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Data Validation Summary

Second Quarter 2020 Groundwater Monitoring Event - Annual Monitoring under 40 CFR 264 Appendix IX For HWMU-16; and Corrective Action Annual Groundwater Monitoring Event for HWMU-5

Final Hazardous Waste Post-Closure Care Permit for Hazardous Waste Management Units 5 and 16 Radford Facility Army Ammunition Plant, Radford, Virginia EPA ID# VA1210020730

Draper Aden Associates performed data validation of the analytical results for the Second Quarter 2020 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP), in Radford, Virginia. The monitoring event also served as annual monitoring under 40 CFR 264 Appendix IX for HWMU-16. As well, the event served as the corrective action semiannual groundwater monitoring event for HWMU-5 conducted in accordance with the *Final Hazardous Waste Post-Closure Care Permit for HWMU 5 and 16* (reissued August 16, 2014, Class 1 Permit Modification dated September 12, 2014 and Class 1 Permit Modification dated December 1, 2016).

This groundwater monitoring event was conducted using revised detection limits (DLs) and quantitation limits (QLs) for total antimony, total copper, total lead, total silver, and total vanadium as approved by the Virginia Department of Environmental Quality (VDEQ) in electronic correspondence dated March 29, 2019. RFAAP submitted a Class 1 permit modification to reflect these changes to the VDEQ on February 12, 2020. The permit modification is pending.

The following information and attached tables summarize the data validation results.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected groundwater samples during April 2020. Due to headspace issue, sample 16-3 was recollected for Method 8260C on May 7, 2020.

Samples were submitted for laboratory analysis to Eurofins Lancaster Laboratories Environmental, (ELLE), to Eurofins TestAmerica Canton, (ETAC) of North Canton, Ohio; to Pace (formerly Shealy Environmental Services) (Pace), of West Columbia, South Carolina, Microbac Laboratories (Microbac) of Marietta, Ohio.

Receipt of Monitoring Event Data

On behalf of BAE SYSTEMS, Ordnance Systems, Inc., each laboratory submitted results to Draper Aden Associates in a final certificate of analysis which included analytical results as well as relevant documentation to verify and validate the results. The final certificate of analysis for these events was received on July 10, 2020.

Verification Events

Verification monitoring was conducted on June 22, 2020 to confirm or refute the initial results for acetone in 16MW8 and vinyl chloride in 16WC1A. The verification sample results disconfirmed the acetone result in 16MW8. The verification sample result confirmed the vinyl chloride result in 16WC1A. Blind field sample duplicates for the verification event were also submitted as DUP1 (16MW8) and DUP2 (16WC1A).

Summary of Monitoring Event Data by Analytical Method

Certificates of analysis were received from each laboratory in the following sample delivery groups (SDGs):

Summary of Required Analytical Methods and SDGs

Analytical Method	Hazardous Waste Management Unit	
	HWMU-5	**HWMU-16**
8260C / 8260D Volatiles	RAF60	RAF59 / RAF64 VF27003 (verification)
8270D / 8270C Semivolatiles	RAF60 / 240-129236-2	RAF59 / M0D1189
6020B Inorganics	VD21024	VD17087 / VD17091
9012B Cyanide	Not required	VD17087
7470A Mercury	VD21024	VD17087 / VD17091

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chains of custody and permit required target analytes are provided in each SDG.

Data Analysis and Validation

Samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)*. Data were evaluated in general accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods*, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017, where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review*, January 2017, where applicable.

Draper Aden Associates, of Blacksburg, Virginia, performed a comprehensive data validation, including recalculation of 10% of the data, where noted. For each HWMU, data validation reports and a summary table of data validation results are provided as an attachment (Appendix A – data validation summary tables, Appendix B – data validation reports).

Reporting of Results

For HWMU-16, all compliance groundwater monitoring network wells were sampled for the constituents listed in Appendix E to Permit Attachment 3 (Unit 16 Groundwater Compliance Monitoring (Semiannual) Constituent List). This event also served as the annual monitoring event in which the upgradient and point of compliance wells at HWMU-16 were sampled for the 40 CFR Part 264 Appendix IX constituents listed in Appendix I of Permit Attachment 1 of the Final Post-Closure Care Permit. Upgradient and point of compliance monitoring well results were reported to at or above the detection limit for the Appendix IX target analytes (constituents). The 8270D target analyte detection limits vary slightly from the permit required detection limit. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. Plume well results were reported to at or above the permit quantitation limit for the constituents listed in the semiannual compliance monitoring lists (Attachment 3 Appendix E).

Additionally, for HWMU-16, a footnote presented in Appendix G of Permit Attachment 3 of the August 16, 2014 reissuance of the Permit indicates that verification is required for constituents detected at concentrations less than the QL if their associated GPSs are equal to the QL and are greater than the applicable risk-based concentrations (i.e., ACL or RSL). In these instances, verification must be conducted using an alternate low-level analytical method in order to confirm or refute the observed initial detections if the QL achievable by that method is less than, or equal to, the ACL or RSL for the subject constituent. If a concentration greater than the low-level analytical method QL is observed, then the GPS for that constituent will be updated, if warranted. During Second Quarter 2020, no constituents with GPSs equal to their respective QLs and greater than the applicable risk-based concentrations were detected.

For HWMU-5, results were reported to at or above the permit detection limit for constituents listed in Appendix J to Permit Attachment 2 and Appendix K to Permit Attachment 2 of Module VI-Groundwater Corrective Action & Monitoring Program for Unit-5, with the exception of Methods 8260C and 8270D target analytes. Select target analyte detection limits based on current laboratory method detection limit studies varied slightly from the detection limit listed in the permit; however, no corrective action was needed. Results reported between the detection limit and quantitation limit should be considered estimated concentrations.

The USEPA periodically updates the Regional Screening Levels (RSLS). As stated in section VI.E.3 of Module IV of the Permit for HWMU-5, "The Permittee shall use the most up-to-date USEPA MCL, the Department ACL, or EPA Region 3 RBC as the GPS. If USEPA implements any changes to MCLs or RBCs, the GPS defined by that MCL or RBC will be updated to reflect the most current value established by USEPA." At the time of the Second Quarter 2020 groundwater monitoring event, the November 2019 USEPA RSL table reflected the most current value (although the RSL for this constituent did not change in the subsequent RSL table release May 2020). The USEPA RSL for one constituent, diethyl ether, listed in Appendix K to Attachment 2, was updated from 7,300 µg/l to 3,900 µg/l; therefore, the GPS comparison value for diethyl ether listed in Appendix A-2 of this report is 3,900 µg/l. Diethyl ether is the only constituent listed in Appendix K to

Attachment 2 whose GPS is based on an EPA RSL that was updated. Diethyl ether was detected below the quantitation limit (QL) (12 µg/l) at estimated values in 5WC7B, 5WC21, 5WC22, and in 5WC23; detected results are below the GPS listed Appendix K to Attachment 2 of the permit (7,300 µg/l) and the November 2019 USEPA RSL of 3,900 µg/l. Diethyl ether was not detected in any other wells comprising the CA groundwater monitoring network.

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Draper Aden Associates
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This Report has been prepared by:

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Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2020

Draper Aden Associates
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Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020B											
Laboratory: Pace Analytical, West Columbia, SC											
Antimony	5W5B	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	2	U	U		2	0.5	2	0.4	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Arsenic	5W5B	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Barium	5W5B	19		19		10	1.3	10	1	ug/L	No action taken.
	5W7B	40		40		10	1.3	10	1	ug/L	No action taken.
	5WC21	14		14		10	1.3	10	1	ug/L	No action taken.
	5WC22	22		22		10	1.3	10	1	ug/L	No action taken.
	5WC23	19		19		10	1.3	10	1	ug/L	No action taken.
	5WDUP	14		14		10	1.3	10	1	ug/L	No action taken. Blind field dupllicate of 5WC21 (RPD<1).
Beryllium	5W5B	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	0.66	J	0.66	J	1	0.2	1	0.2	ug/L	Result < QL.
	5WC21	0.22	J	0.22	J	1	0.2	1	0.2	ug/L	Result < QL.
	5WC22	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Cadmium	5W5B	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020B											
Laboratory: Pace Analytical, West Columbia, SC											
Cadmium	5W7B	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		1	0.2	1	0.2	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Chromium	5W5B	5	U	U		5	1.3	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	5.2		5.2		5	1.3	5	1	ug/L	No action taken.
	5WC21	2.4	J	2.4	J	5	1.3	5	1	ug/L	Result < QL. Internal standard %RI did not meet criteria (69%).
	5WC22	5	U	U		5	1.3	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	5	U	U		5	1.3	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	2	J	2	J	5	1.3	5	1	ug/L	Result < QL. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21 (RPD <20).
Cobalt	5W8B	5	U	U		5	1.3	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5W5B	5	U	U		5	1.3	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	11		11		5	1.3	5	1	ug/L	No action taken.
	5WC21	19		19	J	5	1.3	5	1	ug/L	Result is estimated. Internal standard %RI did not meet criteria (69%).
	5WC22	3.1	J	3.1	J	5	1.3	5	1	ug/L	Result < QL.
	5WC23	1.4	J	1.4	J	5	1.3	5	1	ug/L	Result < QL.
	5WDUP	19		19	J	5	1.3	5	1	ug/L	Result is estimated. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21 (RPD <1).
Copper	5W5B	2.7	J	2.7	J	5	2	5	1	ug/L	Result < QL.
	5W7B	5.6		5.6		5	2	5	1	ug/L	No action taken.
	5WC21	5	U	U	J	5	2	5	1	ug/L	Analyte not detected at or above the DL or QL. Internal standard %RI did not meet criteria (69%).
	5WC22	5	U	U		5	2	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	5	U	U		5	2	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	5	U	U	J	5	2	5	1	ug/L	Analyte not detected at or above the DL or QL. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020B											
Laboratory: Pace Analytical, West Columbia, SC											
Lead	5W5B	3	U	U		3	1	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	2.1	J	2.1	J	3	1	2	0.2	ug/L	Result < QL.
	5WC21	3	U	U		3	1	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	3	U	U		3	1	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		3	1	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		3	1	2	0.2	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Nickel	5W5B	10	U	U		10	2	10	2	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	13		13		10	2	10	2	ug/L	No action taken.
	5WC21	11		11	J	10	2	10	2	ug/L	Result is estimated. Internal standard %RI did not meet criteria (69%).
	5WC22	2.8	J	2.8	J	10	2	10	2	ug/L	Result < QL.
	5WC23	2.3	J	2.3	J	10	2	10	2	ug/L	Result < QL.
	5WDUP	10		10	J	10	2	10	2	ug/L	Result is estimated. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21 (RPD <10).
Selenium	5W5B	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	10	U	U		10	3	10	3	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Silver	5W5B	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC22	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WC23	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL.
	5WDUP	2	U	U		2	0.3	2	0.2	ug/L	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020B											
Laboratory: Pace Analytical, West Columbia, SC											
Thallium	**5W5B**	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5W7B	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC21	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC22	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC23	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WDUP	**1**	**U**	**U**		**1**	**0.2**	**1**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.**
Vanadium	**5W5B**	**10**	**U**	**U**		**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5W7B	**10**	**U**	**U**		**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC21	**10**	**U**	**U**	**J**	**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL. Internal standard %RI did not meet criteria (69%).**
	5WC22	**10**	**U**	**U**		**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC23	**10**	**U**	**U**		**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WDUP	**10**	**U**	**U**	**J**	**10**	**2.5**	**10**	**1**	**ug/L**	**Analyte not detected at or above the DL or QL. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21.**
Zinc	**5W5B**	**8.3**	**J**	**8.3**	**J**	**30**	**7.3**	**30**	**7.3**	**ug/L**	**Result < QL.**
	5W7B	**24**	**J**	**24**	**J**	**30**	**7.3**	**30**	**7.3**	**ug/L**	**Result < QL.**
	5WC21	**30**	**U**	**U**		**30**	**7.3**	**30**	**7.3**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC22	**30**	**U**	**U**		**30**	**7.3**	**30**	**7.3**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC23	**30**	**U**	**U**		**30**	**7.3**	**30**	**7.3**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WDUP	**30**	**U**	**U**		**30**	**7.3**	**30**	**7.3**	**ug/L**	**Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.**

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 7470A											
Laboratory: Pace Analytical, West Columbia, SC											
Mercury	**5W5B**	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5W7B	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC21	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC22	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WC23	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL.**
	5WDUP	**0.2**	**U**	**U**		**0.2**	**0.12**	**2**	**0.2**	**ug/L**	**Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.**

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Acetone	5W5B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
2-Butanone	5W5B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
Chloroform	5W5B	1.2		1.2		1	0.1	1	0.1	ug/l	No action taken.
	5W7B	1.3		1.3		1	0.1	1	0.1	ug/l	No action taken.
	5WC21	1.8		1.8		1	0.1	1	0.1	ug/l	No action taken.
	5WC22	1.4		1.4		1	0.1	1	0.1	ug/l	No action taken.
	5WC23	1.4		1.4		1	0.1	1	0.1	ug/l	No action taken.
	5WDUP	1.8		1.8		1	0.1	1	0.1	ug/l	No action taken. Blind field dupllicate of 5WC21 (RPD <1).
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Dichlorodifluoromethane	5W5B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Dichlorodifluoromethane	5WC23	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
1,2-Dichloroethane	5W5B	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
1,1-Dichloroethene	5W8B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	5W12A	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
cis-1,2-Dichloroethene	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
cis-1,2-Dichloroethene	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	5W12A	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
Diethyl ether	5W5B	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.6	J	0.6	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WC21	1.7	J	1.7	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WC22	8.4	J	8.4	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WC23	10	J	10	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WDUP	1.6	J	1.6	J	12	0.4	12	0.39	ug/l	Result < QL.Blind field dupllicate of 5WC21 (RPD <10).
	Trip Blank 1	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
Methylene chloride	5W5B	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Methylene chloride	Trip Blank 1	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
Toluene	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.5	J	0.5	J	1	0.2	1	0.177	ug/l	Result < QL.
	5WC21	2.1		2.1		1	0.2	1	0.177	ug/l	No action taken.
	5WC22	2.5		2.5		1	0.2	1	0.177	ug/l	No action taken.
	5WC23	3		3		1	0.2	1	0.177	ug/l	No action taken.
	5WDUP	2.1		2.1		1	0.2	1	0.177	ug/l	No action taken. Blind field dupllicate of 5WC21 (RPD <1).
	5W12A	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
Vinyl chloride	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Vinyl chloride	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Xylenes (Total)	5W5B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
	Trip Blank 1	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
bis(2-Ethylhexyl)phthalate	5W5B	5.1	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	5.1	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	5	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	5.1	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	5.1	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	5	U	U		6	5	6	1.5	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Diethyl phthalate	5W5B	2	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	2	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	2.1	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	2	U	U		10	2	10	0.5	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
2,4-Dinitrotoluene	5W5B	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	0.6	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
2,6-Dinitrotoluene	5W5B	0.71	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.71	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.71	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.71	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.72	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.7	U	U		10	0.71	10	0.7	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
o-Nitroaniline	5W5B	2	U	U		10	2	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		10	2	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		10	2	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	2	U	U		10	2	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	2.1	U	U		10	2	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	2	J	2	J	10	2	10	0.7	ug/l	Result < QL. Blind field dupllicate of 5WC21.
p-Nitroaniline	5W5B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate of 5WC21.
Nitrobenzene	5W5B	0.82	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.81	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.81	U	U		10	0.8	10	0.8	ug/L	Analyte not detected at or above the DL or QL.
	5WC21	0.81	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.81	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.82	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.77	U	U		10	0.8	10	0.8	ug/l	Blind field dupllicate of 5WC21. Result reported from TA (5WC21) serving as sample duplicate, disconfirms initial result from ELLE.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes

Definitions:

QL Denotes quantitation limit.
DL Denotes detection limit
Q Denotes data qualifier.
U Denotes analyte not detected at or above Detection Limit (DL) or Quantitation Limit (QL).
UA Denotes analyte not detected at or above adjusted sample DL or QL.
J Denotes analyte reported at or above the DL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above **DL and QL and DL and QL are estimated. When used with "UA"** (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted **DL and QL and adjusted DL and QL are estimated.**
R Denotes result rejected.
Laboratory Data Qualifiers, "U" and "<"**, denote not detected at or above the DL or QL.**

SW-846 METHOD 8260C VOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive review of the analytical results for the April 20, 2020 semiannual groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23 and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the Method 8260C data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) and a trip blank were analyzed for five Appendix J and nine Appendix K volatile organic target analytes, as listed in the facility's permit, by USEPA SW-846 Method 8260C. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for the five Appendix J volatile organic target analytes by USEPA SW-846 Method 8260C.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant documentation to validate and verify the results (SDG#: RAF60).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: quality control (QC) deliverables package, QC history documentation, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification, blank, surrogate spike, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and/or target analyte identification and quantitation results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Applicable holding time and preservation criteria were met for the samples.

The original certificate of analysis was received on June 4, 2020. The original certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the permit required quantitation limit (QL) for each target analyte, except where noted below.

QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Sample holding time, preservation, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS, and internal standards criteria were met, except where noted below. Target analyte identification and quantitation criteria were met except where noted below. No deviations from specific QA/QC criteria were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable. Target analyte detections at or above the QL were verified through calculations from the instrument data. No transcription errors were observed with the reporting of sample results.

A 25 ml sample purge volume was used for the analysis of the target analytes.

Results were reported by the laboratory to at or above the laboratory method detection limit (MDL) for this Corrective Action monitoring event. The laboratory MDL was at or below the permit specified detection limit (DL), or slightly above, due to rounding.

Results for samples unaffected by the data validation process and reported as not detected at or above the MDL were validated and qualified "U." Except where noted above, reported values less than the quantitation limit (QL) should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANIC DATA VALIDATION

Comments: *Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 25 ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1.	Was the case narrative present/signed by a lab representative?	☑ YES ☐ NO
2.	Was the Chain of Custody present/signed by a lab representative?	☑ YES ☐ NO
3.	Were the sample results included for the sample locations?	☑ YES ☐ NO
4.	Did the laboratory report the required target analytes?	☑ YES ☐ NO
5.	Were the analyte QLs reported on reports in agreement with the instrument specific MDL study and project required QL?	☑ YES ☐ NO
6.	Were the sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)?	☑ YES ☐ NO

Comments: QC deliverables package requirements were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1.	Were instrument specific detection limits provided for analytes?	☑ YES ☐ NO
2.	Were the instrument specific QLs for target analytes provided?	☑ YES ☐ NO
3.	Was calibration range specified for the target analytes?	☑ YES ☐ NO

Comments: QC history documentation was provided and met criteria. The laboratory analyzed a MDL check sample at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1.	Was the 14-day sample collection to analysis holding time met?	☑ YES ☐ NO
2.	Were the samples received at ≤6°C, zero headspace?	☑ YES ☐ NO
3.	Were the sample pHs adjusted to <2 with HCl?	☑ YES ☐ NO
4.	Were sample pHs adjusted to 4-5 with HCl? (Acrolein)	☑ NA ☐ YES ☐ NO
5.	Were samples analyzed unpreserved (2-Chloroethyl vinyl)	☑ NA ☐ YES ☐ NO

Comments: Technical holding time and sample preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1.	Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period during which standards or samples were analyzed?	☑ YES ☐ NO
2.	Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)?	☑ YES ☐ NO
3.	Were the ion abundance criteria met?	☑ YES ☐ NO

4. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria*:*

1. Did the internal standard (IS) which was selected for target analyte RF calculation have a retention time close to the IS? ☑ YES ☐ NO
2. Were the target analytes included in the ICAL? ☑ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☑ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL? ☑ YES ☐ NO
6. Was the calibration curve developed using the same purge volume used for sample analysis? ☑ YES ☐ NO
7. Were 8260C minimum Relative Response Factor (RRF) criteria met? ☑ YES ☐ NO
   Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs
8. Was each target analyte %RSD ≤ 20%? ☑ YES ☐ NO
9. Was the correlation coefficient >0.99 for target analytes with ≥20 % RSD? (*System recalibrated if >10% analytes fail above condition)* ☑ NA ☐ YES ☐ NO
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION (CV) CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
   Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs ☑ YES ☐ NO
3. Did the target analytes and system monitoring analytes

(surrogates) have the % D within ± 20%? ☑ YES ☐ NO
If "NO", list analytes that exceed these criteria: *None*

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within ± 20%? ☑ YES ☐ NO

Comments: The CV standard criteria were met.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12-hour period beginning with the injection of BFB? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☑ YES ☐ NO
4. Was the level of blank contamination less than 5% of the regulatory limit associated with an analyte or less than 5% of the sample result for the same analyte, whichever is greater? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*
6. Did any result exceed the calibration range? ☐ YES ☑ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☑ NA ☐ YES ☐ NO

Comments: A trip blank was submitted and analyzed. Blank criteria were met.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☑ YES ☐ NO
   - dibromofluoromethane (80-120%)
   - 4-bromofluorobenzene (80-120%)
   - toluene-d_8 (80-120%)
   - 1,2-dichloroethane-d_4 (80-120%)
2. Were recoveries within specified ranges? ☑ YES ☐ NO
   If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted
3. Were samples with surrogates outside the QC window reanalyzed as required? ☑ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*% RPD Water*
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a MS/MSD analyzed per sample batch or every 20 samples? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List the MS % recovery range: 75-125%; 70-130% poor purge analytes; RPD ≤20
5. Were any analytes qualified as estimated? ☐ YES ☑ NO
    - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was the LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS acceptance criteria: 80-120% (most analytes).
4. List the LCS analytes which were not within the specified ranges: *See below*.
5. Were any analytes flagged as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☑ YES ☐ NO
   t-butyl alcohol-d_{10}, fluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
2. Were the IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were the IS RTs within ± 30 seconds of the last CV? ☑ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☑ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Did characteristic ions maximize in the same scan or within one scan of each other? ☑ YES ☐ NO
   * Were the characteristic ions present in the standard spectra and sample spectra for analytes detected above the QL? ☑ YES ☐ NO
   * Were the relative intensities of the ions between the standard and sample spectra within ± 30%? ☑ YES ☐ NO
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).

1. List the detected analytes whose %RSD was > 20%: *None*
   - Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☐ YES ☑ NO
   If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the instrument data/quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
4. Were sample/ field duplicate RPDs <20% where applicable? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met. Calculation checks were performed on ten percent of the data set and no errors were noted.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was taken. Library searches were not requested. The initial demonstration of capability (IDOC) for analyst J. Howe was submitted previously.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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SW-846 METHOD 8270D SEMIVOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 20, 2020 Corrective Action groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from point of compliance (POC) monitoring wells 5W5B, 5W7B, 5WC21, 5WC22, and 5WC23. Sample 5WDUP was submitted to the laboratory as a blind field sample duplicate for 5WC21.

Samples were analyzed for the seven Appendix K semivolatile target analytes listed in the facility's permit by USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Other wells were listed on the chain of custody (COC); however, USEPA SW-846 Method 8270D analysis was not required for those sample locations.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 8270D analyses. ELLE is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in final certificates of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results (SDG# RAF60).

The evaluation of ELLE's compliance with Method 8270D and validation of the results was based on review of the following items: quality control (QC) deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard and/or target analyte identification and quantitation results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculations checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel, except as noted.

The original certificate of analysis was received on June 4, 2020. The certificate of analysis appeared complete and data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit required quantitation limit (QL).

QC history documentation (instrument specific initial demonstration of proficiency and method detection limit data) were provided. Applicable preservation and technical holding time

criteria were met. Instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, MS/MSD, LCS, surrogate recoveries, and internal standard requirements were met, except where noted below. Target analyte identification and quantitation criteria were met except where noted below. No deviations from specific QA/QC criteria were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable. 2-Nitroaniline and nitrobenzene were reported as detected below the QL in the field duplicate of 5WC21. Nitrobenzene was disconfirmed by a duplicate sample 5WC21 analyzed by Eurofins TestAmerica Canton (ETAC), North Canton, Ohio (received May 7, 2020 (SDG 240-129236-2)) and the final duplicate result for nitrobenzene was reported by ETAC. No target analytes were detected at or above the QL in any project sample. No transcription errors were observed with the reporting of sample results.

A footnote presented in Appendix K, Groundwater Corrective Action Annual Monitoring List, of Permit Module VI - *Groundwater Corrective Action & Monitoring* P*rogram for Unit 5* indicates that verification is required for constituents detected at a concentration less than the Limit of Quantitation/Quantitation Limit (LOQ)/QL if their associated groundwater protection standard (GPS) is:

(1) based on a background value equal to the QL/LOQ/PQL
(2) greater than the applicable risk-based concentration (i.e., ACL or RBC/regional screening level).

In these instances, verification must be conducted using an alternate low-level analytical method in order to confirm or refute the observed initial detections if the QL achievable by that method is less than, or equal to, the ACL or RSL for the subject constituent. If a concentration greater than the low-level analytical method QL is observed, then the GPS for that constituent will be updated, if warranted. During Second Quarter 2020, no constituents with GPS equal to their respective QLs and greater than the applicable risk-based concentrations were detected.

Except where noted above, results remain as reported by the laboratory. Sample results were reported by the laboratory to at or above the method detection limit (MDL). These current laboratory established MDLs slightly differ from the MDL listed in Appendix K of the permit.

Target analytes detected at or above the MDL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. Sample results unaffected by the data validation process and reported as not detected at or above the MDL/detection limit (DL) were validated and qualified "U." Reported values less than the QL should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: *Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using liquid/liquid extraction technique (SW-846 Method 3510C). The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Did the data correspond to the project specific analyte list? ☑ YES ☐ NO
5. Were the analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study? ☑ YES ☐ NO

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1. Were instrument specific detection limits provided for analytes? ☑ YES ☐ NO
2. Were the instrument specific QLs for target analytes provided? ☑ YES ☐ NO
3. Was calibration range specified for the target analytes? ☑ YES ☐ NO

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 7-day sample collection to extraction holding time met? ☑ YES ☐ NO
2. Was the 40-day extraction to analysis holding time met? ☑ YES ☐ NO
3. Were the samples received at ≤6°C? ☑ YES ☐ NO

Comments: Sample holding times and preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

1. Was performance check solution analysis performed at the beginning of each 12-hour period of standard and/or sample analysis? ☑ YES ☐ NO
2. Was there documentation of the injection of 12.5 ng of DFTPP? ☑ YES ☐ NO
3. Were the ion abundance criteria met? ☑ YES ☐ NO
4. Was the injection port inertness verified by analysis of 4,4'-DDT? ☑ YES ☐ NO
   - If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
   - Was the injection port inertness check acceptable? ☑ YES ☐ NO
5. Was column performance checked through the analysis of peak tailing of pentachlorophenol and benzidine? ☑ YES ☐ NO

- If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
- Was column performance check acceptable? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☑ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D? ☑ YES ☐ NO
3. Were the target analytes included in the ICAL? ☑ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☑ YES ☐ NO
6. Were calibration levels removed from the curve that would negatively impact the data integrity? ☐ YES ☑ NO
7. Were 8270D minimum RRF criteria met? Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☑ YES ☐ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☑ NA ☐ YES ☐ NO
   **System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or run independently on another 12-hour analysis period. ☑ YES ☐ NO

2. Was each target analyte % difference/drift ≤ 20%? ☑ YES ☐ NO
   (Corrective action if >20%)
3. Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*

Method Validation Performance Criteria:

1. Did target analytes and system monitoring
   analytes (surrogates) have % Ds within ± 20.0%? ☑ YES ☐ NO
   If "NO", list analytes that exceed this criterion:

Comments: Calibration verification criteria were met.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system
   used for sample analysis? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☑ YES ☐ NO
4. Was the level of blank contamination > 5% of the MCL? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? See comment
   - phenol - d_6 (10%-94%)
   - 2-fluorophenol (21%-100%)
   - 2,4,6-tribromophenol (10%-123%)
   - nitrobenzene – d_5 (35%-107%)
   - 2-fluorobiphenyl (44%-102%)
   - p-terphenyl - d_{14} (33%-126%)
2. Were recoveries within the specified ranges? ☑ YES ☐ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☑ NA ☐ YES ☐ NO
   If yes, was a re-extraction and reanalysis performed to confirm that the non-compliance was due to sample matrix effects rather than laboratory deficiencies?

Comments: The laboratory only used and reported the base/neutral surrogates as allowed by the method. The surrogate criteria were met.

I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*% RPD Water*
Phenol	12-110	42
2-Chlorophenol	27-123	40

N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List the MS % recovery range: *See certificate of analysis*
5. Were any analytes qualified as estimated? ☐ YES ☑ NO
    - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met. Field duplicate/sample results exhibited acceptable precision, where applicable.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain required target analytes? ☑ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range: *See semivolatile certificate of analysis.*
4. Were any analytes qualified as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards used? ☑ YES ☐ NO
    - 1,4-Dichlorobenzene-d_4
    - Naphthalene-d_8
    - Acenapththene-d_{10}
    - Phenanthrene-d_{10}
    - Pyrene-d_{10}
    - Perylene-d_{12}
2. Were the IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were the IS RTs within ± 30 seconds of last CV? ☑ YES ☐ NO

Comments: Internal standard criteria were met or no data qualification was required.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard

spectra to see that the following criteria were met: ☑ YES ☐ NO

* Did characteristic ions maximize in the same scan or within one scan of each other?
* Were characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
* Were the relative ion intensities between the standard and sample spectra within ± 30%?

3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments*:* Target analyte identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).

1. List the analytes detected above the QL whose %RSD was >20%: *None*
   a. Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
   b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☑ NO
   -If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
4. Were sample/ field duplicate RPDs <20% where applicable? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met. Calculation checks were performed on ten percent of the data set, where applicable.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was taken. Library searches were not requested with this data set. The initial demonstration of capability (IDOC) for analyst E. Monborne was submitted previously.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical

program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

This Report has been prepared by:

KO for CD _____ 7/17/2020

Cheryl Daniel, Staff Environmental Scientist
2206 South Main Street, Blacksburg, Virginia 24060
540-552-0444; cdaniel@daa.com, www.daa.com

Date:

This Report has been subjected to technical and quality review by:

Kathy Olsen _____ 7/17/2020

Kathy Olsen, Project Environmental Scientist
2206 South Main Street, Blacksburg, Virginia 24060
540-552-0444; kolsen@daa.com, www.daa.com

Date:

SW-846 METHODS 6020B AND 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive data review of the analytical results for the April 20, 2020 Corrective Action groundwater monitoring event for Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia.

Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23, and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the inorganic data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) were analyzed for the sixteen inorganic constituents listed in Appendix K of the facility's permit by SW-846 Method 6020B and SW-846 Method 7470A. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for cobalt only by SW-846 Method 6020B.

Inductively coupled plasma mass spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA) were the techniques used for the metal analyses. ICP-MS Method 6020B was used to analyze for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc. CVAA Method 7470A was used to analyze for mercury. Target analytes were analyzed for total (T) concentrations.

Draper Aden Associates sent samples to Pace Analytical Services (formerly Shealy Environmental Services) of West Columbia, South Carolina. Pace performed the Method 6020B and 7470A analyses. On behalf of RFAAP, Pace submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results. Pace is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the above analytes, methods and matrix.

The evaluation of Pace's compliance with the method and validation of results presented here are based upon a review of quality assurance/quality control (QA/QC) information including chain-of-custody, case narrative, holding time, preservation procedures, instrument calibration, tuning, blank (method, calibration and other blanks), interference check sample, matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution data. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

Pace received the samples on ice and in good condition with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel, except where noted below. Applicable holding time and preservation criteria were met.

Method 6020B (ICP-MS)

The original certificate of analysis was received on May 15, 2020. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL).

QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration, calibration verification and tuning requirements were met. QL check standards, blank, interference check samples (ICSA), MS/MSD, LCS, internal standard data, and serial dilution sample results were within control limits, where applicable, unless noted below. Field duplicate/sample results exhibited acceptable precision, where applicable. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. Deviations from QA/QC criteria that were noted during the data review are summarized below.

The internal standard (45 Sc) percent relative intensity (%RI) did not meet QC criteria (70-125%) in project samples 5WC21 and 5WDUP. This internal standard is associated with total chromium, total cobalt, total copper, total nickel, and total vanadium and the reported result for each analyte was validated and qualified "J" or "UJ" to note that the result or QL is estimated due to the observed QC deficiency. The remaining % Relative Intensities were within QC criteria.

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit specified detection limit (DL). Target analytes detected at or above the DL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

Results for samples unaffected by the data validation process and reported as not detected at or above the DL were validated and qualified "U" or as described above. Reported detected values less than the QL should be considered estimated concentrations and were validated and qualified "J" or as describe above. No results were rejected based on the data validation criteria.

Method 7470A (CVAA)

The original certificate of analysis was received on May 15, 2019. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL).

QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration and calibration verification criteria were met. QL standard, blank, MS/MSD and LCS results recovered within control limits. Field duplicate/sample results exhibited acceptable precision, where applicable. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. No deviations from QA/QC criteria were noted during data review.

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit detection limit. Mercury detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For this Corrective Action groundwater monitoring event, mercury results for the samples unaffected by the data validation process and not detected at or above the detection limit and/or QL were validated and reported as "U." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION BY SW-846 ICP-MS METHOD 6020B

Pace Analytical Services, West Columbia, South Carolina; Lot Number: VD21024
☑ - denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Instrument detection limit (IDL) less than QL
- ☑ VELAP accredited for target analytes

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ IDOC for analyst BNW submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion method: 3005A

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO_3)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) </=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration </=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ A single point calibration or a multi-point calibration with a calibration blank and at least 3 standards (low standard at or below the QL)
- ☑ Linear curve fit with correlation coefficient r≥0.995
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration - Independent/second source used for standard
- ☑ ICV recovery 90-110% - concentration near mid-point of calibration curve
- ☑ Low level ICV (LLICV) – prior to sample analysis, at QL concentration, 80-120% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Daily following ICV
- ☑ Interference free (< ±1/2 the QL concentration)

J. QL/LOQ CHECK STANDARD CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity

- ☑ Standard analyzed at or below the QL (LLQC), digested, mean of 7 replicates with RSD <5%, analyzed after MDL determination and analyzed at least quarterly
- ☑ QL standard recovery 80-120%

K. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☑ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☑ CCV recovery within 90-110%, mid-point of curve concentration

L. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Immediately after the CCV and after each group of 10 samples
- ☑ Interference free (<QL)

M. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- N/A Trip Blank (check only if analyzed)
- ☑ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☑ Interference free (<1/2 LLOQ), where applicable

N. INTERFERENCE CHECK SAMPLE (ICS)/(Spectral Interference Check (SIC) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☑ At beginning of analytical run or once every 12 hours of continuing sample analysis Results for elements not spiked in solution should be < 2 times the LLOQ. (Ti and Mo are spiked in addition to alkali metals)

O. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ RPD ≤ 20 between MS & MSD results or sample & duplicate results, where applicable
- ☑ MSD analyte recovery 75-125%

P. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☑ All analytes, one MS per digestion batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ Recovery: 75-125%, post-digestion spike analyzed for failed analytes, recovery 75-125%

Q. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ 1 LCS per 20 samples, all analytes, Recovery: 80-120%
- ☑ LCS solution same concentration as MS/MSD solution

R. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☑ IS added to each sample and QC sample
- ☑ Relative intensity (RI) should be within 70-125%
- ☑ If RI of CCB is <30%, terminate run and recalibrate

S. SERIAL DILUTION TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ <20% Difference (applicable when concentration >25X LLOQ)

T. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☑ Sample results reported within instrument calibration range
- ☑ Sample results reported to project detection limit
- ☑ Calculation checks on 10% of the data set
- ☑ Sample/Field duplicate RPD ≤ 20, where applicable

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

DATA EVALUATION FOR MERCURY BY COLD VAPOR AA SW 846 -METHOD 7470A

Pace Analytical Services, West Columbia, South Carolina; Lot Number: VD21024
☑ - denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific detection limits/quantitation limit (QLs) for mercury
- ☑ Standard analyzed at the QL (70-130% R)
- ☑ VELAP accredited within 12 months
- ☑ IDOC for analyst KSH2 submitted previously

B. METHOD INFORMATION DOCUMENTATION:
- ☑ Mercury analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:
- ☑ 28 day holding time
- ☑ Adjust pH <2 w/ HNO_3

D. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 3 standards, correlation coefficient >0.995
- ☑ Instrument calibrated for every analytical sequence for every method

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:
- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120%

F. BLANK SAMPLE CRITERIA:
- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

G. MATRIX SPIKE DUPLICATE (MSD)/DUPLICATE SAMPLE CRITERIA:
- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ RPD ≤ 20 for spike/sample values greater than 5 times QL
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ Recovery within 75-125% range
- ☑ One MS per batch of 20 samples
- ☑ MS added prior to digestion

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:
- ☑ LCS for mercury, one LCS per 20 sample batch
- ☑ Recovery within 80-120%
- ☑ Independent source for LCS

J. SAMPLE RESULTS CRITERIA:

- ☑ Sample results reported within instrument calibration range
- ☑ Sample results reported to detection limit
- ☑ Calculation checks on 10% of the data set
- ☑ Sample/Field duplicate RPD ≤ 20, where applicable

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

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Conclusions presented are based upon a review of available information, the results of our field studies, and/or professional judgment. To the best of our knowledge, information provided by others is true and accurate, unless otherwise noted.

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Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

This Report has been prepared by:

KO for CD _____ 7/17/2020

Cheryl Daniel, Environmental Scientist
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540-552-0444; cdaniel@daa.com, www.daa.com

Date:

This Report has been subjected to technical and quality review by:

Kathy Olsen _____ 7/17/2020

Kathy Olsen, Senior Project Environmental Scientist
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540-552-0444; kolsen@daa.com, www.daa.com

Date:

Comprehensive Data Validation Report
Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Monitoring Event: Second Quarter 2020

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Barium	5WC21	14		14		10	No action taken.
	5WDUP	14		14		10	No action taken. Blind field dupllicate of 5WC21 (RPD<1).
Cobalt	5WC21	19		19	J	5	Result is estimated. Internal standard %RI did not meet criteria (69%).
	5WDUP	19		19	J	5	Result is estimated. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21 (RPD <1).
Nickel	5WC21	11		11	J	10	Result is estimated. Internal standard %RI did not meet criteria (69%).
	5WDUP	10		10	J	10	Result is estimated. Internal standard %RI did not meet criteria (67%). Blind field duplicate of 5WC21 (RPD <10).
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroform	5WC21	1.8		1.8		1	No action taken.
	5WDUP	1.8		1.8		1	No action taken. Blind field dupllicate of 5WC21 (RPD <1).
Trichloroethene	5WC21	2.1		2.1		1	No action taken.
	5WDUP	2.1		2.1		1	No action taken. Blind field dupllicate of 5WC21 (RPD <1).

Definitions:

Data Validation Qualifiers:
QL Denotes permit quantitation limit. Q Denotes data qualifier.
J Denotes analyte reported at or above quantitation limit and associated result is estimated.

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2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater and Water Samples
Collected on 04/20/20

SDG# RAF60

GROUP	SAMPLE NUMBERS
2096898	1302093-1302103

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-20-35
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman

Dana M. Kauffman
Manager

Date: **06/02/2020**

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Table of Contents for SDG# RAF60

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Sample Reference List for SDG Number RAF60
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
1302093	5W8B	04/20/2020 08:15	04/21/2020 09:40
1302094	5W5B	04/20/2020 10:55	04/21/2020 09:40
1302095	5W7B	04/20/2020 09:55	04/21/2020 09:40
1302096	5W7B Matrix Spike	04/20/2020 09:55	04/21/2020 09:40
1302097	5W7B Matrix Spike Dup	04/20/2020 09:55	04/21/2020 09:40
1302098	5WC21	04/20/2020 13:10	04/21/2020 09:40
1302099	5WDUP	04/20/2020 13:20	04/21/2020 09:40
1302100	5WC22	04/20/2020 11:40	04/21/2020 09:40
1302101	5WC23	04/20/2020 12:25	04/21/2020 09:40
1302102	5W12A	04/20/2020 09:15	04/21/2020 09:40
1302103	Trip Blank 1	04/20/2020 00:00	04/21/2020 09:40

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Sample pH Log

SDG: RAF60

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1302093	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:08PM	29284
1302094	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302094	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:09:14PM	1201
1302094	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:43PM	1201
1302095	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302095	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:39PM	1201
1302095	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:09:09PM	1201
1302096	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302096	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:17PM	1201
1302096	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:13PM	1201
1302097	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302097	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:10PM	1201
1302097	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:01PM	1201
1302098	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302098	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:07:32PM	1201
1302098	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:07:27PM	1201
1302099	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302099	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:09:17PM	1201
1302099	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:46PM	1201
1302100	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302100	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:35PM	1201
1302100	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:59PM	1201
1302101	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302101	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:31PM	1201
1302101	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/21/2020 6:08:05PM	1201
1302102	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284
1302103	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 5:44:06PM	29284

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14241 SVOAs 8270D/E MINI

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 01, 2020 14:32

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 2096898
SDG: RAF60
State of Sample Origin: VA

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	04/20/2020 08:15	1302093
5W5B Grab Groundwater	04/20/2020 10:55	1302094
5W7B Grab Groundwater	04/20/2020 09:55	1302095
5W7B Matrix Spike Grab Groundwater	04/20/2020 09:55	1302096
5W7B Matrix Spike Dup Grab Groundwater	04/20/2020 09:55	1302097
5WC21 Grab Groundwater	04/20/2020 13:10	1302098
5WDUP Grab Groundwater	04/20/2020 13:20	1302099
5WC22 Grab Groundwater	04/20/2020 11:40	1302100
5WC23 Grab Groundwater	04/20/2020 12:25	1302101
5W12A Grab Groundwater	04/20/2020 09:15	1302102
Trip Blank 1 Water	04/20/2020	1302103

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU-5
ELLE Group #: 2096898

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: **5W8B Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 08:15
SDG#: RAF60-01

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302093
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 10:39	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 10:38	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W5B Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 10:55
SDG#: RAF60-02

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302094
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.2	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.1	6.1	1
14241	2-Nitroaniline	88-74-4	N.D.	2.0	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.82	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 11:00	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 10:59	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 15:24	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 09:55
SDG#: RAF60-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302095
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.3	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	0.6 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	0.5 J	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.1	6.1	1
14241	2-Nitroaniline	88-74-4	N.D.	2.0	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.81	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 11:22	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 11:21	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 15:52	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 09:55
SDG#: RAF60-03MS

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302096
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	32		3.0	10	1
11996	2-Butanone	78-93-3	38		1.0	10	1
11996	Chloroform	67-66-3	6.7		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.9		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.2		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.2		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.5		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.2		0.8	1.0	1
11996	Ethyl ether	60-29-7	6.0	J	0.4	12	1
11996	Methylene Chloride	75-09-2	5.3		0.2	1.0	1
11996	Toluene	108-88-3	5.4		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.8		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	5.6		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	44		2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	47		1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	47		0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	47		5.1	6.1	1
14241	2-Nitroaniline	88-74-4	45		2.0	10	1
14241	4-Nitroaniline	100-01-6	39		1.3	20	1
14241	Nitrobenzene	98-95-3	46		0.82	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 11:44	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 11:43	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 16:20	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 09:55
SDG#: RAF60-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302097
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	33		3.0	10	1
11996	2-Butanone	78-93-3	39		1.0	10	1
11996	Chloroform	67-66-3	6.6		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.8		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.2		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.3		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.6		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.2		0.8	1.0	1
11996	Ethyl ether	60-29-7	6.2	J	0.4	12	1
11996	Methylene Chloride	75-09-2	5.3		0.2	1.0	1
11996	Toluene	108-88-3	5.4		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.9		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	5.6		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	44		2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	47		1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	46		0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	45		5.0	6.0	1
14241	2-Nitroaniline	88-74-4	45		2.0	10	1
14241	4-Nitroaniline	100-01-6	39		1.3	20	1
14241	Nitrobenzene	98-95-3	43		0.81	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 12:06	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 12:05	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 16:49	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC21 Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 13:10
SDG#: RAF60-04

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302098
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.8	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	1.7 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	2.1	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.0	6.0	1
14241	2-Nitroaniline	88-74-4	N.D.	2.0	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.81	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 12:27	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 12:26	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 17:17	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WDUP Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 13:20
SDG#: RAF60-05FD

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302099
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.8	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	1.6 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	2.1	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.70	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.0	6.0	1
14241	2-Nitroaniline	88-74-4	2 J	2.0	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	0.8 J	0.80	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 12:49	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 12:48	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 17:45	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC22 Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 11:40
SDG#: RAF60-06

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302100
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.4	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	8.4 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	2.5	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	2.0	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.1	6.1	1
14241	2-Nitroaniline	88-74-4	N.D.	2.0	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.81	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 13:11	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 13:10	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 18:13	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC23 Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 12:25
SDG#: RAF60-07

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302101
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	1.4		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	10	J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	3.0		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.		2.1	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.		1.0	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.		0.72	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		5.1	6.2	1
14241	2-Nitroaniline	88-74-4	N.D.		2.1	10	1
14241	4-Nitroaniline	100-01-6	N.D.		1.3	21	1
14241	Nitrobenzene	98-95-3	N.D.		0.82	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 13:32	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 13:31	Jennifer K Howe	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20114WAH026	04/27/2020 18:41	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	20114WAH026	04/24/2020 09:19	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W12A Grab Groundwater**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020 09:15
SDG#: RAF60-08

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302102
ELLE Group #: 2096898
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 13:54	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 13:53	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2Qtr 2019 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/21/2020 09:40
Collection Date/Time: 04/20/2020
SDG#: RAF60-09TB

Draper Aden Associates, Inc.
ELLE Sample #: GW 1302103
ELLE Group #: 2096898
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	N.D.	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	H201201AA	04/29/2020 10:17	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201201AA	04/29/2020 10:16	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 2096898
Reported: 05/01/2020 14:32

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: H201201AA	Sample number(s): 1302093-1302103		
Acetone	N.D.	3.0	10
2-Butanone	N.D.	1.0	10
Chloroform	N.D.	0.1	1.0
Dichlorodifluoromethane	N.D.	0.3	1.0
1,2-Dichloroethane	N.D.	0.1	1.0
1,1-Dichloroethene	N.D.	0.4	1.0
cis-1,2-Dichloroethene	N.D.	0.1	1.0
trans-1,2-Dichloroethene	N.D.	0.8	1.0
Ethyl ether	N.D.	0.4	12
Methylene Chloride	N.D.	0.2	1.0
Toluene	N.D.	0.1	1.0
Trichloroethene	N.D.	0.2	1.0
Vinyl Chloride	N.D.	0.1	1.0
Xylene (Total)	N.D.	0.2	3.0
Batch number: 20114WAH026	Sample number(s): 1302094-1302101		
Diethylphthalate	N.D.	2.0	10
2,4-Dinitrotoluene	N.D.	1.0	10
2,6-Dinitrotoluene	N.D.	0.70	10
bis(2-Ethylhexyl)phthalate	N.D.	5.0	6.0
2-Nitroaniline	N.D.	2.0	10
4-Nitroaniline	N.D.	1.3	20
Nitrobenzene	N.D.	0.80	10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H201201AA	Sample number(s): 1302093-1302103								
Acetone	37.5	35.36			94		60-146		
2-Butanone	37.5	39.16			104		59-141		
Chloroform	5.00	4.94			99		80-120		
Dichlorodifluoromethane	5.00	4.18			84		43-123		
1,2-Dichloroethane	5.00	4.92			98		69-122		
1,1-Dichloroethene	5.00	4.55			91		80-131		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 2096898
Reported: 05/01/2020 14:32

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
cis-1,2-Dichloroethene	5.00	5.01			100		80-122		
trans-1,2-Dichloroethene	5.00	4.66			93		80-122		
Ethyl ether	5.00	5.15			103		72-121		
Methylene Chloride	5.00	4.86			97		80-120		
Toluene	5.00	4.91			98		80-120		
Trichloroethene	5.00	4.86			97		80-120		
Vinyl Chloride	5.00	5.01			100		60-125		
Xylene (Total)	15	14.48			97		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20114WAH026	Sample number(s): 1302094-1302101								
Diethylphthalate	50	36.7			73		42-126		
2,4-Dinitrotoluene	50	41.7			83		66-122		
2,6-Dinitrotoluene	50	41.02			82		71-120		
bis(2-Ethylhexyl)phthalate	50	43.19			86		61-129		
2-Nitroaniline	50	40.5			81		66-126		
4-Nitroaniline	50	37.94			76		55-113		
Nitrobenzene	50	38.75			78		59-109		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H201201AA	Sample number(s): 1302093-1302103 UNSPK: 1302095									
Acetone	N.D.	37.5	32.31	37.5	33.27	86	89	60-146	3	30
2-Butanone	N.D.	37.5	38.12	37.5	39.45	102	105	59-141	3	30
Chloroform	1.25	5.00	6.70	5.00	6.58	109	107	80-120	2	30
Dichlorodifluoromethane	N.D.	5.00	4.94	5.00	4.81	99	96	43-123	3	30
1,2-Dichloroethane	N.D.	5.00	5.15	5.00	5.22	103	104	69-122	1	30
1,1-Dichloroethene	N.D.	5.00	5.23	5.00	5.27	105	105	80-131	1	30
cis-1,2-Dichloroethene	N.D.	5.00	5.54	5.00	5.55	111	111	80-120	0	30
trans-1,2-Dichloroethene	N.D.	5.00	5.18	5.00	5.25	104	105	80-120	1	30
Ethyl ether	0.635	5.00	6.03	5.00	6.21	108	111	72-121	3	30
Methylene Chloride	N.D.	5.00	5.31	5.00	5.28	106	106	80-120	1	30
Toluene	N.D.	5.00	5.40	5.00	5.40	108	108	80-120	0	30
Trichloroethene	0.481	5.00	5.83	5.00	5.92	107	109	80-120	2	30
Vinyl Chloride	N.D.	5.00	5.65	5.00	5.58	113	112	60-125	1	30
Xylene (Total)	N.D.	15	15.99	15	16.06	107	107	80-120	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 2096898
Reported: 05/01/2020 14:32

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20114WAH026	Sample number(s): 1302094-1302101 UNSPK: 1302095									
Diethylphthalate	N.D.	51.02	44.26	50.4	43.82	87	87	42-126	1	30
2,4-Dinitrotoluene	N.D.	51.02	46.8	50.4	47.07	92	93	66-122	1	30
2,6-Dinitrotoluene	N.D.	51.02	46.75	50.4	45.6	92	90	71-120	3	30
bis(2-Ethylhexyl)phthalate	N.D.	51.02	46.75	50.4	44.98	92	89	61-129	4	30
2-Nitroaniline	N.D.	51.02	45.13	50.4	45.38	88	90	66-126	1	30
4-Nitroaniline	N.D.	51.02	38.62	50.4	38.95	76	77	55-113	1	30
Nitrobenzene	N.D.	51.02	45.55	50.4	43.29	89	86	59-109	5	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: RAAP Unit 5 "J" and "K" lists
Batch number: H201201AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1302093	102	107	99	93
1302094	103	107	98	93
1302095	104	110	98	92
1302096	99	101	99	95
1302097	99	106	100	95
1302098	103	105	99	92
1302099	102	107	99	93
1302100	103	106	98	91
1302101	102	104	99	92
1302102	102	106	99	92
1302103	102	108	99	93
Blank	103	108	99	92
LCS	100	105	99	95
MS	99	101	99	95
MSD	99	106	100	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SVOAs 8270D/E MINI
Batch number: 20114WAH026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1302094	71	67	89
1302095	65	64	82

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 2096898
Reported: 05/01/2020 14:32

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SVOAs 8270D/E MINI
Batch number: 20114WAH026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1302096	84	74	96
1302097	83	79	95
1302098	76	72	68
1302099	85	78	68
1302100	79	74	68
1302101	79	73	91
Blank	57	47	71
LCS	76	68	96
MS	84	74	96
MSD	83	79	95
Limits:	38-113	44-102	34-128

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

11200 2096898 1302093-104

jcf 3-25-2020

CHAIN OF CUSTODY RECORD

JC 3/27/2020

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 **Event:** 2Qtr 2019 Corrective Action Annual Monitoring Event **DAA JN:** B03204-20A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES MB **Carrier:** 1Z 75Y 02X Y0 5775 8881 **Tracking Number:**		

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCL	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E Equipment Blank	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P Product	C H_2SO_4	G Other (Specify)	**Box 5: Sample Container Type**		Preserved and shipped on ice: YES
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

Box 4 - Sample Type				G			G					
Box 3 - Filtered/Unfiltered				U			U					
Required pH of Sample				<2								
Box 2 - Preservative				A			H					
Box 5 - Sample Container Type				3-40ml V			2-250mL AG					
Sample ID	**Date: 2020**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260C/5030C 25 ml purge Appendix J Analyte List**	**8260C/5030C 25 ml purge Appendix K Analyte List**	**8270D/3510C (Semivolatiles)**					
5W8B	4/20	0815	GW	3	X							upgradient monitoring well
5W5B	4/20	1055	GW	5	X	X	X					
5W7B	4/20	0955	GW	15	X	X	X					USE FOR QC
5WC21	4/20	1310	GW	5	X	X	X					
5WDUP	4/20	1320	GW	5	X	X	X					
5WC22	4/20	1140	GW	5	X	X	X					
5WC23	4/20	1225	GW	5	X	X	X					
5W12A	4/20	0915	GW	3	X							plume well
Trip Blank 1	4/20	—	T	2	X	X						1 per day. Delete Trip Blank 2 if not used.
~~Trip Blank 2~~			T	2	X	X						

GENERAL NOTES:

1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QLs attached.
5. ERIS DELIVERABLE

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 1.3 Received on Ice X Yes ____ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 4/20/2020	#1 Relinquished by (Signature):	Date: 4/20/2020	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ian McGregor	Date: 4-20-2020	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4-21-20	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 9:40	

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KO 4/17/2020

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – J Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL*
1.	Trichloroethene	79-01-6	1	0.177
2.	1,1-Dichloroethene	75-35-4	1	0.44
3.	Cis-1,2-Dichloroethene	156-59-2	1	0.1
4.	Trans-1,2-Dichloroethene	156-60-5	1	0.8
5.	Vinyl Chloride	75-01-4	1	0.1

Note: *Report current lab MDL if higher.

25 ml purge volume

JCf 3-25-2020

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ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – K Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Acetone	67-64-1	10	3
2.	Chloroform (trichloromethane)	67-66-3	1	0.1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10	1
4.	1,2-dichloroethane	107-06-2	1	0.147
5.	Methylene chloride (Dichloromethane)	75-09-2	1	0.182
6.	Toluene (methyl benzene)	108-88-3	1	0.1
7.	Xylenes (total)	1330-20-7	3	0.208
8.	Diethyl ether	60-29-7	12	0.39
9.	Dichlorodifluoromethane	75-71-8	1	0.28

Note.
2Q2010 is the first event under corrective action monitoring. Analyte list and monitoring wells sampled have changed from previous event.

Final Report must list the project required QLs and MDLs listed above. Report results between the project required QL and MDL as estimated value.

Rev 07-2014 permit mod. JCF

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25 ml purge volume

JCf 3-25-2020

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HWMU5 - Appendix K
Radford Army Ammunition Plant (RFAAP)
Groundwater Corrective Action Annual Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Bis(2-ethylhexyl)phthalate	117-81-7	6	1.5
2.	Diethyl phthalate	84-66-2	10	0.5
3.	2,4-dinitrotoluene	121-14-2	10	0.6
4.	2,6-dinitrotoluene	606-20-2	10	0.7
5.	2-Nitroaniline (o-Nitroaniline)	88-74-4	10	0.7
6.	4-Nitroaniline (p-Nitroaniline)	100-01-6	20	1.3
7.	Nitrobenzene	98-95-3	10	0.8

Final Report must list the project required QLs listed above. Report results between the project required QL and MDL noted above as estimated value. OK to report lab MDL if higher.

Note: # 5-7 added on Jan 2004 due To 4Q2003 detection. JCF 0104

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
Reviewed 4 Q 2006 -3/25/2020 4:48 PM
10/9/2007 JCF – 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfc
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. Checked 2015JCF

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Sample Administration Receipt Documentation Log

Doc Log ID: 282441

Group Number(s): 2096898

Client: DRAPER ADEN ASSOCIATES

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Date:	04/21/2020
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Jessenia Colon Martinez

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.3	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
TRIP BLANK	4	2	

2425 New Holland Pike
Lancaster, PA 17601-2422
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

GC/MS Volatiles

Fraction: Volatiles by GC/MS

RAAP Unit 5 "J" and "K" lists

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1302093	5W8B	X		1	
1302094	5W5B	X		1	
1302095	5W7B	X		1	Unspiked
1302096	5W7B Matrix Spike	X		1	Matrix Spike
1302097	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
1302098	5WC21	X		1	
1302099	5WDUP	X		1	Field Duplicate Sample
1302100	5WC22	X		1	
1302101	5WC23	X		1	
1302102	5W12A	X		1	
1302103	Trip Blank 1	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

GC/MS Volatiles

Fraction: Volatiles by GC/MS

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
RAAP Unit 5 "J" and "K" lists	H201201AA	VBLKH63	04/29/2020 09:55
		LCSH63	04/29/2020 09:11
		1302094	04/29/2020 11:00
		1302095 UNSPK	04/29/2020 11:22
		1302096 MS	04/29/2020 11:44
		1302097 MSD	04/29/2020 12:06
		1302098	04/29/2020 12:27
		1302099	04/29/2020 12:49
		1302100	04/29/2020 13:11
		1302101	04/29/2020 13:32
		1302103	04/29/2020 10:17
RAAP Unit 5 "J" list	H201201AA	1302093	04/29/2020 10:39
		1302102	04/29/2020 13:54

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAF60
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H201201AA / VBLKH63 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/29/20	N.D.	ug/l	0.3	1.0
Vinyl Chloride	04/29/20	N.D.	ug/l	0.1	1.0
Ethyl ether	04/29/20	N.D.	ug/l	0.4	12
1,1-Dichloroethene	04/29/20	N.D.	ug/l	0.4	1.0
Acetone	04/29/20	N.D.	ug/l	3.0	10
Methylene Chloride	04/29/20	N.D.	ug/l	0.2	1.0
trans-1,2-Dichloroethene	04/29/20	N.D.	ug/l	0.8	1.0
2-Butanone	04/29/20	N.D.	ug/l	1.0	10
cis-1,2-Dichloroethene	04/29/20	N.D.	ug/l	0.1	1.0
Chloroform	04/29/20	N.D.	ug/l	0.1	1.0
1,2-Dichloroethane	04/29/20	N.D.	ug/l	0.1	1.0
Trichloroethene	04/29/20	N.D.	ug/l	0.2	1.0
Toluene	04/29/20	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/29/20	N.D.	ug/l	0.2	3.0

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF60
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H201201AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH63	108	80 - 120	92	80 - 120	103	80 - 120	99	80 - 120
LCSH63	105	80 - 120	95	80 - 120	100	80 - 120	99	80 - 120
1302093	107	80 - 120	93	80 - 120	102	80 - 120	99	80 - 120
1302094	107	80 - 120	93	80 - 120	103	80 - 120	98	80 - 120
1302095 UNSPK	110	80 - 120	92	80 - 120	104	80 - 120	98	80 - 120
1302096 MS	101	80 - 120	95	80 - 120	99	80 - 120	99	80 - 120
1302097 MSD	106	80 - 120	95	80 - 120	99	80 - 120	100	80 - 120
1302098	105	80 - 120	92	80 - 120	103	80 - 120	99	80 - 120
1302099	107	80 - 120	93	80 - 120	102	80 - 120	99	80 - 120
1302100	106	80 - 120	91	80 - 120	103	80 - 120	98	80 - 120
1302101	104	80 - 120	92	80 - 120	102	80 - 120	99	80 - 120
1302102	106	80 - 120	92	80 - 120	102	80 - 120	99	80 - 120
1302103	108	80 - 120	93	80 - 120	102	80 - 120	99	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1302095 MS: 1302096 MSD: 1302097 **Analyte**	Batch: **H201201AA** (Sample number(s): 1302093-1302103)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	4.94	4.81	99	96	43-123	3	30
Vinyl Chloride	5.00	N.D.	5.65	5.58	113	112	60-125	1	30
Ethyl ether	5.00	0.635 J	6.03 J	6.21 J	108	111	72-121	3	30
1,1-Dichloroethene	5.00	N.D.	5.23	5.27	105	105	80-131	1	30
Acetone	37.5	N.D.	32.31	33.27	86	89	60-146	3	30
Methylene Chloride	5.00	N.D.	5.31	5.28	106	106	80-120	1	30
trans-1,2-Dichloroethene	5.00	N.D.	5.18	5.25	104	105	80-120	1	30
2-Butanone	37.5	N.D.	38.12	39.45	102	105	59-141	3	30
cis-1,2-Dichloroethene	5.00	N.D.	5.54	5.55	111	111	80-120	0	30
Chloroform	5.00	1.25	6.70	6.58	109	107	80-120	2	30
1,2-Dichloroethane	5.00	N.D.	5.15	5.22	103	104	69-122	1	30
Trichloroethene	5.00	0.481 J	5.83	5.92	107	109	80-120	2	30
Toluene	5.00	N.D.	5.40	5.40	108	108	80-120	0	30
Xylene (Total)	15	N.D.	15.99	16.06	107	107	80-120	0	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF60
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH63	Batch: **H201201AA** (Sample number(s): 1302093-1302103)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	4.18	NA	84	NA	43-123	NA	NA
Vinyl Chloride	5.00	5.01	NA	100	NA	60-125	NA	NA
Ethyl ether	5.00	5.15 J	NA	103	NA	72-121	NA	NA
1,1-Dichloroethene	5.00	4.55	NA	91	NA	80-131	NA	NA
Acetone	37.5	35.36	NA	94	NA	60-146	NA	NA
Methylene Chloride	5.00	4.86	NA	97	NA	80-120	NA	NA
trans-1,2-Dichloroethene	5.00	4.66	NA	93	NA	80-122	NA	NA
2-Butanone	37.5	39.16	NA	104	NA	59-141	NA	NA
cis-1,2-Dichloroethene	5.00	5.01	NA	100	NA	80-122	NA	NA
Chloroform	5.00	4.94	NA	99	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	4.92	NA	98	NA	69-122	NA	NA
Trichloroethene	5.00	4.86	NA	97	NA	80-120	NA	NA
Toluene	5.00	4.91	NA	98	NA	80-120	NA	NA
Xylene (Total)	15	14.48	NA	97	NA	80-120	NA	NA

Fraction: Volatiles by GC/MS

11996: RAAP Unit 5 "J" and "K" lists Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.3	1.0	ug/l
Vinyl Chloride	0.1	1.0	ug/l
Ethyl ether	0.4	12	ug/l
1,1-Dichloroethene	0.4	1.0	ug/l
Acetone	3.0	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
trans-1,2-Dichloroethene	0.8	1.0	ug/l
2-Butanone	1.0	10	ug/l
cis-1,2-Dichloroethene	0.1	1.0	ug/l
Chloroform	0.1	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l
Toluene	0.1	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hj06t01.d BFB Injection Date: 01/06/20

Instrument ID: HP19094 BFB Injection Time: 10:35

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.27
75	30.0 - 60.0% of mass 95	46.81
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.87 (1.05)1
174	Greater than 50.0% of mass 95	83.57
175	5.0 - 9.0% of mass 174	6.30 (7.54)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.22 (98.38)1
177	5.0 - 9.0% of mass 176	5.38 (6.54)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hj06i11.d	01/06/20	11:19
02	VSTD10	hj06i12.d	01/06/20	11:41
03	VSTD5	hj06i13.d	01/06/20	12:02
04	VSTD2	hj06i14.d	01/06/20	12:24
05	VSTD1	hj06i15.d	01/06/20	12:46
06	VSTD.5	hj06i16.d	01/06/20	13:07
07	VSTD.2	hj06i17.d	01/06/20	13:29
08	ICVH01	hj06v11.d	01/06/20	13:51
09	VSTD25	hj06i01.d	01/06/20	14:34
10	VSTD10	hj06i02.d	01/06/20	14:56
11	VSTD5	hj06i03.d	01/06/20	15:18
12	VSTD2	hj06i04.d	01/06/20	15:39
13	VSTD1	hj06i05.d	01/06/20	16:01
14	VSTD.5	hj06i06.d	01/06/20	16:23
15	VSTD.2	hj06i07.d	01/06/20	16:44
16	ICVH00	hj06v01.d	01/06/20	17:06

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ha29t01.d BFB Injection Date: 04/29/20

Instrument ID: HP19094 BFB Injection Time: 08:14

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.78
75	30.0 - 60.0% of mass 95	47.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.17
173	Less than 2.0% of mass 174	1.20 (1.32)1
174	Greater than 50.0% of mass 95	90.42
175	5.0 - 9.0% of mass 174	7.11 (7.86)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.88 (98.30)1
177	5.0 - 9.0% of mass 176	5.66 (6.37)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ha29c01.d	04/29/20	08:50
02	LCSH63	ha29l01.d	04/29/20	09:11
03	LCSH64	ha29l31.d	04/29/20	09:11
04	VBLKH63	ha29b01.d	04/29/20	09:55
05	VBLKH64	ha29b30.d	04/29/20	09:55
06	1302103	ha29s02.d	04/29/20	10:17
07	1302093	ha29s03.d	04/29/20	10:39
08	1302094	ha29s04.d	04/29/20	11:00
09	1302095	ha29s05.d	04/29/20	11:22
10	1302096MS	ha29s06.d	04/29/20	11:44
11	1302097MSD	ha29s07.d	04/29/20	12:06
12	1302098	ha29s08.d	04/29/20	12:27
13	1302099	ha29s09.d	04/29/20	12:49
14	1302100	ha29s10.d	04/29/20	13:11
15	1302101	ha29s11.d	04/29/20	13:32
16	1302102	ha29s12.d	04/29/20	13:54
17	1302262	ha29s32.d	04/29/20	14:16
18	1302263	ha29s33.d	04/29/20	14:37
19	1302265	ha29s34.d	04/29/20	14:59
20	1302258	ha29s35.d	04/29/20	15:21
21	1302259MS	ha29s36.d	04/29/20	15:43
22	1302260MSD	ha29s37.d	04/29/20	16:04

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: ha29t01.d BFB Injection Date: 04/29/20

Instrument ID: HP19094 BFB Injection Time: 08:14

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.78
75	30.0 - 60.0% of mass 95	47.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.17
173	Less than 2.0% of mass 174	1.20 (1.32)1
174	Greater than 50.0% of mass 95	90.42
175	5.0 - 9.0% of mass 174	7.11 (7.86)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.88 (98.30)1
177	5.0 - 9.0% of mass 176	5.66 (6.37)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1302256	ha29s38.d	04/29/20	16:48
24	1302256DL	ha29s39.d	04/29/20	17:09
25	1302257	ha29s40.d	04/29/20	17:31
26	1302257DL	ha29s41.d	04/29/20	17:53
27	1302255	ha29s42.d	04/29/20	18:14
28	1302255DL	ha29s43.d	04/29/20	18:36
29	1302264	ha29s44.d	04/29/20	18:58
30	1302264DL	ha29s45.d	04/29/20	19:20

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hj06i07.d RRF0.5= hj06i06.d RRF 1 = hj06i05.d
RRF 2 = hj06i04.d RRF 5 = hj06i03.d RRF 10= hj06i02.d RRF 25= hj06i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3097	0.3849	0.3783	0.3762	0.3923	0.3917	0.3909	0.3749	8	AVG #
Chloromethane	#0.3844	0.3706	0.3648	0.3602	0.3703	0.3727	0.3674	0.3700	2	AVG #
Vinyl Chloride	#0.3387	0.3441	0.3484	0.3494	0.3624	0.3634	0.3575	0.3520	3	AVG #
1,3-Butadiene	0.2904	0.2466	0.2826	0.2753	0.2838	0.2863	0.2813	0.2781	5	AVG
Bromomethane	#0.2624	0.2576	0.2458	0.2474	0.2514	0.2534	0.2470	0.2521	2	AVG #
Chloroethane	#0.2030	0.2012	0.2031	0.2003	0.2060	0.2087	0.2045	0.2039	1	AVG #
Dichlorofluoromethane	0.5189	0.4924	0.4752	0.4782	0.4800	0.4783	0.4657	0.4841	4	AVG
Trichlorofluoromethane	#0.3499	0.4155	0.4012	0.4126	0.4146	0.4171	0.4009	0.4017	6	AVG #
Ethyl ether	0.1775	0.1704	0.1750	0.1761	0.1810	0.1853	0.1791	0.1778	3	AVG
Freon 123a	0.3167	0.2815	0.3200	0.3089	0.3200	0.3184	0.3084	0.3106	4	AVG
Acrolein	2.2893	2.2311	2.2350	2.1747	2.3312	2.2106	2.2888	2.2515	2	AVG
1,1-Dichloroethene	#0.2463	0.2301	0.2481	0.2428	0.2504	0.2501	0.2423	0.2443	3	AVG #
Freon 113	#0.2400	0.2146	0.2713	0.2610	0.2726	0.2672	0.2610	0.2554	8	AVG #
Acetone	#3.2700	3.4833	3.1681	2.8864	2.9450	2.7454	2.7687	3.0381	9	AVG #
Methyl Iodide	0.4685	0.4375	0.4809	0.4716	0.4833	0.4821	0.4763	0.4715	3	AVG
Bromoethane	0.2191	0.2159	0.2059	0.2076	0.2148	0.2163	0.2125	0.2131	2	AVG
Carbon Disulfide	#0.7928	0.6951	0.7570	0.7457	0.7536	0.7497	0.7377	0.7474	4	AVG #
Allyl Chloride	0.4734	0.4034	0.4117	0.3979	0.4100	0.4070	0.4017	0.4150	6	AVG
Methyl Acetate	#	7.4161	9.1355	7.3807	7.4710	7.0045	7.5915	7.6666	10	AVG #
Methylene Chloride	#0.2800	0.2558	0.2667	0.2588	0.2602	0.2619	0.2573	0.2630	3	AVG #
t-Butyl Alcohol	1.0663	1.0365	1.0727	1.0640	1.0491	1.0866	1.0123	1.0554	2	AVG
Acrylonitrile	3.6438	3.7208	3.7153	3.6754	3.7852	3.6366	3.7748	3.7074	2	AVG
trans-1,2-Dichloroethene	#0.2864	0.2546	0.2680	0.2637	0.2708	0.2705	0.2661	0.2686	4	AVG #
Methyl Tertiary Butyl Ether	#0.5512	0.5319	0.5663	0.5659	0.5663	0.5757	0.5526	0.5586	3	AVG #
n-Hexane	0.3699	0.3341	0.3889	0.3819	0.3991	0.3915	0.3863	0.3788	6	AVG
1,1-Dichloroethane	#0.4964	0.4403	0.4886	0.4815	0.4974	0.4971	0.4929	0.4849	4	AVG #
di-Isopropyl Ether	0.8052	0.7480	0.8030	0.7976	0.8161	0.8179	0.8029	0.7987	3	AVG
2-Chloro-1,3-Butadiene	0.4129	0.3836	0.4208	0.4118	0.4293	0.4264	0.4213	0.4152	4	AVG
Ethyl t-butyl ether	0.7495	0.7218	0.7503	0.7485	0.7595	0.7704	0.7486	0.7498	2	AVG
cis-1,2-Dichloroethene	#0.3007	0.2855	0.3035	0.2938	0.3037	0.3023	0.2996	0.2984	2	AVG #
2,2-Dichloropropane	0.4256	0.3737	0.4168	0.4103	0.4257	0.4229	0.4132	0.4126	4	AVG
2-Butanone	#5.1154	4.8469	4.7174	4.5786	4.7595	4.5295	4.7056	4.7504	4	AVG #
Propionitrile	1.3075	1.2477	1.3026	1.2681	1.3494	1.3095	1.3240	1.3013	3	AVG
Methacrylonitrile	4.4887	4.5935	4.6153	4.5782	4.8968	4.5862	4.8192	4.6540	3	AVG
Bromochloromethane	0.1274	0.1253	0.1269	0.1251	0.1275	0.1270	0.1229	0.1260	1	AVG
Tetrahydrofuran	1.3100	1.2888	1.2986	1.3006	1.3566	1.2936	1.3388	1.3124	2	AVG
Chloroform	#0.4667	0.4470	0.4748	0.4828	0.4833	0.4813	0.4767	0.4732	3	AVG #
1,1,1-Trichloroethane	#0.4444	0.4107	0.4449	0.4407	0.4498	0.4454	0.4447	0.4401	3	AVG #
Cyclohexane	#0.4672	0.4316	0.4834	0.4694	0.4843	0.4803	0.4740	0.4700	4	AVG #
Cyclohexane(2)	#0.3806	0.3420	0.4231	0.4091	0.4294	0.4200	0.4139	0.4026	8	AVG #
Cyclohexane(3)	#0.1465	0.1257	0.1545	0.1478	0.1525	0.1493	0.1478	0.1463	7	AVG #
1,1-Dichloropropene	0.3558	0.3395	0.3774	0.3744	0.3874	0.3848	0.3844	0.3720	5	AVG
Carbon Tetrachloride	#0.3738	0.3438	0.3839	0.3764	0.3884	0.3885	0.3866	0.3773	4	AVG #
Isobutyl Alcohol	0.4694	0.3757	0.3606	0.3497	0.3405	0.3387	0.3262	0.3658	13	AVG
Benzene	#1.0846	1.0211	1.1054	1.0888	1.1082	1.1041	1.1019	1.0877	3	AVG #
1,2-Dichloroethane	#0.3049	0.2745	0.2857	0.2728	0.2767	0.2762	0.2722	0.2804	4	AVG #
t-Amyl methyl ether	0.6357	0.6339	0.6616	0.6652	0.6592	0.6697	0.6524	0.6539	2	AVG
n-Heptane	0.4155	0.3385	0.4126	0.3960	0.4081	0.4090	0.4019	0.3974	7	AVG
n-Butanol	0.2834	0.2883	0.3017	0.3008	0.3100	0.2997	0.2775	0.2945	4	AVG
Trichloroethene	#0.2904	0.2556	0.2917	0.2844	0.2927	0.2902	0.2918	0.2852	5	AVG #
Methylcyclohexane	#0.4544	0.5019	0.5117	0.5207	0.5375	0.5283	0.5227	0.5110	5	AVG #
1,2-Dichloropropane	#0.2696	0.2531	0.2739	0.2730	0.2707	0.2731	0.2702	0.2691	3	AVG #

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hj06i07.d RRF0.5= hj06i06.d RRF 1 = hj06i05.d
RRF 2 = hj06i04.d RRF 5 = hj06i03.d RRF 10= hj06i02.d RRF 25= hj06i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Methyl Methacrylate	9.0900	9.3502	9.3021	9.1910	9.7770	9.1723	9.6522	9.3621	3	AVG
Dibromomethane	0.1212	0.1183	0.1293	0.1233	0.1238	0.1234	0.1219	0.1230	3	AVG
1,4-Dioxane		0.0573	0.0723	0.0808	0.0838	0.0754	0.0565	0.0710	16	AVG
Bromodichloromethane	#0.3205	0.3236	0.3371	0.3352	0.3352	0.3419	0.3468	0.3343	3	AVG #
2-Nitropropane	3.2316	3.0276	2.9775	2.9749	3.1206	3.0117	3.1811	3.0750	3	AVG
1-Bromo-2-chloroethane	0.2432	0.2568	0.2489	0.2508	0.2551	0.2578	0.2580	0.2529	2	AVG
cis-1,3-Dichloropropene	#0.3694	0.3660	0.3991	0.3952	0.4065	0.4135	0.4143	0.3948	5	AVG #
4-Methyl-2-Pentanone	#11.689	11.445	11.679	11.451	12.107	11.578	12.010	11.708	2	AVG #
Toluene	#0.9582	0.8631	0.9491	0.9424	0.9593	0.9462	0.9328	0.9359	4	AVG #
trans-1,3-Dichloropropene	#0.4385	0.3983	0.4332	0.4356	0.4404	0.4462	0.4485	0.4344	4	AVG #
Ethyl Methacrylate	0.3239	0.3247	0.3481	0.3371	0.3376	0.3463	0.3393	0.3367	3	AVG
1,1,2-Trichloroethane	#0.2405	0.2274	0.2363	0.2325	0.2353	0.2385	0.2355	0.2351	2	AVG #
Tetrachloroethene	#0.4363	0.3889	0.4380	0.4243	0.4306	0.4324	0.4272	0.4254	4	AVG #
1,3-Dichloropropane	0.4043	0.3821	0.4191	0.4064	0.4034	0.4094	0.4031	0.4040	3	AVG
2-Hexanone	#7.9283	7.9187	8.1810	7.8730	8.2441	7.7916	8.0670	8.0005	2	AVG #
Dibromochloromethane	#0.2937	0.2799	0.3032	0.2987	0.3062	0.3128	0.3131	0.3011	4	AVG #
1,2-Dibromoethane	#0.2153	0.2140	0.2251	0.2255	0.2286	0.2342	0.2302	0.2247	3	AVG #
1-Chlorohexane	0.6423	0.5286	0.5784	0.5490	0.5560	0.5478	0.5475	0.5642	7	AVG
Chlorobenzene	#1.0386	0.9715	1.0468	1.0269	1.0395	1.0244	1.0099	1.0225	2	AVG #
1,1,1,2-Tetrachloroethane	0.3747	0.3370	0.3630	0.3634	0.3733	0.3703	0.3642	0.3637	3	AVG
Ethylbenzene	#1.8831	1.7348	1.8850	1.8440	1.8692	1.8503	1.8248	1.8416	3	AVG #
m+p-Xylene	#0.7059	0.6564	0.7237	0.7167	0.7198	0.7099	0.6969	0.7042	3	AVG #
o-Xylene	#0.6857	0.6423	0.7052	0.7025	0.7087	0.7057	0.6970	0.6924	3	AVG #
Styrene	#1.0823	1.0546	1.1453	1.1483	1.1530	1.1521	1.1302	1.1237	3	AVG #
Bromoform	#0.1633	0.1645	0.1757	0.1781	0.1782	0.1852	0.1834	0.1755	5	AVG #
Isopropylbenzene	#1.8487	1.7689	1.9137	1.8892	1.9361	1.9068	1.8732	1.8767	3	AVG #
1,1,2,2-Tetrachloroethane	#0.4994	0.4980	0.5251	0.5207	0.5272	0.5453	0.5391	0.5221	3	AVG #
Bromobenzene	0.8059	0.7131	0.7937	0.7855	0.8114	0.8121	0.8029	0.7892	4	AVG
trans-1,4-Dichloro-2-butene	4.1891	4.2507	4.3730	4.3458	4.6463	4.3757	4.6071	4.3982	4	AVG
1,2,3-Trichloropropane	0.1329	0.1349	0.1383	0.1456	0.1436	0.1429	0.1406	0.1398	3	AVG
n-Propylbenzene	4.0038	3.7608	4.1898	4.1439	4.3013	4.2499	4.1984	4.1211	4	AVG
2-Chlorotoluene	0.8233	0.7428	0.8120	0.8069	0.8423	0.8318	0.8324	0.8131	4	AVG
1,3,5-Trimethylbenzene	2.8683	2.7354	3.0313	2.9795	3.1123	3.1073	3.0940	2.9897	5	AVG
4-Chlorotoluene	0.8217	0.7498	0.8101	0.8115	0.8336	0.8310	0.8225	0.8115	4	AVG
tert-Butylbenzene	0.5960	0.5587	0.6274	0.6022	0.6546	0.6445	0.6449	0.6183	6	AVG
Pentachloroethane	0.5351	0.5182	0.5016	0.5034	0.5370	0.5464	0.5471	0.5270	4	AVG
1,2,4-Trimethylbenzene	3.0470	2.8069	3.1134	3.0700	3.2193	3.1924	3.1614	3.0872	4	AVG
sec-Butylbenzene	3.6634	3.4932	3.9040	3.8869	4.0805	4.0498	4.0364	3.8735	6	AVG
1,3-Dichlorobenzene	#1.5516	1.4564	1.5818	1.5697	1.6170	1.6185	1.6149	1.5728	4	AVG #
p-Isopropyltoluene	3.2134	2.9781	3.3743	3.3312	3.5064	3.4772	3.4553	3.3337	6	AVG
1,4-Dichlorobenzene	#1.5411	1.4393	1.5240	1.5288	1.5664	1.5739	1.5662	1.5342	3	AVG #
1,2,3-Trimethylbenzene	1.3591	1.2555	1.2679	1.2337	1.3070	1.2919	1.2966	1.2874	3	AVG
Benzyl Chloride	0.2076	0.1893	0.2210	0.2156	0.2297	0.2352	0.2380	0.2195	8	AVG
n-Butylbenzene	1.5451	1.4501	1.6692	1.6573	1.7438	1.7424	1.7279	1.6480	7	AVG
1,2-Dichlorobenzene	#1.3261	1.3151	1.4032	1.4162	1.4151	1.4260	1.4033	1.3864	3	AVG #
1,2-Dibromo-3-chloropropane	#2.2552	2.1963	2.5713	2.5323	2.6799	2.5504	2.7733	2.5084	8	AVG #
1,3,5-Trichlorobenzene	1.1407	1.0902	1.2060	1.1954	1.3088	1.3191	1.3559	1.2309	8	AVG
1,2,4-Trichlorobenzene	#1.0027	0.9074	0.9860	0.9977	1.0738	1.1222	1.1358	1.0322	8	AVG #
Hexachlorobutadiene	0.5135	0.4561	0.5355	0.5284	0.5712	0.5840	0.5821	0.5387	9	AVG
Naphthalene	1.6782	1.6582	1.8169	1.7840	1.8578	1.9200	1.8943	1.8013	6	AVG
1,2,3-Trichlorobenzene	0.7996	0.8006	0.8629	0.8740	0.9308	0.9483	0.9518	0.8811	7	AVG
Dibromofluoromethane	0.2477	0.2456	0.2483	0.2493	0.2486	0.2509	0.2497	0.2486	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hj06i07.d RRF0.5= hj06i06.d RRF 1 = hj06i05.d
RRF 2 = hj06i04.d RRF 5 = hj06i03.d RRF 10= hj06i02.d RRF 25= hj06i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromofluoromethane(2)	0.2549	0.2544	0.2555	0.2559	0.2536	0.2572	0.2563	0.2554	0	AVG
1,2-Dichloroethane-d4	0.0472	0.0483	0.0482	0.0489	0.0480	0.0483	0.0483	0.0482	1	AVG
1,2-Dichloroethane-d4(2)	0.2204	0.2241	0.2240	0.2252	0.2192	0.2227	0.2204	0.2223	1	AVG
1,2-Dichloroethane-d4(3)	0.0301	0.0306	0.0309	0.0310	0.0300	0.0304	0.0306	0.0305	1	AVG
Toluene-d8	1.3324	1.3300	1.3321	1.3440	1.3324	1.3267	1.3286	1.3323	0	AVG
Toluene-d8(2)	0.8602	0.8569	0.8641	0.8678	0.8646	0.8582	0.8598	0.8616	0	AVG
4-Bromofluorobenzene	0.4987	0.4950	0.4949	0.4985	0.4896	0.4877	0.4860	0.4929	1	AVG
4-Bromofluorobenzene(2)	0.4239	0.4230	0.4242	0.4248	0.4203	0.4167	0.4195	0.4218	1	AVG

Average %RSD 4

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i01.d	VSTD025
/chem2/HP19094.i/20jan06i.b/hj06i02.d	VSTD010
/chem2/HP19094.i/20jan06i.b/hj06i03.d	VSTD005
/chem2/HP19094.i/20jan06i.b/hj06i04.d	VSTD002
/chem2/HP19094.i/20jan06i.b/hj06i05.d	VSTD001
/chem2/HP19094.i/20jan06i.b/hj06i06.d	VSTD0.5
/chem2/HP19094.i/20jan06i.b/hj06i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	113987	123863	115826	125392	124021	118243	115841	119596	4	Yes
Fluorobenzene	1932435	1942157	1972661	1989998	1989646	1956262	1935544	1959815	1	Yes
Chlorobenzene-d5	1455879	1453618	1473060	1474389	1476031	1457562	1434543	1460726	1	Yes
1,4-Dichlorobenzene-d4	746931	753053	772144	794109	798465	784772	777924	775343	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. RT
t-Butyl Alcohol-d10	4.476	4.464	4.483	4.458	4.458	4.464	4.470	4.468
Fluorobenzene	7.964	7.964	7.964	7.957	7.958	7.957	7.957	7.960
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.384	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.255	13.255	13.255	13.255	13.255	13.255	13.255

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 01/08/2020 at 10:31.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06

Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3749	0.3201	4.27	5	-15	#
# Chloromethane	0.3700	0.3393	4.58	5	-8	#
# Vinyl Chloride	0.3520	0.3408	4.84	5	-3	#
1,3-Butadiene	0.2781	0.3046	5.48	5	10	
# Bromomethane	0.2521	0.2433	4.82	5	-4	#
# Chloroethane	0.2039	0.2045	5.02	5	0	#
Dichlorofluoromethane	0.4841	0.4759	4.92	5	-2	
# Trichlorofluoromethane	0.4017	0.4334	5.39	5	8	#
Ethyl ether	0.1778	0.1796	5.05	5	1	
Freon 123a	0.3106	0.3259	5.25	5	5	
Acrolein	2.2515	2.2144	36.88	37.5	-2	
# 1,1-Dichloroethene	0.2443	0.2488	5.09	5	2	#
# Freon 113	0.2554	0.2674	5.24	5	5	#
# Acetone	3.0381	2.7604	34.07	37.5	-9	#
Methyl Iodide	0.4715	0.4682	4.97	5	-1	
Bromoethane	0.2131	0.2262	5.31	5	6	
# Carbon Disulfide	0.7474	0.7334	4.91	5	-2	#
Allyl Chloride	0.4150	0.3969	4.78	5	-4	
# Methyl Acetate	7.6666	7.4992	4.89	5	-2	#
# Methylene Chloride	0.2630	0.2662	5.06	5	1	#
t-Butyl Alcohol	1.0554	1.0288	48.74	50	-3	
Acrylonitrile	3.7074	3.7529	25.31	25	1	
# trans-1,2-Dichloroethene	0.2686	0.2708	5.04	5	1	#
# Methyl Tertiary Butyl Ether	0.5586	0.5830	5.22	5	4	#
n-Hexane	0.3788	0.3874	5.11	5	2	
# 1,1-Dichloroethane	0.4849	0.5023	5.18	5	4	#
di-Isopropyl Ether	0.7987	0.8120	5.08	5	2	
2-Chloro-1,3-Butadiene	0.4152	0.4299	5.18	5	4	
Ethyl t-butyl ether	0.7498	0.7685	5.12	5	2	
# cis-1,2-Dichloroethene	0.2984	0.3237	5.42	5	8	#
2,2-Dichloropropane	0.4126	0.4213	5.11	5	2	
# 2-Butanone	4.7504	4.6847	36.98	37.5	-1	#
Propionitrile	1.3013	1.3348	38.47	37.5	3	
Methacrylonitrile	4.6540	4.9263	39.69	37.5	6	
Bromochloromethane	0.1260	0.1227	4.87	5	-3	
Tetrahydrofuran	1.3124	1.3898	26.47	25	6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06

Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Chloroform	0.4732	0.4985	5.27	5	5	#
# 1,1,1-Trichloroethane	0.4401	0.4474	5.08	5	2	#
# Cyclohexane	0.4700	0.4695	4.99	5	0	#
1,1-Dichloropropene	0.3720	0.3846	5.17	5	3	
# Carbon Tetrachloride	0.3773	0.3969	5.26	5	5	#
Isobutyl Alcohol	0.3658	0.3294	112.57	125	-10	
# Benzene	1.0877	1.1105	5.10	5	2	#
# 1,2-Dichloroethane	0.2804	0.2841	5.07	5	1	#
t-Amyl methyl ether	0.6539	0.6666	5.10	5	2	
n-Heptane	0.3974	0.3827	4.81	5	-4	
n-Butanol	0.2945	0.2562	217.49	250	-13	
# Trichloroethene	0.2852	0.2961	5.19	5	4	#
# Methylcyclohexane	0.5110	0.5002	4.89	5	-2	#
# 1,2-Dichloropropane	0.2691	0.2785	5.17	5	3	#
Methyl Methacrylate	9.3621	9.9193	5.30	5	6	
Dibromomethane	0.1230	0.1261	5.13	5	3	
1,4-Dioxane	0.0710	0.0596	104.88	125	-16	
# Bromodichloromethane	0.3343	0.3516	5.26	5	5	#
2-Nitropropane	3.0750	3.1165	5.07	5	1	
1-Bromo-2-Chloroethane	0.2529	0.2590	5.04	5	0	
# cis-1,3-Dichloropropene	0.3948	0.4096	5.19	5	4	#
# 4-Methyl-2-Pentanone	11.708	11.9190	25.45	25	2	#
# Toluene	0.9359	0.9616	5.14	5	3	#
# trans-1,3-Dichloropropene	0.4344	0.4412	5.08	5	2	#
Ethyl Methacrylate	0.3367	0.3344	4.97	5	-1	
# 1,1,2-Trichloroethane	0.2351	0.2437	5.18	5	4	#
# Tetrachloroethene	0.4254	0.4467	5.25	5	5	#
1,3-Dichloropropane	0.4040	0.4093	5.07	5	1	
# 2-Hexanone	8.0005	8.4443	26.39	25	6	#
# Dibromochloromethane	0.3011	0.3198	5.31	5	6	#
# 1,2-Dibromoethane	0.2247	0.2335	5.20	5	4	#
1-Chlorohexane	0.5642	0.5459	4.84	5	-3	
# Chlorobenzene	1.0225	1.0544	5.16	5	3	#
1,1,1,2-Tetrachloroethane	0.3637	0.3717	5.11	5	2	
# Ethylbenzene	1.8416	1.8833	5.11	5	2	#
# m+p-Xylene	0.7042	0.7318	10.39	10	4	#
# o-Xylene	0.6924	0.7141	5.16	5	3	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06

Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Styrene	1.1237	1.1749	5.23	5	5	#
# Bromoform	0.1755	0.1814	5.17	5	3	#
# Isopropylbenzene	1.8767	1.9613	5.23	5	5	#
# 1,1,2,2-Tetrachloroethane	0.5221	0.5351	5.12	5	2	#
Bromobenzene	0.7892	0.8162	5.17	5	3	
trans-1,4-Dichloro-2-butene	4.3982	4.6890	26.65	25	7	
1,2,3-Trichloropropane	0.1398	0.1491	5.33	5	7	
n-Propylbenzene	4.1211	4.3318	5.26	5	5	
2-Chlorotoluene	0.8131	0.8455	5.20	5	4	
1,3,5-Trimethylbenzene	2.9897	3.0960	5.18	5	4	
4-Chlorotoluene	0.8115	0.8366	5.15	5	3	
tert-Butylbenzene	0.6183	0.6465	5.23	5	5	
Pentachloroethane	0.5270	0.5198	4.93	5	-1	
1,2,4-Trimethylbenzene	3.0872	3.1484	5.10	5	2	
sec-Butylbenzene	3.8735	4.0509	5.23	5	5	
# 1,3-Dichlorobenzene	1.5728	1.6190	5.15	5	3	#
p-Isopropyltoluene	3.3337	3.4736	5.21	5	4	
# 1,4-Dichlorobenzene	1.5342	1.6011	5.22	5	4	#
1,2,3-Trimethylbenzene	1.2874	1.2871	5.00	5	0	
Benzyl Chloride	0.2195	0.1994	4.54	5	-9	
n-Butylbenzene	1.6480	1.7077	5.18	5	4	
# 1,2-Dichlorobenzene	1.3864	1.4475	5.22	5	4	#
# 1,2-Dibromo-3-chloropropane	2.5084	2.7000	5.38	5	8	#
1,3,5-Trichlorobenzene	1.2309	1.2744	5.18	5	4	
# 1,2,4-Trichlorobenzene	1.0322	1.0719	5.19	5	4	#
Hexachlorobutadiene	0.5387	0.5618	5.21	5	4	
Naphthalene	1.8013	1.8460	5.12	5	2	
1,2,3-Trichlorobenzene	0.8811	0.9152	5.19	5	4	

Average %Drift 4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i07.d
/chem2/HP19094.i/20jan06i.b/hj06i06.d
/chem2/HP19094.i/20jan06i.b/hj06i05.d
/chem2/HP19094.i/20jan06i.b/hj06i04.d
/chem2/HP19094.i/20jan06i.b/hj06i03.d
/chem2/HP19094.i/20jan06i.b/hj06i02.d
/chem2/HP19094.i/20jan06i.b/hj06i01.d

File /chem2/HP19094.i/20jan06i.b/hj06i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20apr29a.b/ha29c01.d

RT Summary

Internal Standard Name	File ID: ha29c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.464	4.464	Yes
Fluorobenzene	7.958	7.964	Yes
Chlorobenzene-d5	11.372	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ha29c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	130148	123863	61932	247726	Yes
Fluorobenzene	2101028	1942157	971078	3884314	Yes
Chlorobenzene-d5	1564978	1453618	726809	2907236	Yes
1,4-Dichlorobenzene-d4	818818	753053	376526	1506106	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/29/2020 at 09:18

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 04/29/20 Time: 08:50

Lab File ID: ha29c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3749	0.3284	8.76	10	-12	#
# Chloromethane	0.3700	0.3535	9.55	10	-4	#
# Vinyl Chloride	0.3520	0.3417	9.71	10	-3	#
1,3-Butadiene	0.2781	0.3884	13.97	10	40	<-
# Bromomethane	0.2521	0.2362	9.37	10	-6	#
# Chloroethane	0.2039	0.1931	9.47	10	-5	#
Dichlorofluoromethane	0.4841	0.4634	9.57	10	-4	
# Trichlorofluoromethane	0.4017	0.4063	10.11	10	1	#
Ethyl ether	0.1778	0.1556	8.75	10	-12	
Freon 123a	0.3106	0.2966	9.55	10	-5	
Acrolein	2.2515	2.1164	469.99	500	-6	
# 1,1-Dichloroethene	0.2443	0.2144	8.78	10	-12	#
# Freon 113	0.2554	0.2346	9.19	10	-8	#
# Acetone	3.0381	2.7486	90.47	100	-10	#
Methyl Iodide	0.4715	0.4324	9.17	10	-8	
Bromoethane	0.2131	0.1829	8.58	10	-14	
# Carbon Disulfide	0.7474	0.6577	8.80	10	-12	#
Allyl Chloride	0.4150	0.3521	8.48	10	-15	
# Methyl Acetate	7.6666	7.4682	9.74	10	-3	#
# Methylene Chloride	0.2630	0.2461	9.36	10	-6	#
t-Butyl Alcohol	1.0554	0.8962	169.84	200	-15	
Acrylonitrile	3.7074	3.7661	50.79	50	2	
# trans-1,2-Dichloroethene	0.2686	0.2420	9.01	10	-10	#
# Methyl Tertiary Butyl Ether	0.5586	0.4895	8.76	10	-12	#
n-Hexane	0.3788	0.3611	9.53	10	-5	
# 1,1-Dichloroethane	0.4849	0.4615	9.52	10	-5	#
di-Isopropyl Ether	0.7987	0.7965	9.97	10	0	
2-Chloro-1,3-Butadiene	0.4152	0.3828	9.22	10	-8	
Ethyl t-butyl ether	0.7498	0.6710	8.95	10	-11	
# cis-1,2-Dichloroethene	0.2984	0.2822	9.46	10	-5	#
2,2-Dichloropropane	0.4126	0.3681	8.92	10	-11	
# 2-Butanone	4.7504	4.8220	101.51	100	2	#
Propionitrile	1.3013	1.3929	214.08	200	7	
Methacrylonitrile	4.6540	4.8557	104.33	100	4	
Bromochloromethane	0.1260	0.1147	9.10	10	-9	
Tetrahydrofuran	1.3124	1.3000	99.06	100	-1	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 04/29/20 Time: 08:50

Lab File ID: ha29c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Chloroform	0.4732	0.4505	9.52	10	-5	#
# 1,1,1-Trichloroethane	0.4401	0.3930	8.93	10	-11	#
# Cyclohexane	0.4700	0.4410	9.38	10	-6	#
# Cyclohexane(2)	0.4026	0.3643	9.05	10	-10	#
# Cyclohexane(3)	0.1463	0.1333	9.11	10	-9	#
1,1-Dichloropropene	0.3720	0.3579	9.62	10	-4	
# Carbon Tetrachloride	0.3773	0.3497	9.27	10	-7	#
Isobutyl Alcohol	0.3658	0.3458	472.60	500	-5	
# Benzene	1.0877	1.0647	9.79	10	-2	#
# 1,2-Dichloroethane	0.2804	0.2640	9.42	10	-6	#
t-Amyl methyl ether	0.6539	0.5926	9.06	10	-9	
n-Heptane	0.3974	0.4013	10.10	10	1	
n-Butanol	0.2945	0.3110	1056.17	1000	6	
# Trichloroethene	0.2852	0.2741	9.61	10	-4	#
# Methylcyclohexane	0.5110	0.4342	8.50	10	-15	#
# 1,2-Dichloropropane	0.2691	0.2758	10.25	10	2	#
Methyl Methacrylate	9.3621	9.1767	9.80	10	-2	
Dibromomethane	0.1230	0.1200	9.75	10	-2	
1,4-Dioxane	0.0710	0.0699	492.23	500	-2	
# Bromodichloromethane	0.3343	0.3259	9.75	10	-3	#
2-Nitropropane	3.0750	2.5989	84.52	100	-15	
1-Bromo-2-chloroethane	0.2529	0.2663	10.53	10	5	
# cis-1,3-Dichloropropene	0.3948	0.3950	10.00	10	0	#
# 4-Methyl-2-Pentanone	11.7080	11.8687	101.37	100	1	#
# Toluene	0.9359	0.9161	9.79	10	-2	#
# trans-1,3-Dichloropropene	0.4344	0.4144	9.54	10	-5	#
Ethyl Methacrylate	0.3367	0.3252	9.66	10	-3	
# 1,1,2-Trichloroethane	0.2351	0.2365	10.06	10	1	#
# Tetrachloroethene	0.4254	0.4163	9.79	10	-2	#
1,3-Dichloropropane	0.4040	0.4133	10.23	10	2	
# 2-Hexanone	8.0005	8.2251	102.81	100	3	#
# Dibromochloromethane	0.3011	0.2986	9.92	10	-1	#
# 1,2-Dibromoethane	0.2247	0.2318	10.32	10	3	#
1-Chlorohexane	0.5642	0.5127	9.09	10	-9	
# Chlorobenzene	1.0225	1.0101	9.88	10	-1	#
1,1,1,2-Tetrachloroethane	0.3637	0.3560	9.79	10	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 04/29/20 Time: 08:50

Lab File ID: ha29c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Ethylbenzene	1.8416	1.7659	9.59	10	-4	#
# m+p-Xylene	0.7042	0.6945	19.72	20	-1	#
# o-Xylene	0.6924	0.6675	9.64	10	-4	#
# Styrene	1.1237	1.1176	9.95	10	-1	#
# Bromoform	0.1755	0.1734	9.88	10	-1	#
# Isopropylbenzene	1.8767	1.7724	9.44	10	-6	#
# 1,1,2,2-Tetrachloroethane	0.5221	0.5359	10.26	10	3	#
Bromobenzene	0.7892	0.8050	10.20	10	2	
trans-1,4-Dichloro-2-butene	4.3982	3.3207	75.50	100	-25	<-
1,2,3-Trichloropropane	0.1398	0.1399	10.01	10	0	
n-Propylbenzene	4.1211	4.0268	9.77	10	-2	
2-Chlorotoluene	0.8131	0.7978	9.81	10	-2	
1,3,5-Trimethylbenzene	2.9897	2.8968	9.69	10	-3	
4-Chlorotoluene	0.8115	0.8193	10.10	10	1	
tert-Butylbenzene	0.6183	0.6183	10.00	10	0	
Pentachloroethane	0.5270	0.5014	9.51	10	-5	
1,2,4-Trimethylbenzene	3.0872	2.9840	9.67	10	-3	
sec-Butylbenzene	3.8735	3.7752	9.75	10	-3	
# 1,3-Dichlorobenzene	1.5728	1.5841	10.07	10	1	#
p-Isopropyltoluene	3.3337	3.2489	9.75	10	-3	
# 1,4-Dichlorobenzene	1.5342	1.5388	10.03	10	0	#
1,2,3-Trimethylbenzene	1.2874	1.1950	9.28	10	-7	
Benzyl Chloride	0.2195	0.2245	10.23	10	2	
n-Butylbenzene	1.6480	1.6371	9.93	10	-1	
# 1,2-Dichlorobenzene	1.3864	1.3859	10.00	10	0	#
# 1,2-Dibromo-3-chloropropane	2.5084	2.2861	9.11	10	-9	#
1,3,5-Trichlorobenzene	1.2309	1.2155	9.88	10	-1	
# 1,2,4-Trichlorobenzene	1.0322	0.9418	9.12	10	-9	#
Hexachlorobutadiene	0.5387	0.5154	9.57	10	-4	
Naphthalene	1.8013	1.4961	8.31	10	-17	
1,2,3-Trichlorobenzene	0.8811	0.7591	8.61	10	-14	
Dibromofluoromethane	0.2486	0.2458	9.89	10	-1	
Dibromofluoromethane(2)	0.2554	0.2509	9.83	10	-2	
1,2-Dichloroethane-d4	0.0482	0.0496	10.30	10	3	
1,2-Dichloroethane-d4(2)	0.2223	0.2225	10.01	10	0	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 04/29/20 Time: 08:50

Lab File ID: ha29c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2-Dichloroethane-d4(3)	0.0305	0.0309	10.11	10	1
Toluene-d8	1.3323	1.3142	9.86	10	-1
Toluene-d8(2)	0.8616	0.8548	9.92	10	-1
4-Bromofluorobenzene	0.4929	0.4701	9.54	10	-5
4-Bromofluorobenzene(2)	0.4218	0.4148	9.83	10	-2

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ha29c01.d Date Analyzed: 04/29/20

Instrument ID: HP19094 Time Analyzed: 08:50

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	130148	4.464	2101028	7.958	1564978	11.372	818818	13.243
UPPER LIMIT	260296	4.964	4202056	8.458	3129956	11.872	1637636	13.743
LOWER LIMIT	65074	3.964	1050514	7.458	782489	10.872	409409	12.743
LAB SAMPLE ID								
01 LCSH63	133897	4.464	2098867	7.957	1572721	11.371	833506	13.243
02 LCSH64	133897	4.464	2098867	7.957	1572721	11.371	833506	13.243
03 VBLKH63	140188	4.470	2060358	7.951	1551137	11.371	816619	13.243
04 VBLKH64	140188	4.470	2060358	7.951	1551137	11.371	816619	13.243
05 1302103	129731	4.476	2039792	7.958	1528747	11.372	803481	13.243
06 1302093	134098	4.452	2044993	7.952	1539914	11.372	805562	13.243
07 1302094	131159	4.476	2020034	7.951	1530303	11.371	793233	13.243
08 1302095	138957	4.464	2035007	7.951	1548738	11.371	801888	13.243
09 1302096MS	133219	4.452	2078451	7.951	1551573	11.371	819451	13.243
10 1302097MSD	133556	4.452	2081190	7.951	1555529	11.371	819814	13.243
11 1302098	138765	4.470	2011137	7.951	1519767	11.372	795206	13.243
12 1302099	125919	4.458	2012925	7.951	1521233	11.372	794245	13.243
13 1302100	129725	4.452	2007011	7.951	1518933	11.372	795327	13.243
14 1302101	126694	4.458	2004626	7.951	1512361	11.371	787072	13.243
15 1302102	126401	4.458	2005286	7.951	1513363	11.371	780895	13.243
16 1302262	121915	4.452	1989403	7.951	1500257	11.372	784899	13.243
17 1302263	120727	4.452	1990244	7.951	1502249	11.372	785777	13.243
18 1302265	114813	4.452	1992683	7.951	1497759	11.371	783032	13.243
19 1302258	91495	4.434	1989206	7.951	1504127	11.371	800822	13.243
20 1302259MS	119692	4.440	2048527	7.951	1530088	11.372	809539	13.243
21 1302260MSD	129726	4.458	2030461	7.951	1516298	11.371	799518	13.243
22 1302256	114091	4.440	2012596	7.952	1524780	11.372	821884	13.243

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): ha29c01.d Date Analyzed: 04/29/20

Instrument ID: HP19094 Time Analyzed: 08:50

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	130148	4.464	2101028	7.958	1564978	11.372	818818	13.243
UPPER LIMIT	260296	4.964	4202056	8.458	3129956	11.872	1637636	13.743
LOWER LIMIT	65074	3.964	1050514	7.458	782489	10.872	409409	12.743
	LAB SAMPLE ID								
23	1302256DL	125275	4.452	2023468	7.951	1519765	11.372	805339	13.243
24	1302257	124330	4.458	2072194	7.945	1530634	11.372	805919	13.243
25	1302257DL	111018	4.452	2020860	7.951	1510874	11.372	794796	13.243
26	1302255	119307	4.458	2055802	7.951	1528951	11.371	809353	13.243
27	1302255DL	134518	4.458	2025511	7.952	1510366	11.372	797402	13.243
28	1302264	123376	4.446	2040646	7.951	1530052	11.372	813593	13.243
29	1302264DL	136505	4.476	2007558	7.957	1515404	11.371	786963	13.243

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

^

Sample Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/20apr29a.b/ha29s03.d Injection date and time: **29-APR-2020 10:39**
Data file Sample Info. Line: 5WB01;1302093;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452	(0.012)	470	65	134098	(3)	50.00	
64) Fluorobenzene	7.952	(0.006)	1044	96	2044993	(-3)	10.00	
98) Chlorobenzene-d5	11.372	(0.000)	1605	117	1539914	(-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	805562	(-2)	10.00	

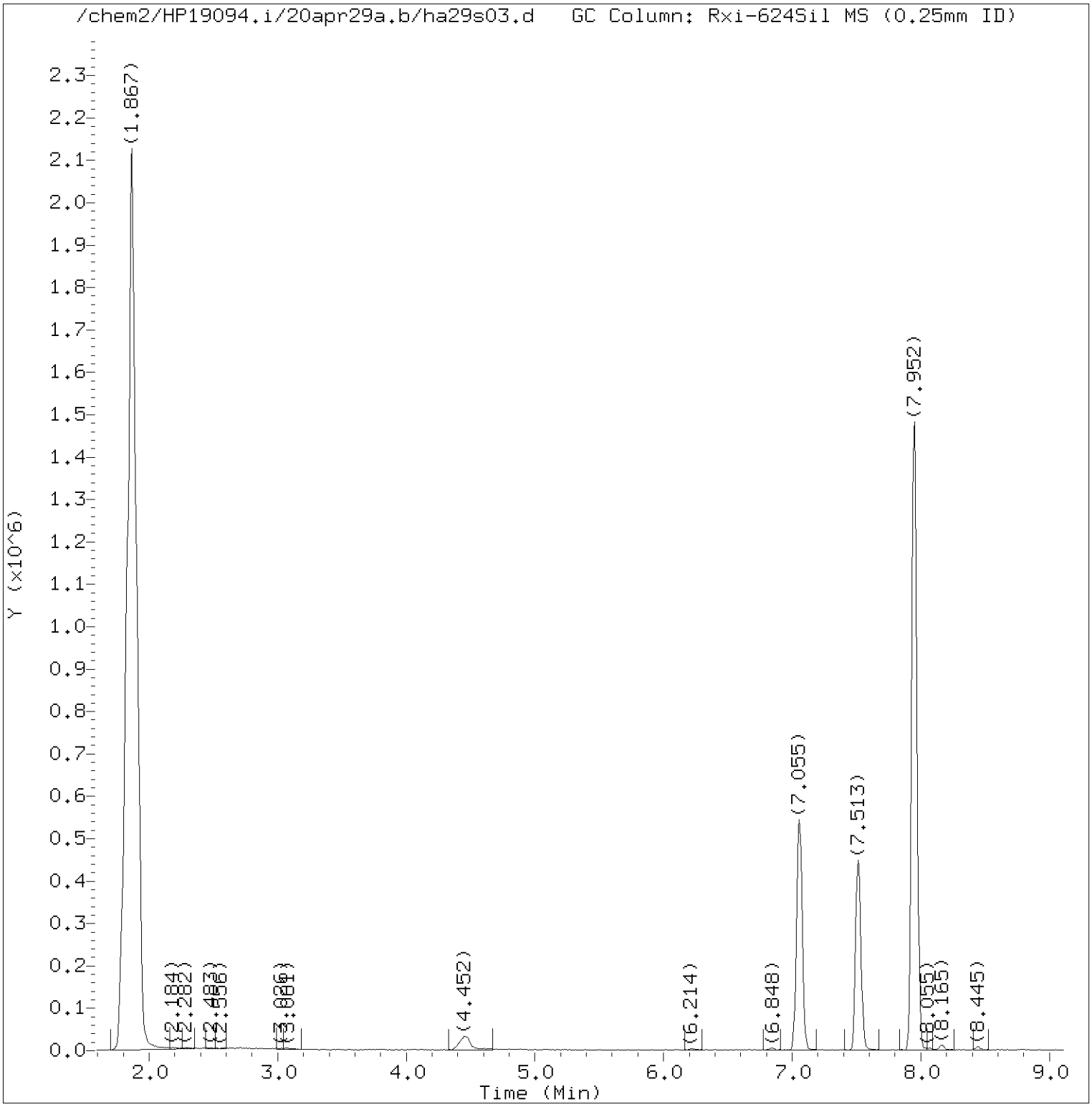
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055	(0.001)	113	520690	10.243	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513	(0.001)	102	105074	10.665	107%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	2020910	9.850	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	705061	9.289	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

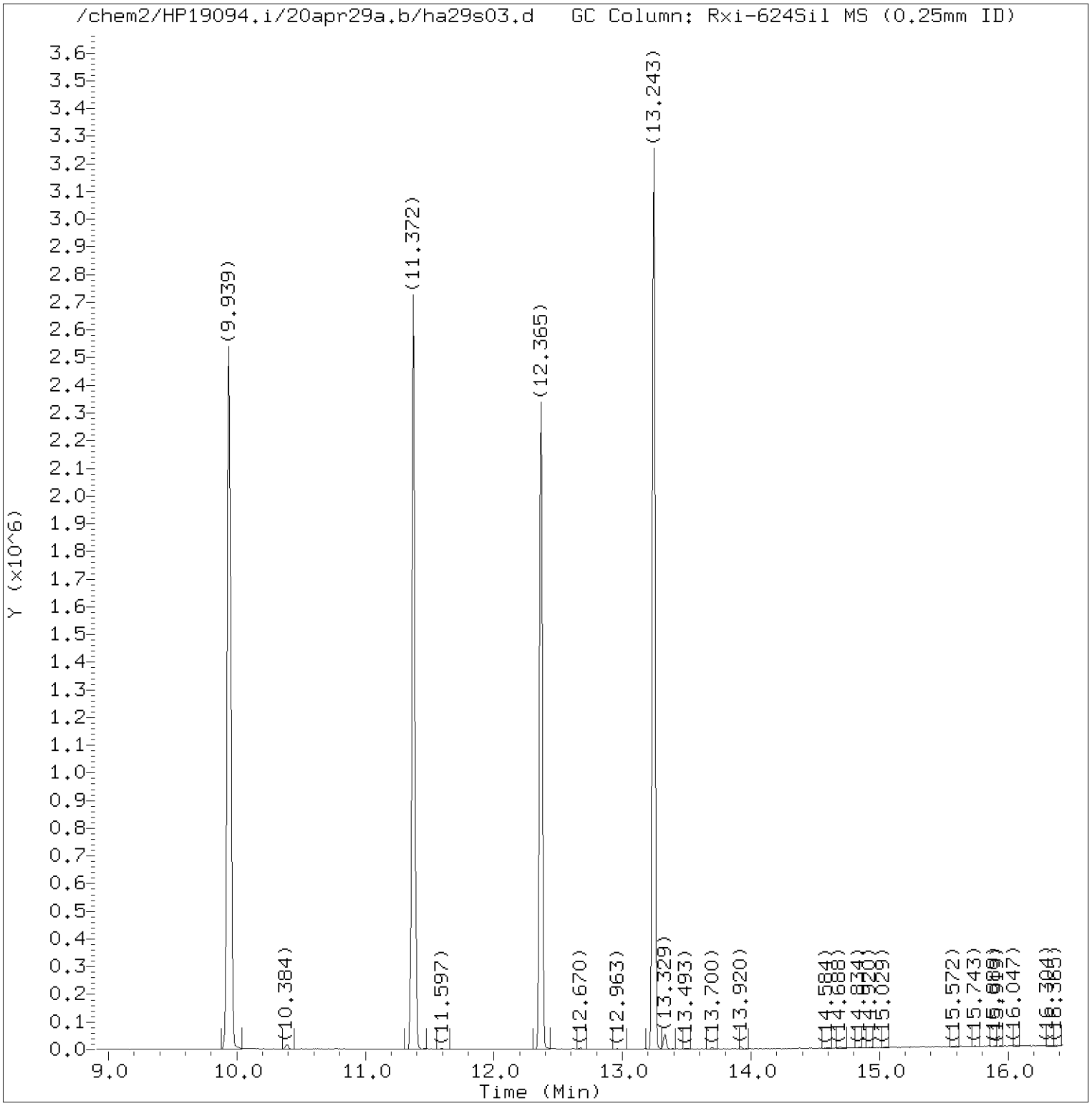
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s03.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB01 Lab Sample ID: 1302093

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s03.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB01 Lab Sample ID: 1302093

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s03.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB01 Lab Sample ID: 1302093

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27)*t-Butyl Alcohol-d10	(1)	4.452	65	134098	50.000
51)$Dibromofluoromethane	(2)	7.055	113	520690	10.243
58)$1,2-Dichloroethane-d4	(2)	7.513	102	105074	10.665
64)*Fluorobenzene	(2)	7.952	96	2044993	10.000
83)$Toluene-d8	(3)	9.939	98	2020910	9.850
98)*Chlorobenzene-d5	(3)	11.372	117	1539914	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	705061	9.289
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	805562	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

5WB02 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1302094

Data file: /chem2/HP19094.i/20apr29a.b/ha29s04.d Injection date and time: **29-APR-2020 11:00**
Data file Sample Info. Line: 5WB02;1302094;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 11:18 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.476	(-0.012)	474	65	131159	(1)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2020034	(-4)	10.00	
98) Chlorobenzene-d5	11.371	(0.000)	1605	117	1530303	(-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	793233	(-3)	10.00	

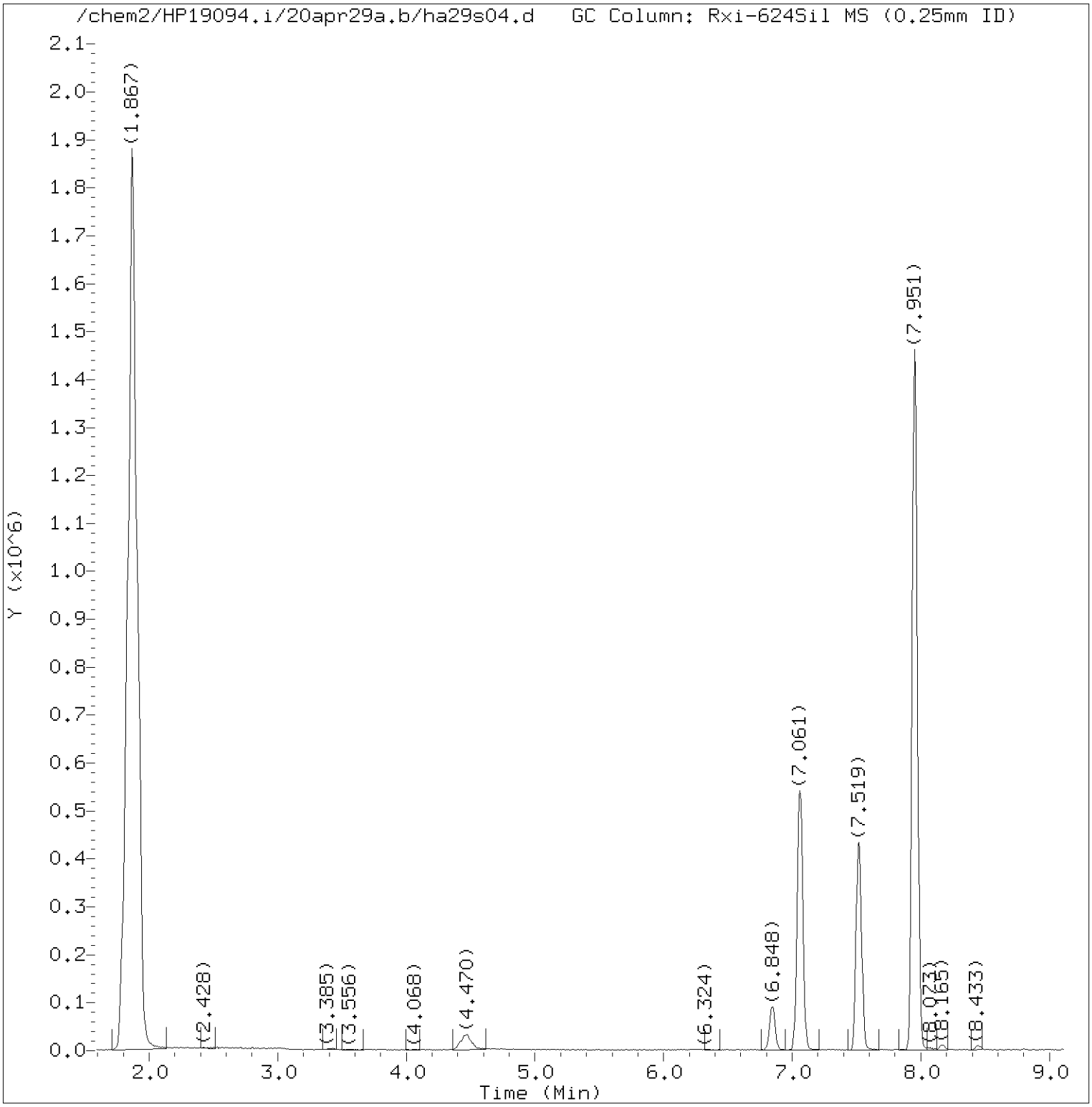
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	514965	10.255	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512	(0.001)	102	104484	10.736	107%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	2005815	9.838	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	699381	9.272	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.842	(0.000)	83	115769	1.211	1.21			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

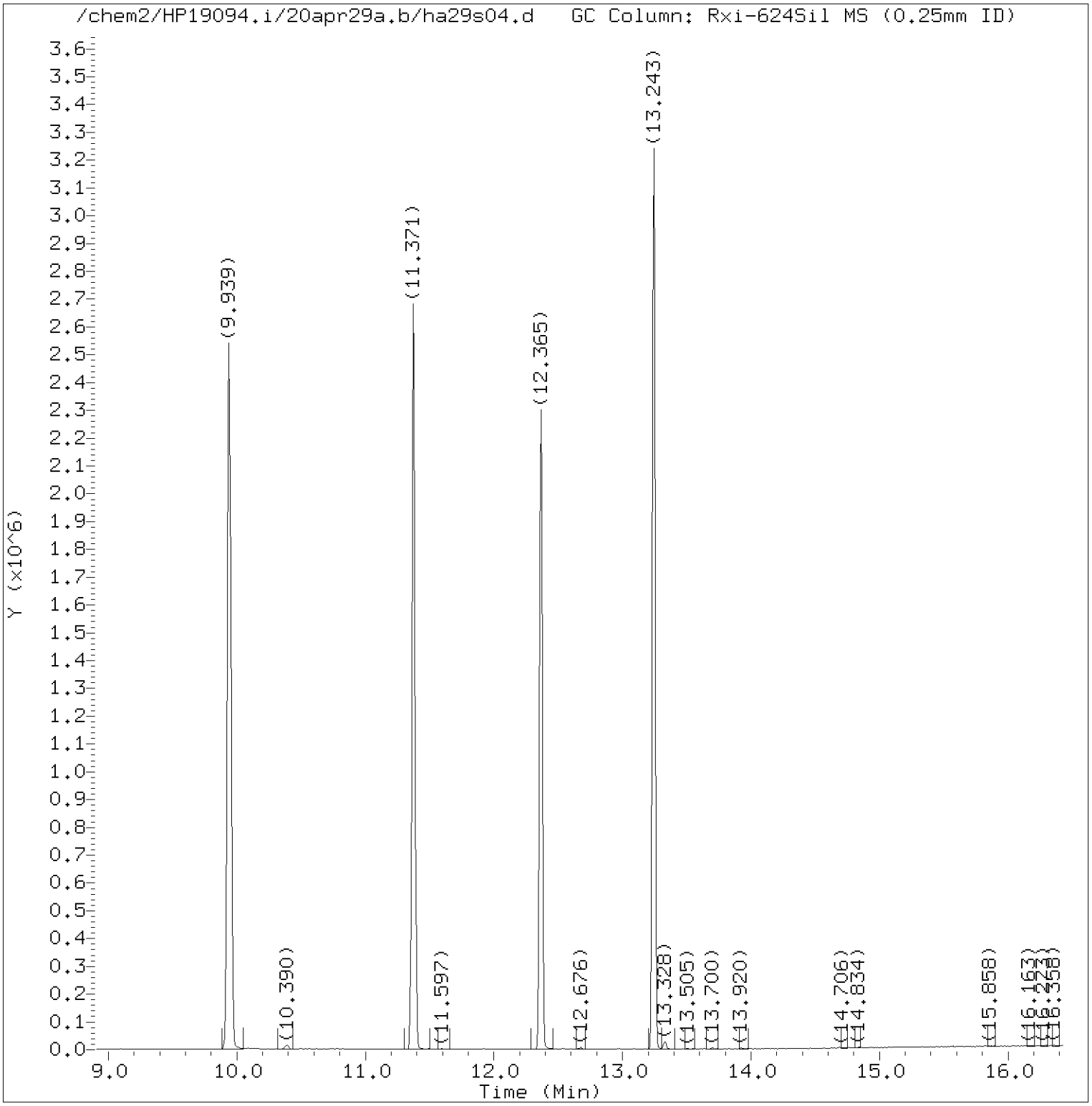
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s04.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:00 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:18 Automation

Sample Name: 5WB02 Lab Sample ID: 1302094

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s04.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:00 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:18 Automation

Sample Name: 5WB02 Lab Sample ID: 1302094

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s04.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:00 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:18 Automation

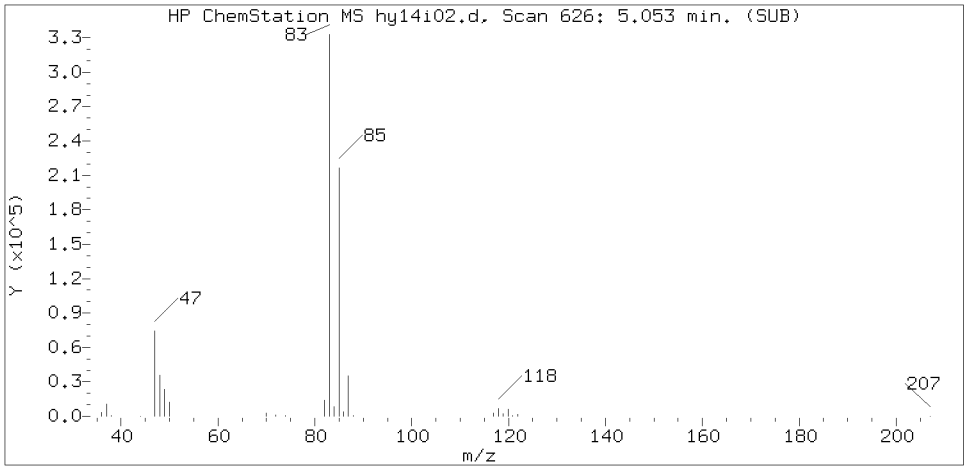
Sample Name: 5WB02 Lab Sample ID: 1302094

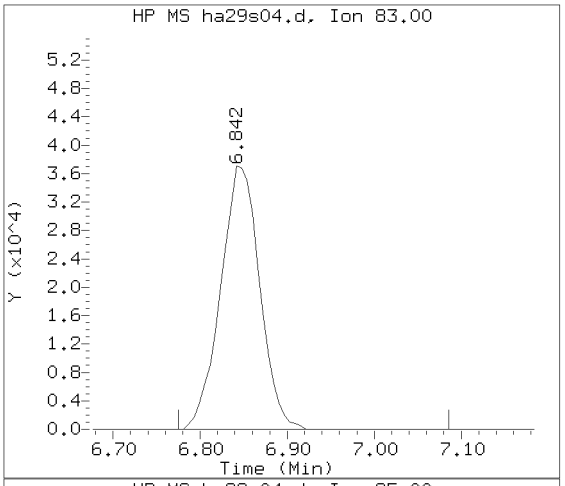
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27)*t-Butyl Alcohol-d10	(1)	4.476	65	131159	50.000
50) Chloroform	(2)	6.842	83	115769	1.211
51)$Dibromofluoromethane	(2)	7.061	113	514965	10.255
58)$1,2-Dichloroethane-d4	(2)	7.512	102	104484	10.736
64)*Fluorobenzene	(2)	7.951	96	2020034	10.000
83)$Toluene-d8	(3)	9.939	98	2005815	9.838
98)*Chlorobenzene-d5	(3)	11.371	117	1530303	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	699381	9.272
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	793233	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

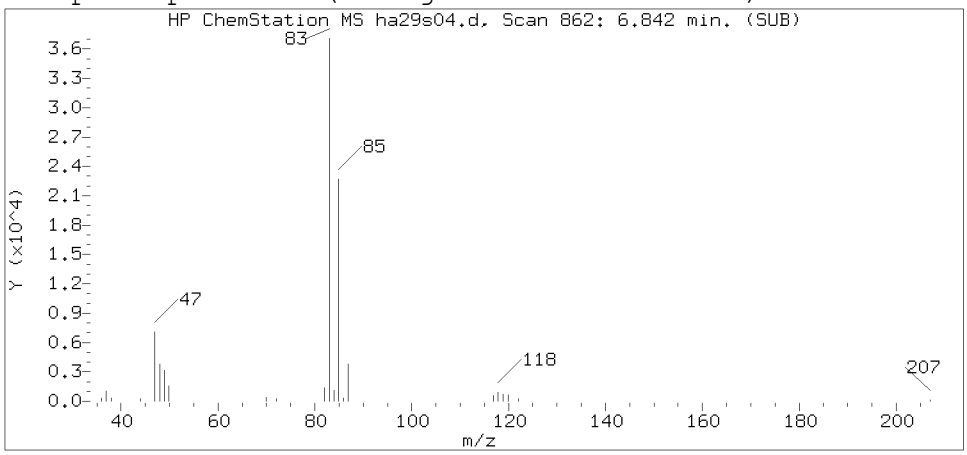
Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

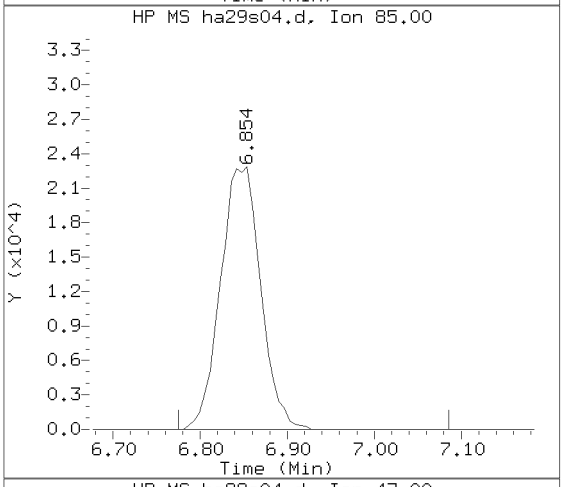
Reference Standard Spectrum for Chloroform



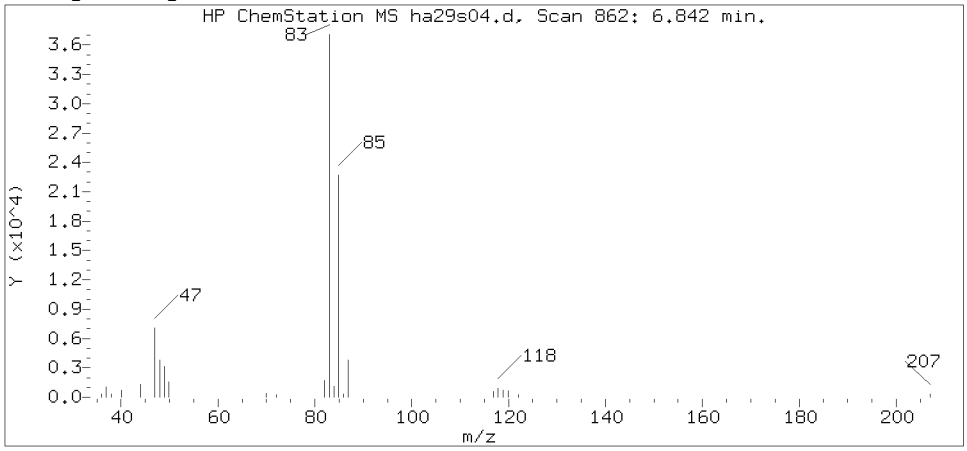


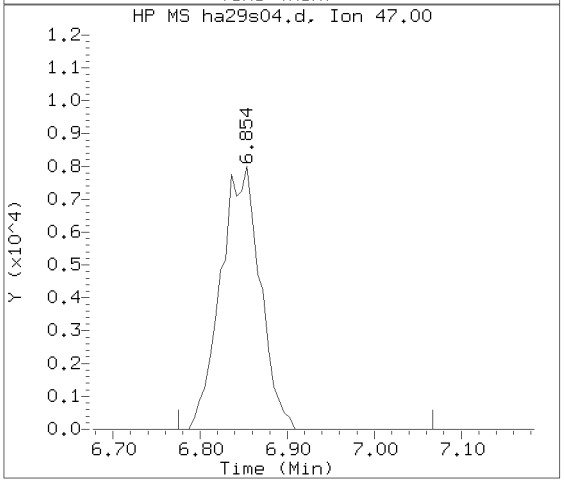
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s04.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:00 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:18 Automation

Sample Name: 5WB02 Lab Sample ID: 1302094

Compound Number : 50
Compound Name : Chloroform
Scan Number : 862
Retention Time (minutes): 6.842
Relative Retention Time : 0.00011
Quant Ion : 83.00
Area (flag) : 115769
On-Column Amount (ng) : 1.2111

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

5WB03 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1302095

Data file: /chem2/HP19094.i/20apr29a.b/ha29s05.d Injection date and time: **29-APR-2020 11:22**
Data file Sample Info. Line: 5WB03;1302095;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464	(0.000)	472	65	138957	(7)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2035007	(-3)	10.00	
98) Chlorobenzene-d5	11.371	(0.000)	1605	117	1548738	(-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	801888	(-2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	526030	10.398	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519	(0.000)	102	108325	11.049	110%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	2024104	9.809	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	704630	9.231	92%		80 - 120

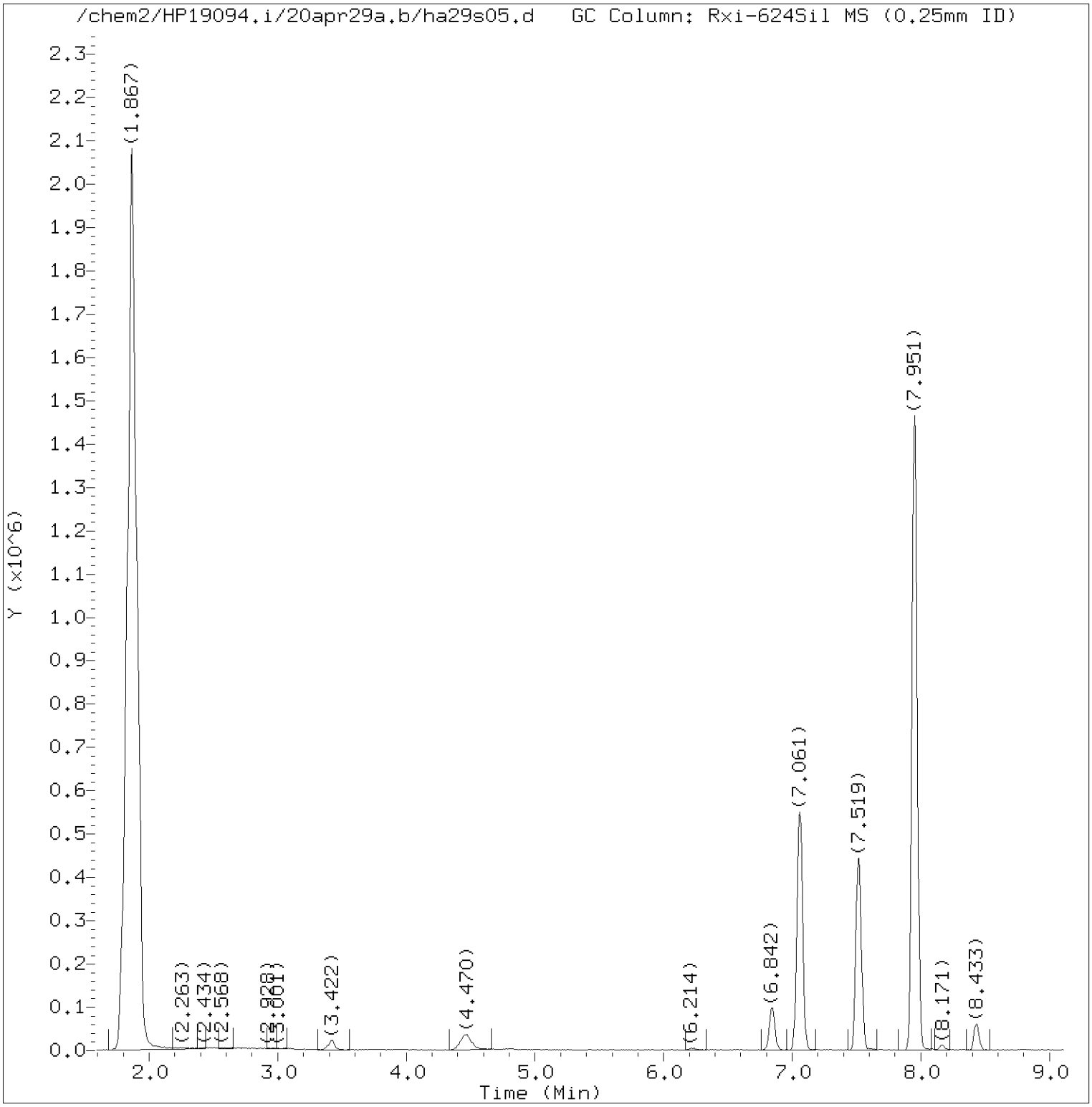
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.422	(0.000)	59	22987M	0.635	0.64		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.842	(0.000)	83	120391	1.250	1.25			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)	8.427	(-0.000)	95	27930	0.481	0.48		J	0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

M = Compound was manually integrated.

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

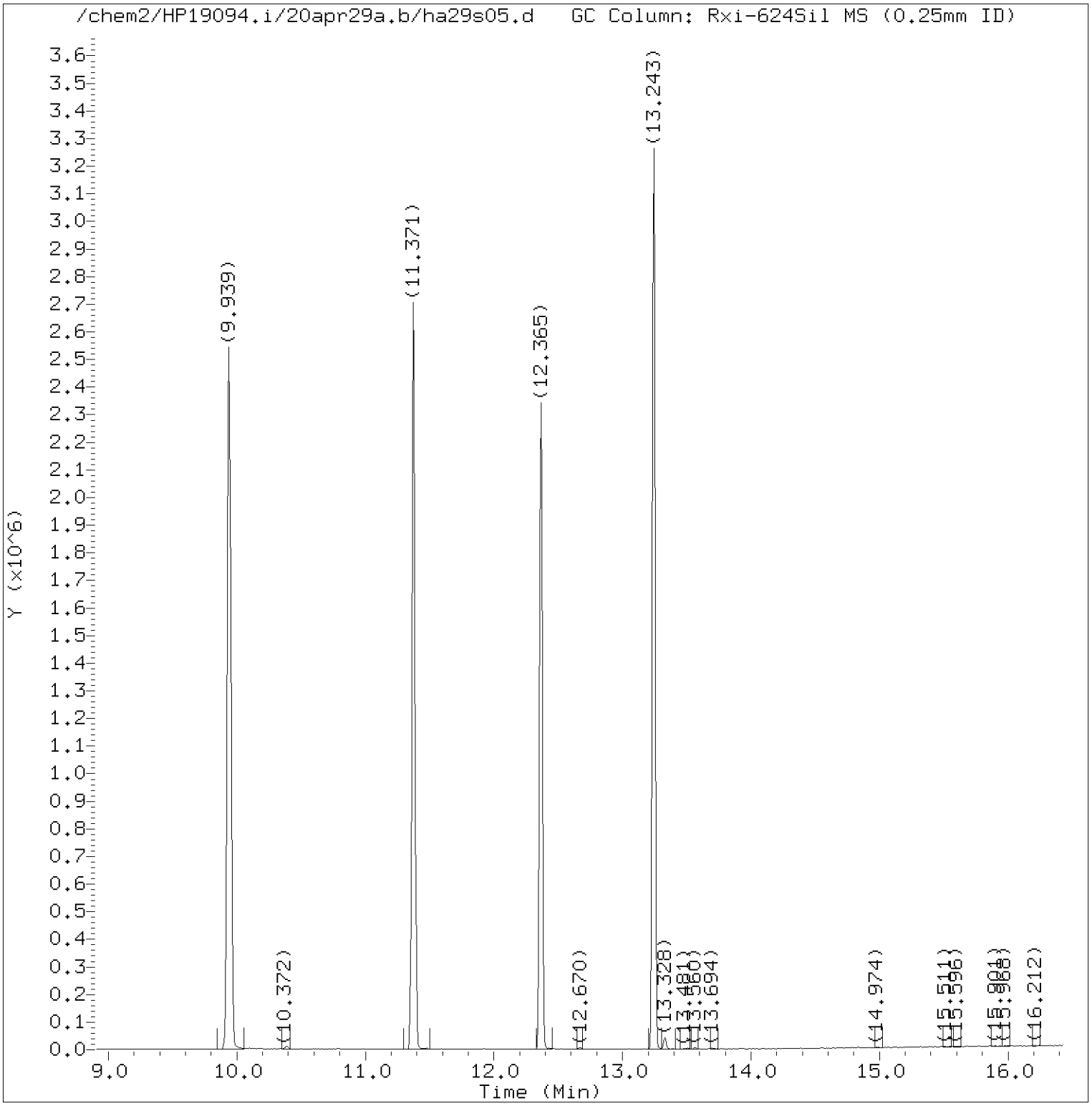
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

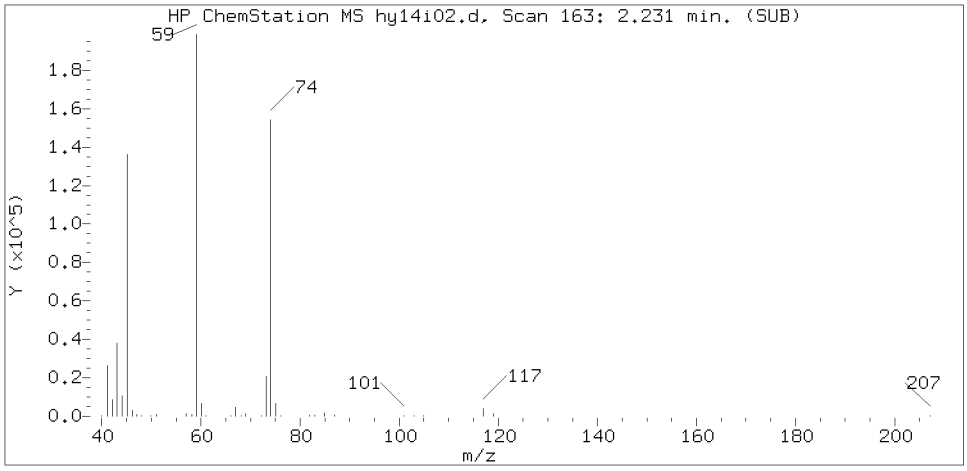
Sample Name: 5WB03 Lab Sample ID: 1302095

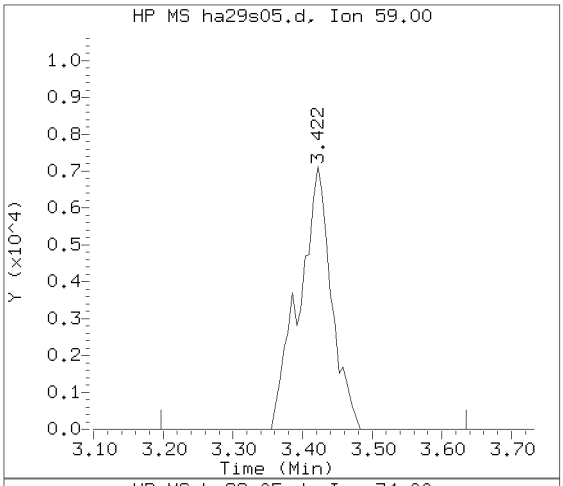
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.422	59	22987M	0.635
27)*t-Butyl Alcohol-d10	(1)	4.464	65	138957	50.000
50) Chloroform	(2)	6.842	83	120391	1.250
51)$Dibromofluoromethane	(2)	7.061	113	526030	10.398
58)$1,2-Dichloroethane-d4	(2)	7.519	102	108325	11.049
64)*Fluorobenzene	(2)	7.951	96	2035007	10.000
68) Trichloroethene	(2)	8.427	95	27930	0.481
83)$Toluene-d8	(3)	9.939	98	2024104	9.809
98)*Chlorobenzene-d5	(3)	11.371	117	1548738	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	704630	9.231
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	801888	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

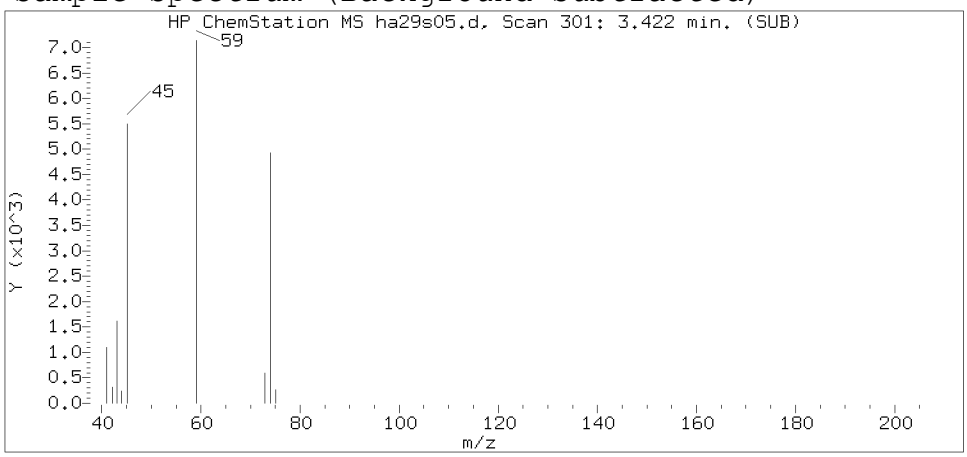
Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

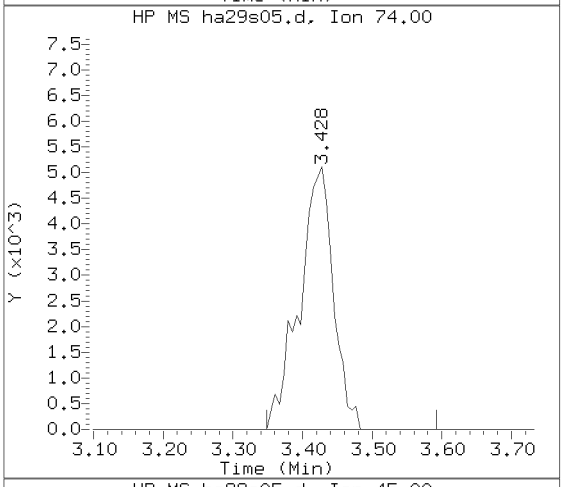
Reference Standard Spectrum for Ethyl ether



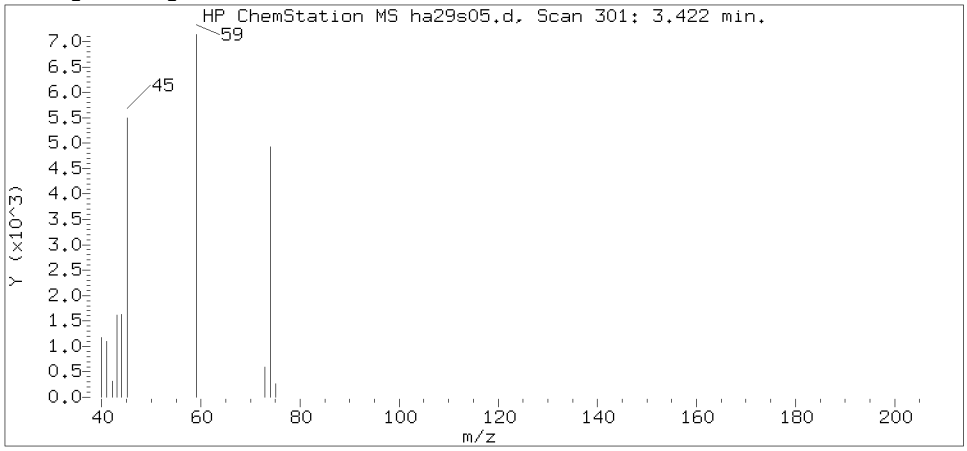


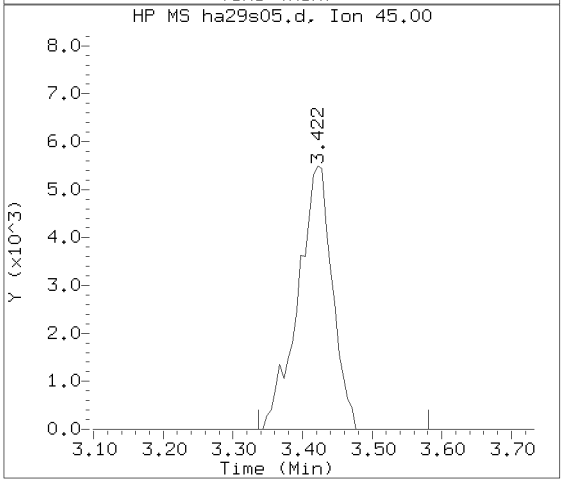
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

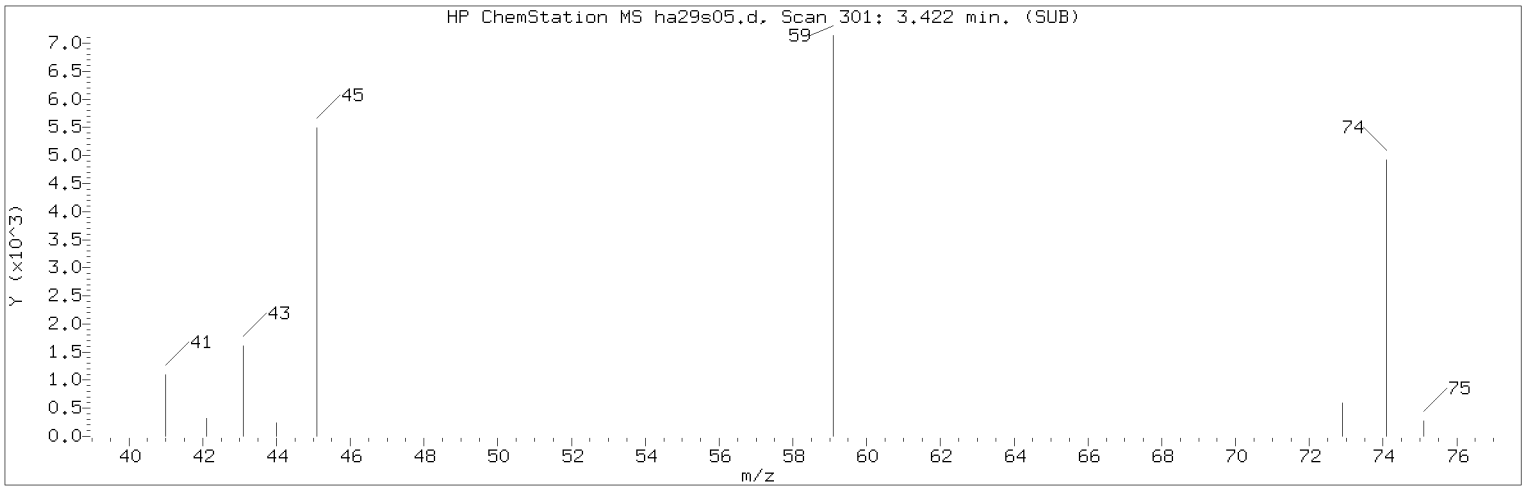
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

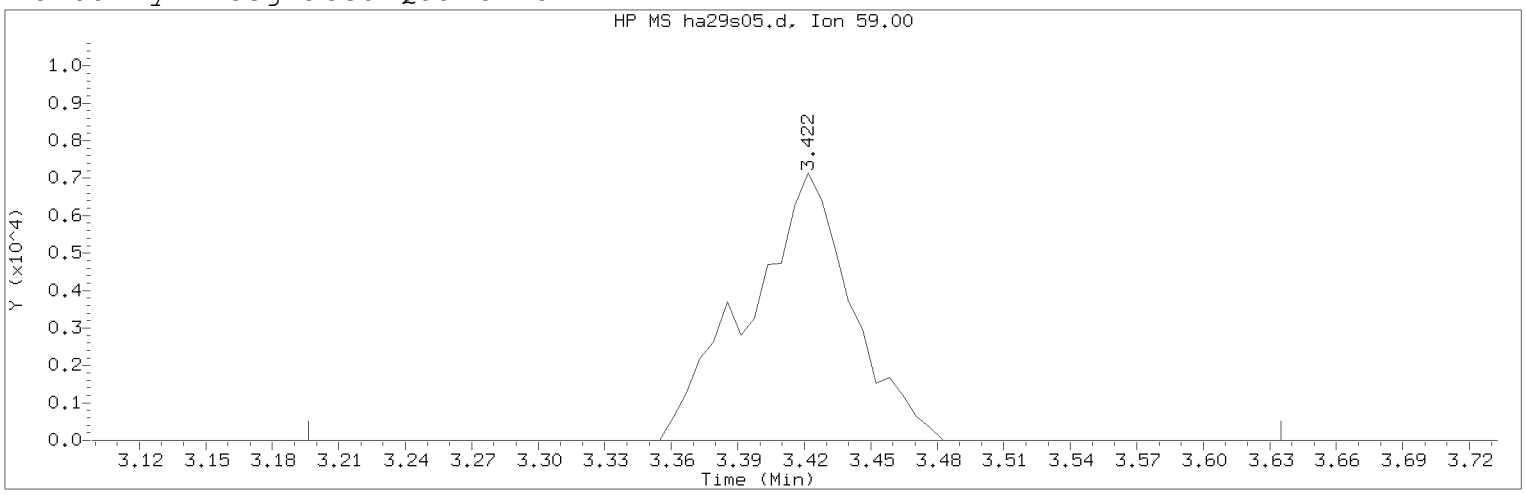
Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 301
Retention Time (minutes)	: 3.422
Relative Retention Time	: 0.00045
Quant Ion	: 59.00
Area (flag)	: 22987M
On-Column Amount (ng)	: 0.6354

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

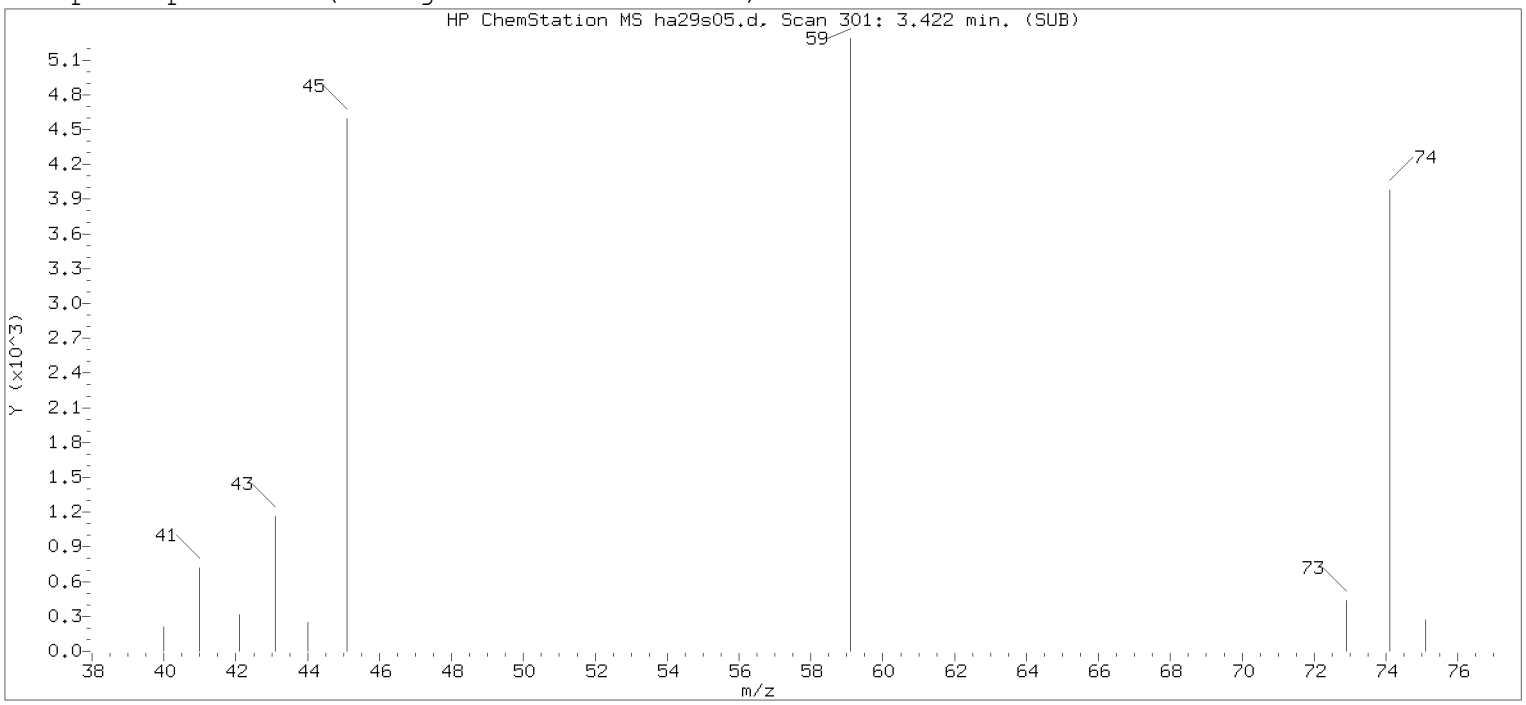
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 301
Retention Time (minutes): 3.422
Quant Ion : 59.00
Area (flag) : 22987M
On-Column Amount (ng) : 0.6354
Integration start scan : 263 Integration stop scan: 335
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

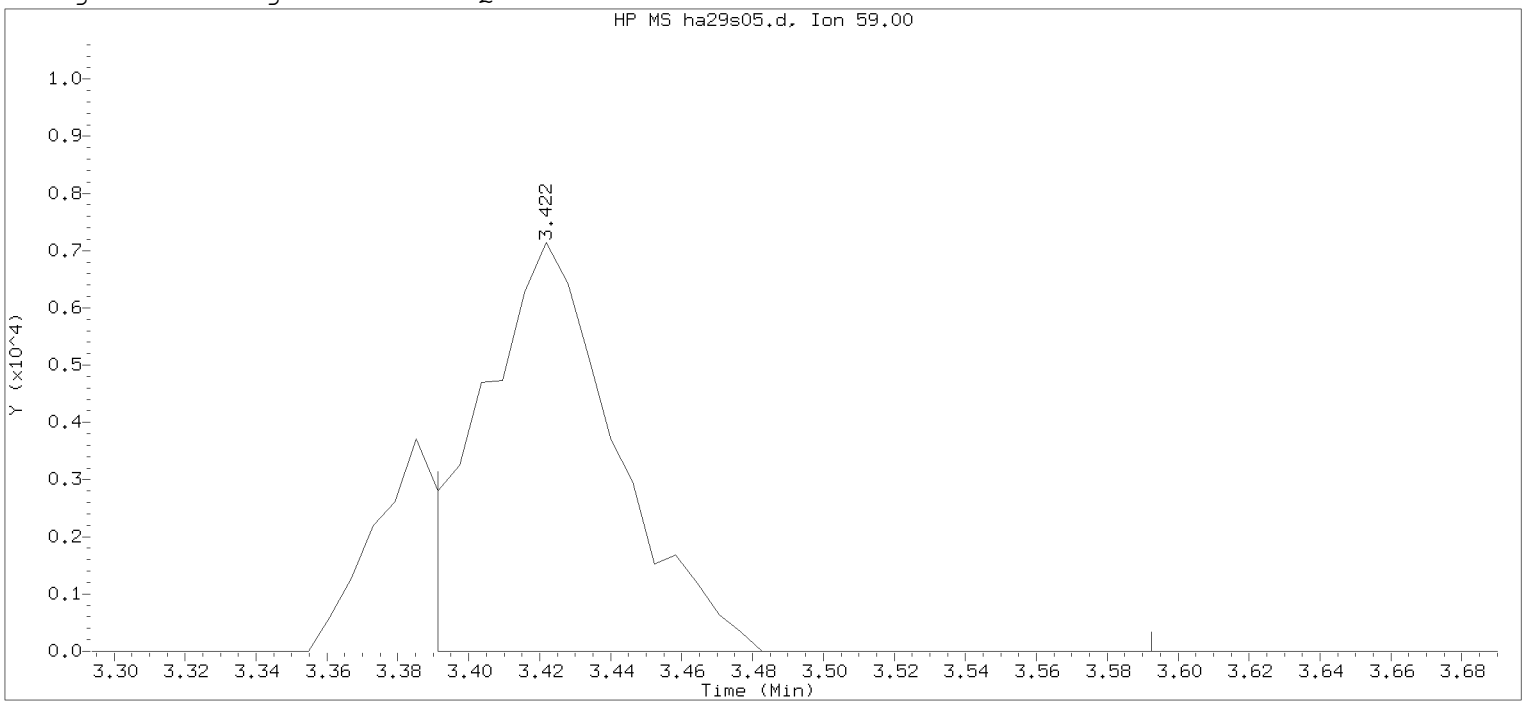
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

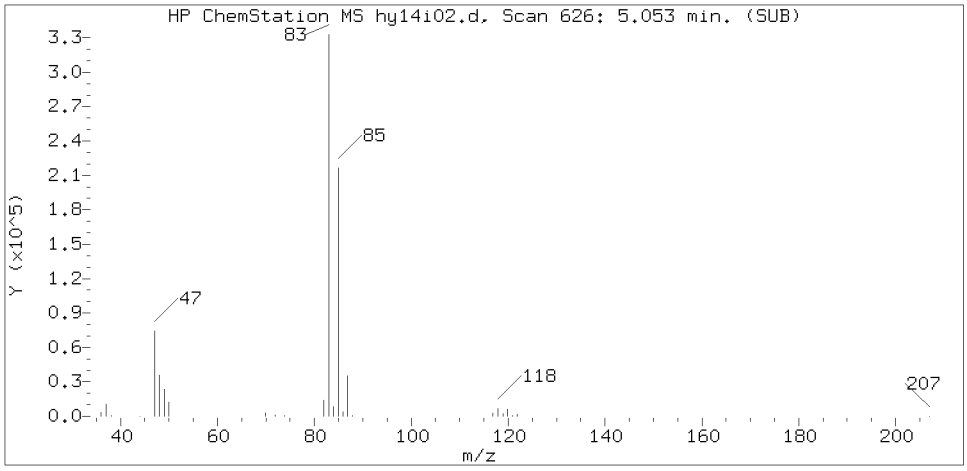
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 Automation

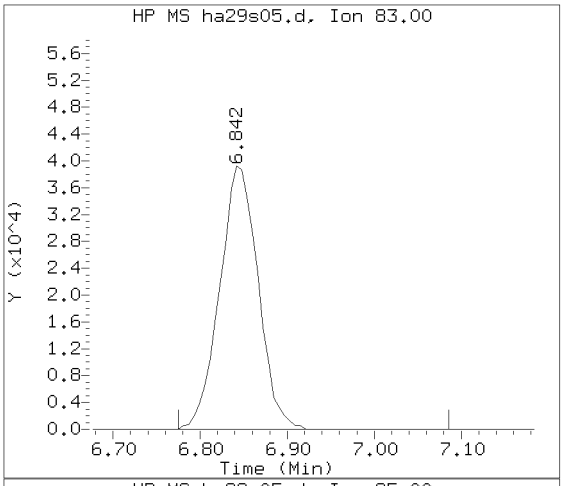
Sample Name: 5WB03 Lab Sample ID: 1302095

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 301
Retention Time (minutes): 3.422
Quant Ion : 59.00
Area : 18676
On-column Amount (ng) : 0.5163
Integration start scan : 295 Integration stop scan: 328
Y at integration start : 0 Y at integration end: 0

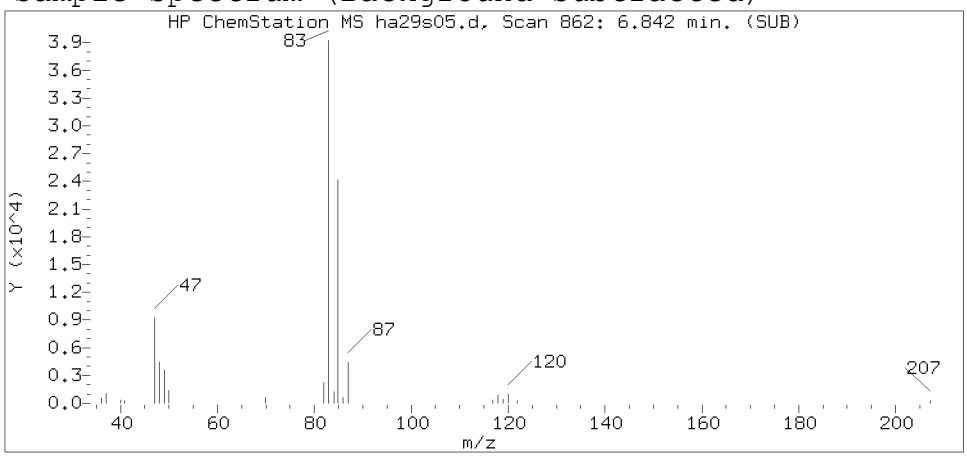
Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46.
Target 3.5 esignature user Jennifer K. Howe

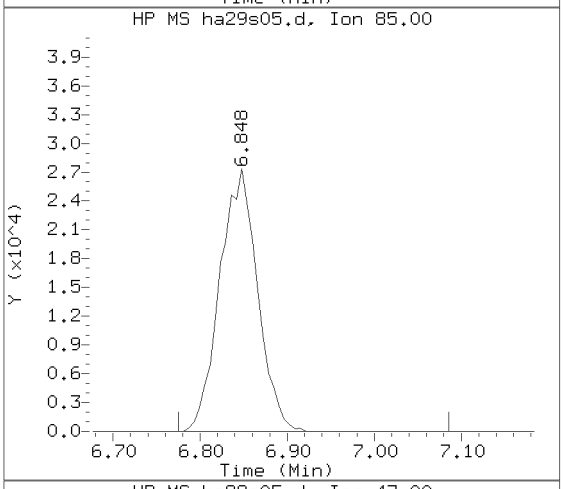
Reference Standard Spectrum for Chloroform



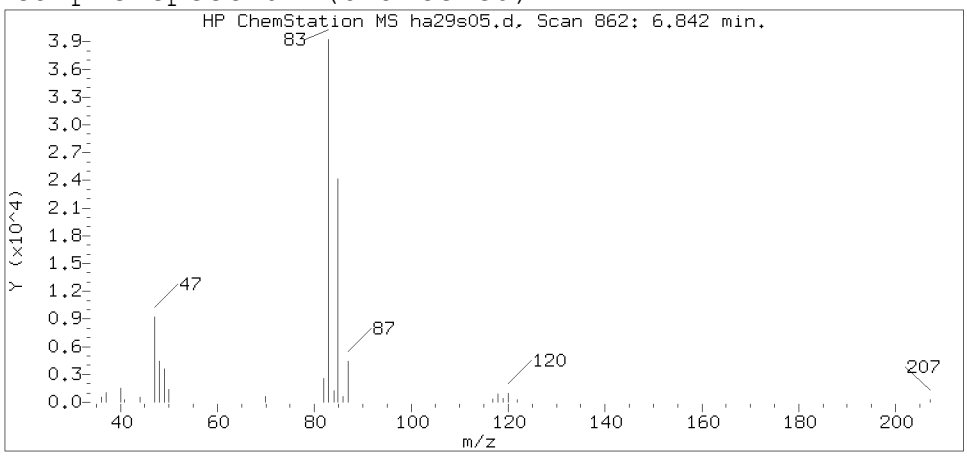


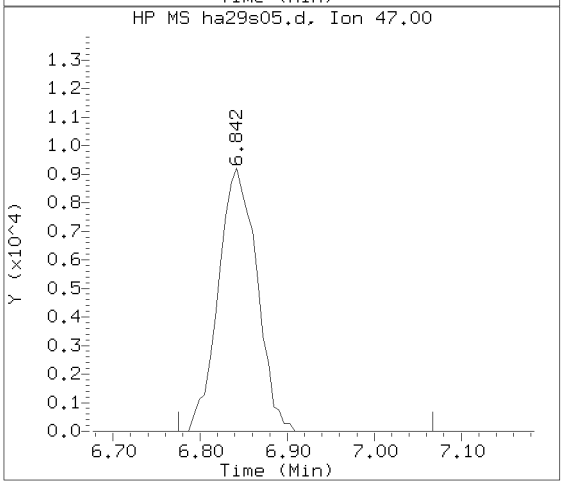
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

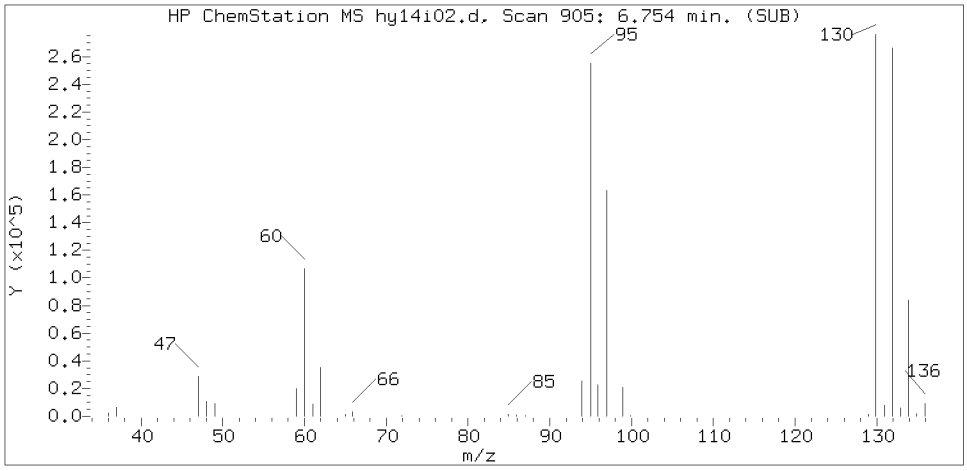
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

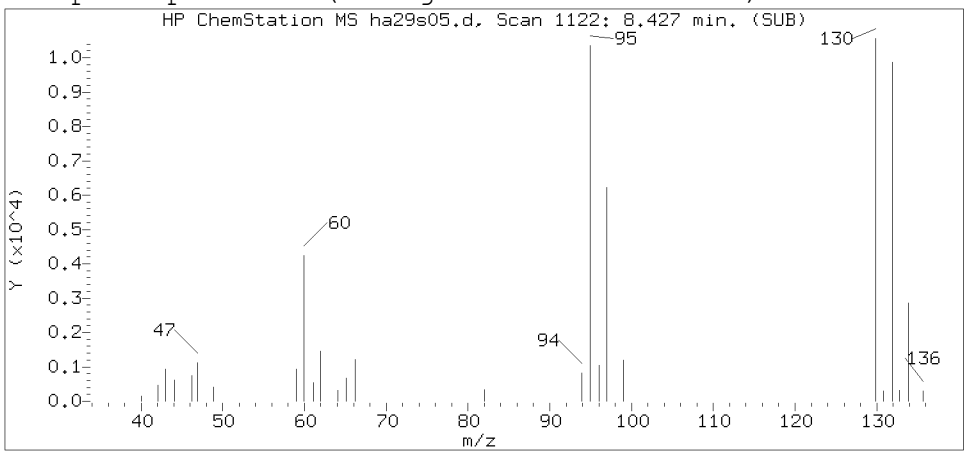
Compound Number : 50
Compound Name : Chloroform
Scan Number : 862
Retention Time (minutes): 6.842
Relative Retention Time : 0.00011
Quant Ion : 83.00
Area (flag) : 120391
On-Column Amount (ng) : 1.2501

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

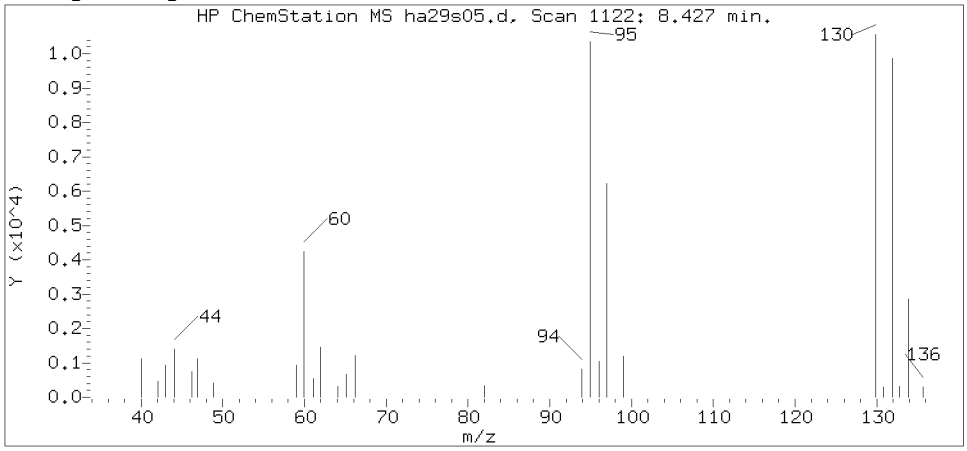
Reference Standard Spectrum for Trichloroethene

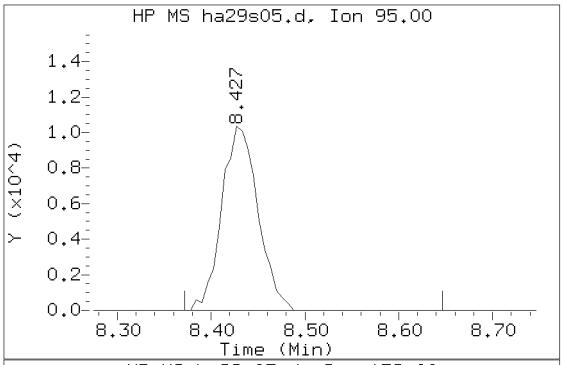


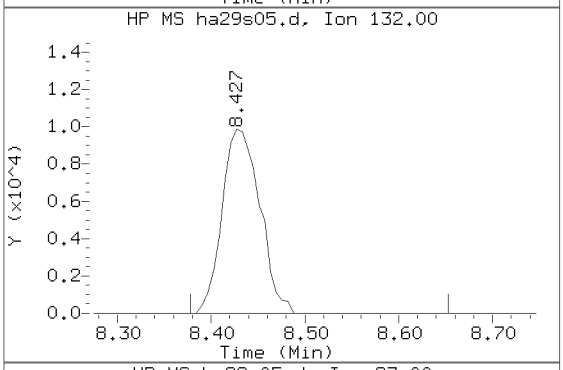
Sample Spectrum (Background Subtracted)

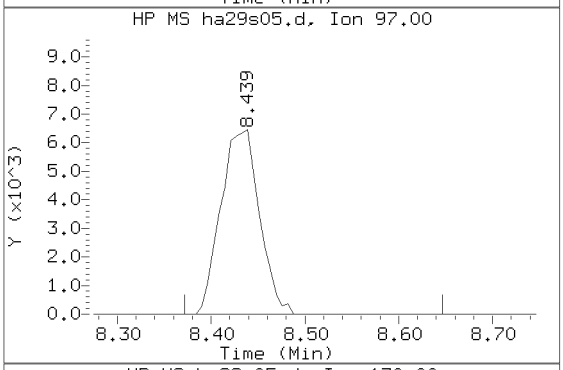


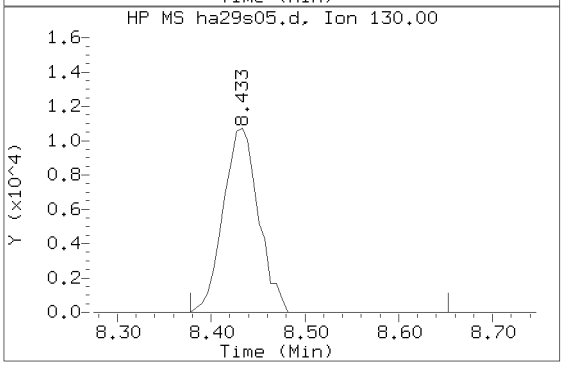
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/20apr29a.b/ha29s05.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:22 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:45 jkh09052

Sample Name: 5WB03 Lab Sample ID: 1302095

Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1122
Retention Time (minutes): 8.427
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 27930
On-Column Amount (ng) : 0.4812

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

5WB04 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1302098

Data file: /chem2/HP19094.i/20apr29a.b/ha29s08.d Injection date and time: **29-APR-2020 12:27**
Data file Sample Info. Line: 5WB04;1302098;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.470	(-0.006)	473	65	138765	(7)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2011137	(-4)	10.00	
98) Chlorobenzene-d5	11.372	(0.000)	1605	117	1519767	(-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	795206	(-3)	10.00	

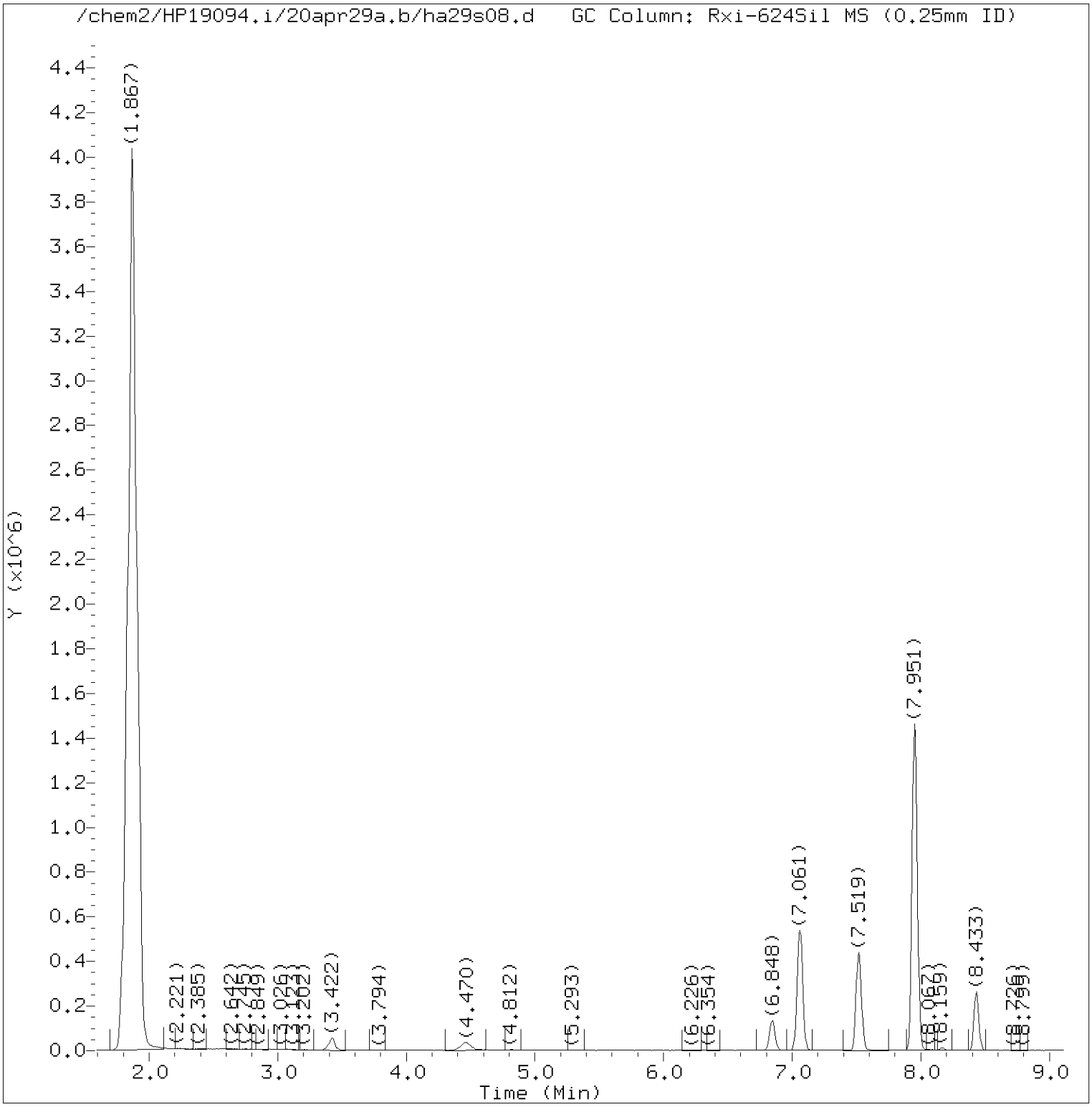
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	514400	10.289	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513	(0.001)	102	102087	10.536	105%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	1995679	9.856	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	688522	9.191	92%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.422	(0.000)	59	60078	1.680	1.68		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.848	(-0.000)	83	168658	1.772	1.77			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)	8.427	(-0.000)	95	122046	2.128	2.13			0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

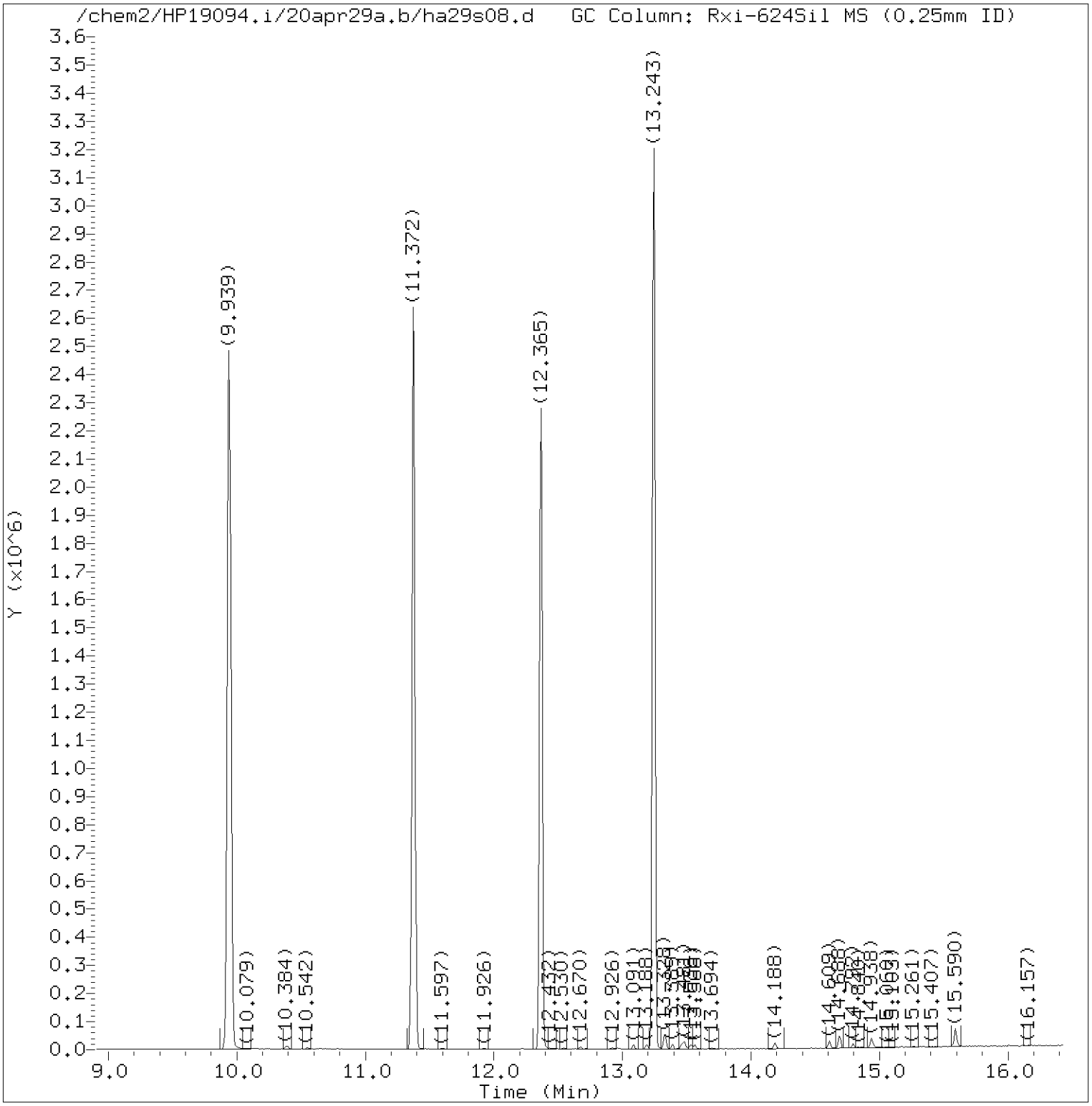
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

Sample Name: 5WB04 Lab Sample ID: 1302098

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

Sample Name: 5WB04 Lab Sample ID: 1302098

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

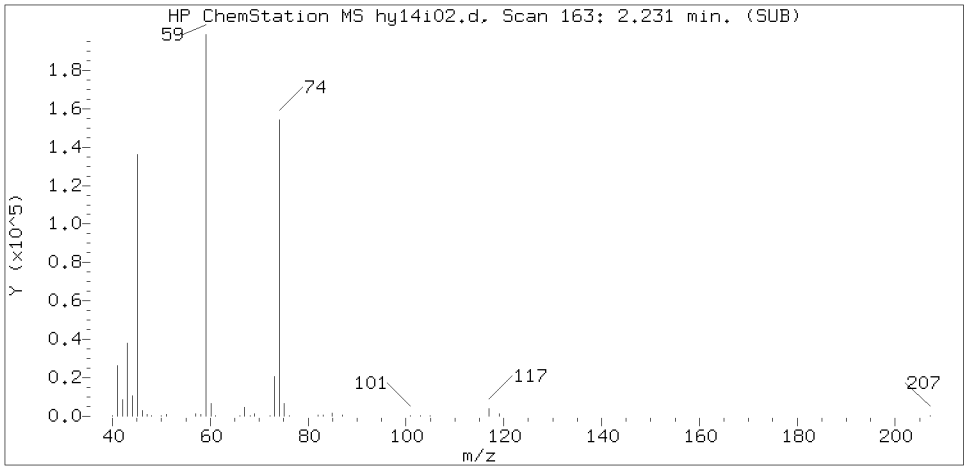
Sample Name: 5WB04 Lab Sample ID: 1302098

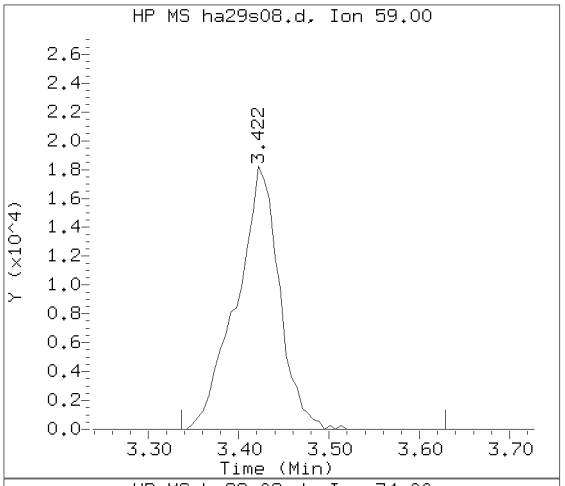
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.422	59	60078	1.680
27)*t-Butyl Alcohol-d10	(1)	4.470	65	138765	50.000
50) Chloroform	(2)	6.848	83	168658	1.772
51)$Dibromofluoromethane	(2)	7.061	113	514400	10.289
58)$1,2-Dichloroethane-d4	(2)	7.513	102	102087	10.536
64)*Fluorobenzene	(2)	7.951	96	2011137	10.000
68) Trichloroethene	(2)	8.427	95	122046	2.128
83)$Toluene-d8	(3)	9.939	98	1995679	9.856
98)*Chlorobenzene-d5	(3)	11.372	117	1519767	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	688522	9.191
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	795206	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

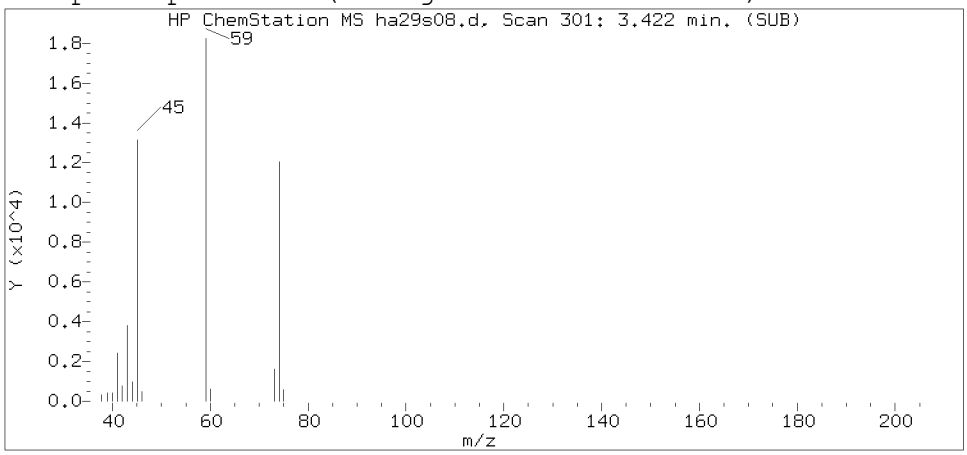
Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

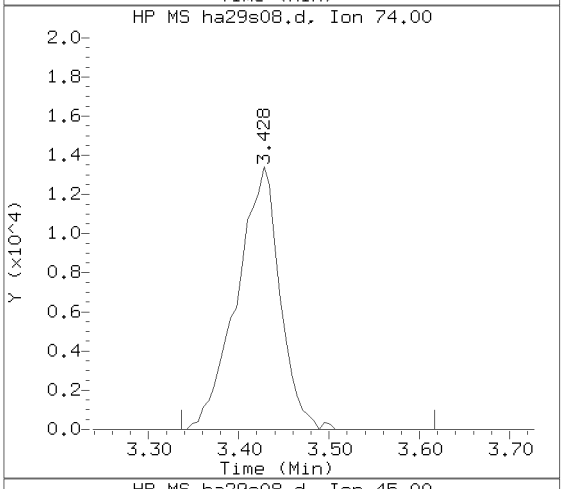
Reference Standard Spectrum for Ethyl ether



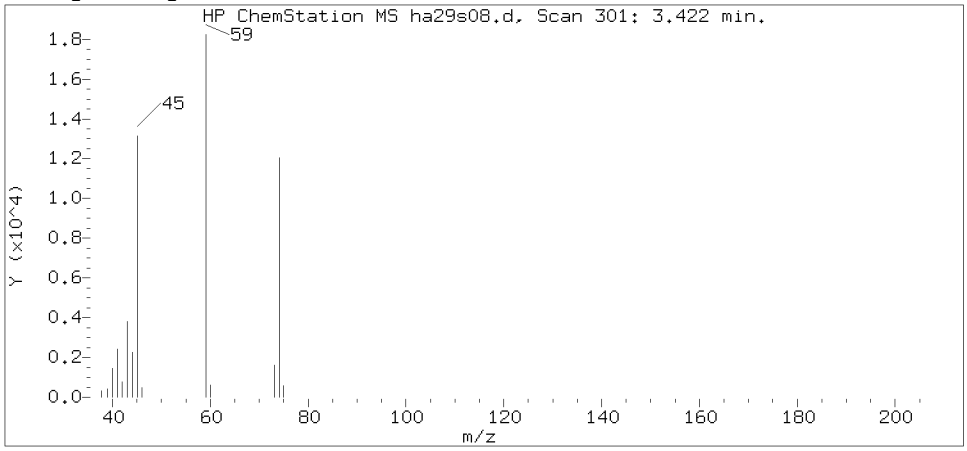


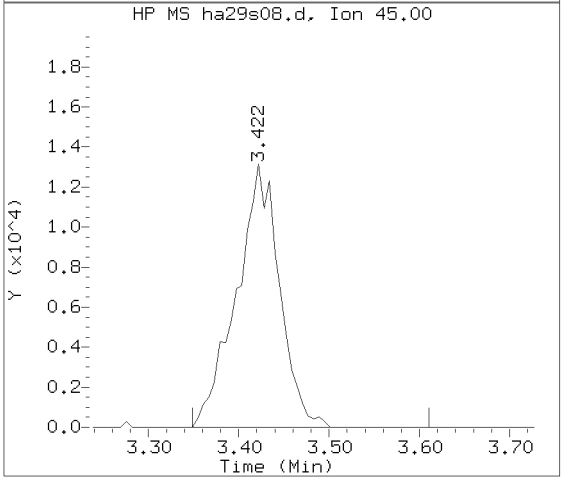
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

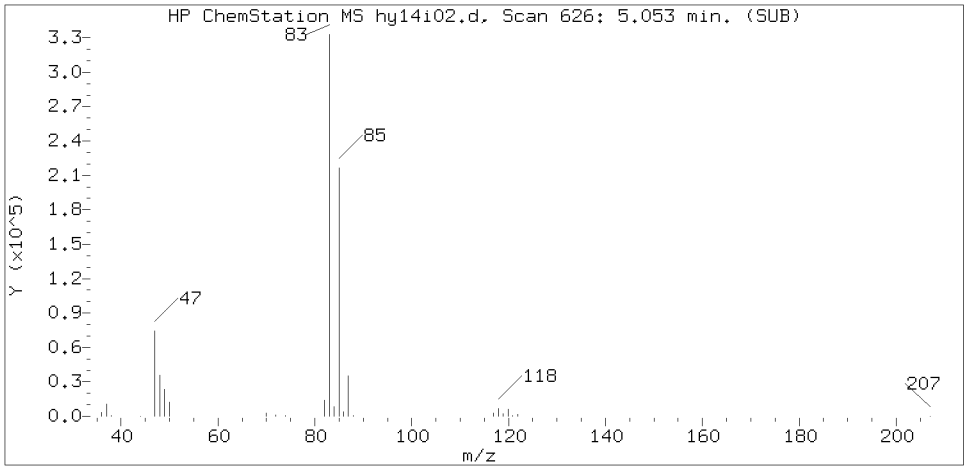
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

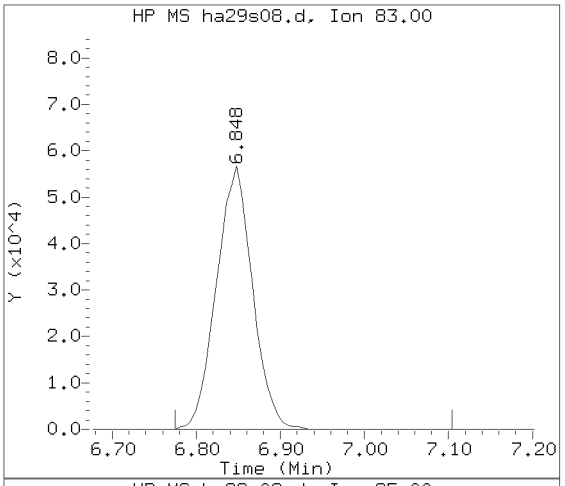
Sample Name: 5WB04 Lab Sample ID: 1302098

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 301
Retention Time (minutes)	: 3.422
Relative Retention Time	: 0.00044
Quant Ion	: 59.00
Area (flag)	: 60078
On-Column Amount (ng)	: 1.6804

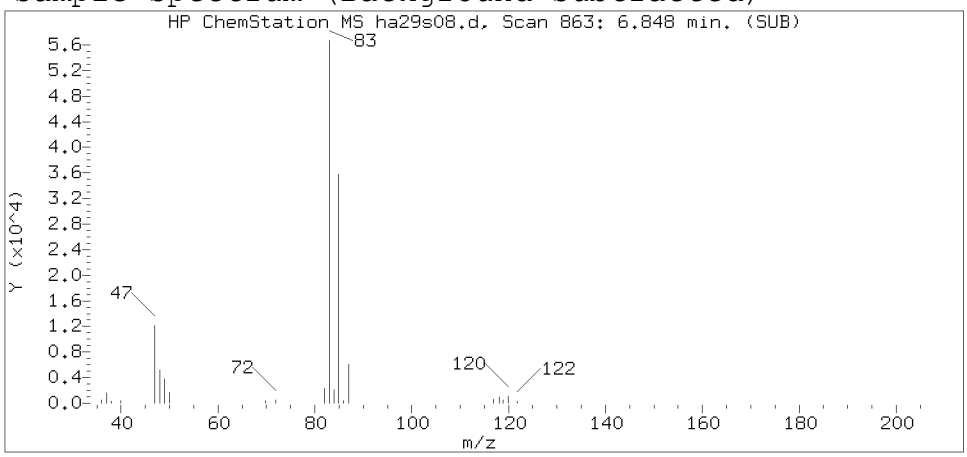
Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

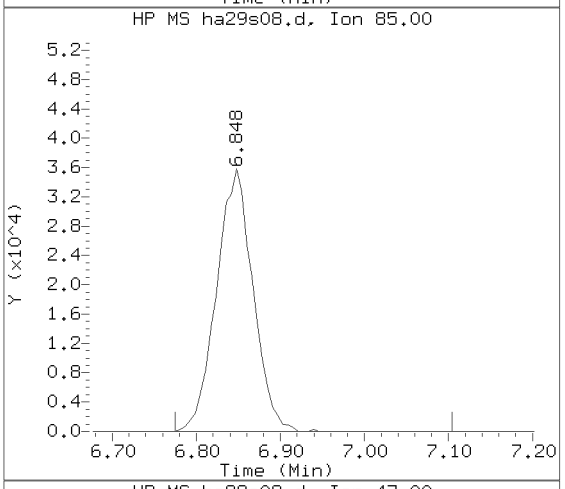
Reference Standard Spectrum for Chloroform



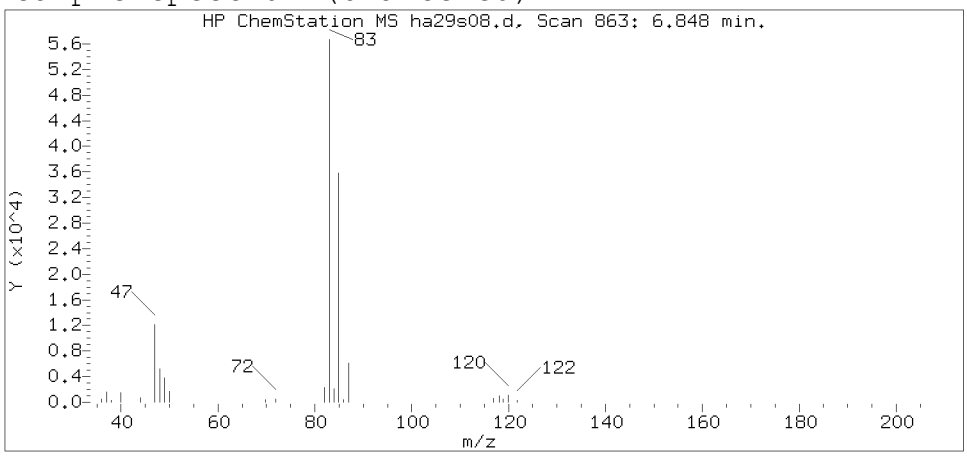


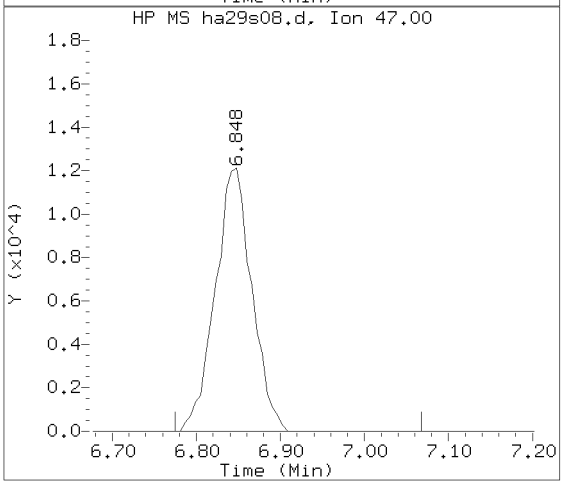
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

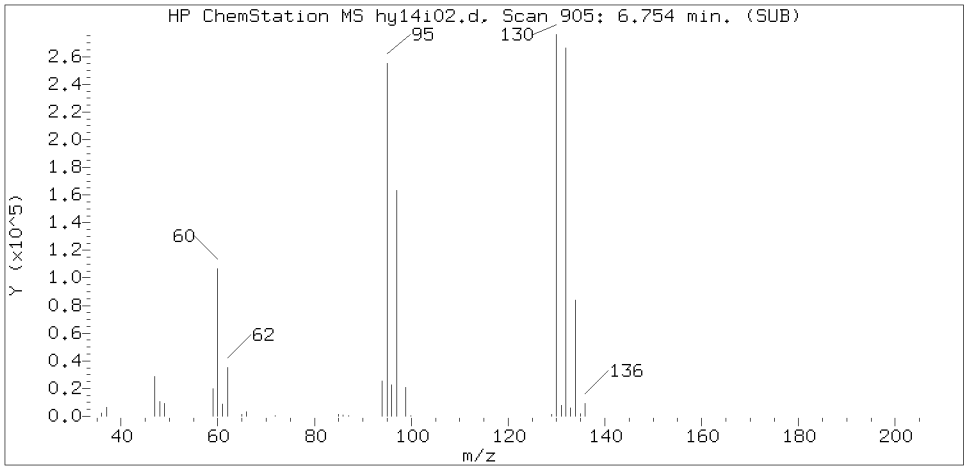
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

Sample Name: 5WB04 Lab Sample ID: 1302098

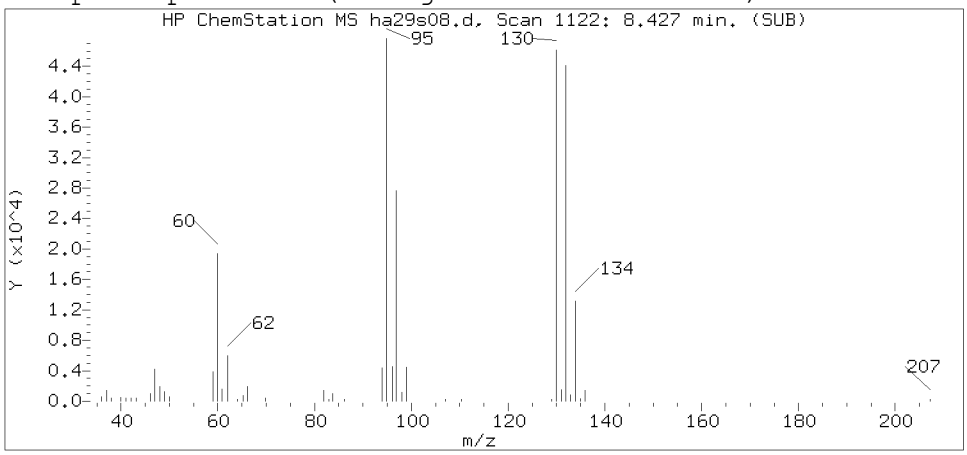
Compound Number : 50
Compound Name : Chloroform
Scan Number : 863
Retention Time (minutes): 6.848
Relative Retention Time :-0.00066
Quant Ion : 83.00
Area (flag) : 168658
On-Column Amount (ng) : 1.7721

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

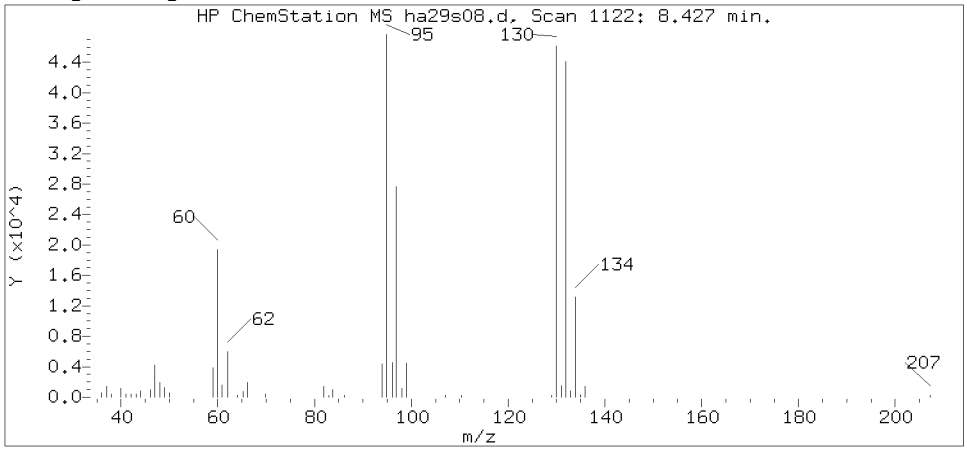
Reference Standard Spectrum for Trichloroethene

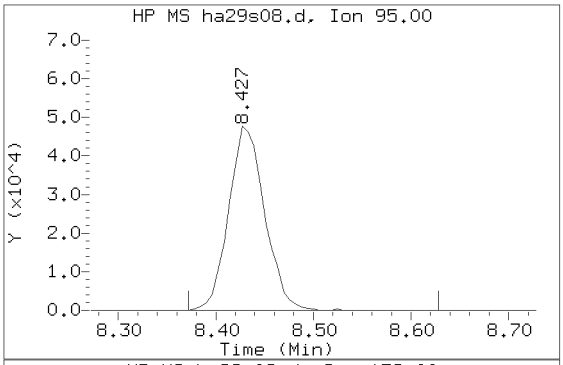


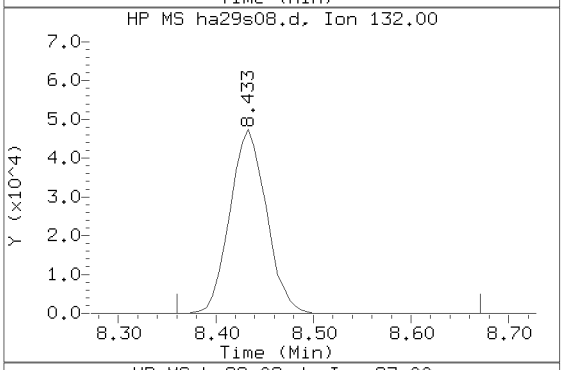
Sample Spectrum (Background Subtracted)

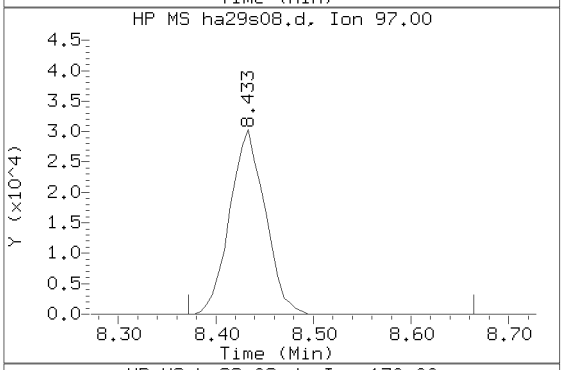


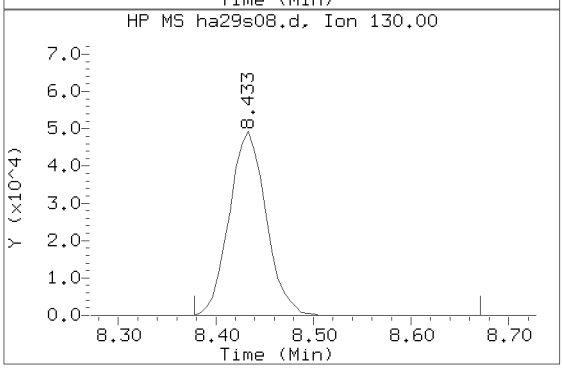
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/20apr29a.b/ha29s08.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:27 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:45 Automation

Sample Name: 5WB04 Lab Sample ID: 1302098

Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1122
Retention Time (minutes): 8.427
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 122046
On-Column Amount (ng) : 2.1275

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

5WB05 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1302099

Data file: /chem2/HP19094.i/20apr29a.b/ha29s09.d Injection date and time: **29-APR-2020 12:49**
Data file Sample Info. Line: 5WB05;1302099;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458	(0.006)	471	65	125919	(-3)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2012925	(-4)	10.00	
98) Chlorobenzene-d5	11.372	(0.000)	1605	117	1521233	(-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	794245	(-3)	10.00	

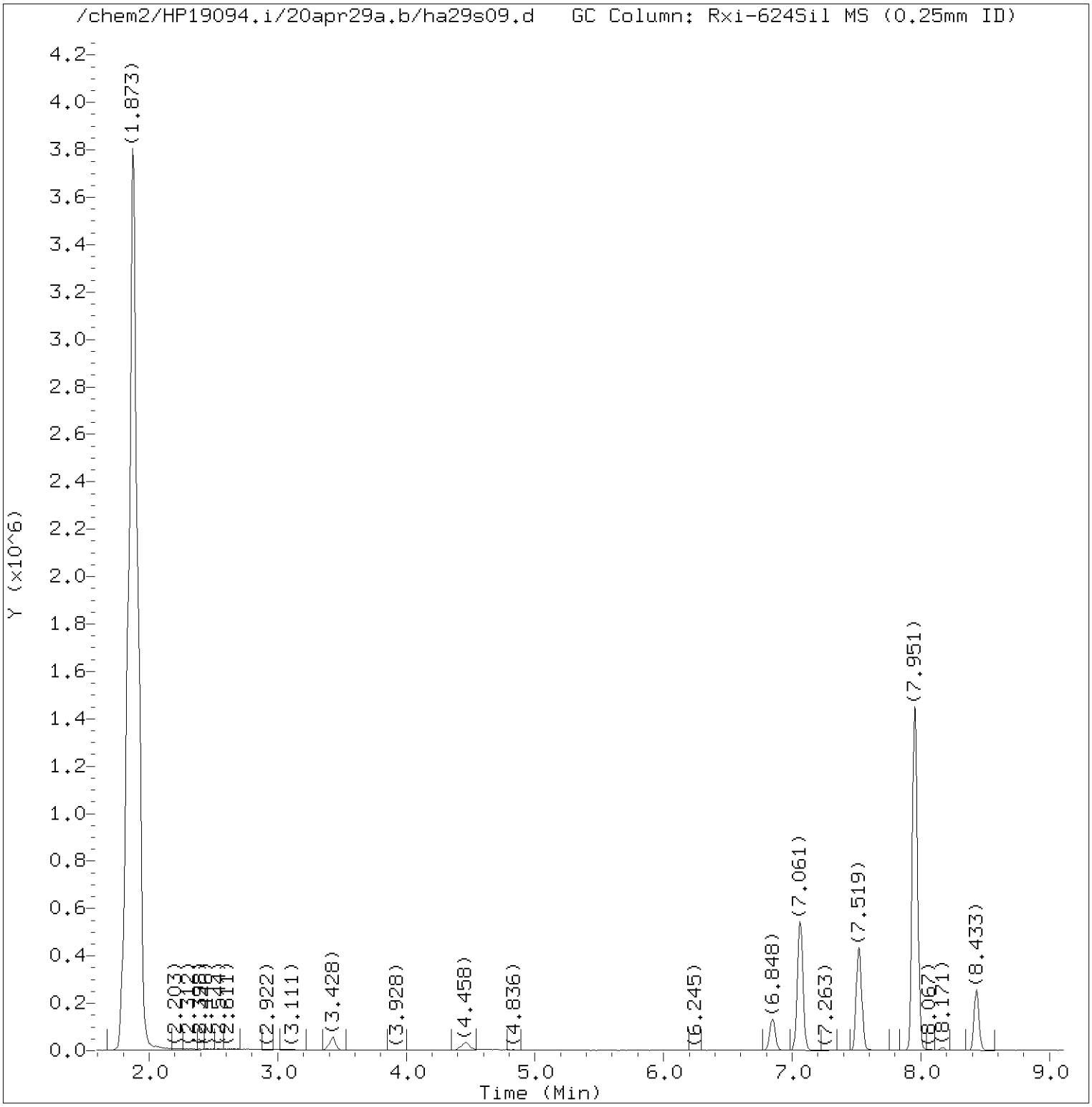
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	512693	10.246	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519	(0.000)	102	103684	10.692	107%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	1999178	9.864	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	694867	9.267	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.428	(-0.000)	59	58441	1.633	1.63		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.848	(-0.000)	83	169049	1.775	1.77			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)	8.433	(-0.000)	95	120809	2.104	2.10			0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

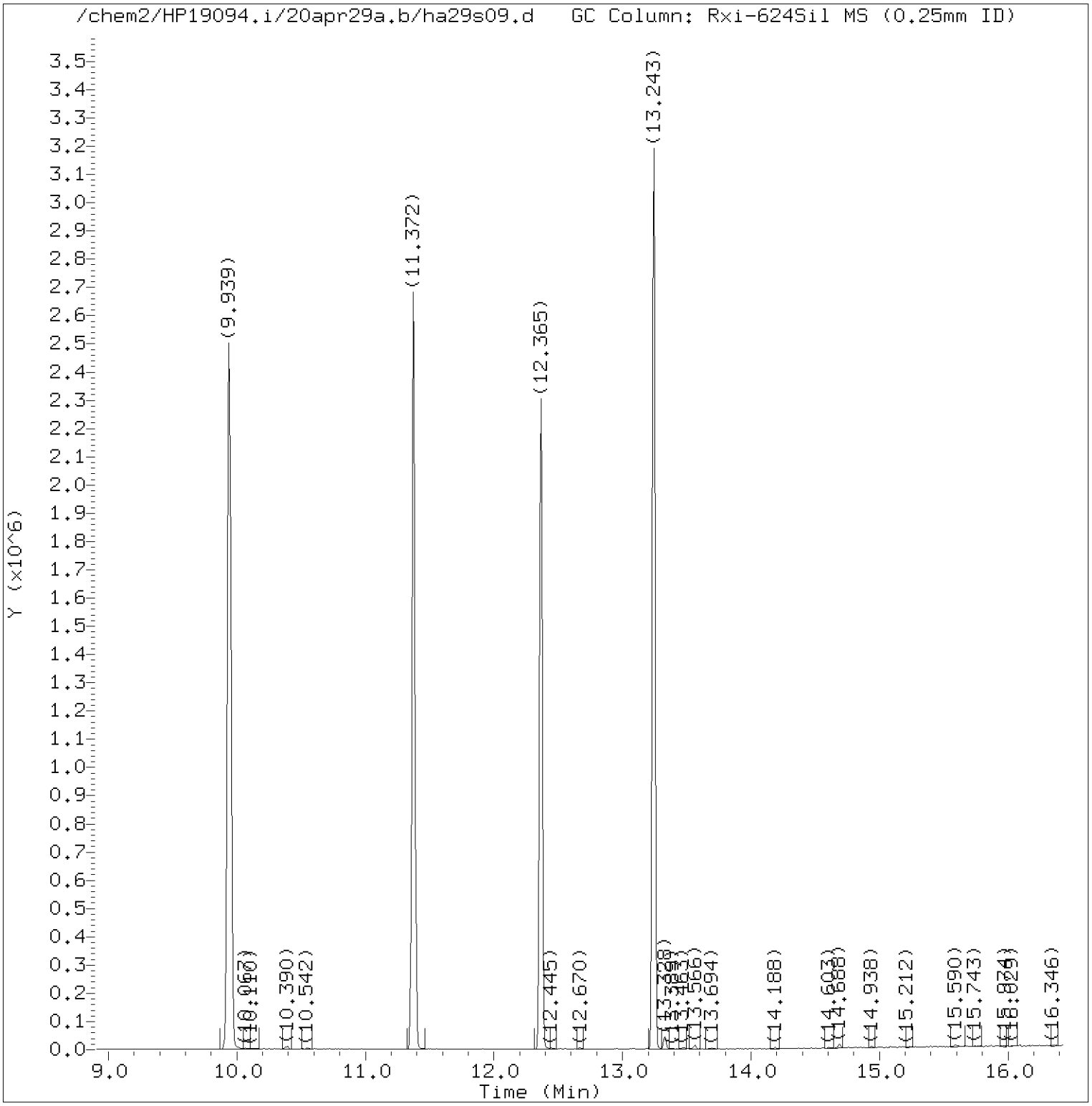
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

Sample Name: 5WB05 Lab Sample ID: 1302099

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

Sample Name: 5WB05 Lab Sample ID: 1302099

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

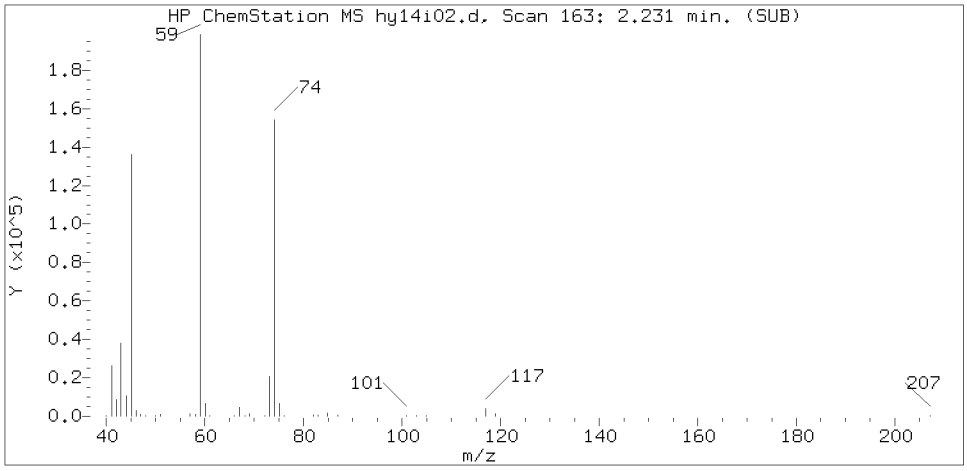
Sample Name: 5WB05 Lab Sample ID: 1302099

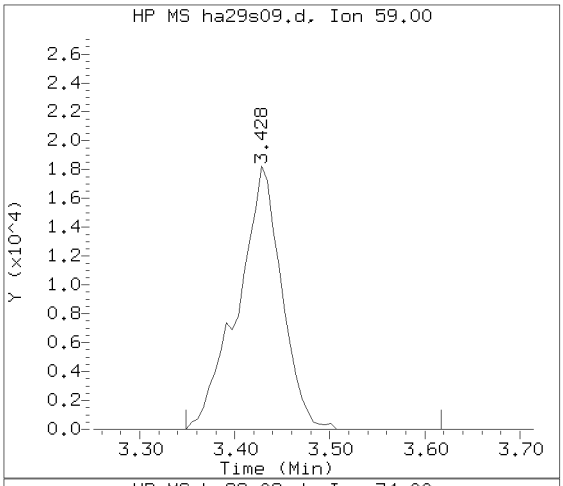
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.428	59	58441	1.633
27)*t-Butyl Alcohol-d10	(1)	4.458	65	125919	50.000
50) Chloroform	(2)	6.848	83	169049	1.775
51)$Dibromofluoromethane	(2)	7.061	113	512693	10.246
58)$1,2-Dichloroethane-d4	(2)	7.519	102	103684	10.692
64)*Fluorobenzene	(2)	7.951	96	2012925	10.000
68) Trichloroethene	(2)	8.433	95	120809	2.104
83)$Toluene-d8	(3)	9.939	98	1999178	9.864
98)*Chlorobenzene-d5	(3)	11.372	117	1521233	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	694867	9.267
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	794245	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

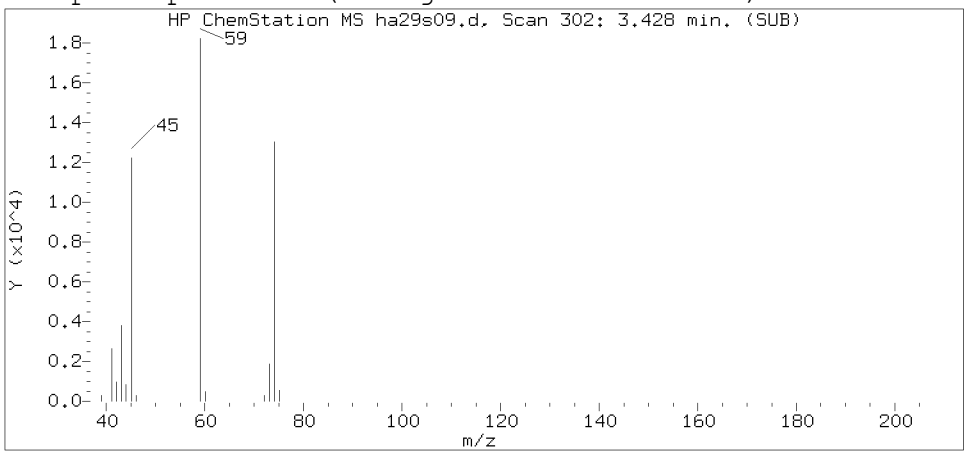
Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

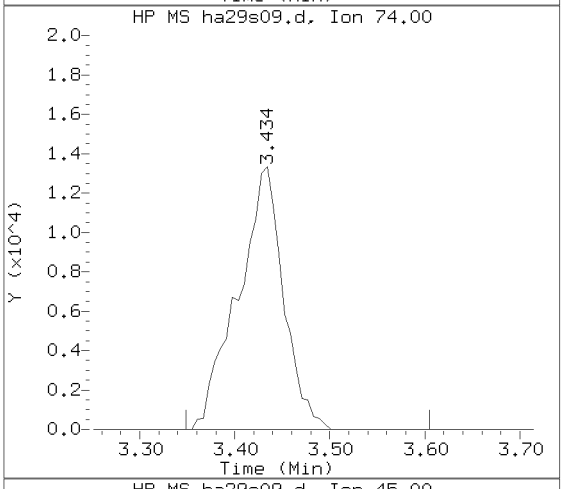
Reference Standard Spectrum for Ethyl ether



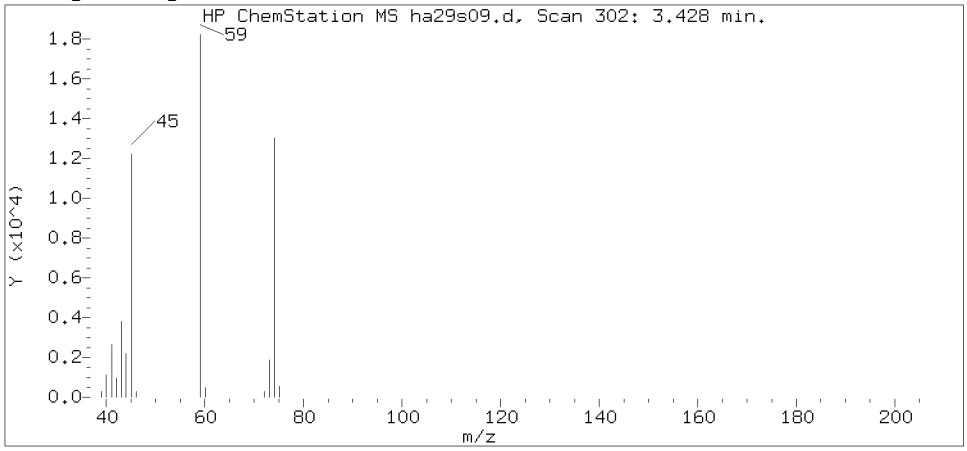


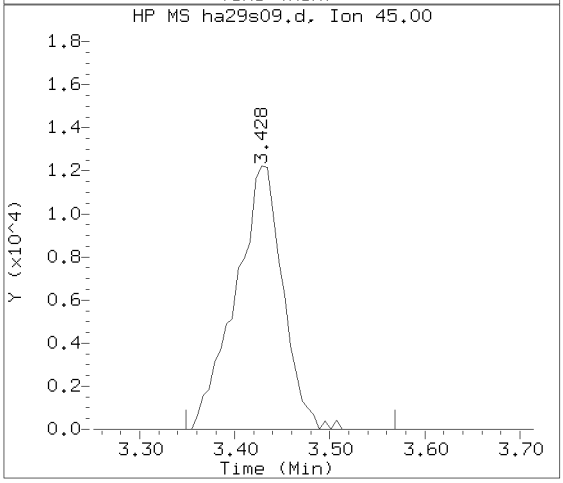
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

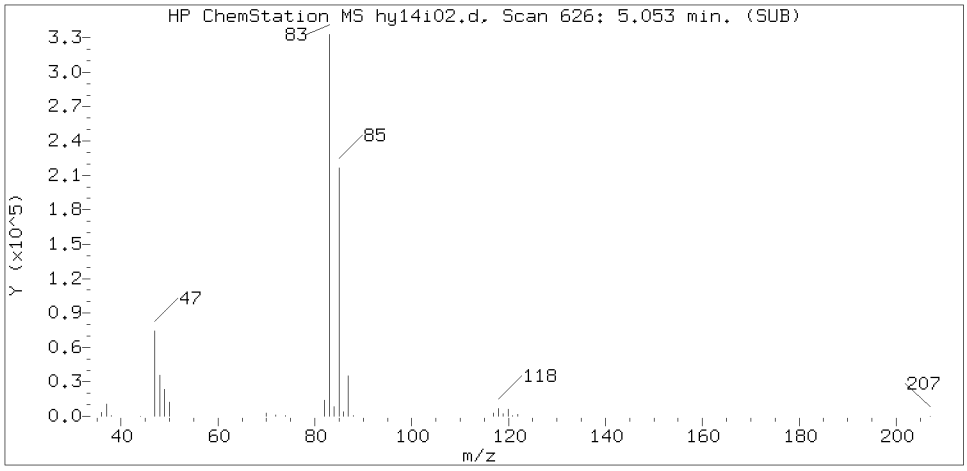
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

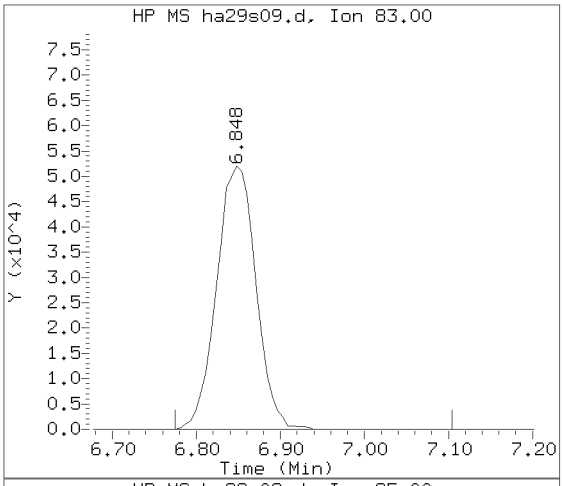
Sample Name: 5WB05 Lab Sample ID: 1302099

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00033
Quant Ion : 59.00
Area (flag) : 58441
On-Column Amount (ng) : 1.6332

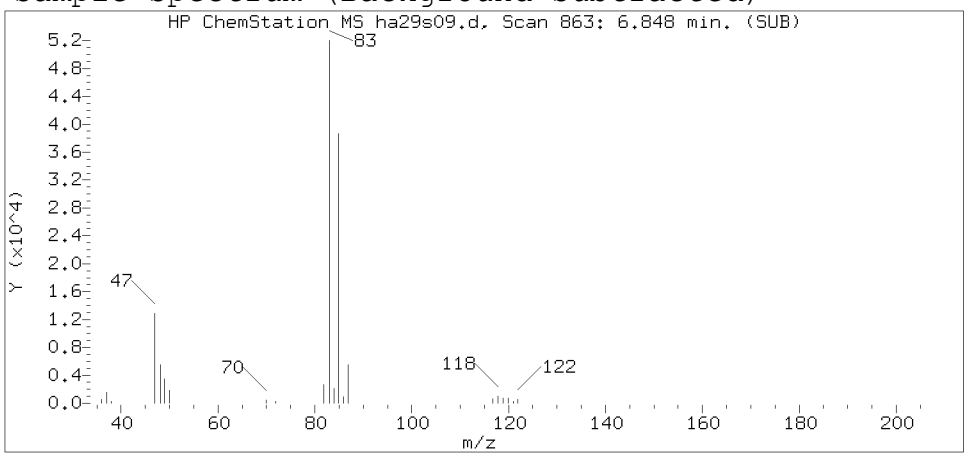
Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

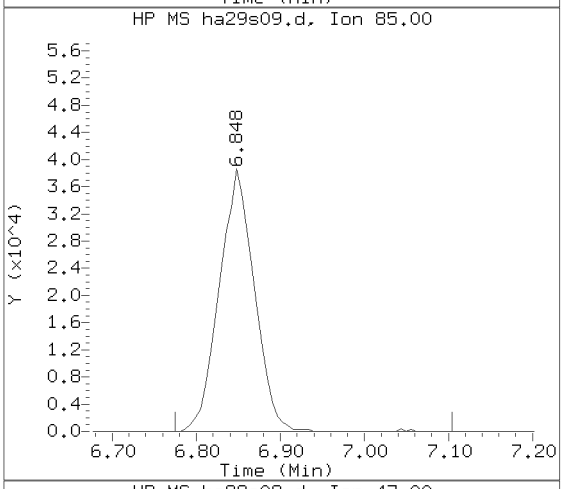
Reference Standard Spectrum for Chloroform



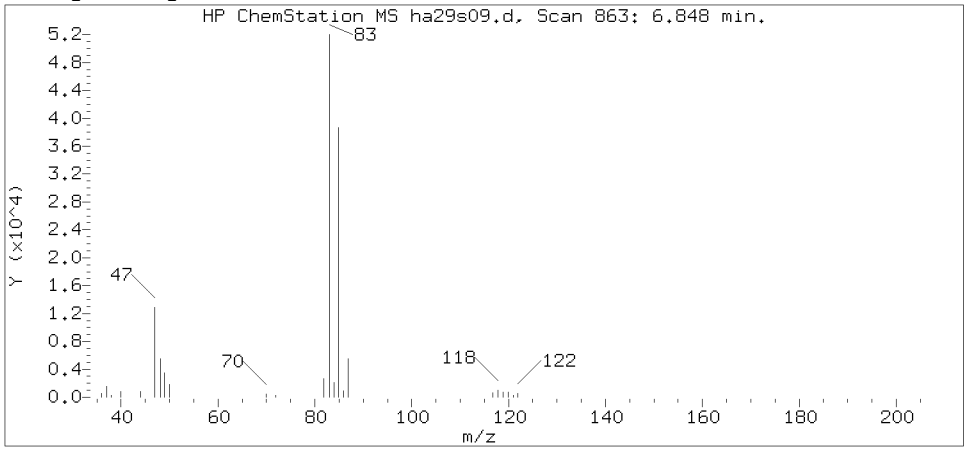


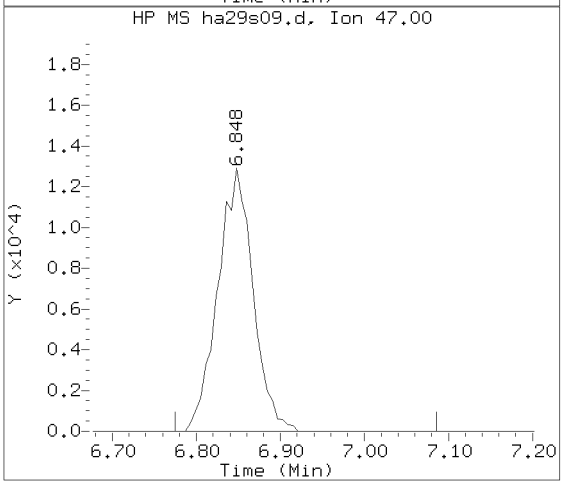
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

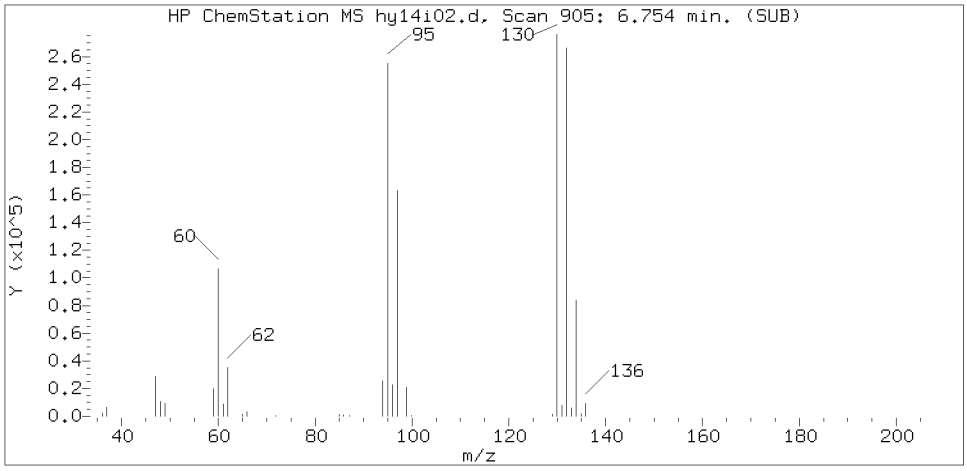
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

Sample Name: 5WB05 Lab Sample ID: 1302099

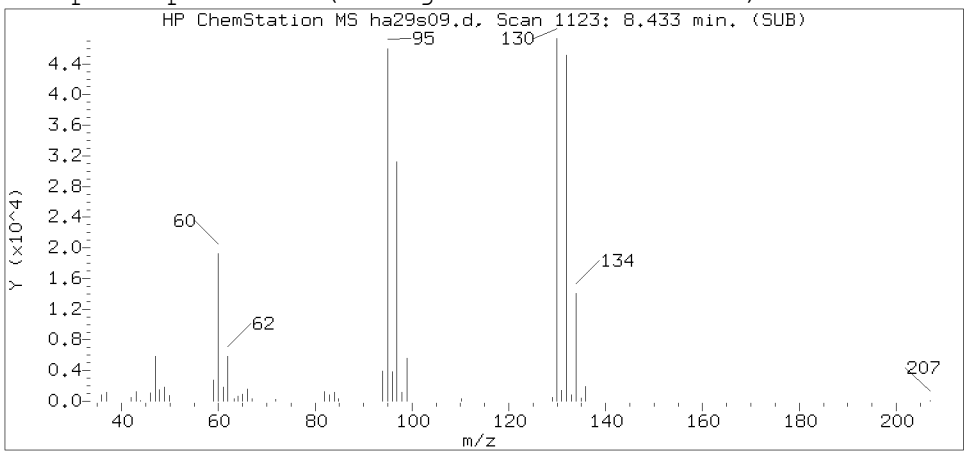
Compound Number : 50
Compound Name : Chloroform
Scan Number : 863
Retention Time (minutes): 6.848
Relative Retention Time :-0.00066
Quant Ion : 83.00
Area (flag) : 169049
On-Column Amount (ng) : 1.7747

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

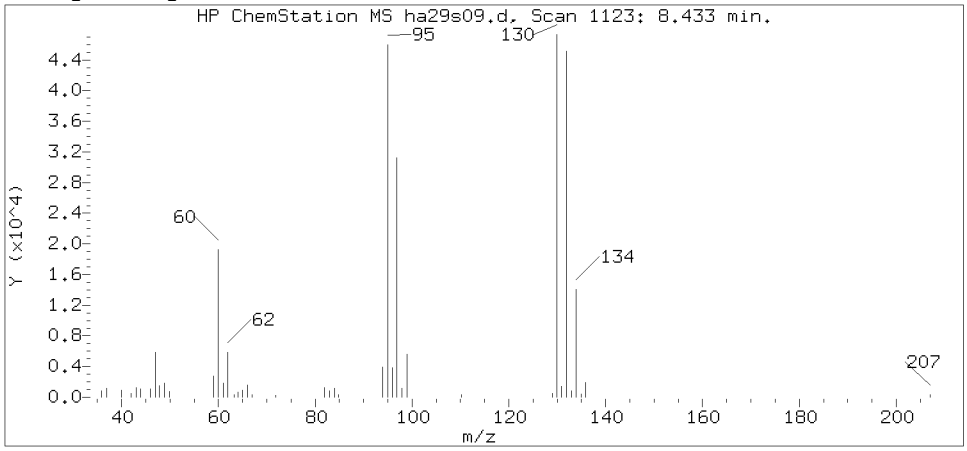
Reference Standard Spectrum for Trichloroethene

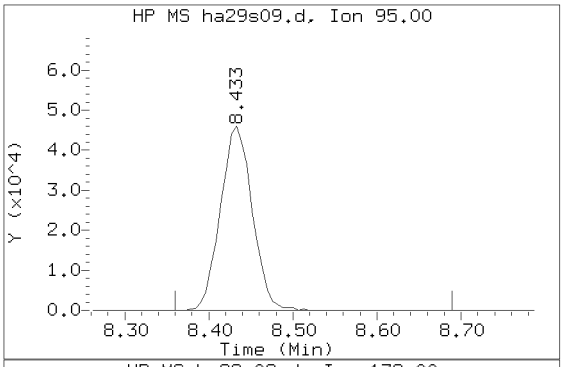


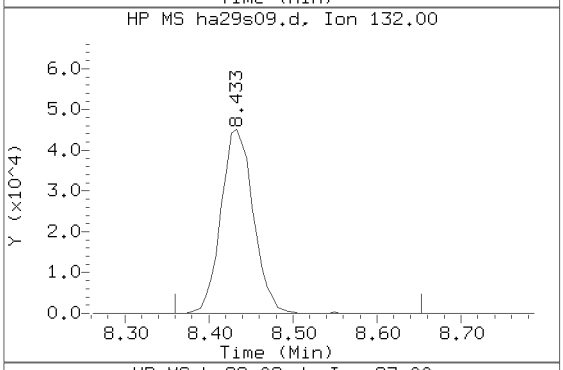
Sample Spectrum (Background Subtracted)

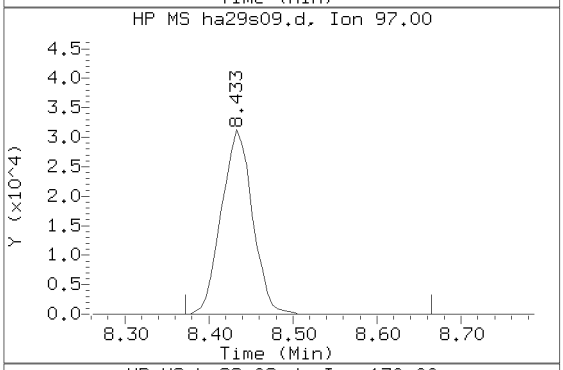


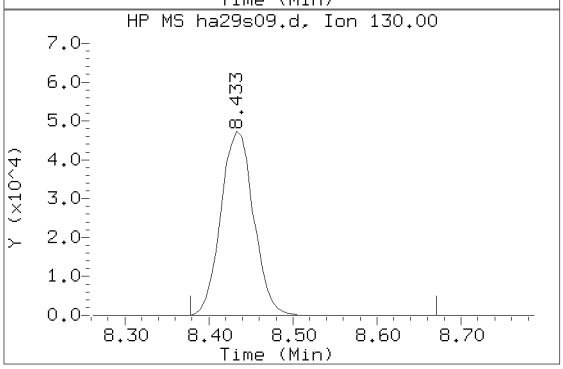
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/20apr29a.b/ha29s09.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:49 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:07 Automation

Sample Name: 5WB05 Lab Sample ID: 1302099

Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1123
Retention Time (minutes): 8.433
Relative Retention Time :-0.00081
Quant Ion : 95.00
Area (flag) : 120809
On-Column Amount (ng) : 2.1041

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

5WB06 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1302100

Data file: /chem2/HP19094.i/20apr29a.b/ha29s10.d Injection date and time: **29-APR-2020 13:11**
Data file Sample Info. Line: 5WB06;1302100;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452	(0.012)	470	65	129725	(0)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2007011	(-4)	10.00	
98) Chlorobenzene-d5	11.372	(0.000)	1605	117	1518933	(-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	795327	(-3)	10.00	

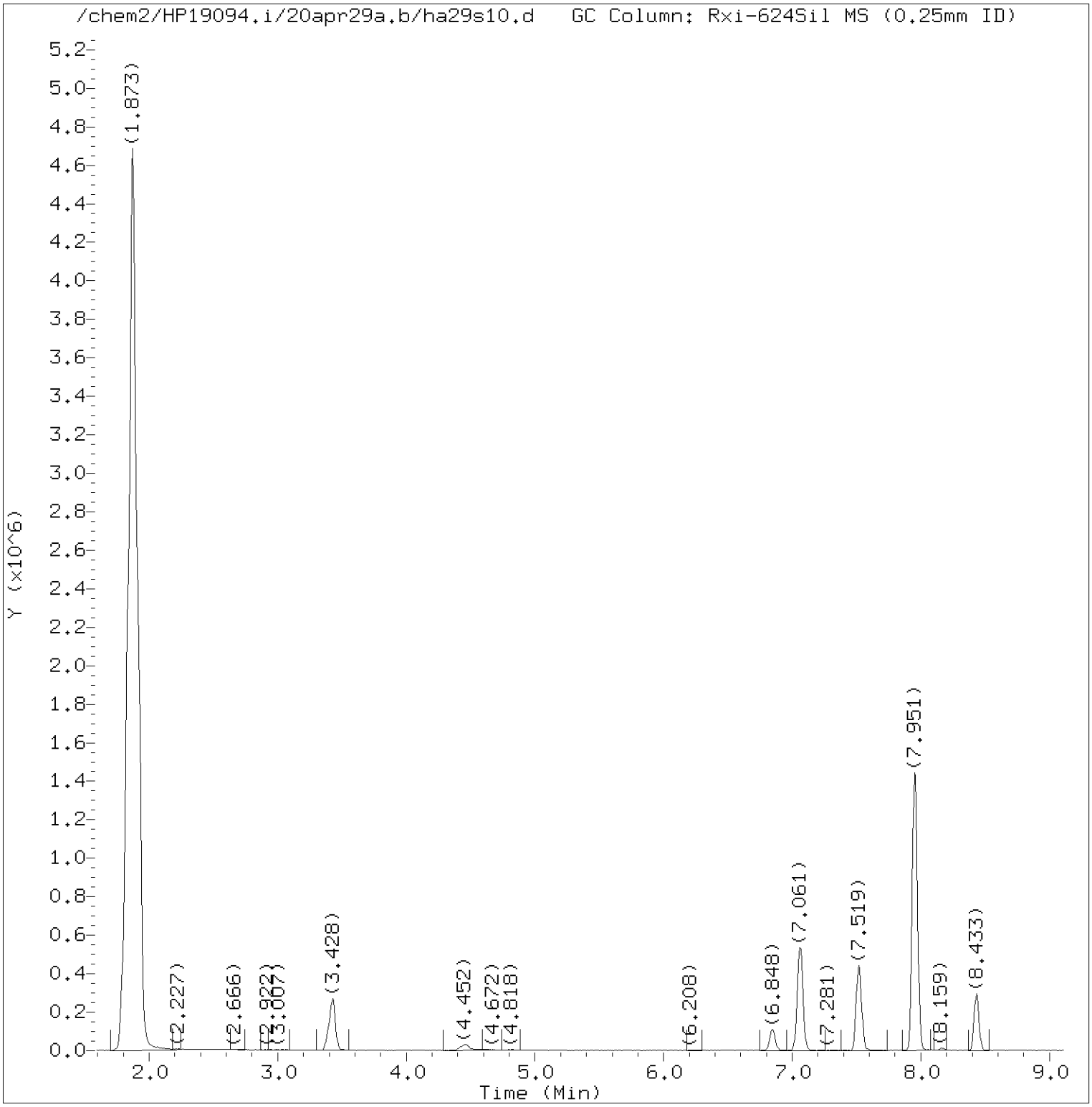
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	513068	10.284	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525	(-0.001)	102	102384	10.589	106%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	1990613	9.836	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	684642	9.145	91%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.428	(-0.000)	59	298814	8.375	8.38		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.848	(-0.000)	83	137489	1.448	1.45			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)	8.433	(-0.000)	95	140645	2.457	2.46			0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Miranda E. Campbell on 04/29/2020 at 16:26. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

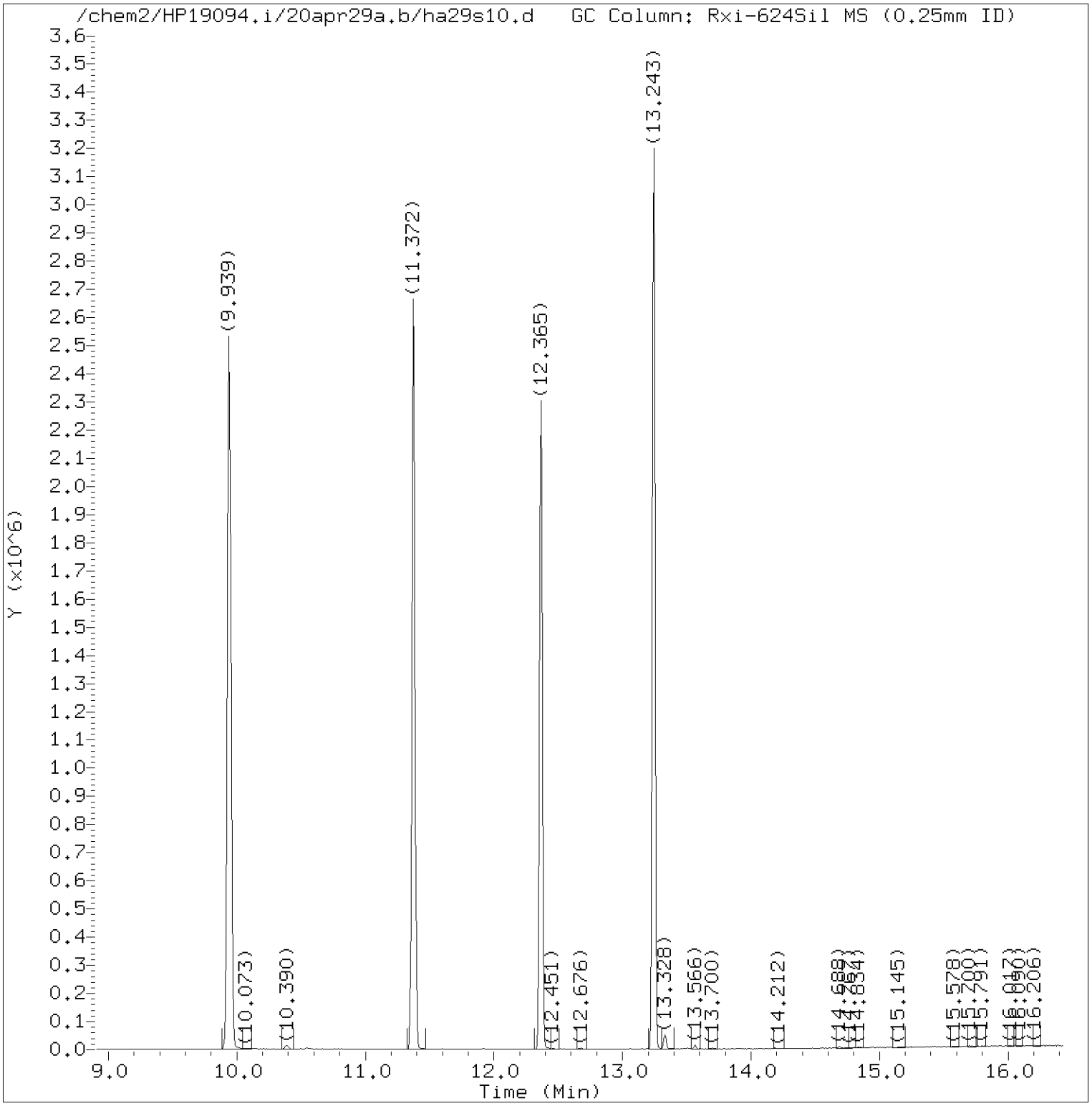
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.428	59	298814	8.375
27)*t-Butyl Alcohol-d10	(1)	4.452	65	129725	50.000
50) Chloroform	(2)	6.848	83	137489	1.448
51)$Dibromofluoromethane	(2)	7.061	113	513068	10.284
58)$1,2-Dichloroethane-d4	(2)	7.525	102	102384	10.589
64)*Fluorobenzene	(2)	7.951	96	2007011	10.000
68) Trichloroethene	(2)	8.433	95	140645	2.457
83)$Toluene-d8	(3)	9.939	98	1990613	9.836
98)*Chlorobenzene-d5	(3)	11.372	117	1518933	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	684642	9.145
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	795327	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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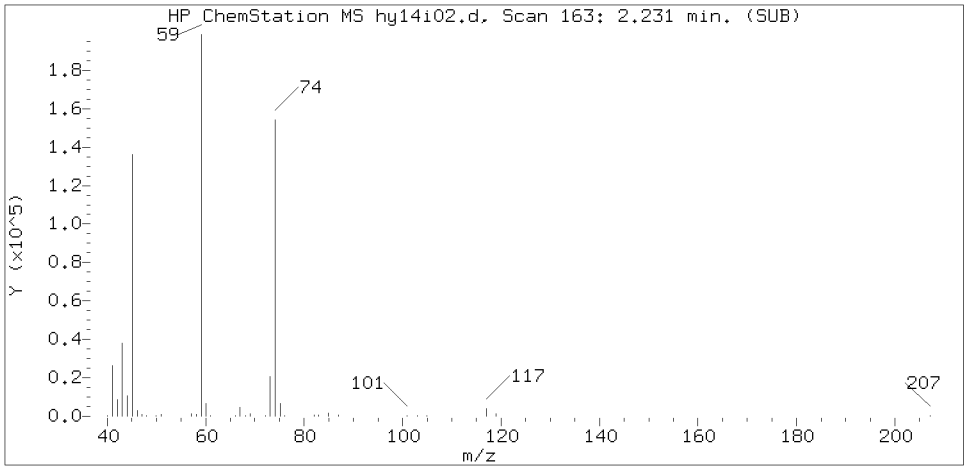
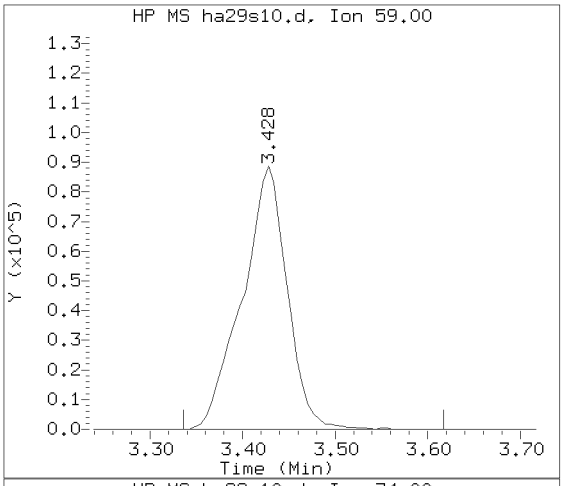
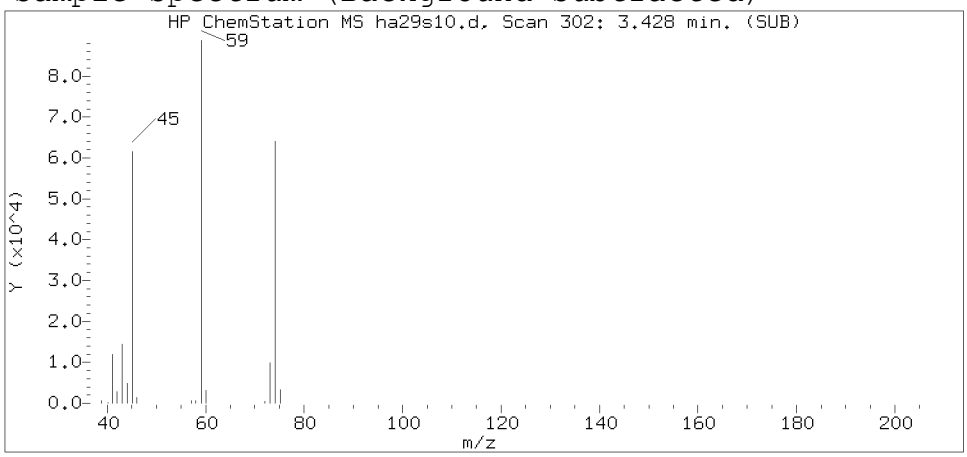
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284

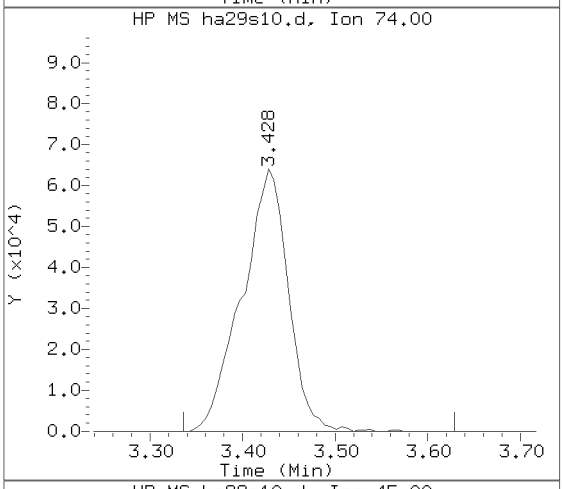
Reference Standard Spectrum for Ethyl ether



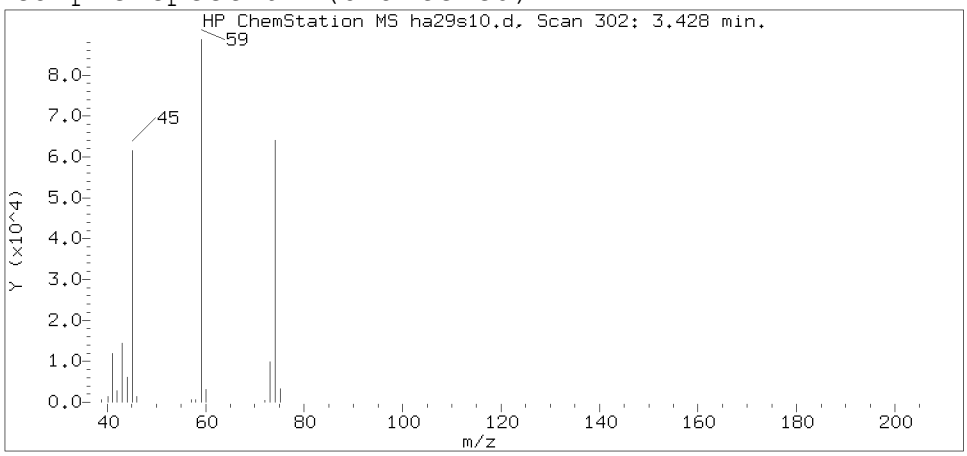


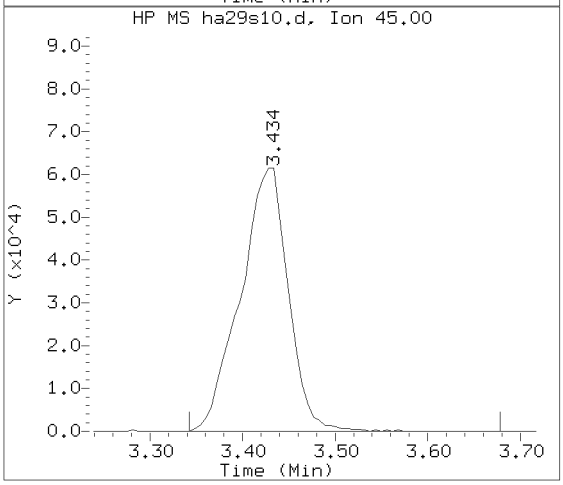
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00032
Quant Ion : 59.00
Area (flag) : 298814
On-Column Amount (ng) : 8.3752

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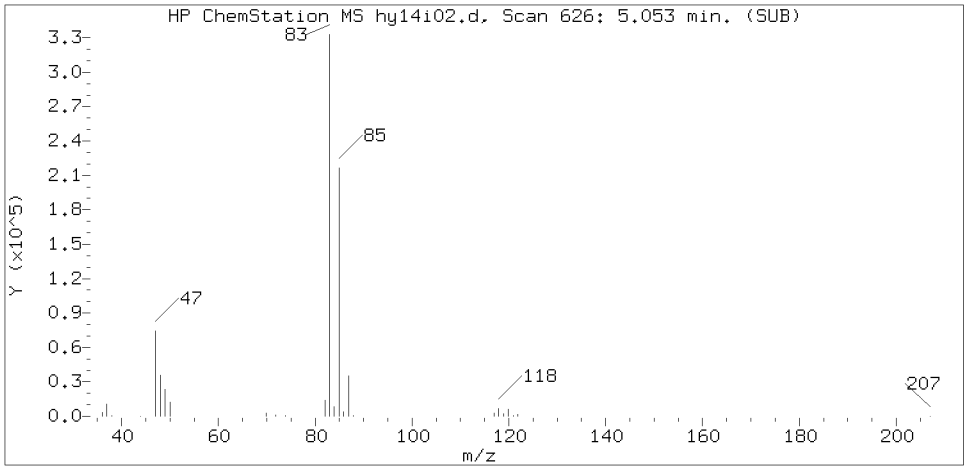
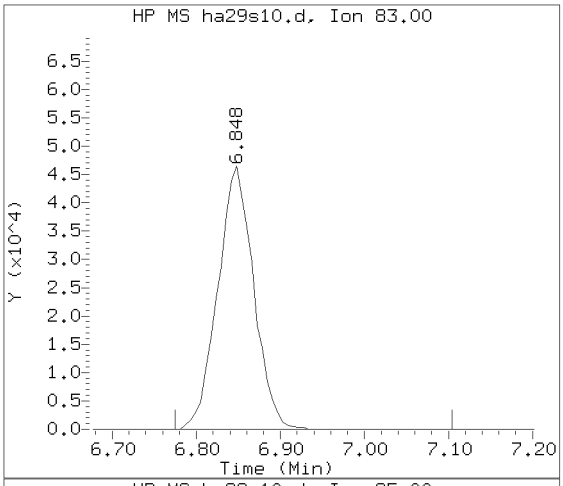
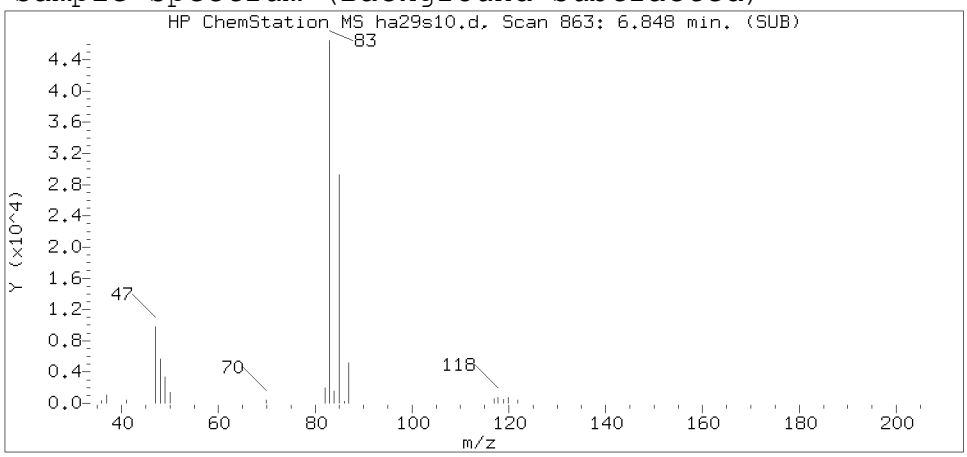
Target 3.5 esignature user ID: mec29284

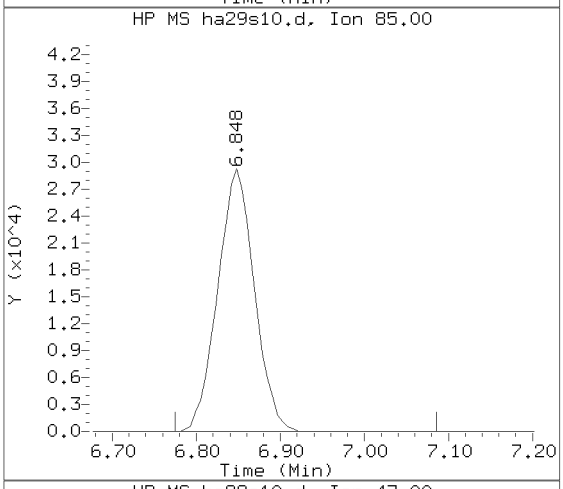
Reference Standard Spectrum for Chloroform



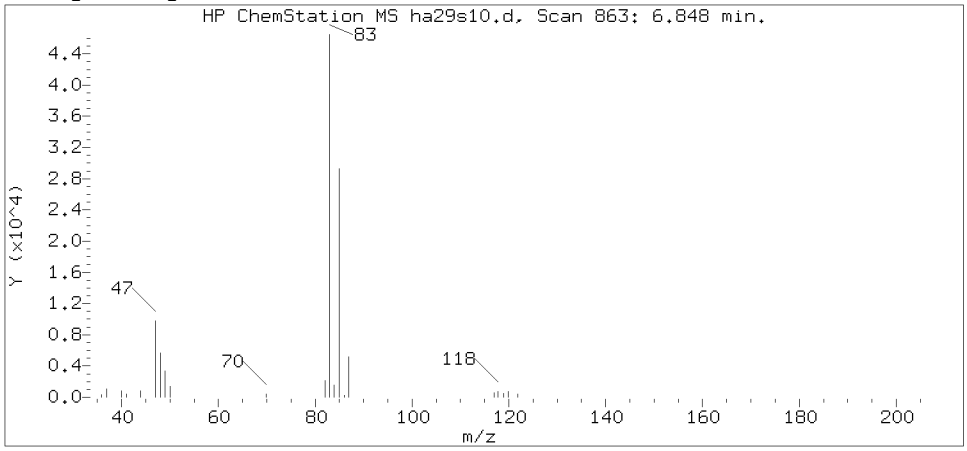


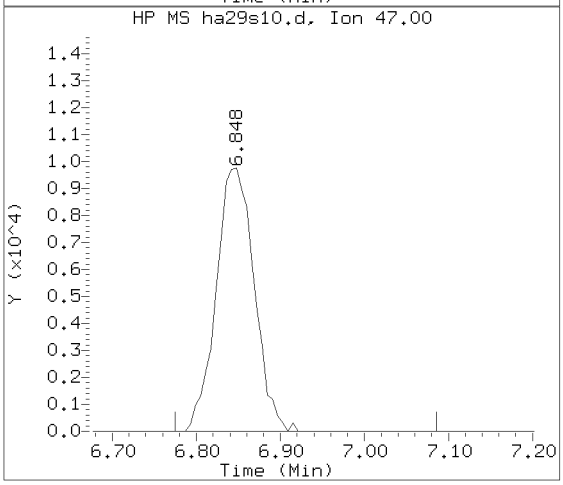
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Compound Number : 50
Compound Name : Chloroform
Scan Number : 863
Retention Time (minutes): 6.848
Relative Retention Time :-0.00066
Quant Ion : 83.00
Area (flag) : 137489
On-Column Amount (ng) : 1.4476

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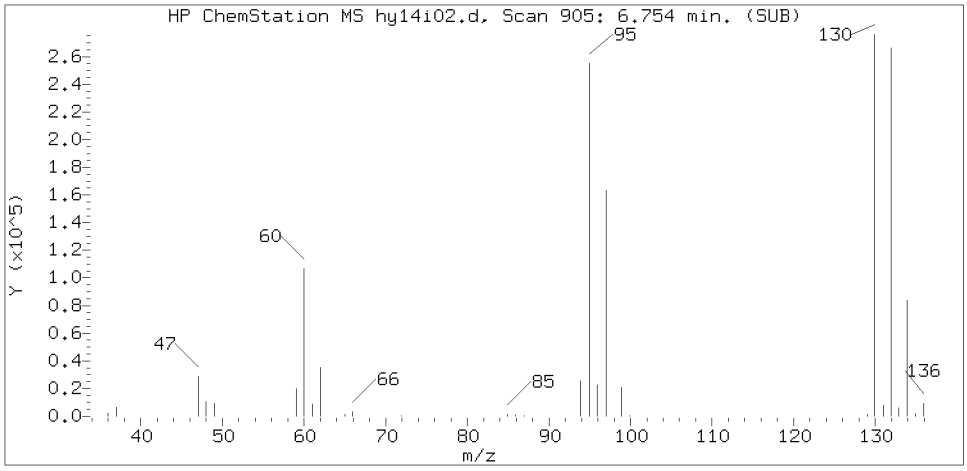
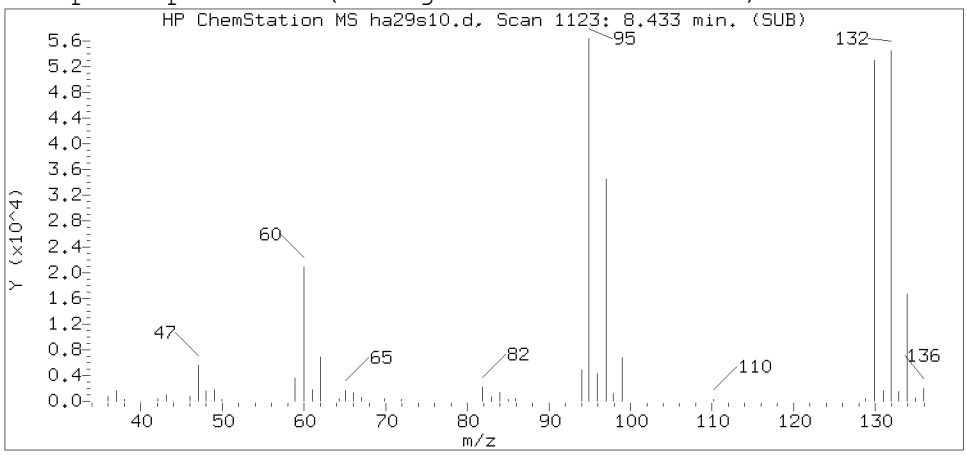
Target 3.5 esignature user ID: mec29284

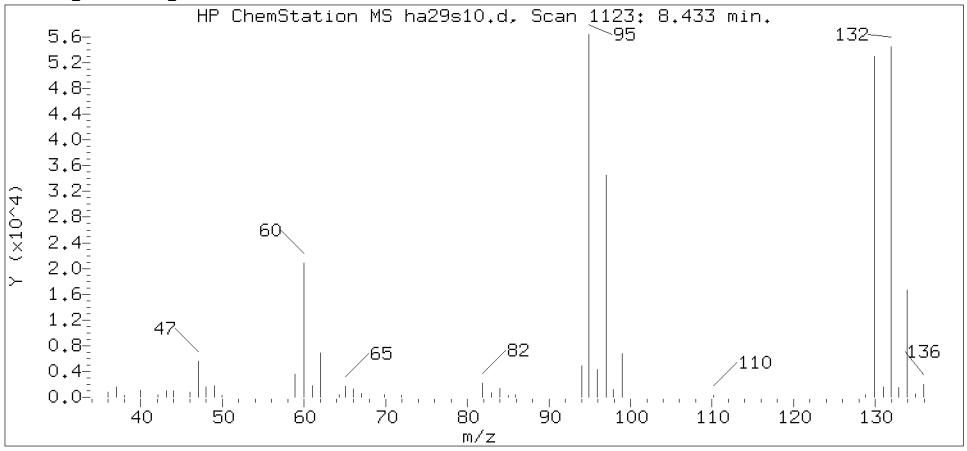
Reference Standard Spectrum for Trichloroethene

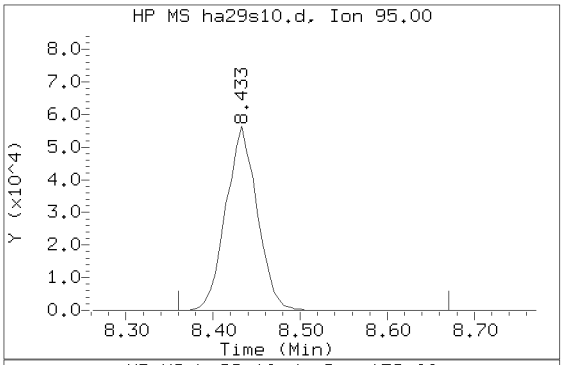


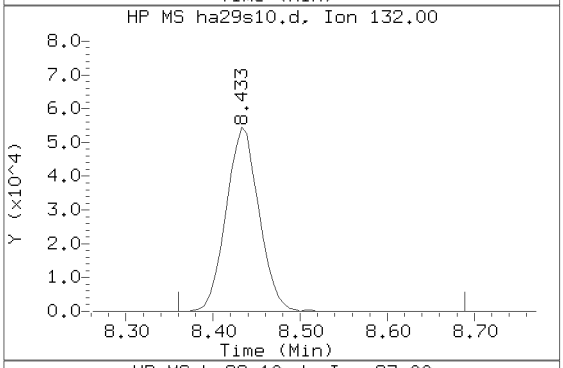
Sample Spectrum (Background Subtracted)

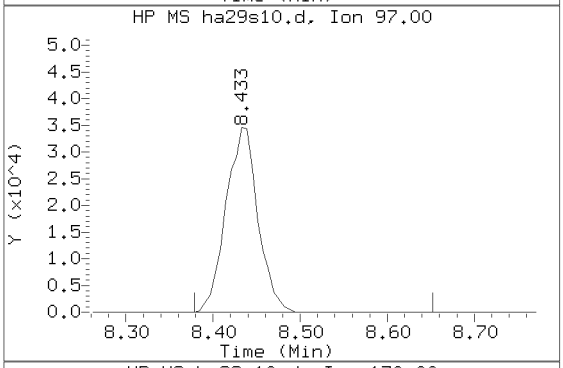


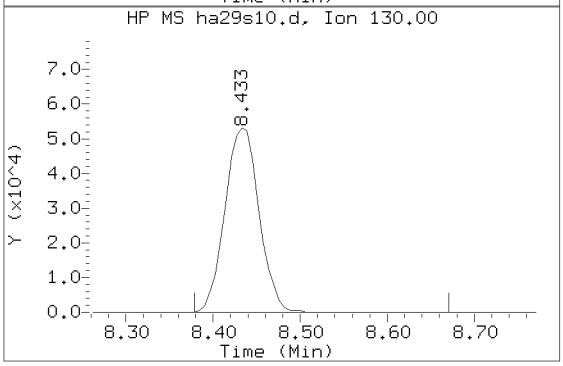
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/20apr29a.b/ha29s10.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:29 Automation

Sample Name: 5WB06 Lab Sample ID: 1302100

Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1123
Retention Time (minutes): 8.433
Relative Retention Time :-0.00081
Quant Ion : 95.00
Area (flag) : 140645
On-Column Amount (ng) : 2.4568

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Target 3.5 esignature user ID: mec29284

5WB07 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 1302101

Data file: /chem2/HP19094.i/20apr29a.b/ha29s11.d Injection date and time: **29-APR-2020 13:32**
Data file Sample Info. Line: 5WB07;1302101;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458	(0.006)	471	65	126694	(-3)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2004626	(-5)	10.00	
98) Chlorobenzene-d5	11.371	(0.000)	1605	117	1512361	(-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	787072	(-4)	10.00	

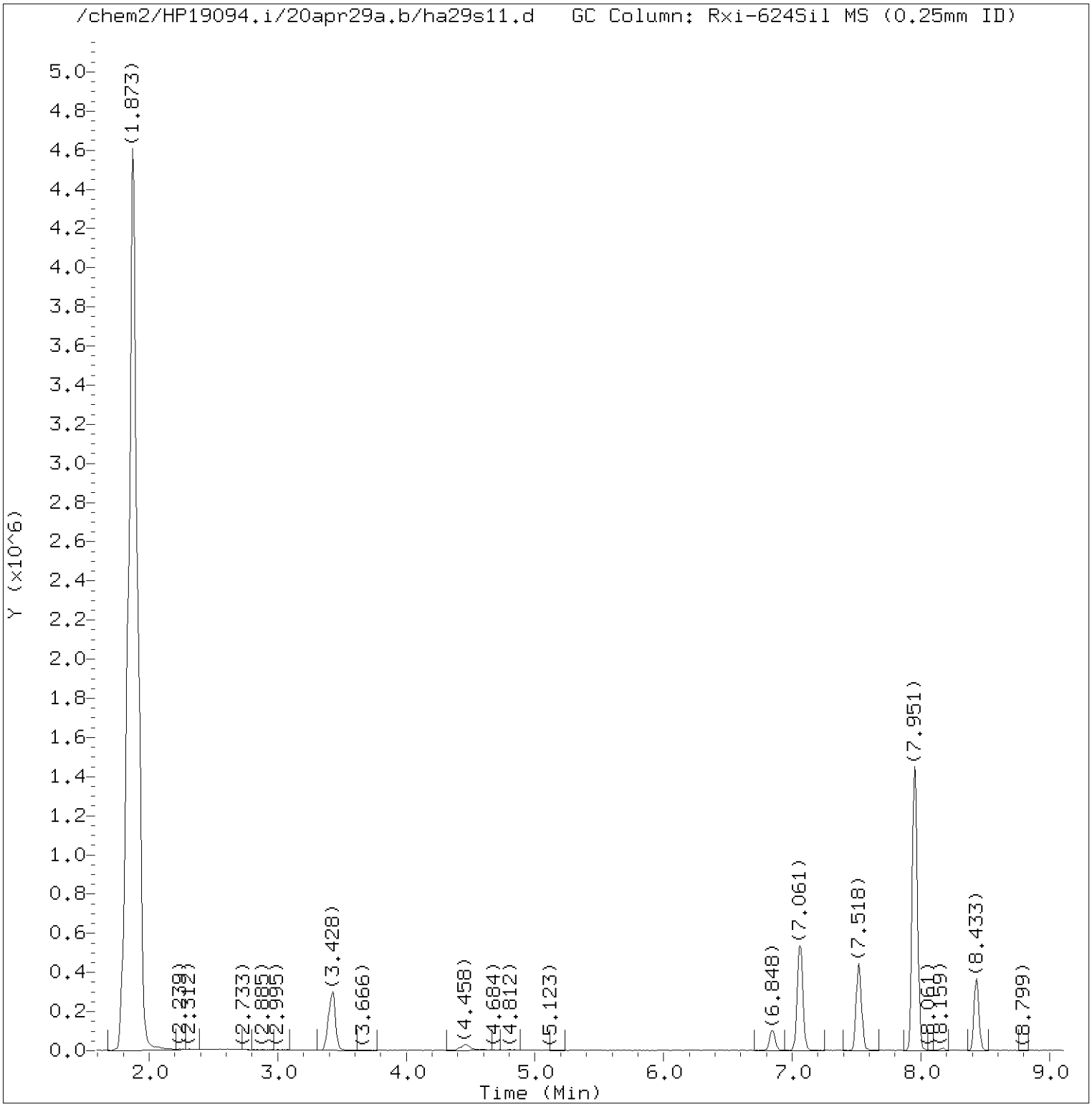
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	507251	10.179	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518	(0.000)	102	100706	10.427	104%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	1990029	9.876	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	688107	9.231	92%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.428	(-0.000)	59	363012	10.187	10.19		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)	6.854	(-0.001)	83	133206	1.404	1.40			0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)	8.433	(-0.000)	95	171435	2.998	3.00			0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Miranda E. Campbell on 04/29/2020 at 16:26. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

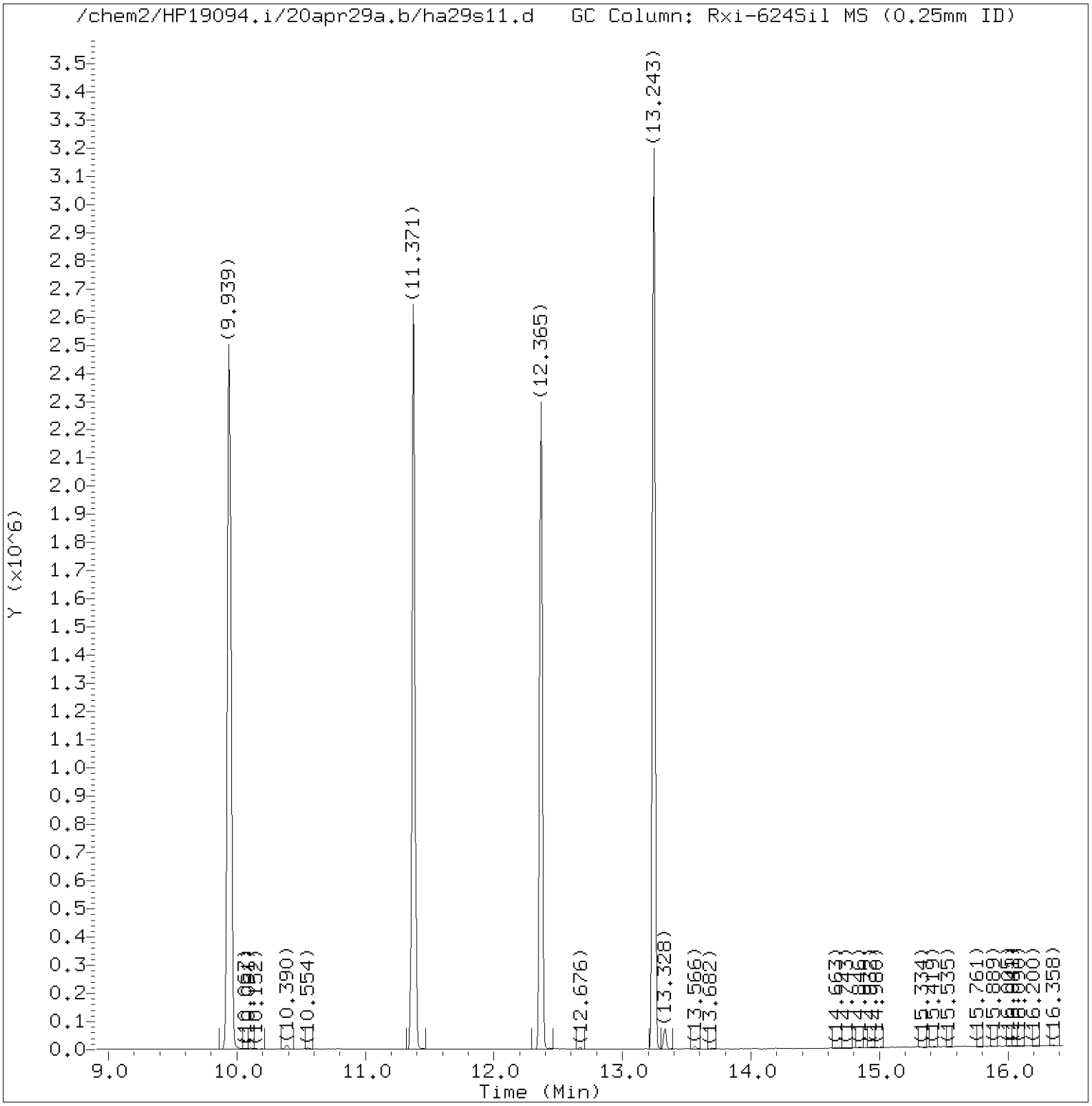
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Sample Name: 5WB07 Lab Sample ID: 1302101

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Sample Name: 5WB07 Lab Sample ID: 1302101

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

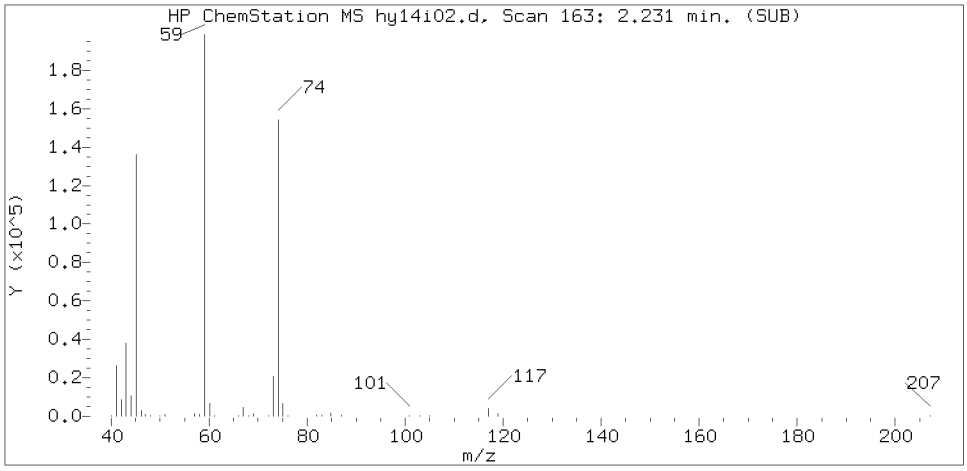
Sample Name: 5WB07 Lab Sample ID: 1302101

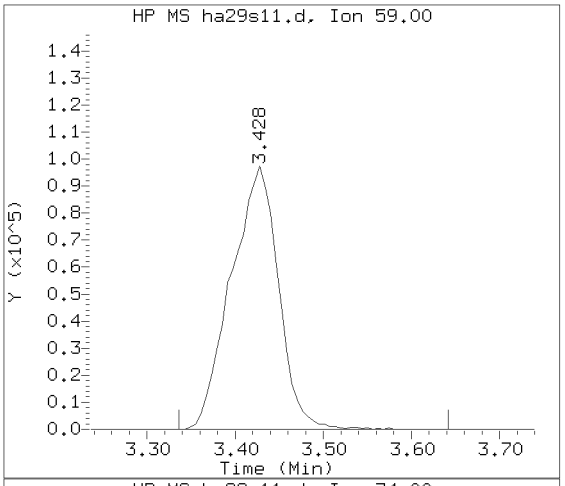
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.428	59	363012	10.187
27)*t-Butyl Alcohol-d10	(1)	4.458	65	126694	50.000
50) Chloroform	(2)	6.854	83	133206	1.404
51)$Dibromofluoromethane	(2)	7.061	113	507251	10.179
58)$1,2-Dichloroethane-d4	(2)	7.518	102	100706	10.427
64)*Fluorobenzene	(2)	7.951	96	2004626	10.000
68) Trichloroethene	(2)	8.433	95	171435	2.998
83)$Toluene-d8	(3)	9.939	98	1990029	9.876
98)*Chlorobenzene-d5	(3)	11.371	117	1512361	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	688107	9.231
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	787072	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

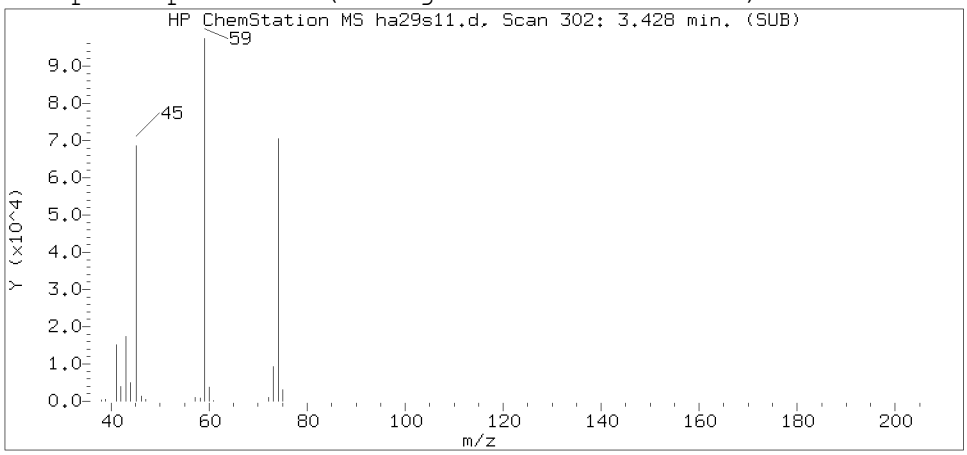
Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:26.
Target 3.5 esignature user ID: mec29284

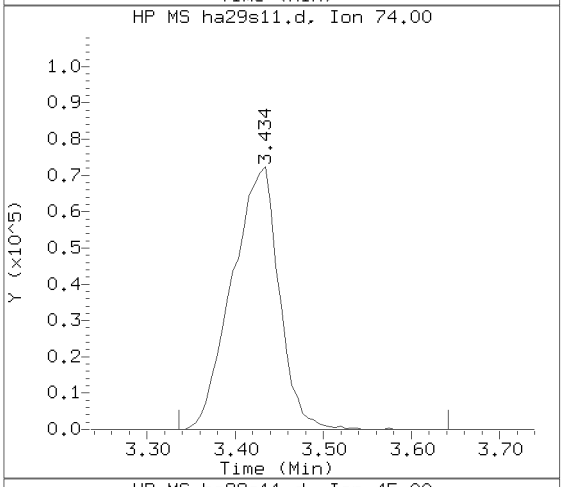
Reference Standard Spectrum for Ethyl ether



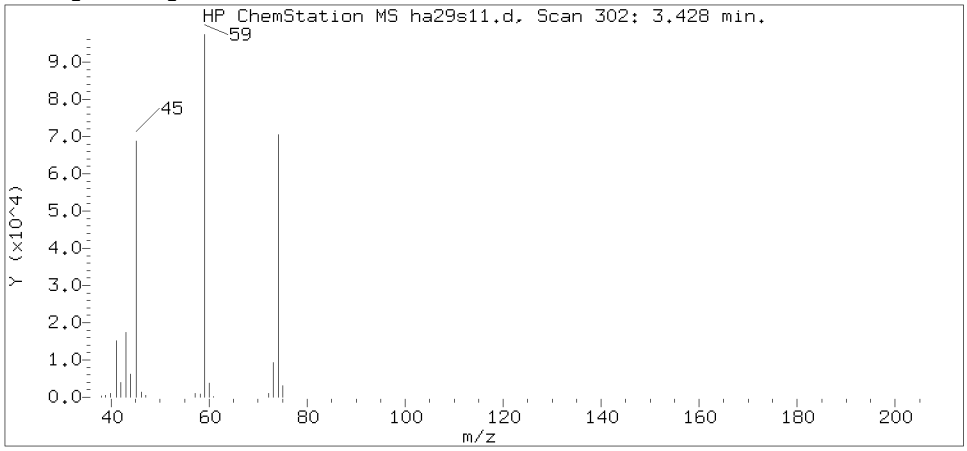


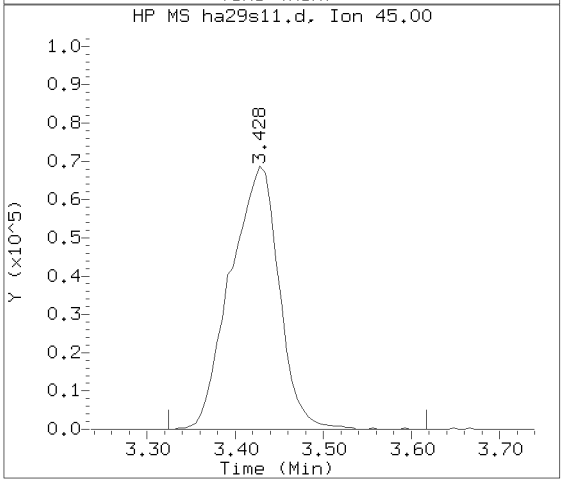
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Sample Name: 5WB07 Lab Sample ID: 1302101

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00031
Quant Ion : 59.00
Area (flag) : 363012
On-Column Amount (ng) : 10.1867

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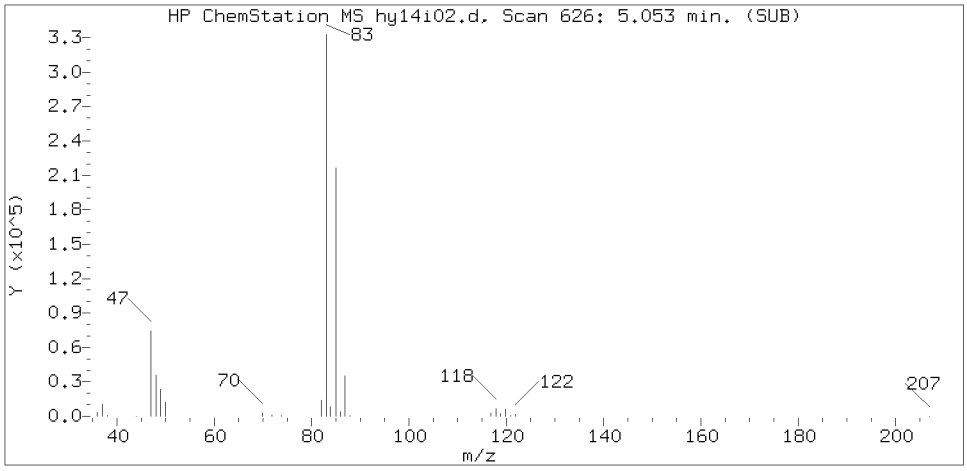
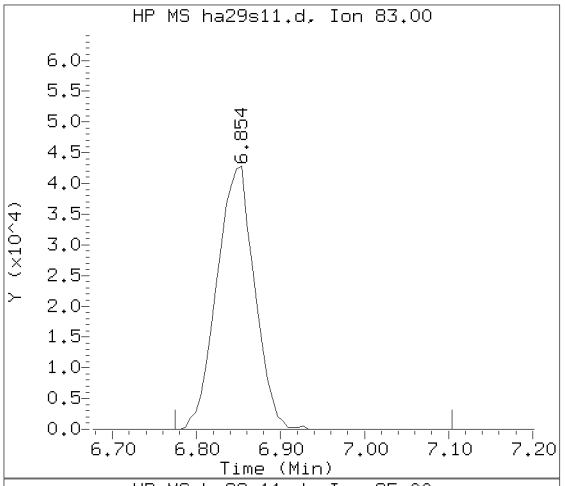
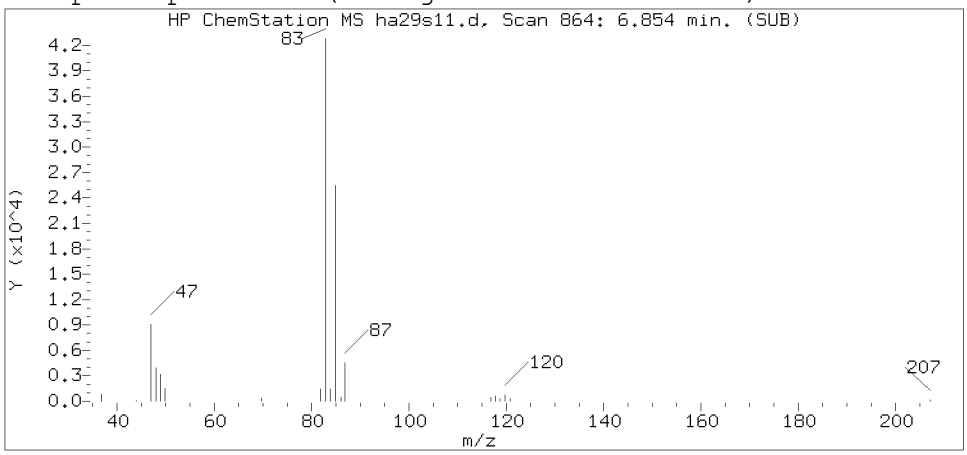
Target 3.5 esignature user ID: mec29284

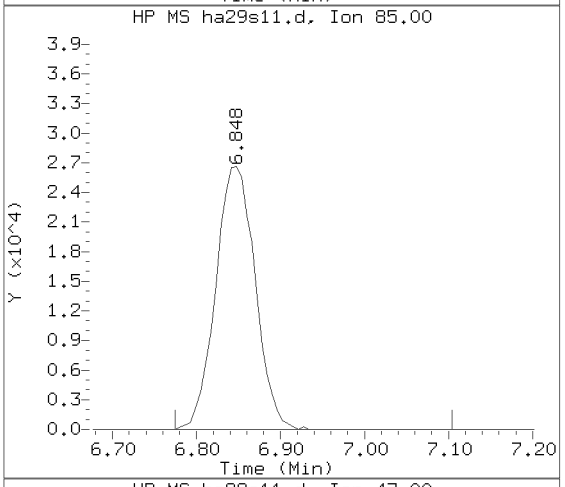
Reference Standard Spectrum for Chloroform



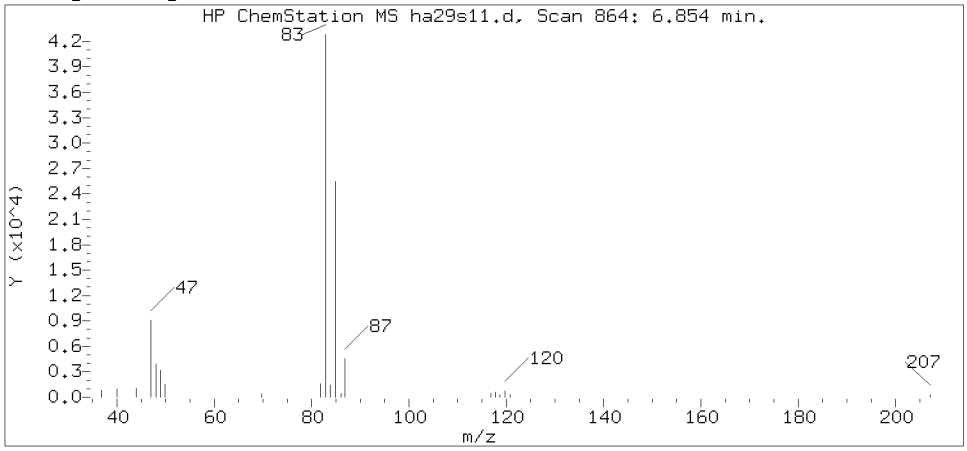


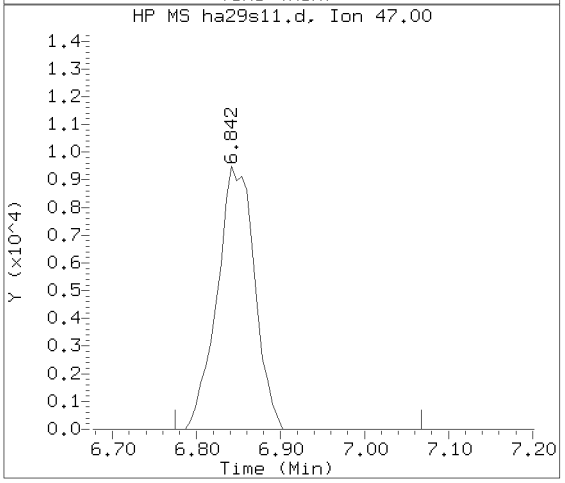
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Sample Name: 5WB07 Lab Sample ID: 1302101

Compound Number : 50
Compound Name : Chloroform
Scan Number : 864
Retention Time (minutes): 6.854
Relative Retention Time :-0.00142
Quant Ion : 83.00
Area (flag) : 133206
On-Column Amount (ng) : 1.4042

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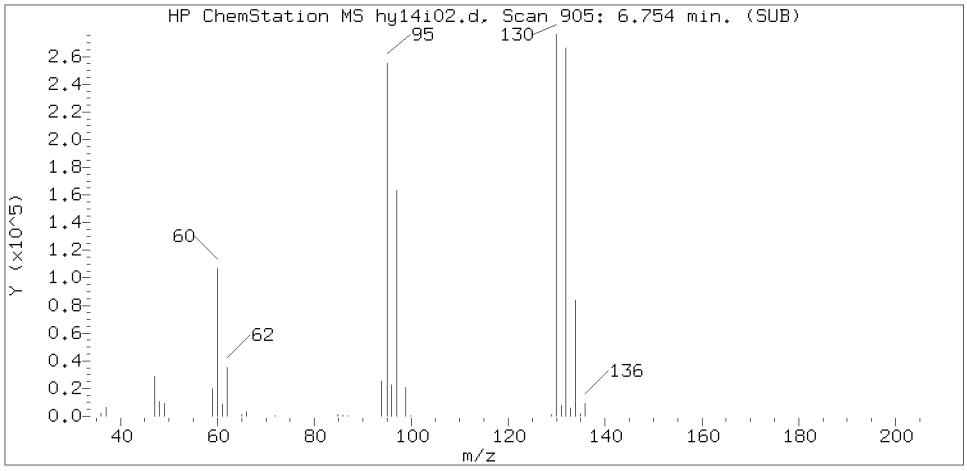
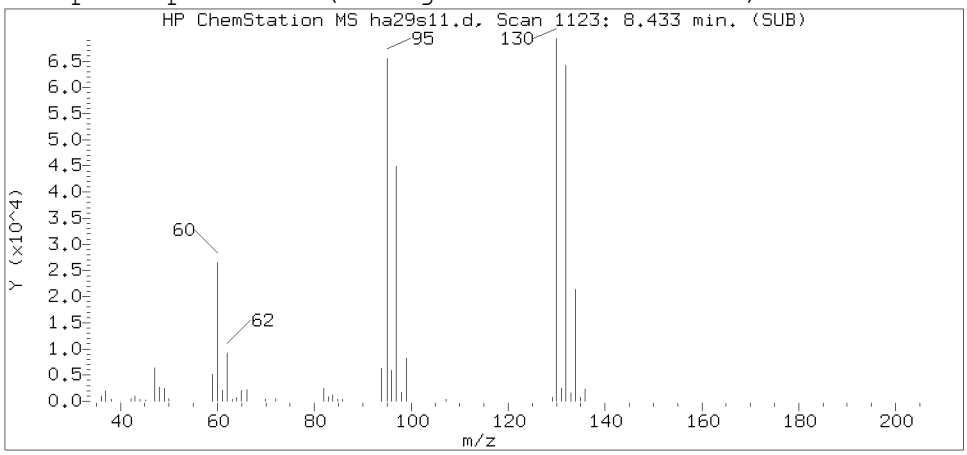
Target 3.5 esignature user ID: mec29284

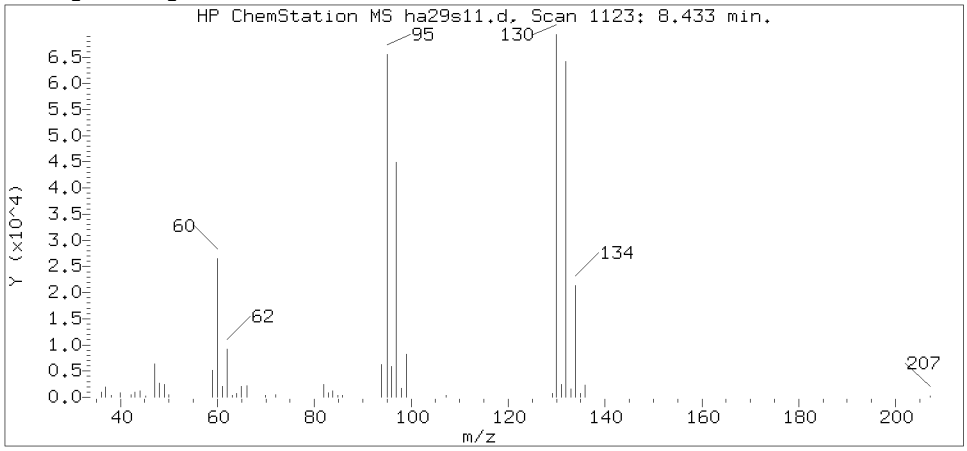
Reference Standard Spectrum for Trichloroethene

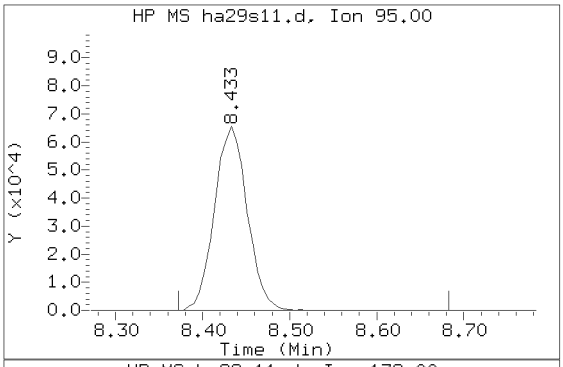


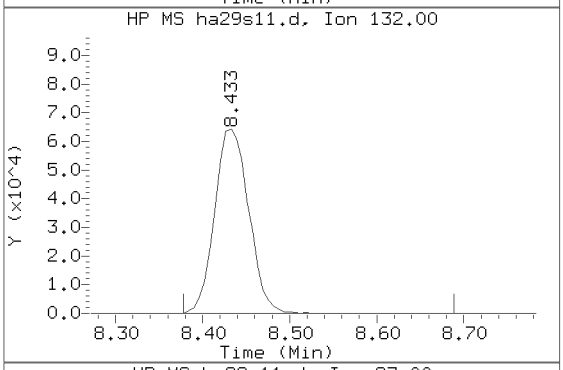
Sample Spectrum (Background Subtracted)

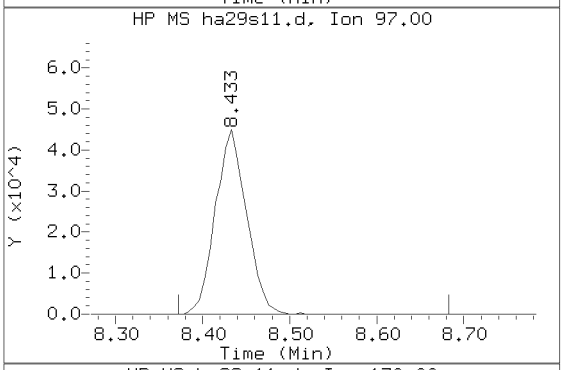


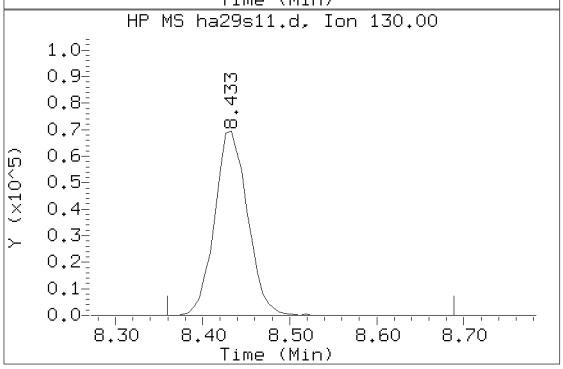
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/20apr29a.b/ha29s11.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:50 Automation

Sample Name: 5WB07 Lab Sample ID: 1302101

Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1123
Retention Time (minutes): 8.433
Relative Retention Time :-0.00081
Quant Ion : 95.00
Area (flag) : 171435
On-Column Amount (ng) : 2.9982

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Target 3.5 esignature user ID: mec29284

Data file: /chem2/HP19094.i/20apr29a.b/ha29s12.d Injection date and time: **29-APR-2020 13:54**
Data file Sample Info. Line: 5WB08;1302102;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 14:12 Automation

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458	(0.006)	471	65	126401	(-3)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2005286	(-5)	10.00	
98) Chlorobenzene-d5	11.371	(0.000)	1605	117	1513363	(-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	780895	(-5)	10.00	

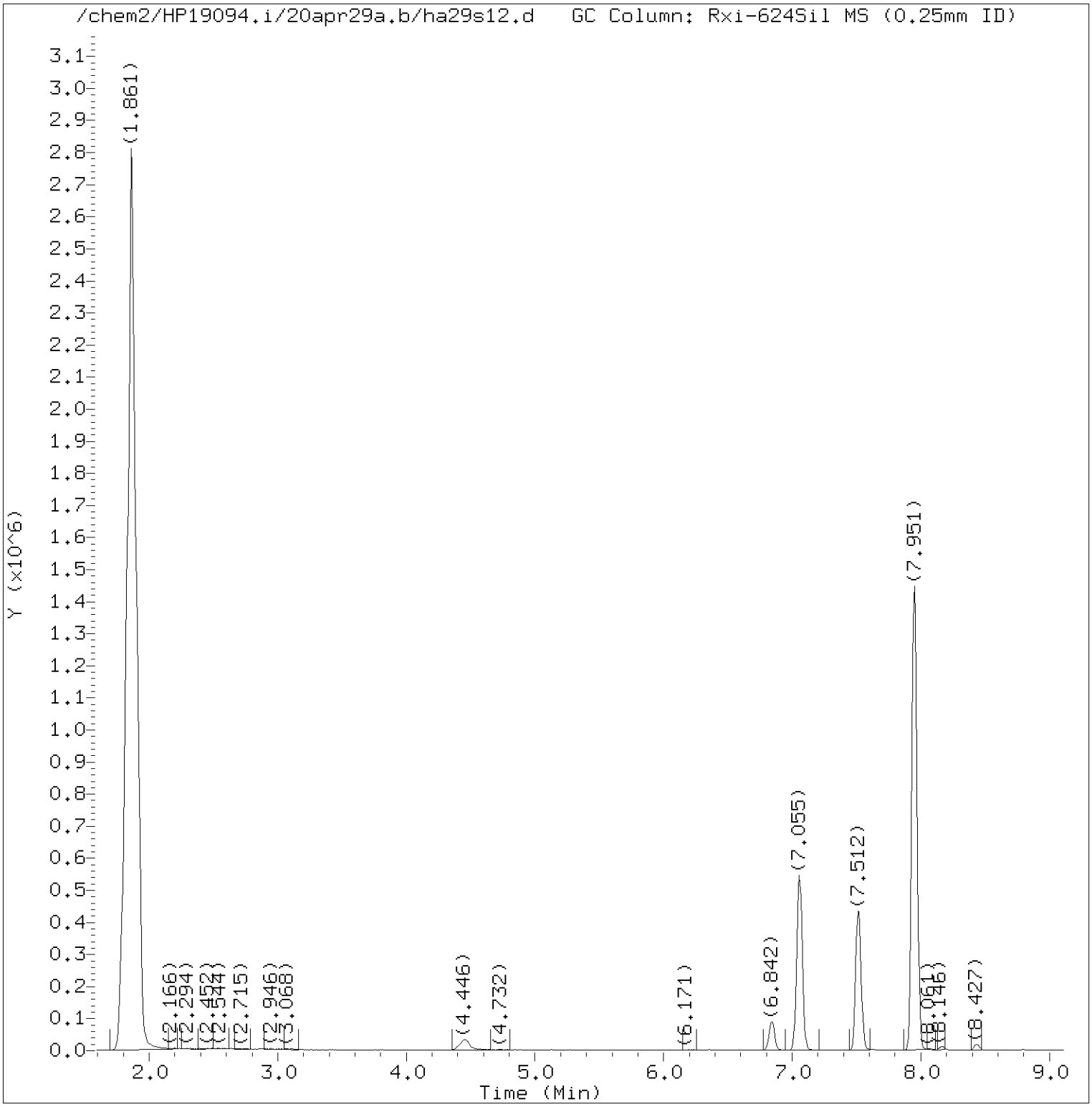
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055	(0.001)	113	510181	10.235	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518	(0.000)	102	102172	10.576	106%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	1994378	9.891	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	685909	9.195	92%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Miranda E. Campbell on 04/29/2020 at 16:27. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

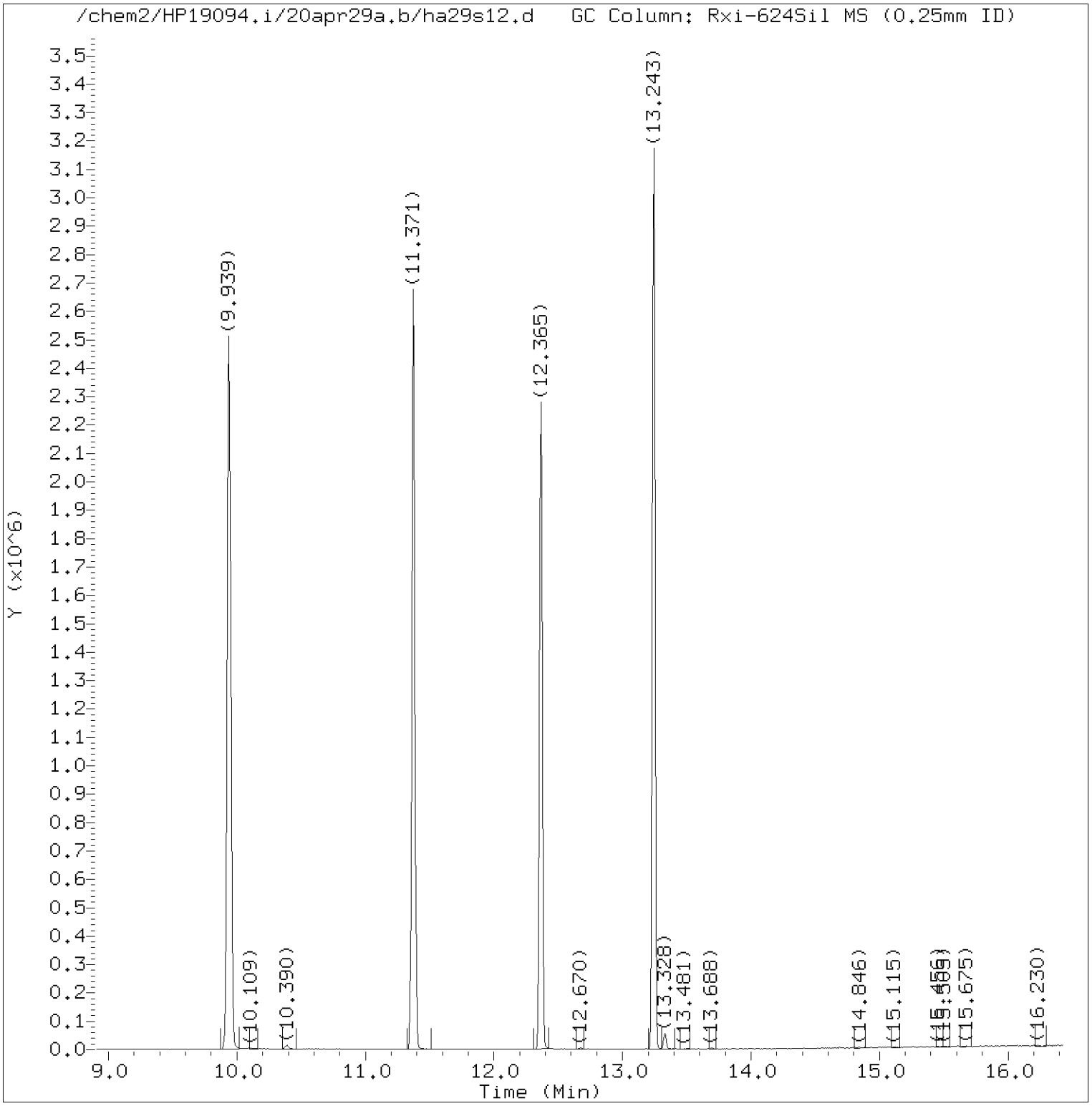
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s12.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 14:12 Automation

Sample Name: 5WB08 Lab Sample ID: 1302102

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:27.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s12.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 14:12 Automation

Sample Name: 5WB08 Lab Sample ID: 1302102

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:27.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s12.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 13:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12025
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 14:12 Automation

Sample Name: 5WB08 Lab Sample ID: 1302102

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27)*t-Butyl Alcohol-d10	(1)	4.458	65	126401	50.000
51)$Dibromofluoromethane	(2)	7.055	113	510181	10.235
58)$1,2-Dichloroethane-d4	(2)	7.518	102	102172	10.576
64)*Fluorobenzene	(2)	7.951	96	2005286	10.000
83)$Toluene-d8	(3)	9.939	98	1994378	9.891
98)*Chlorobenzene-d5	(3)	11.371	117	1513363	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	685909	9.195
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	780895	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 16:27.
Target 3.5 esignature user ID: mec29284

5WB09 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 1302103

Data file: /chem2/HP19094.i/20apr29a.b/ha29s02.d Injection date and time: **29-APR-2020 10:17**
Data file Sample Info. Line: 5WB09;1302103;1;0;;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.477	(-0.012)	474	65	129731	(0)	50.00	
64) Fluorobenzene	7.958	(0.000)	1045	96	2039792	(-3)	10.00	
98) Chlorobenzene-d5	11.372	(0.000)	1605	117	1528747	(-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	803481	(-2)	10.00	

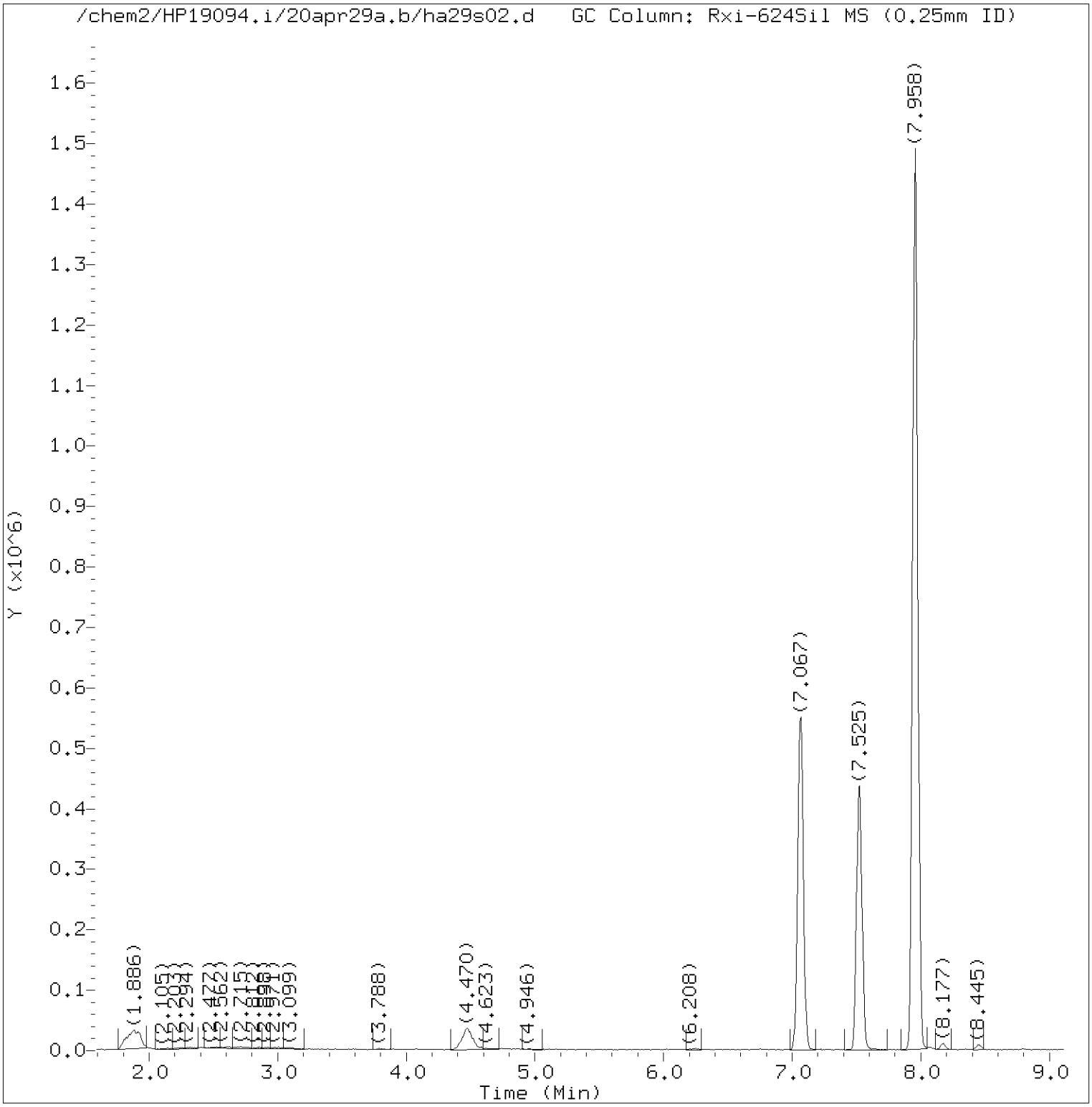
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.067	(0.000)	113	517459	10.205	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	106060	10.792	108%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	2016838	9.902	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	701719	9.313	93%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)				Not Detected					0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 11:46. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

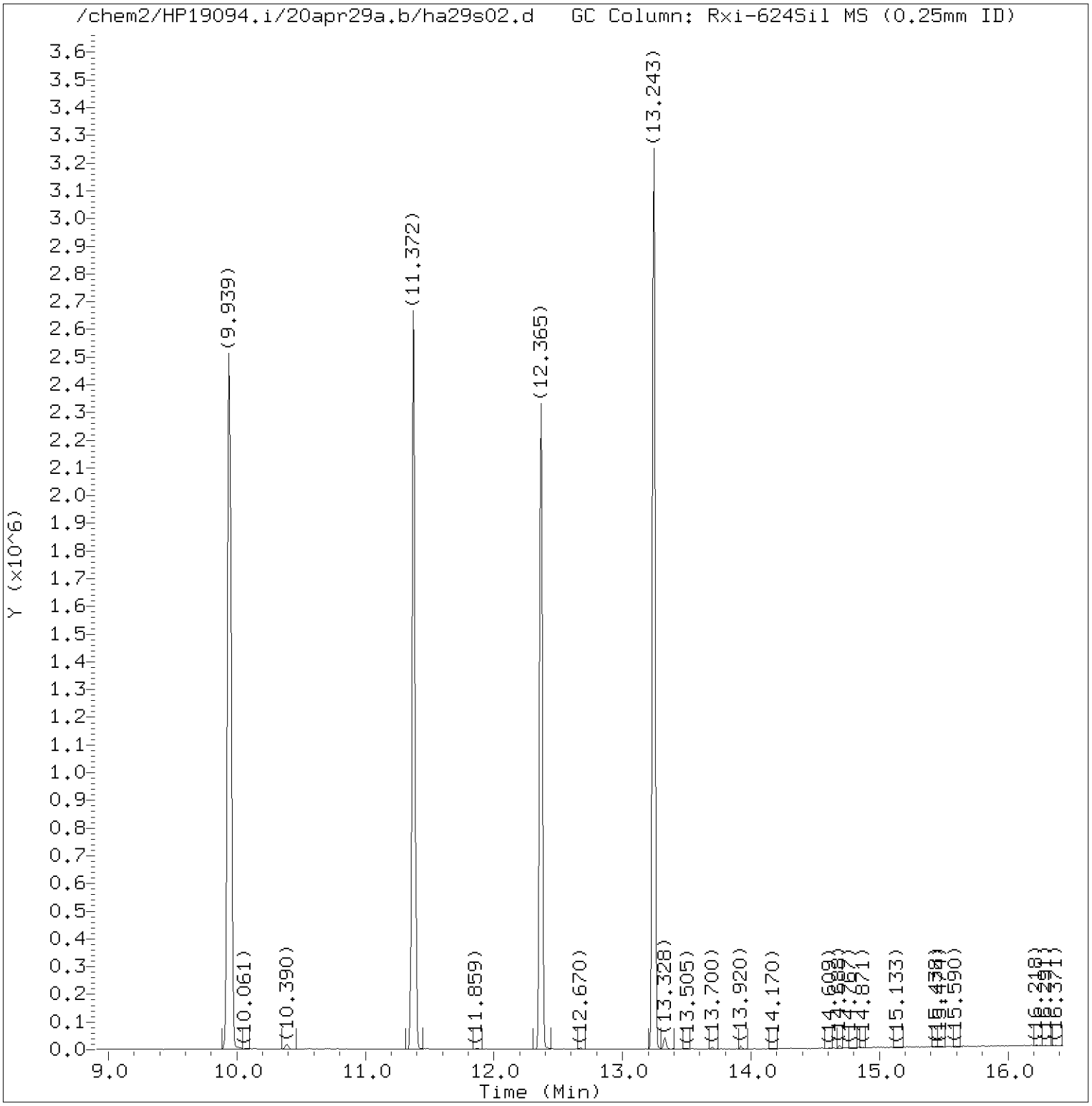
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s02.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:17 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB09 Lab Sample ID: 1302103

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s02.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:17 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB09 Lab Sample ID: 1302103

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s02.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 10:17 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 11:44 jkh09052

Sample Name: 5WB09 Lab Sample ID: 1302103

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27)*t-Butyl Alcohol-d10	(1)	4.477	65	129731	50.000
51)$Dibromofluoromethane	(2)	7.067	113	517459	10.205
58)$1,2-Dichloroethane-d4	(2)	7.525	102	106060	10.792
64)*Fluorobenzene	(2)	7.958	96	2039792	10.000
83)$Toluene-d8	(3)	9.939	98	2016838	9.902
98)*Chlorobenzene-d5	(3)	11.372	117	1528747	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	701719	9.313
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	803481	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 11:46.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20jan06i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HJ06T01.D	BFB AUG 02 2019	01/06/2020	10:35		
JKH09052	HJ06X00.D	blk	01/06/2020	10:57		
JKH09052	HJ06I11.D	VSTD025	01/06/2020	11:19		
JKH09052	HJ06I12.D	VSTD010	01/06/2020	11:41		
JKH09052	HJ06I13.D	VSTD005	01/06/2020	12:02		
JKH09052	HJ06I14.D	VSTD002	01/06/2020	12:24		
JKH09052	HJ06I15.D	VSTD001	01/06/2020	12:46		
JKH09052	HJ06I16.D	VSTD0.5	01/06/2020	13:07		
JKH09052	HJ06I17.D	VSTD0.2	01/06/2020	13:29		
JKH09052	HJ06V11.D	ICVH00	01/06/2020	13:51		
JKH09052	HJ06X01.D	blk	01/06/2020	14:13		
JKH09052	HJ06I01.D	VSTD025	01/06/2020	14:34		
JKH09052	HJ06I02.D	VSTD010	01/06/2020	14:56		
JKH09052	HJ06I03.D	VSTD005	01/06/2020	15:18		
JKH09052	HJ06I04.D	VSTD002	01/06/2020	15:39		
JKH09052	HJ06I05.D	VSTD001	01/06/2020	16:01		
JKH09052	HJ06I06.D	VSTD0.5	01/06/2020	16:23		
JKH09052	HJ06I07.D	VSTD0.2	01/06/2020	16:44		
JKH09052	HJ06V01.D	ICVH01	01/06/2020	17:06		
JKH09052	HJ06X02.D	blk	01/06/2020	17:28		
JKH09052	HJ06B01.D	blk	01/06/2020	17:50		
JKH09052	HJ06M01.D	MDL0.1	01/06/2020	18:11		
JKH09052	HJ06M02.D	MDL0.1	01/06/2020	18:33		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20apr29a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HA29T01.D	BFB jan28 2020	04/29/2020	08:14		
JKH09052	HA29X00.D	VBLKH63	04/29/2020	08:28	H201201AA	
JKH09052	HA29C01.D	VSTD010	04/29/2020	08:50	H201201AA	
JKH09052	HA29L01.D	LCSH63	04/29/2020	09:11	H201201AA	
JKH09052	HA29X01.D	VBLKH63	04/29/2020	09:33	H201201AA	
JKH09052	HA29B01.D	VBLKH63	04/29/2020	09:55	H201201AA	
JKH09052	HA29S02.D	1302103	04/29/2020	10:17	H201201AA	
JKH09052	HA29S03.D	1302093	04/29/2020	10:39	H201201AA	
JKH09052	HA29S04.D	1302094	04/29/2020	11:00	H201201AA	
JKH09052	HA29S05.D	1302095	04/29/2020	11:22	H201201AA	
JKH09052	HA29S06.D	1302096MS	04/29/2020	11:44	H201201AA	
JKH09052	HA29S07.D	1302097MSD	04/29/2020	12:06	H201201AA	
JKH09052	HA29S08.D	1302098	04/29/2020	12:27	H201201AA	
JKH09052	HA29S09.D	1302099	04/29/2020	12:49	H201201AA	
JKH09052	HA29S10.D	1302100	04/29/2020	13:11	H201201AA	
JKH09052	HA29S11.D	1302101	04/29/2020	13:32	H201201AA	
JKH09052	HA29S12.D	1302102	04/29/2020	13:54	H201201AA	
JKH09052	HA29S32.D	1302262	04/29/2020	14:16	H201202AA	
JKH09052	HA29S33.D	1302263	04/29/2020	14:37	H201202AA	
JKH09052	HA29S34.D	1302265	04/29/2020	14:59	H201202AA	
JKH09052	HA29S35.D	1302258	04/29/2020	15:21	H201202AA	
JKH09052	HA29S36.D	1302259MS	04/29/2020	15:43	H201202AA	
JKH09052	HA29S37.D	1302260MSD	04/29/2020	16:04	H201202AA	
JKH09052	HA29X05.D	VBLKH64	04/29/2020	16:26	H201202AA	
JKH09052	HA29S38.D	1302256	04/29/2020	16:48	H201202AA	
JKH09052	HA29S39.D	1302256DL	04/29/2020	17:09	H201202AA	10
JKH09052	HA29S40.D	1302257	04/29/2020	17:31	H201202AA	
JKH09052	HA29S41.D	1302257DL	04/29/2020	17:53	H201202AA	10
JKH09052	HA29S42.D	1302255	04/29/2020	18:14	H201202AA	5
JKH09052	HA29S43.D	1302255DL	04/29/2020	18:36	H201202AA	50
JKH09052	HA29S44.D	1302264	04/29/2020	18:58	H201202AA	5
JKH09052	HA29S45.D	1302264DL	04/29/2020	19:20	H201202AA	50

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Page 1

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

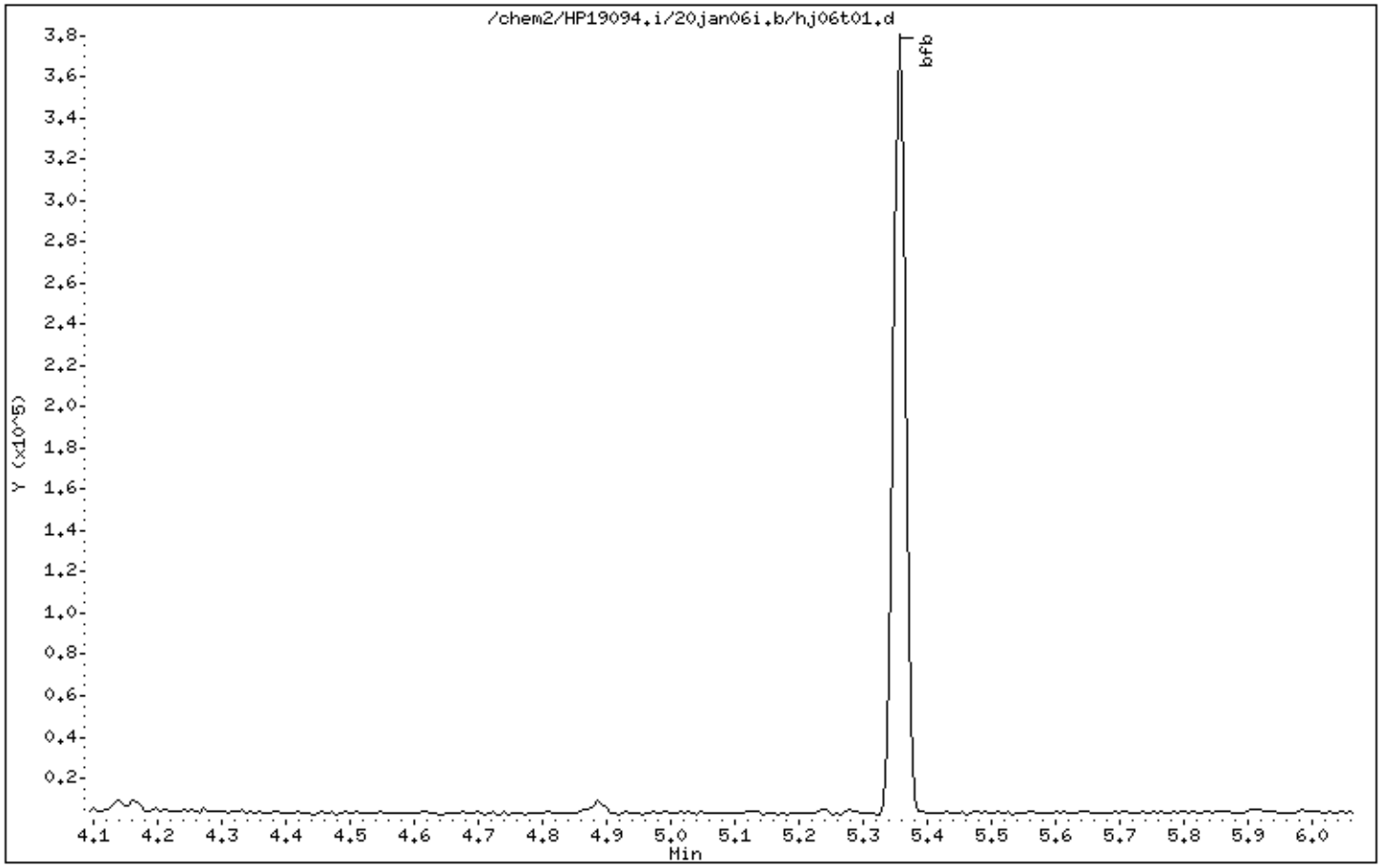
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

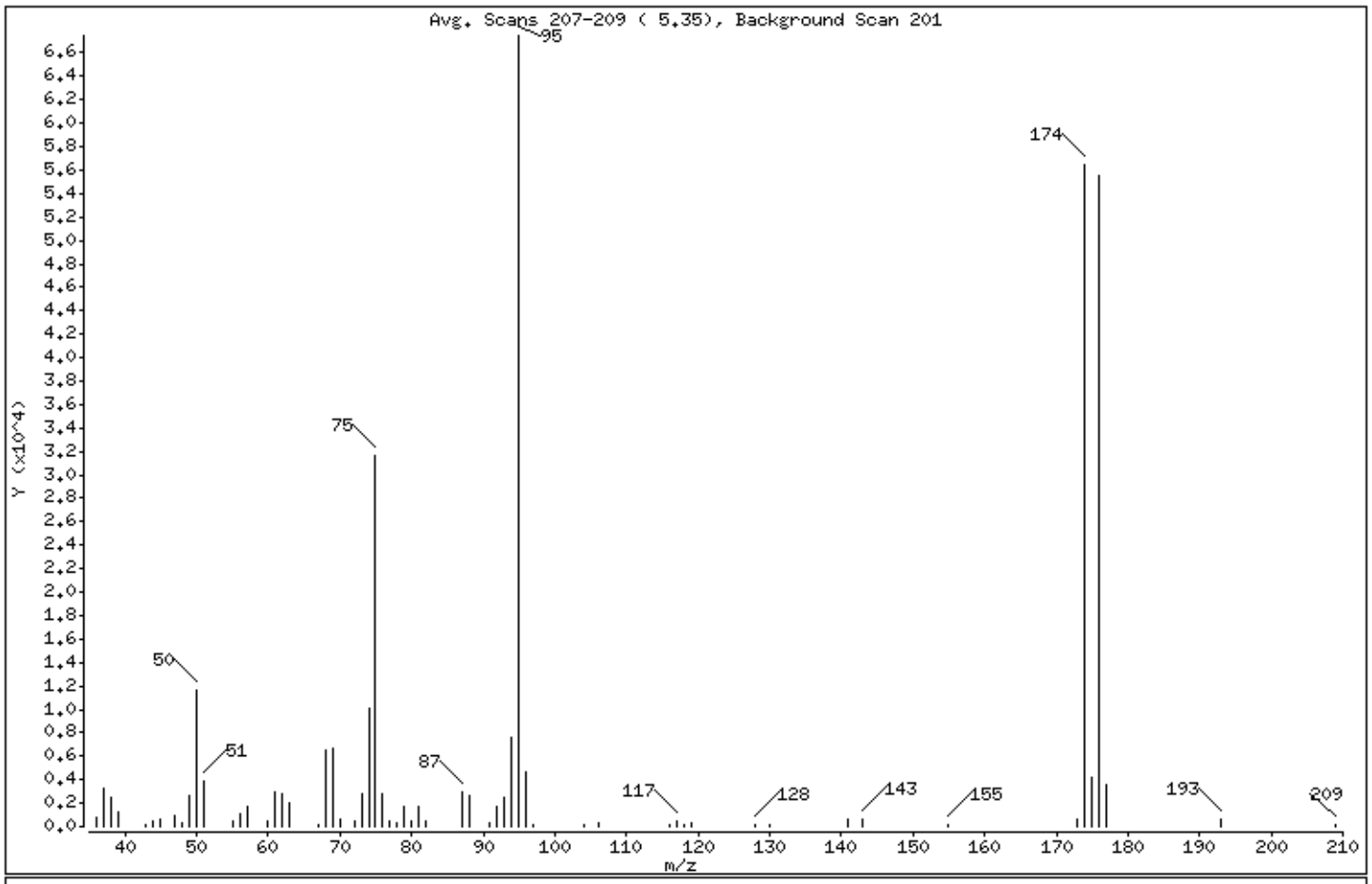
Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.81
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.87 (1.05)
174	50.00 - 100.00% of mass 95	83.57
175	5.00 - 9.00% of mass 174	6.30 (7.54)
176	95.00 - 101.00% of mass 174	82.22 (98.38)
177	5.00 - 9.00% of mass 176	5.38 (6.54)

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;;;;;

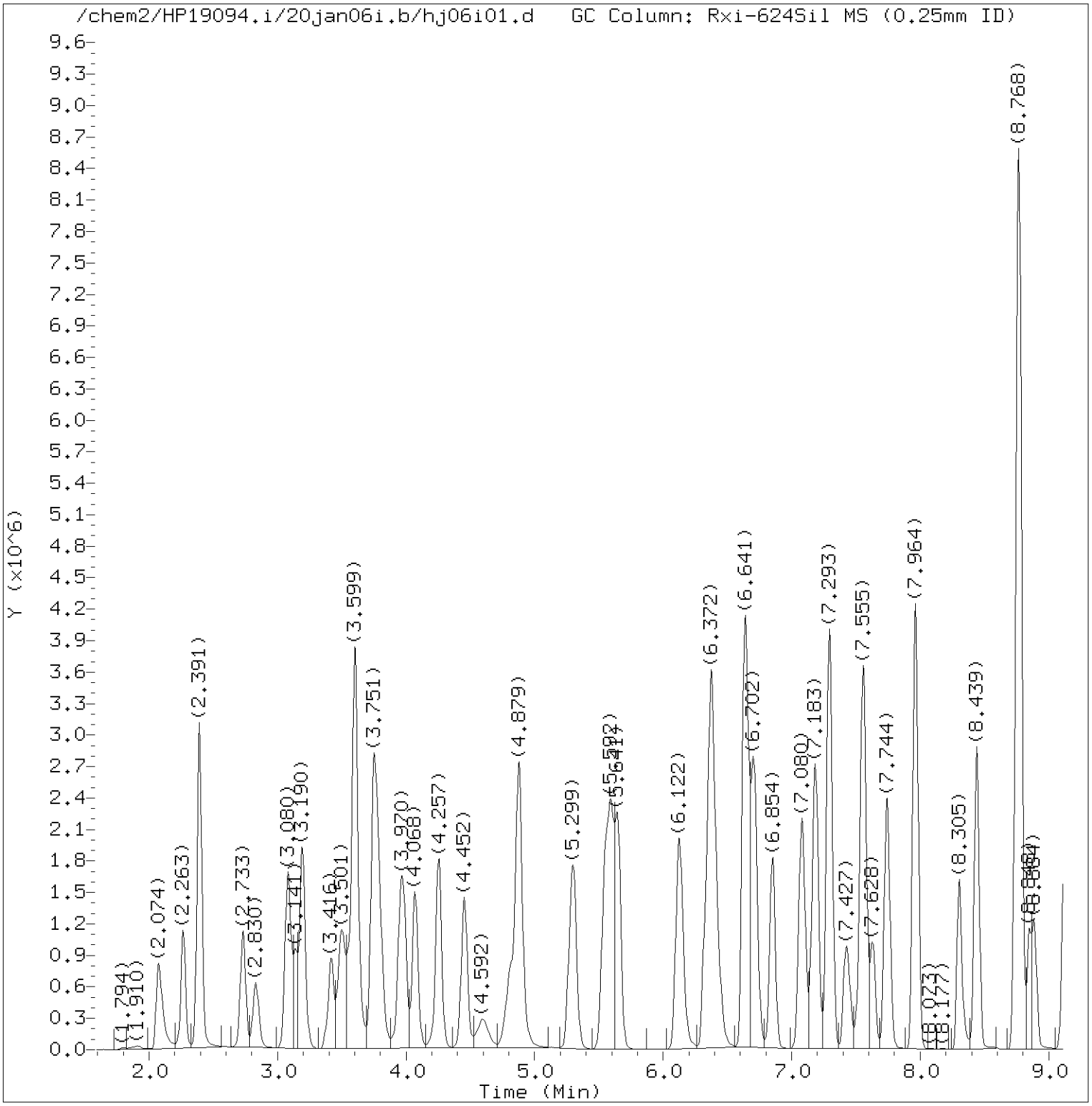
Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hj06t01.d
Spectrum: Avg. Scans 207-209 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	728	61.00	3008	81.00	1673	119.00	311
37.00	3211	62.00	2746	82.00	464	128.00	179
38.00	2548	63.00	2022	87.00	2913	130.00	83
39.00	1276	67.00	141	88.00	2633	141.00	588
43.00	92	68.00	6446	91.00	362	143.00	676
44.00	477	69.00	6605	92.00	1689	155.00	88
45.00	580	70.00	566	93.00	2528	173.00	590
47.00	876	72.00	410	94.00	7552	174.00	56384
48.00	366	73.00	2820	95.00	67472	175.00	4254
49.00	2645	74.00	10007	96.00	4591	176.00	55472
50.00	11651	75.00	31584	97.00	183	177.00	3628
51.00	3893	76.00	2766	104.00	180	193.00	604
55.00	413	77.00	463	106.00	329	209.00	154
56.00	1070	78.00	272	116.00	96		
57.00	1740	79.00	1750	117.00	427		
60.00	500	80.00	538	118.00	84		



Total Ion Chromatogram (TIC)

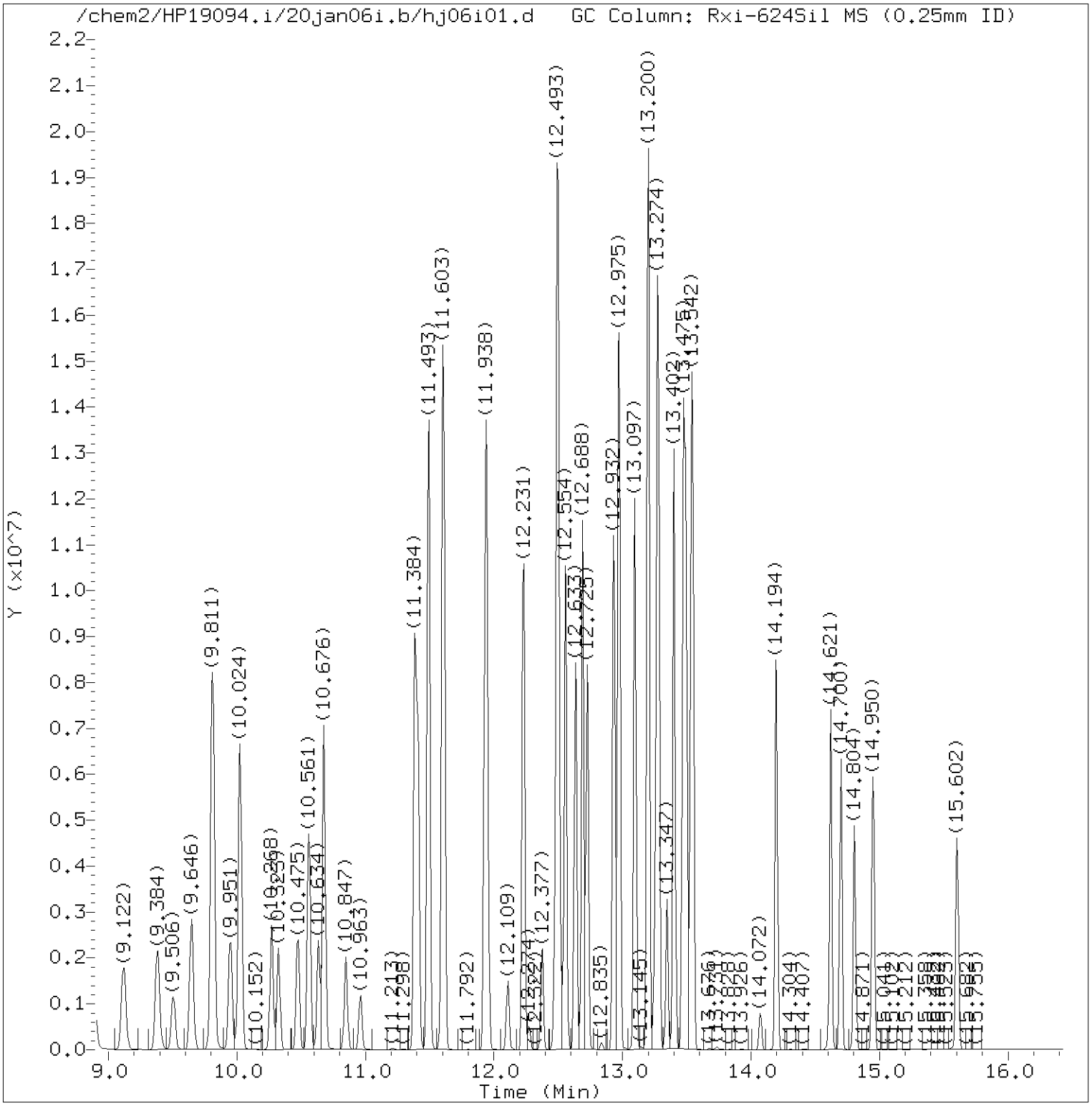
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	1888431M	26.070
2) Chloromethane	(2)	2.263	50	1774739	24.819
6) 1,3-Butadiene	(2)	2.391	39	1358999	25.292
5) Vinyl Chloride	(2)	2.391	62	1727148	25.393
7) Bromomethane	(2)	2.733	94	1193329	24.492
8) Chloroethane	(2)	2.830	64	988051	25.082
9) Dichlorofluoromethane	(2)	3.080	67	2249717	24.048
10) Trichlorofluoromethane	(2)	3.135	101	1936642	24.949
11) Ethyl ether	(2)	3.416	59	865011	25.180
12) Freon 123a	(2)	3.501	67	1489859	24.825
13) Acrolein	(1)	3.605	56	6522303	1270.686
15) 1,1-Dichloroethene	(2)	3.745	96	1170732	24.798
14) Acetone	(1)	3.781	43	1577967M	227.830
16) Freon 113	(2)	3.781	101	1260863	25.549
17) Methyl Iodide	(2)	3.958	142	2301223	25.258
18) Bromoethane	(2)	3.983	108	1026514M	24.921
19) Carbon Disulfide	(2)	4.068	76	3564017	24.678
22) Methyl Acetate	(1)	4.226	43	432665	24.755
23) Allyl Chloride	(2)	4.257	41	1940516	24.196
24) Methylene Chloride	(2)	4.452	84	1243110	24.464
27)*t-Butyl Alcohol-d10	(1)	4.476	65	113987M	50.000
29) t-Butyl Alcohol	(1)	4.598	59	1153887	479.599
30) Acrylonitrile	(1)	4.800	53	1075695	127.272
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	2669747	24.734
32) trans-1,2-Dichloroethene	(2)	4.885	96	1285392	24.767
33) n-Hexane	(2)	5.299	57	1866448	25.497
34) 1,1-Dichloroethane	(2)	5.543	63	2381394	25.415
35) di-Isopropyl Ether	(2)	5.592	45	3878957	25.133
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2035507	25.371
41) 1,2-Dichloroethene (Total)	(2)		96	2732662	49.862
38) Ethyl t-butyl ether	(2)	6.122	59	3616764	24.961
39) 2-Butanone	(1)	6.330	43	2681869	247.640
40) cis-1,2-Dichloroethene	(2)	6.372	96	1447270	25.095
42) 2,2-Dichloropropane	(2)	6.391	77	1996218	25.037
43) Propionitrile	(1)	6.421	54	1509137	508.720
46) Methacrylonitrile	(1)	6.641	67	2746656	258.877
48) Bromochloromethane	(2)	6.702	128	593671	24.382
49) Tetrahydrofuran	(1)	6.708	71	763010	255.020

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	2302782	25.181
51)$Dibromofluoromethane	(2)	7.067	113	482524	10.045
51)$Dibromofluoromethane	(2)	7.067	111	495256	10.035
52) 1,1,1-Trichloroethane	(2)	7.086	97	2148440	25.262
53) Cyclohexane	(2)	7.183	56	2289885	25.210
53) Cyclohexane	(2)	7.183	84	1999561	25.701
53) Cyclohexane	(2)	7.183	69	713908	25.255
56) 1,1-Dichloropropene	(2)	7.293	75	1857069	25.837
55) Carbon Tetrachloride	(2)	7.293	117	1867884	25.616
57) Isobutyl Alcohol	(1)	7.427	41	929458	1114.509
58)$1,2-Dichloroethane-d4	(2)	7.525	102	93327	10.024
58)$1,2-Dichloroethane-d4	(2)	7.525	65	425818	9.913
58)$1,2-Dichloroethane-d4	(2)	7.525	104	59128	10.027
59) Benzene	(2)	7.561	78	5323567	25.327
60) 1,2-Dichloroethane	(2)	7.628	62	1315186M	24.269
61) t-Amyl methyl ether	(2)	7.744	73	3151720	24.940
63) n-Heptane	(2)	7.964	43	1941468	25.282
64)*Fluorobenzene	(2)	7.964	96	1932435	10.000
66) n-Butanol	(1)	8.305	56	1581544	2355.676
68) Trichloroethene	(2)	8.439	95	1409523	25.571
70) Methylcyclohexane	(2)	8.750	83	2525018	25.569
71) 1,2-Dichloropropane	(2)	8.780	63	1305552	25.106
72) Methyl Methacrylate	(1)	8.848	69	550111	25.775
73) 1,4-Dioxane	(1)	8.860	88	161139M	995.125
74) Dibromomethane	(2)	8.890	93	588855	24.771
75) Bromodichloromethane	(2)	9.122	83	1675482	25.933
77) 2-Nitropropane	(1)	9.384	41	1813026	258.627
80) 1-Bromo-2-chloroethane	(2)	9.506	63	1246645M	25.504
81) cis-1,3-Dichloropropene	(2)	9.646	75	2001367	26.231
82) 4-Methyl-2-Pentanone	(1)	9.811	43	6845018	256.442
83)$Toluene-d8	(3)	9.951	98	1934295	9.972
83)$Toluene-d8	(3)	9.951	100	1251812	9.979
84) Toluene	(3)	10.024	92	3395076	24.917
86) 1,3-Dichloropropene (total)	(3)		75	3633907	52.045
85) trans-1,3-Dichloropropene	(3)	10.268	75	1632540	25.814
87) Ethyl Methacrylate	(3)	10.323	69	1234931	25.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	856983	25.034
90) Tetrachloroethene	(3)	10.561	166	1554796	25.105

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	1467070	24.945
92) 2-Hexanone	(1)	10.676	43	4597643	252.076
94) Dibromochloromethane	(3)	10.847	129	1139436	25.995
96) 1,2-Dibromoethane	(3)	10.963	107	837813	25.610
97) 1-Chlorohexane	(3)	11.384	91	1992892	24.260
98)*Chlorobenzene-d5	(3)	11.384	117	1455879	10.000
99) Chlorobenzene	(3)	11.408	112	3675871	24.692
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1325399	25.032
101) Ethylbenzene	(3)	11.493	91	6641855	24.772
102) m+p-Xylene	(3)	11.603	106	5072744	49.480
106) Xylene (Total)	(3)		106	7609455	74.638
105) o-Xylene	(3)	11.932	106	2536711	25.163
107) Styrene	(3)	11.944	104	4113469	25.144
108) Bromoform	(3)	12.109	173	667346	26.121
109) Isopropylbenzene	(3)	12.231	105	6817861	24.954
112)$4-Bromofluorobenzene	(3)	12.377	95	707521	9.860
112)$4-Bromofluorobenzene	(3)	12.377	174	610743	9.946
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	1006708M	25.815
115) Bromobenzene	(4)	12.493	156	1499258	25.433
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2625732A	261.870
117) 1,2,3-Trichloropropane	(4)	12.524	110	262588	25.145
118) n-Propylbenzene	(4)	12.554	91	7839823	25.469
120) 2-Chlorotoluene	(4)	12.633	126	1554434	25.595
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	5777458	25.872
123) 4-Chlorotoluene	(4)	12.725	126	1535913	25.341
126) tert-Butylbenzene	(4)	12.932	134	1204251	26.074
127) Pentachloroethane	(4)	12.969	167	1021562	25.954
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	5903452	25.601
129) sec-Butylbenzene	(4)	13.097	105	7537250	26.052
133) p-Isopropyltoluene	(4)	13.200	119	6452104	25.912
132) 1,3-Dichlorobenzene	(4)	13.200	146	3015496	25.668
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	746931	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	2924687	25.521
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	2421094	25.178
137) Benzyl Chloride	(4)	13.347	126	444448	27.109
139) n-Butylbenzene	(4)	13.493	92	3226649	26.213
140) 1,2-Dichlorobenzene	(4)	13.530	146	2620490	25.305
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	158060	27.640

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

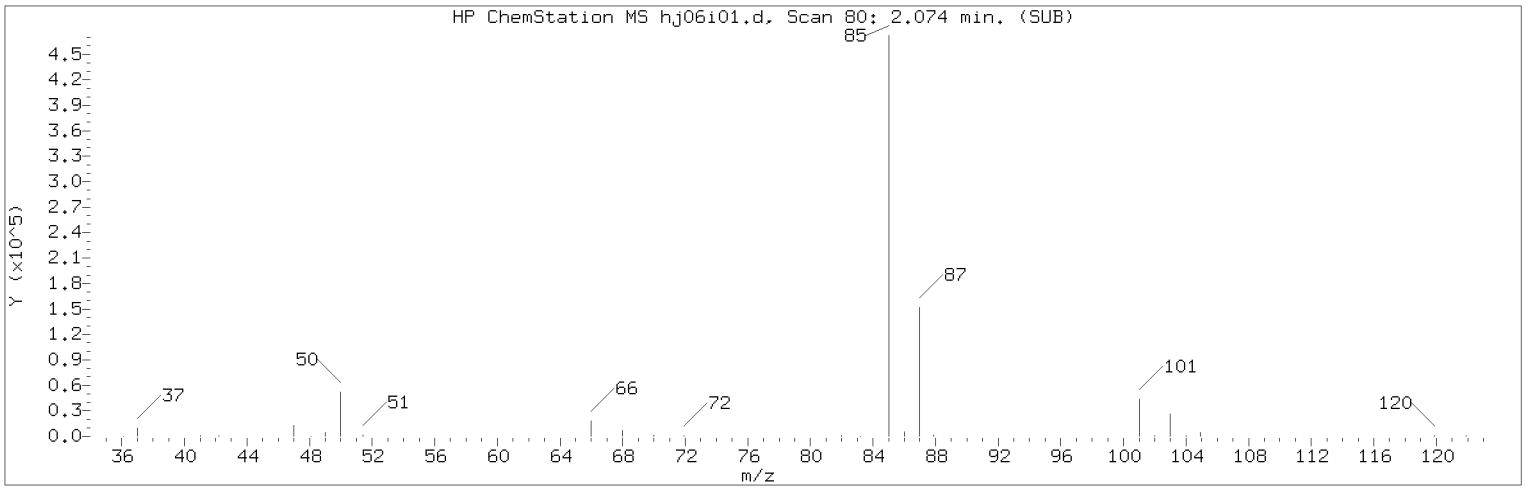
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

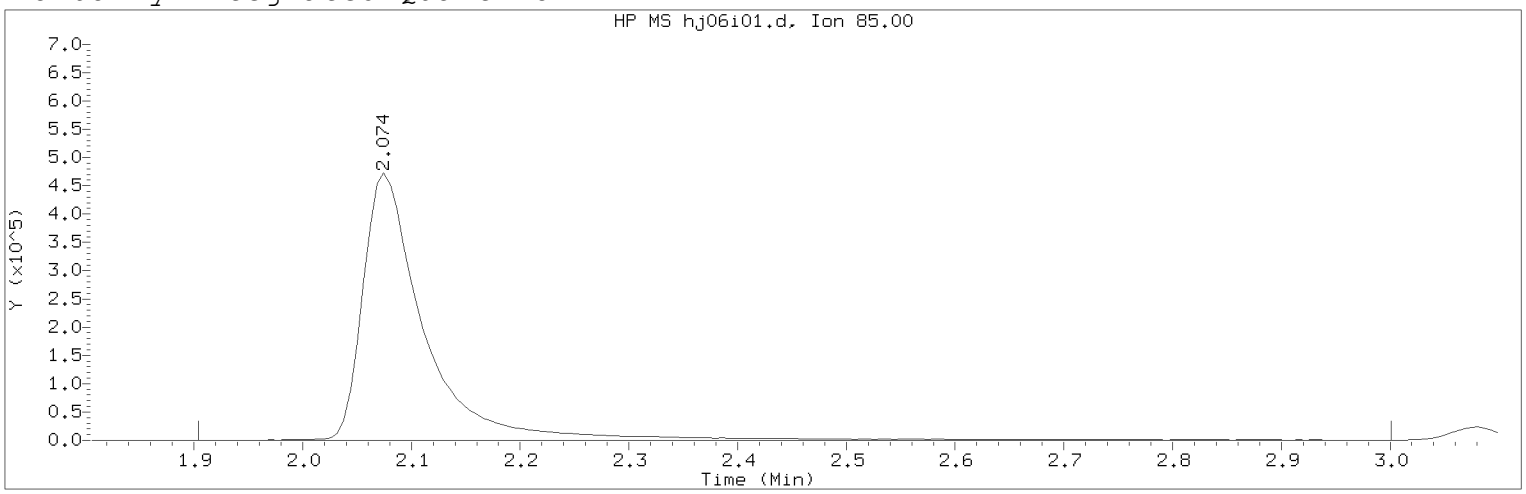
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	2531869	27.539
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	2120885	27.508
147) Hexachlorobutadiene	(4)	14.700	225	1087011	27.015
148) Naphthalene	(4)	14.804	128	3537363	26.291
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	1777387	27.005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

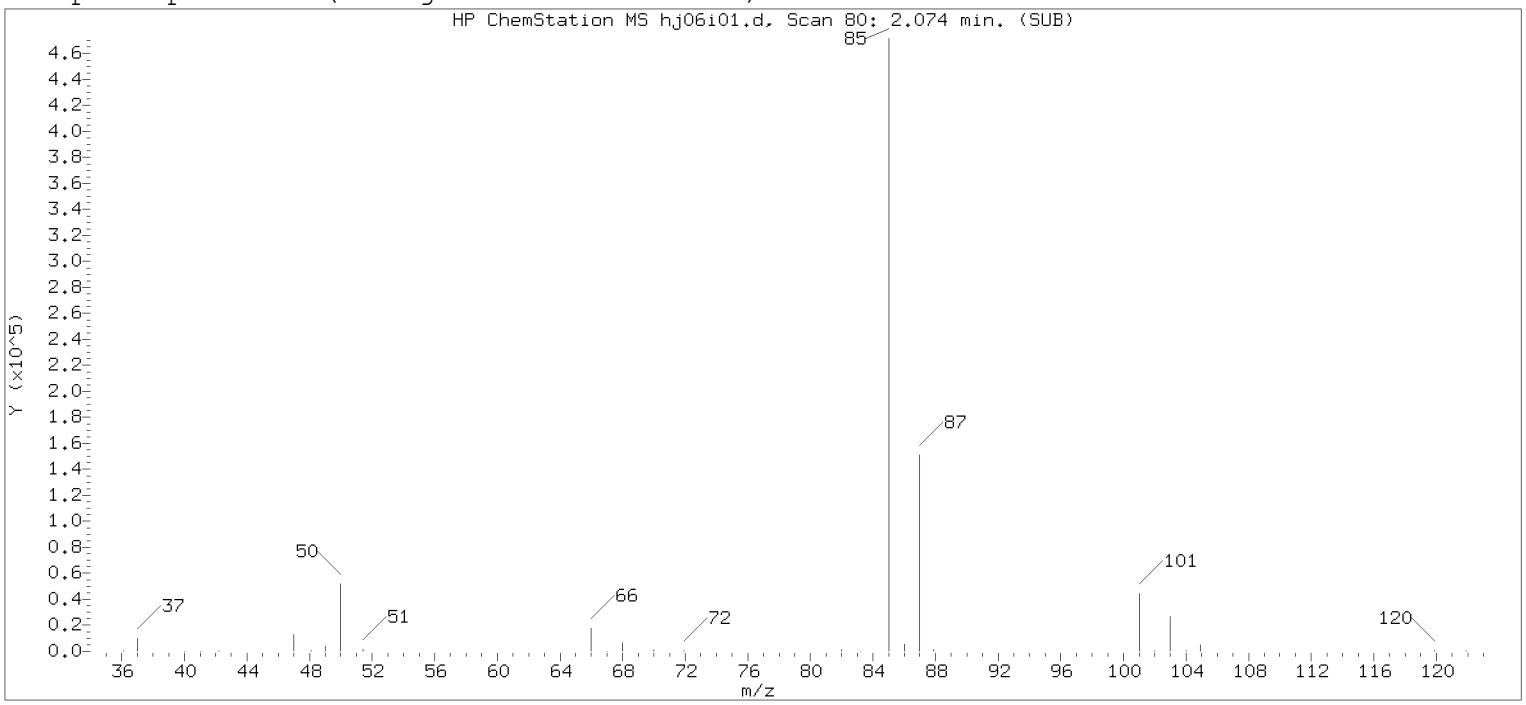
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 1888431M
On-Column Amount (ng) : 26.0698
Integration start scan : 51 Integration stop scan: 231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

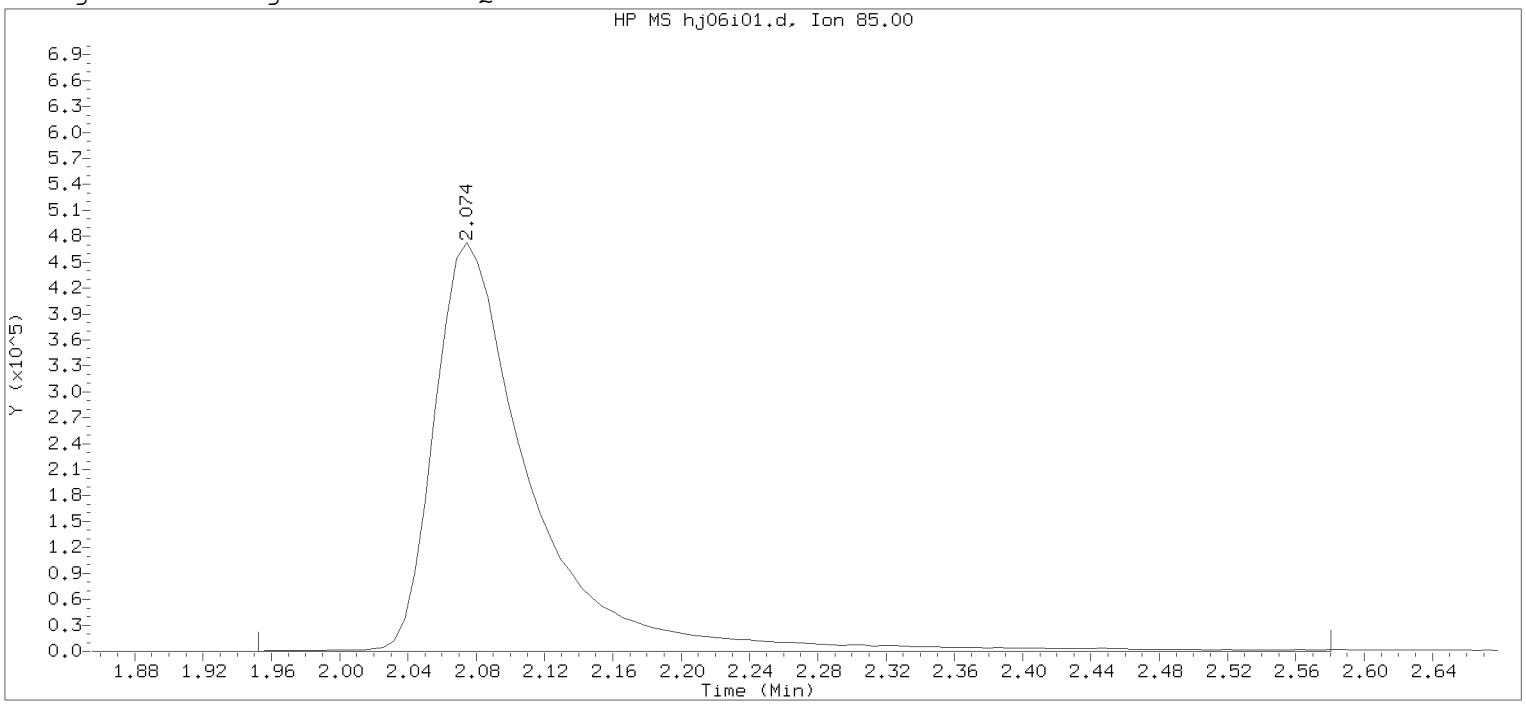
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area : 1866572
On-column Amount (ng) : 25.8333
Integration start scan : 59 Integration stop scan: 162
Y at integration start : 0 Y at integration end: 0

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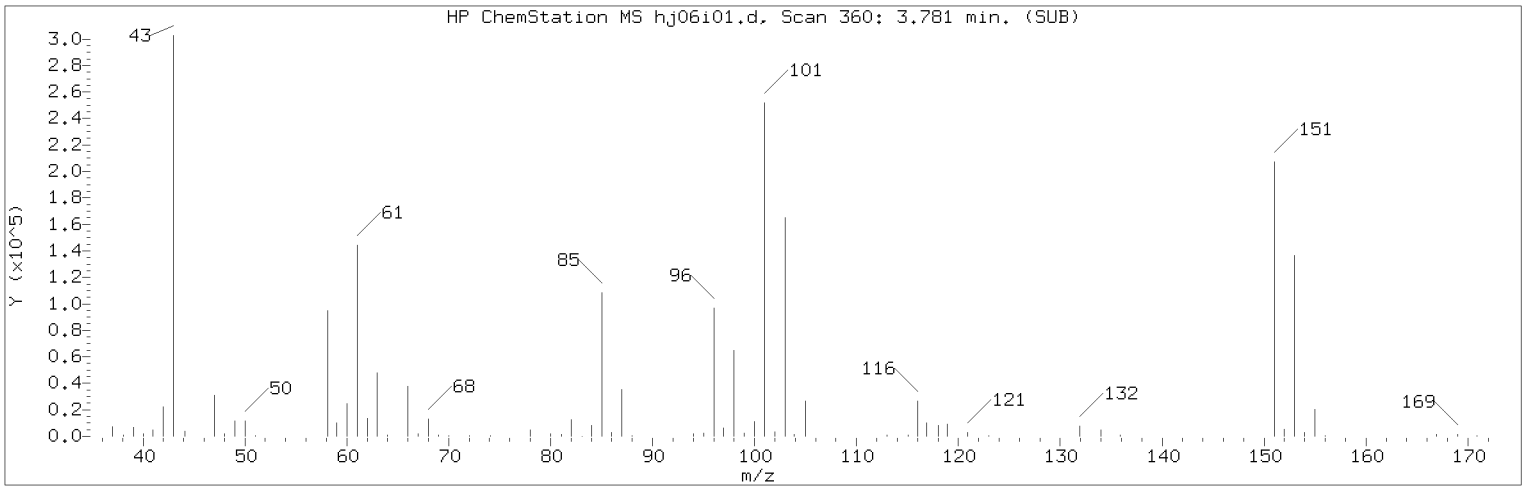
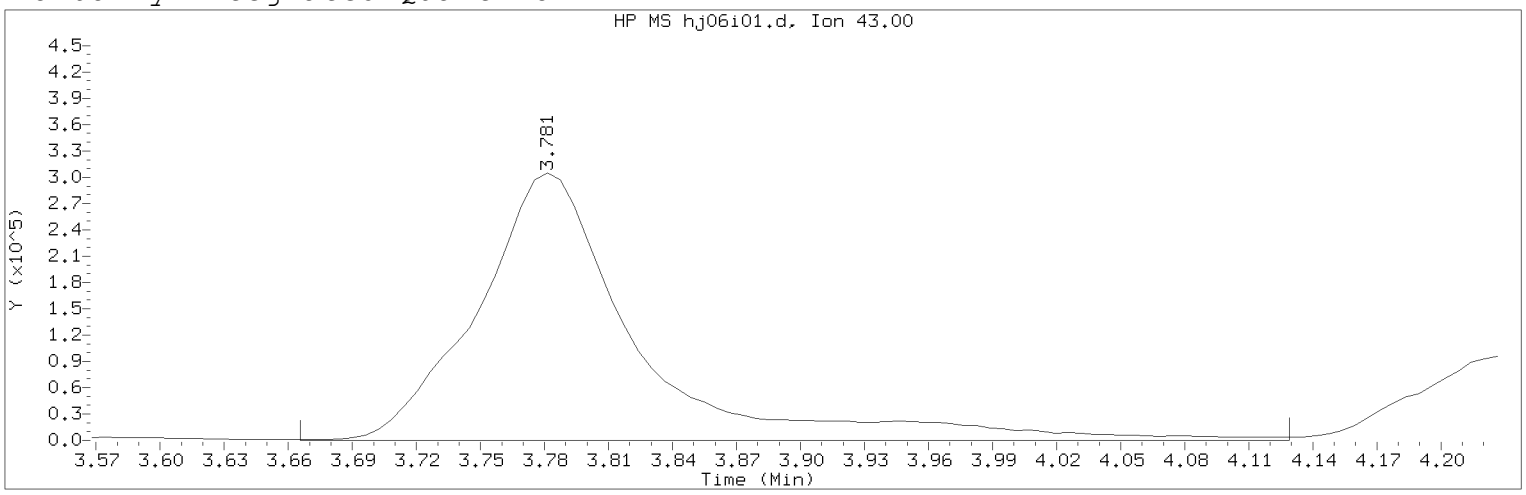
Target 3.5 esignature user's page 130

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

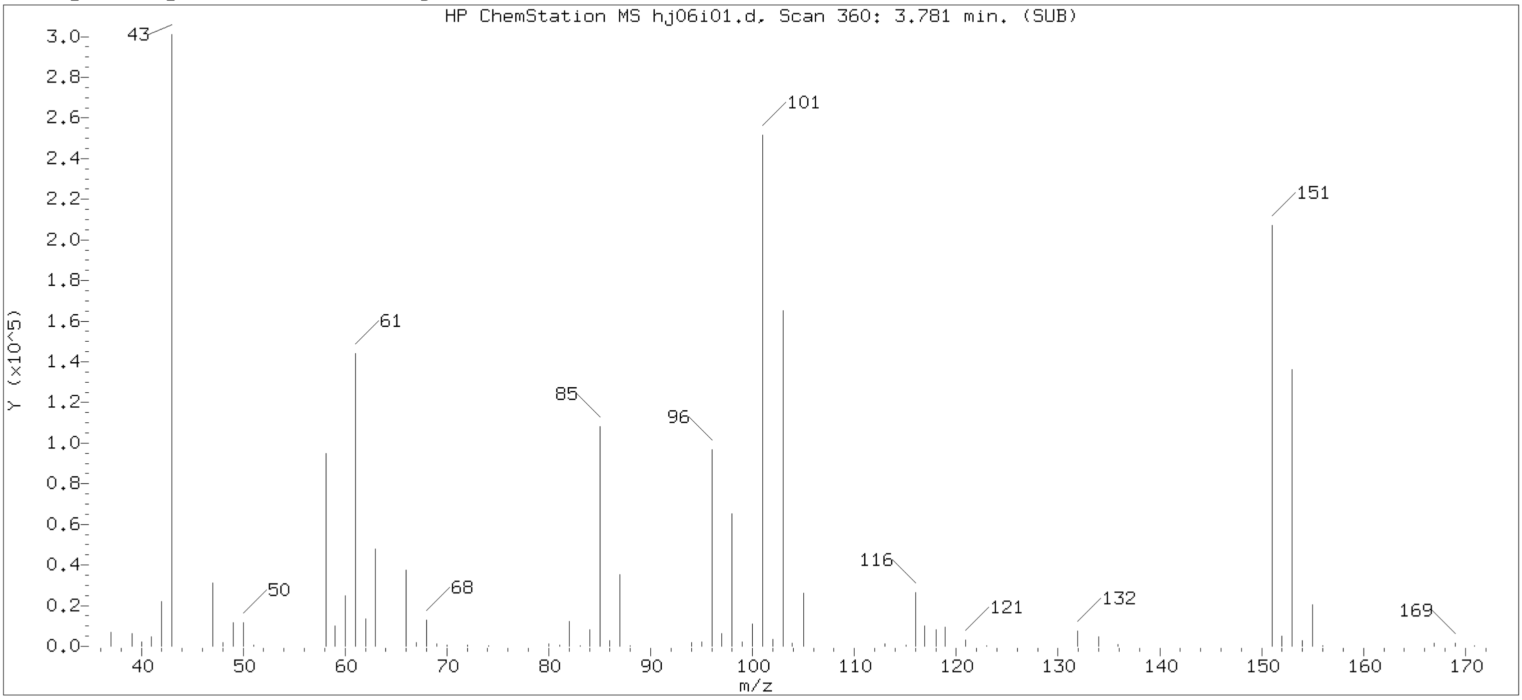
Compound Number : 14
Compound Name : Acetone
Scan Number : 360
Retention Time (minutes): 3.781
Quant Ion : 43.00
Area (flag) : 1577967M
On-Column Amount (ng) : 227.8298
Integration start scan : 340 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

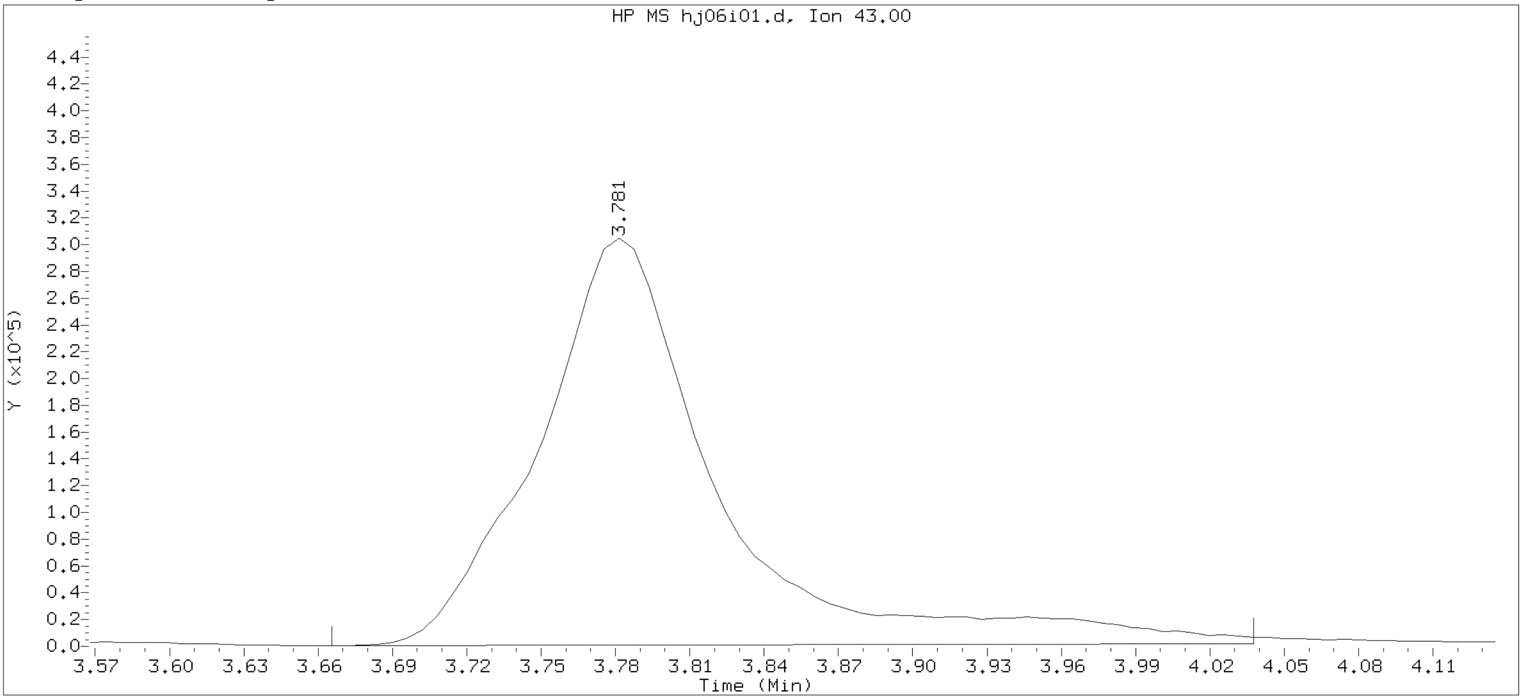
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 360		
Retention Time (minutes)	: 3.781		
Quant Ion	: 43.00		
Area	: 1526309		
On-column Amount (ng)	: 209.3158		
Integration start scan	: 340	Integration stop scan:	401
Y at integration start	: 368	Y at integration end:	1908

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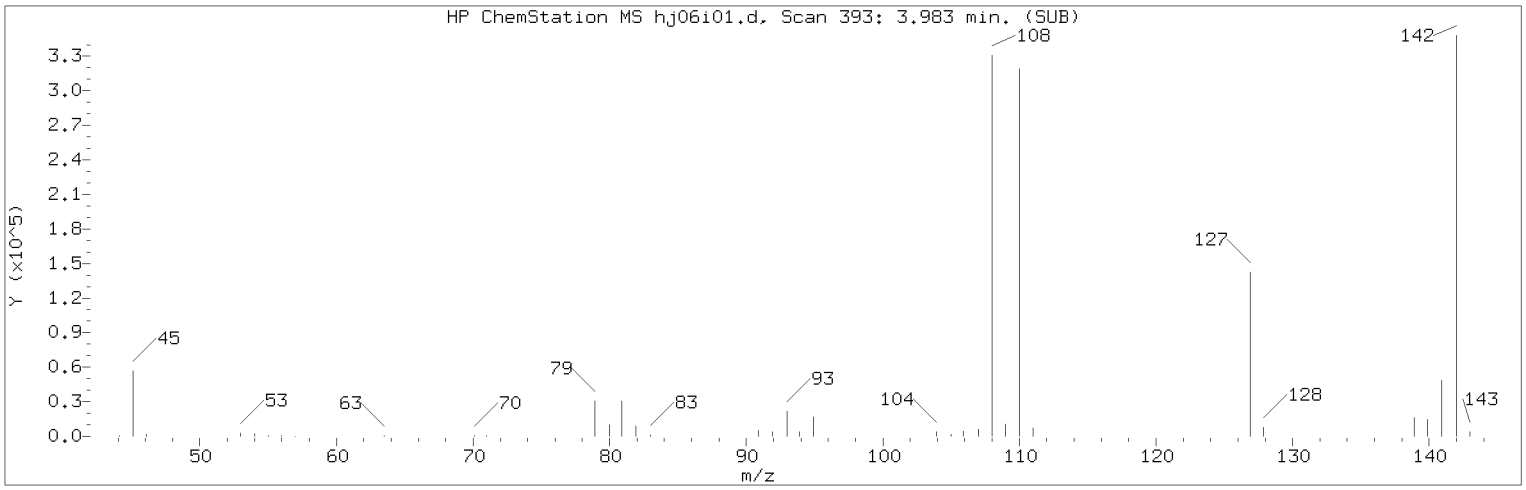
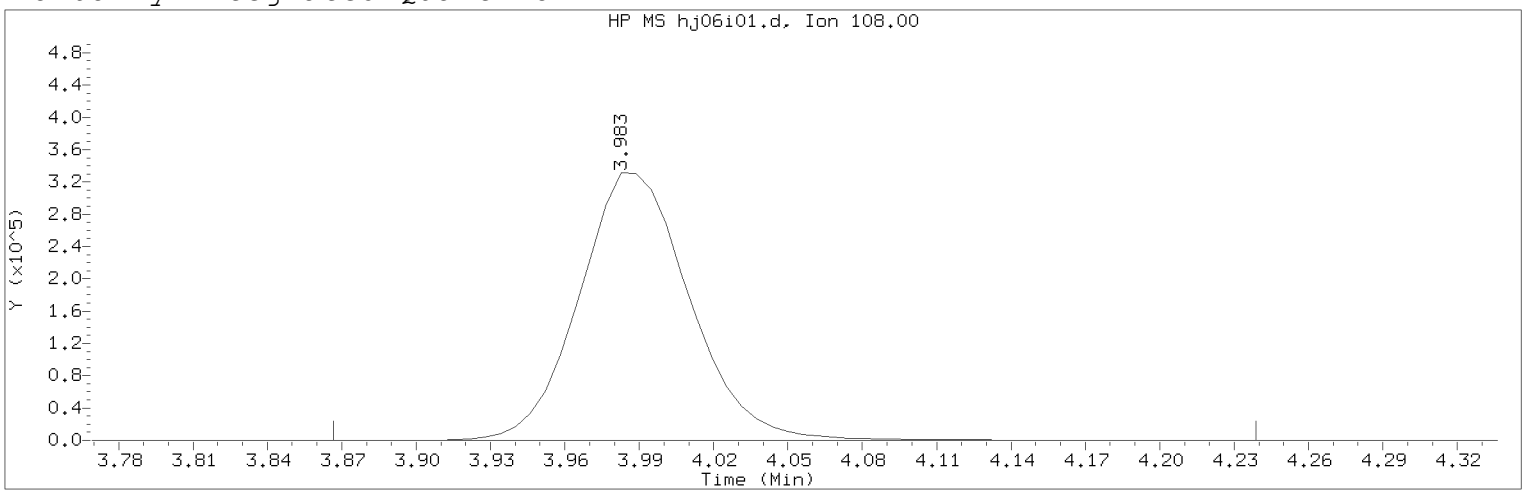
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

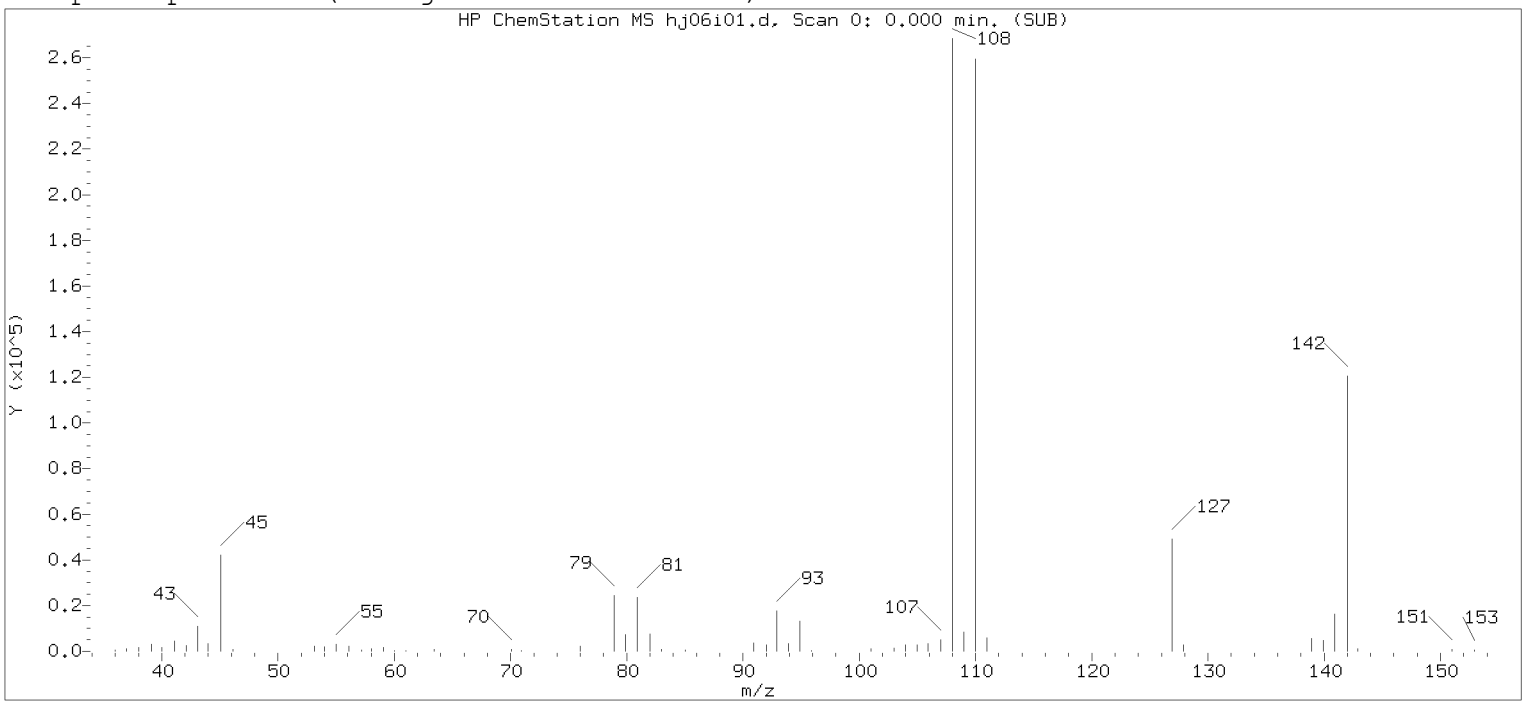
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 108.00
Area (flag) : 1026514M
On-Column Amount (ng) : 24.9213
Integration start scan : 373 Integration stop scan: 434
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

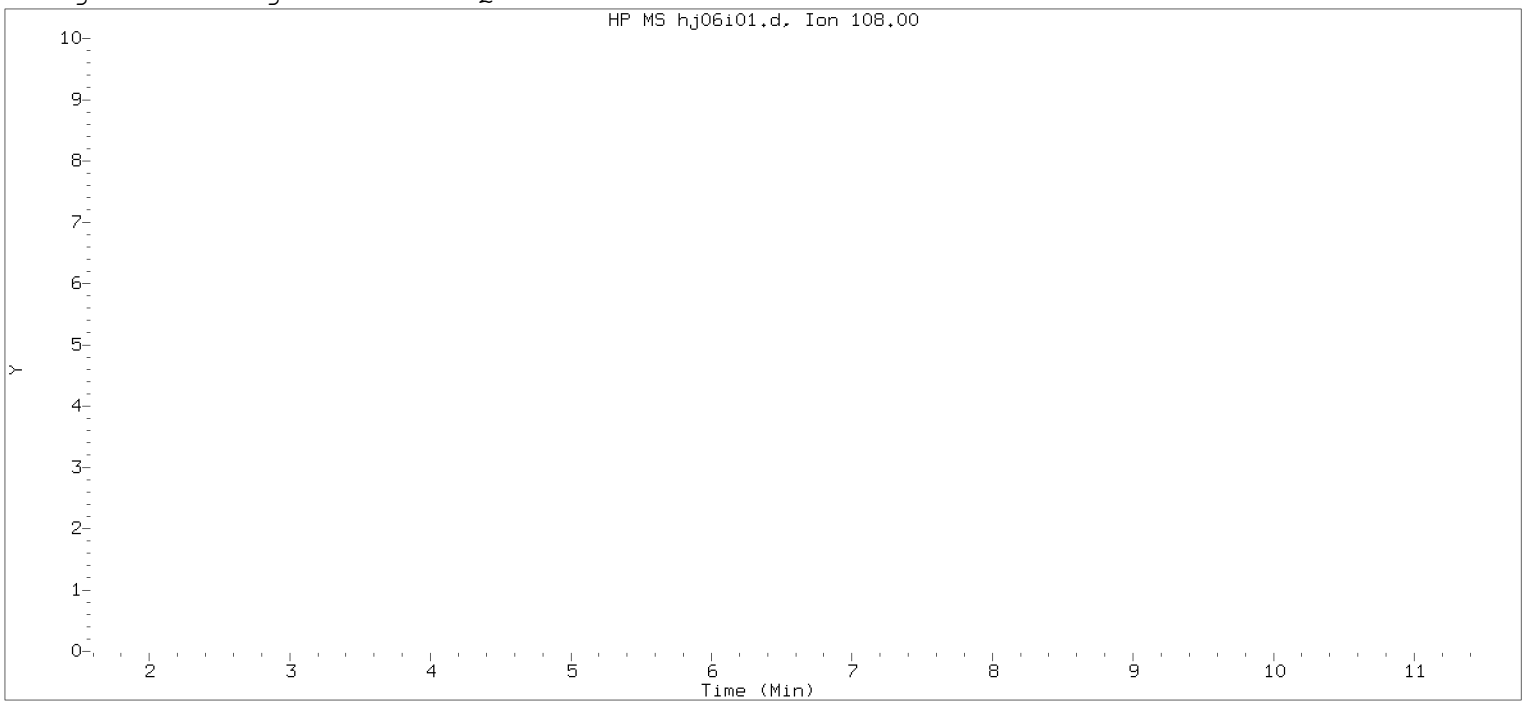
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

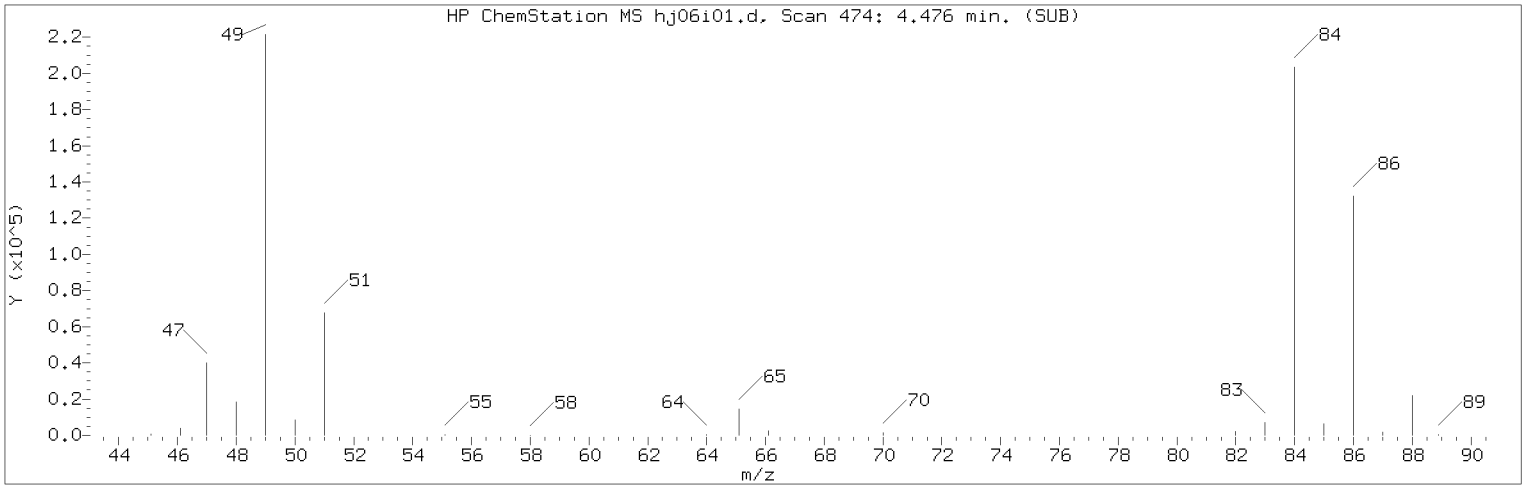
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

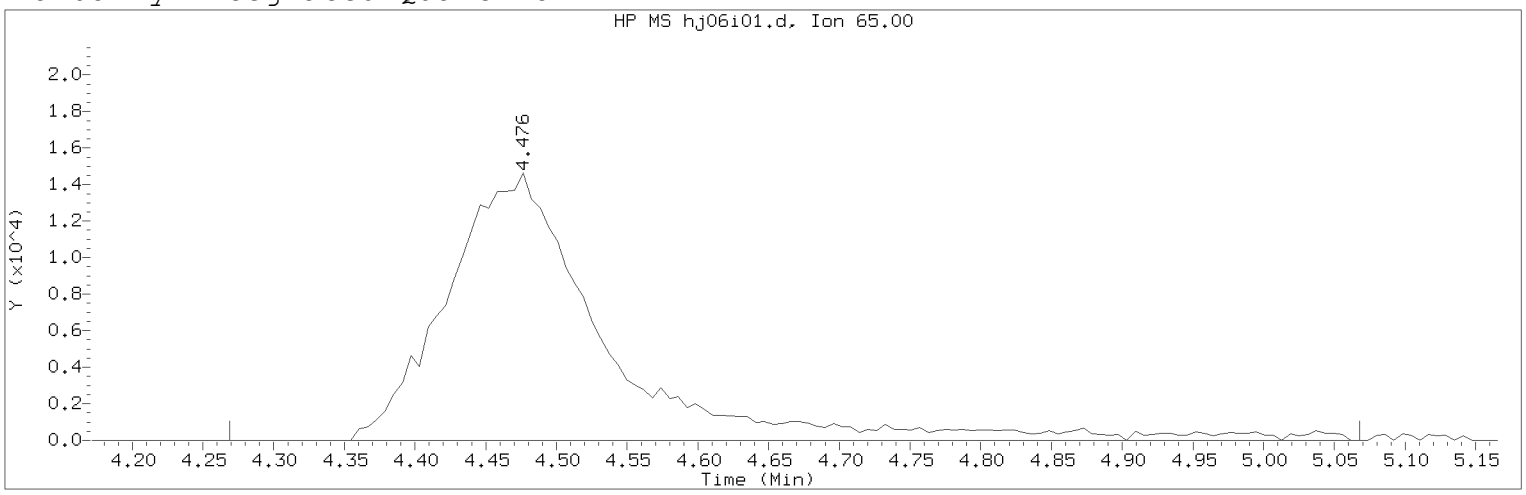
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

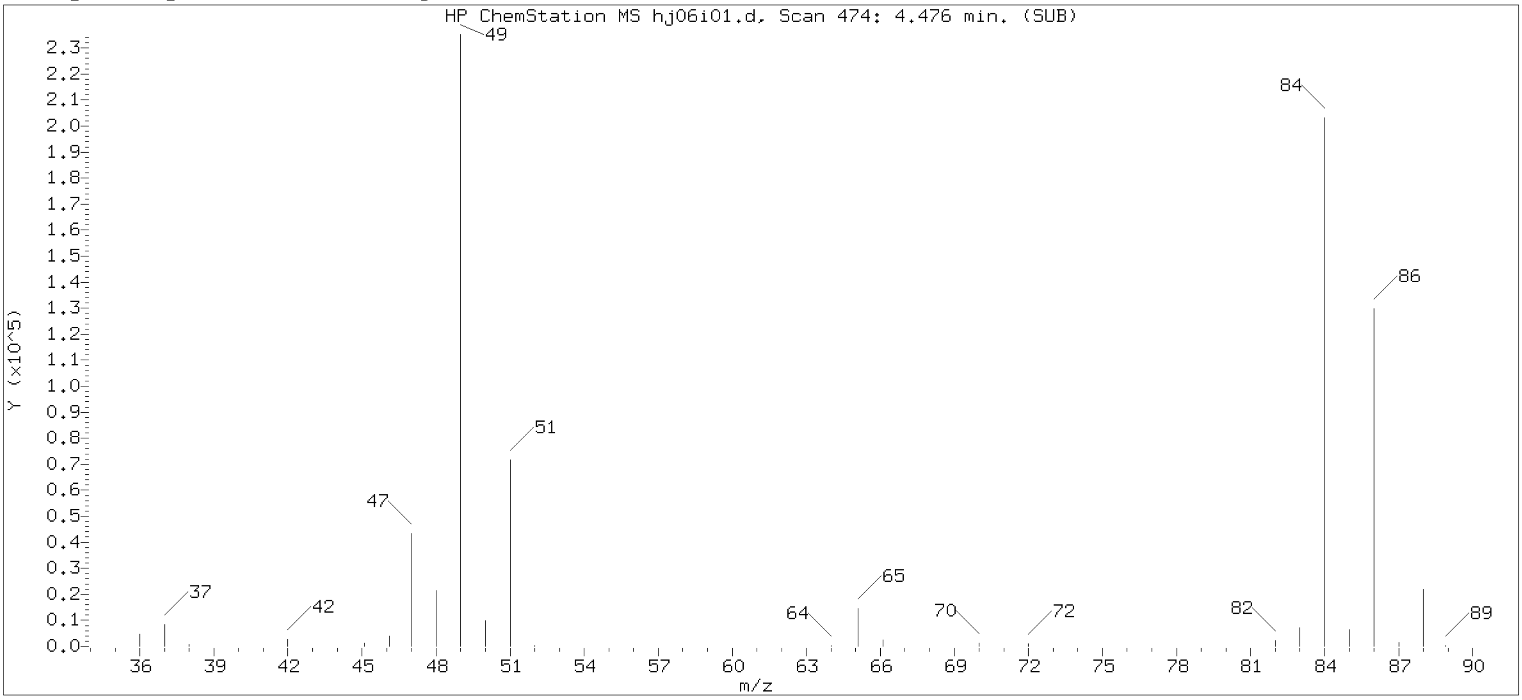
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 113987M
On-Column Amount (ng) : 50.0000
Integration start scan : 439 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

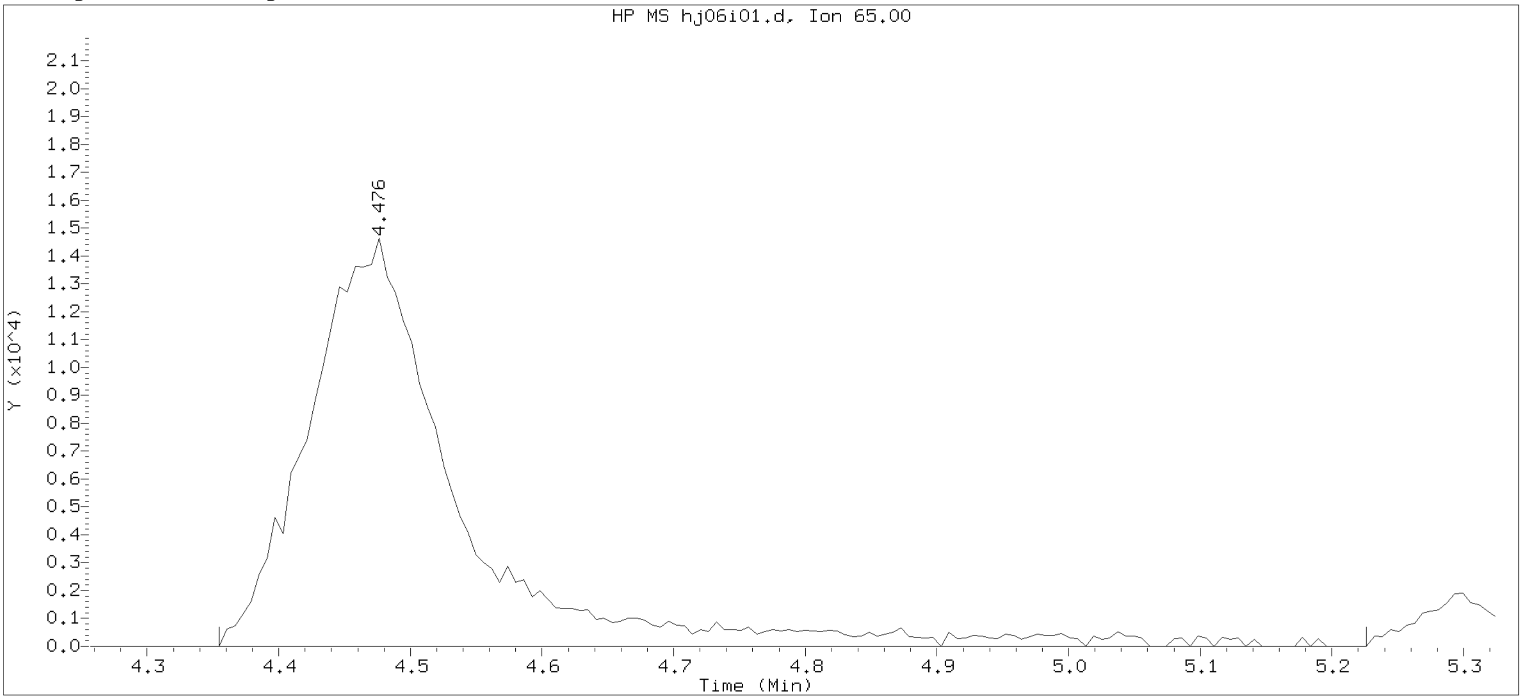
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34   Analyst ID: JKH09052

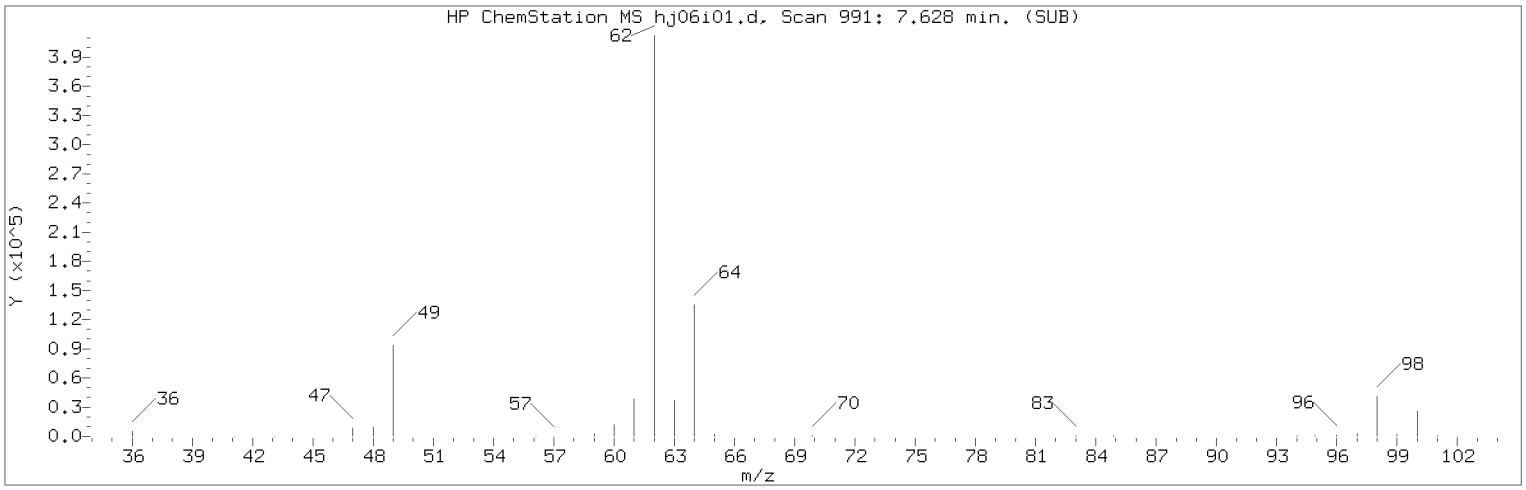
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025   Lab Sample ID: VSTD025

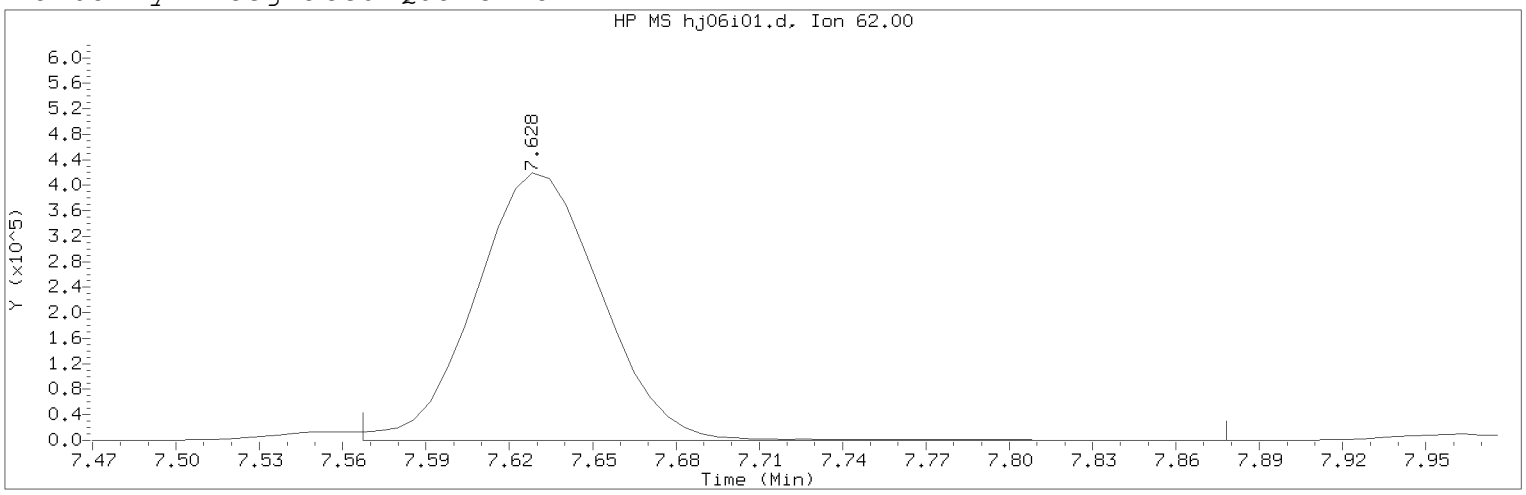
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area : 115073
On-column Amount (ng) : 50.0000
Integration start scan : 453   Integration stop scan: 596
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02036

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

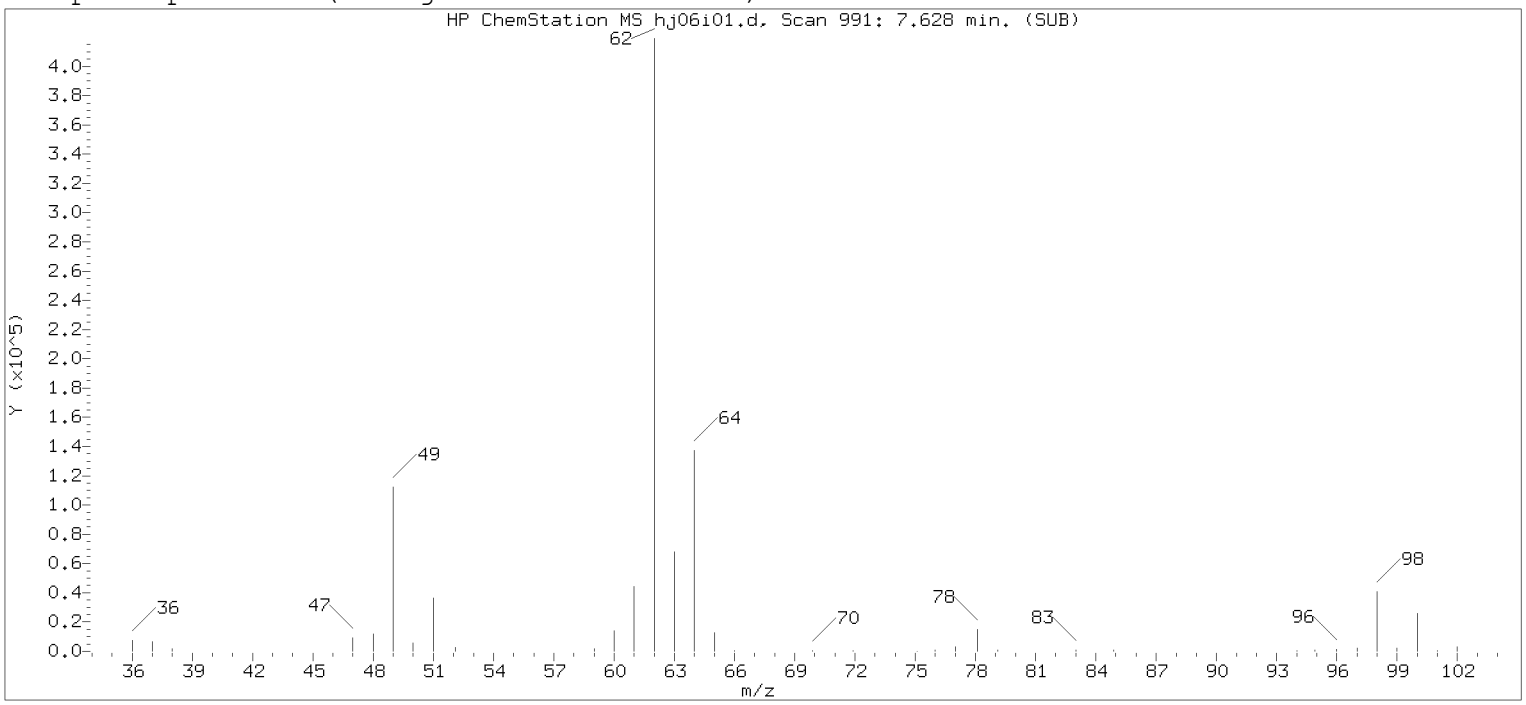
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 1315186M
On-Column Amount (ng) : 24.2692
Integration start scan : 980 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

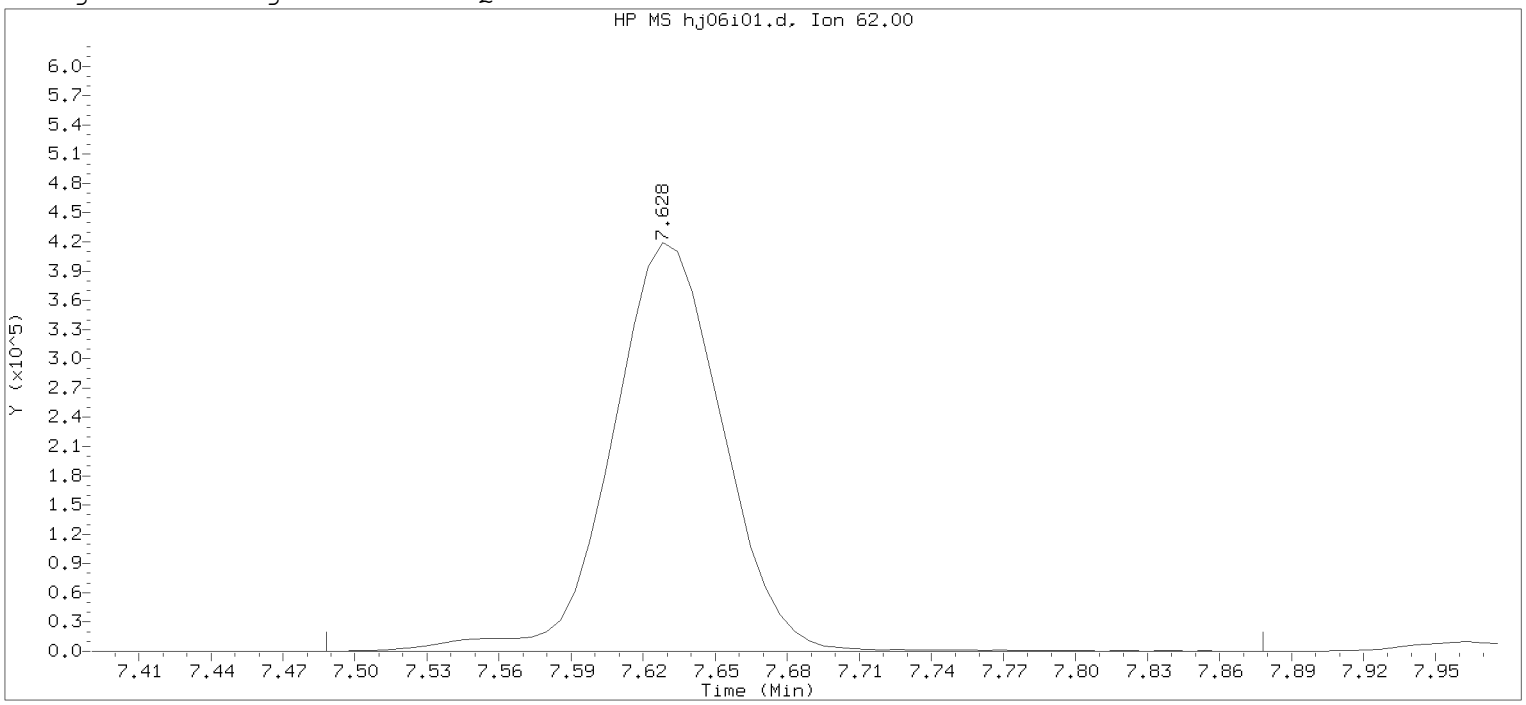
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

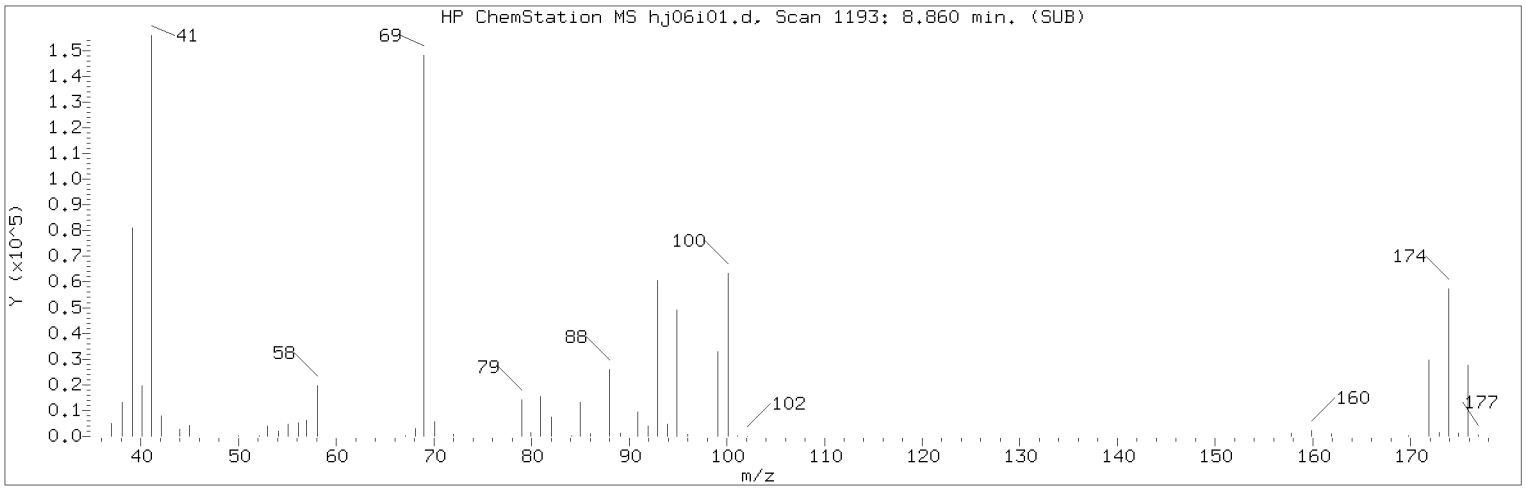
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

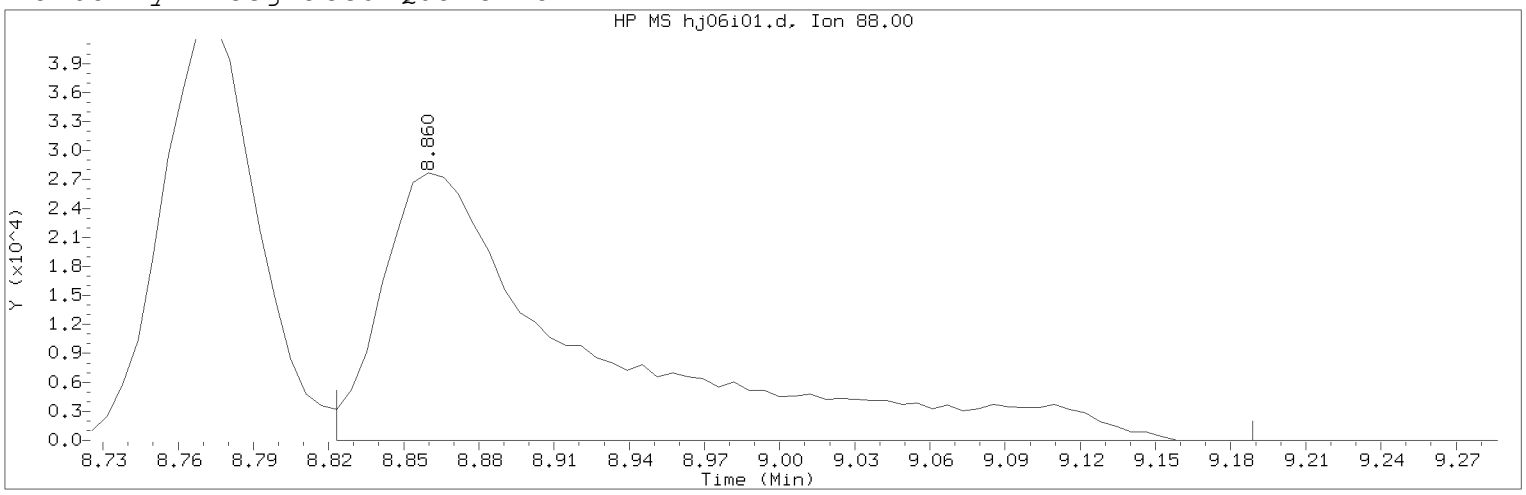
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 1341880
On-column Amount (ng) : 24.6923
Integration start scan : 967 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

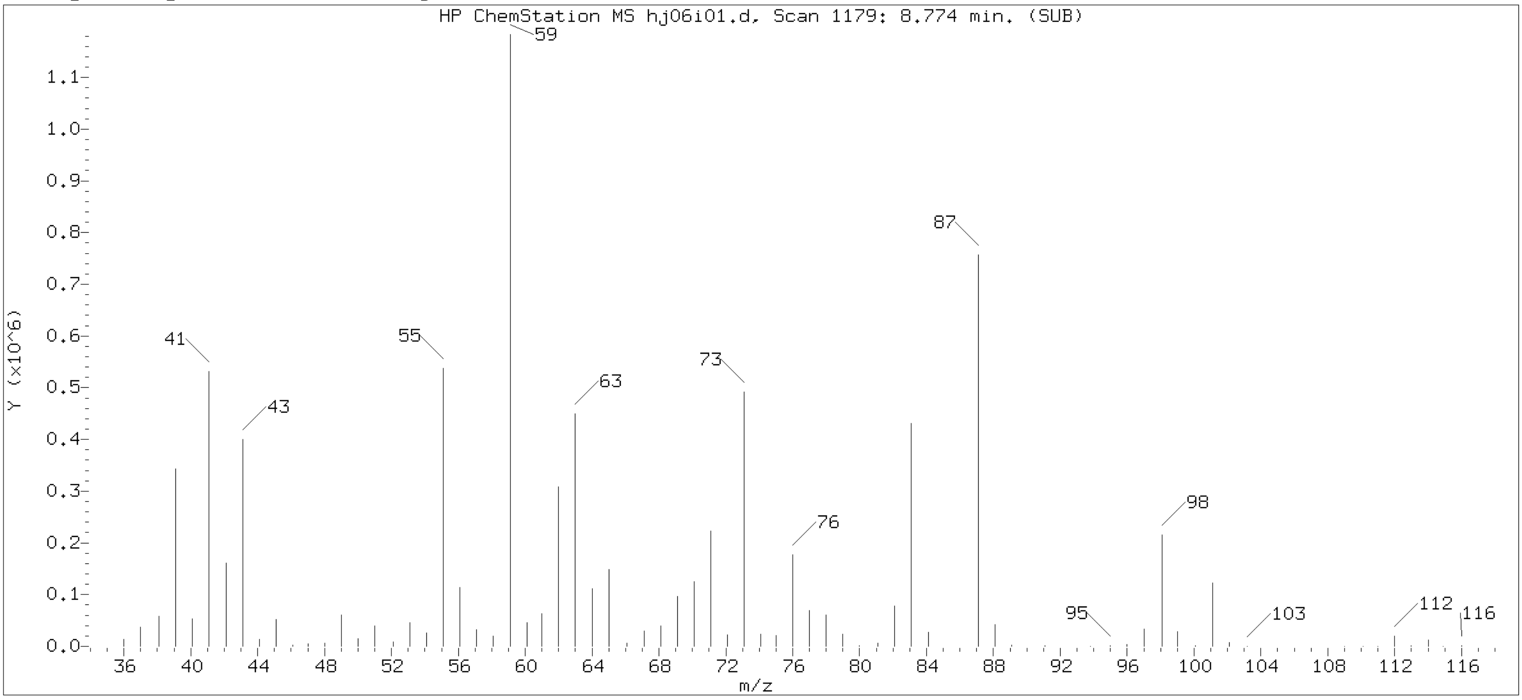
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 161139M
On-Column Amount (ng) : 995.1248
Integration start scan : 1186 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

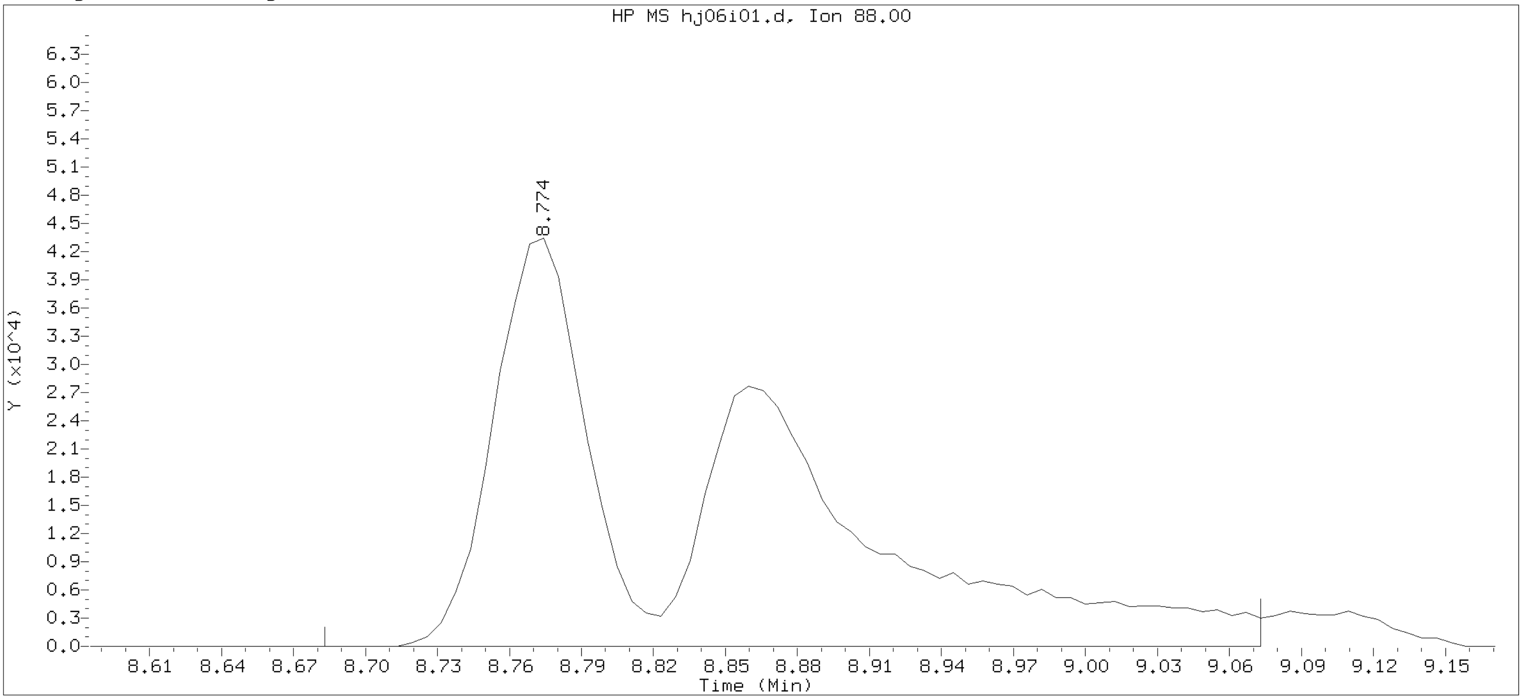
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

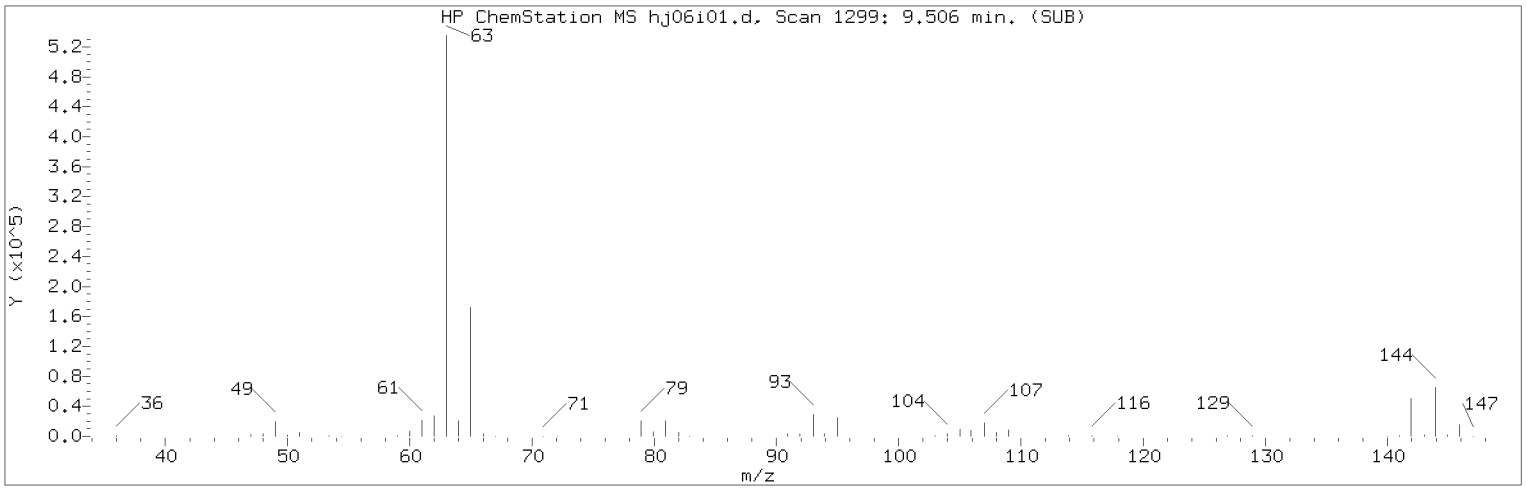
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

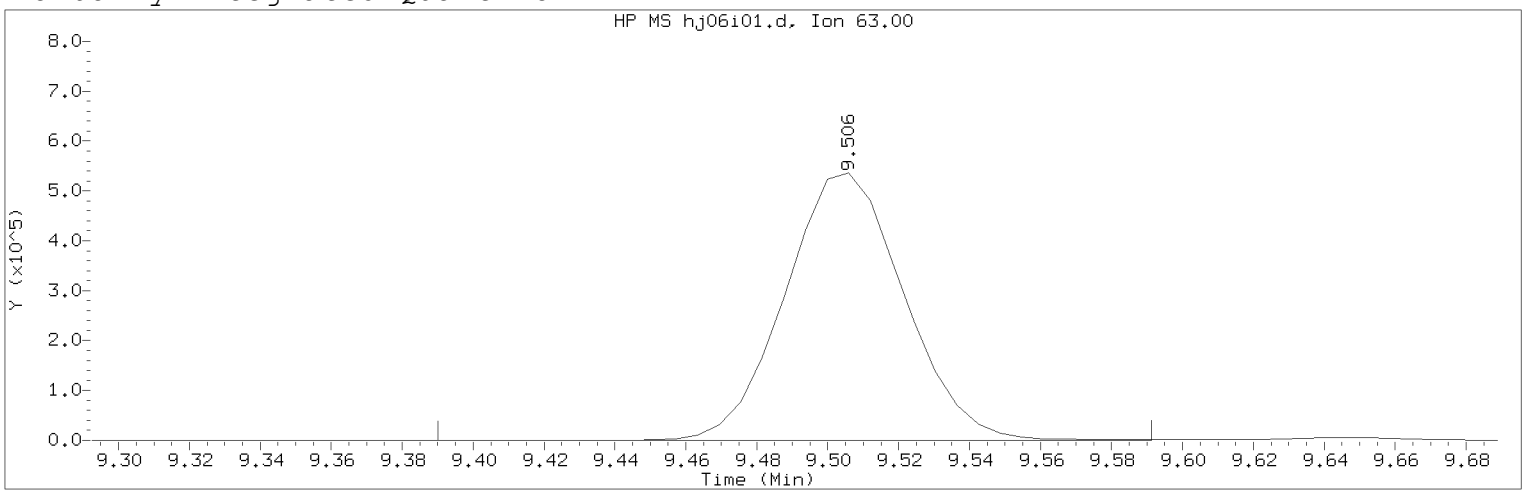
Compound Number	: 73
Compound Name	: 1,4-Dioxane
Scan Number	: 1179
Retention Time (minutes)	: 8.774
Quant Ion	: 88.00
Area	: 263699
On-column Amount (ng)	: 1564.0069
Integration start scan	: 1163 Integration stop scan: 1227
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

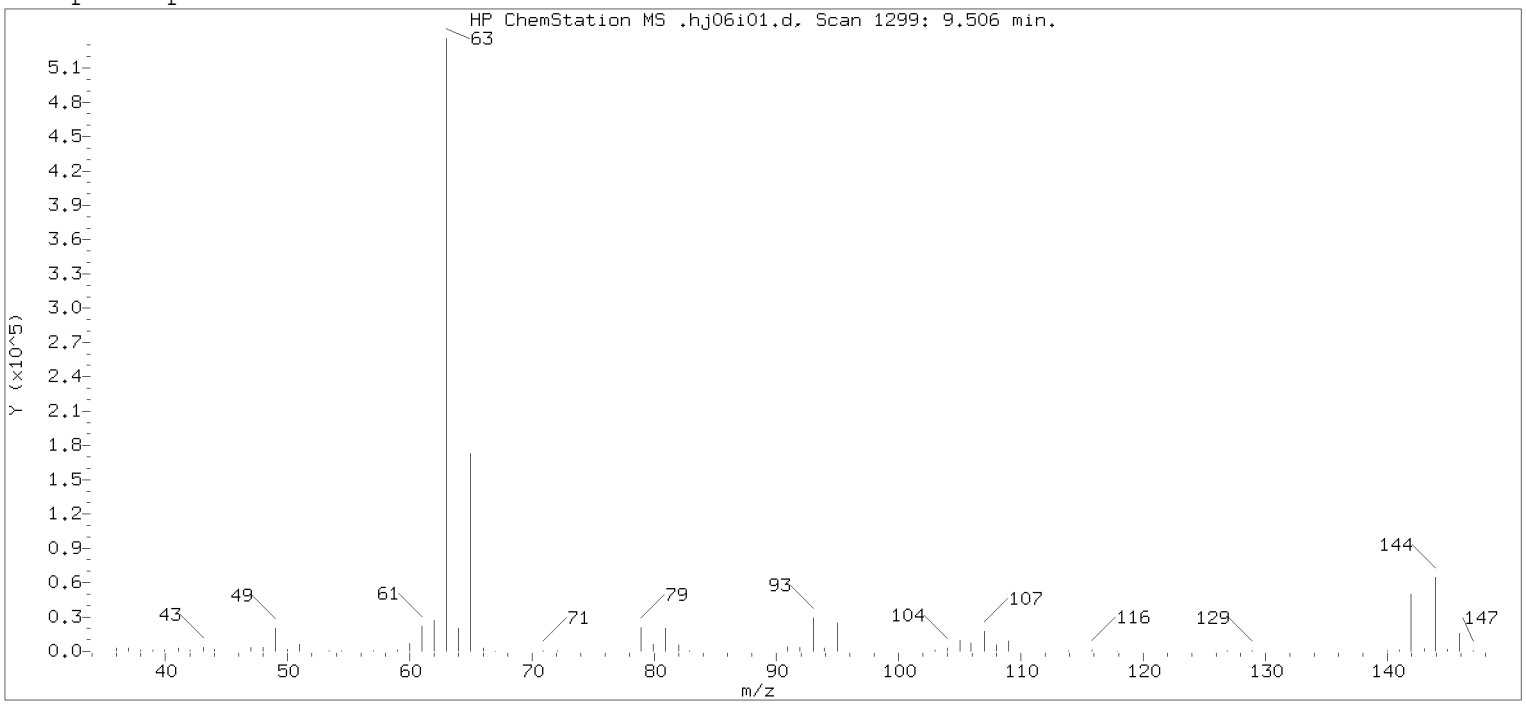
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 1246645M
On-Column Amount (ng) : 25.5039
Integration start scan : 1279 Integration stop scan: 1312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

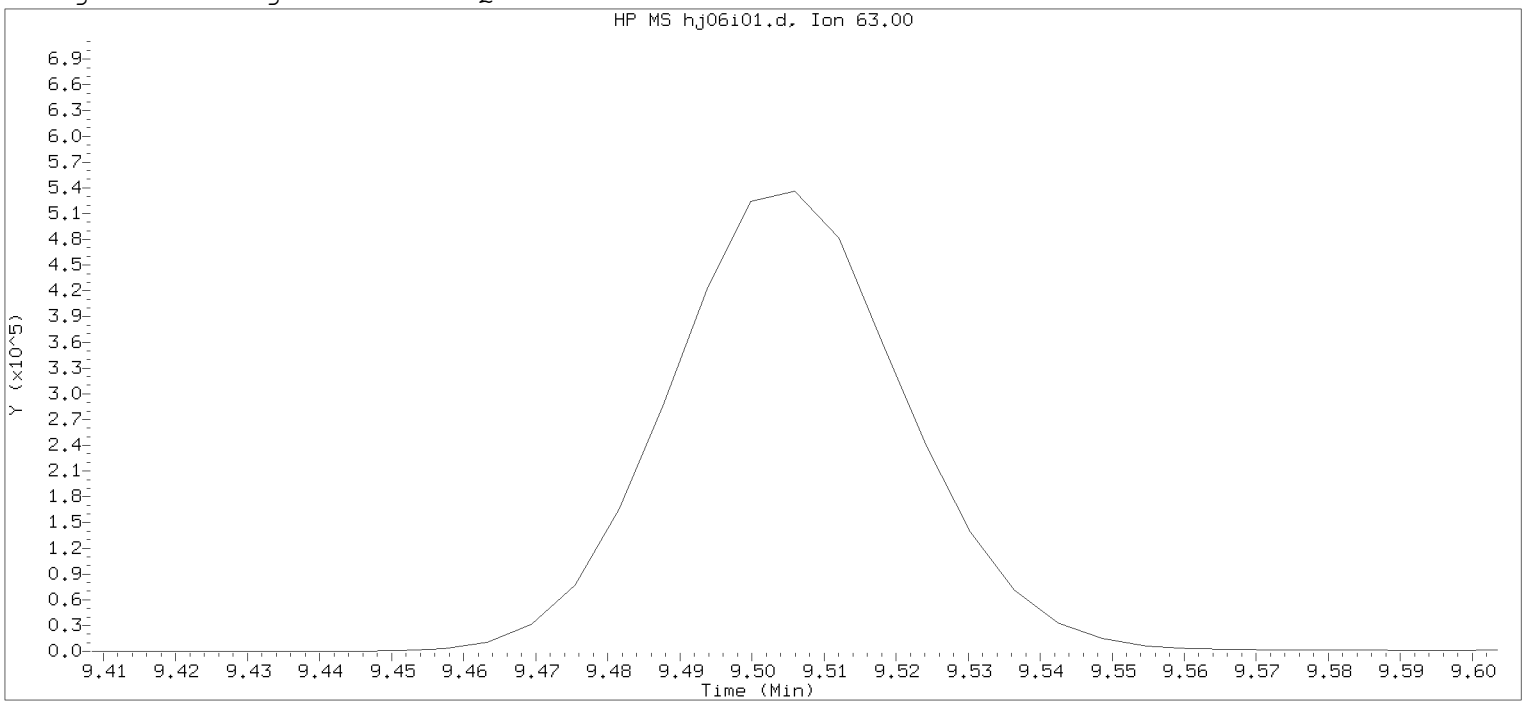
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

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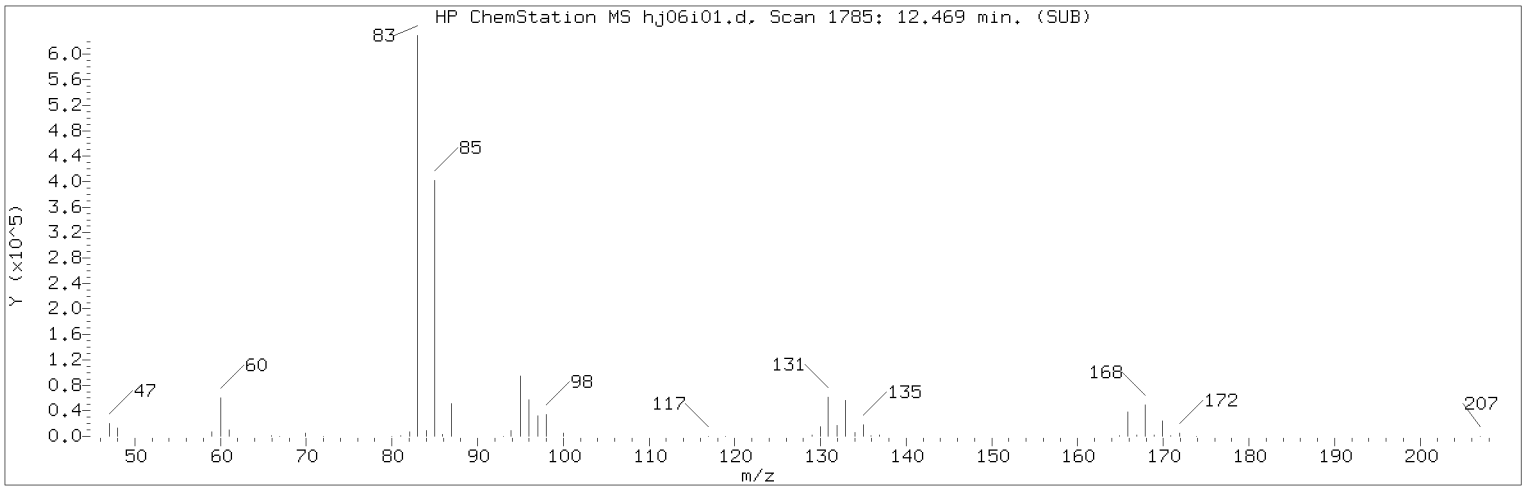
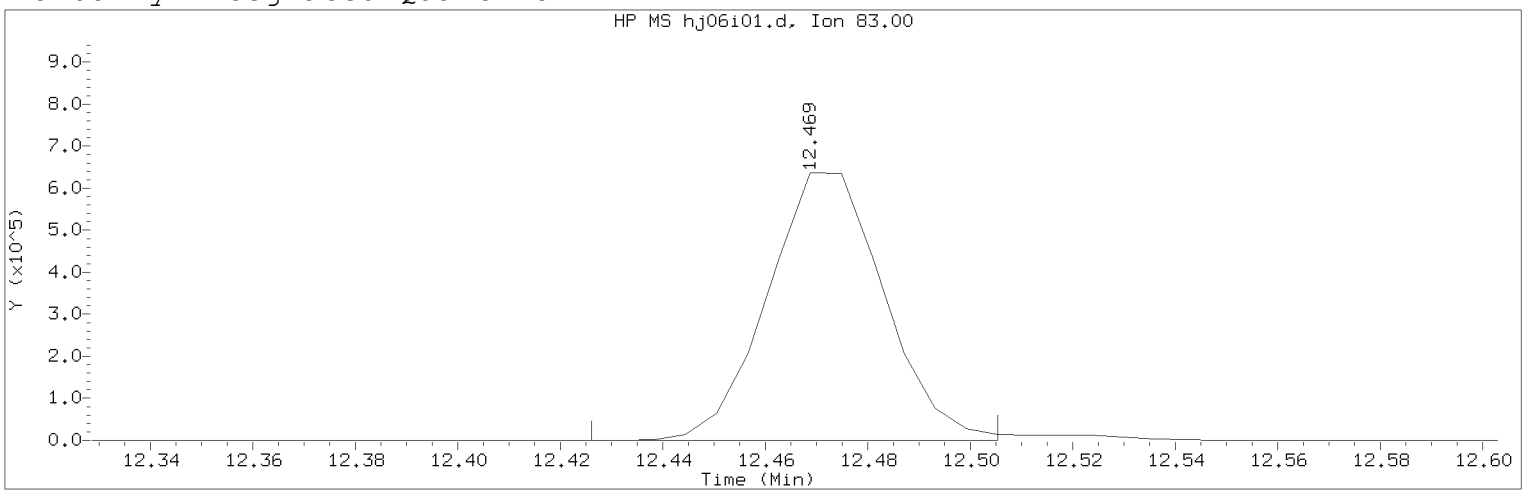
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

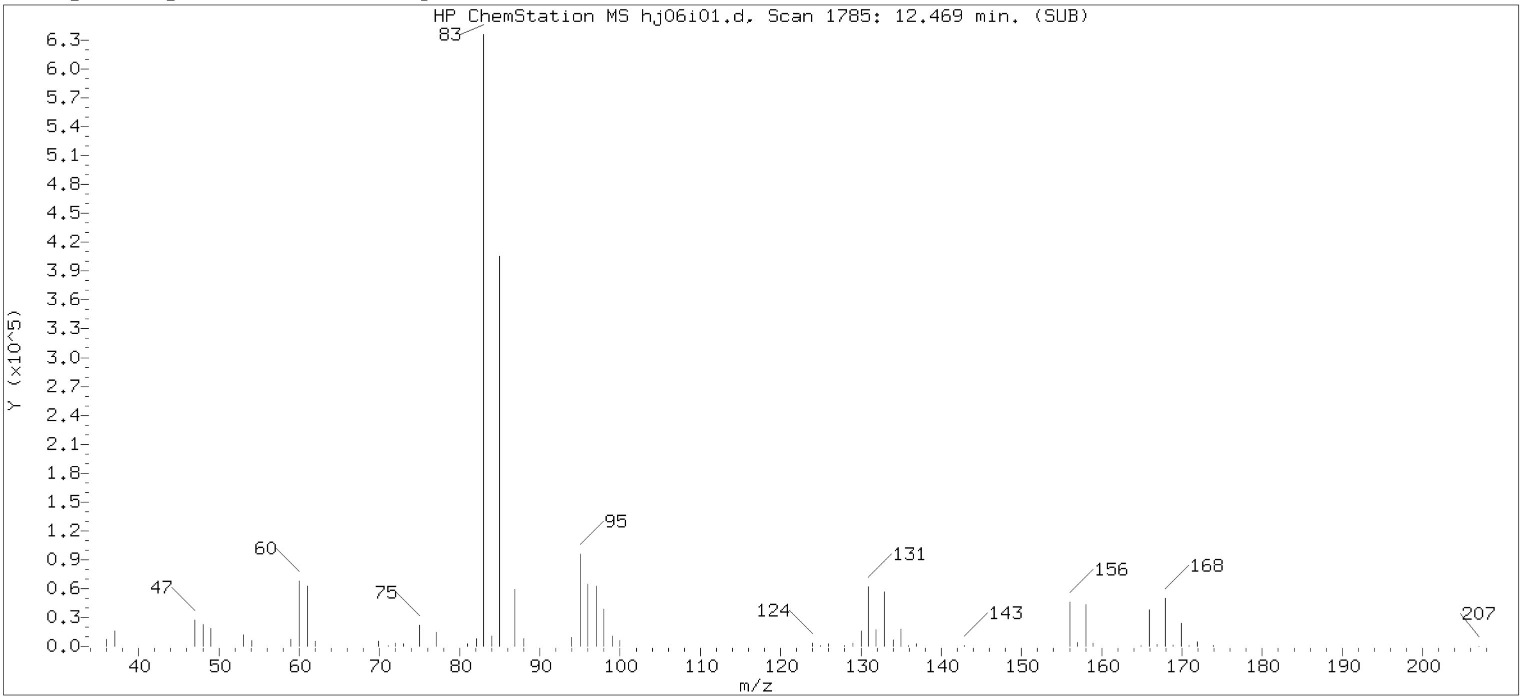
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 1006708M
On-Column Amount (ng) : 25.8147
Integration start scan : 1777 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

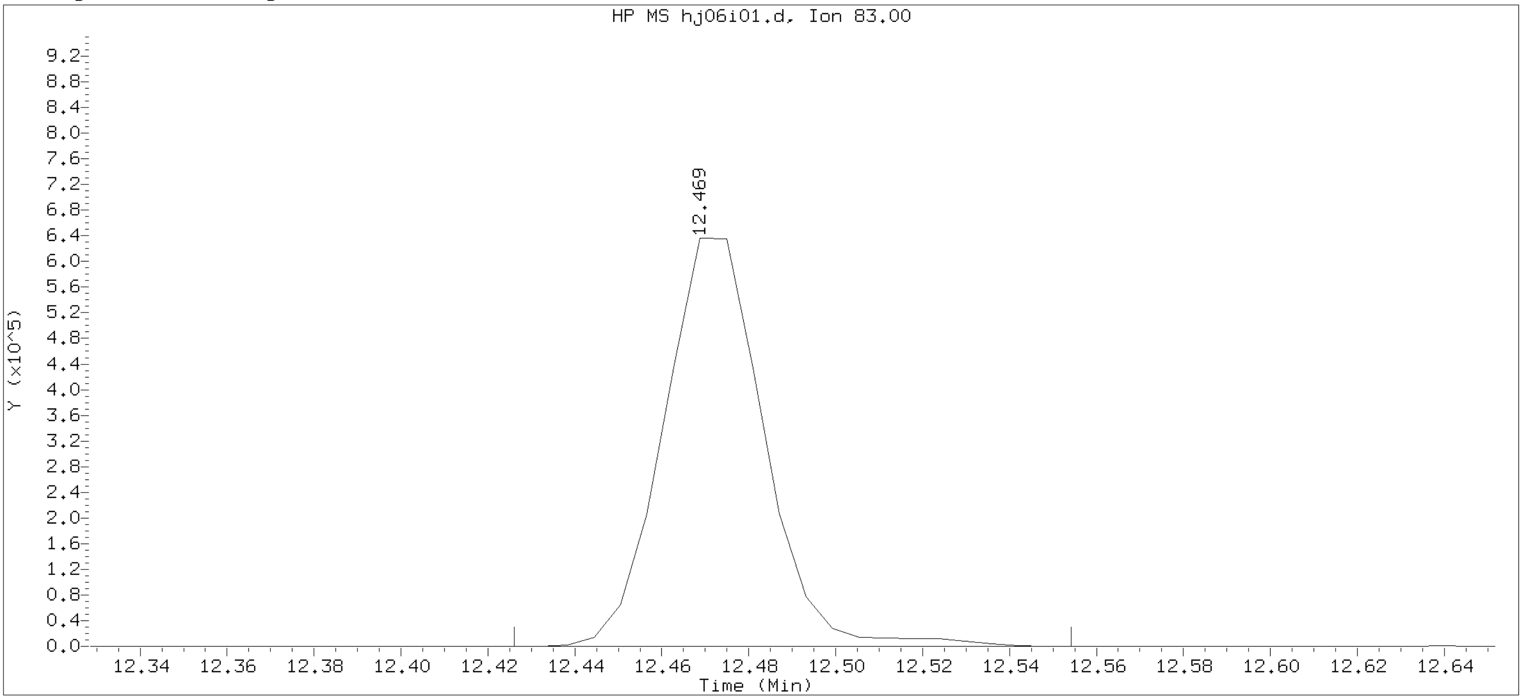
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 114		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1785		
Retention Time (minutes)	: 12.469		
Quant Ion	: 83.00		
Area	: 1024892		
On-column Amount (ng)	: 25.0000		
Integration start scan	: 1777	Integration stop scan:	1798
Y at integration start	: 0	Y at integration end:	0

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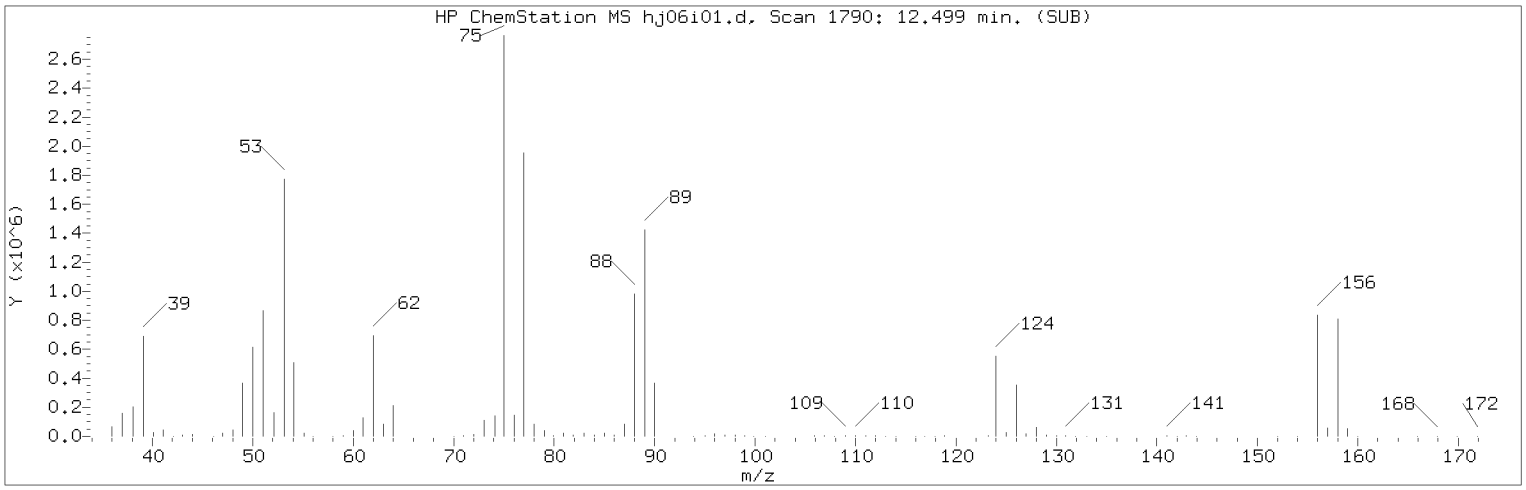
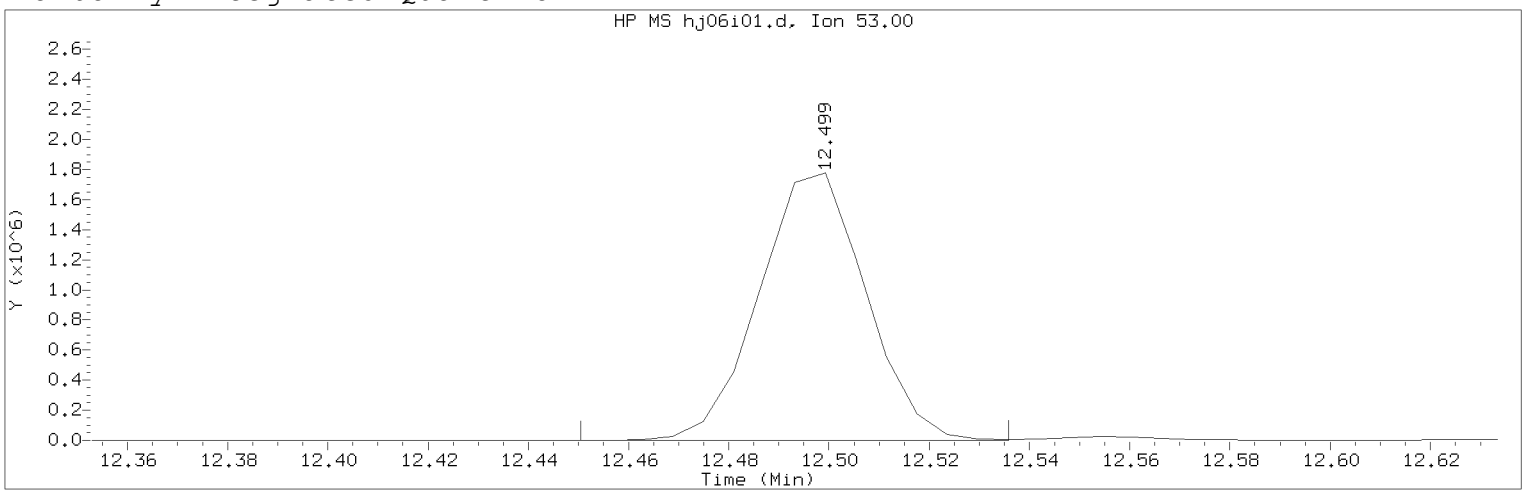
Target 3.5 esignature user ID: sej02044

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

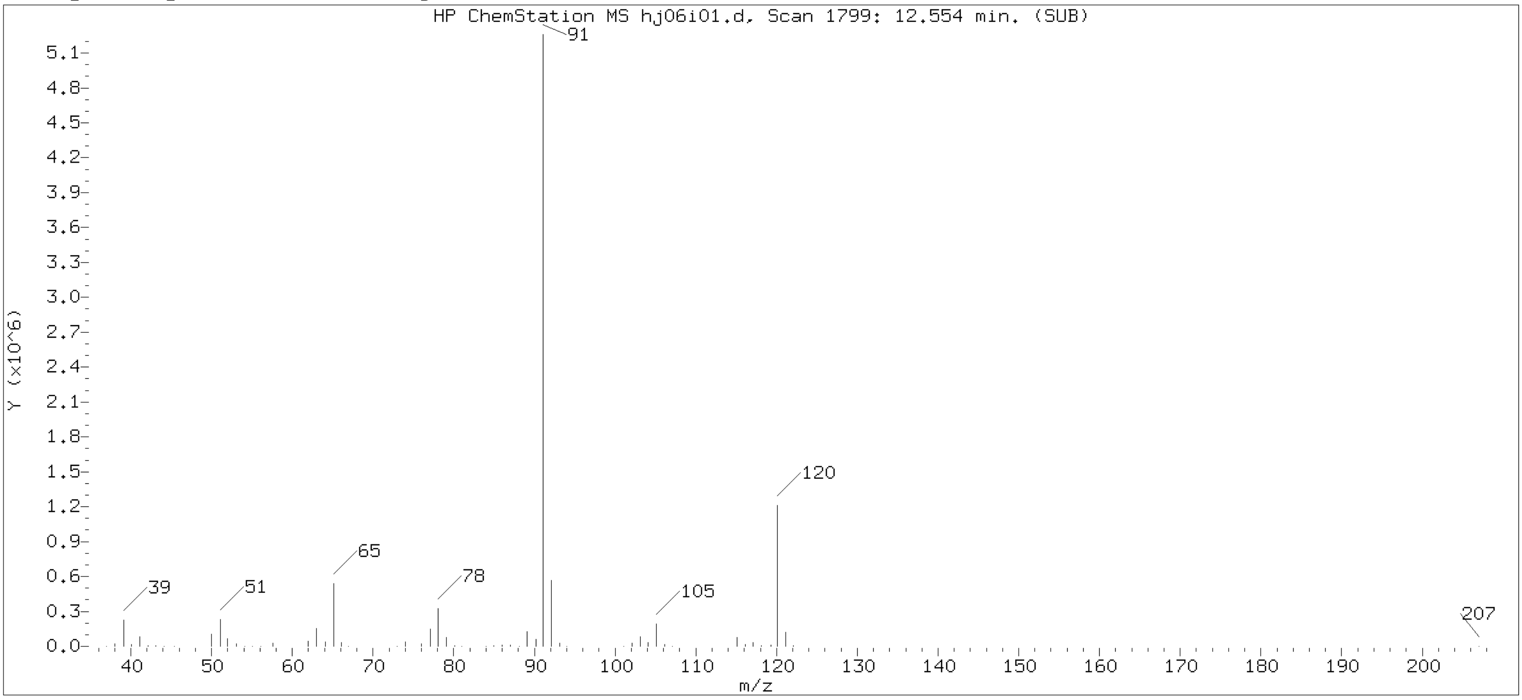
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1790
Retention Time (minutes): 12.499
Quant Ion : 53.00
Area (flag) : 2625732A
On-Column Amount (ng) : 261.8701
Integration start scan : 1781 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

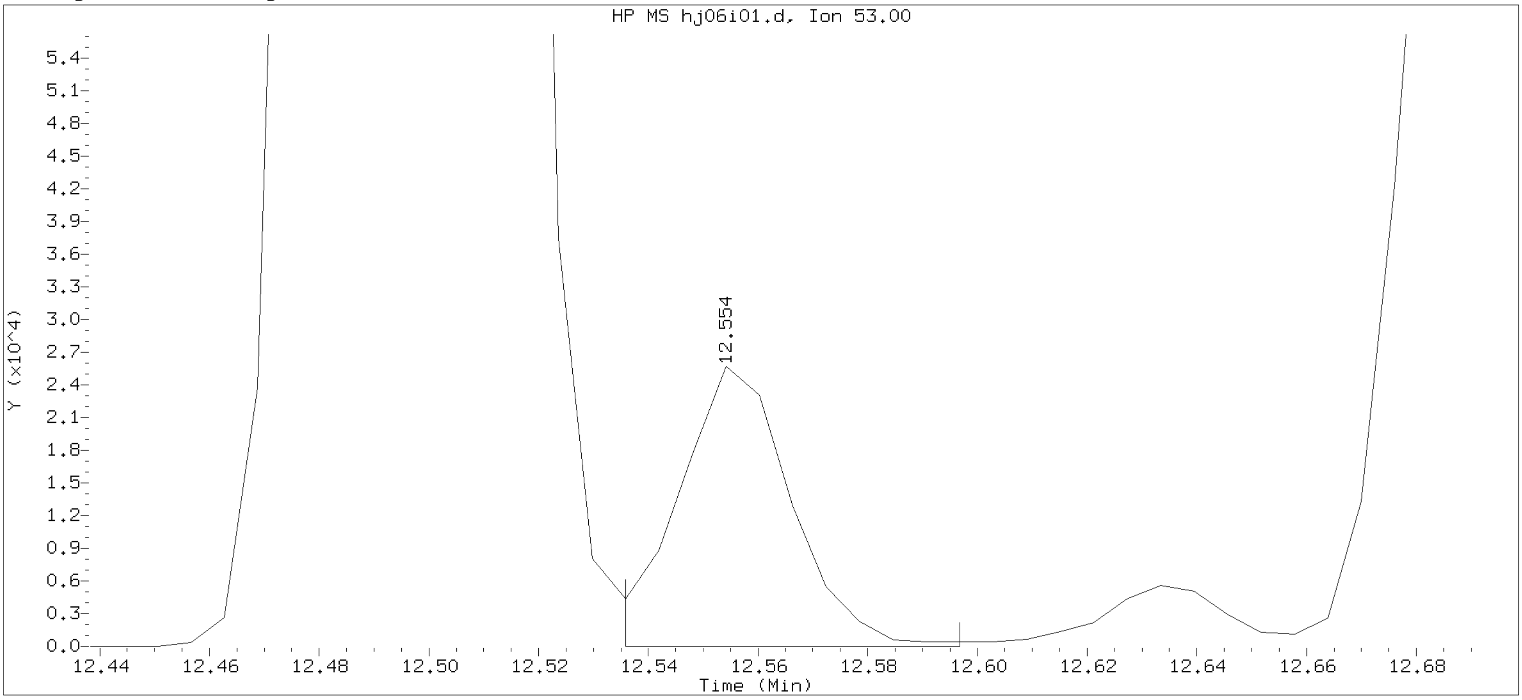
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



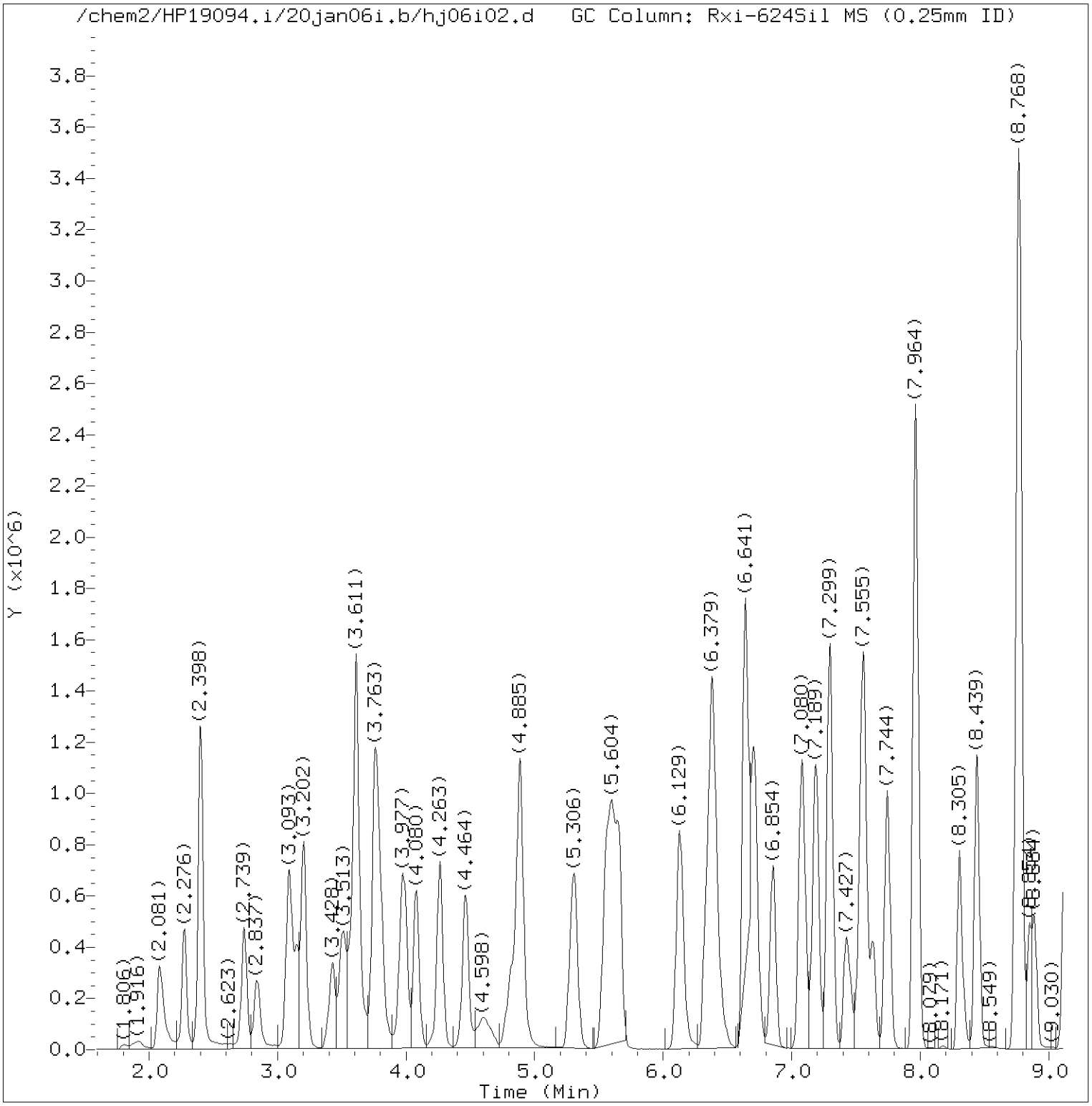
Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1799
Retention Time (minutes): 12.554
Quant Ion : 53.00
Area : 36305
On-column Amount (ng) : 250.0000
Integration start scan : 1795 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02046



Total Ion Chromatogram (TIC)

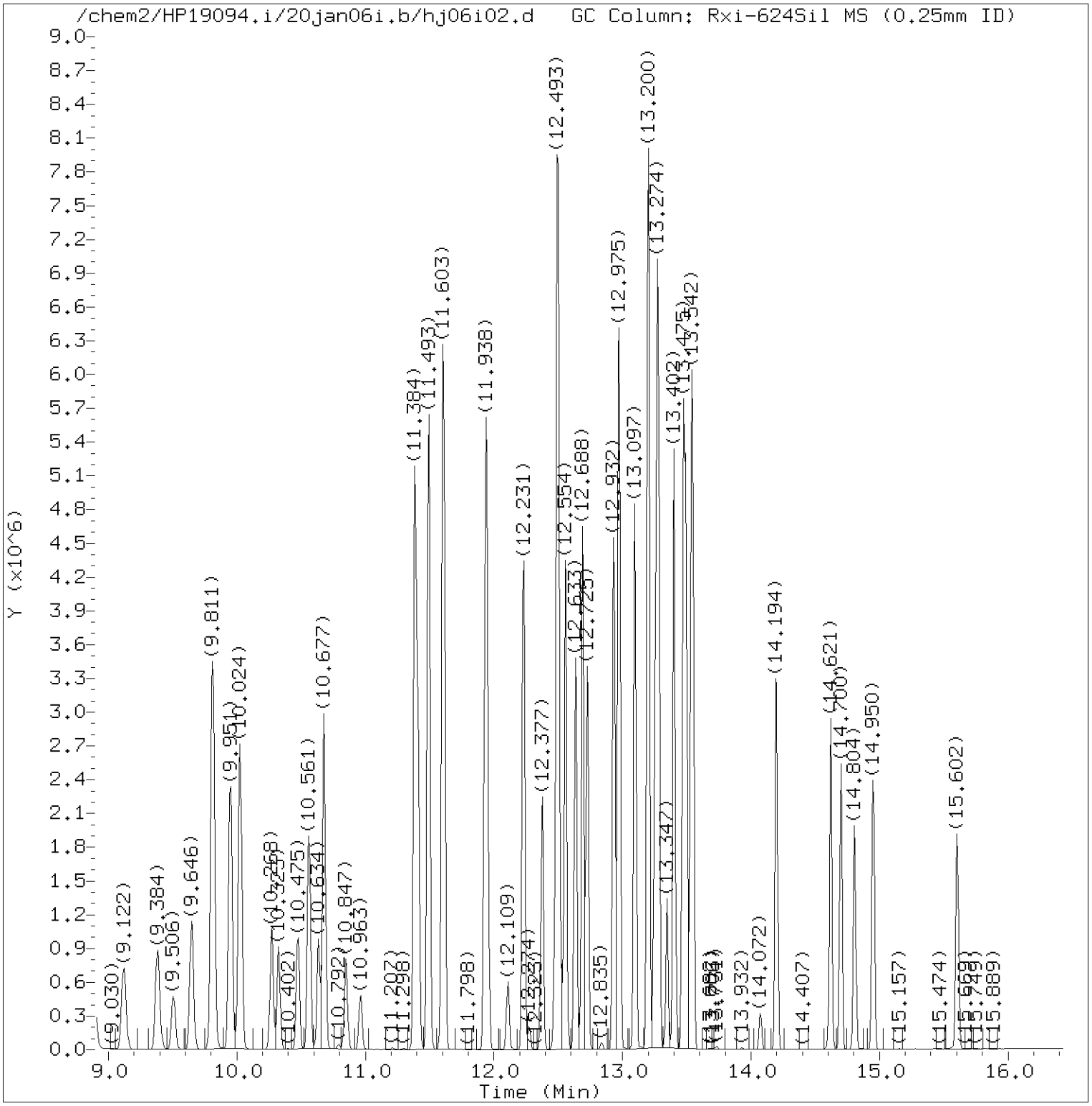
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.081	85	760677M	10.449
2) Chloromethane	(2)	2.276	50	723816	10.071
5) Vinyl Chloride	(2)	2.398	62	705685	10.323
6) 1,3-Butadiene	(2)	2.404	39	556101M	10.298
7) Bromomethane	(2)	2.739	94	492084	10.049
8) Chloroethane	(2)	2.843	64	405350	10.238
9) Dichlorofluoromethane	(2)	3.087	67	928944	9.880
10) Trichlorofluoromethane	(2)	3.147	101	810077	10.384
11) Ethyl ether	(2)	3.428	59	359873	10.423
12) Freon 123a	(2)	3.507	67	618460	10.254
13) Acrolein	(1)	3.611	56	2738099	490.908
15) 1,1-Dichloroethene	(2)	3.757	96	485755	10.238
16) Freon 113	(2)	3.781	101	518962	10.463
14) Acetone	(1)	3.788	43	680105M	90.365
17) Methyl Iodide	(2)	3.964	142	936249	10.225
18) Bromoethane	(2)	4.001	108	420057M	10.147
19) Carbon Disulfide	(2)	4.080	76	1456070	10.031
22) Methyl Acetate	(1)	4.233	43	173520	9.136
23) Allyl Chloride	(2)	4.263	41	790437	9.807
24) Methylene Chloride	(2)	4.464	84	508726	9.961
27)*t-Butyl Alcohol-d10	(1)	4.464	65	123863	50.000
29) t-Butyl Alcohol	(1)	4.604	59	538353	205.919
30) Acrylonitrile	(1)	4.806	53	450445	49.045
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	1118152	10.307
32) trans-1,2-Dichloroethene	(2)	4.891	96	525358	10.072
33) n-Hexane	(2)	5.306	57	760285	10.334
34) 1,1-Dichloroethane	(2)	5.543	63	965481	10.252
35) di-Isopropyl Ether	(2)	5.598	45	1588448	10.240
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	828227	10.272
41) 1,2-Dichloroethene (Total)	(2)		96	1112521	20.202
38) Ethyl t-butyl ether	(2)	6.129	59	1496284	10.275
39) 2-Butanone	(1)	6.330	43	1122078	95.350
40) cis-1,2-Dichloroethene	(2)	6.379	96	587163	10.130
42) 2,2-Dichloropropane	(2)	6.391	77	821251	10.249
43) Propionitrile	(1)	6.421	54	648800	201.268
46) Methacrylonitrile	(1)	6.641	67	1136111	98.542
48) Bromochloromethane	(2)	6.708	128	246581	10.076
49) Tetrahydrofuran	(1)	6.714	71	320458	98.567

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	934761	10.171
51)$Dibromofluoromethane	(2)	7.074	113	487337	10.094
51)$Dibromofluoromethane	(2)	7.067	111	499455	10.069
52) 1,1,1-Trichloroethane	(2)	7.086	97	865028	10.120
53) Cyclohexane	(2)	7.189	56	932893	10.219
53) Cyclohexane	(2)	7.189	84	815738	10.433
53) Cyclohexane	(2)	7.189	69	289935	10.205
56) 1,1-Dichloropropene	(2)	7.293	75	747294	10.345
55) Carbon Tetrachloride	(2)	7.299	117	754553	10.296
57) Isobutyl Alcohol	(1)	7.427	41	419476	462.887
58)$1,2-Dichloroethane-d4	(2)	7.525	102	93717	10.016
58)$1,2-Dichloroethane-d4	(2)	7.525	65	432514	10.018
58)$1,2-Dichloroethane-d4	(2)	7.525	104	59118	9.975
59) Benzene	(2)	7.561	78	2144318	10.150
60) 1,2-Dichloroethane	(2)	7.634	62	536476M	9.850
61) t-Amyl methyl ether	(2)	7.744	73	1300717	10.241
63) n-Heptane	(2)	7.964	43	794361	10.293
64)*Fluorobenzene	(2)	7.964	96	1942157	10.000
66) n-Butanol	(1)	8.305	56	742424	1017.654
68) Trichloroethene	(2)	8.445	95	563519	10.172
70) Methylcyclohexane	(2)	8.756	83	1026004	10.338
71) 1,2-Dichloropropane	(2)	8.781	63	530369	10.148
72) Methyl Methacrylate	(1)	8.848	69	227222	9.797
73) 1,4-Dioxane	(1)	8.860	88	93413M	530.882
74) Dibromomethane	(2)	8.890	93	239624	10.029
75) Bromodichloromethane	(2)	9.122	83	664074	10.227
77) 2-Nitropropane	(1)	9.384	41	746083	97.942
80) 1-Bromo-2-chloroethane	(2)	9.506	63	500661M	10.191
81) cis-1,3-Dichloropropene	(2)	9.646	75	803099	10.473
82) 4-Methyl-2-Pentanone	(1)	9.811	43	2868230M	98.888
83)$Toluene-d8	(3)	9.951	98	1928498	9.958
83)$Toluene-d8	(3)	9.951	100	1247558	9.960
84) Toluene	(3)	10.024	92	1375434	10.110
86) 1,3-Dichloropropene (total)	(3)		75	1451695	20.745
85) trans-1,3-Dichloropropene	(3)	10.274	75	648596	10.272
87) Ethyl Methacrylate	(3)	10.323	69	503375	10.285
89) 1,1,2-Trichloroethane	(3)	10.475	97	346693	10.143
90) Tetrachloroethene	(3)	10.561	166	628570	10.165

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	595157	10.135
92) 2-Hexanone	(1)	10.677	43	1930183M	97.389
94) Dibromochloromethane	(3)	10.847	129	454667	10.389
96) 1,2-Dibromoethane	(3)	10.963	107	340506	10.425
97) 1-Chlorohexane	(3)	11.384	91	796363	9.710
98)*Chlorobenzene-d5	(3)	11.384	117	1453618	10.000
99) Chlorobenzene	(3)	11.408	112	1489084	10.018
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	538246	10.181
101) Ethylbenzene	(3)	11.493	91	2689588	10.047
102) m+p-Xylene	(3)	11.603	106	2063900	20.163
106) Xylene (Total)	(3)		106	3089747	30.353
105) o-Xylene	(3)	11.932	106	1025847	10.192
107) Styrene	(3)	11.951	104	1674658	10.252
108) Bromoform	(3)	12.109	173	269204	10.553
109) Isopropylbenzene	(3)	12.231	105	2771739	10.161
112)$4-Bromofluorobenzene	(3)	12.377	95	708877	9.894
112)$4-Bromofluorobenzene	(3)	12.377	174	605782	9.881
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	410607	10.443
115) Bromobenzene	(4)	12.493	156	611540	10.290
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1083985	99.488
117) 1,2,3-Trichloropropane	(4)	12.524	110	107587M	10.219
118) n-Propylbenzene	(4)	12.554	91	3200410	10.312
120) 2-Chlorotoluene	(4)	12.633	126	626427	10.231
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	2339950	10.393
123) 4-Chlorotoluene	(4)	12.725	126	625771	10.240
126) tert-Butylbenzene	(4)	12.932	134	485332	10.423
127) Pentachloroethane	(4)	12.969	167	411479	10.369
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	2404012	10.341
129) sec-Butylbenzene	(4)	13.097	105	3049687	10.455
133) p-Isopropyltoluene	(4)	13.200	119	2618528	10.431
132) 1,3-Dichlorobenzene	(4)	13.200	146	1218850	10.291
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	753053	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	1185214	10.258
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	972849	10.035
137) Benzyl Chloride	(4)	13.347	126	177107	10.715
139) n-Butylbenzene	(4)	13.493	92	1312133	10.573
140) 1,2-Dichlorobenzene	(4)	13.530	146	1073891	10.286
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	63180	10.167

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	993380	10.717
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	845107	10.872
147) Hexachlorobutadiene	(4)	14.700	225	439808	10.842
148) Naphthalene	(4)	14.804	128	1445887	10.659
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	714131	10.762

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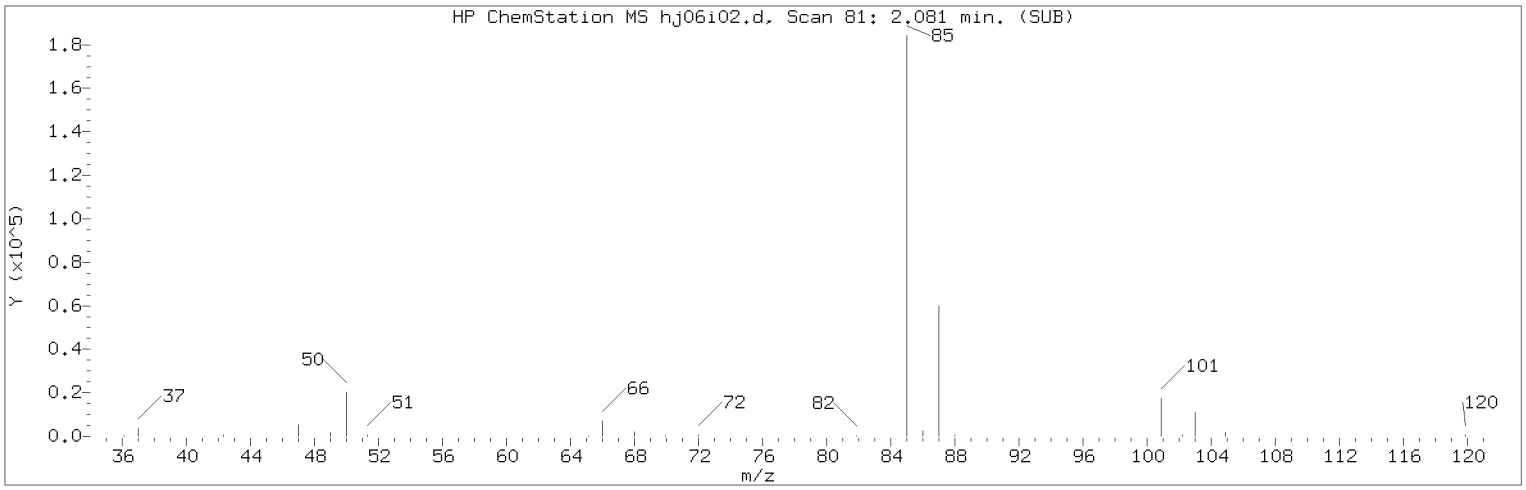
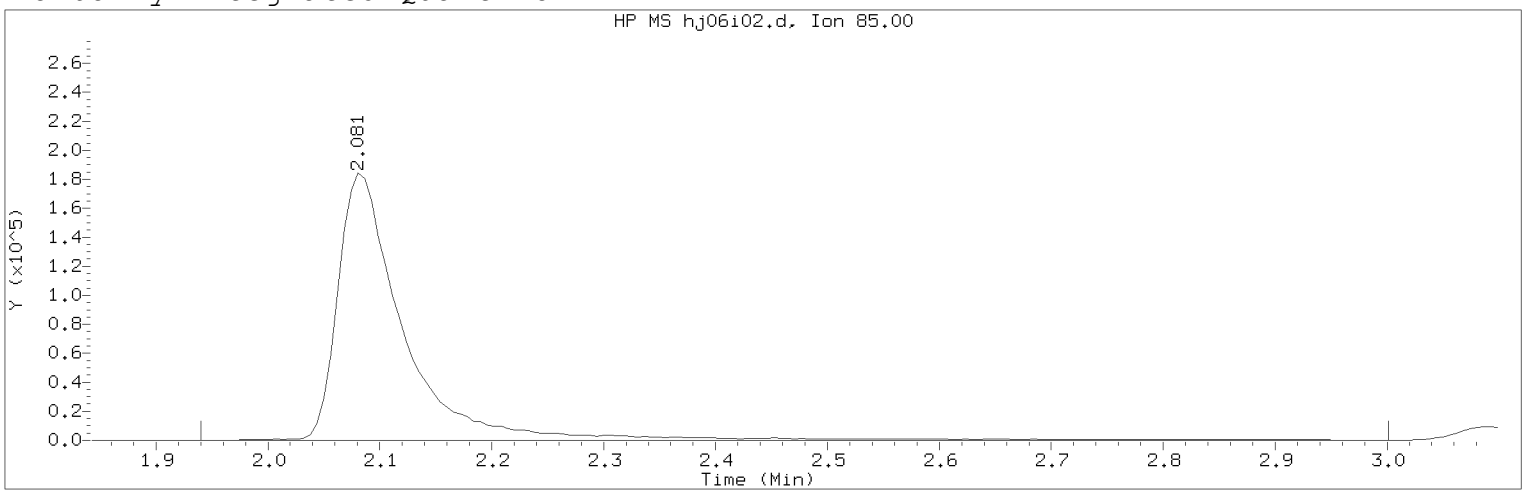
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

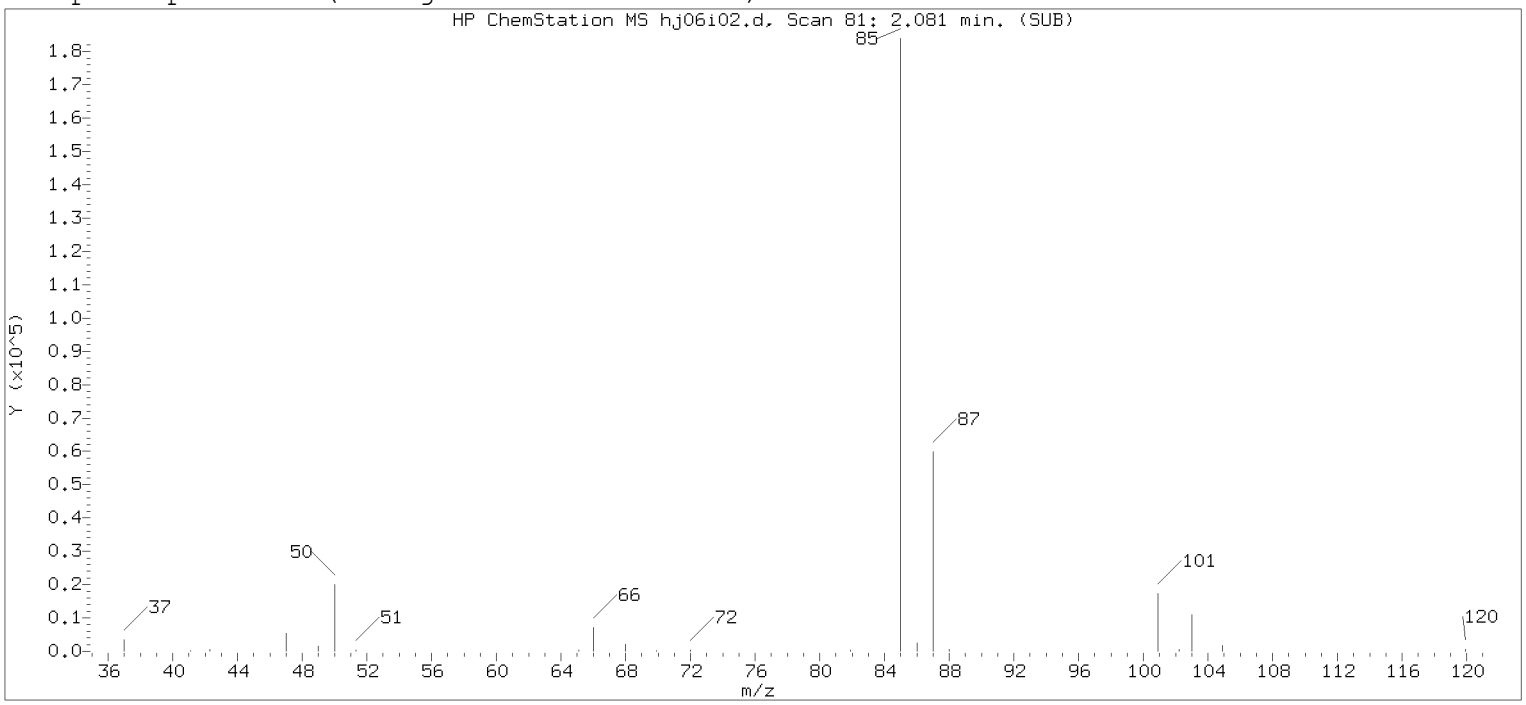
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 85.00
Area (flag) : 760677M
On-Column Amount (ng) : 10.4486
Integration start scan : 57 Integration stop scan: 231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

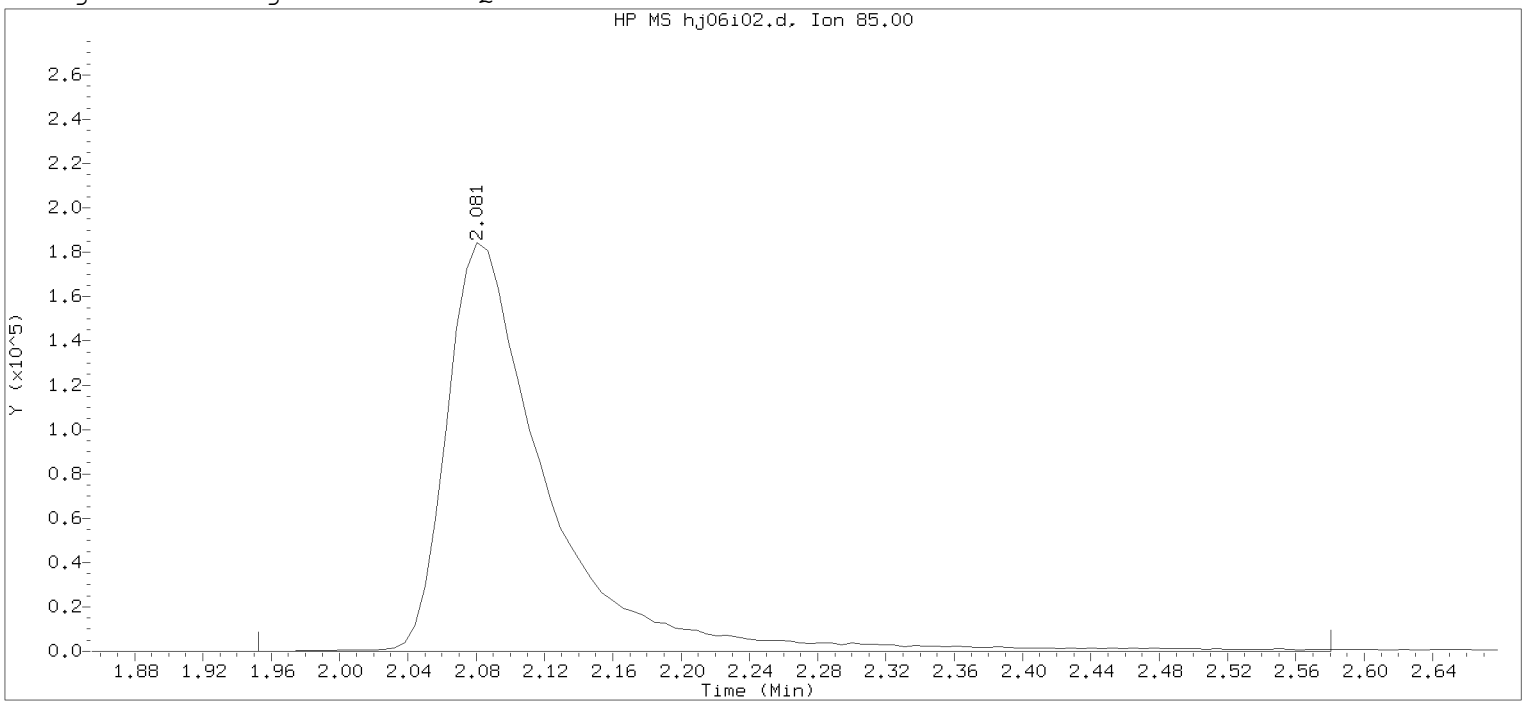
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

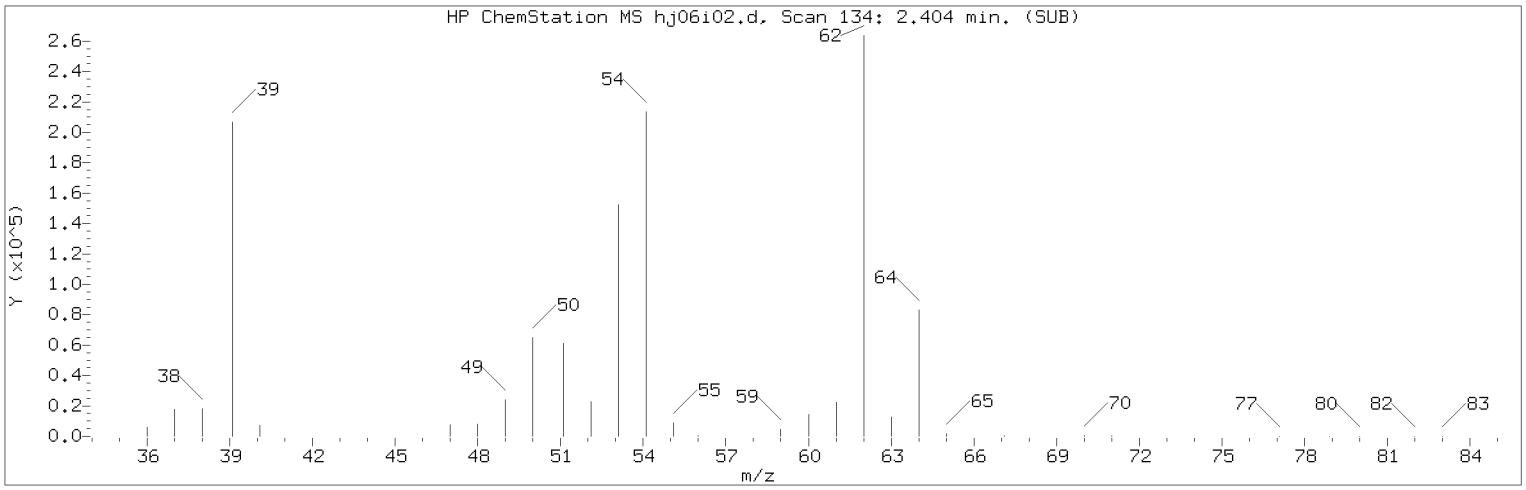
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

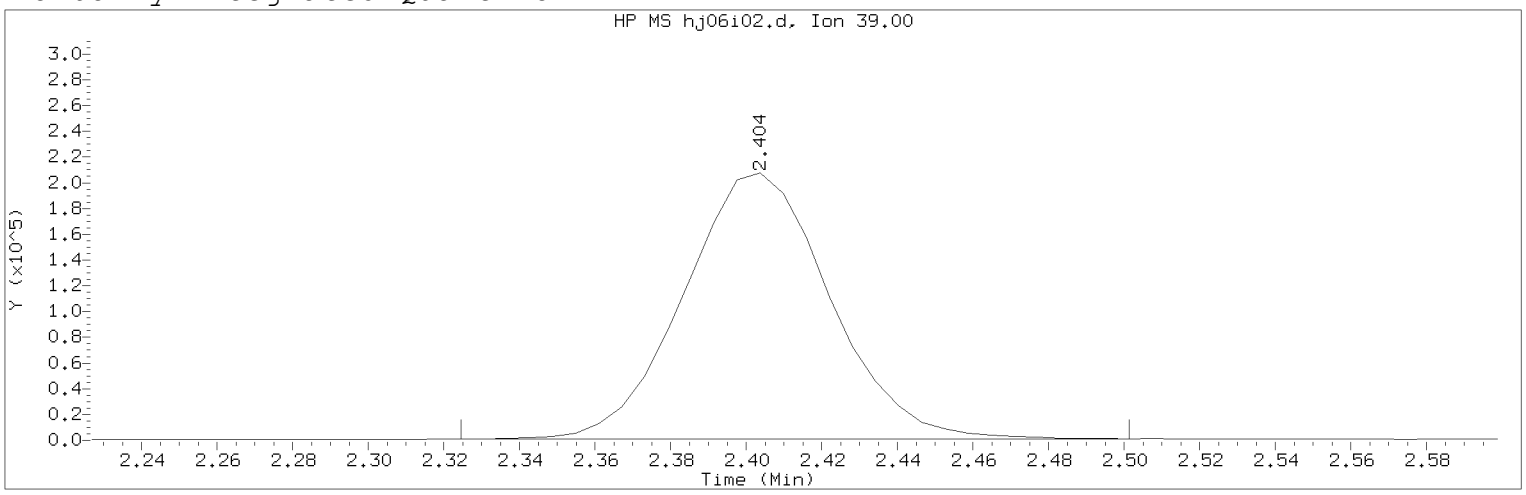
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 85.00
Area : 750056
On-column Amount (ng) : 10.3504
Integration start scan : 59 Integration stop scan: 162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user: sjohnson

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

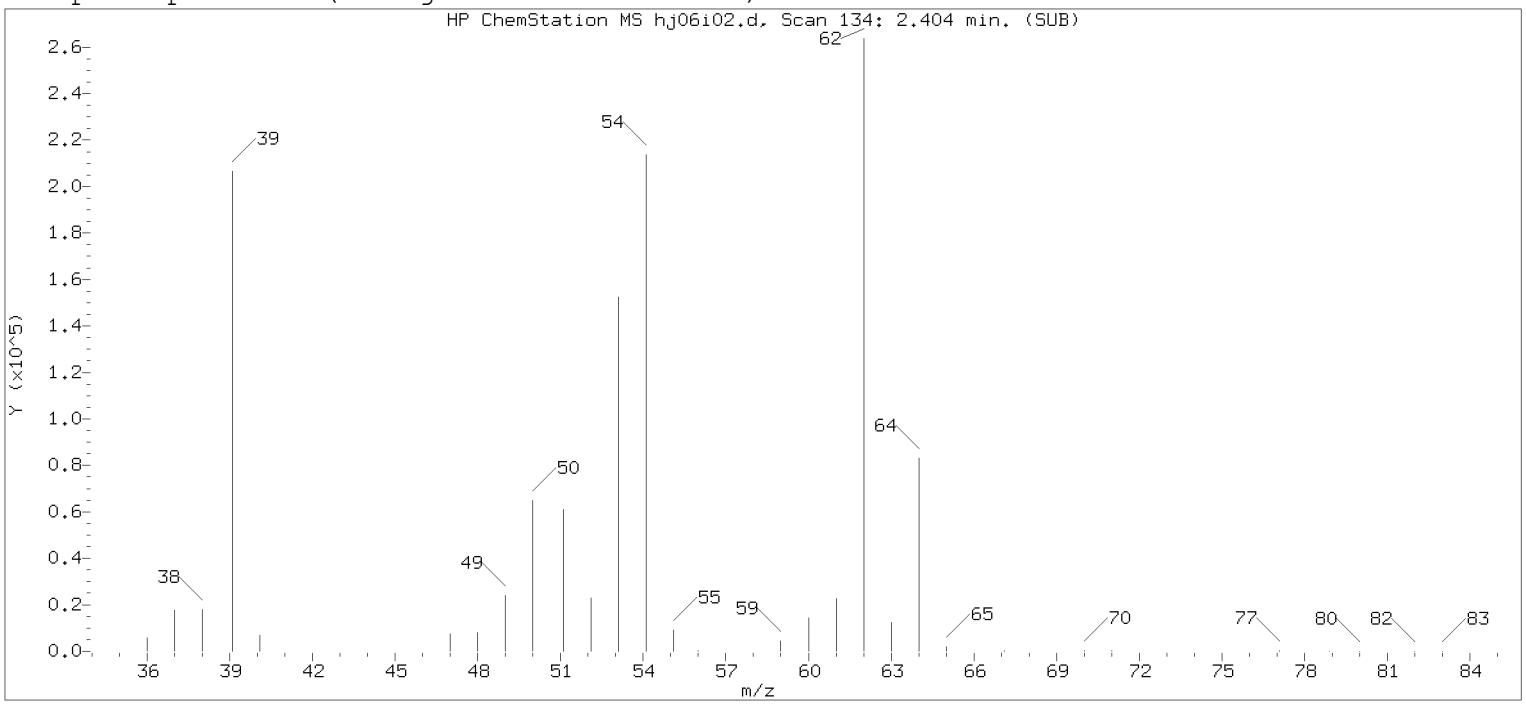
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 556101M
On-Column Amount (ng) : 10.2978
Integration start scan : 120 Integration stop scan: 149
Y at integration start : 805 Y at integration end: 805

Reason for manual integration: improper integration

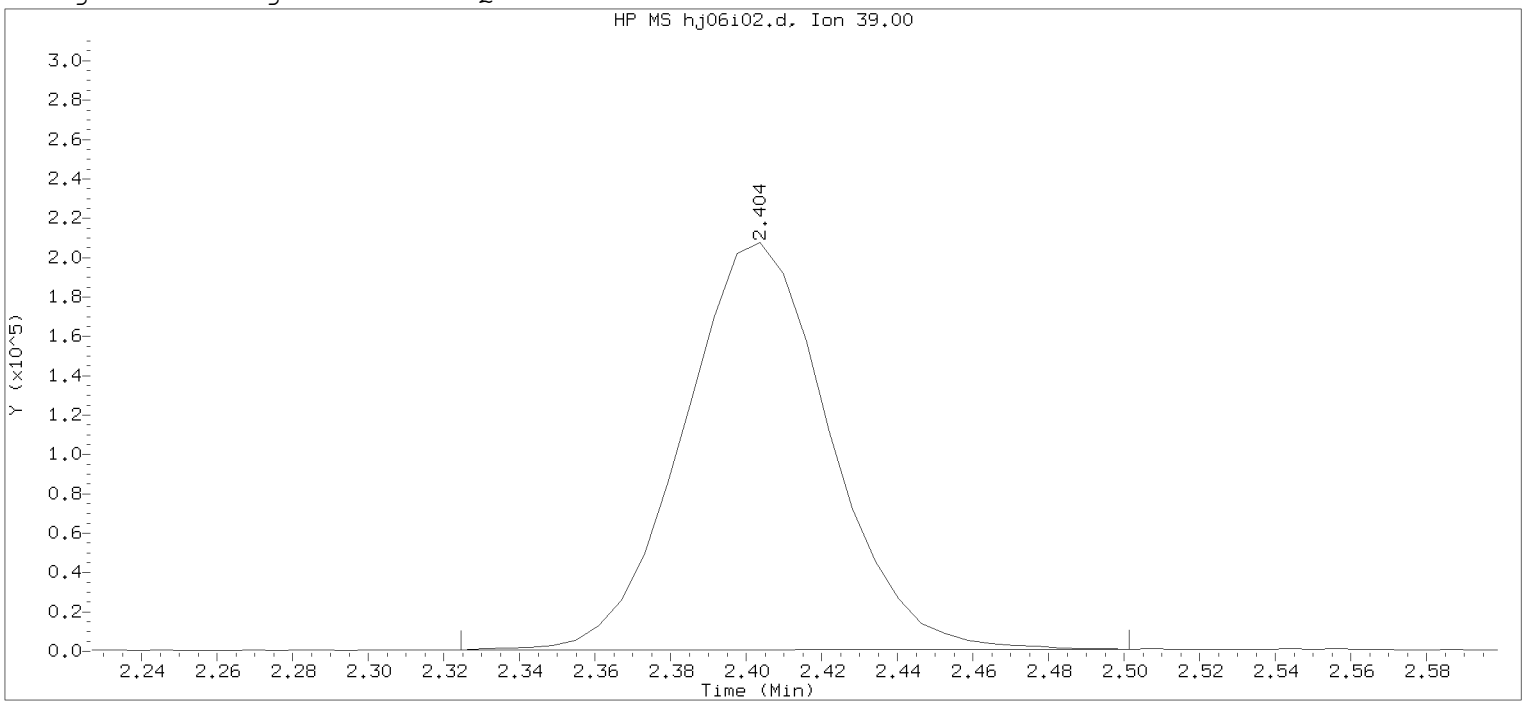
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area : 554271
On-column Amount (ng) : 10.3624
Integration start scan : 120 Integration stop scan: 149
Y at integration start : 806 Y at integration end: 1138

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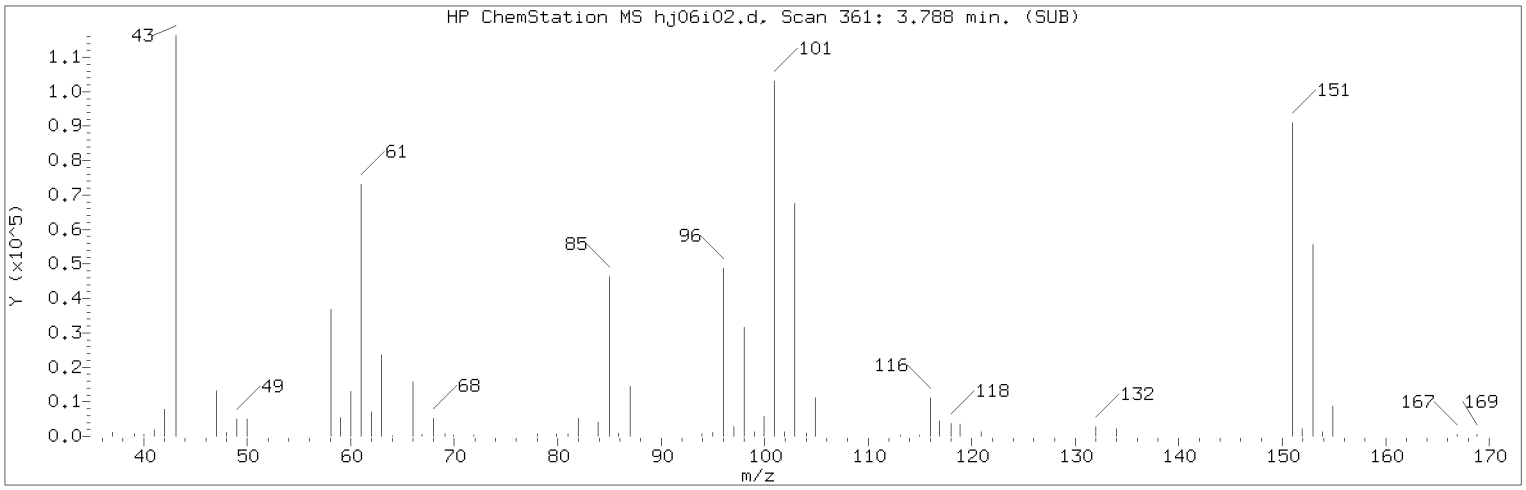
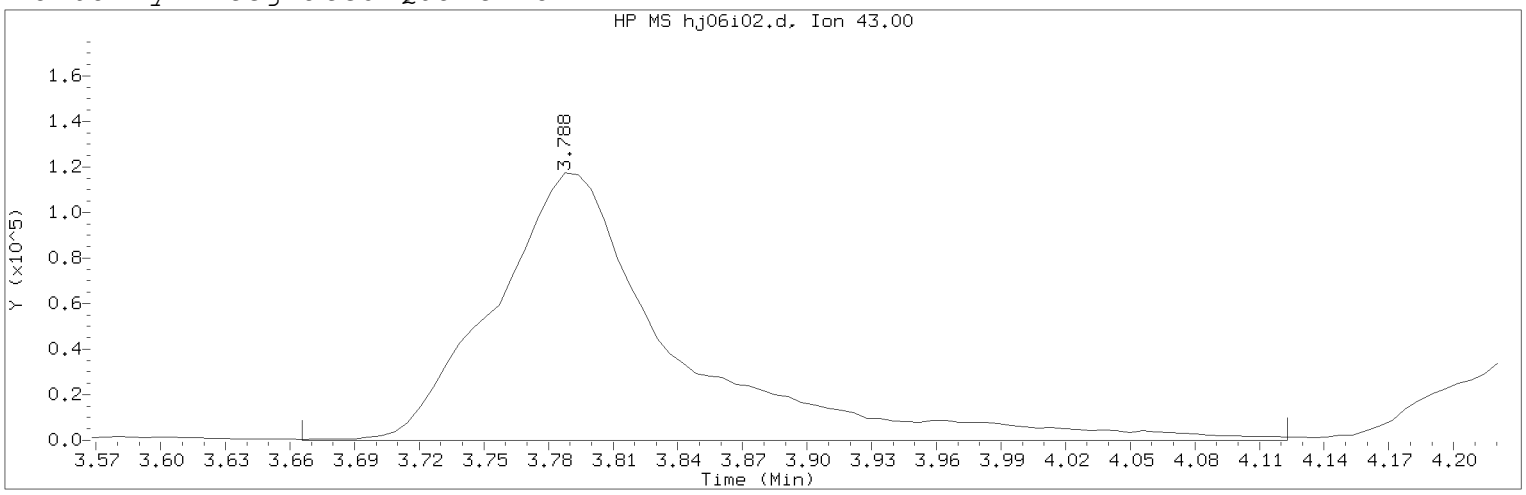
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

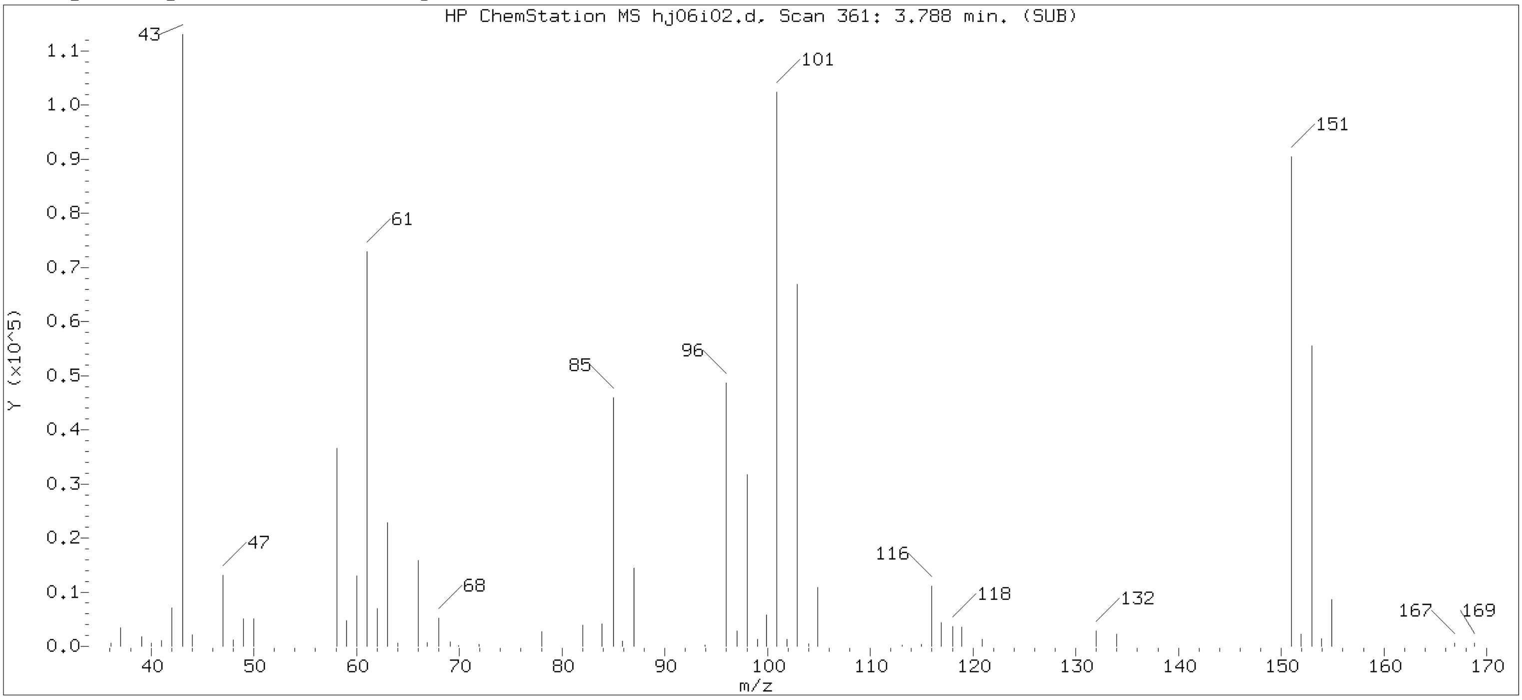
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area (flag) : 680105M
On-Column Amount (ng) : 90.3654
Integration start scan : 340 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

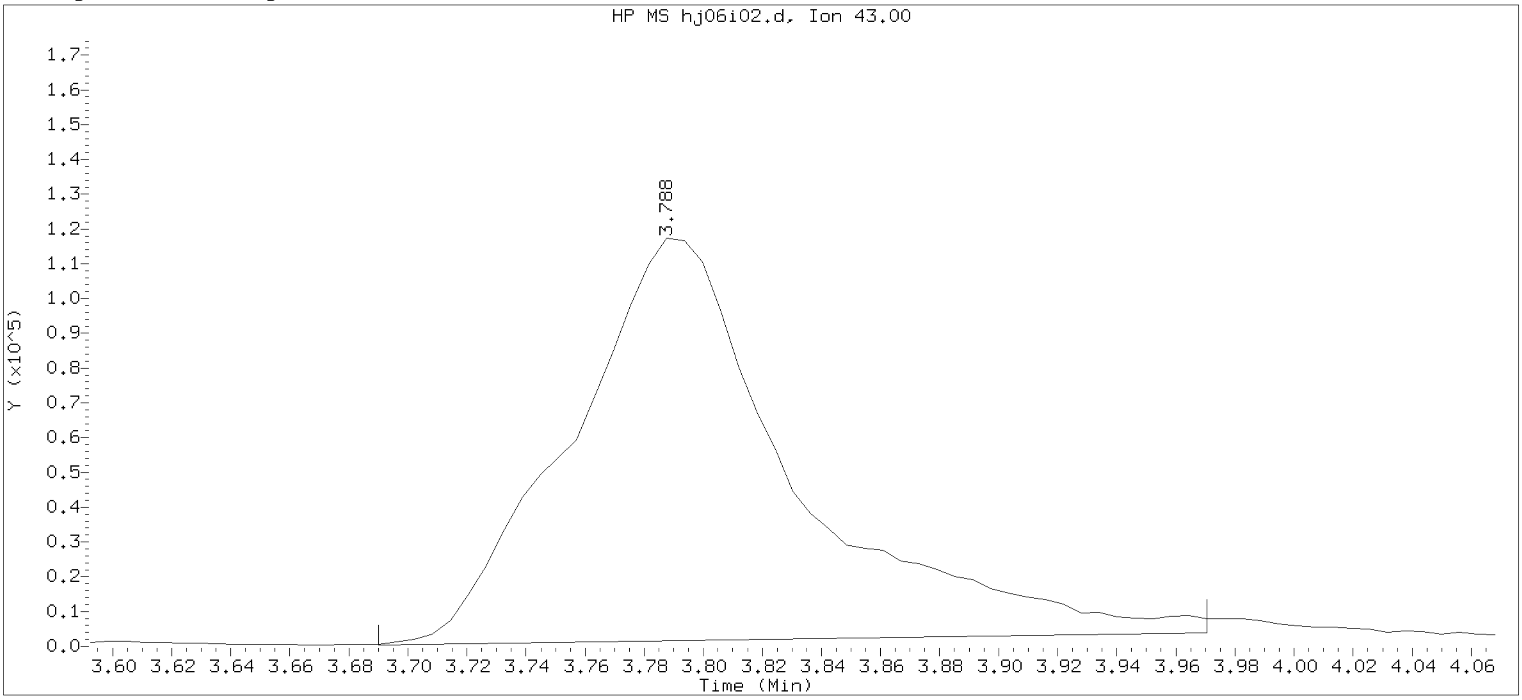
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d　　Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56　　Analyst ID: JKH09052

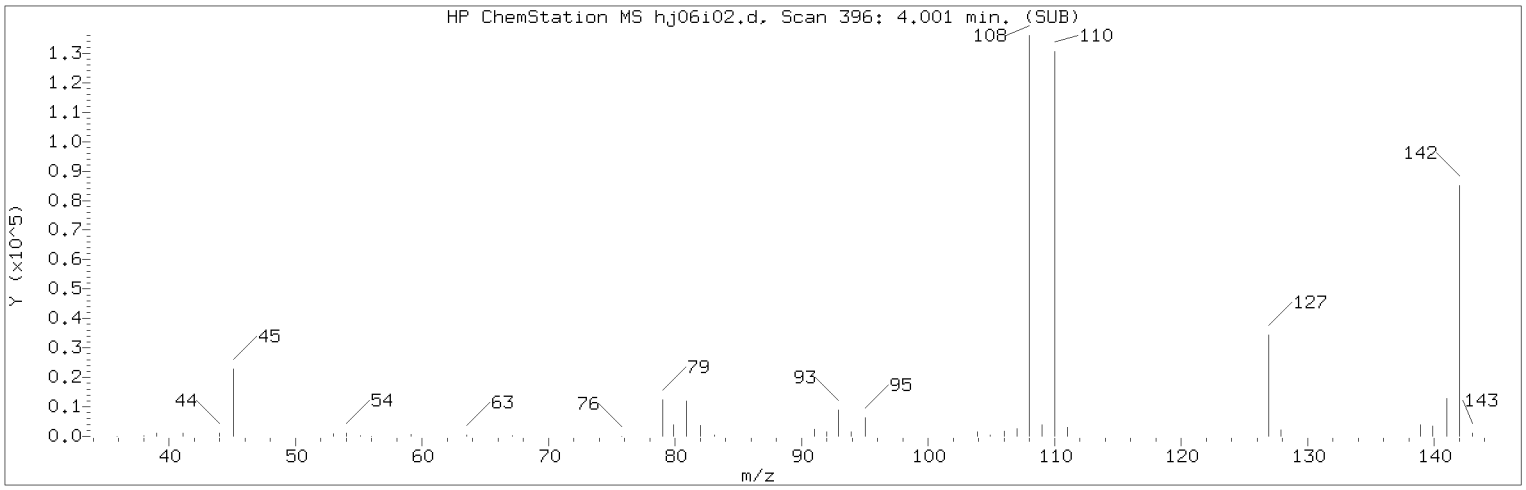
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m　　Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010　　Lab Sample ID: VSTD010

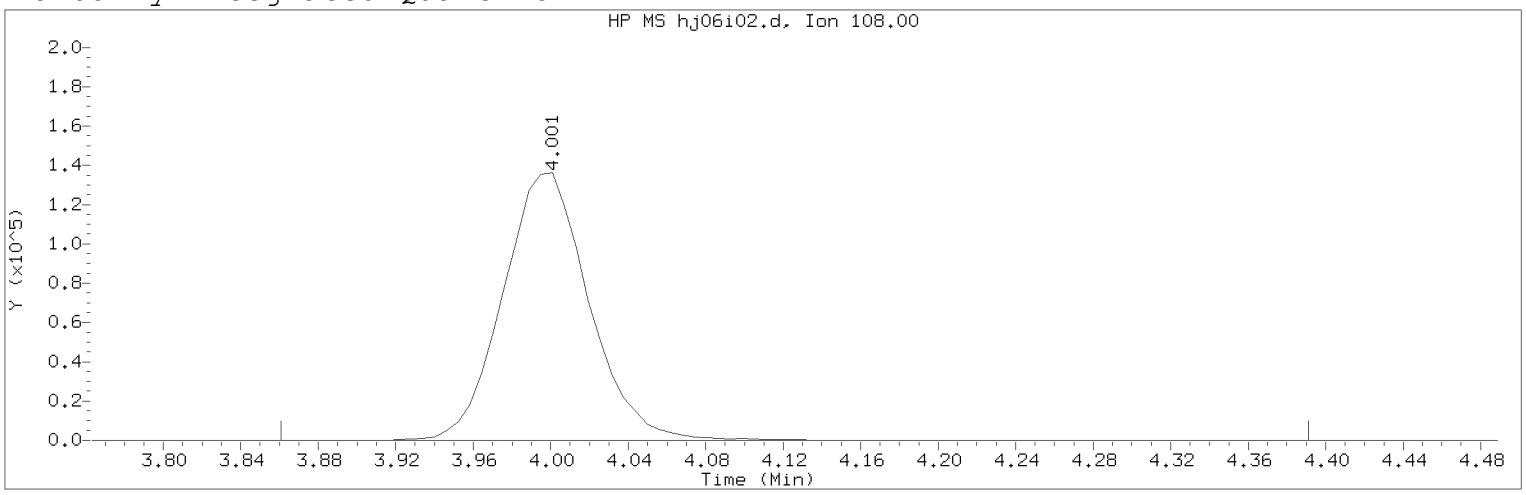
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area : 604987
On-column Amount (ng) : 77.9708
Integration start scan : 344　　Integration stop scan: 390
Y at integration start : 396　　Y at integration end: 3820

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02058

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

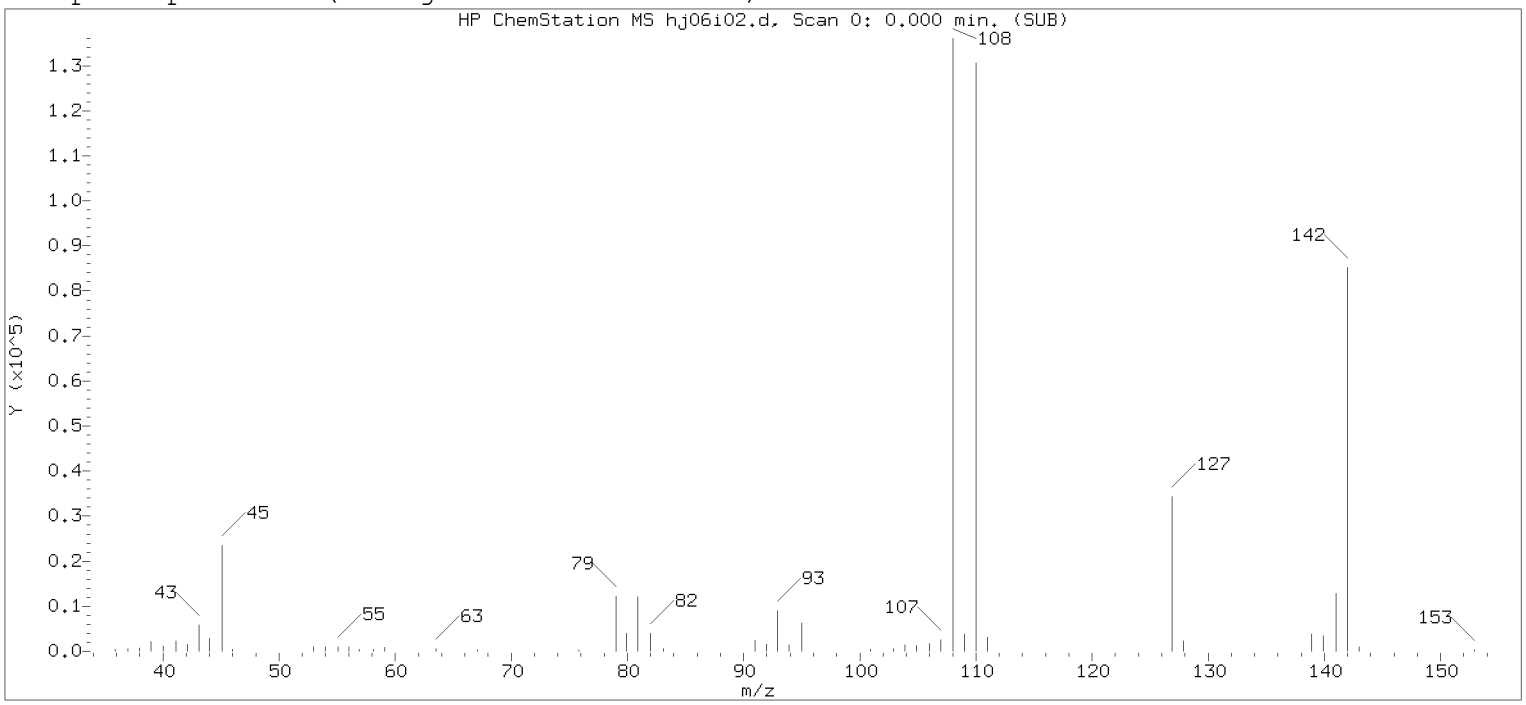
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 108.00
Area (flag) : 420057M
On-Column Amount (ng) : 10.1469
Integration start scan : 372 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

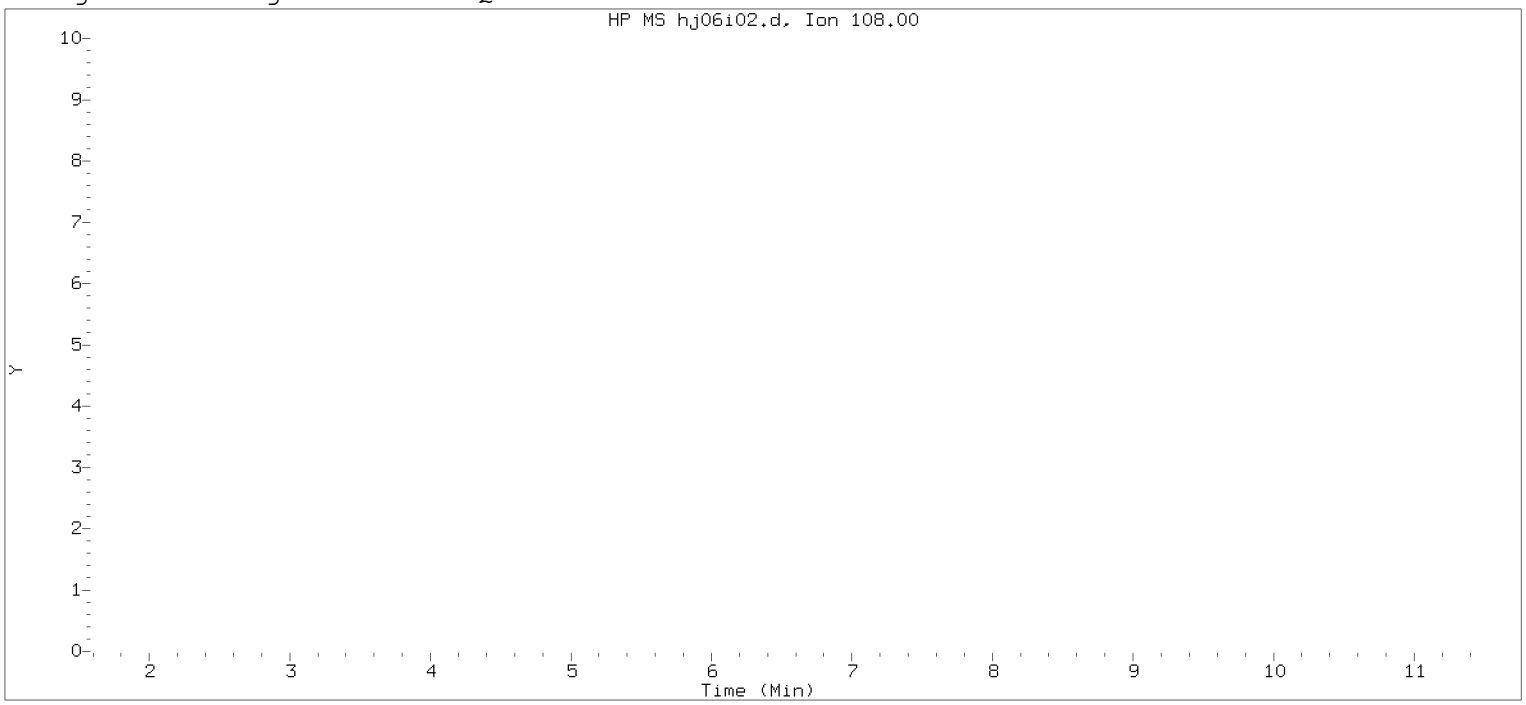
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

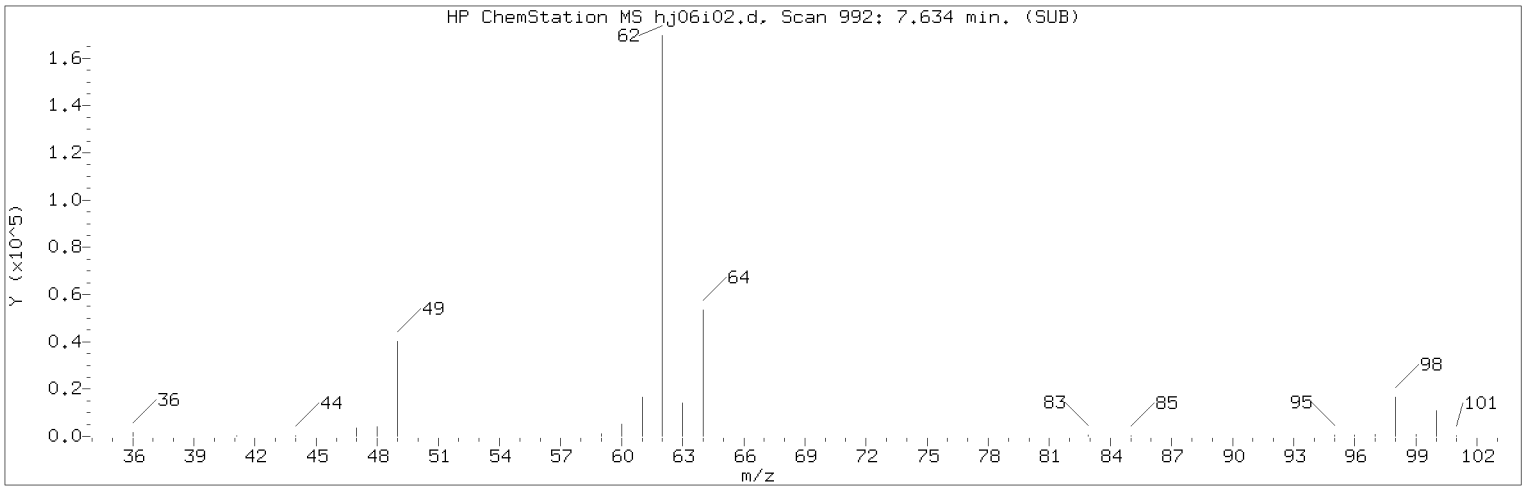
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

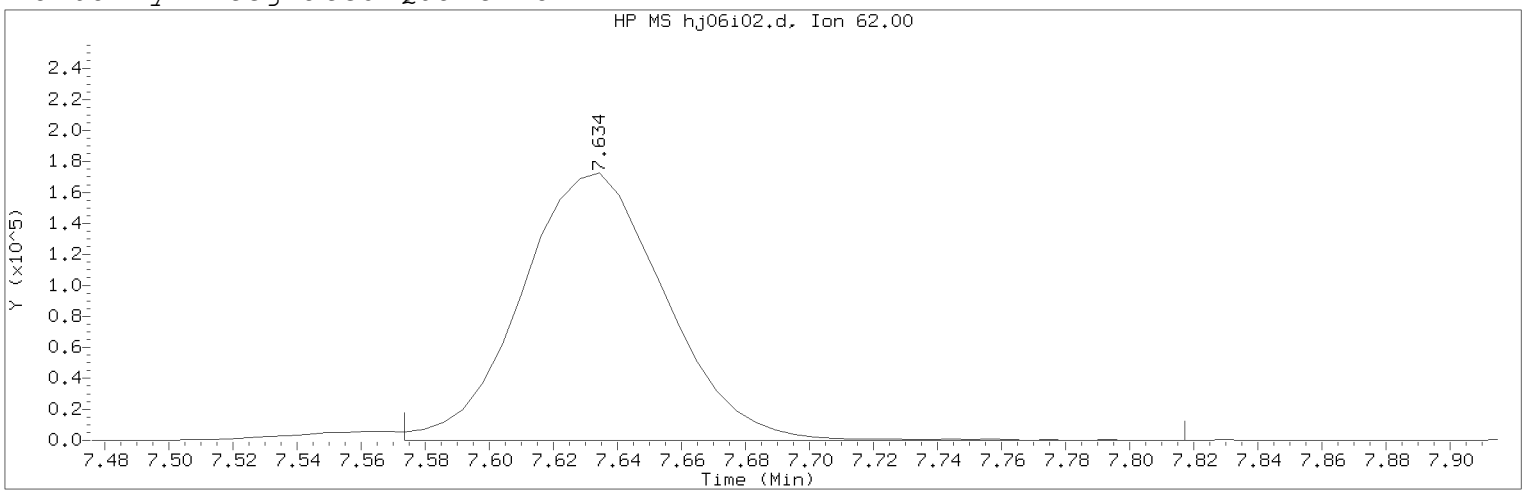
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

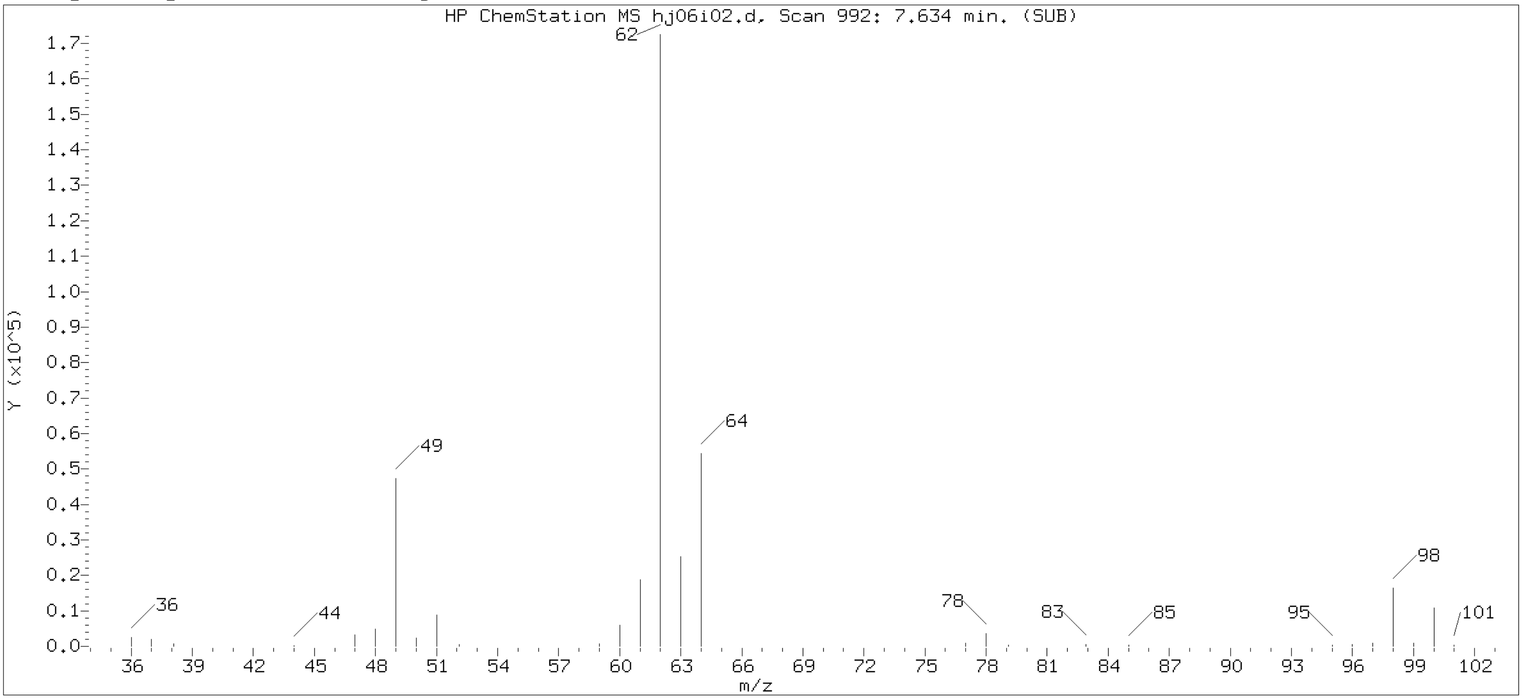
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 992
Retention Time (minutes): 7.634
Quant Ion : 62.00
Area (flag) : 536476M
On-Column Amount (ng) : 9.8501
Integration start scan : 981 Integration stop scan: 1021
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

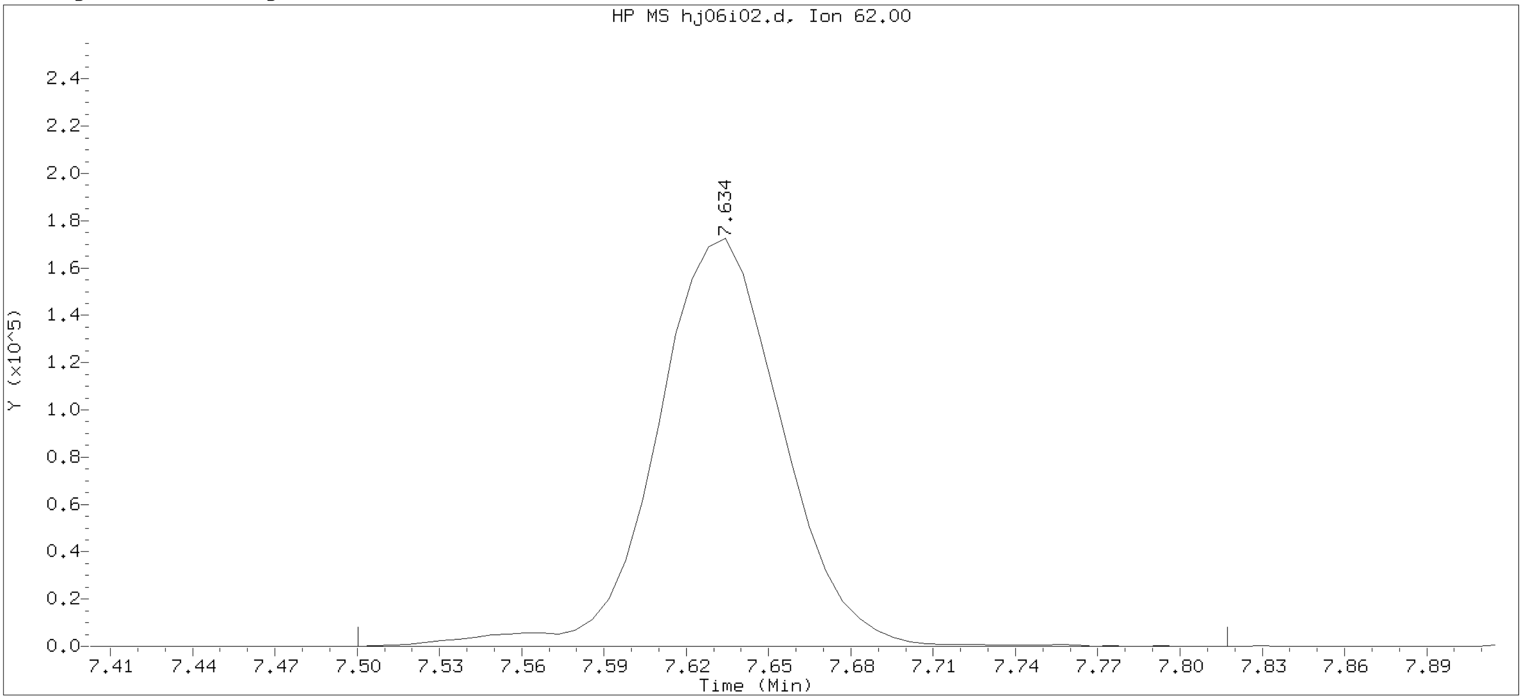
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56   Analyst ID: JKH09052

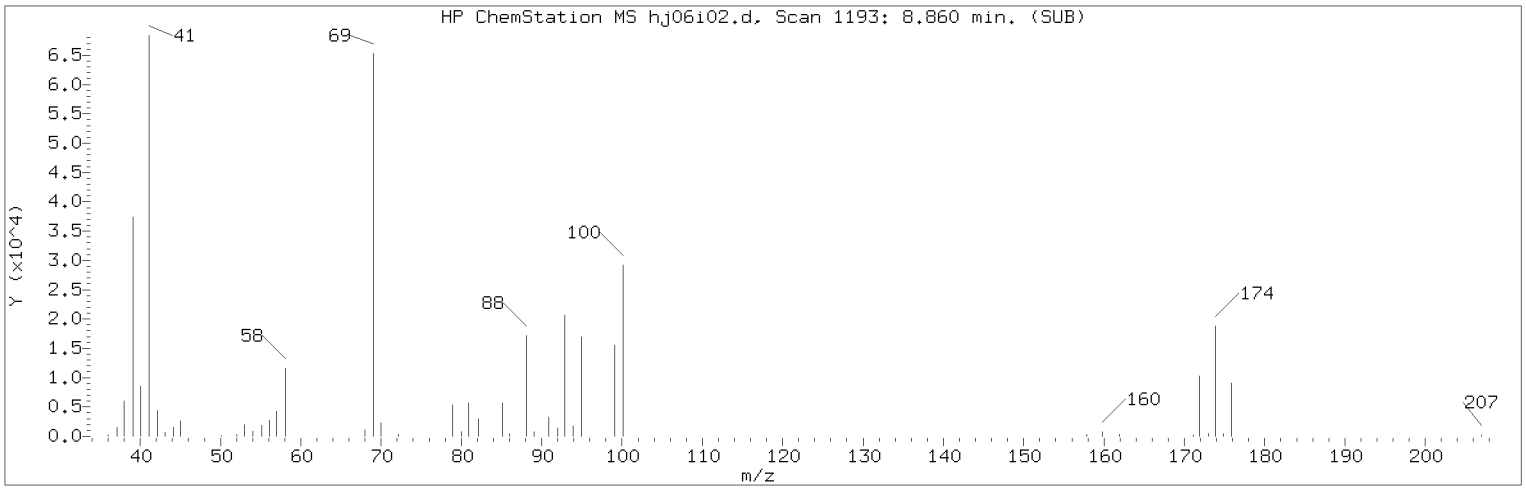
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010   Lab Sample ID: VSTD010

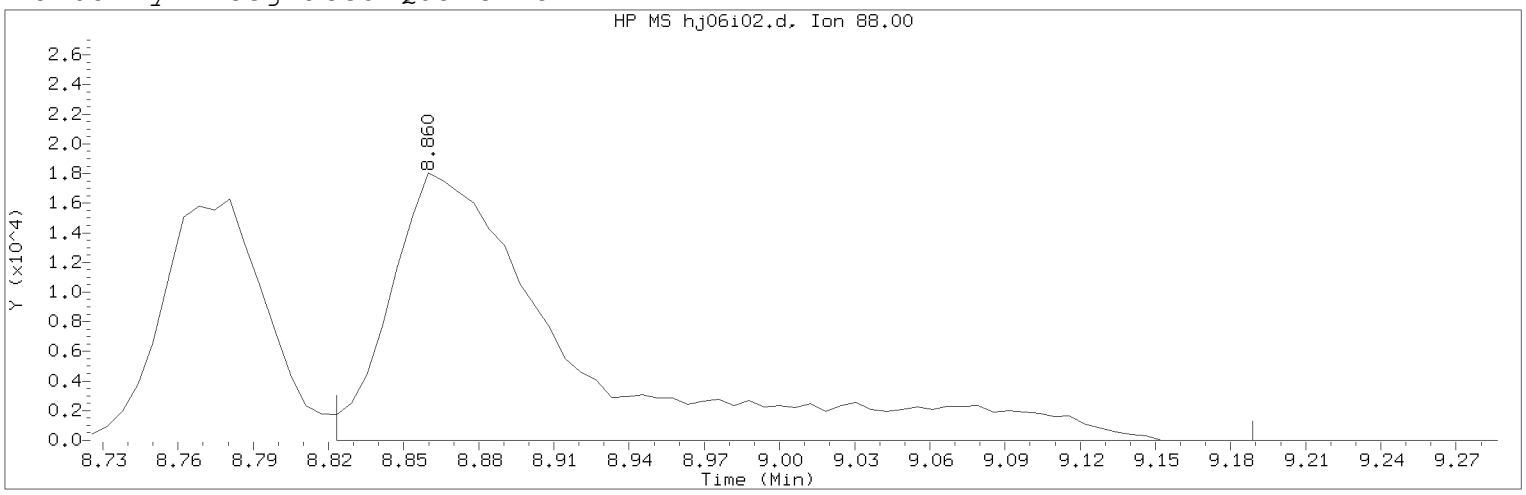
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 992
Retention Time (minutes): 7.634
Quant Ion : 62.00
Area : 548873
On-column Amount (ng) : 10.0169
Integration start scan : 969   Integration stop scan: 1021
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

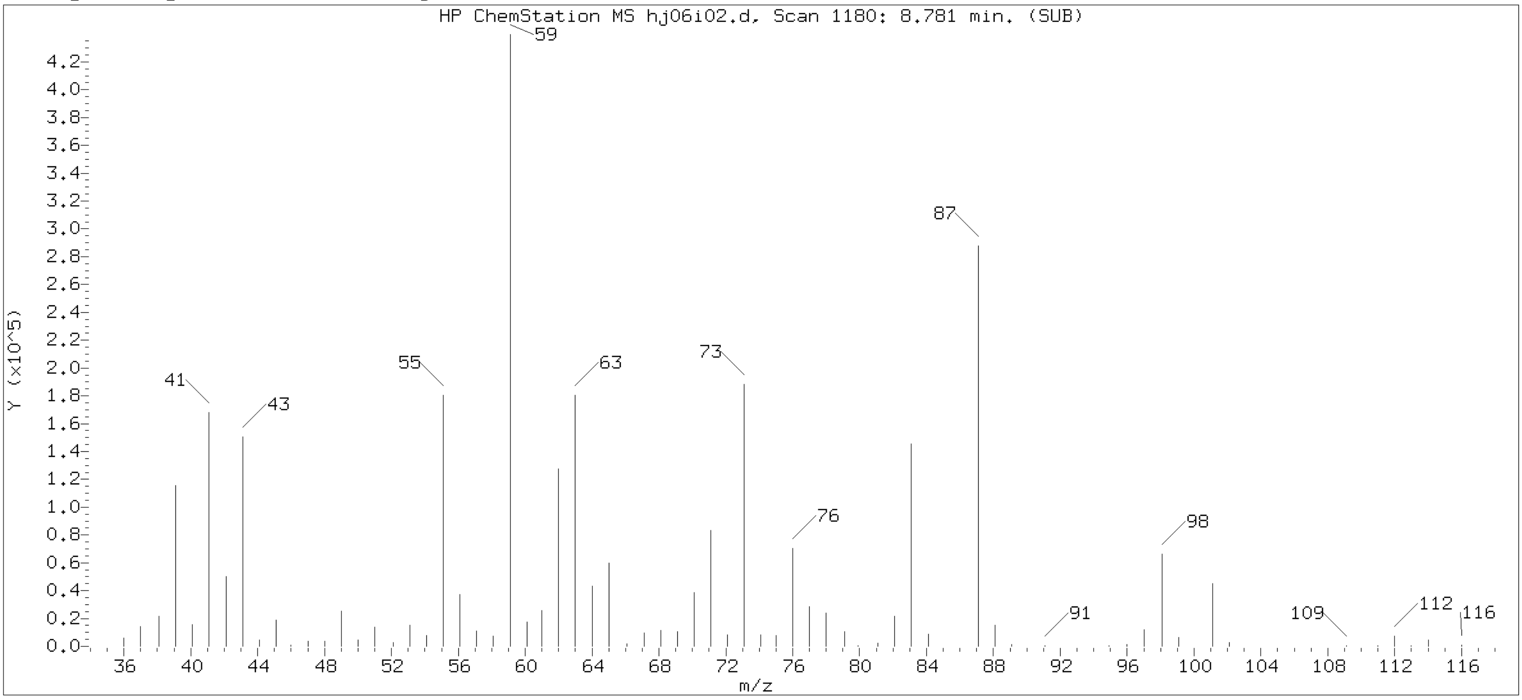
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 93413M
On-Column Amount (ng) : 530.8819
Integration start scan : 1186 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

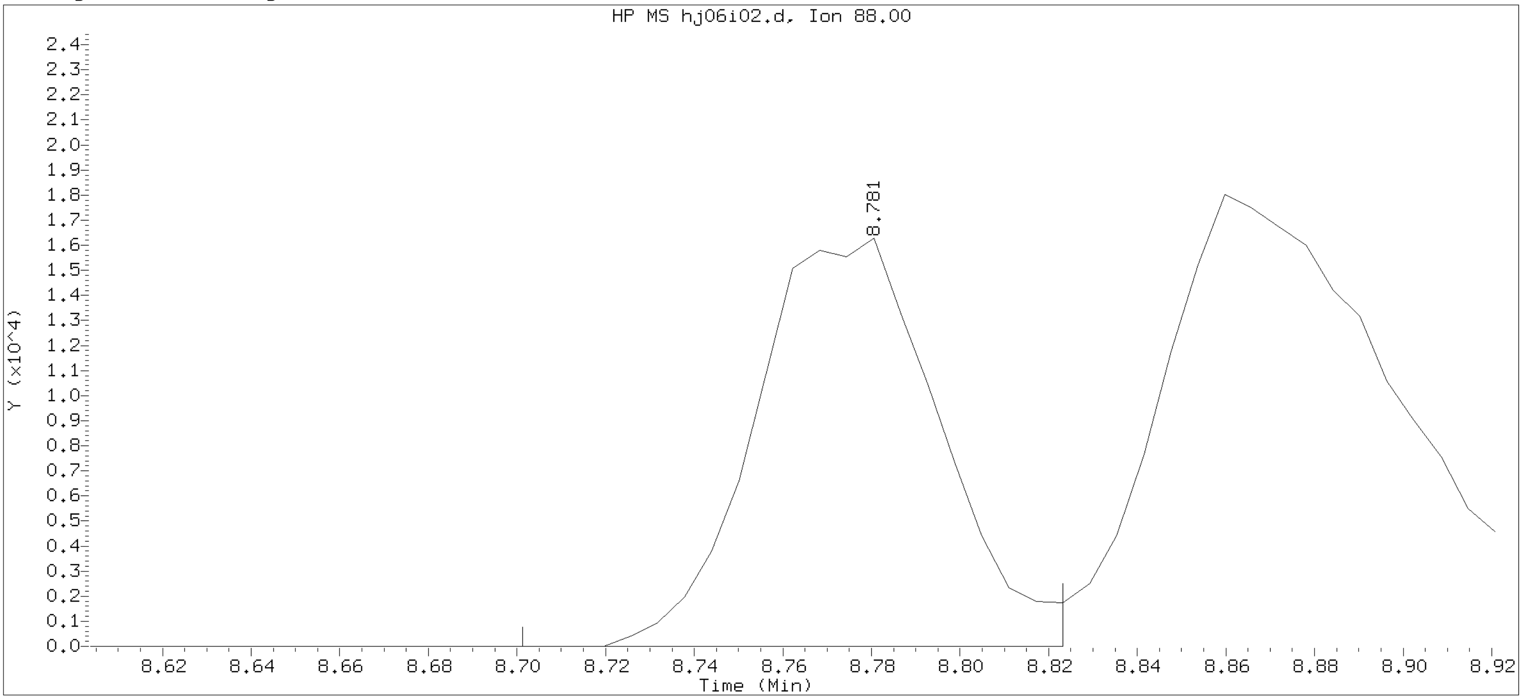
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

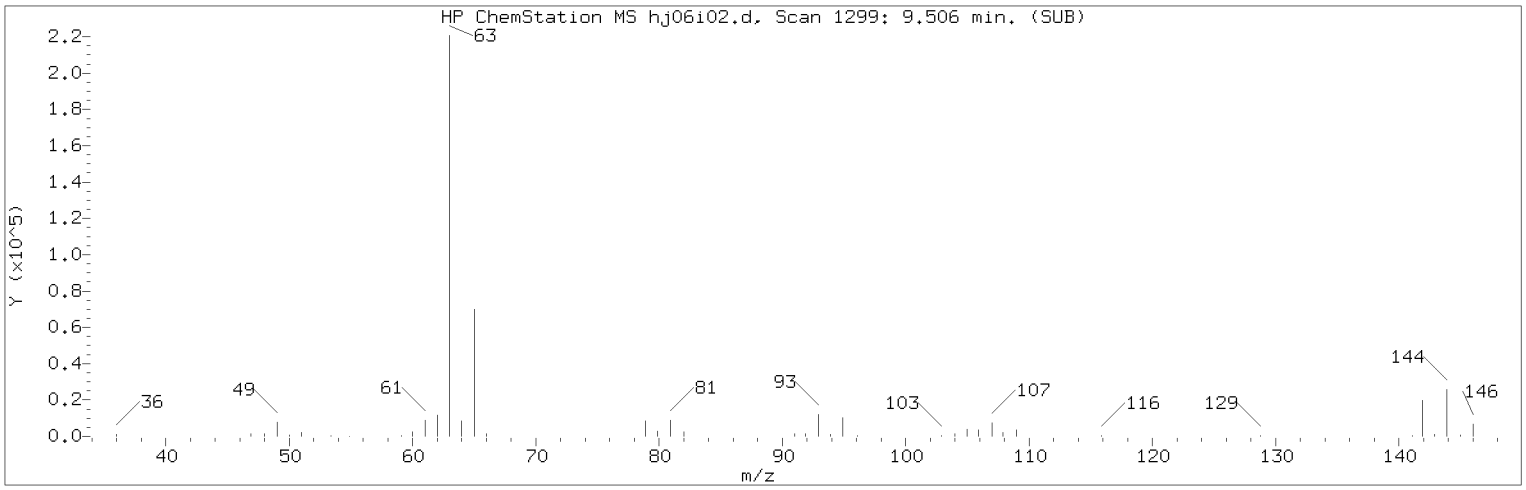
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

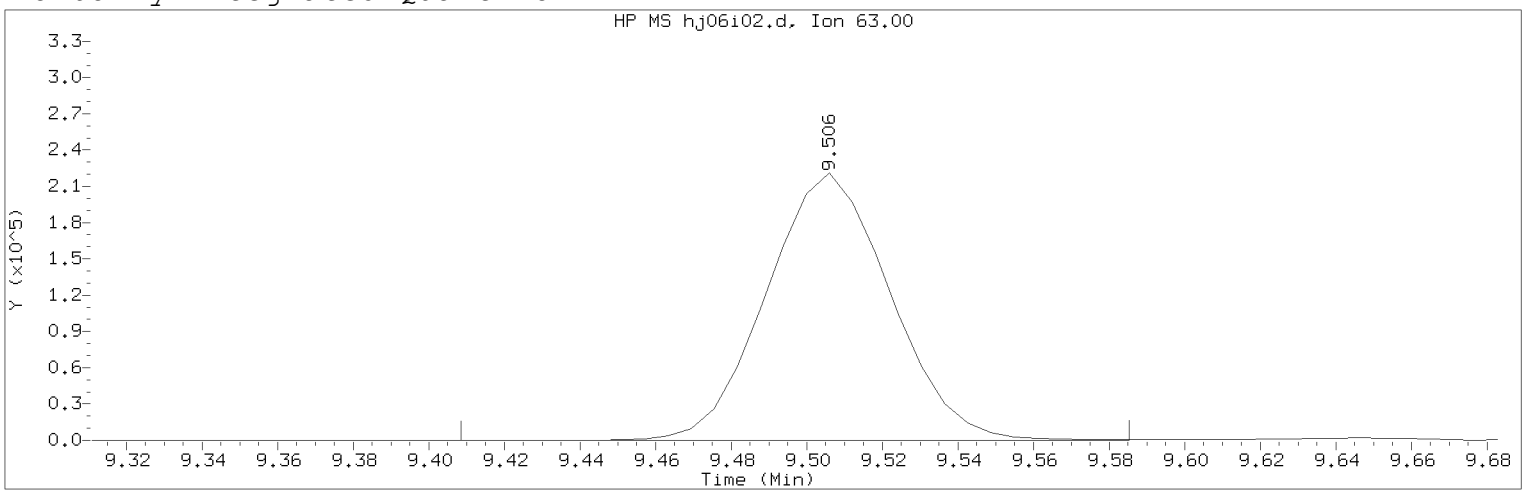
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.781
Quant Ion : 88.00
Area : 46706
On-column Amount (ng) : 277.6322
Integration start scan : 1166 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02064

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

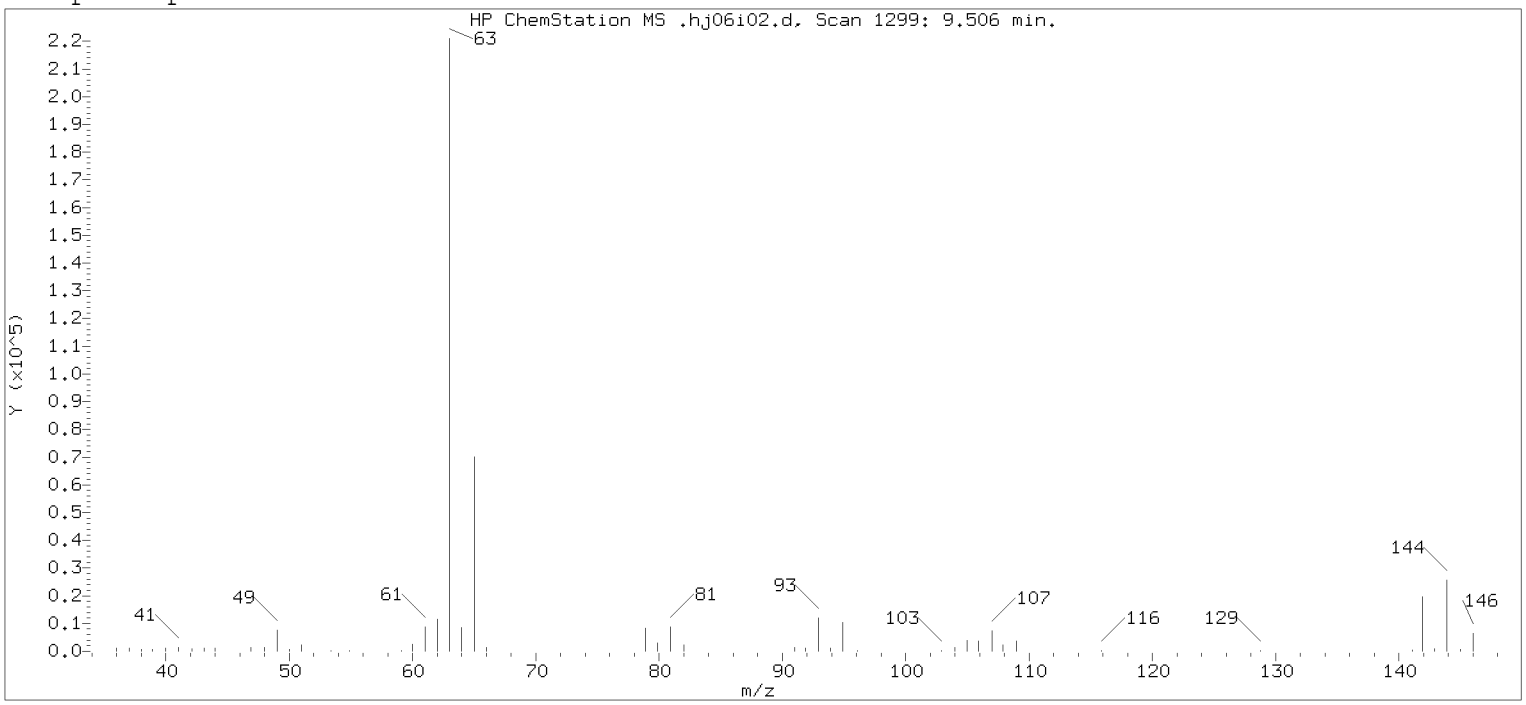
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 500661M
On-Column Amount (ng) : 10.1913
Integration start scan : 1282 Integration stop scan: 1311
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

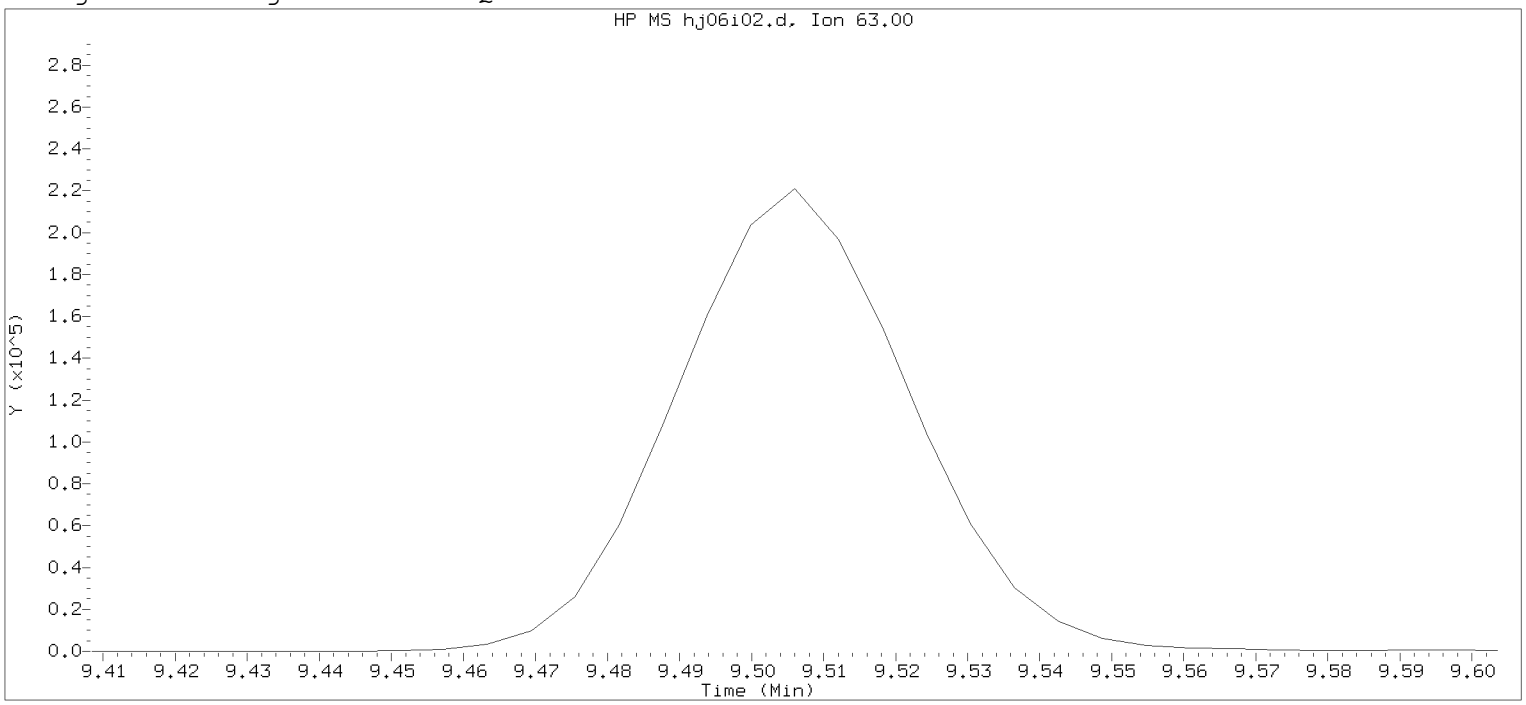
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

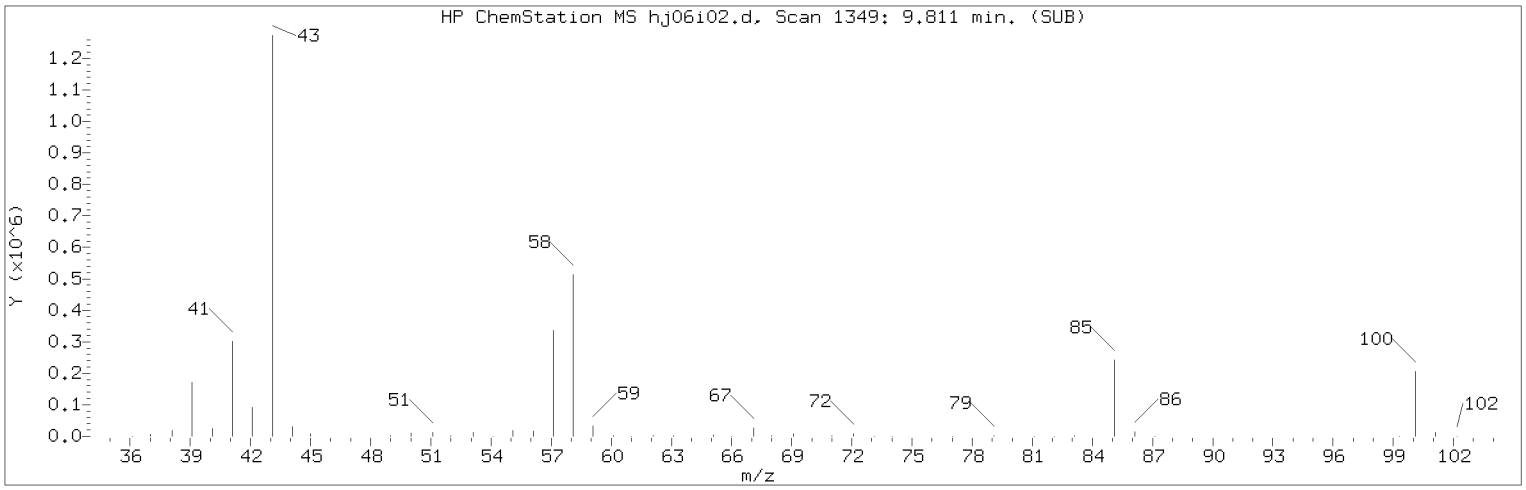
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

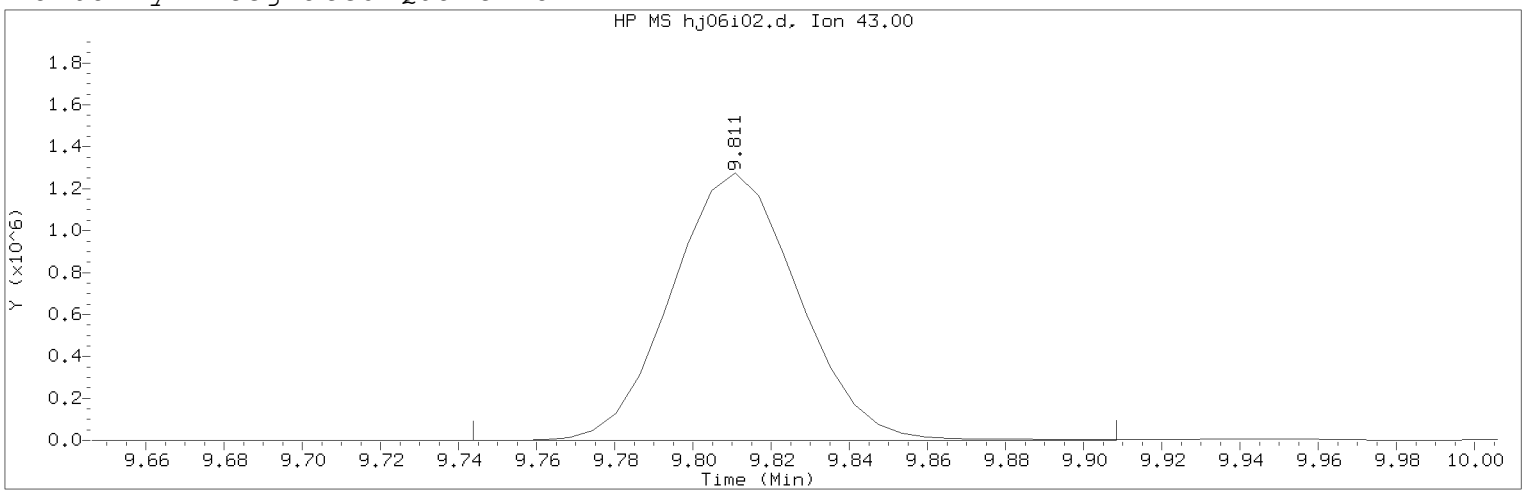
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

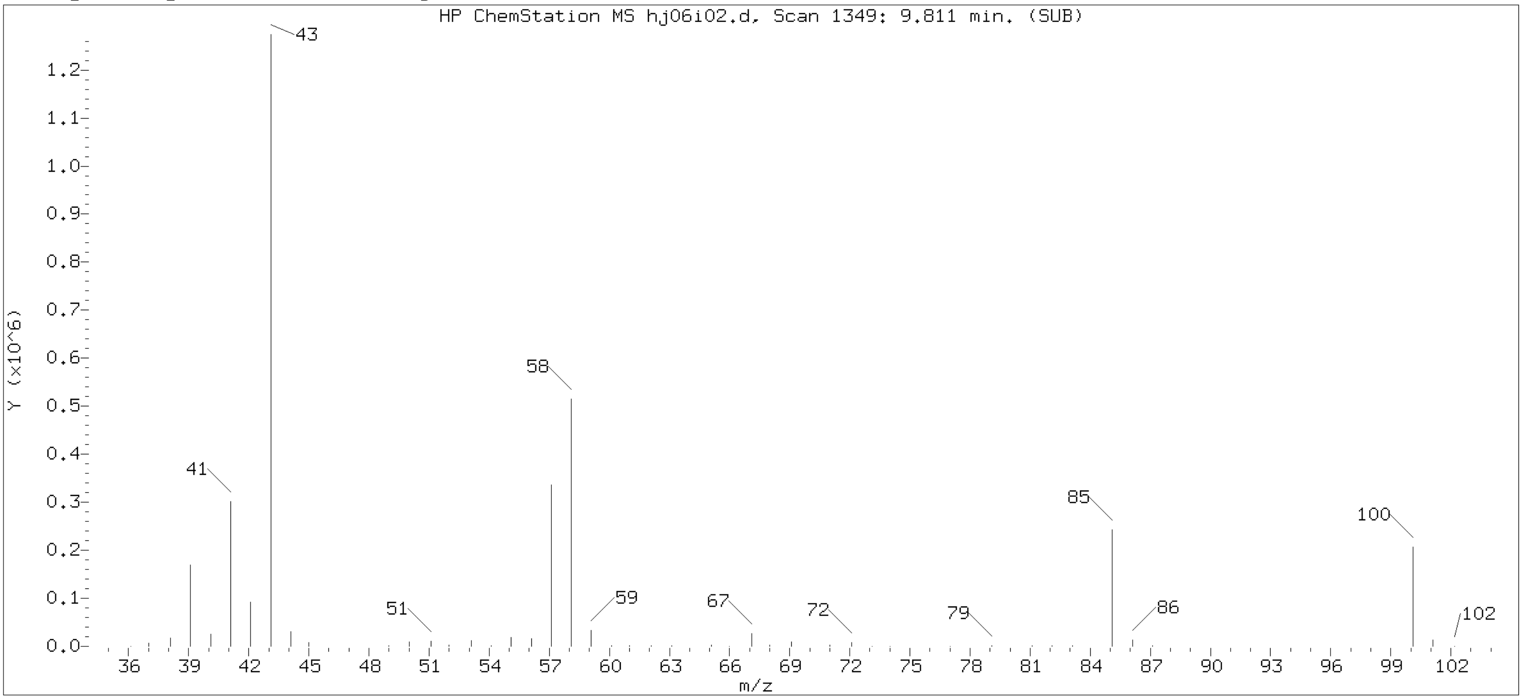
Compound Number : 82
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 2868230M
On-Column Amount (ng) : 98.8878
Integration start scan : 1337 Integration stop scan: 1364
Y at integration start : 0 Y at integration end: 60

Reason for manual integration: improper integration

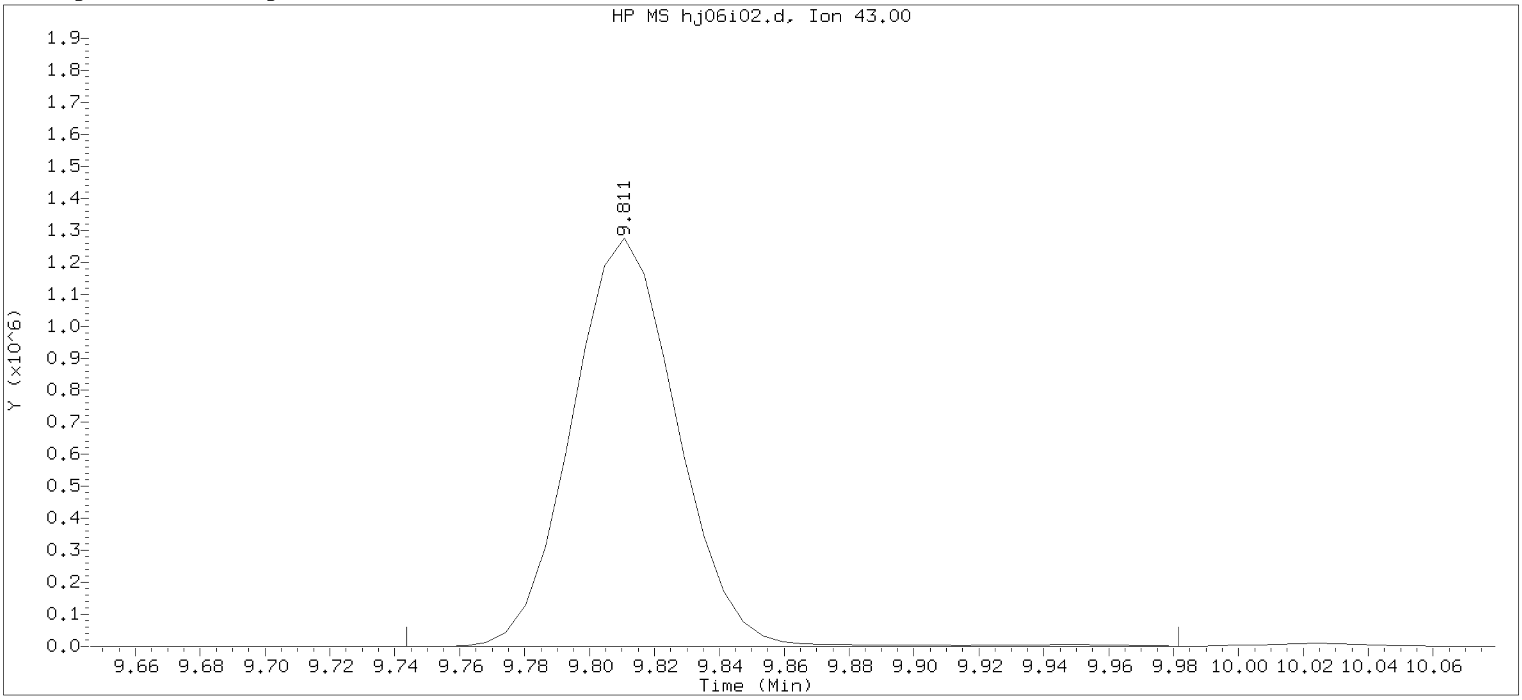
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

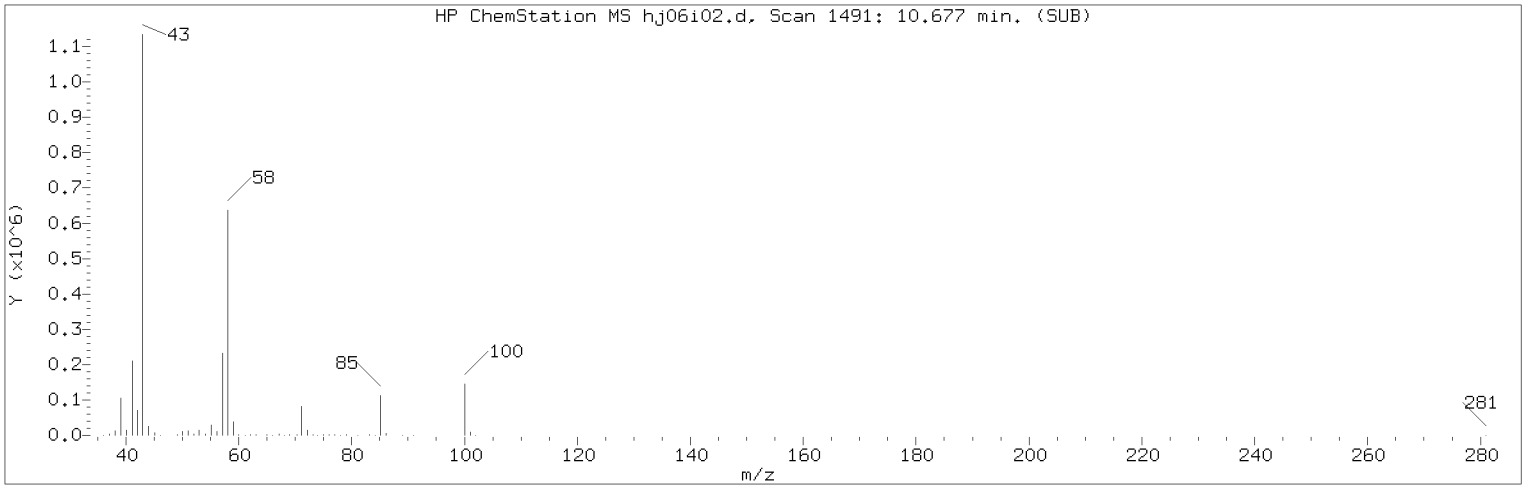
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

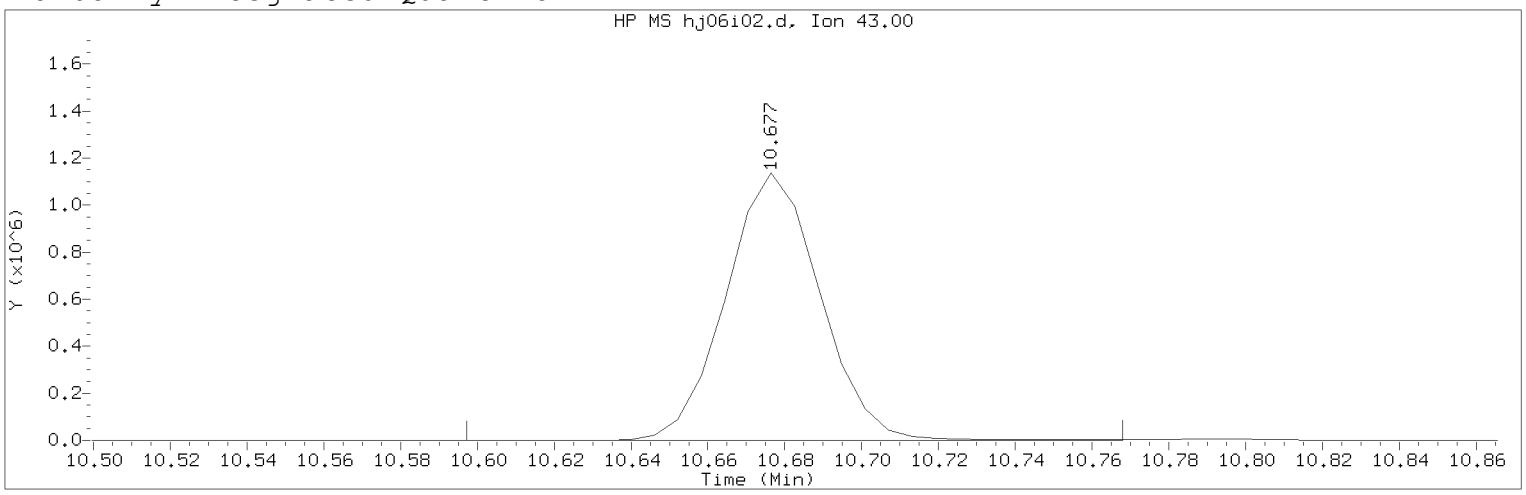
Compound Number : 82
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 2883241
On-column Amount (ng) : 99.9942
Integration start scan : 1337 Integration stop scan: 1376
Y at integration start : 0 Y at integration end: 87

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

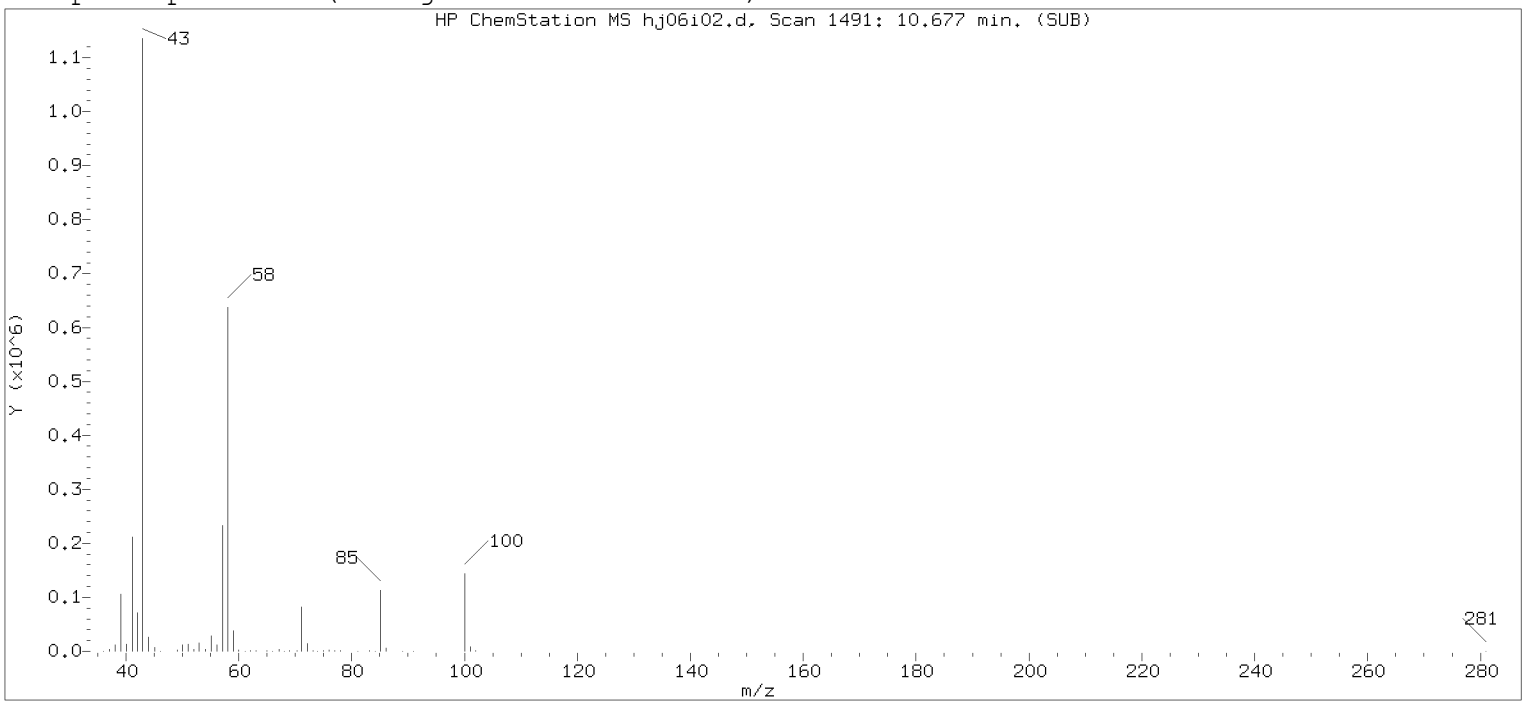
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1930183M
On-Column Amount (ng) : 97.3887
Integration start scan : 1477 Integration stop scan: 1505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

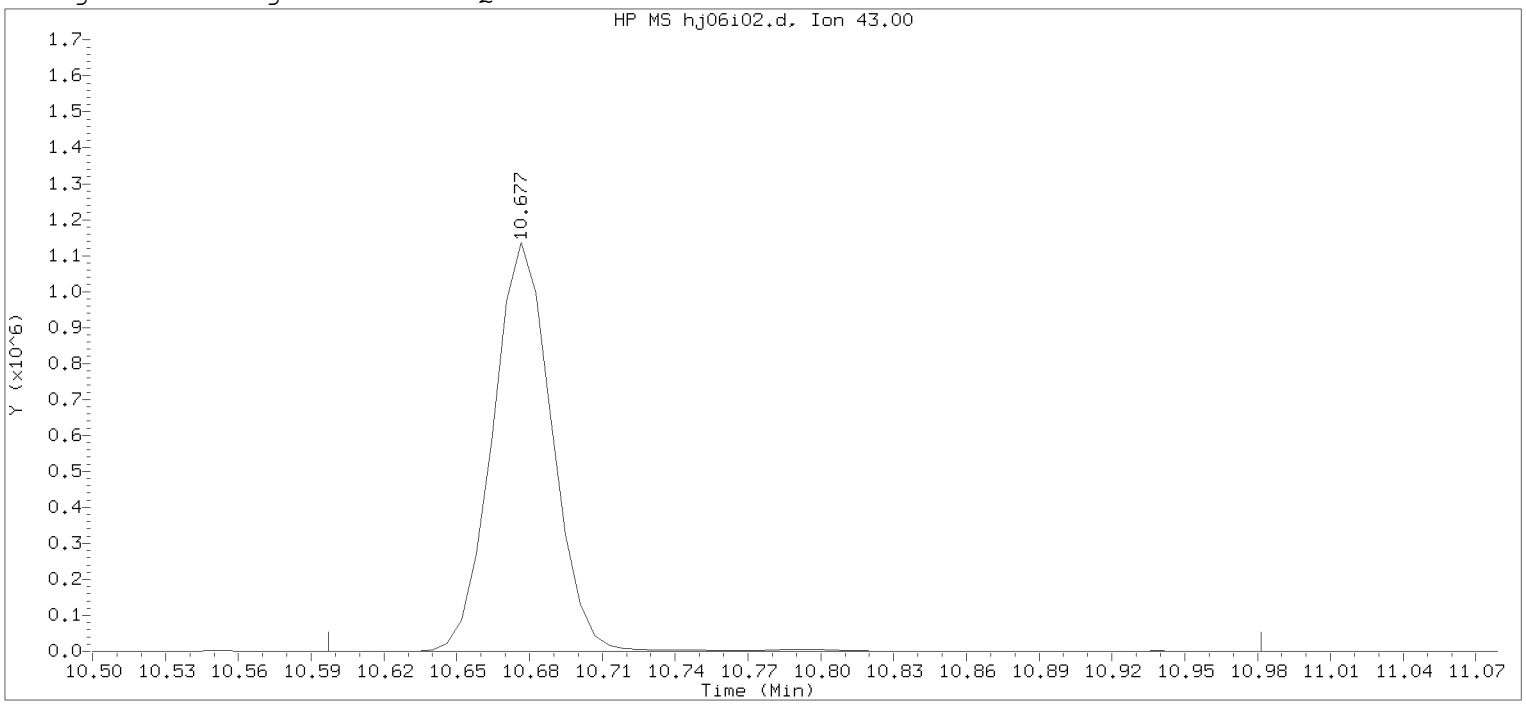
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

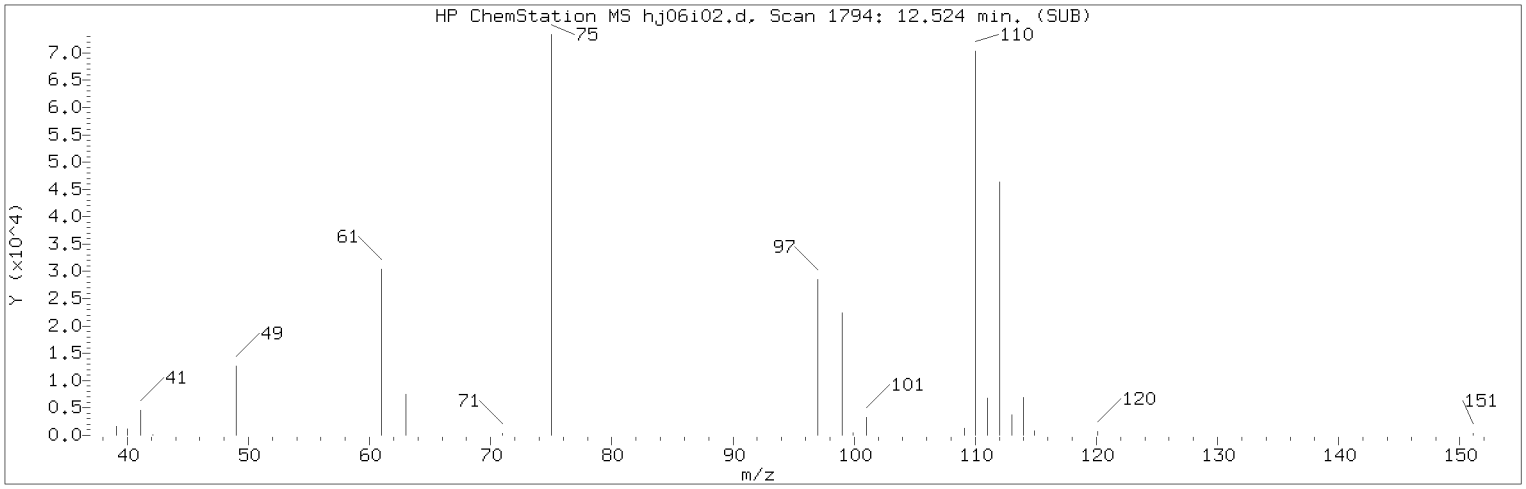
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

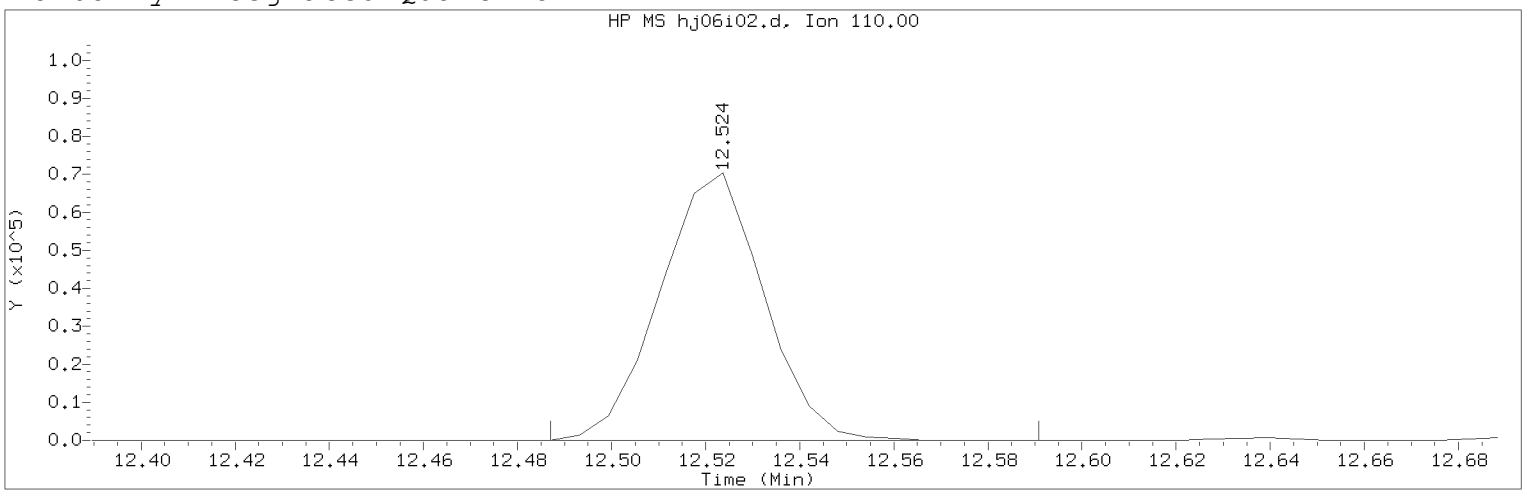
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area : 1946858
On-column Amount (ng) : 97.2432
Integration start scan : 1477 Integration stop scan: 1540
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

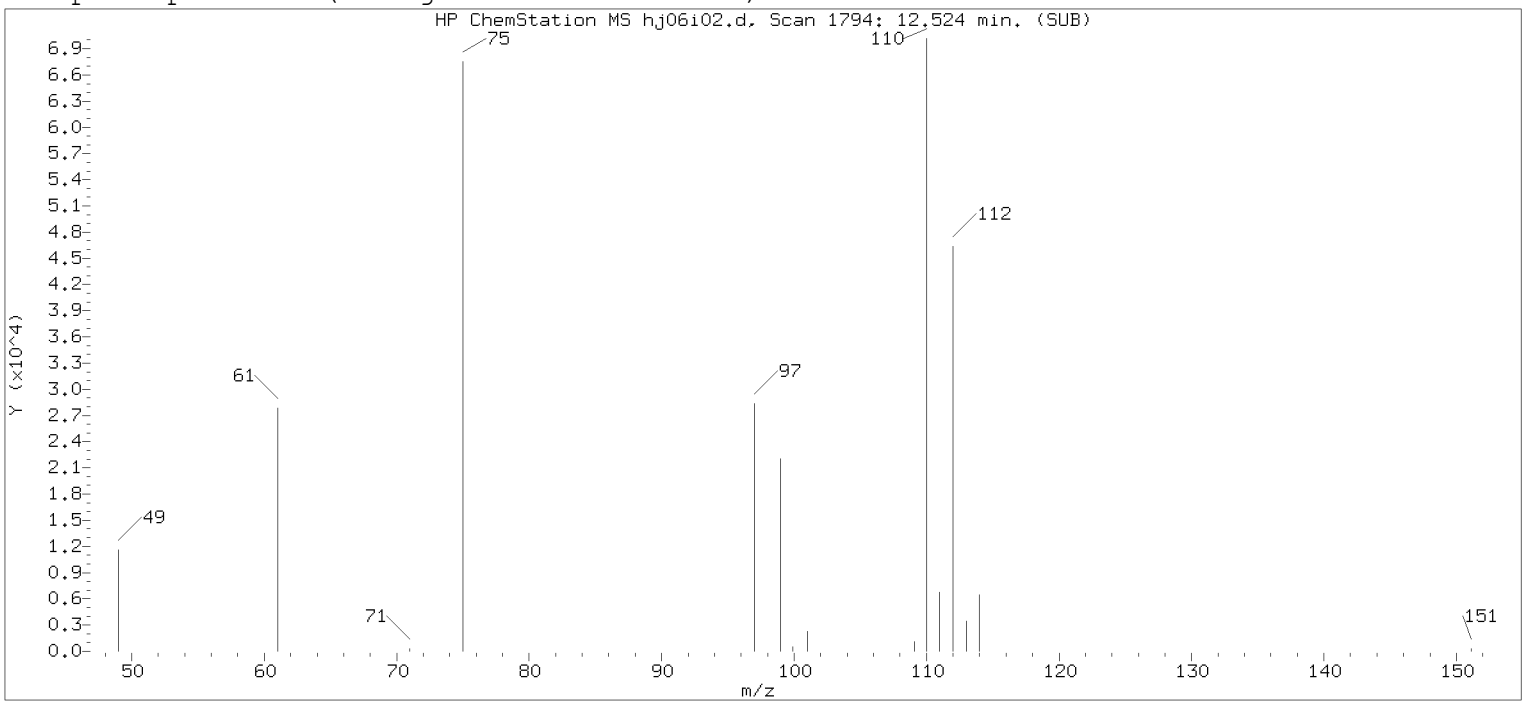
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 107587M
On-Column Amount (ng) : 10.2186
Integration start scan : 1787 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

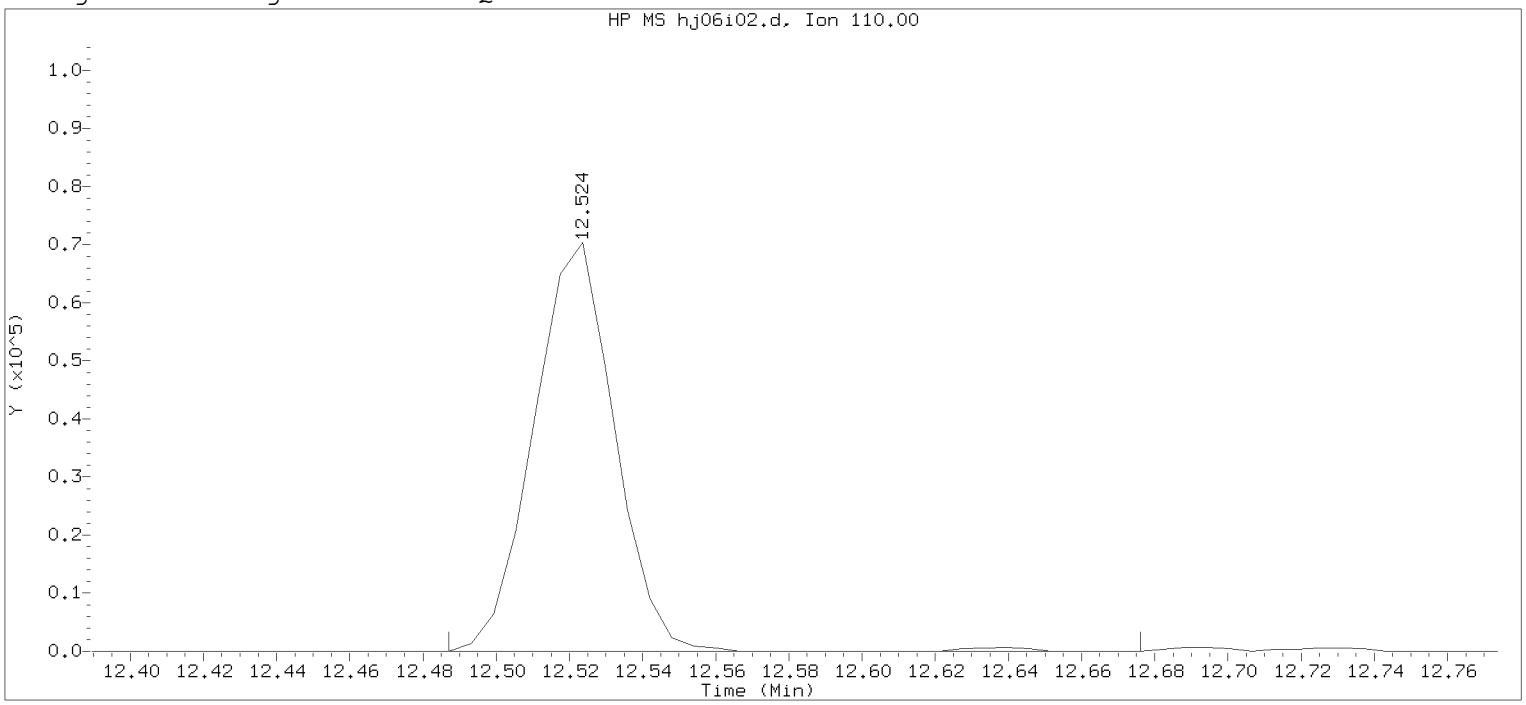
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



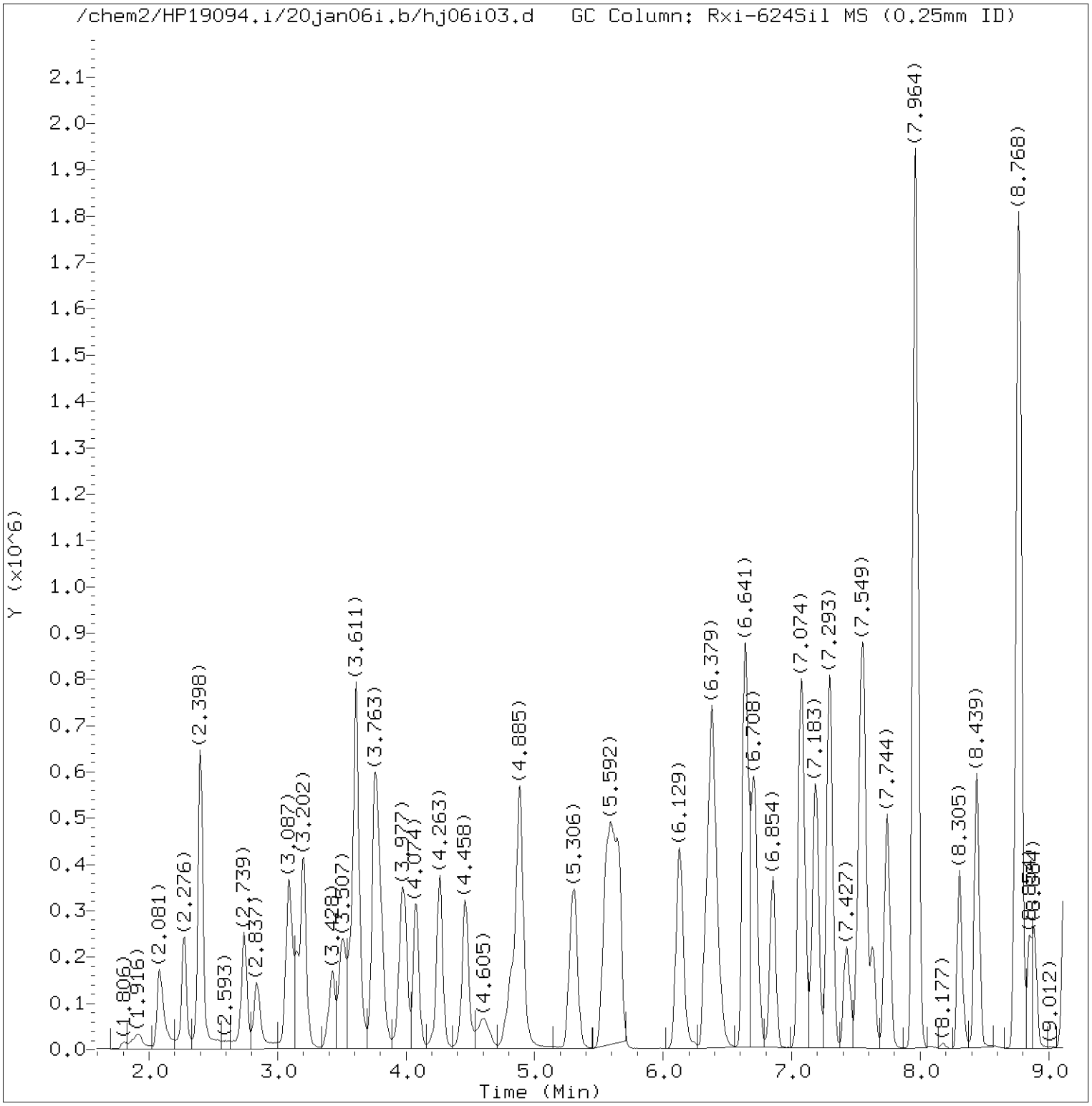
Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 108318
On-column Amount (ng) : 10.1131
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user: sjohnson



Total Ion Chromatogram (TIC)

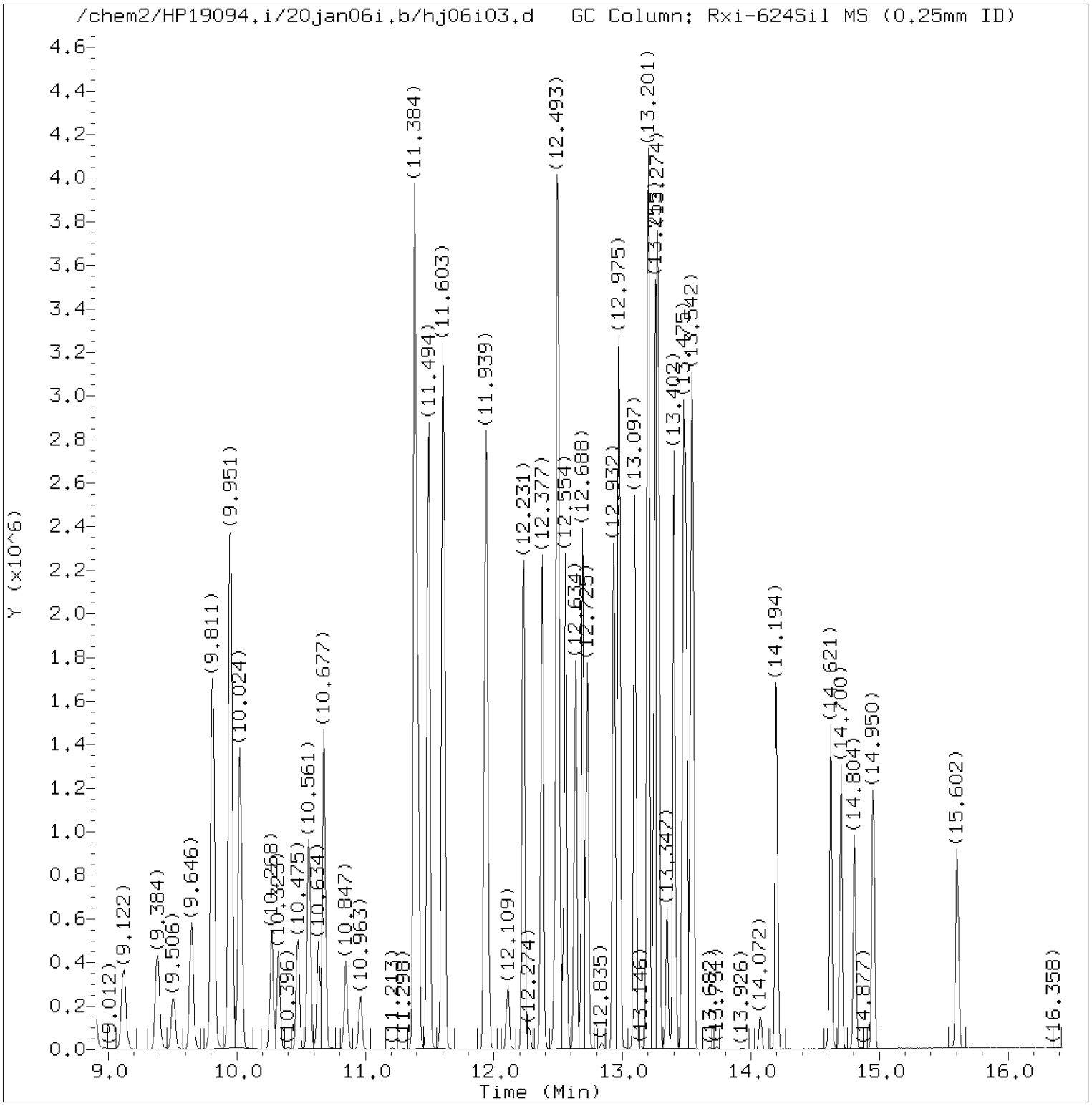
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.081	85	386923M	5.233
2) Chloromethane	(2)	2.270	50	365241	5.004
5) Vinyl Chloride	(2)	2.398	62	357439	5.148
6) 1,3-Butadiene	(2)	2.404	39	279939M	5.104
7) Bromomethane	(2)	2.739	94	248006	4.986
8) Chloroethane	(2)	2.837	64	203219	5.054
9) Dichlorofluoromethane	(2)	3.087	67	473464	4.958
10) Trichlorofluoromethane	(2)	3.148	101	408902	5.160
11) Ethyl ether	(2)	3.422	59	178519	5.091
12) Freon 123a	(2)	3.507	67	315642	5.152
13) Acrolein	(1)	3.611	56	1350061	258.845
15) 1,1-Dichloroethene	(2)	3.751	96	246959	5.124
14) Acetone	(1)	3.788	43	341103M	48.467
16) Freon 113	(2)	3.788	101	268851	5.337
17) Methyl Iodide	(2)	3.965	142	476700	5.126
18) Bromoethane	(2)	3.995	108	211837M	5.038
19) Carbon Disulfide	(2)	4.080	76	743252	5.041
22) Methyl Acetate	(1)	4.233	43	86534	4.872
23) Allyl Chloride	(2)	4.263	41	404402	4.940
24) Methylene Chloride	(2)	4.458	84	256647	4.948
27)*t-Butyl Alcohol-d10	(1)	4.483	65	115826M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	243025	99.407
30) Acrylonitrile	(1)	4.812	53	219211	25.524
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	558561	5.069
32) trans-1,2-Dichloroethene	(2)	4.891	96	267093	5.041
33) n-Hexane	(2)	5.306	57	393617	5.267
34) 1,1-Dichloroethane	(2)	5.550	63	490572	5.129
35) di-Isopropyl Ether	(2)	5.598	45	804988	5.109
36) 2-Chloro-1,3-Butadiene	(2)	5.659	53	423401	5.170
41) 1,2-Dichloroethene (Total)	(2)		96	566643	10.130
38) Ethyl t-butyl ether	(2)	6.129	59	749137	5.065
39) 2-Butanone	(1)	6.330	43	551271	50.095
40) cis-1,2-Dichloroethene	(2)	6.379	96	299550	5.088
42) 2,2-Dichloropropane	(2)	6.397	77	419833	5.158
43) Propionitrile	(1)	6.427	54	312594	103.700
46) Methacrylonitrile	(1)	6.641	67	567177	52.609
48) Bromochloromethane	(2)	6.708	128	125757	5.059
49) Tetrahydrofuran	(1)	6.714	71	157126	51.682

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	476727	5.107
51)$Dibromofluoromethane	(2)	7.068	113	490436	10.001
51)$Dibromofluoromethane	(2)	7.068	111	500245	9.929
52) 1,1,1-Trichloroethane	(2)	7.086	97	443696M	5.111
53) Cyclohexane	(2)	7.183	56	477669	5.152
53) Cyclohexane	(2)	7.183	84	423569	5.333
53) Cyclohexane	(2)	7.189	69	150395	5.212
56) 1,1-Dichloropropene	(2)	7.293	75	382122	5.208
55) Carbon Tetrachloride	(2)	7.299	117	383131	5.147
57) Isobutyl Alcohol	(1)	7.427	41	197211	232.720
58)$1,2-Dichloroethane-d4	(2)	7.525	102	94766	9.971
58)$1,2-Dichloroethane-d4	(2)	7.525	65	432473	9.863
58)$1,2-Dichloroethane-d4	(2)	7.525	104	59241	9.841
59) Benzene	(2)	7.561	78	1093041	5.094
60) 1,2-Dichloroethane	(2)	7.628	62	272967M	4.934
61) t-Amyl methyl ether	(2)	7.744	73	650141	5.040
64)*Fluorobenzene	(2)	7.964	96	1972661	10.000
63) n-Heptane	(2)	7.970	43	402551	5.135
66) n-Butanol	(1)	8.305	56	359098	526.377
68) Trichloroethene	(2)	8.439	95	288728	5.131
70) Methylcyclohexane	(2)	8.756	83	530176	5.259
71) 1,2-Dichloropropane	(2)	8.775	63	267031	5.030
72) Methyl Methacrylate	(1)	8.848	69	113243	5.222
73) 1,4-Dioxane	(1)	8.866	88	48534M	294.966
74) Dibromomethane	(2)	8.890	93	122074	5.030
75) Bromodichloromethane	(2)	9.122	83	330628	5.013
77) 2-Nitropropane	(1)	9.378	41	361445M	50.741
80) 1-Bromo-2-chloroethane	(2)	9.506	63	251630M	5.043
81) cis-1,3-Dichloropropene	(2)	9.646	75	400903	5.147
82) 4-Methyl-2-Pentanone	(1)	9.811	43	1402329	51.703
83)$Toluene-d8	(3)	9.951	98	1962704	10.001
83)$Toluene-d8	(3)	9.951	100	1273541	10.034
84) Toluene	(3)	10.024	92	706549	5.125
86) 1,3-Dichloropropene (total)	(3)		75	725243	10.216
85) trans-1,3-Dichloropropene	(3)	10.268	75	324340	5.069
87) Ethyl Methacrylate	(3)	10.323	69	248630	5.013
89) 1,1,2-Trichloroethane	(3)	10.475	97	173317	5.004
90) Tetrachloroethene	(3)	10.561	166	317187	5.062

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	297105	4.993
92) 2-Hexanone	(1)	10.677	43	954886	51.523
94) Dibromochloromethane	(3)	10.847	129	225534	5.085
96) 1,2-Dibromoethane	(3)	10.963	107	168362	5.086
97) 1-Chlorohexane	(3)	11.384	91	409531	4.927
98)*Chlorobenzene-d5	(3)	11.384	117	1473060	10.000
99) Chlorobenzene	(3)	11.408	112	765651	5.083
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	274917	5.132
101) Ethylbenzene	(3)	11.494	91	1376755	5.075
102) m+p-Xylene	(3)	11.603	106	1060302	10.222
106) Xylene (Total)	(3)		106	1582292	15.339
105) o-Xylene	(3)	11.932	106	521990	5.117
107) Styrene	(3)	11.945	104	849232	5.130
108) Bromoform	(3)	12.109	173	131247	5.077
109) Isopropylbenzene	(3)	12.231	105	1426025	5.158
112)$4-Bromofluorobenzene	(3)	12.377	95	721170	9.933
112)$4-Bromofluorobenzene	(3)	12.377	174	619060	9.964
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	203525M	5.049
115) Bromobenzene	(4)	12.493	156	313243	5.140
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	538157A	52.819
117) 1,2,3-Trichloropropane	(4)	12.518	110	55435M	5.135
118) n-Propylbenzene	(4)	12.554	91	1660624	5.219
120) 2-Chlorotoluene	(4)	12.634	126	325179	5.180
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1201583	5.205
123) 4-Chlorotoluene	(4)	12.725	126	321829	5.136
126) tert-Butylbenzene	(4)	12.932	134	252740M	5.294
127) Pentachloroethane	(4)	12.969	167	207328	5.095
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1242864	5.214
129) sec-Butylbenzene	(4)	13.097	105	1575368	5.267
133) p-Isopropyltoluene	(4)	13.201	119	1353718	5.259
132) 1,3-Dichlorobenzene	(4)	13.201	146	624292	5.140
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	772144	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	604762	5.105
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	504611	5.076
137) Benzyl Chloride	(4)	13.347	126	88697M	5.233
139) n-Butylbenzene	(4)	13.493	92	673217	5.291
140) 1,2-Dichlorobenzene	(4)	13.530	146	546317	5.103
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	31040	5.342

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	505280	5.316
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	414558	5.201
147) Hexachlorobutadiene	(4)	14.700	225	220536	5.302
148) Naphthalene	(4)	14.804	128	717239	5.157
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	359355	5.282

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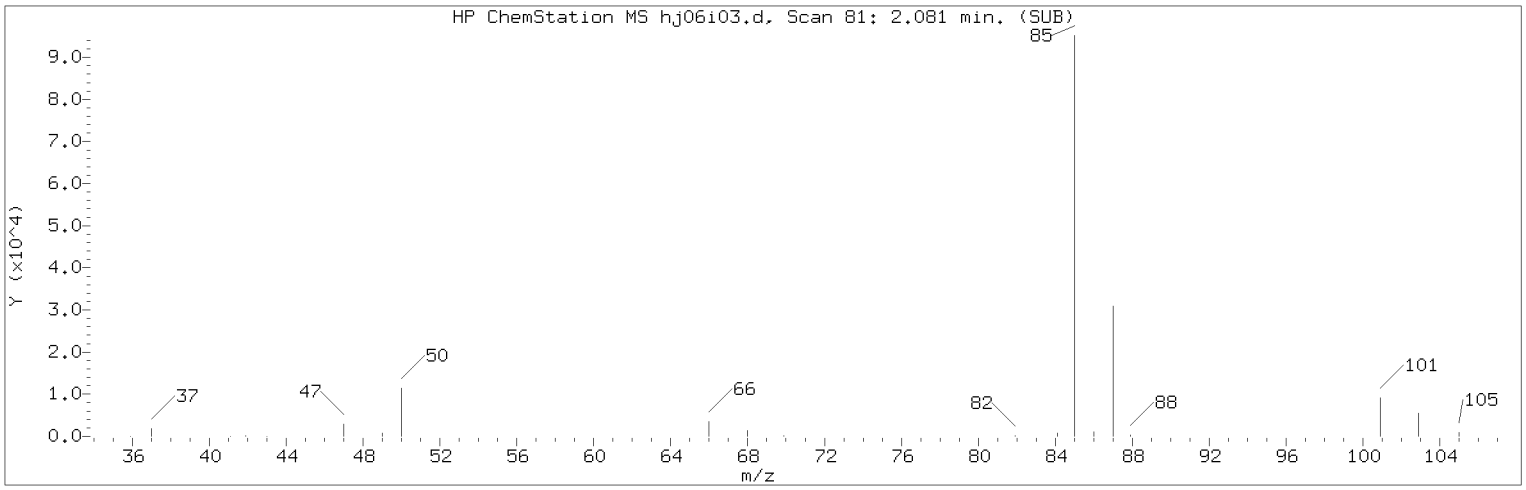
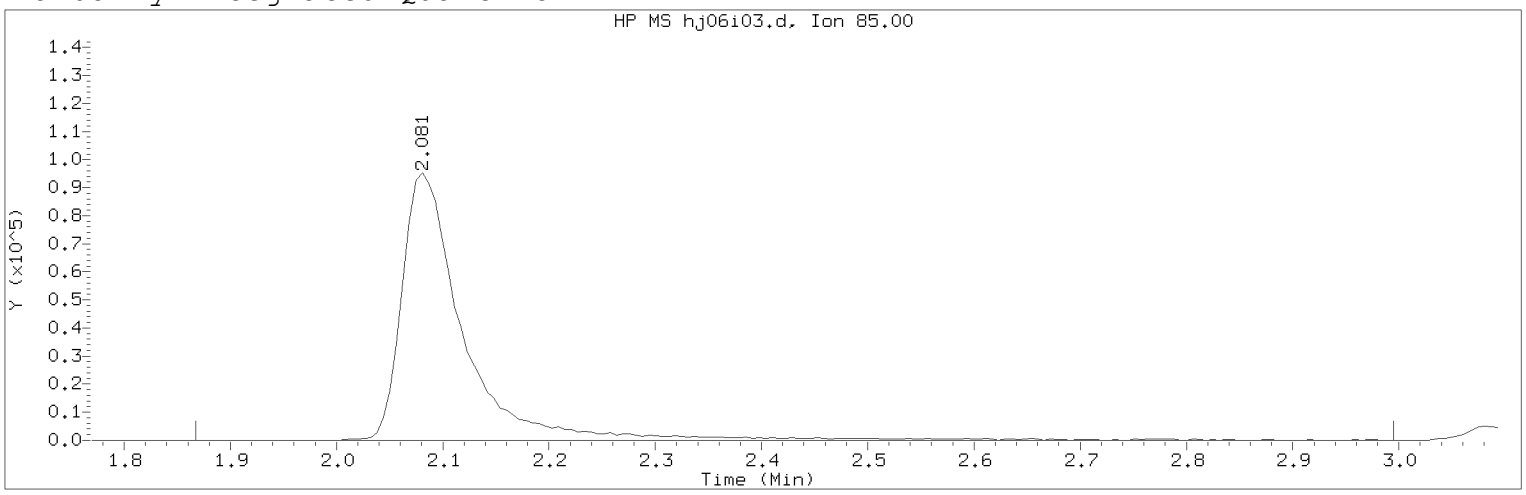
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

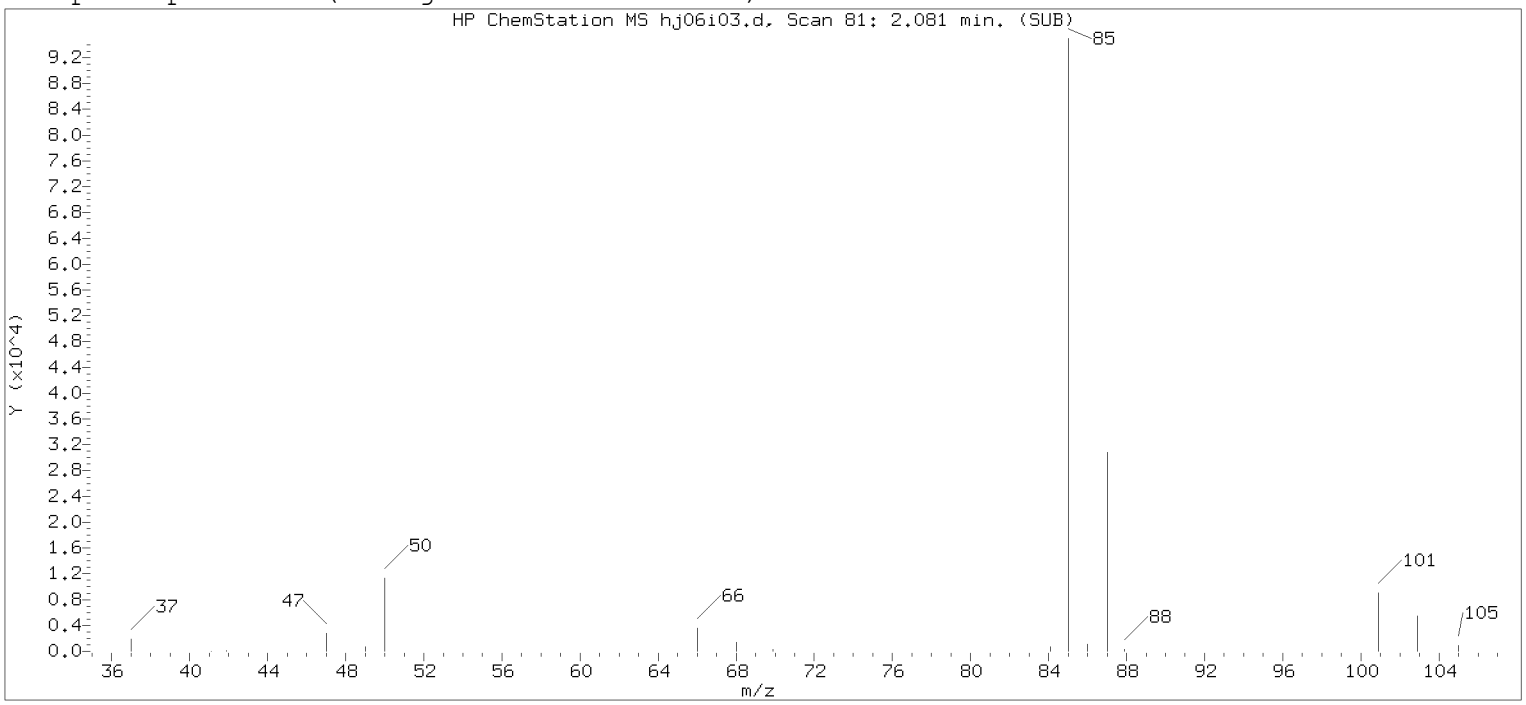
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 85.00
Area (flag) : 386923M
On-Column Amount (ng) : 5.2325
Integration start scan : 45 Integration stop scan: 230
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

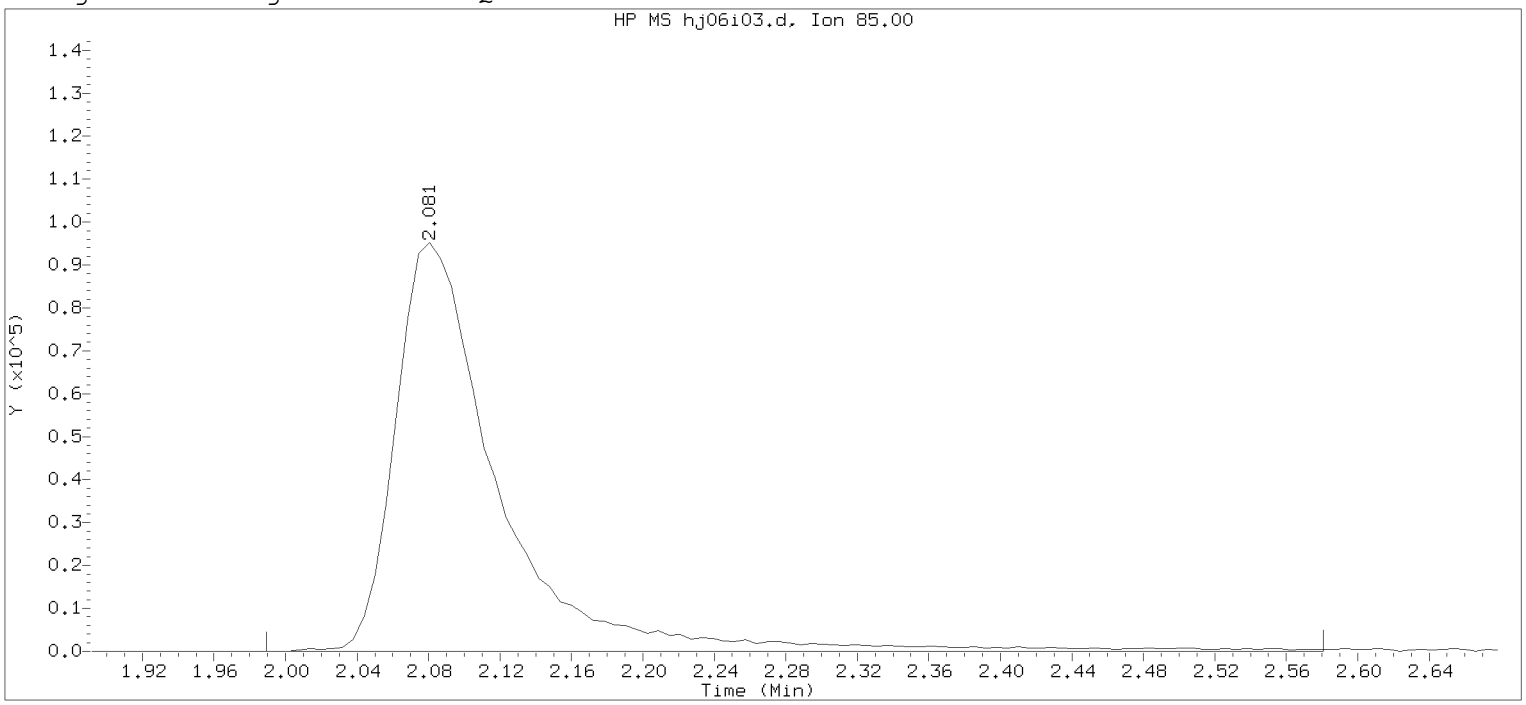
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

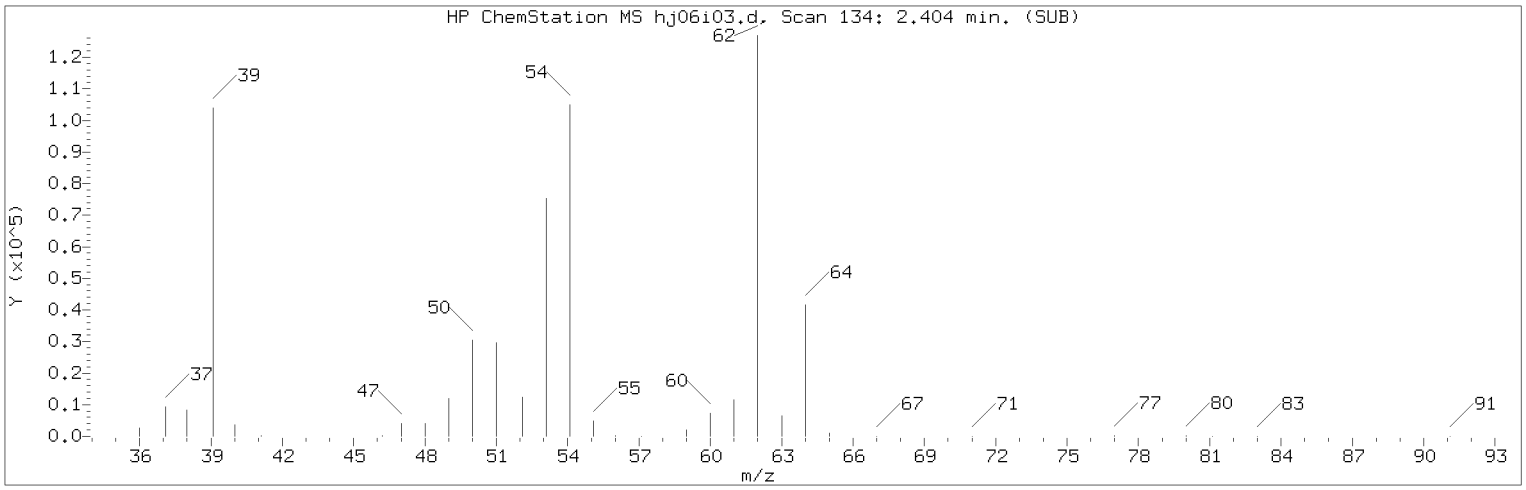
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

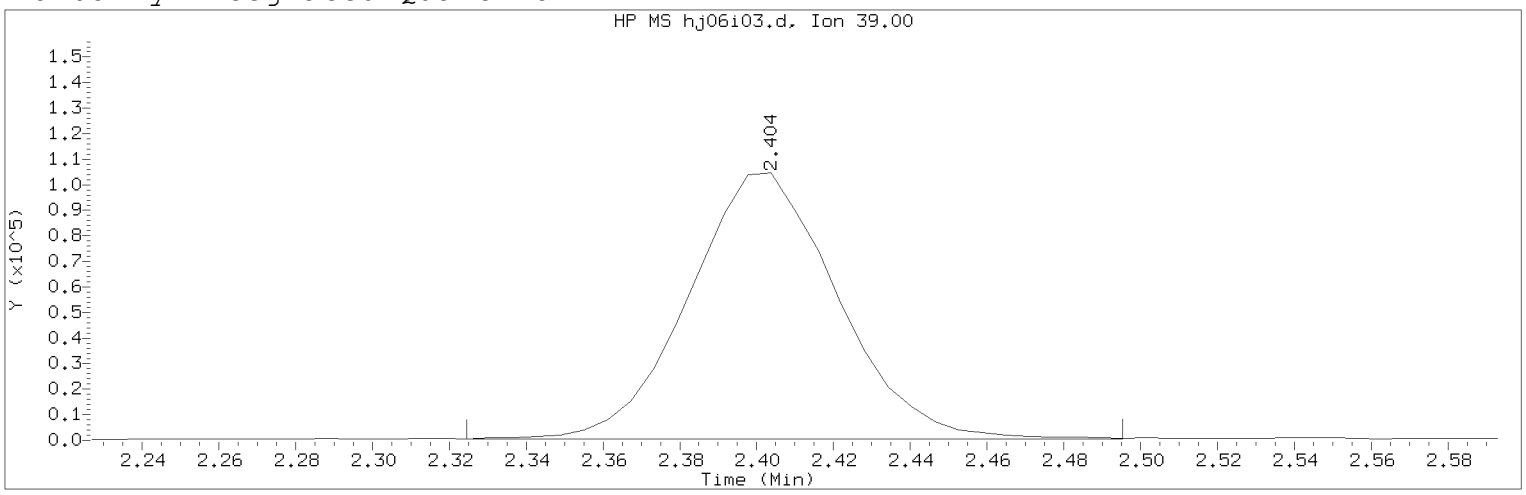
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 85.00
Area : 381559
On-column Amount (ng) : 5.1947
Integration start scan : 65 Integration stop scan: 162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user: ASJohnson

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

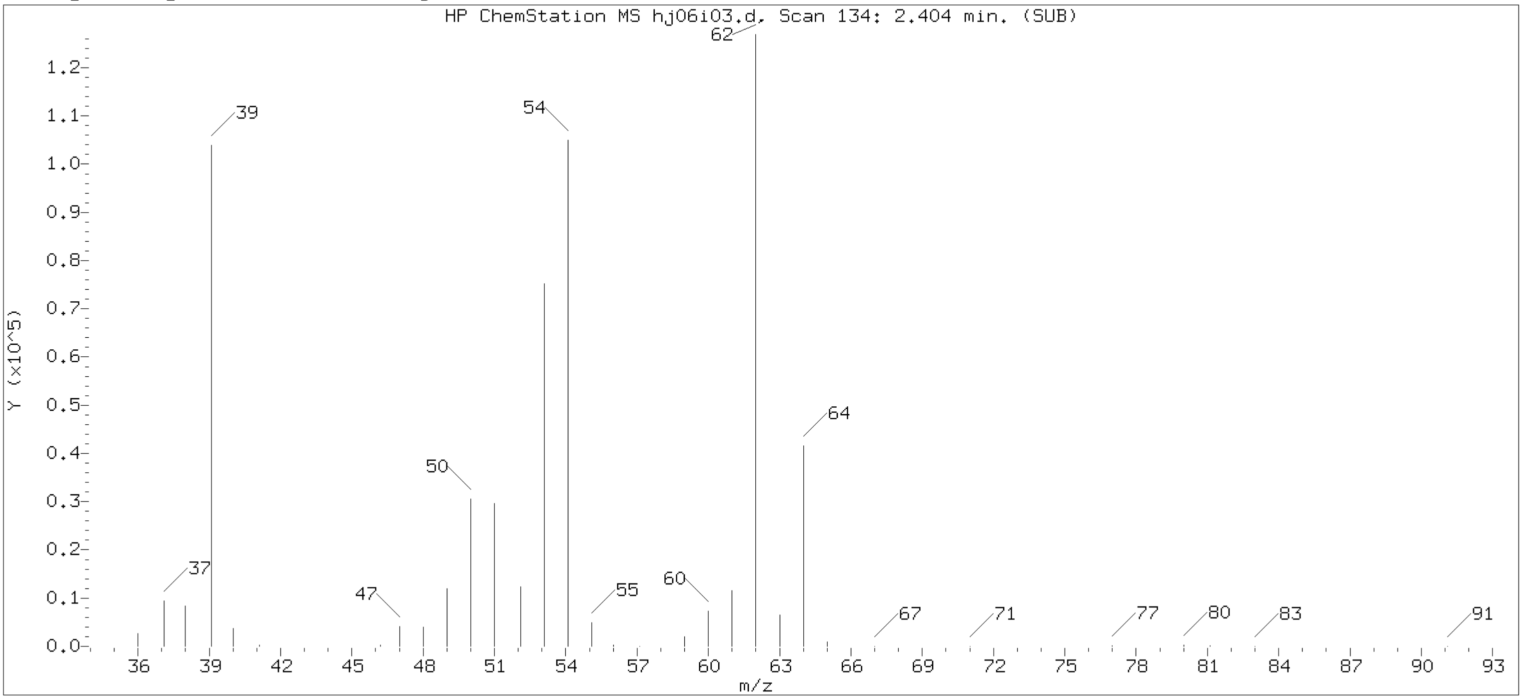
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 279939M
On-Column Amount (ng) : 5.1037
Integration start scan : 120 Integration stop scan: 148
Y at integration start : 562 Y at integration end: 562

Reason for manual integration: improper integration

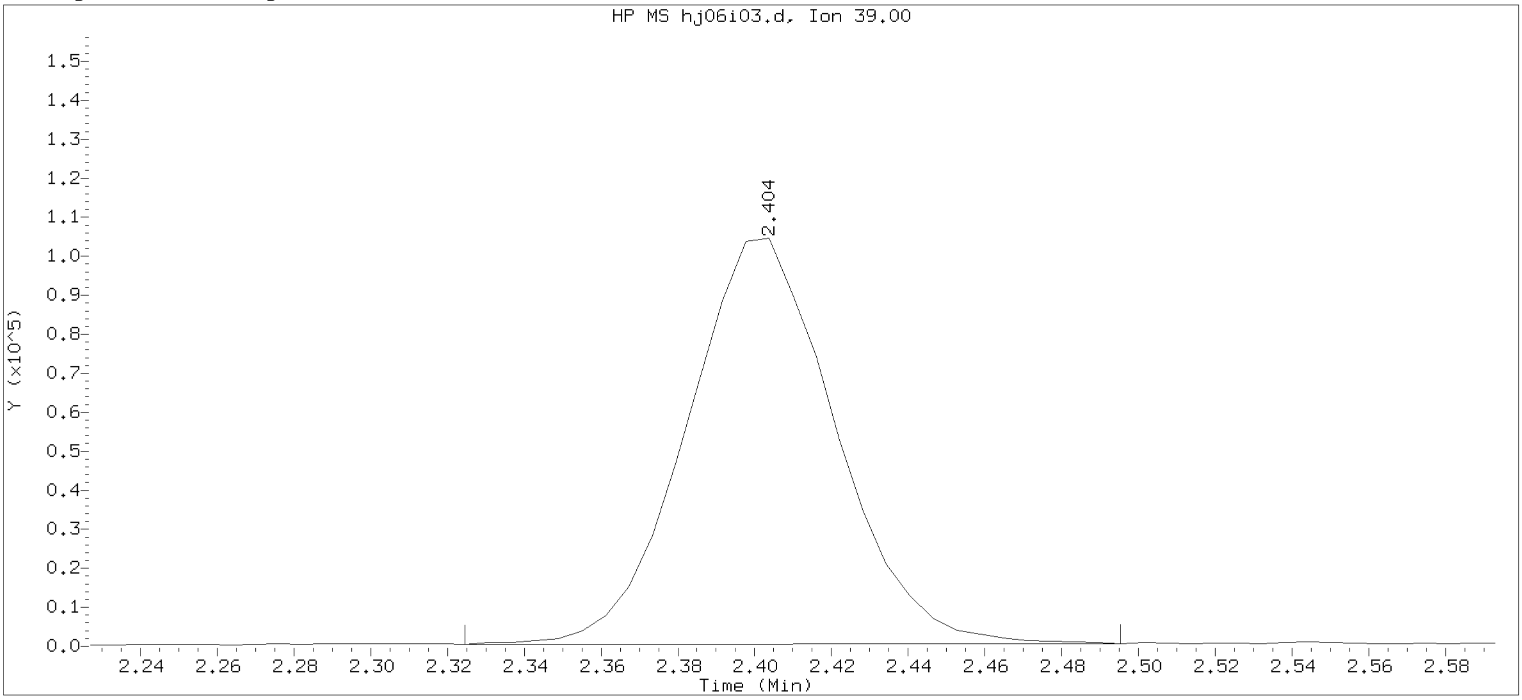
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18   Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005   Lab Sample ID: VSTD005

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area : 279245
On-column Amount (ng) : 5.1399
Integration start scan : 120   Integration stop scan: 148
Y at integration start : 563   Y at integration end: 692

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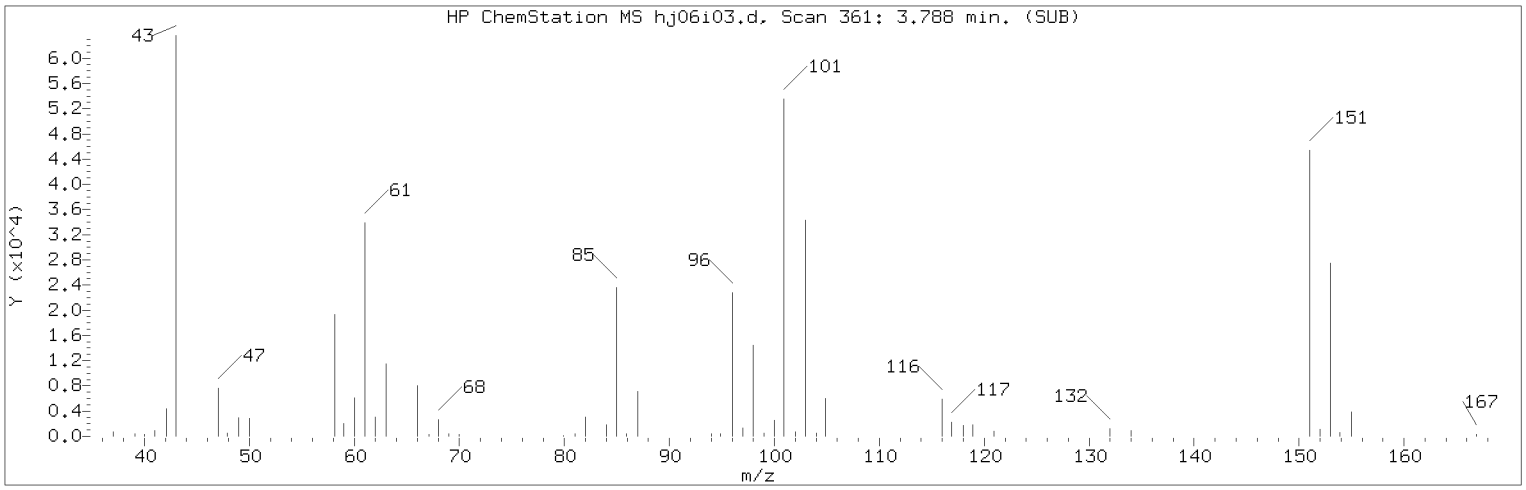
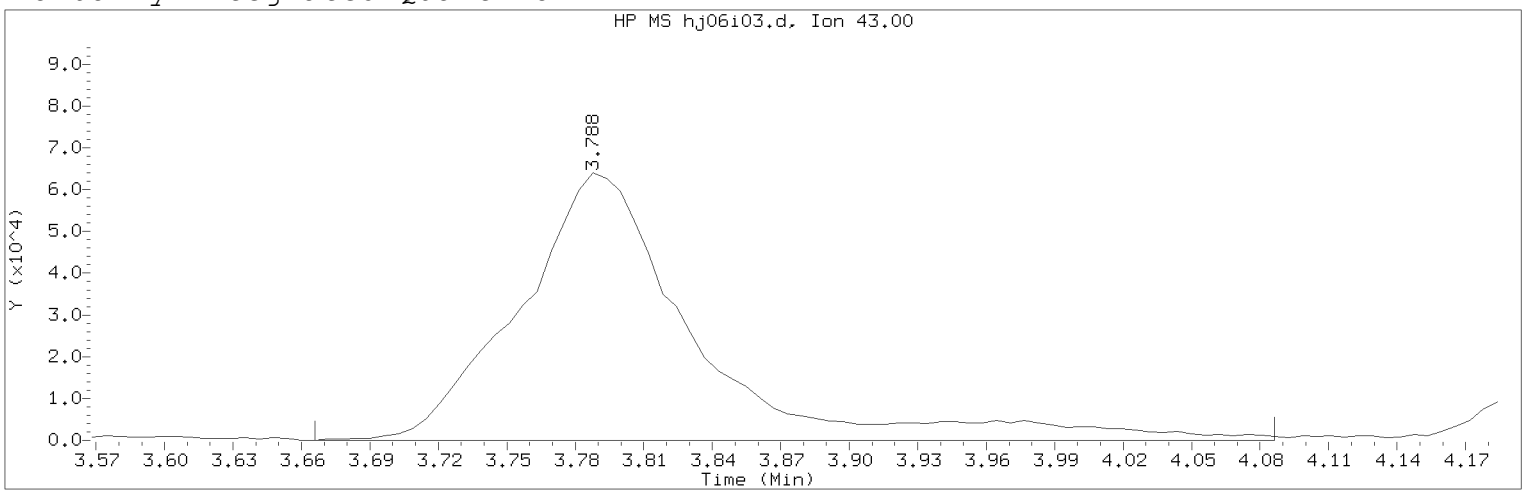
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

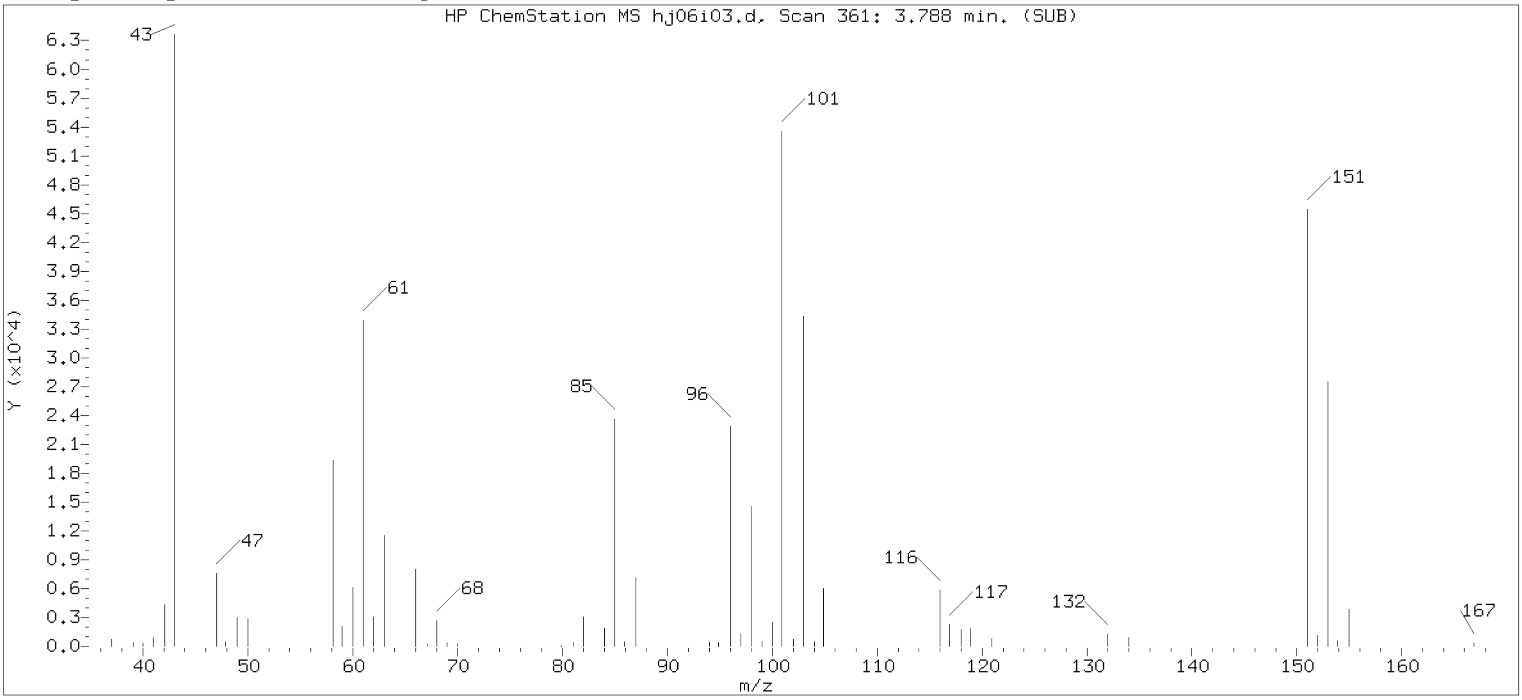
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area (flag) : 341103M
On-Column Amount (ng) : 48.4671
Integration start scan : 340 Integration stop scan: 409
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

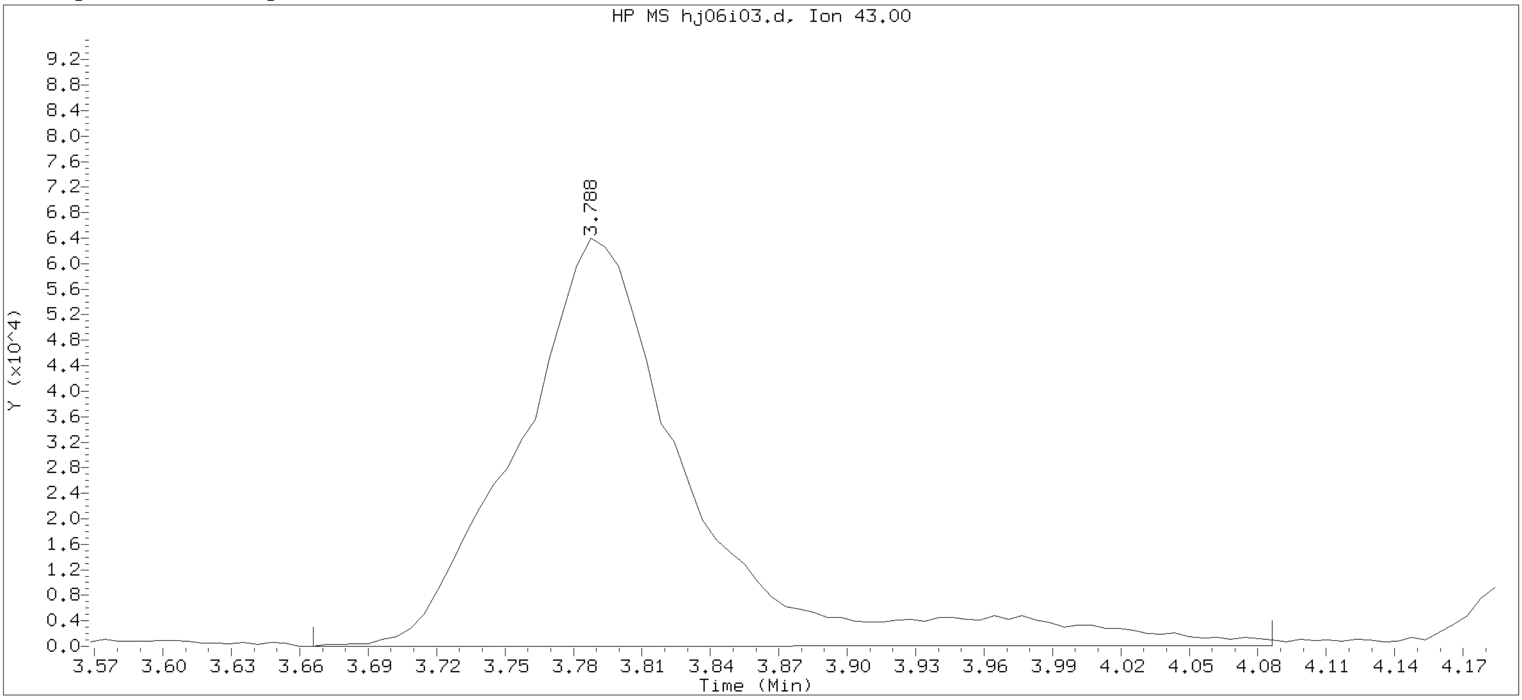
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	14		
Compound Name	Acetone		
Scan Number	361		
Retention Time (minutes)	3.788		
Quant Ion	43.00		
Area	339300		
On-column Amount (ng)	44.9898		
Integration start scan	340	Integration stop scan:	409
Y at integration start	0	Y at integration end:	129

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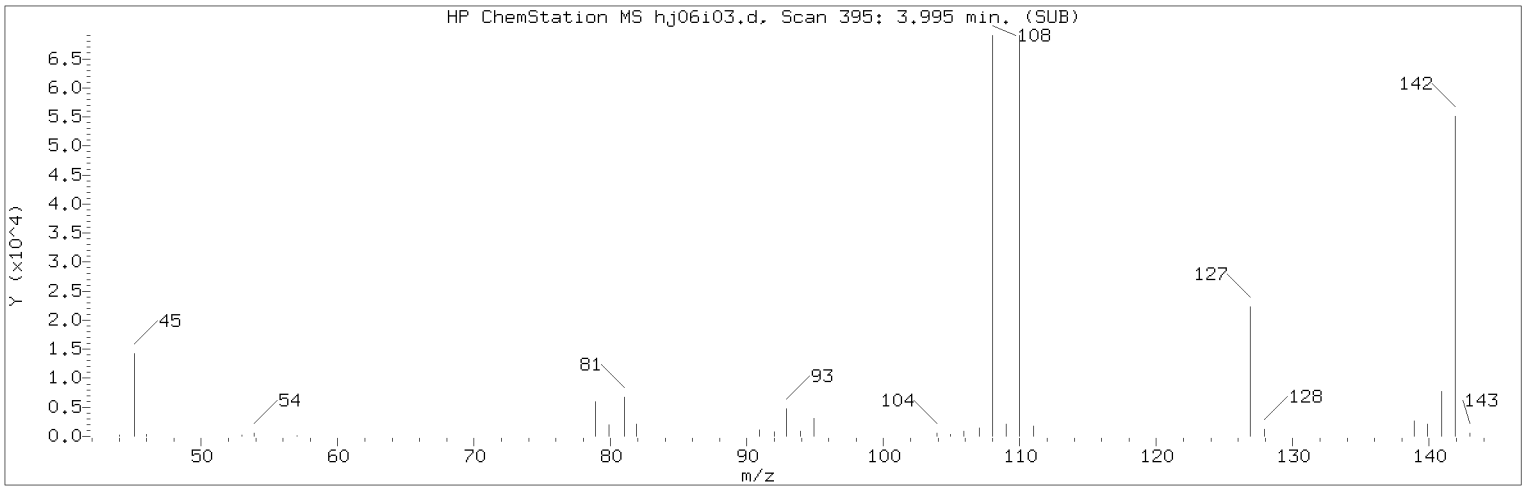
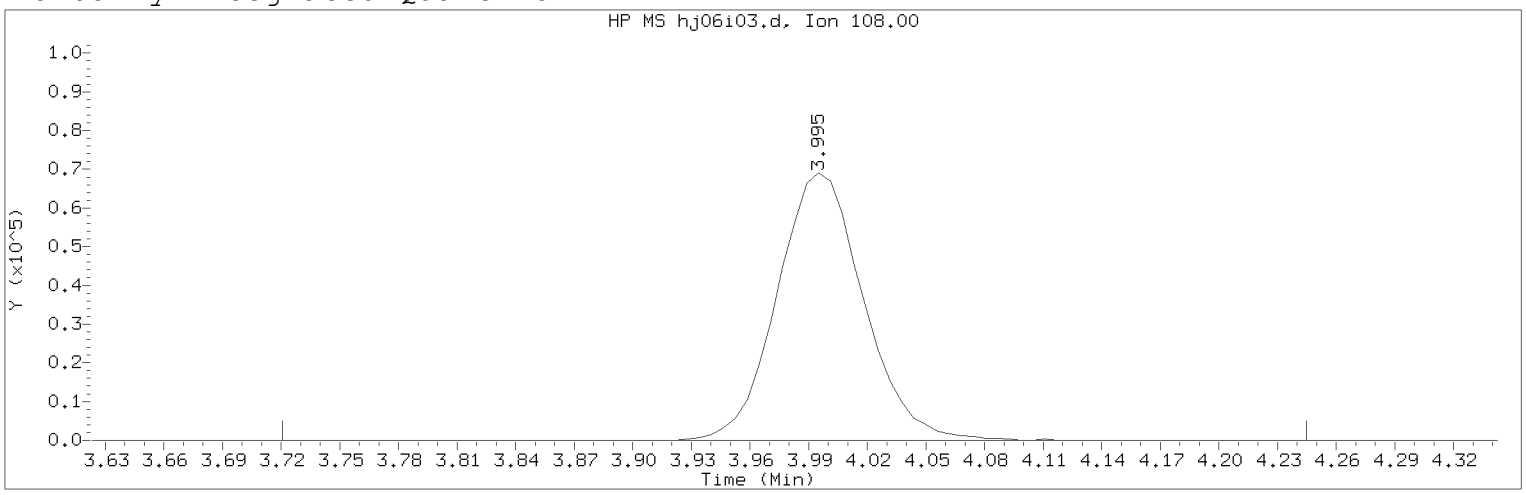
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

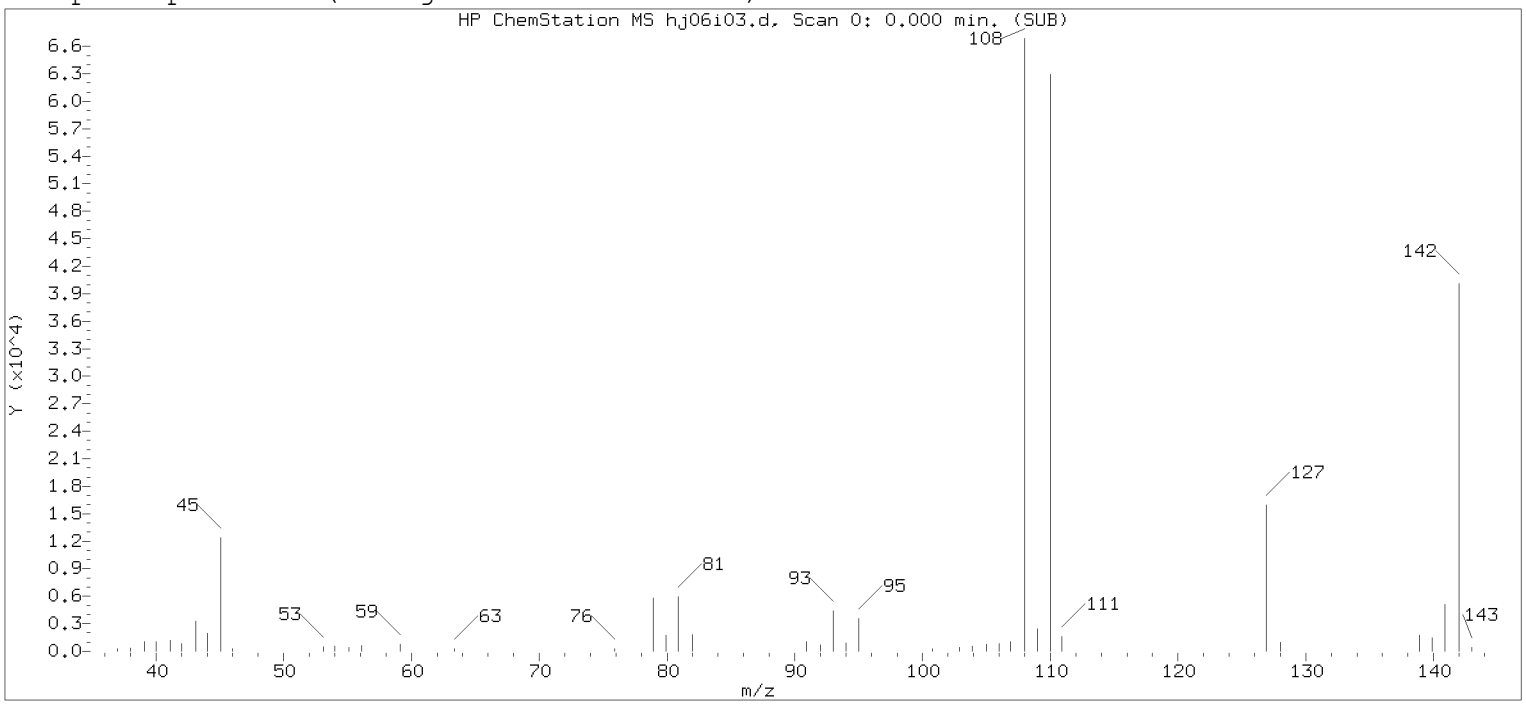
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 395
Retention Time (minutes): 3.995
Quant Ion : 108.00
Area (flag) : 211837M
On-Column Amount (ng) : 5.0380
Integration start scan : 349 Integration stop scan: 435
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

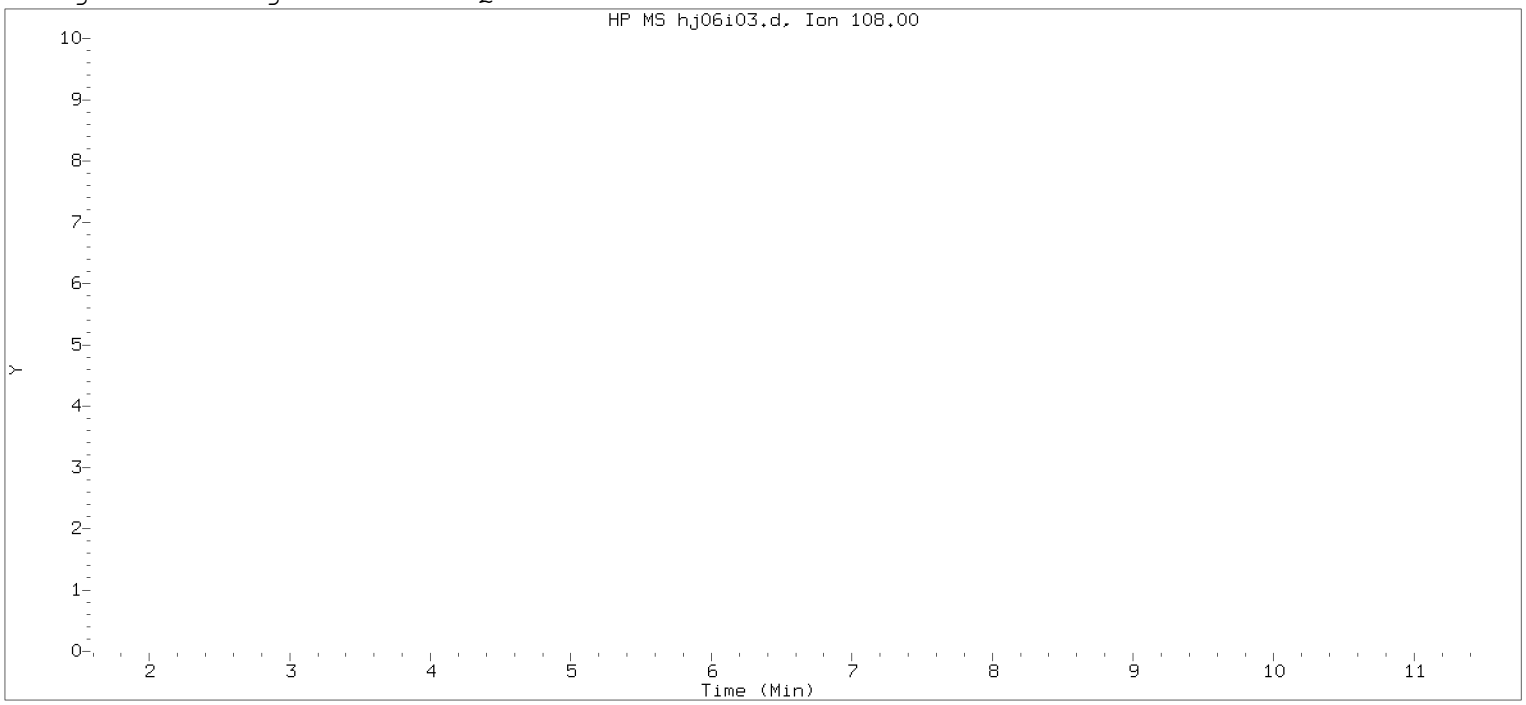
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

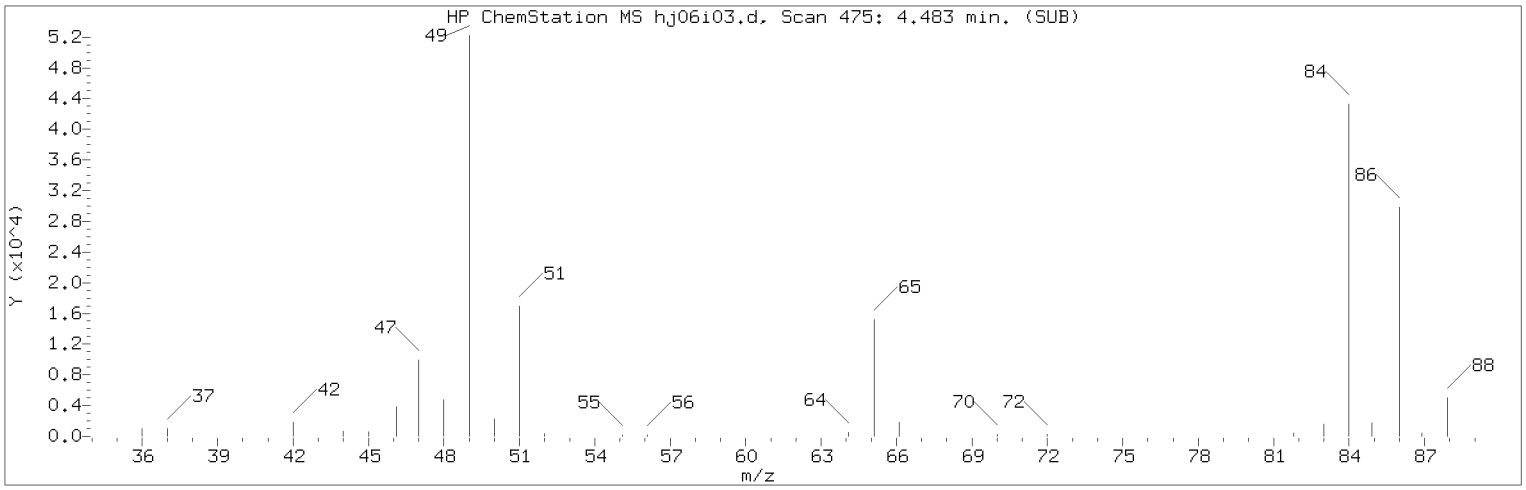
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

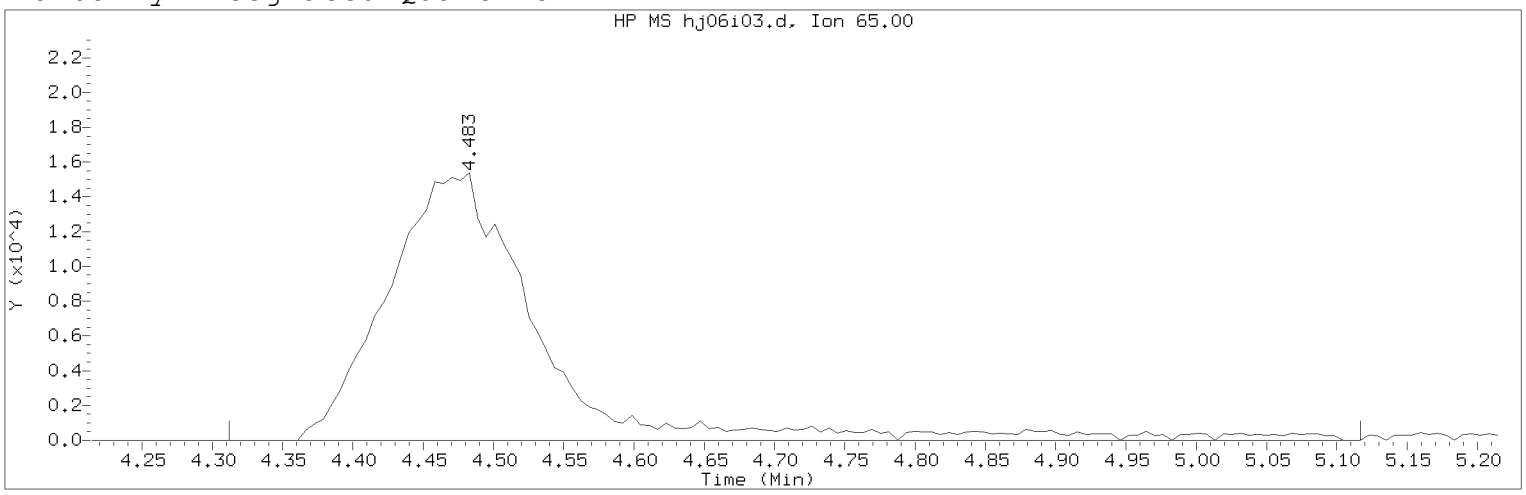
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

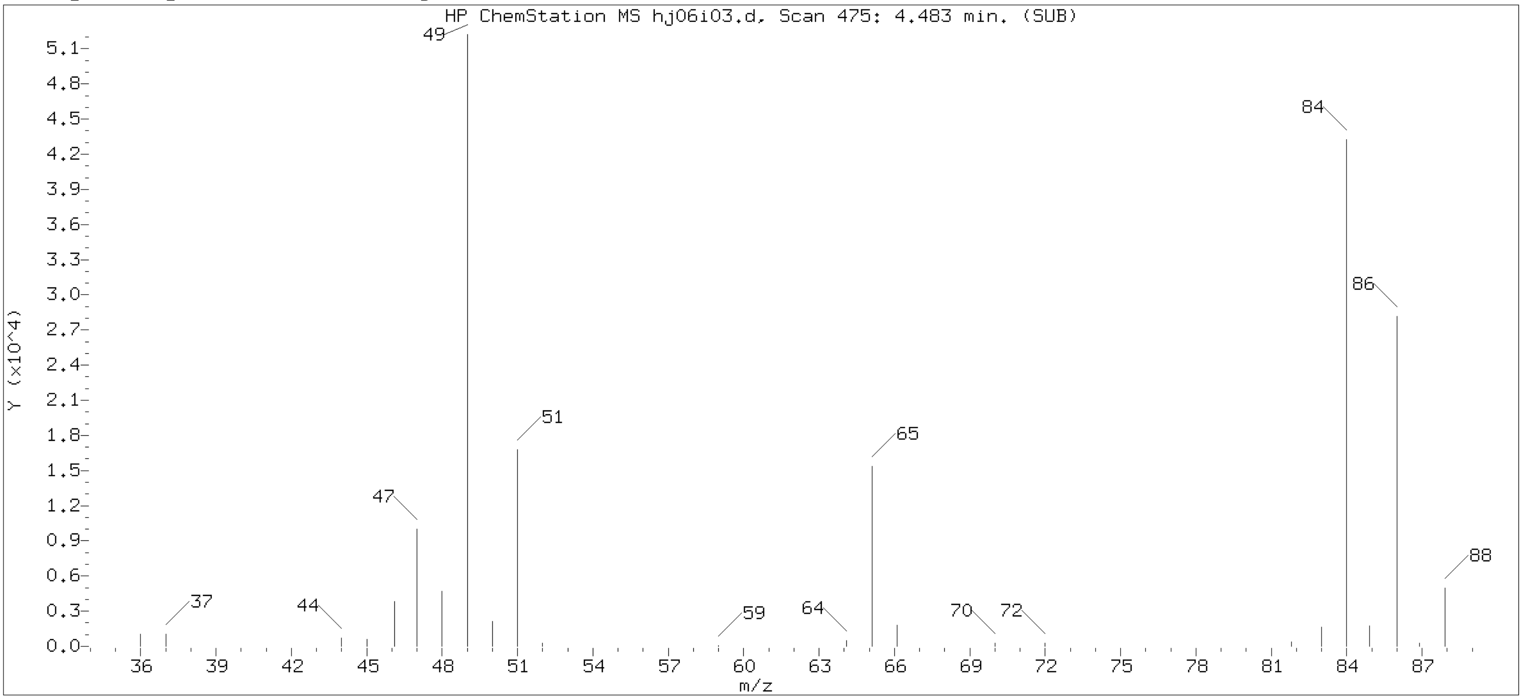
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 115826M
On-Column Amount (ng) : 50.0000
Integration start scan : 446 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

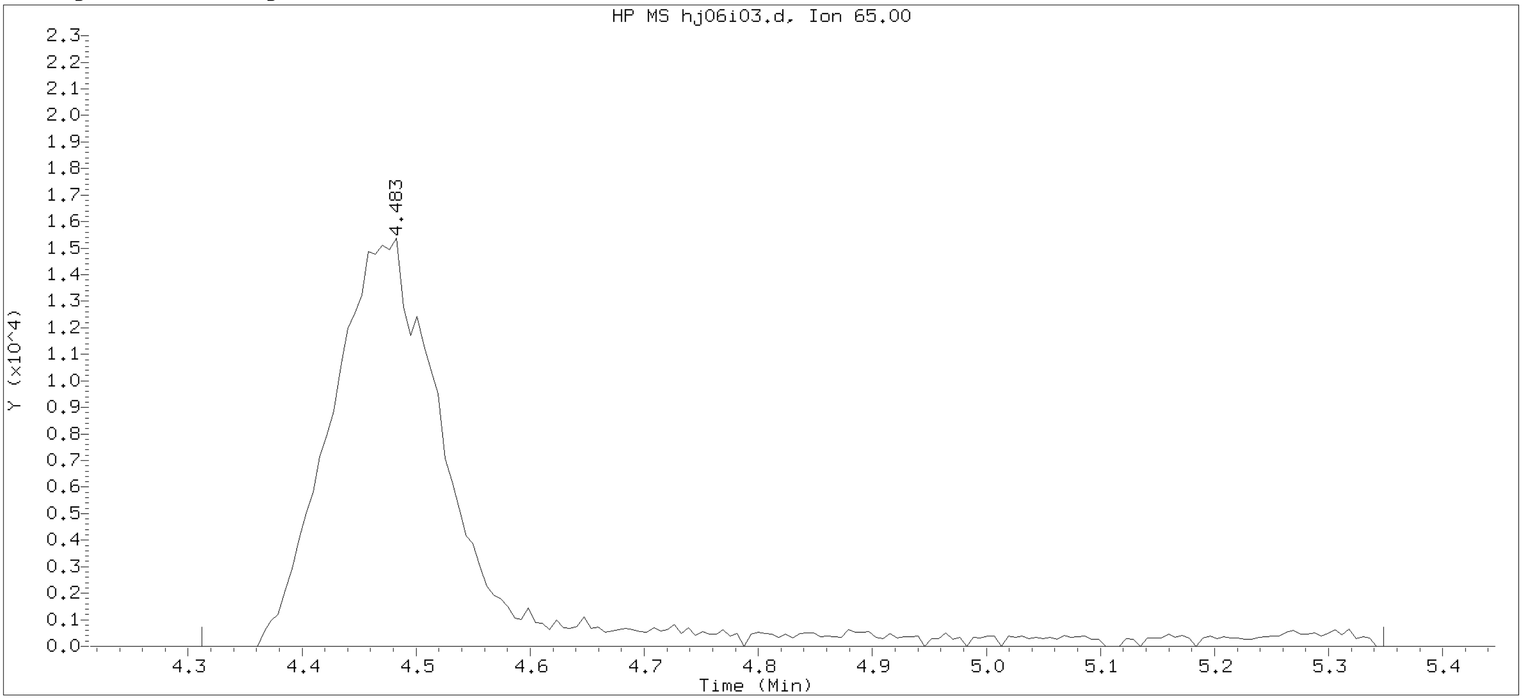
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

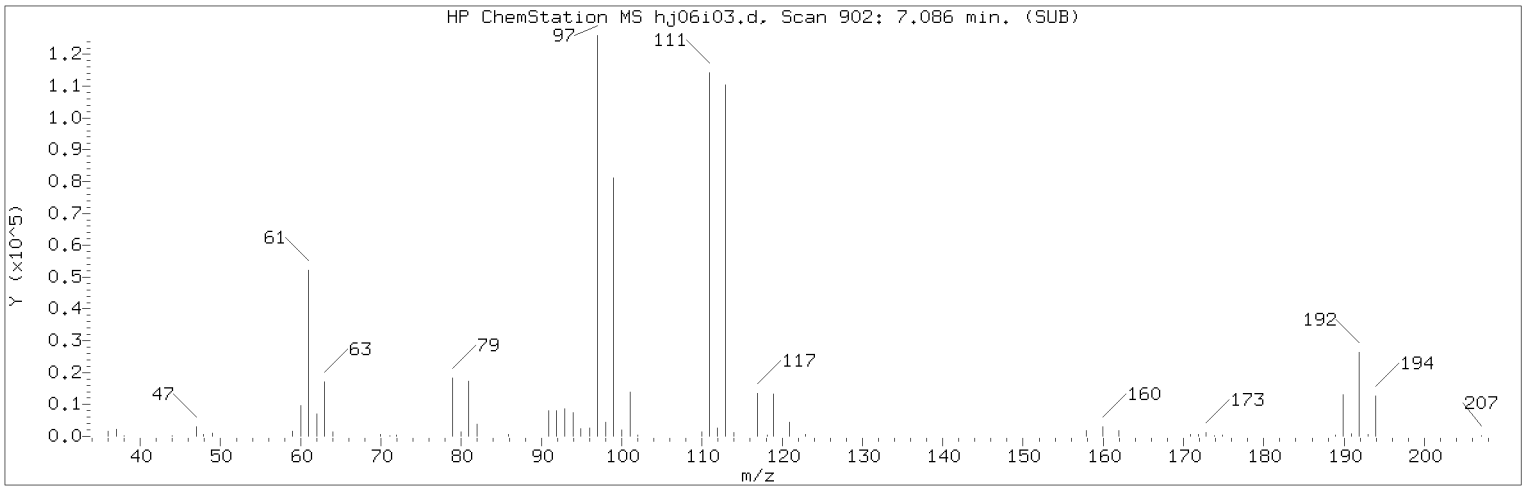
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

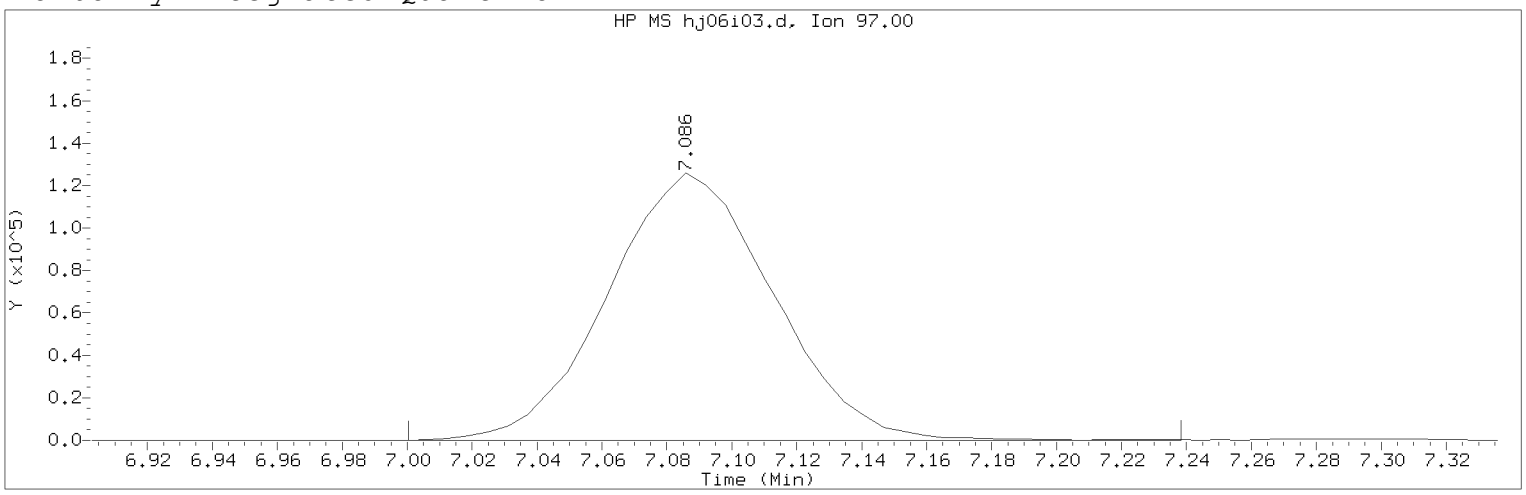
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 120597
On-column Amount (ng) : 50.0000
Integration start scan : 446 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02083

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

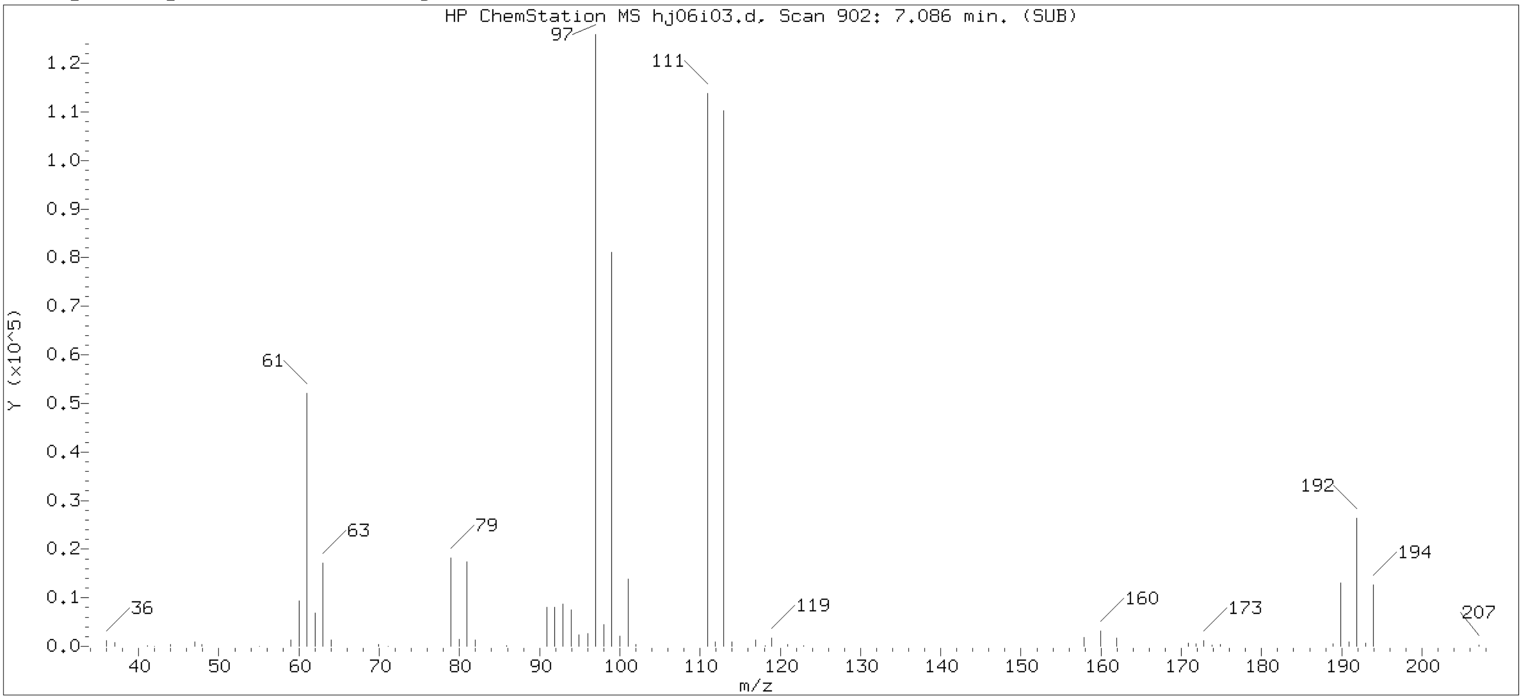
Compound Number : 52
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Quant Ion : 97.00
Area (flag) : 443696M
On-Column Amount (ng) : 5.1107
Integration start scan : 887 Integration stop scan: 926
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

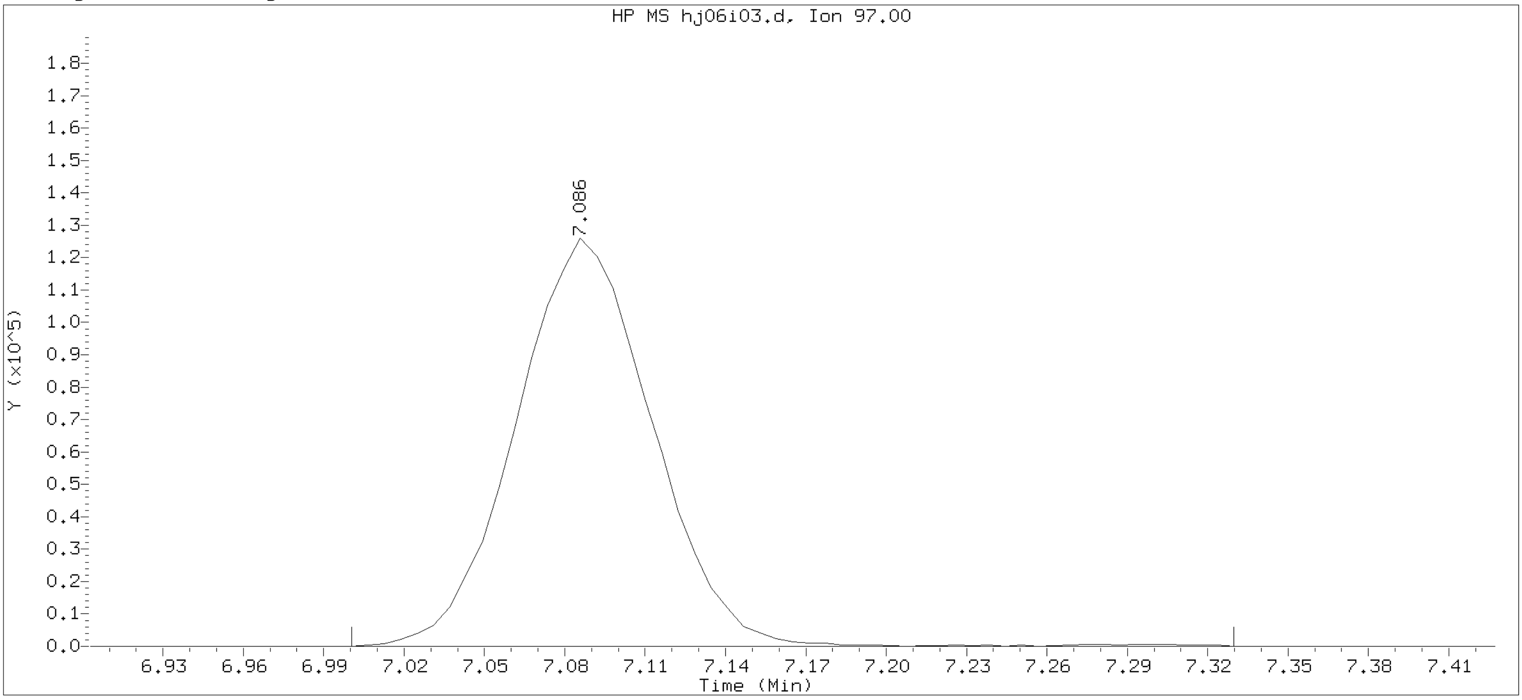
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18   Analyst ID: JKH09052

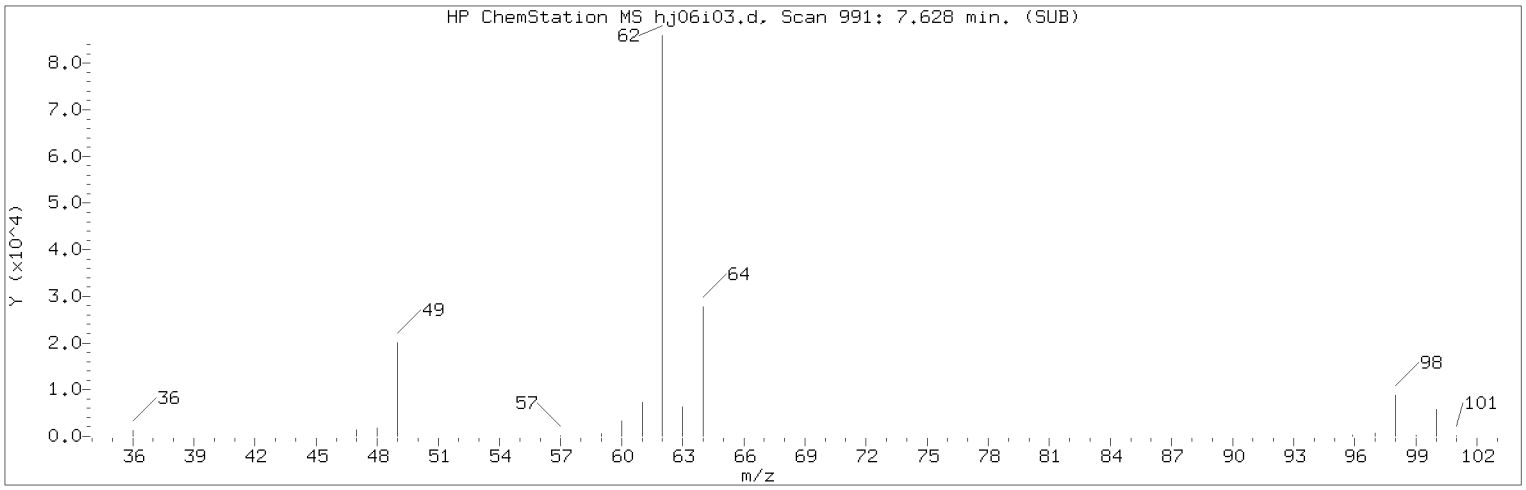
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005   Lab Sample ID: VSTD005

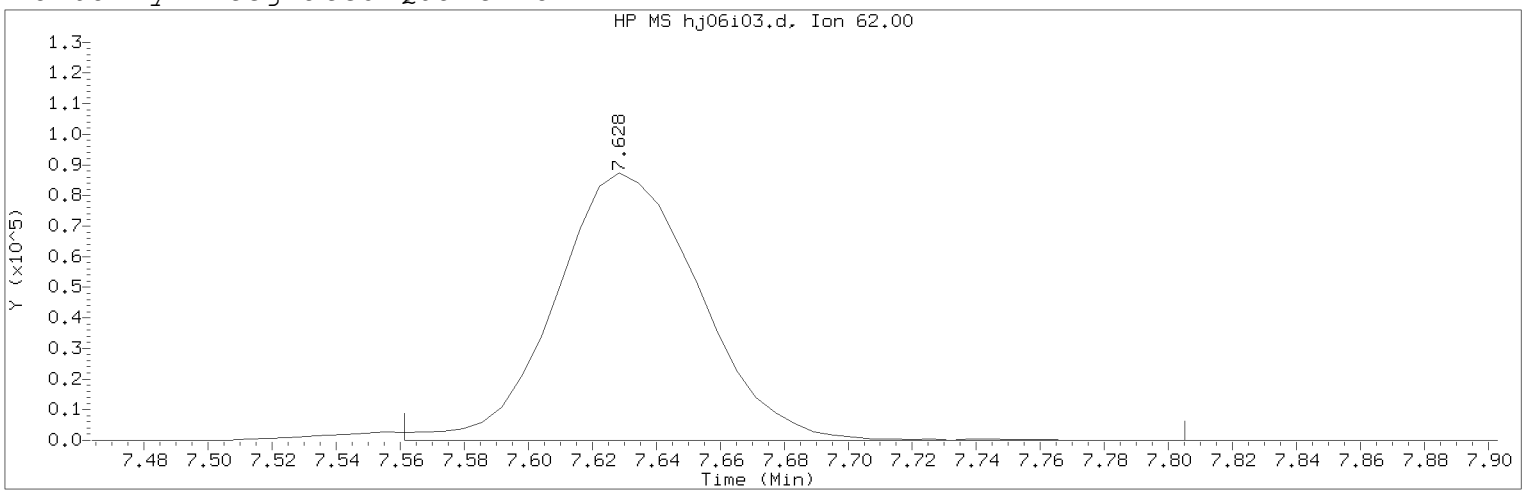
Compound Number	: 52		
Compound Name	: 1,1,1-Trichloroethane		
Scan Number	: 902		
Retention Time (minutes)	: 7.086		
Quant Ion	: 97.00		
Area	: 445768		
On-column Amount (ng)	: 5.1311		
Integration start scan	: 887	Integration stop scan:	941
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

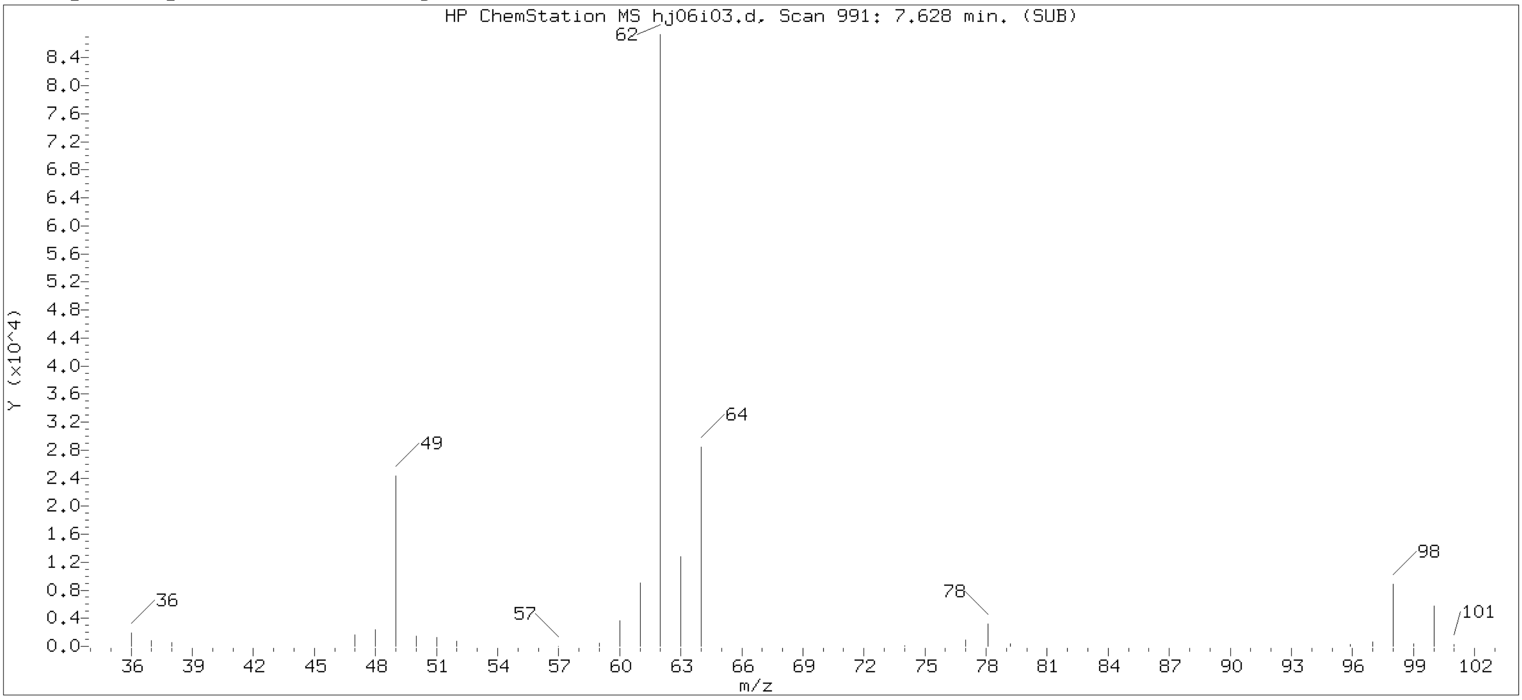
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 272967M
On-Column Amount (ng) : 4.9344
Integration start scan : 979 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

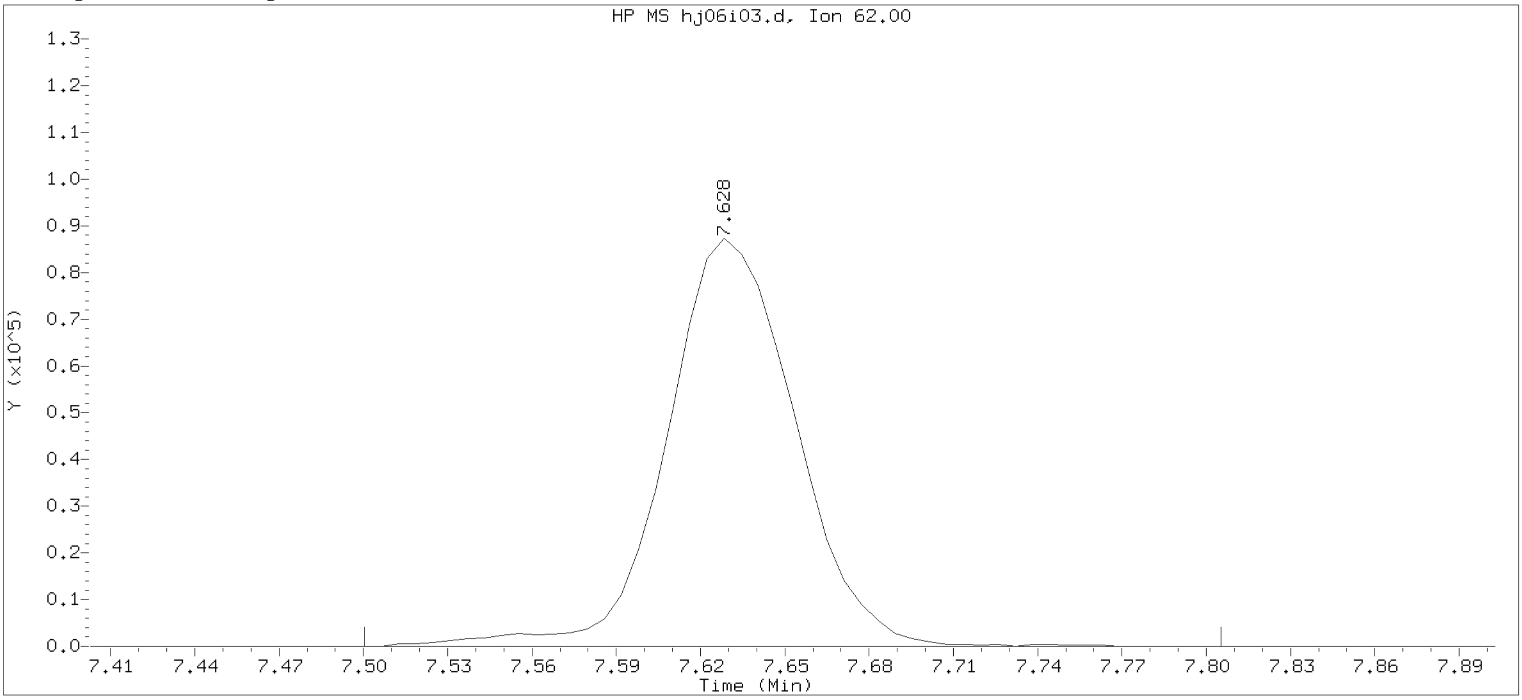
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

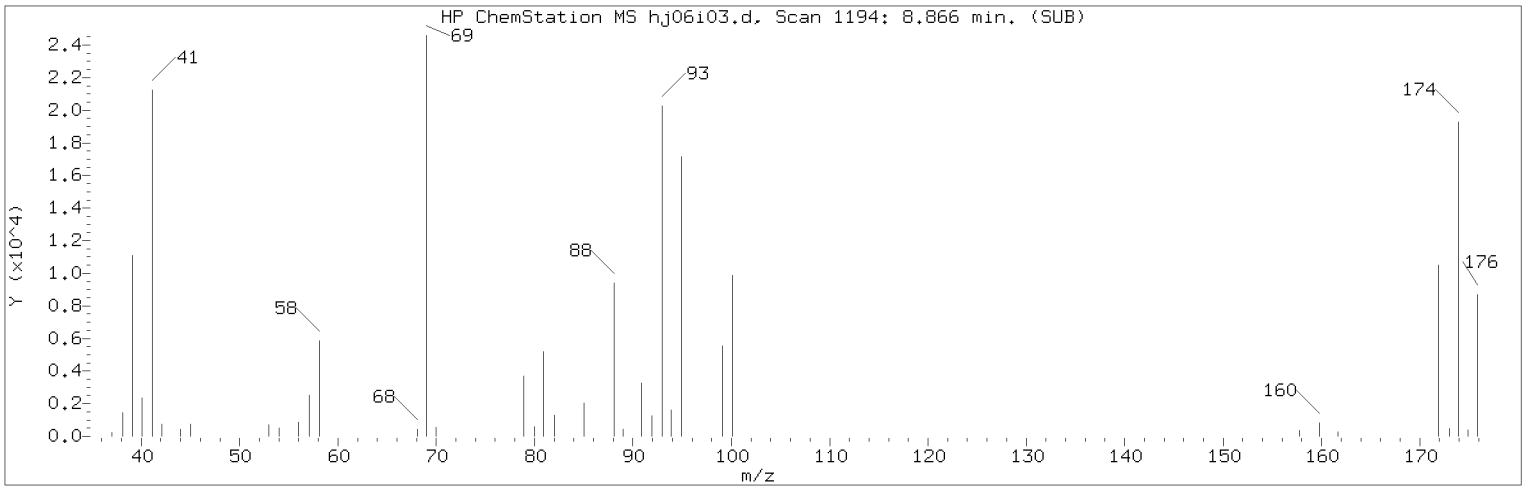
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

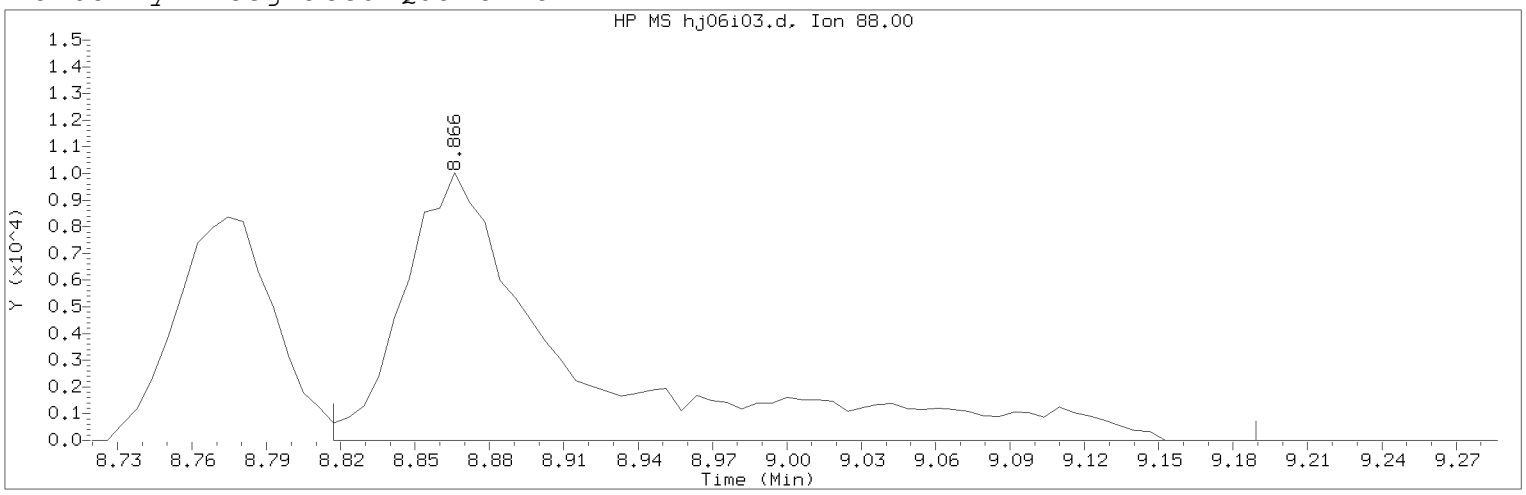
Compound Number	: 60
Compound Name	: 1,2-Dichloroethane
Scan Number	: 991
Retention Time (minutes)	: 7.628
Quant Ion	: 62.00
Area	: 277238
On-column Amount (ng)	: 4.9705
Integration start scan	: 969 Integration stop scan: 1019
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

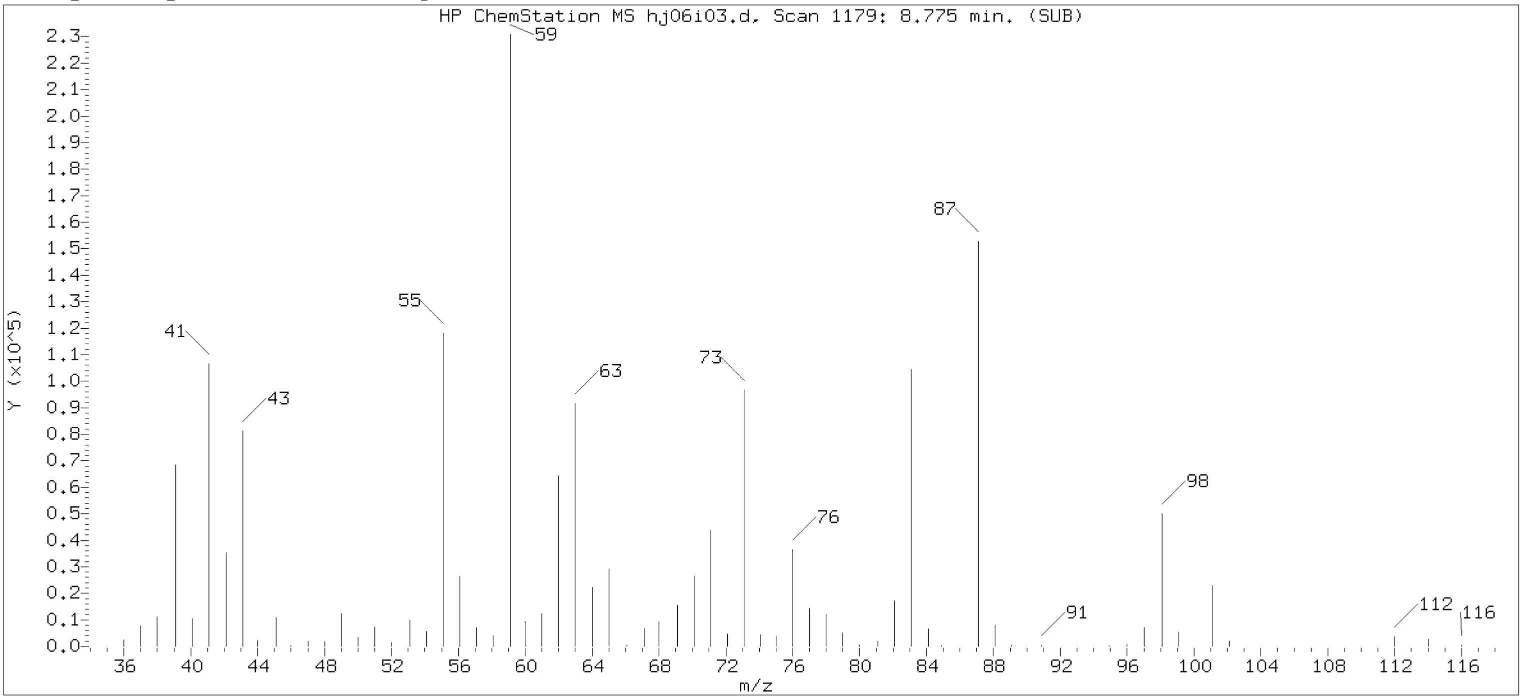
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 48534M
On-Column Amount (ng) : 294.9662
Integration start scan : 1185 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

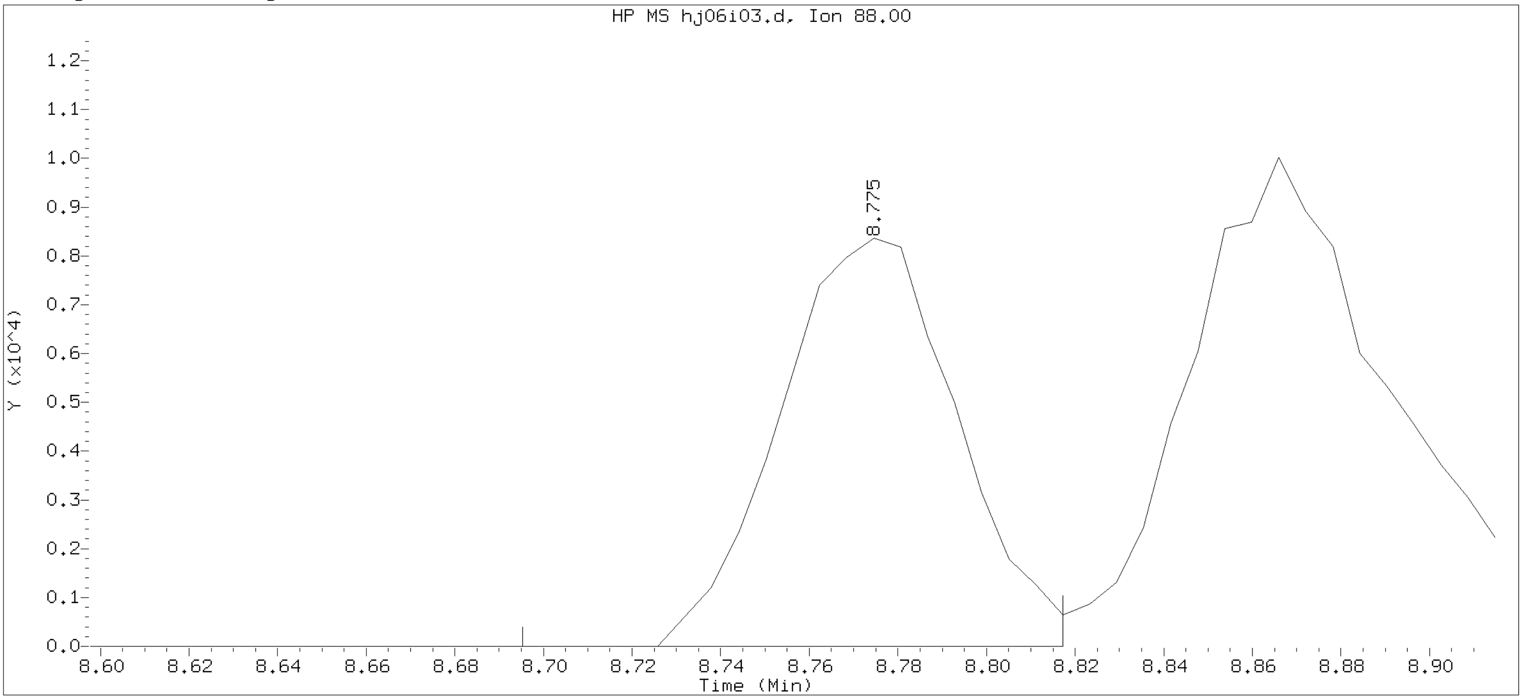
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

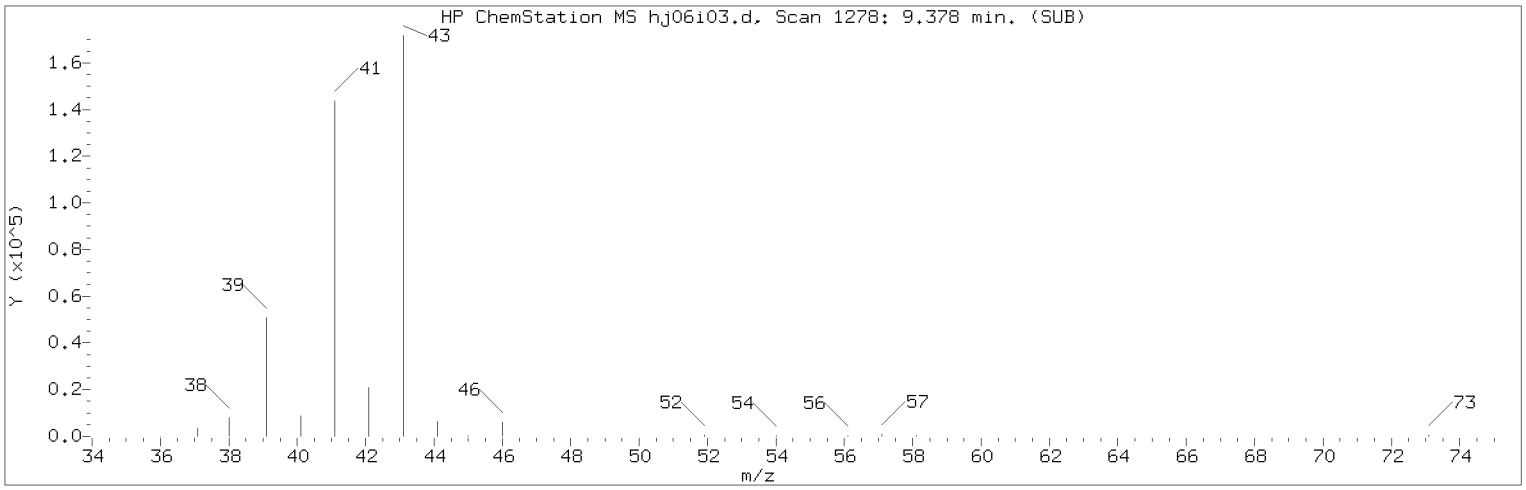
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

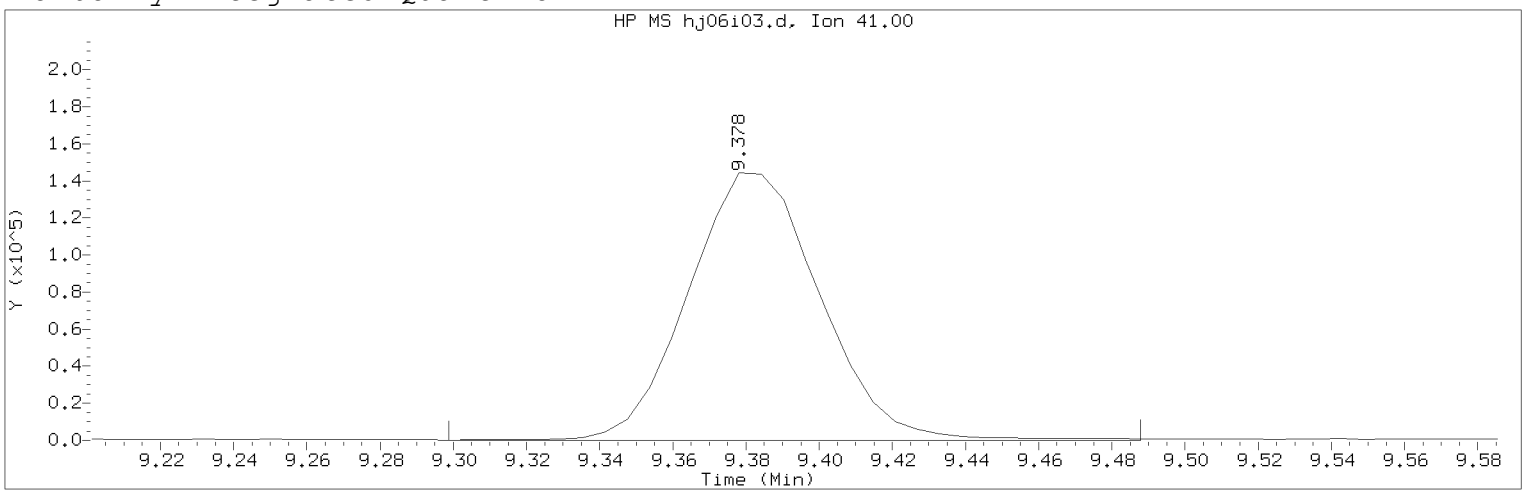
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.775
Quant Ion : 88.00
Area : 23165
On-column Amount (ng) : 155.1606
Integration start scan : 1165 Integration stop scan: 1185
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02094

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

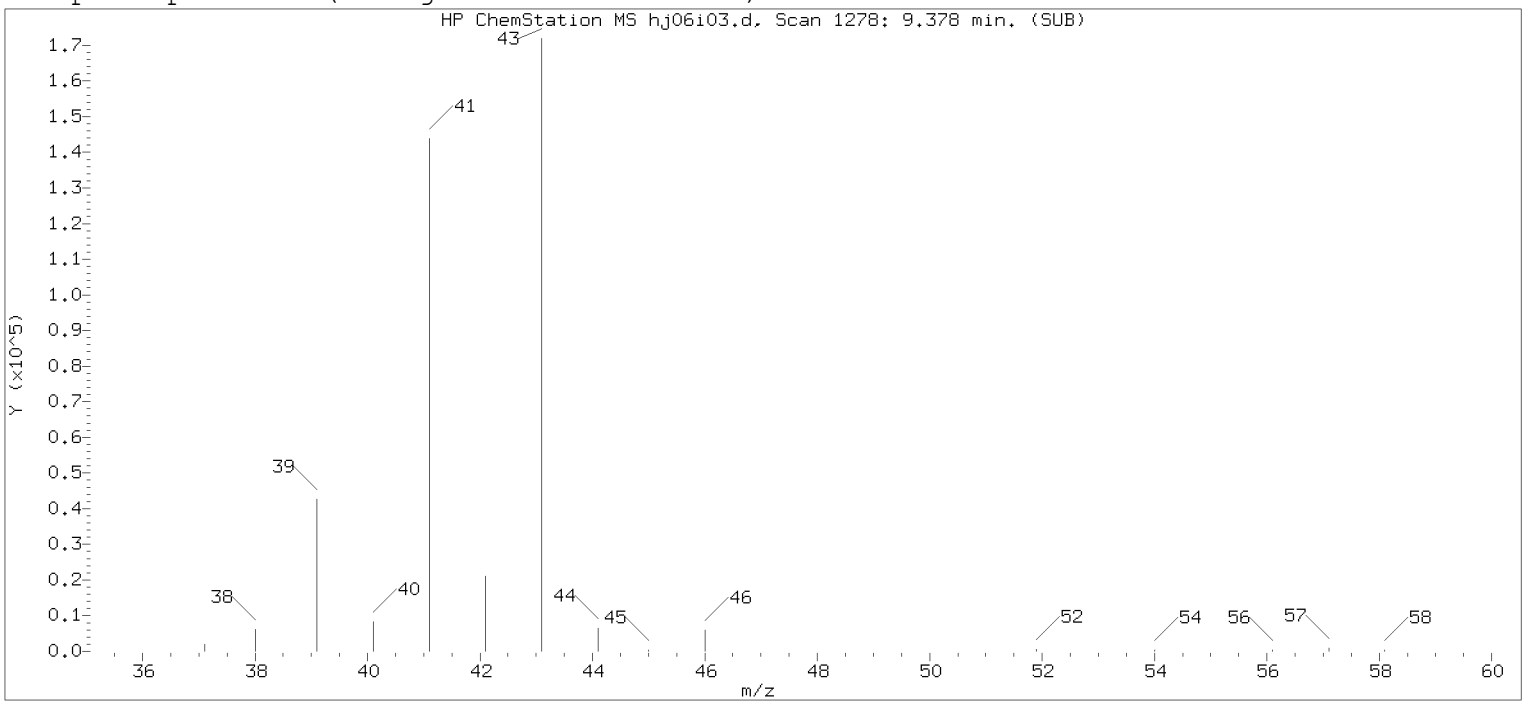
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 361445M
On-Column Amount (ng) : 50.7412
Integration start scan : 1264 Integration stop scan: 1295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

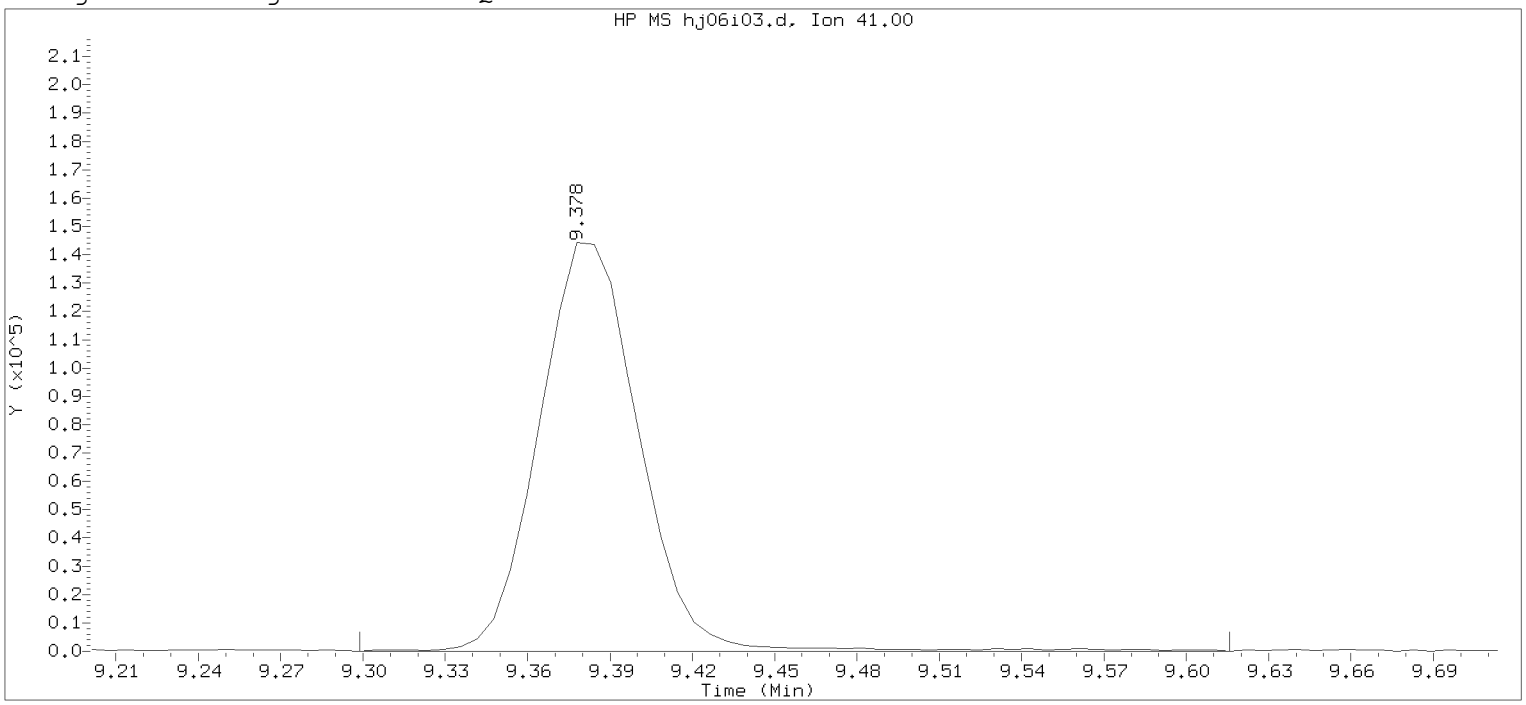
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

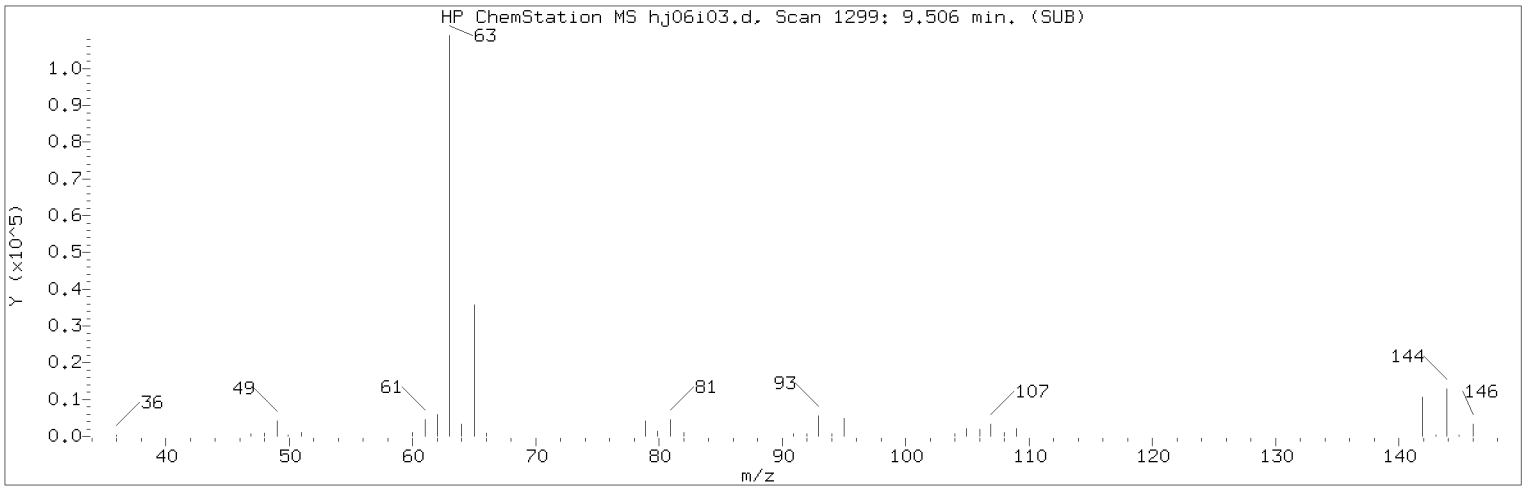
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

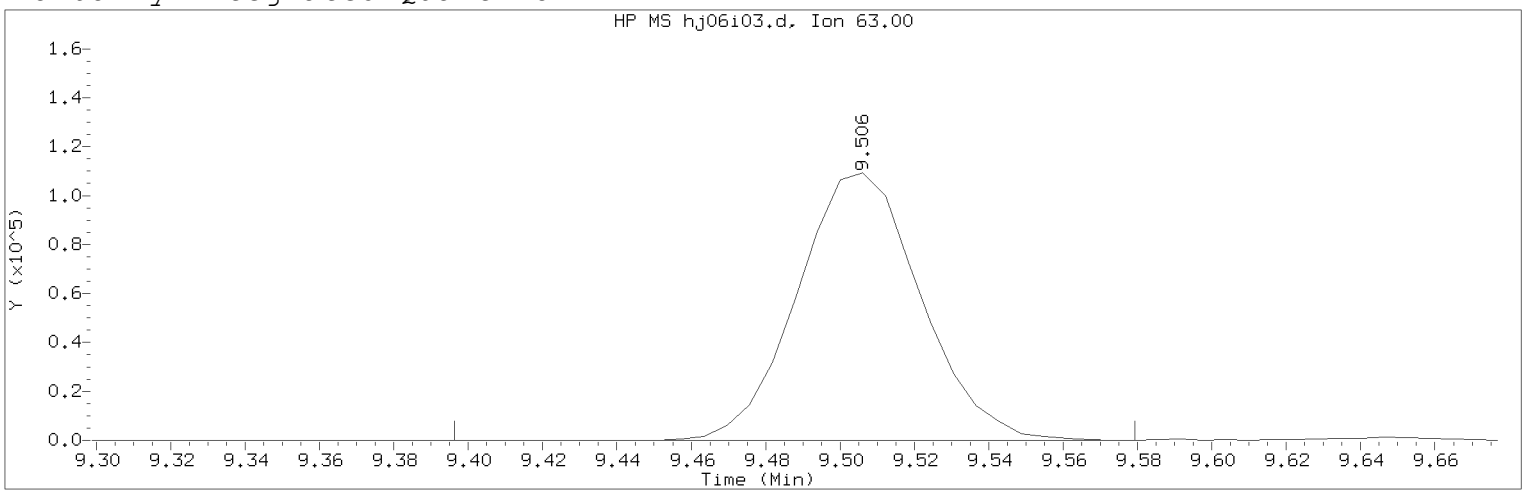
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area : 365903
On-column Amount (ng) : 48.6326
Integration start scan : 1264 Integration stop scan: 1316
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sjohnson

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

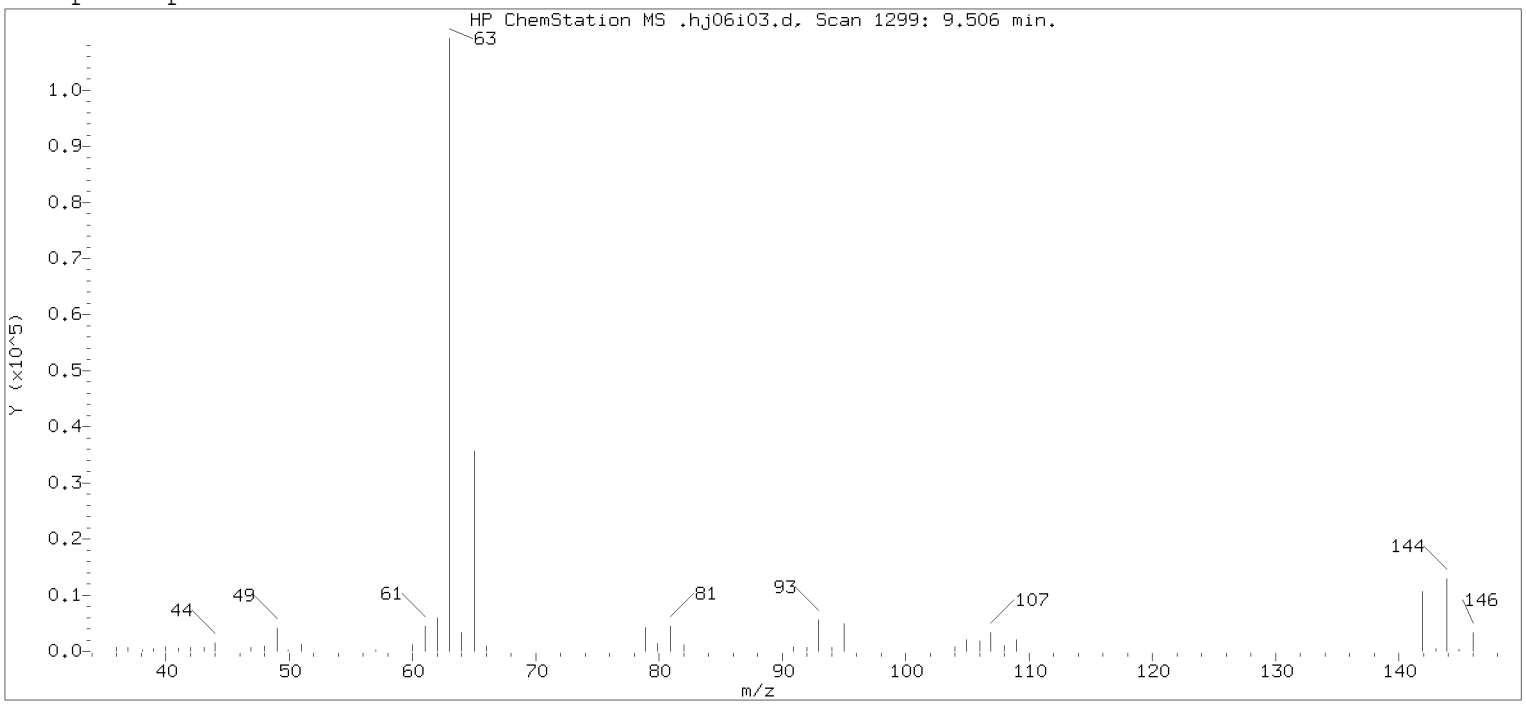
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 251630M
On-Column Amount (ng) : 5.0429
Integration start scan : 1280 Integration stop scan: 1310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

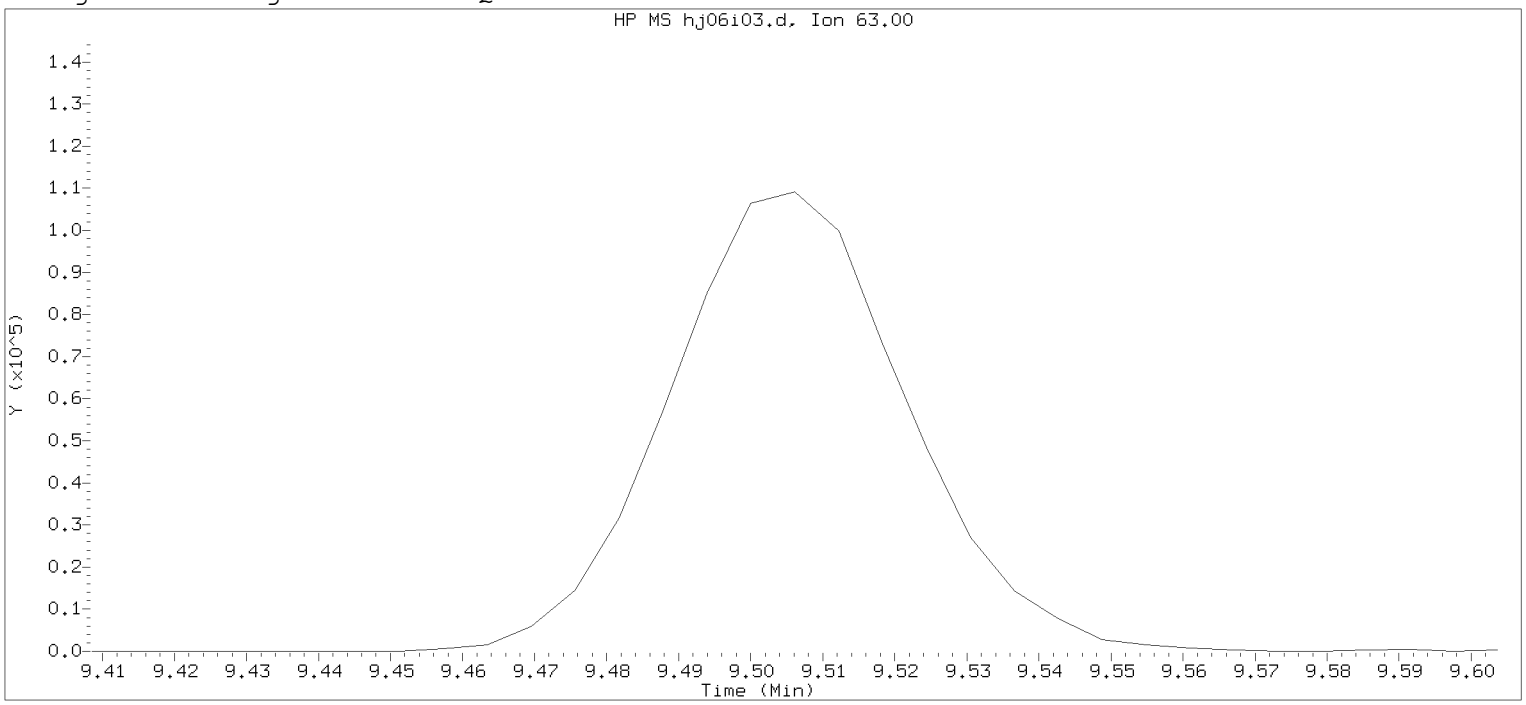
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

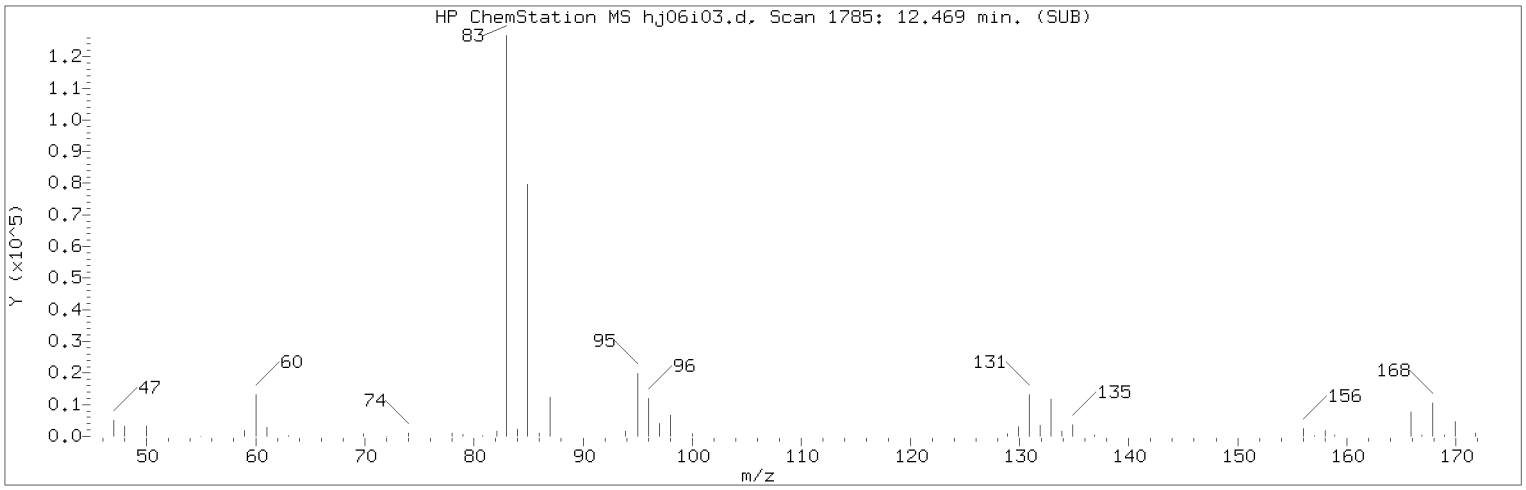
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

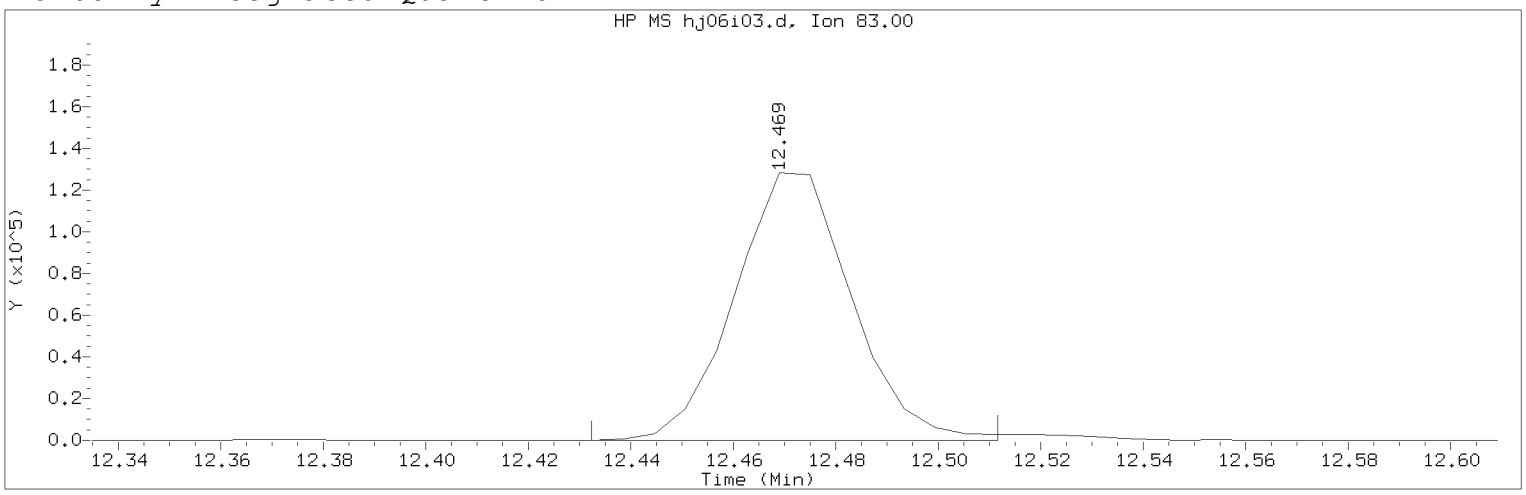
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

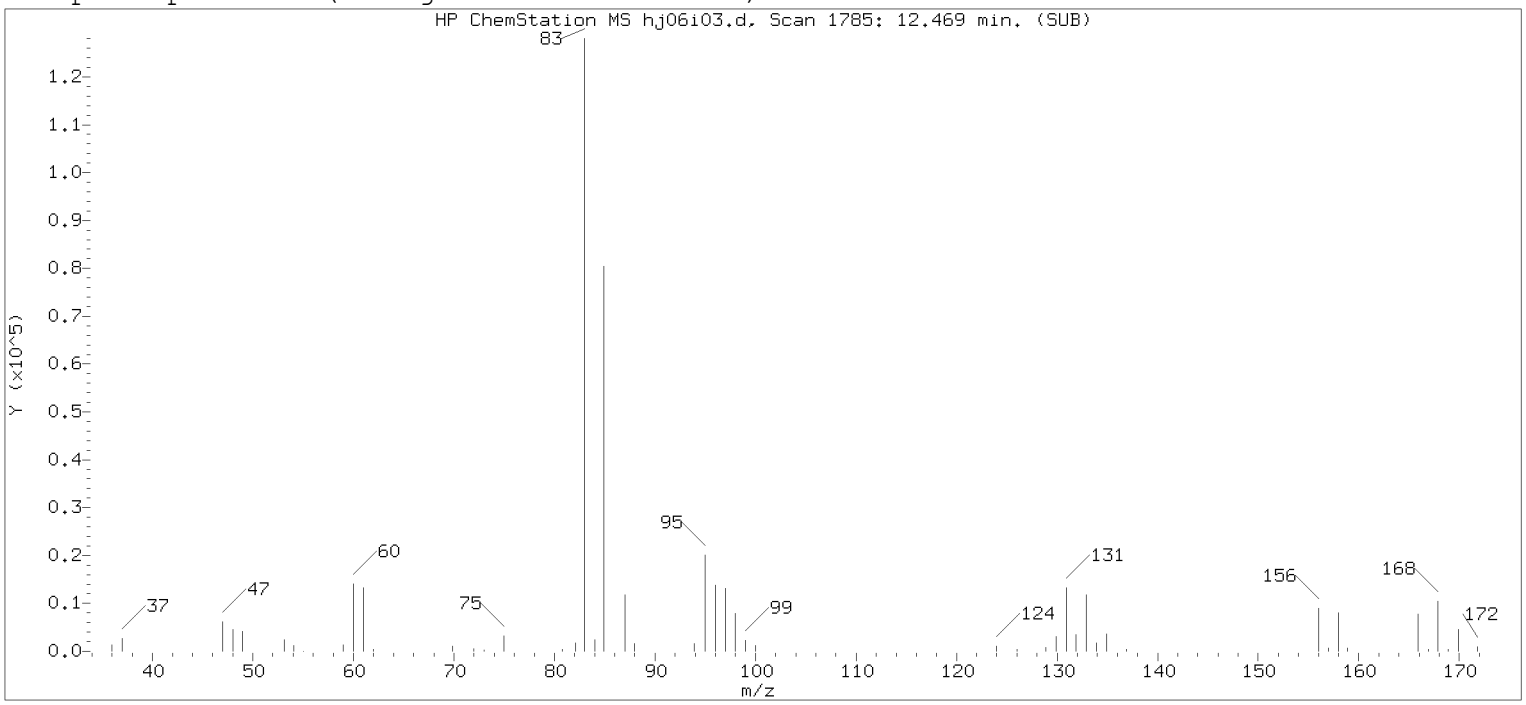
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 203525M
On-Column Amount (ng) : 5.0485
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

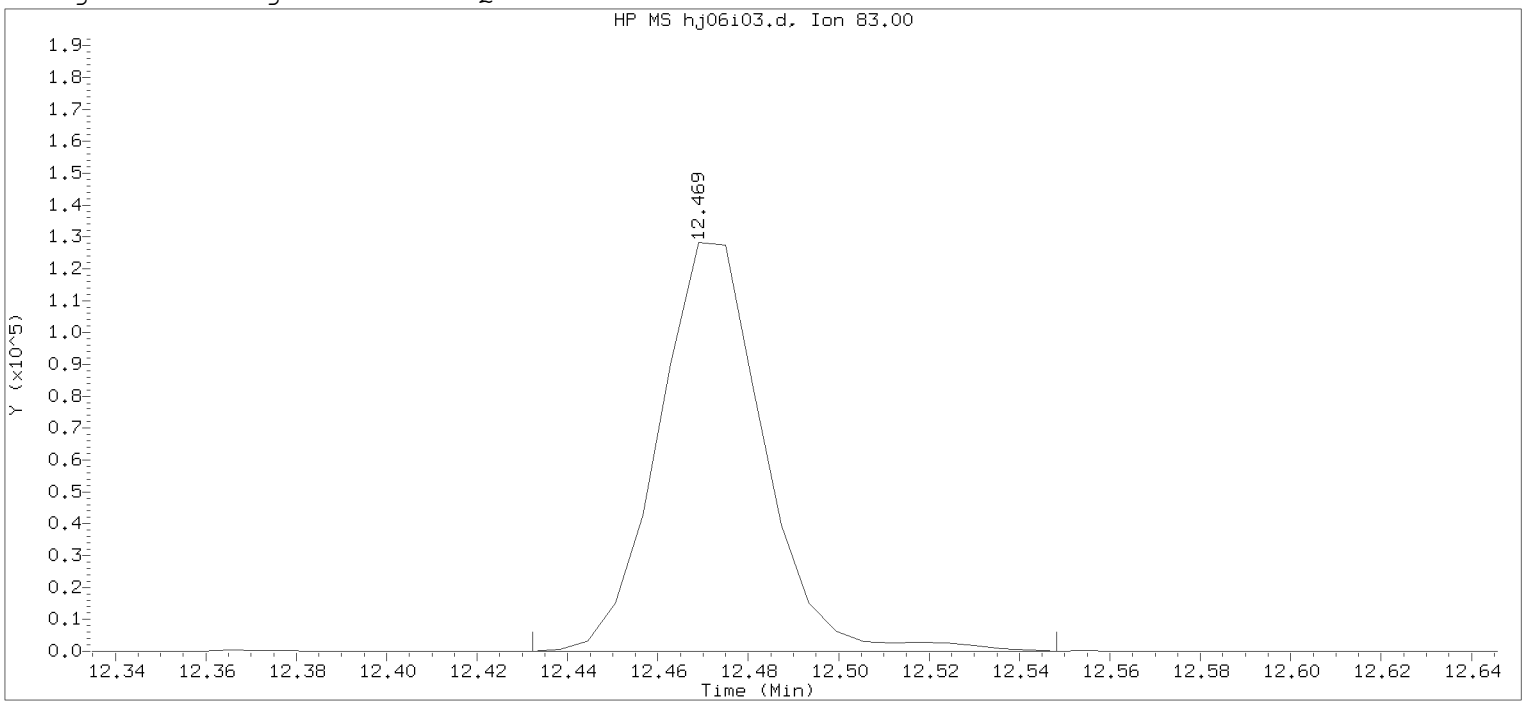
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

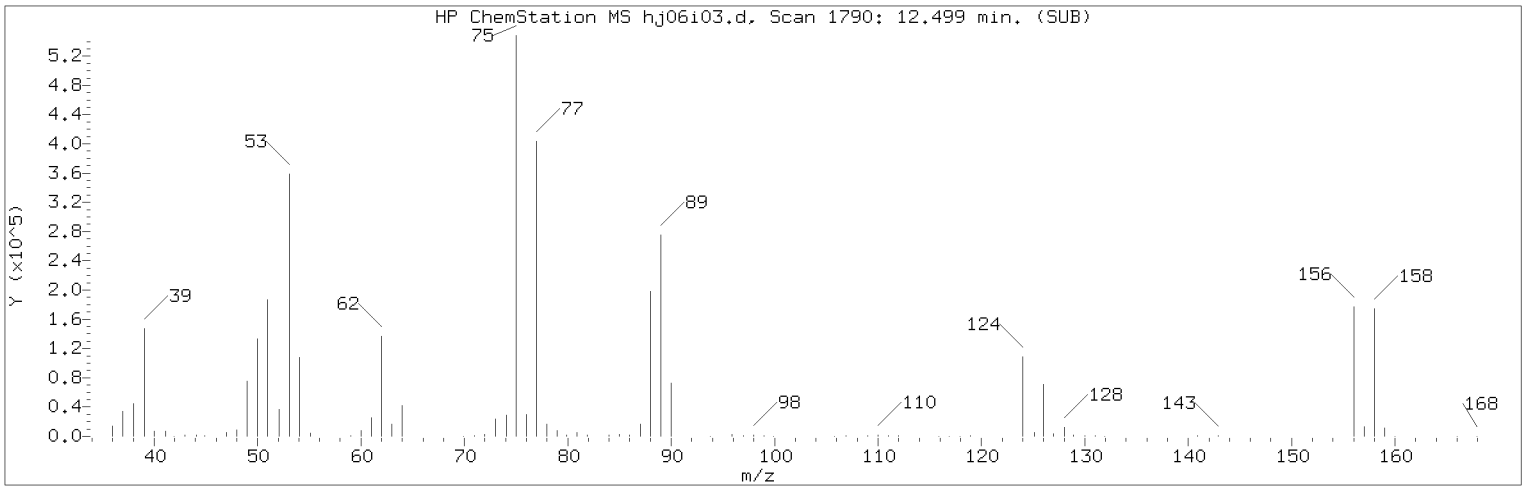
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

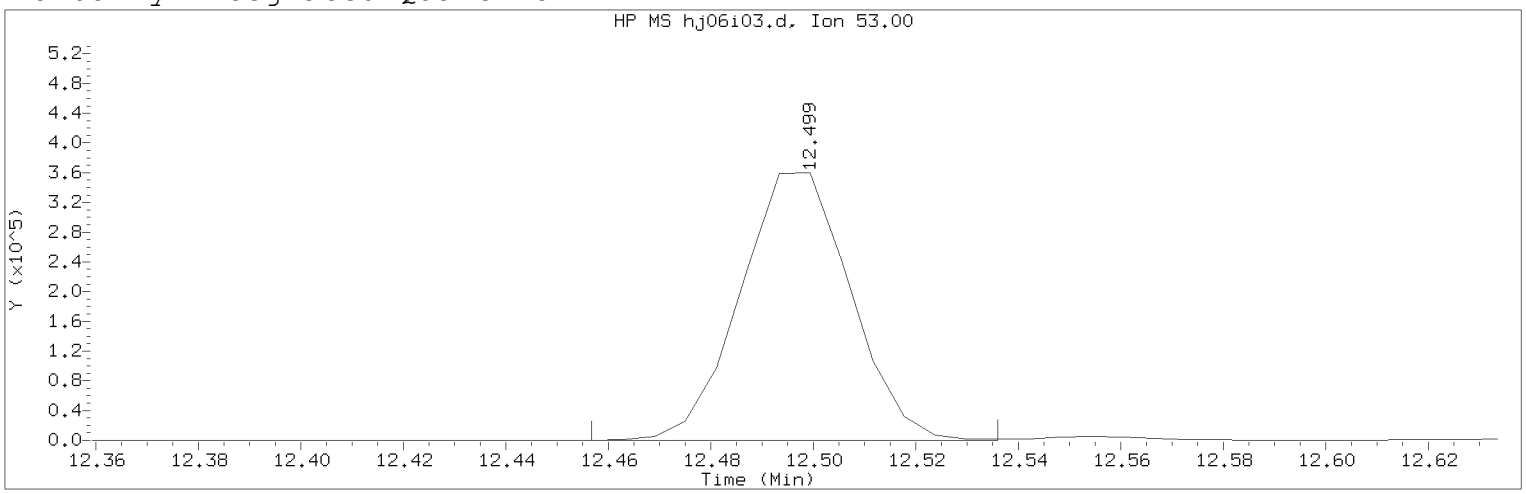
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 206626
On-column Amount (ng) : 4.9272
Integration start scan : 1778 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

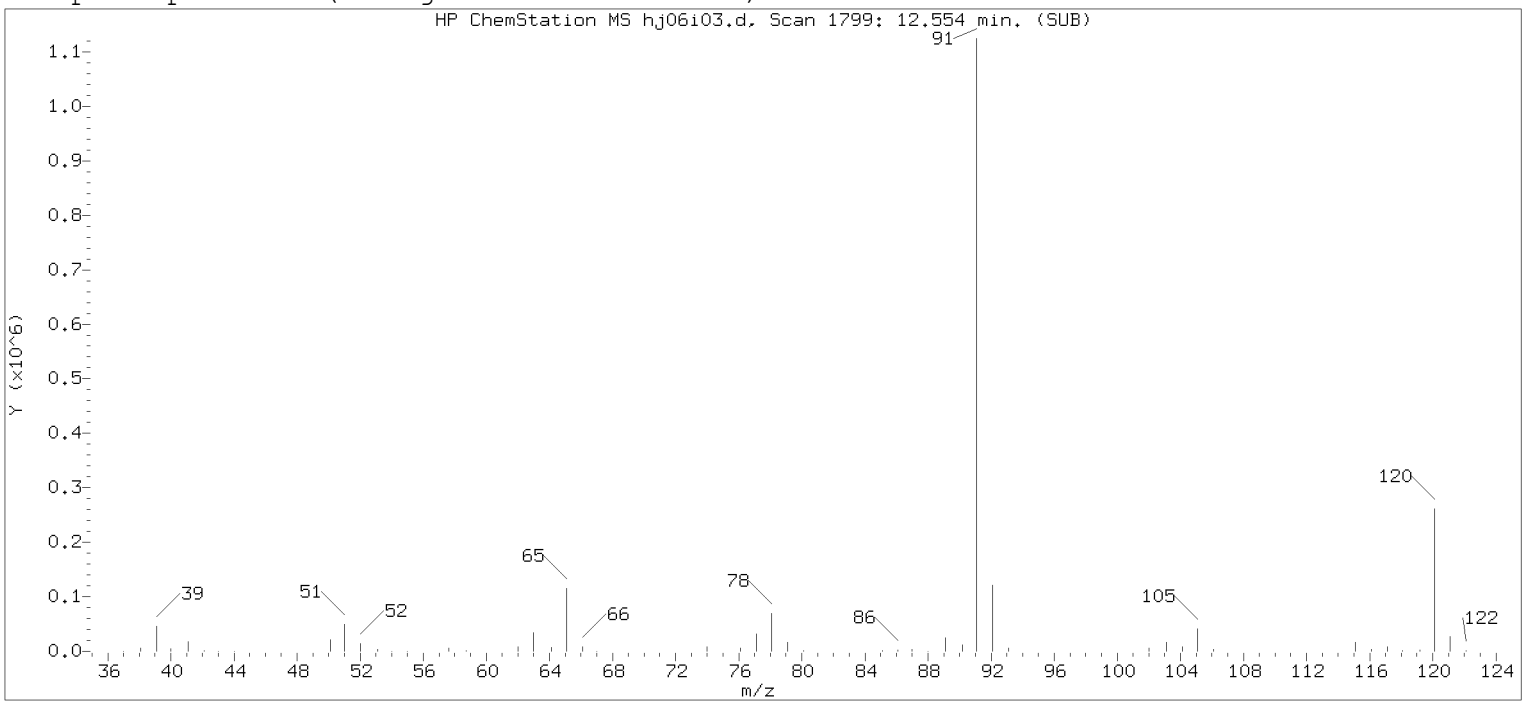
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1790
Retention Time (minutes): 12.499
Quant Ion : 53.00
Area (flag) : 538157A
On-Column Amount (ng) : 52.8194
Integration start scan : 1782 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

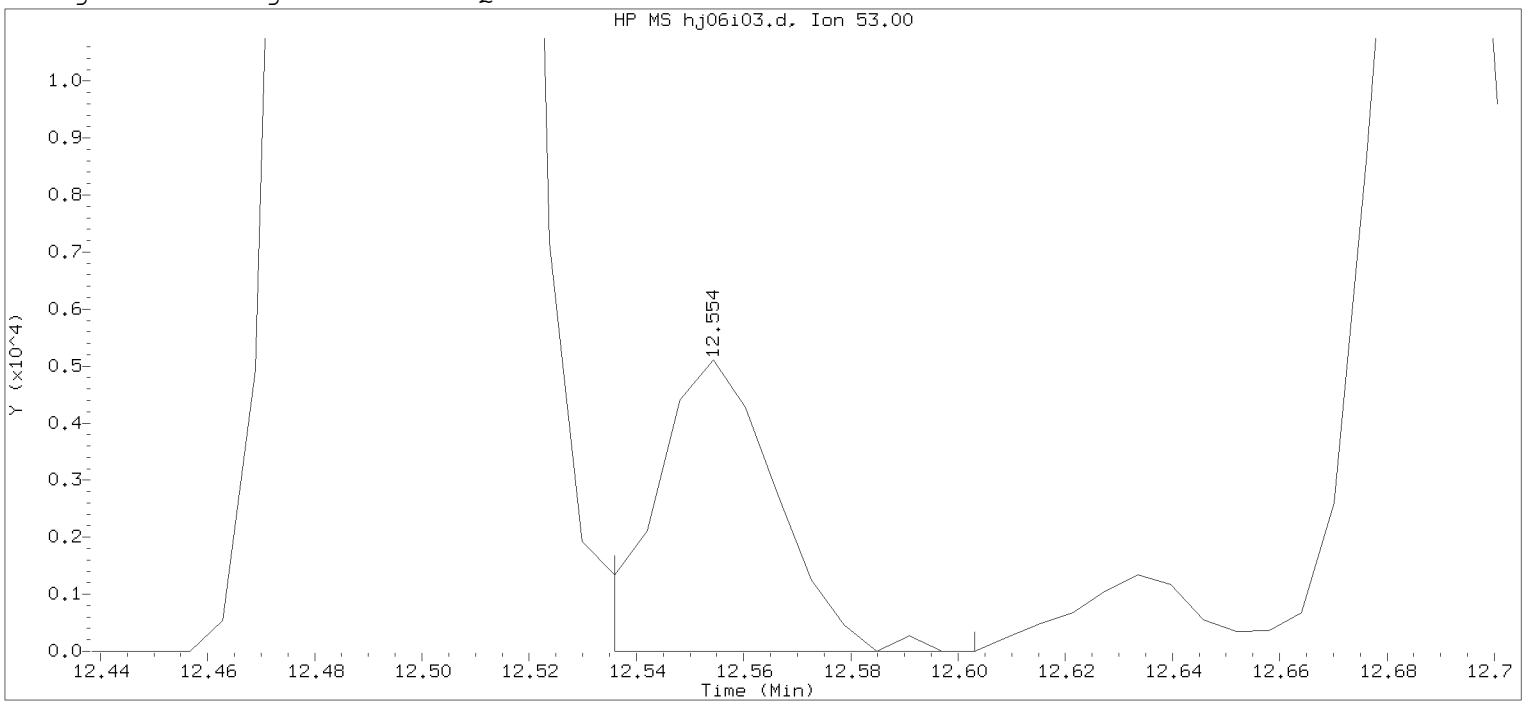
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

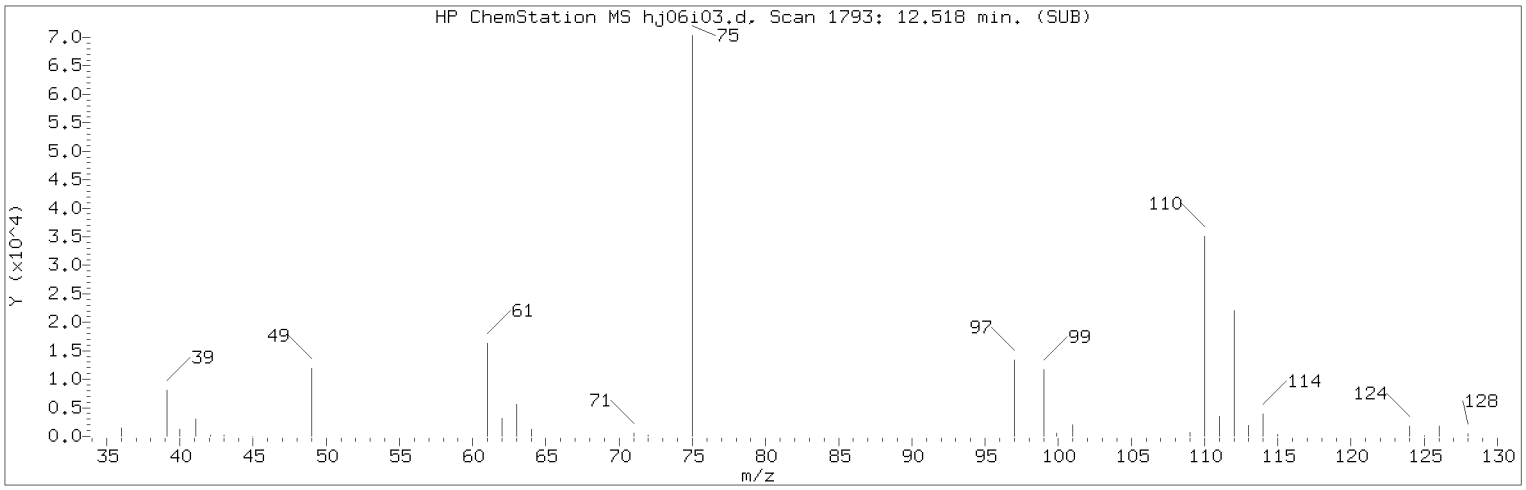
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

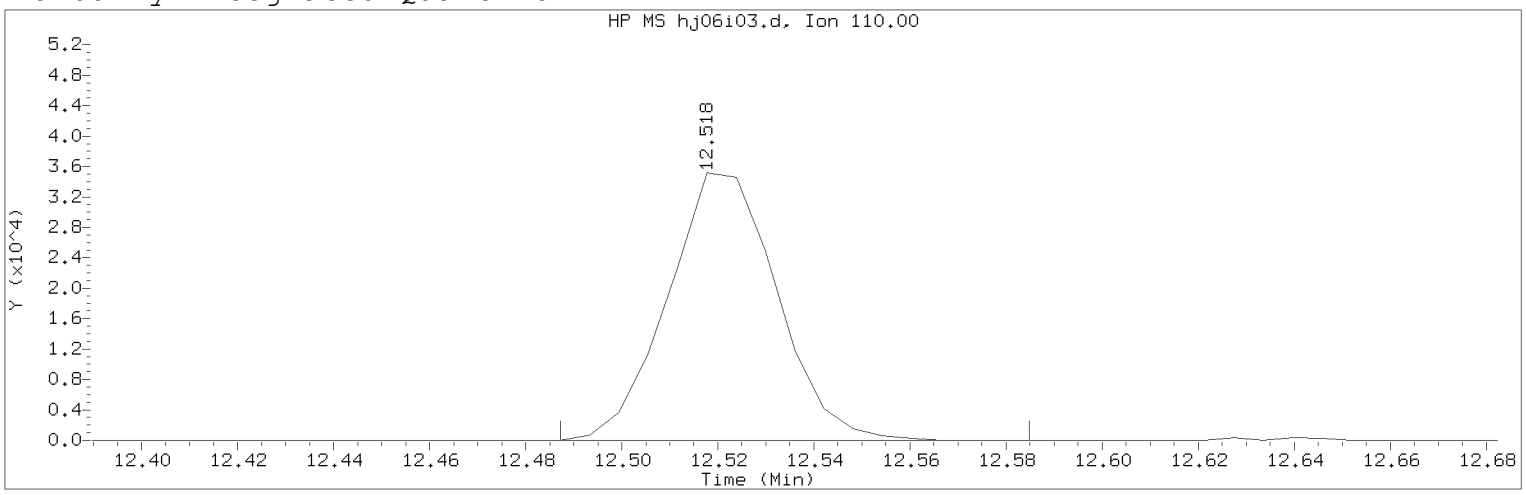
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1799
Retention Time (minutes): 12.554
Quant Ion : 53.00
Area : 7791
On-column Amount (ng) : 2.1518
Integration start scan : 1795 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

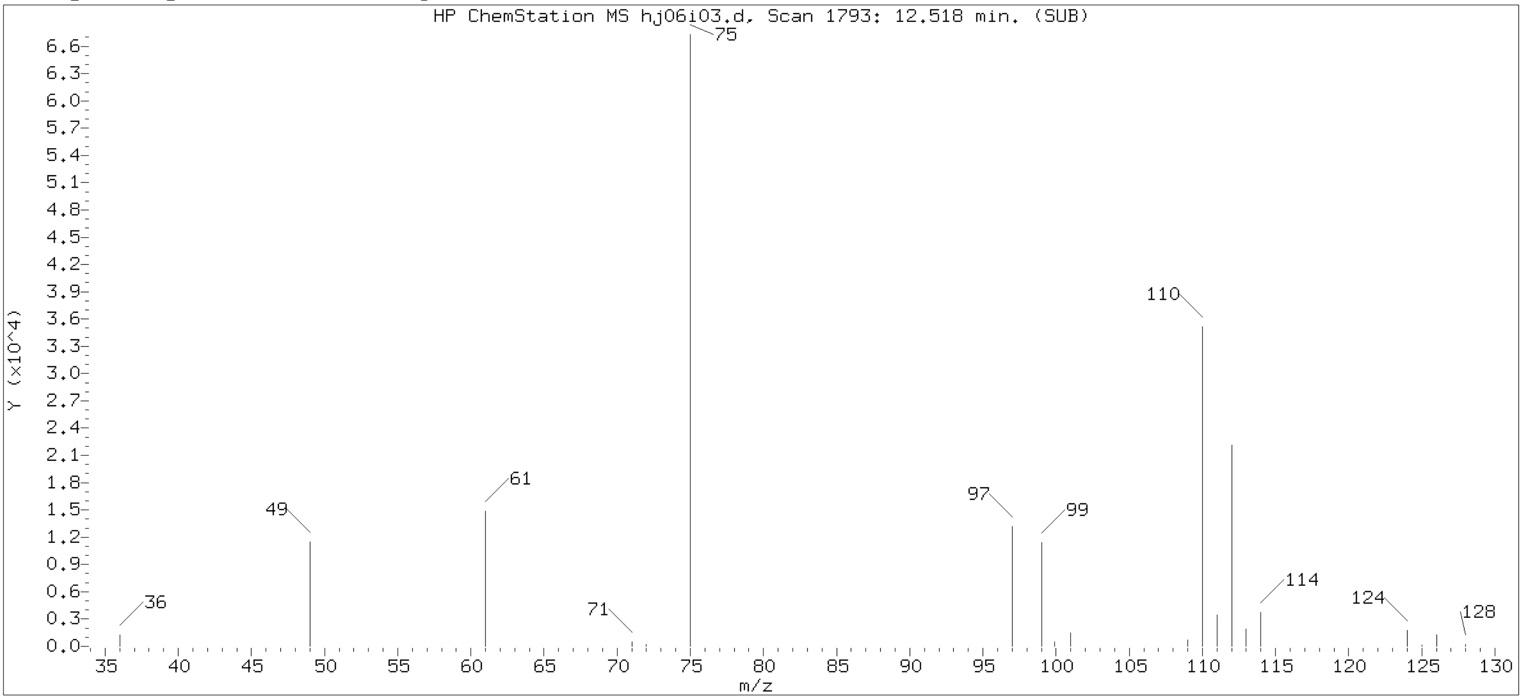
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 55435M
On-Column Amount (ng) : 5.1350
Integration start scan : 1787 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

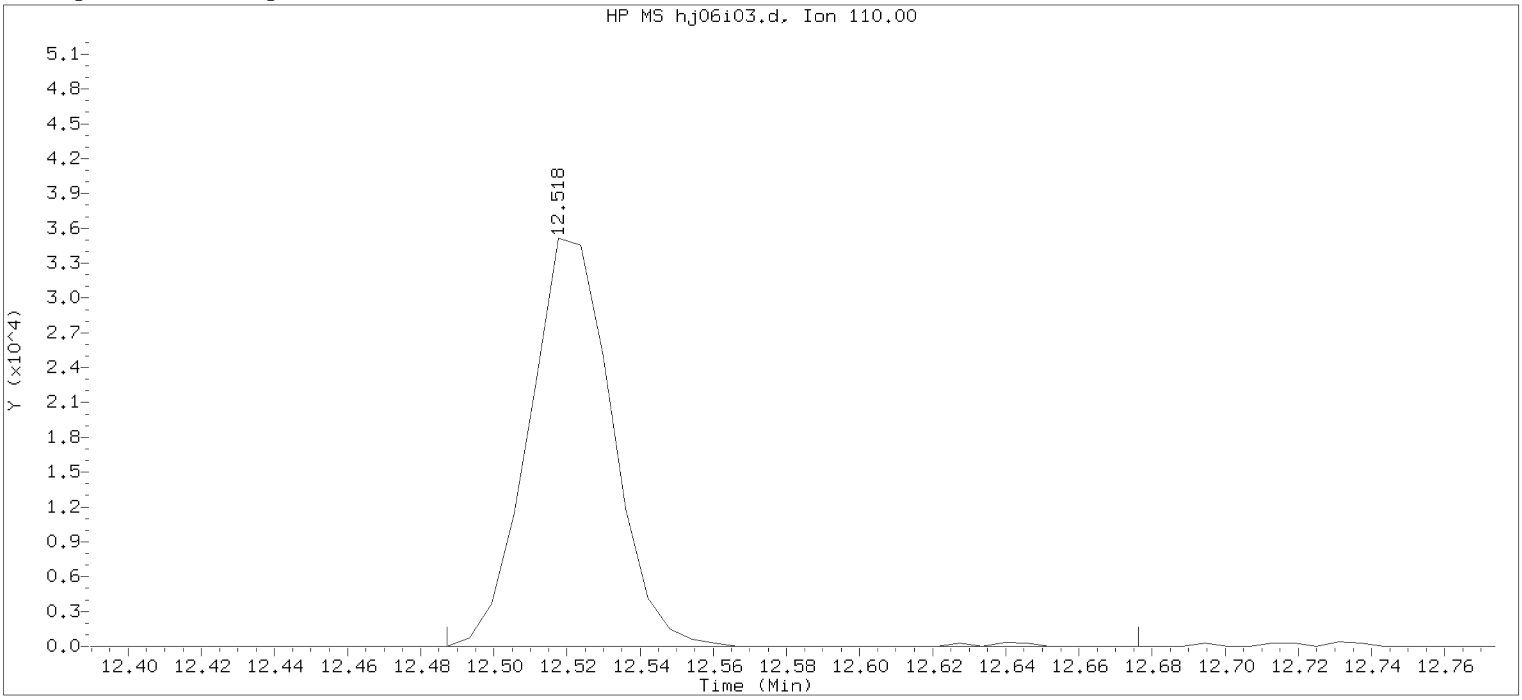
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

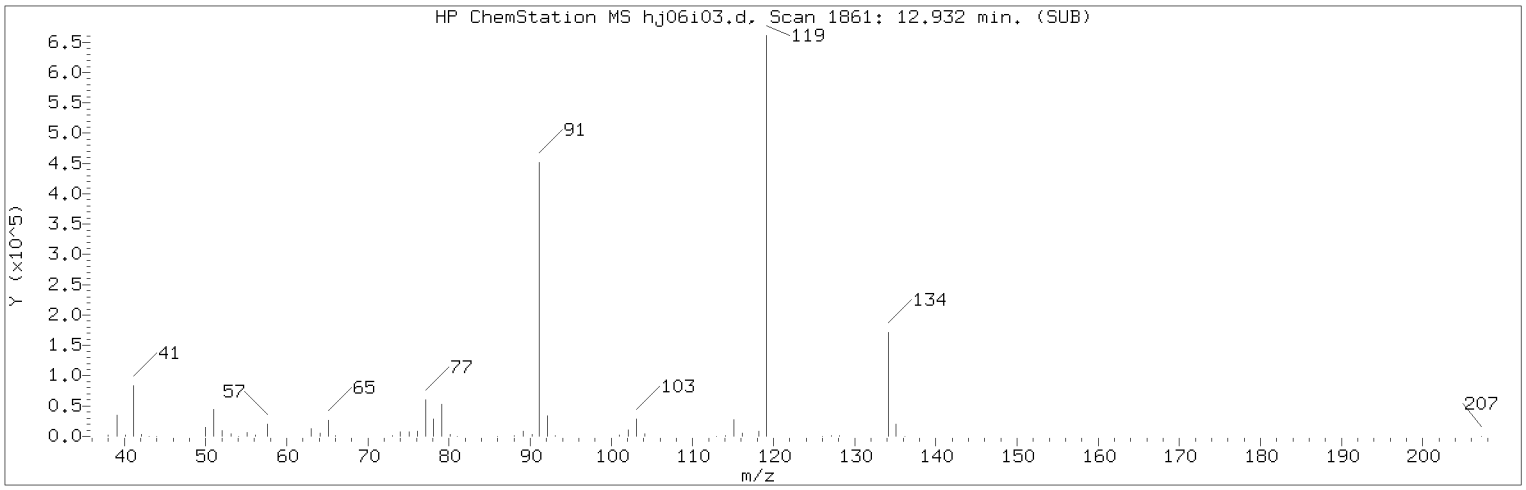
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

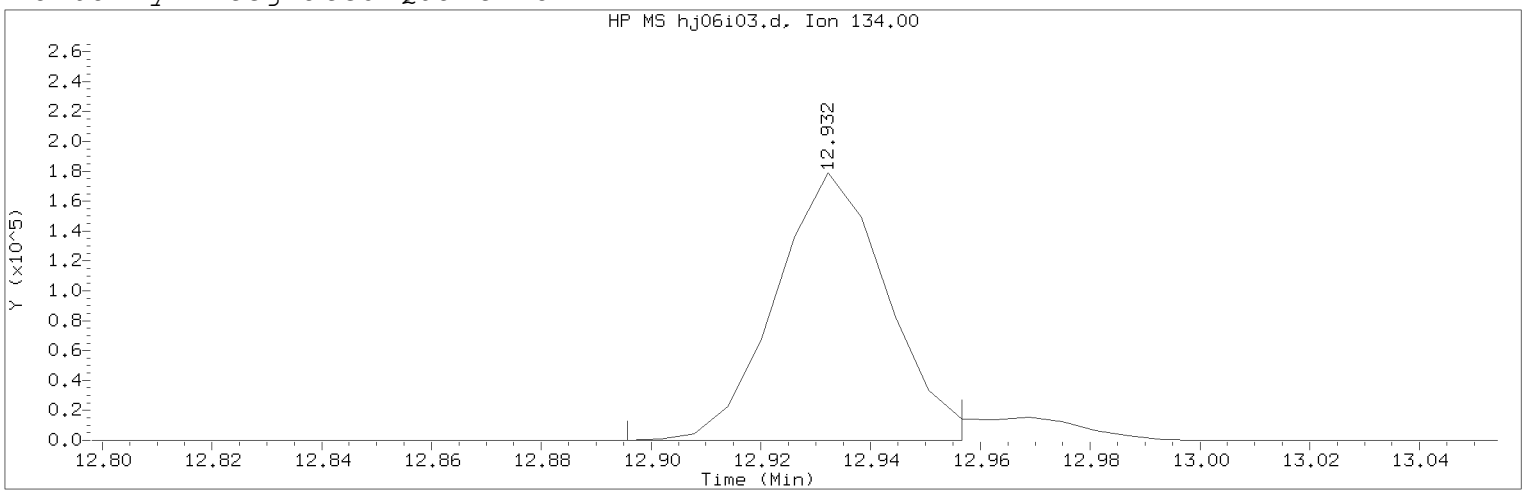
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 55764
On-column Amount (ng) : 5.0515
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02004

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

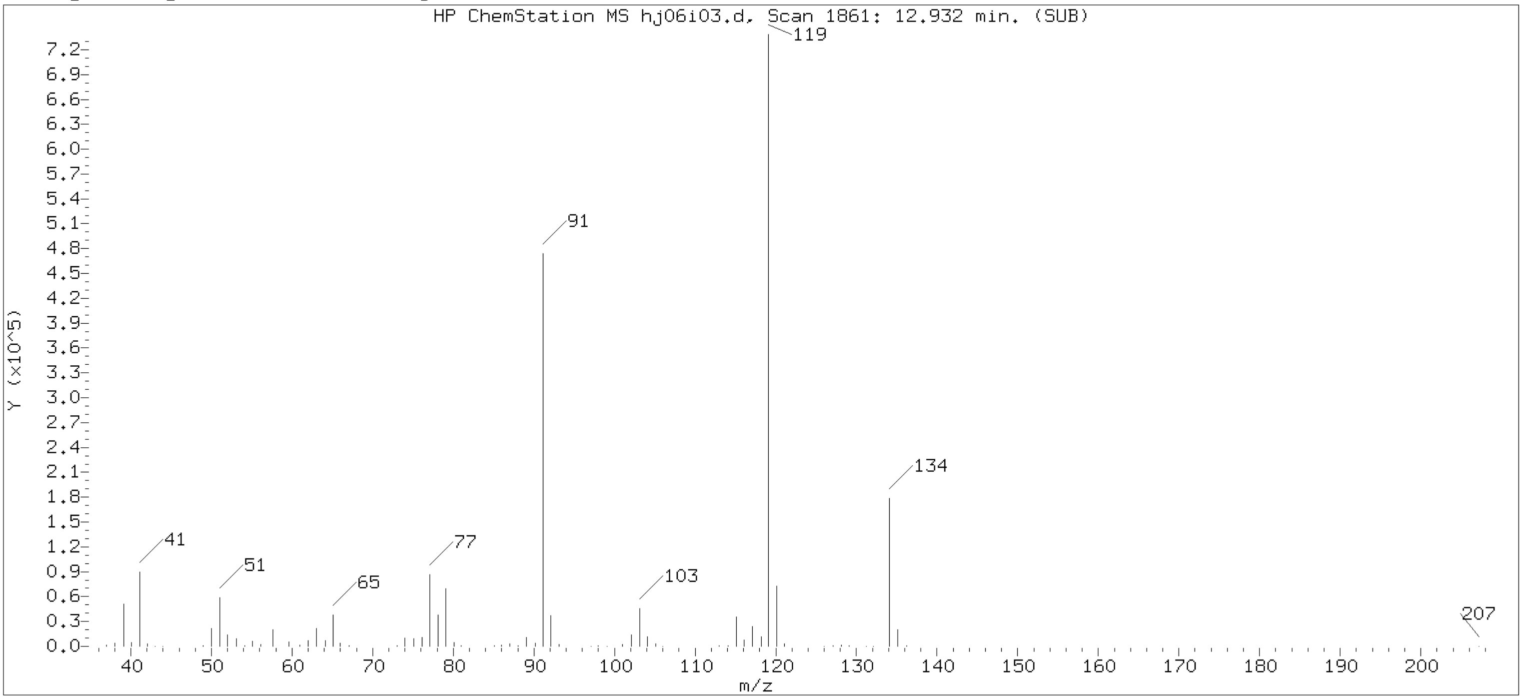
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 252740M
On-Column Amount (ng) : 5.2936
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

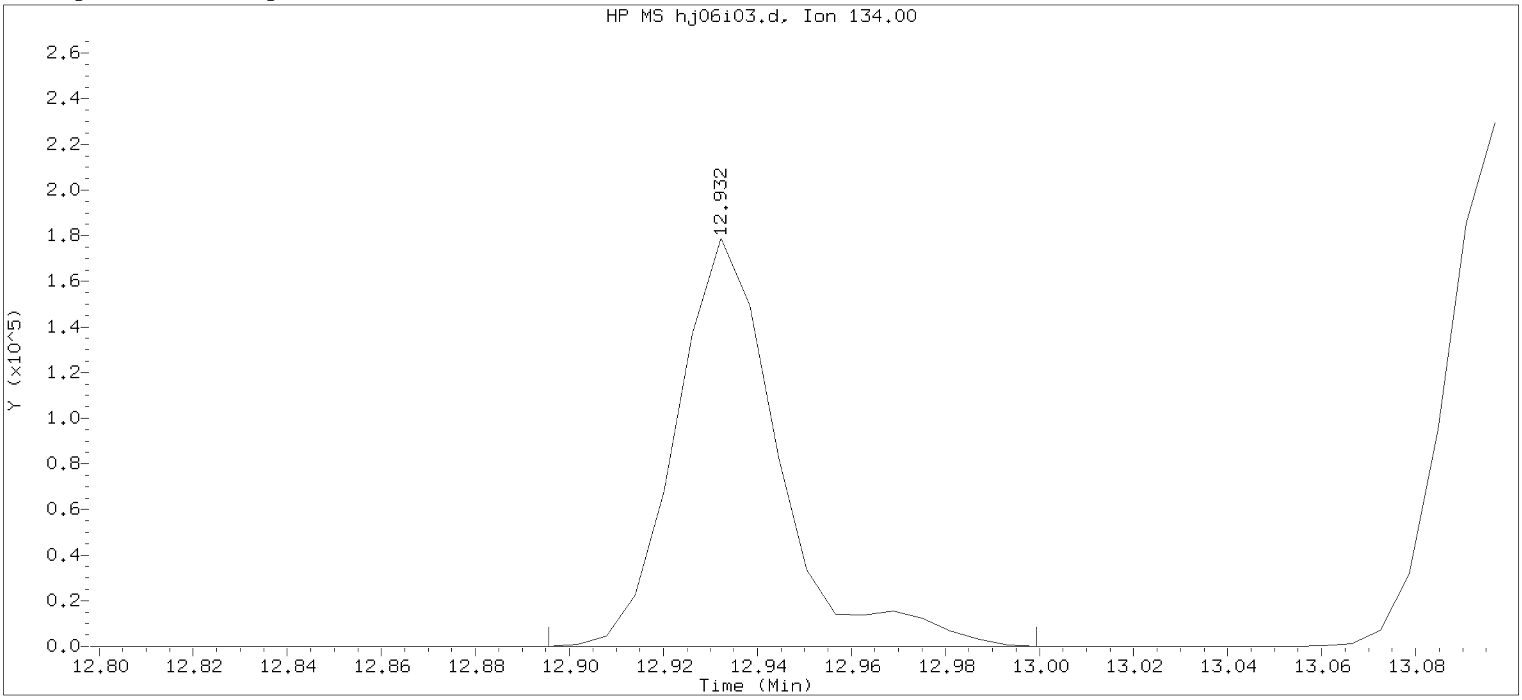
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18   Analyst ID: JKH09052

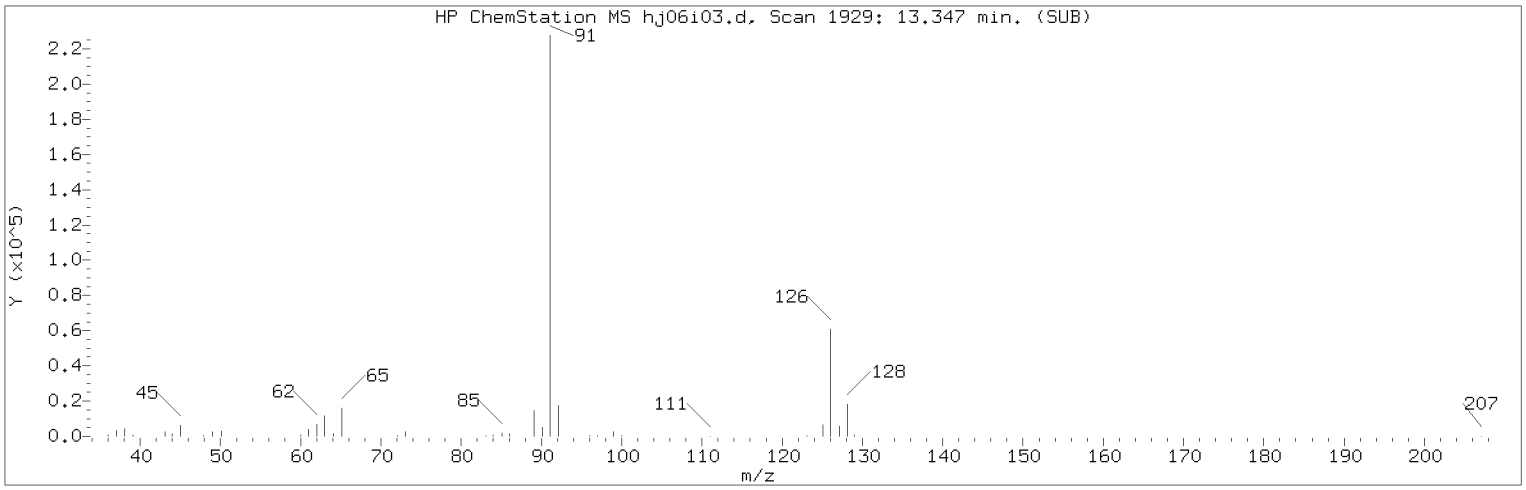
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005   Lab Sample ID: VSTD005

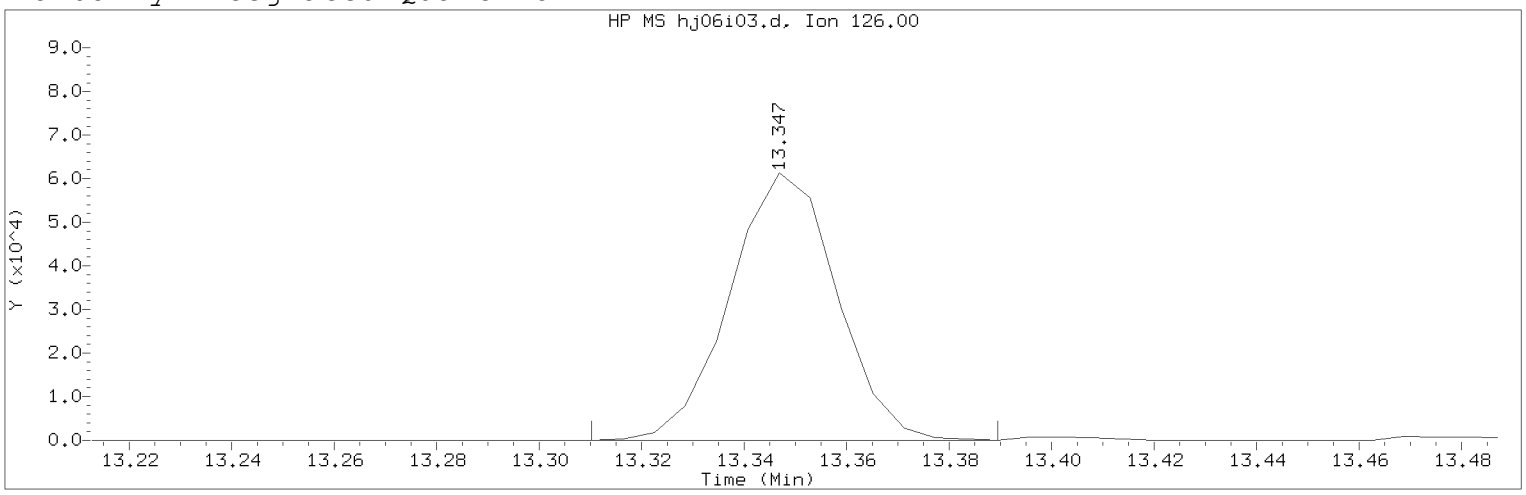
Compound Number	: 126
Compound Name	: tert-Butylbenzene
Scan Number	: 1861
Retention Time (minutes)	: 12.932
Quant Ion	: 134.00
Area	: 271783
On-column Amount (ng)	: 5.2974
Integration start scan	: 1854 Integration stop scan: 1871
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

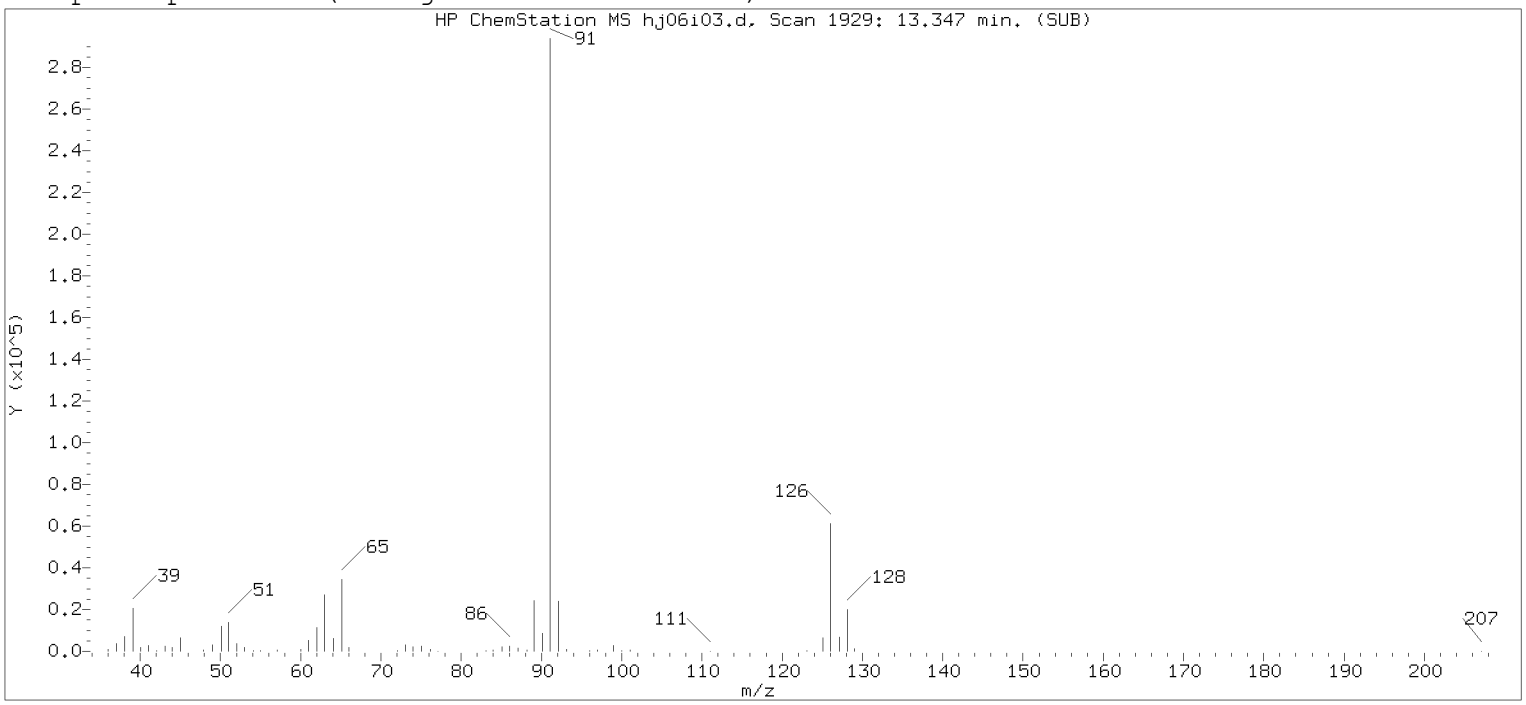
Compound Number : 137
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 88697M
On-Column Amount (ng) : 5.2335
Integration start scan : 1922 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

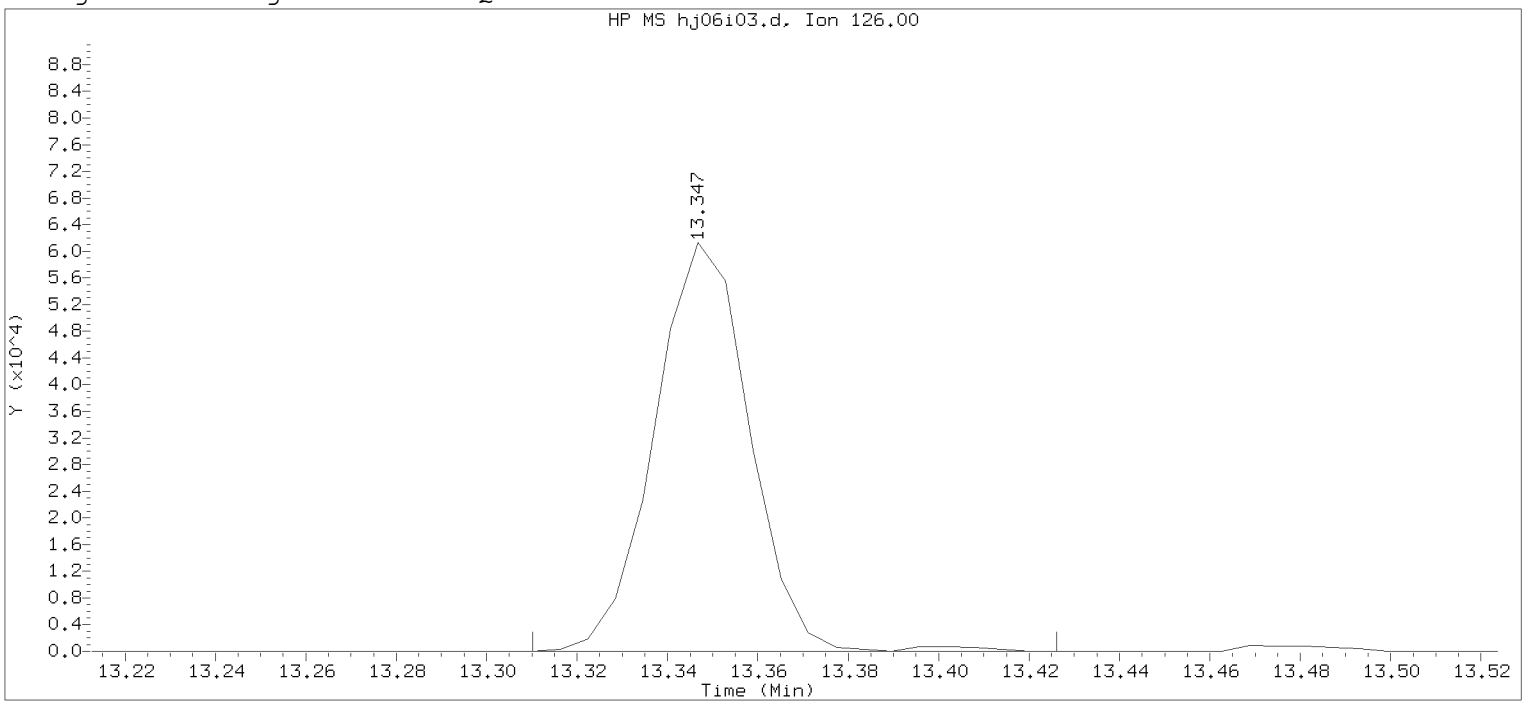
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



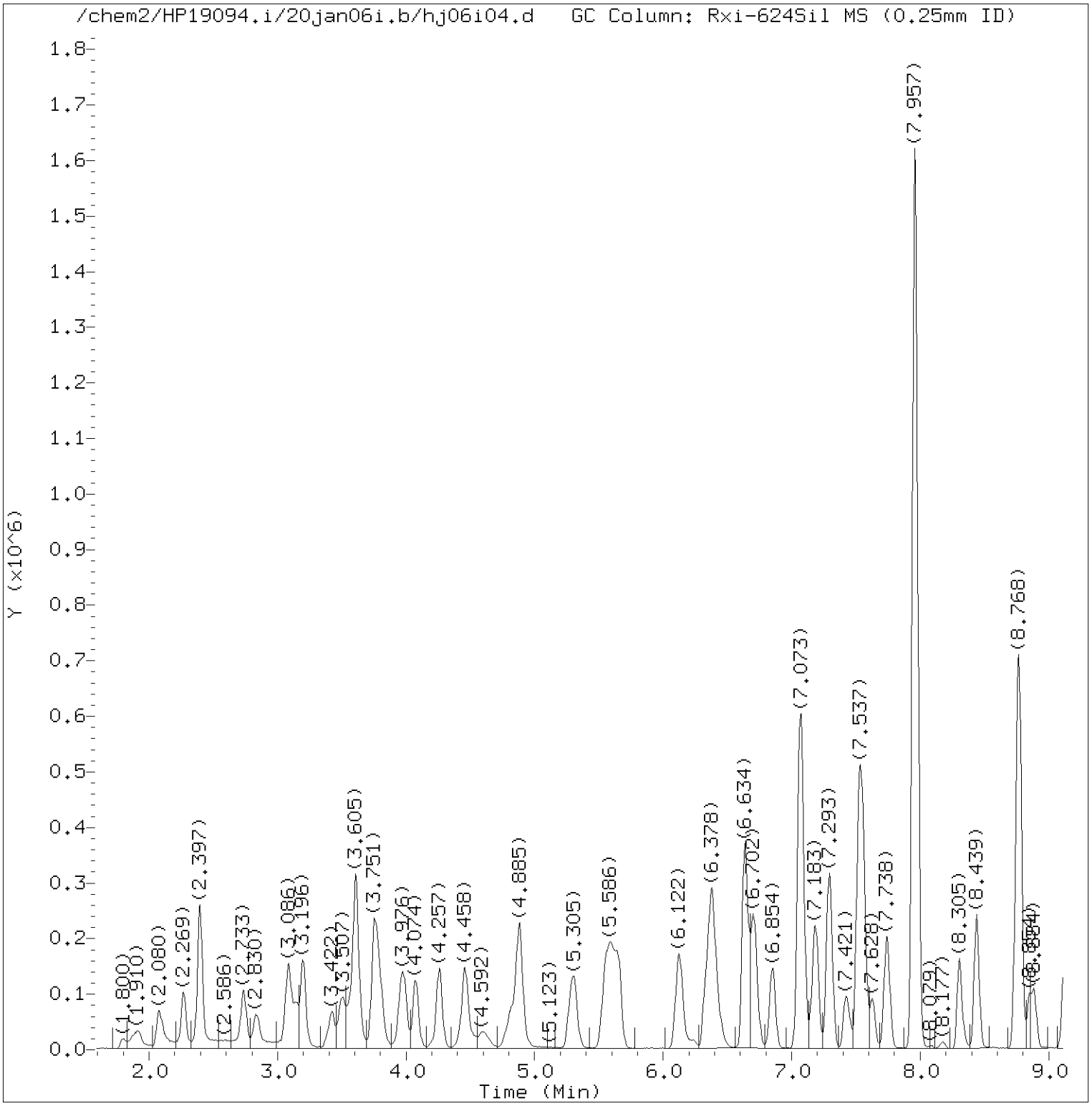
Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 137
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 89552
On-column Amount (ng) : 4.9342
Integration start scan : 1922 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: SJOHNSON



Total Ion Chromatogram (TIC)

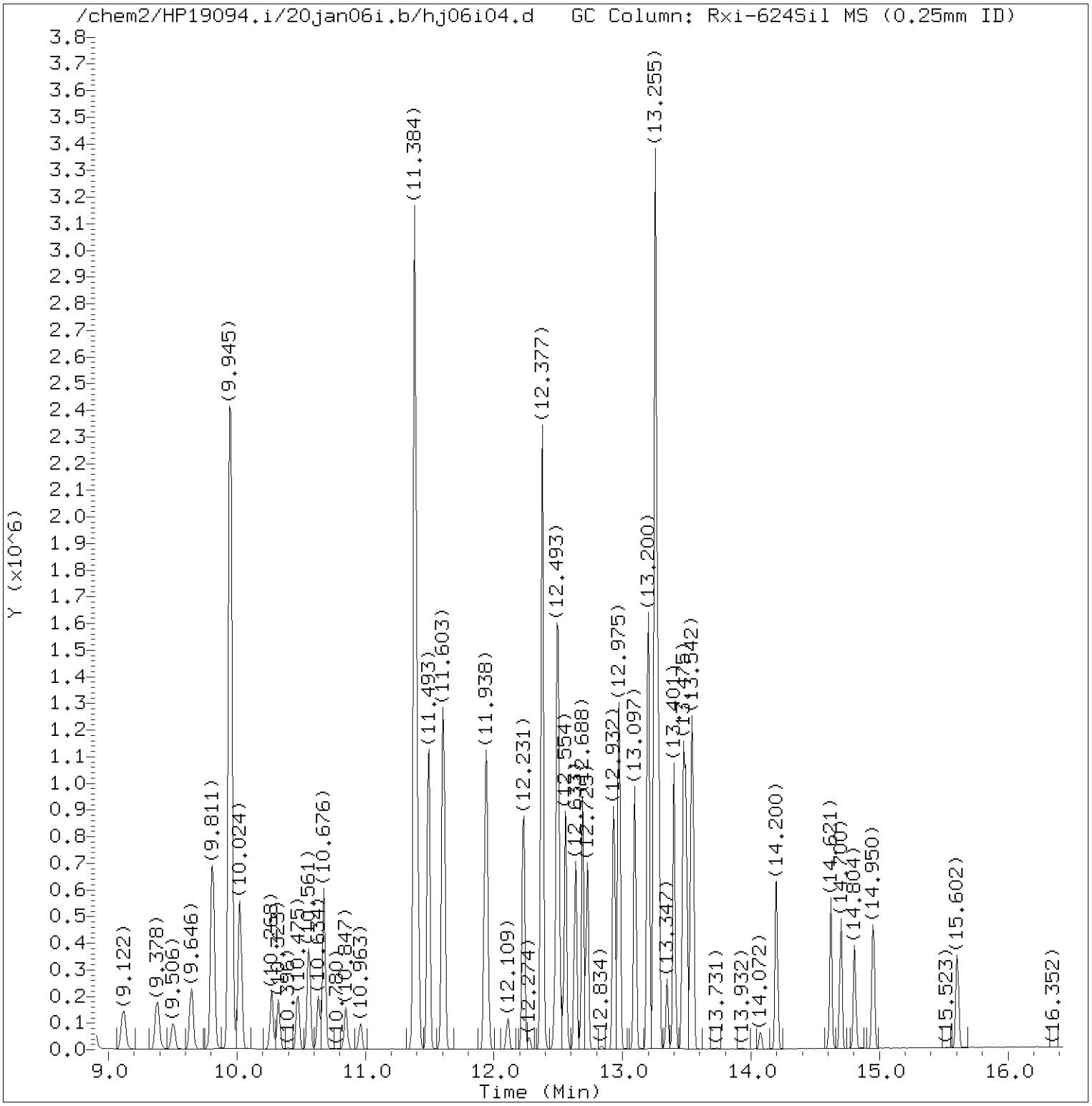
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	149722M	2.007
2) Chloromethane	(2)	2.269	50	143350	1.947
5) Vinyl Chloride	(2)	2.391	62	139052	1.985
6) 1,3-Butadiene	(2)	2.397	39	109568M	1.980
7) Bromomethane	(2)	2.733	94	98480	1.963
8) Chloroethane	(2)	2.830	64	79733	1.966
9) Dichlorofluoromethane	(2)	3.080	67	190321	1.976
10) Trichlorofluoromethane	(2)	3.147	101	164218M	2.054
11) Ethyl ether	(2)	3.422	59	70074	1.981
12) Freon 123a	(2)	3.507	67	122953	1.989
13) Acrolein	(1)	3.605	56	545377	96.587
15) 1,1-Dichloroethene	(2)	3.751	96	96615	1.987
16) Freon 113	(2)	3.781	101	103861	2.044
14) Acetone	(1)	3.787	43	144771M	19.001
17) Methyl Iodide	(2)	3.958	142	187692	2.001
18) Bromoethane	(2)	3.989	108	82628M	1.948
19) Carbon Disulfide	(2)	4.074	76	296775	1.995
22) Methyl Acetate	(1)	4.233	43	37019	1.925
23) Allyl Chloride	(2)	4.263	41	158359	1.917
24) Methylene Chloride	(2)	4.458	84	102992	1.968
27)*t-Butyl Alcohol-d10	(1)	4.458	65	125392	50.000
29) t-Butyl Alcohol	(1)	4.592	59	106730	40.326
30) Acrylonitrile	(1)	4.806	53	92174	9.914
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	225215	2.026
32) trans-1,2-Dichloroethene	(2)	4.885	96	104955	1.964
33) n-Hexane	(2)	5.305	57	151979	2.016
34) 1,1-Dichloroethane	(2)	5.549	63	191645	1.986
35) di-Isopropyl Ether	(2)	5.592	45	317427	1.997
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	163907	1.984
41) 1,2-Dichloroethene (Total)	(2)		96	221882	3.933
38) Ethyl t-butyl ether	(2)	6.122	59	297914	1.997
39) 2-Butanone	(1)	6.330	43	229650	19.277
40) cis-1,2-Dichloroethene	(2)	6.372	96	116927	1.969
42) 2,2-Dichloropropane	(2)	6.391	77	163308	1.989
43) Propionitrile	(1)	6.421	54	127206	38.980
46) Methacrylonitrile	(1)	6.634	67	229628	19.674
48) Bromochloromethane	(2)	6.702	128	49796	1.986
49) Tetrahydrofuran	(1)	6.708	71	65232	19.819

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	192171	2.041
51)$Dibromofluoromethane	(2)	7.067	113	496104	10.029
51)$Dibromofluoromethane	(2)	7.067	111	509210	10.019
52) 1,1,1-Trichloroethane	(2)	7.086	97	175404M	2.003
53) Cyclohexane	(2)	7.183	56	186820	1.997
53) Cyclohexane	(2)	7.177	84	162834	2.032
53) Cyclohexane	(2)	7.183	69	58825	2.021
56) 1,1-Dichloropropene	(2)	7.293	75	148995M	2.013
55) Carbon Tetrachloride	(2)	7.299	117	149793	1.995
57) Isobutyl Alcohol	(1)	7.427	41	87698	95.594
58)$1,2-Dichloroethane-d4	(2)	7.518	102	97406M	10.160
58)$1,2-Dichloroethane-d4	(2)	7.525	65	448109	10.130
58)$1,2-Dichloroethane-d4	(2)	7.525	104	61677	10.157
59) Benzene	(2)	7.555	78	433340	2.002
60) 1,2-Dichloroethane	(2)	7.628	62	108570	1.945
61) t-Amyl methyl ether	(2)	7.738	73	264747	2.034
64)*Fluorobenzene	(2)	7.957	96	1989998	10.000
63) n-Heptane	(2)	7.963	43	157624	1.993
66) n-Butanol	(1)	8.305	56	150886	204.300
68) Trichloroethene	(2)	8.439	95	113182	1.994
70) Methylcyclohexane	(2)	8.750	83	207251	2.038
71) 1,2-Dichloropropane	(2)	8.774	63	108667	2.029
72) Methyl Methacrylate	(1)	8.847	69	46099	1.963
73) 1,4-Dioxane	(1)	8.872	88	20263M	113.754
74) Dibromomethane	(2)	8.890	93	49061	2.004
75) Bromodichloromethane	(2)	9.122	83	133411	2.005
77) 2-Nitropropane	(1)	9.384	41	149212	19.349
80) 1-Bromo-2-chloroethane	(2)	9.506	63	99821M	1.983
81) cis-1,3-Dichloropropene	(2)	9.646	75	157293	2.002
82) 4-Methyl-2-Pentanone	(1)	9.811	43	574351	19.560
83)$Toluene-d8	(3)	9.945	98	1981567	10.088
83)$Toluene-d8	(3)	9.945	100	1279443	10.071
84) Toluene	(3)	10.024	92	277903	2.014
86) 1,3-Dichloropropene (total)	(3)		75	285756	4.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	128463	2.006
87) Ethyl Methacrylate	(3)	10.323	69	99403	2.002
89) 1,1,2-Trichloroethane	(3)	10.475	97	68554	1.977
90) Tetrachloroethene	(3)	10.561	166	125130	1.995

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	119837	2.012
92) 2-Hexanone	(1)	10.676	43	394884	19.681
94) Dibromochloromethane	(3)	10.847	129	88084	1.984
96) 1,2-Dibromoethane	(3)	10.963	107	66500	2.007
97) 1-Chlorohexane	(3)	11.384	91	161874	1.946
98)*Chlorobenzene-d5	(3)	11.384	117	1474389	10.000
99) Chlorobenzene	(3)	11.408	112	302801	2.008
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	107151	1.998
101) Ethylbenzene	(3)	11.493	91	543741	2.003
102) m+p-Xylene	(3)	11.603	106	422690	4.071
106) Xylene (Total)	(3)		106	629842	6.100
105) o-Xylene	(3)	11.932	106	207152	2.029
107) Styrene	(3)	11.944	104	338620	2.044
108) Bromoform	(3)	12.109	173	52526	2.030
109) Isopropylbenzene	(3)	12.231	105	557084	2.013
112)$4-Bromofluorobenzene	(3)	12.377	95	734942	10.113
112)$4-Bromofluorobenzene	(3)	12.377	174	626350	10.072
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	82697M	1.995
115) Bromobenzene	(4)	12.493	156	124753	1.991
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	217970	19.761
117) 1,2,3-Trichloropropane	(4)	12.524	110	23119	2.082
118) n-Propylbenzene	(4)	12.554	91	658135	2.011
120) 2-Chlorotoluene	(4)	12.633	126	128157	1.985
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	473210	1.993
123) 4-Chlorotoluene	(4)	12.725	126	128885	2.000
126) tert-Butylbenzene	(4)	12.932	134	95646	1.948
127) Pentachloroethane	(4)	12.969	167	79946	1.910
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	487578	1.989
129) sec-Butylbenzene	(4)	13.097	105	617331	2.007
133) p-Isopropyltoluene	(4)	13.200	119	529063	1.998
132) 1,3-Dichlorobenzene	(4)	13.200	146	249296	1.996
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	794109	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	242806	1.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	195936	1.917
137) Benzyl Chloride	(4)	13.347	126	34248M	1.965
139) n-Butylbenzene	(4)	13.493	92	263210	2.011
140) 1,2-Dichlorobenzene	(4)	13.529	146	224925	2.043
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	12701	2.019

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	189855	1.942
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	158452	1.933
147) Hexachlorobutadiene	(4)	14.700	225	83917	1.962
148) Naphthalene	(4)	14.804	128	283346	1.981
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	138804	1.984

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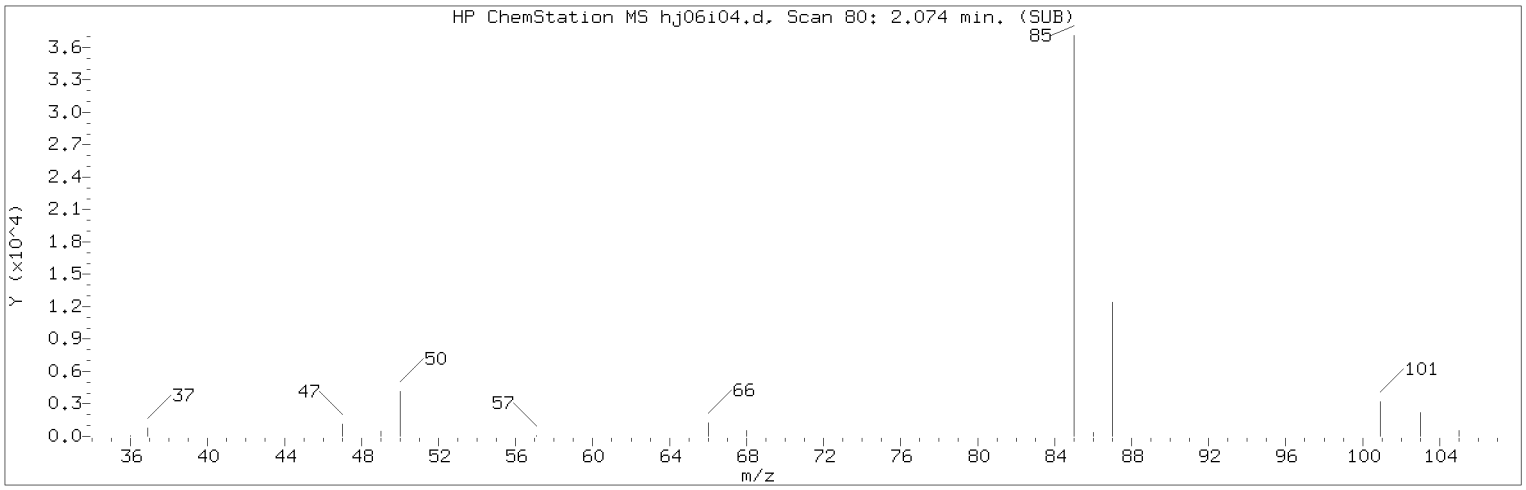
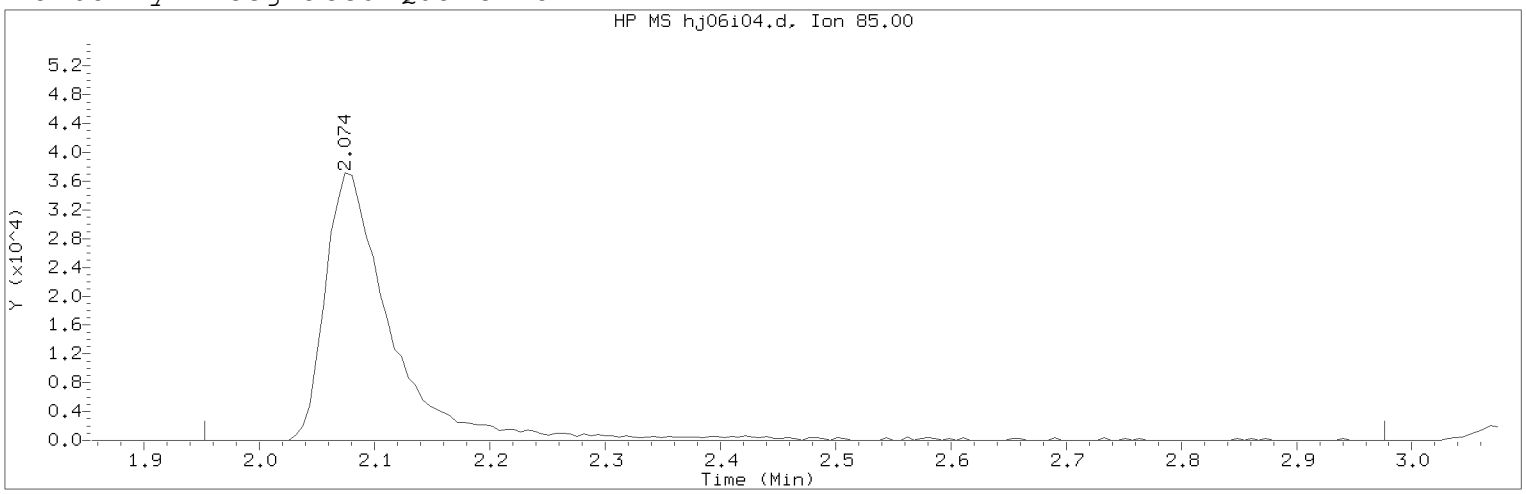
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

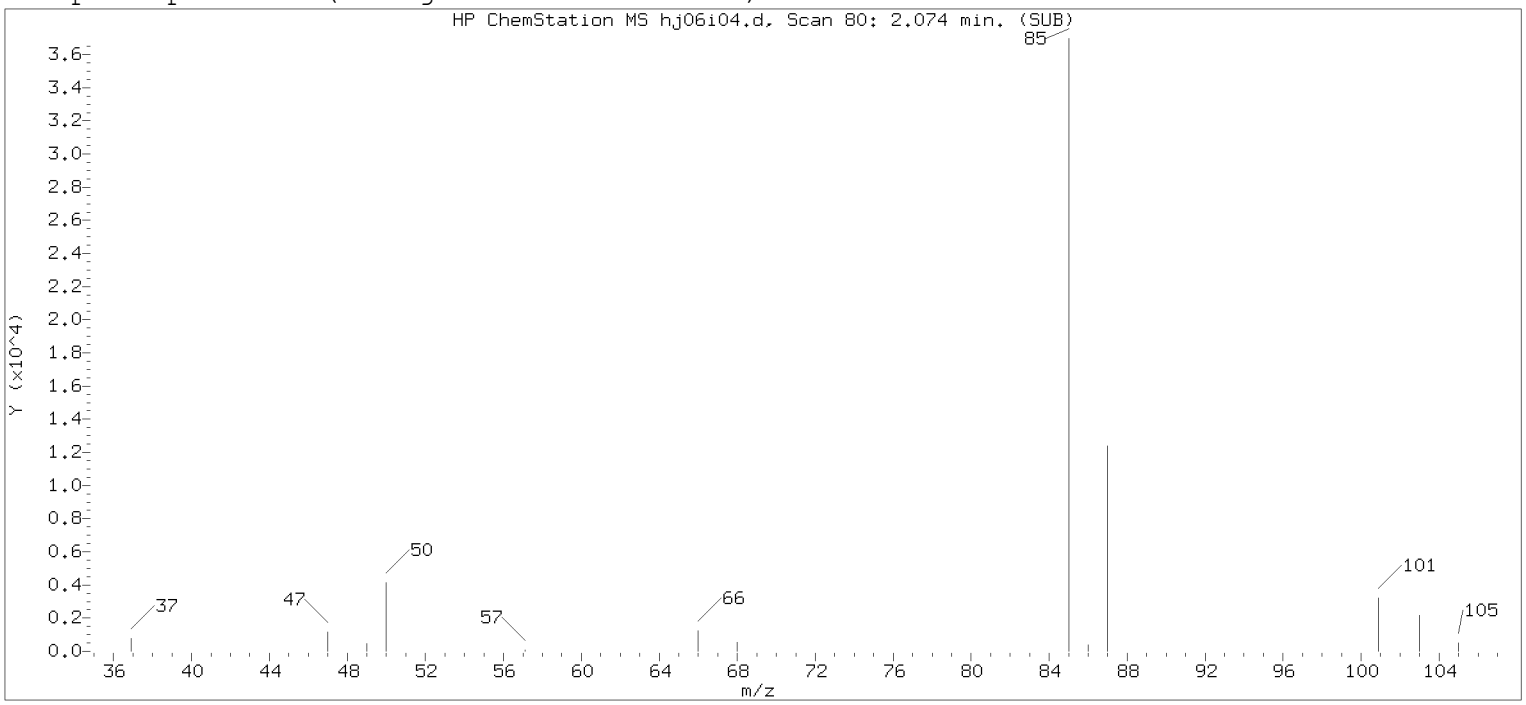
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 149722M
On-Column Amount (ng) : 2.0071
Integration start scan : 59 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

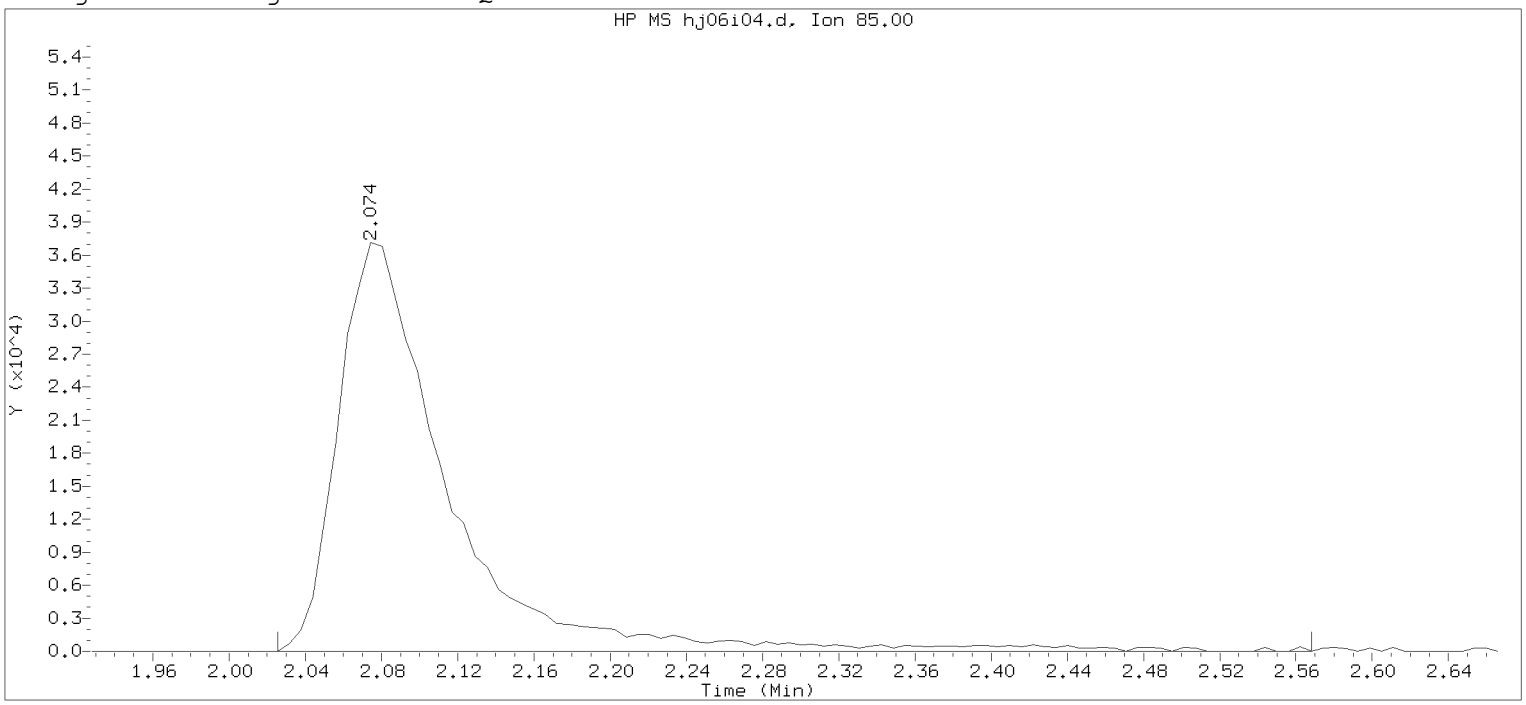
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

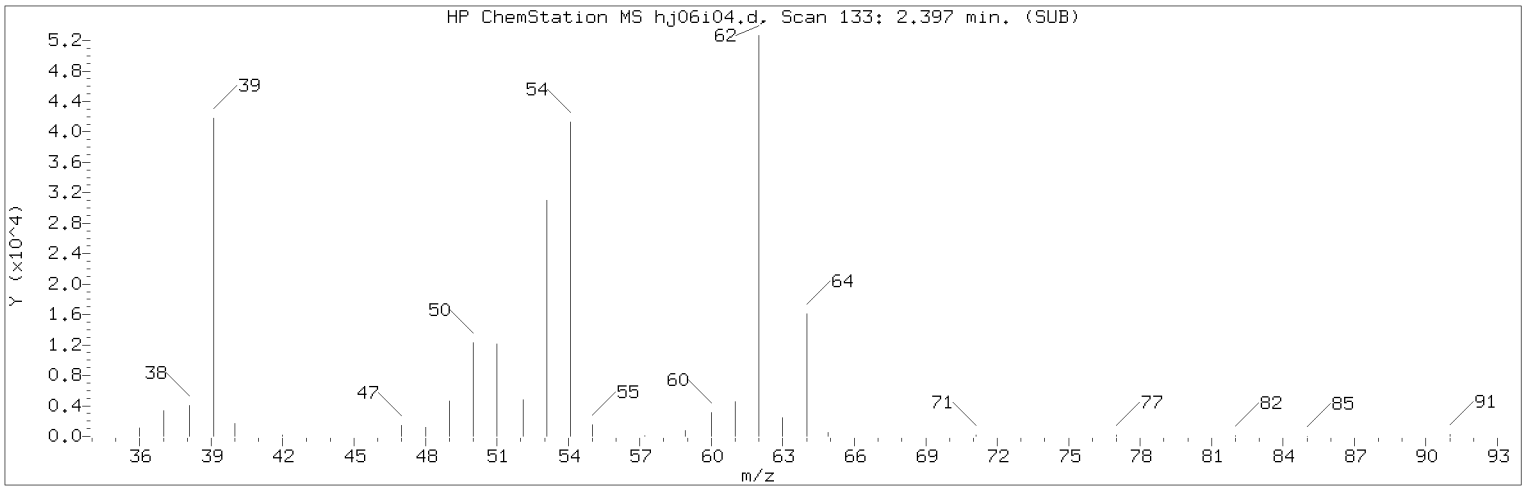
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

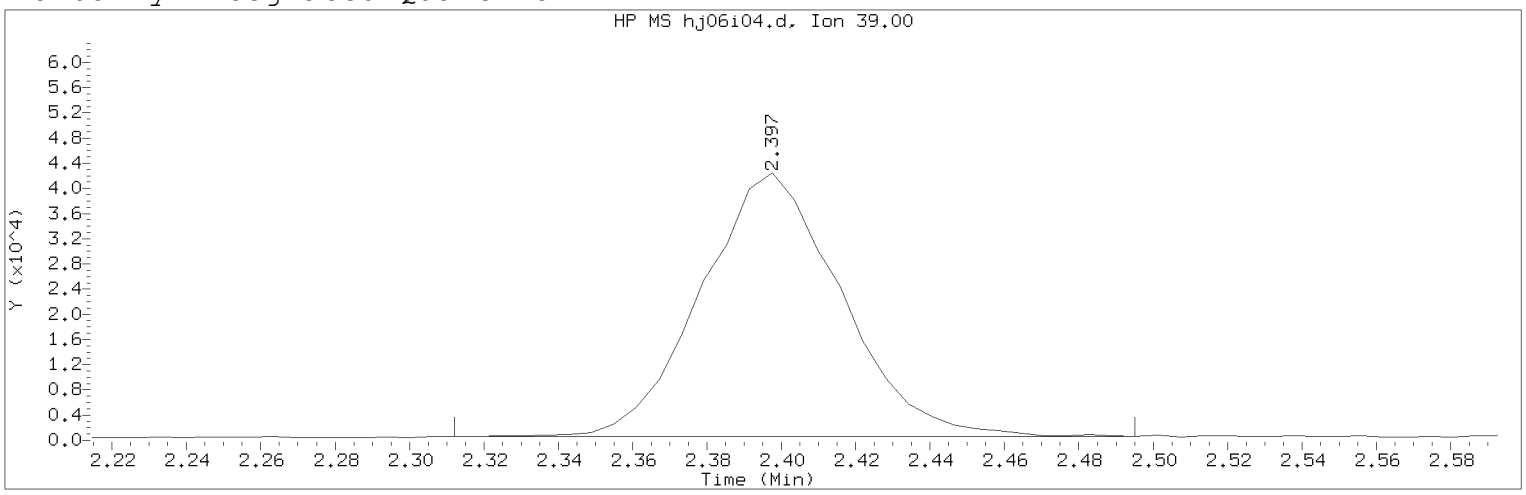
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area : 148084
On-column Amount (ng) : 2.0017
Integration start scan : 71 Integration stop scan: 160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

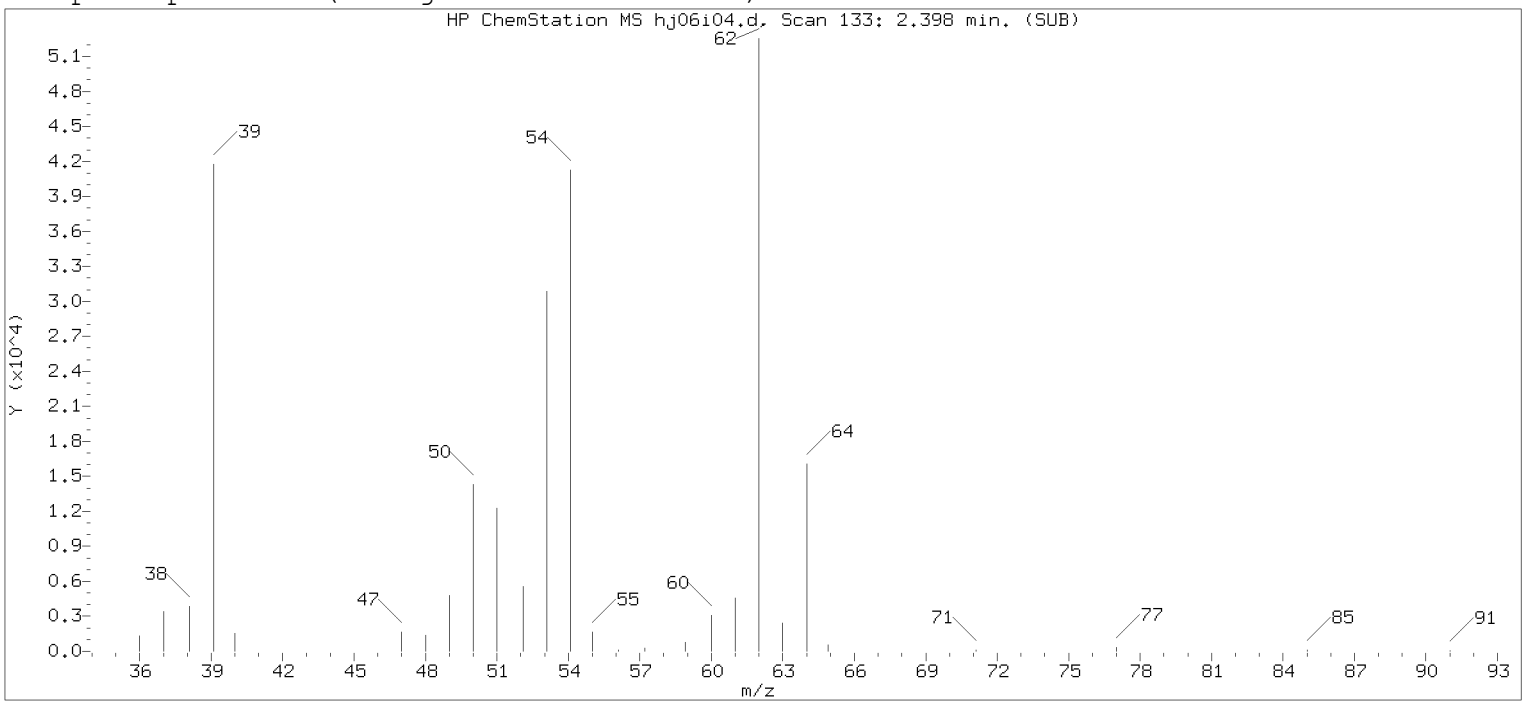
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 133
Retention Time (minutes): 2.397
Quant Ion : 39.00
Area (flag) : 109568M
On-Column Amount (ng) : 1.9802
Integration start scan : 118 Integration stop scan: 148
Y at integration start : 568 Y at integration end: 568

Reason for manual integration: improper integration

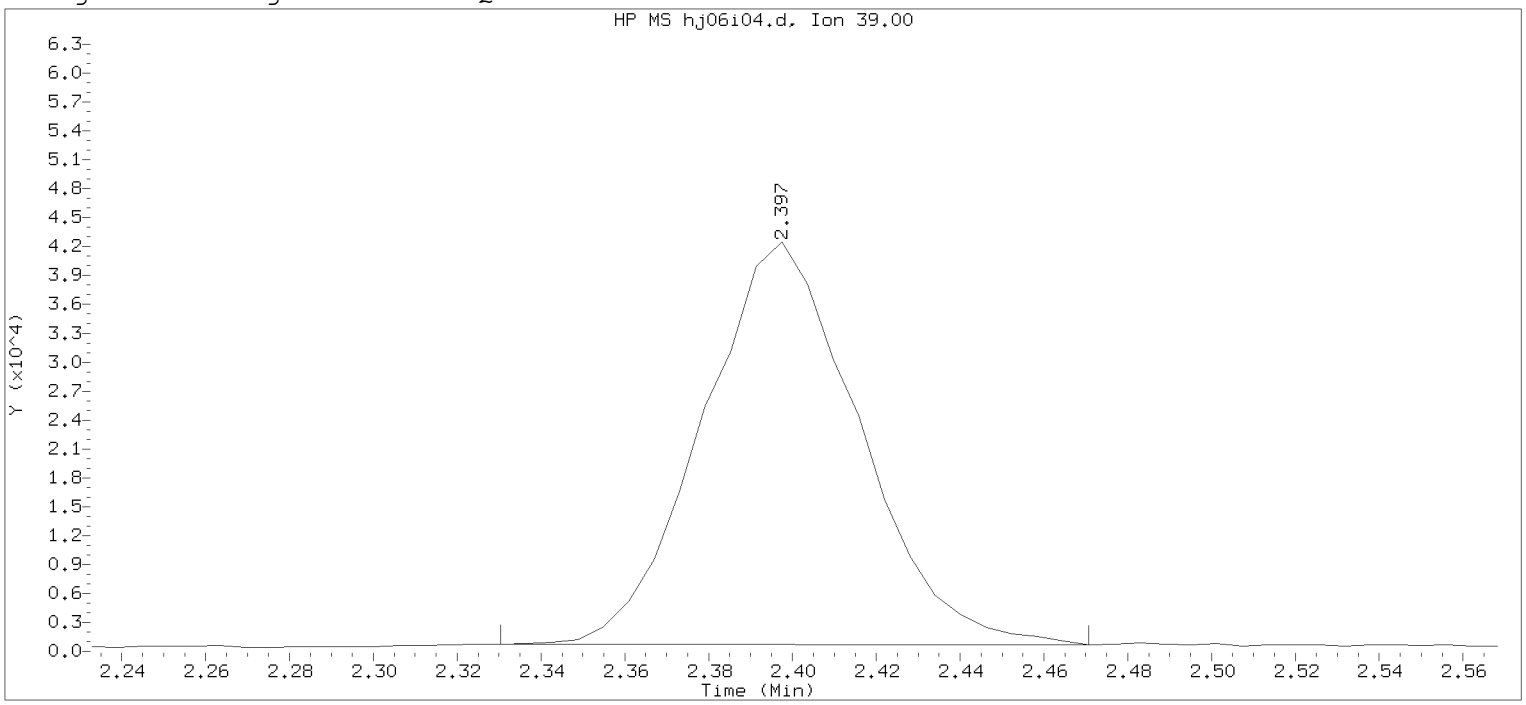
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

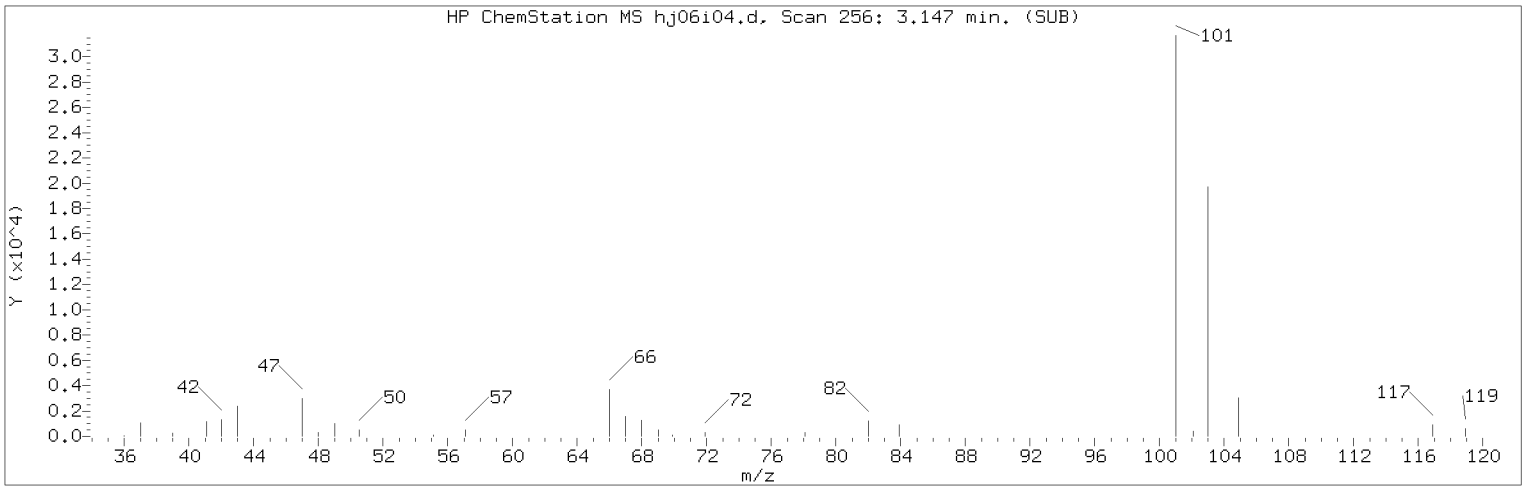
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

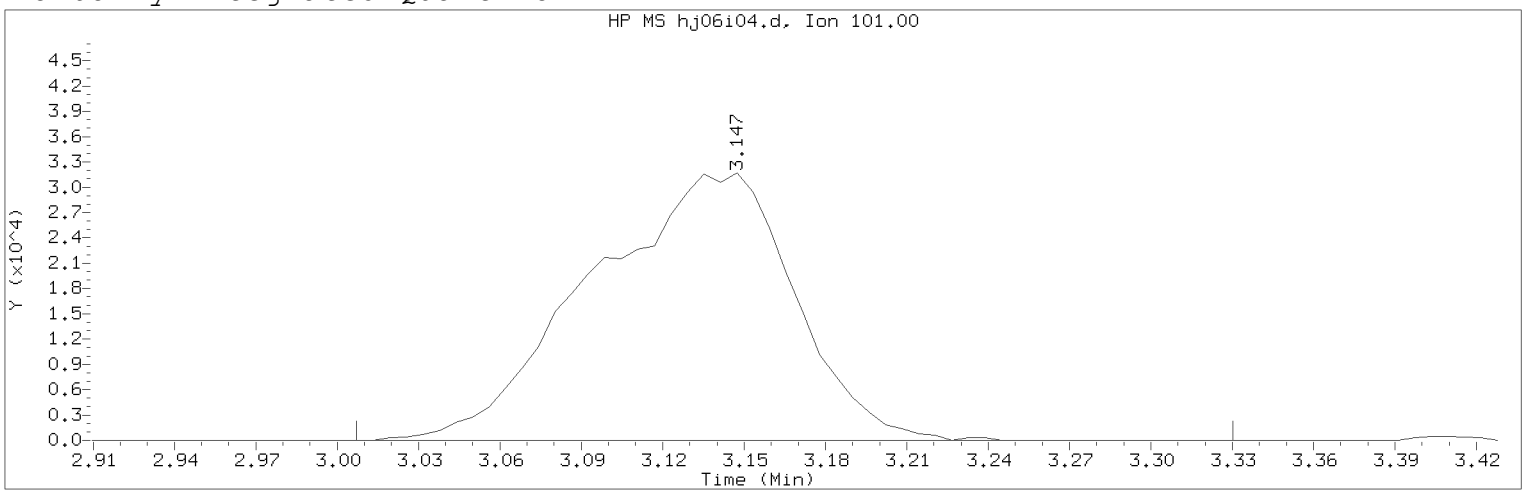
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 133
Retention Time (minutes): 2.397
Quant Ion : 39.00
Area : 108129
On-column Amount (ng) : 1.9729
Integration start scan : 121 Integration stop scan: 144
Y at integration start : 715 Y at integration end: 668

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

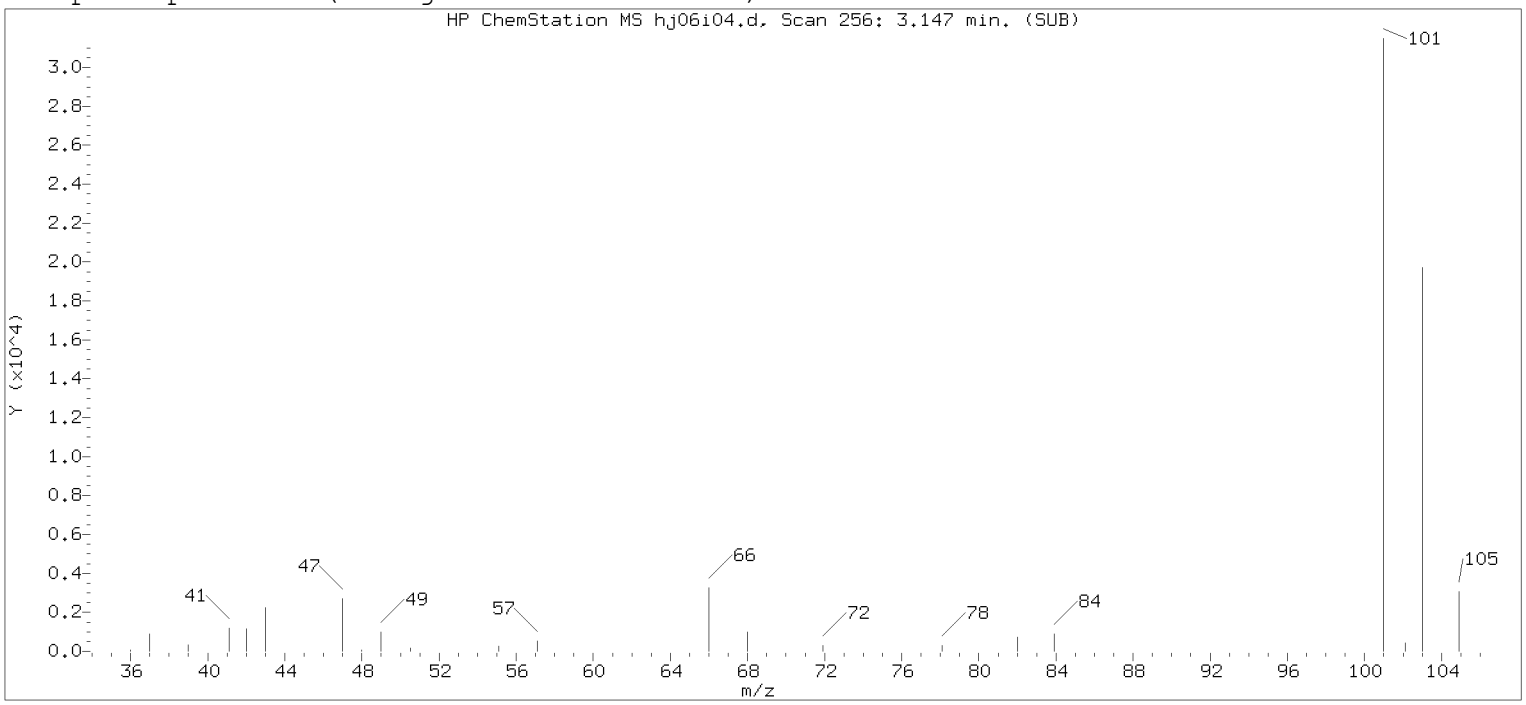
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 256
Retention Time (minutes): 3.147
Quant Ion : 101.00
Area (flag) : 164218M
On-Column Amount (ng) : 2.0544
Integration start scan : 232 Integration stop scan: 285
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

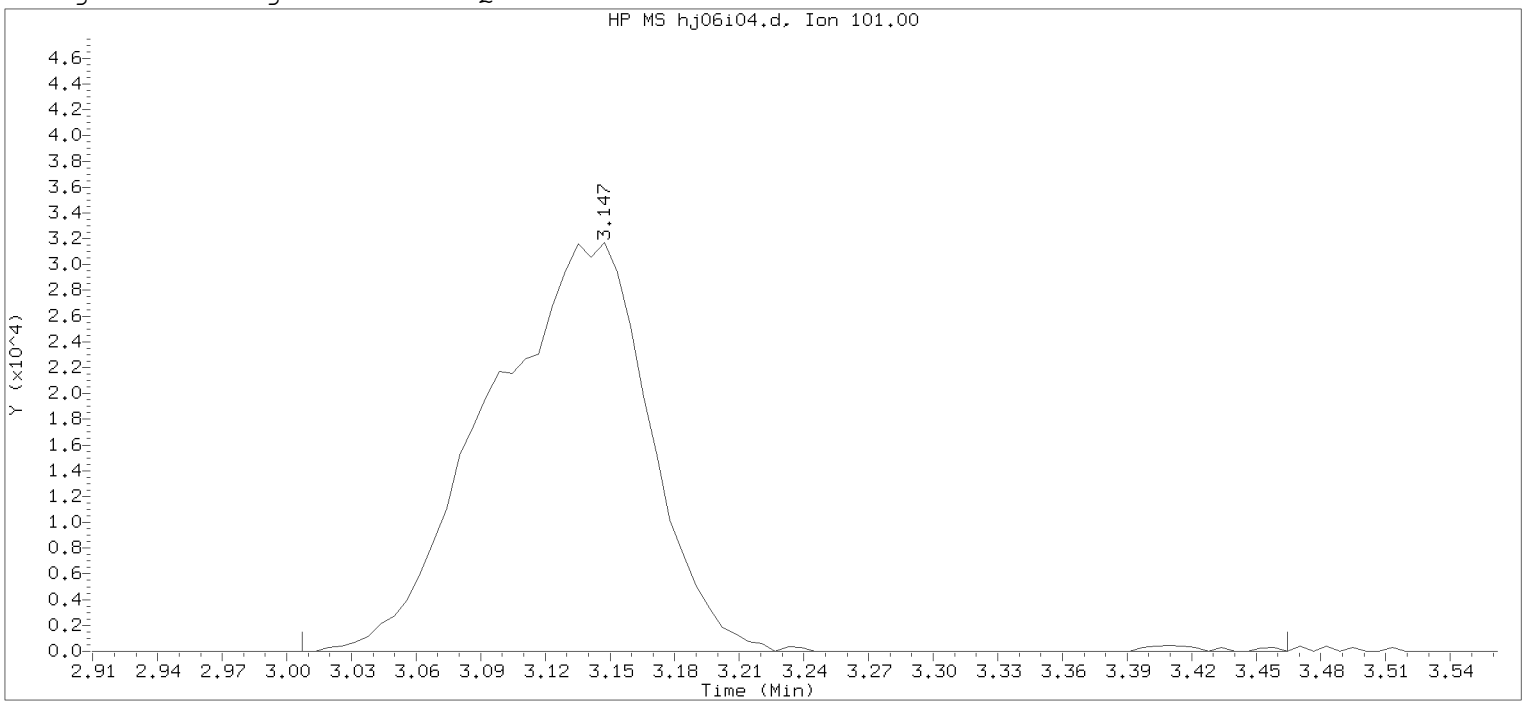
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 10		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 256		
Retention Time (minutes)	: 3.147		
Quant Ion	: 101.00		
Area	: 165205		
On-column Amount (ng)	: 2.0649		
Integration start scan	: 232	Integration stop scan:	307
Y at integration start	: 0	Y at integration end:	0

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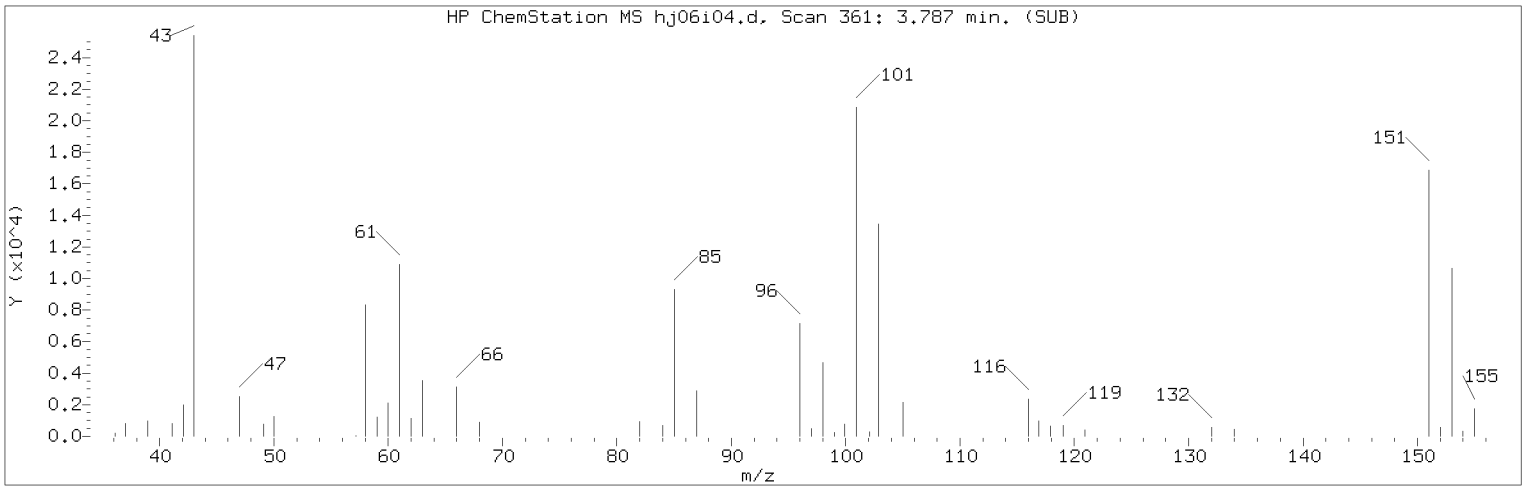
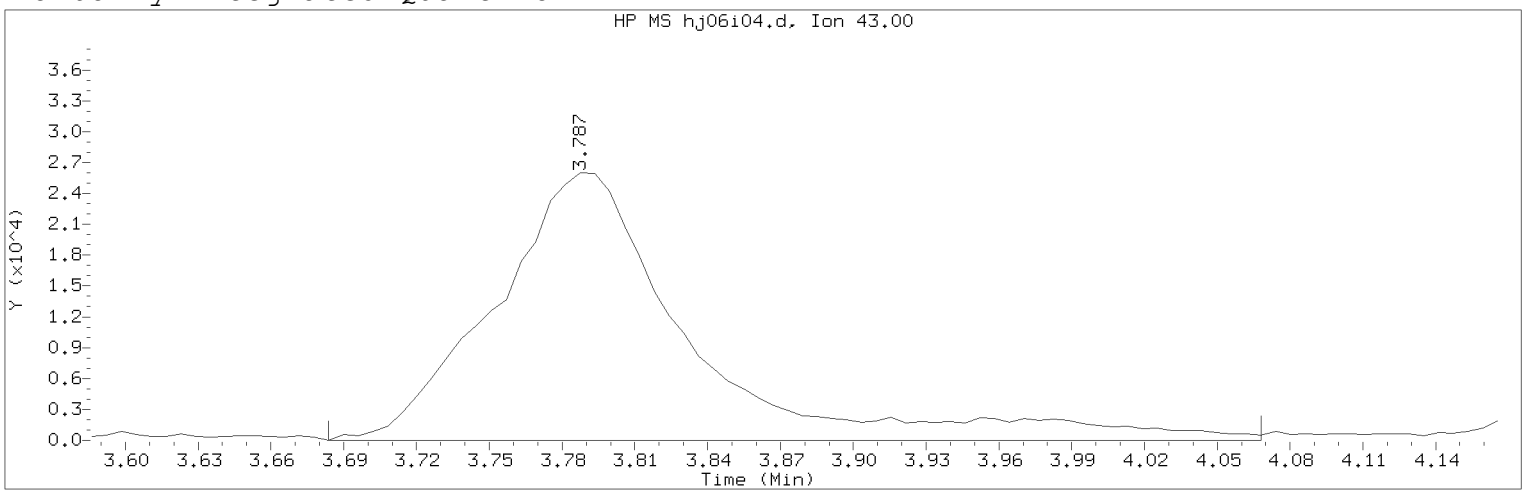
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

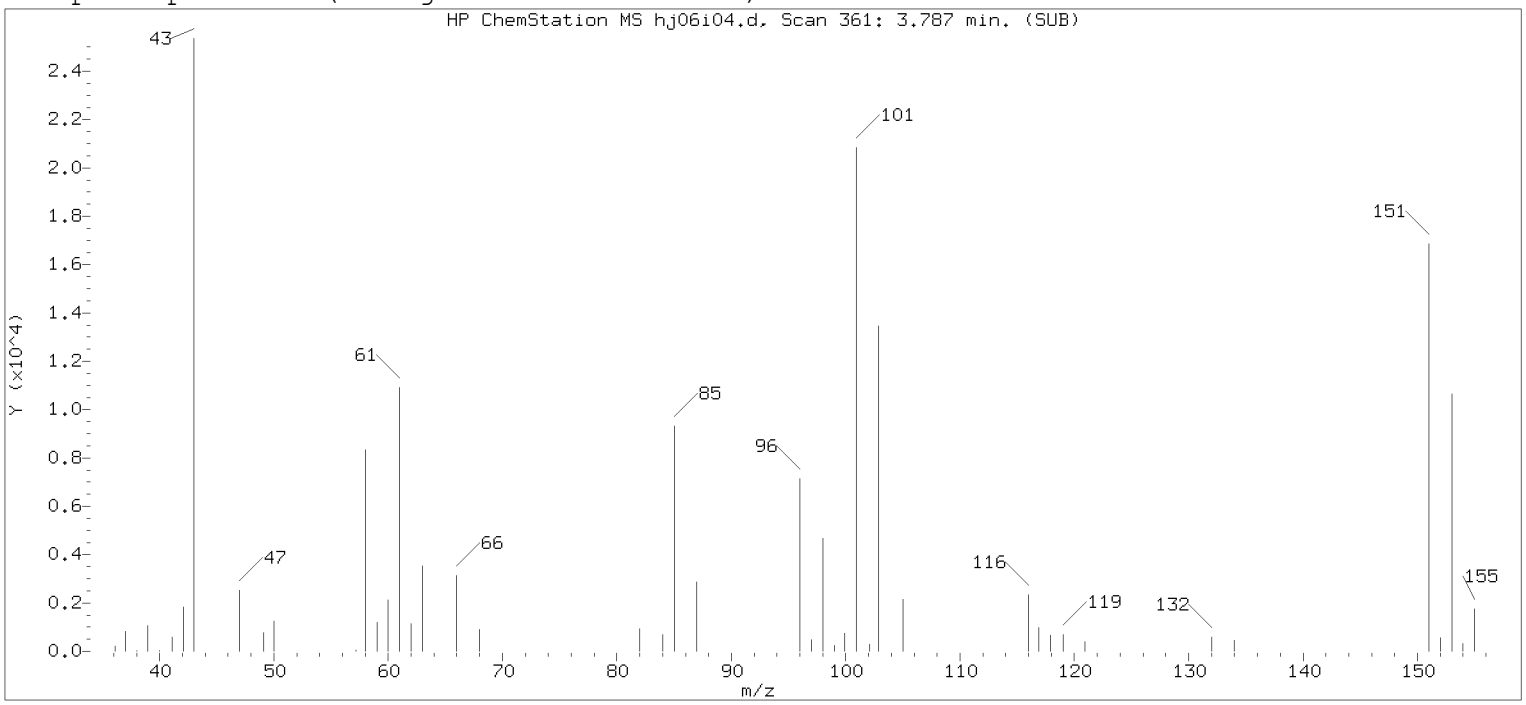
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 144771M
On-Column Amount (ng) : 19.0011
Integration start scan : 343 Integration stop scan: 406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

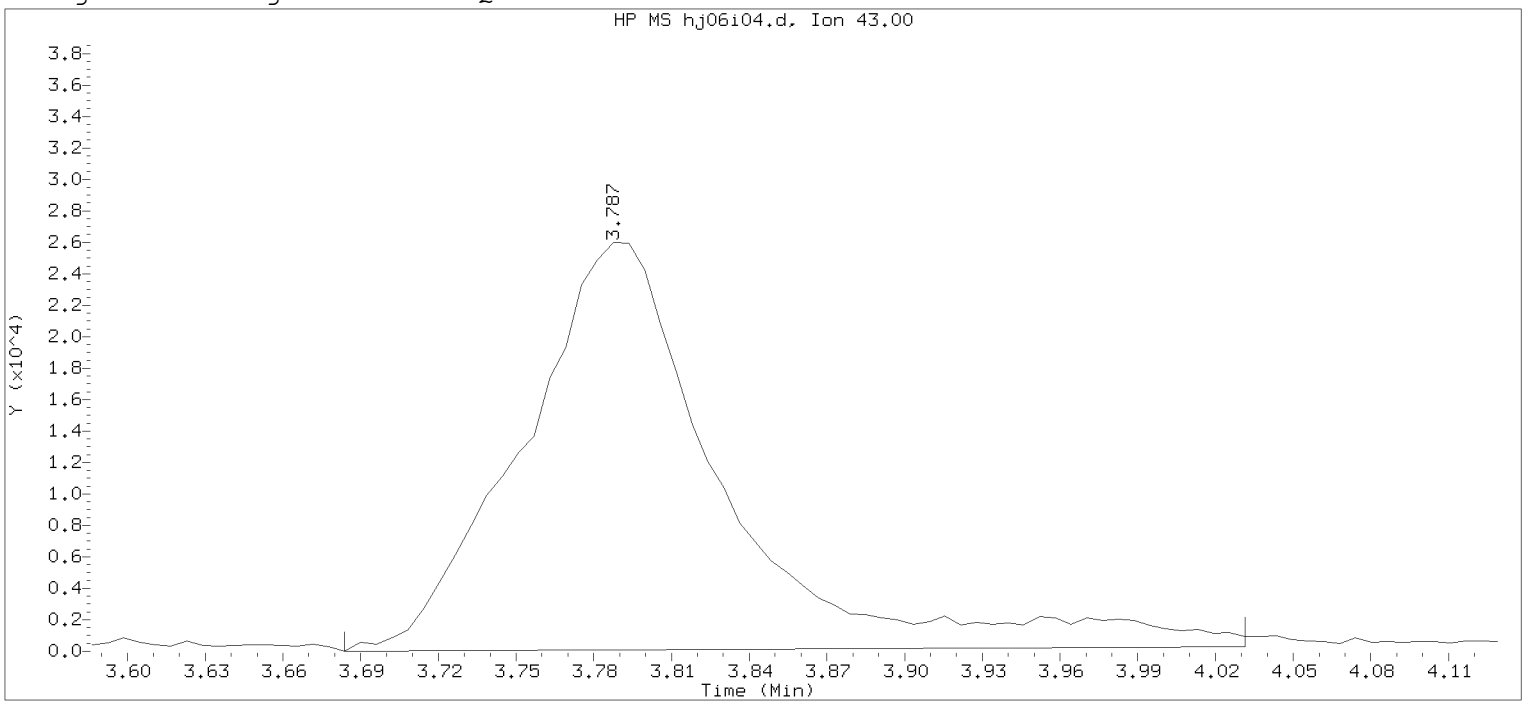
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 139824		
On-column Amount (ng)	: 17.9521		
Integration start scan	: 343	Integration stop scan:	400
Y at integration start	: 0	Y at integration end:	304

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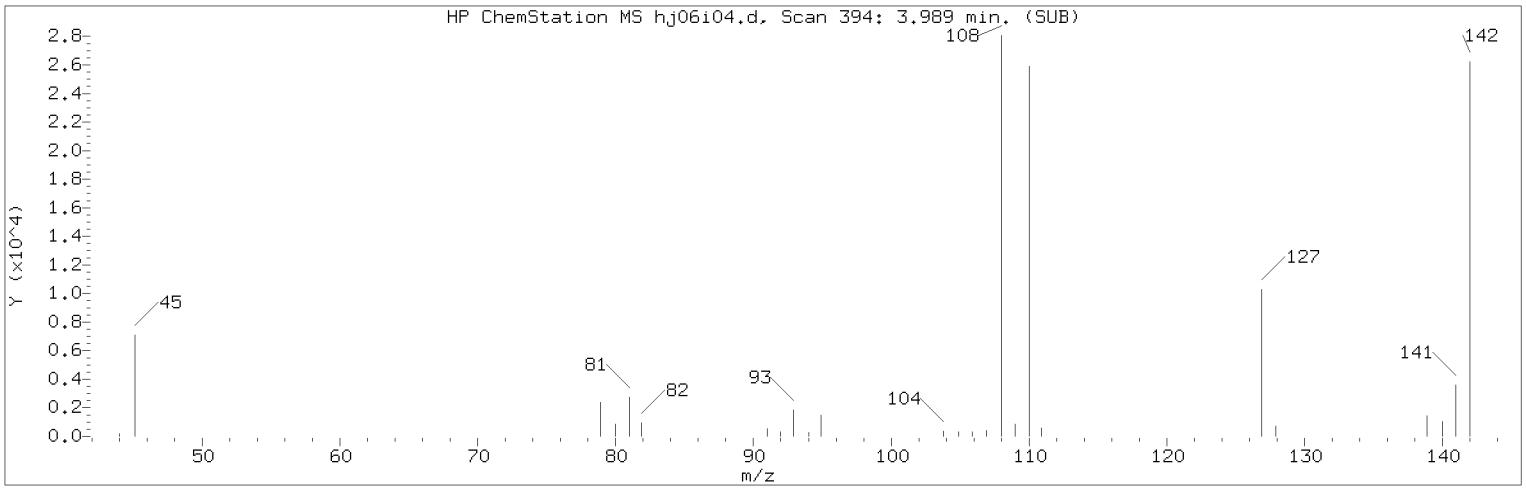
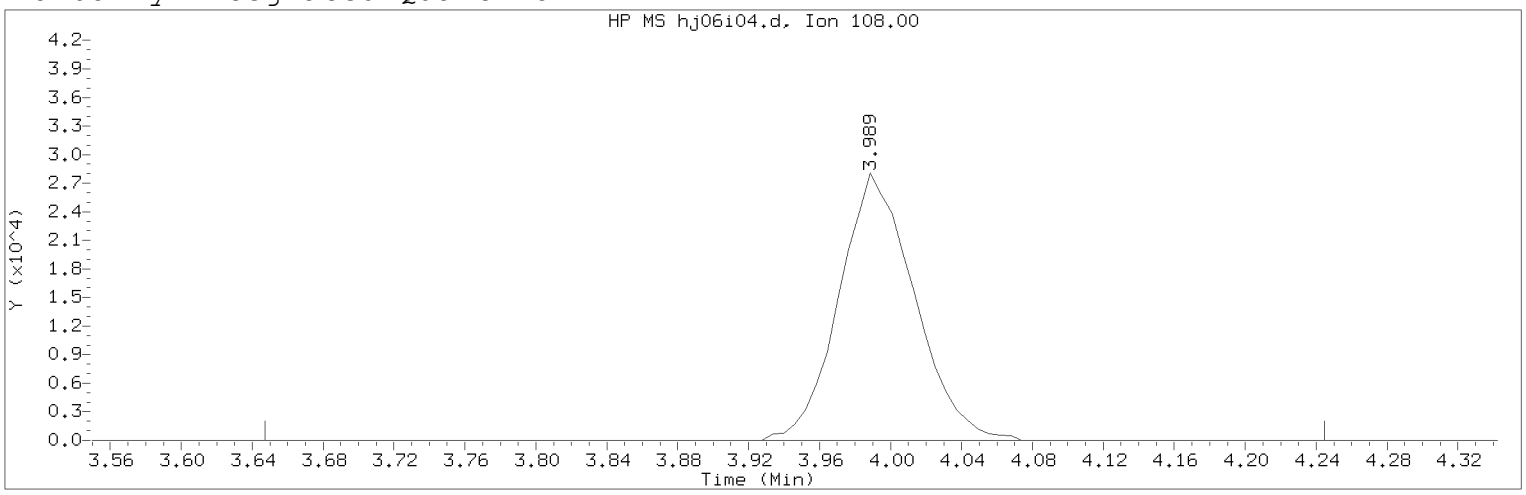
Target 3.5 esignature user's page 22

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

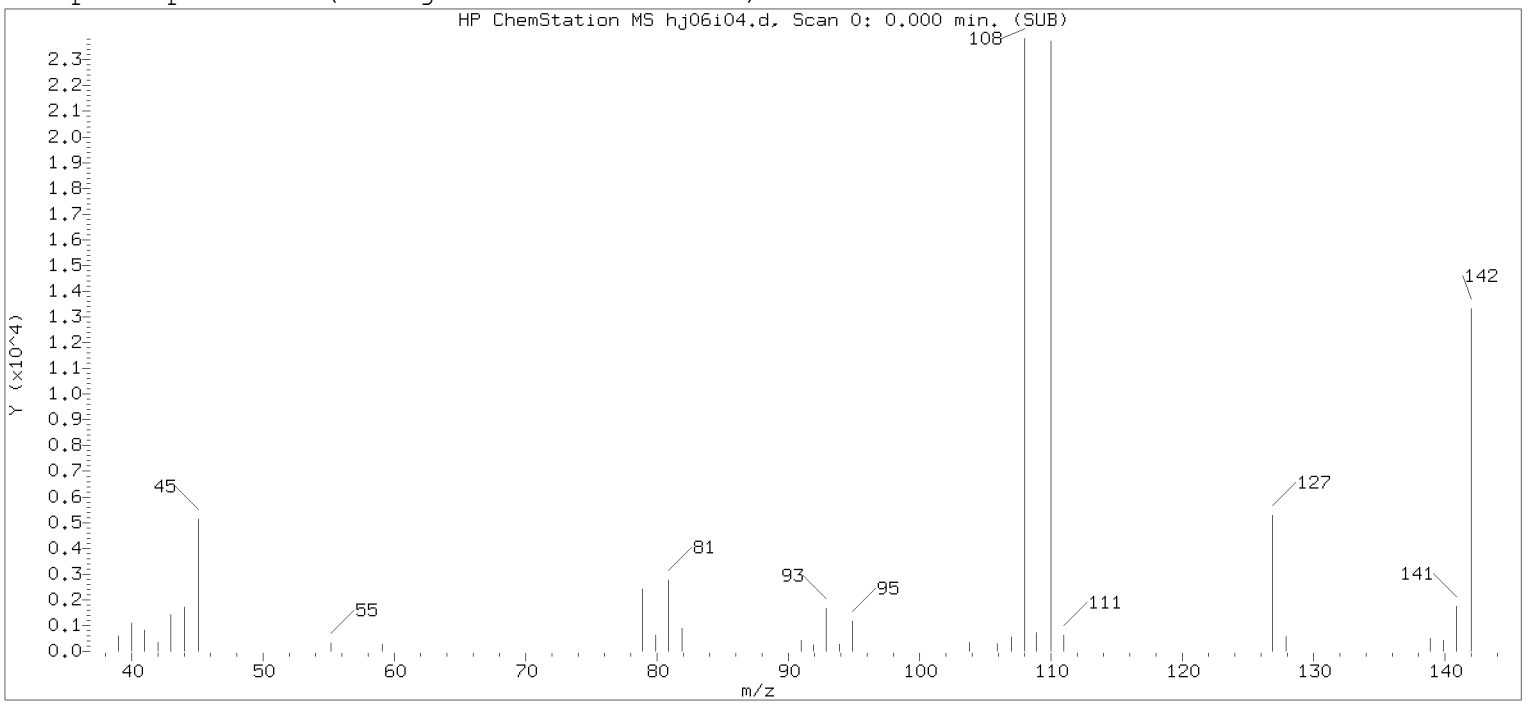
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 108.00
Area (flag) : 82628M
On-Column Amount (ng) : 1.9480
Integration start scan : 337 Integration stop scan: 435
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

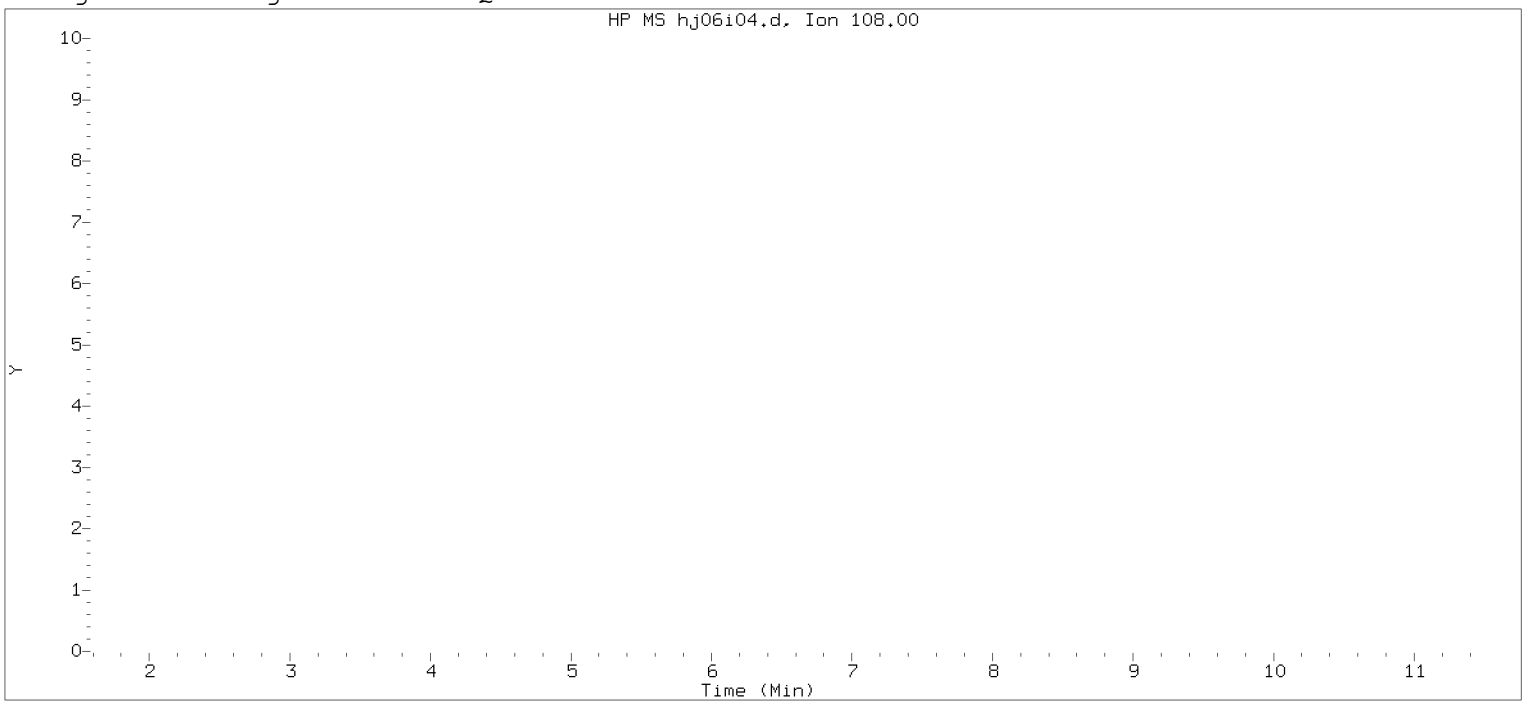
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

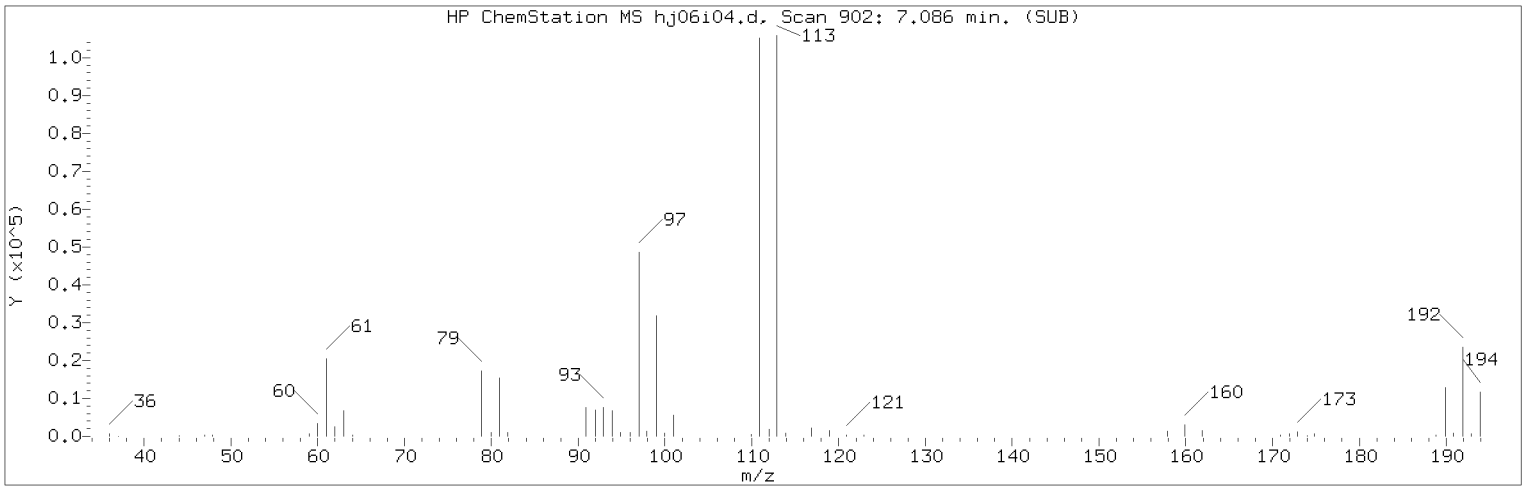
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

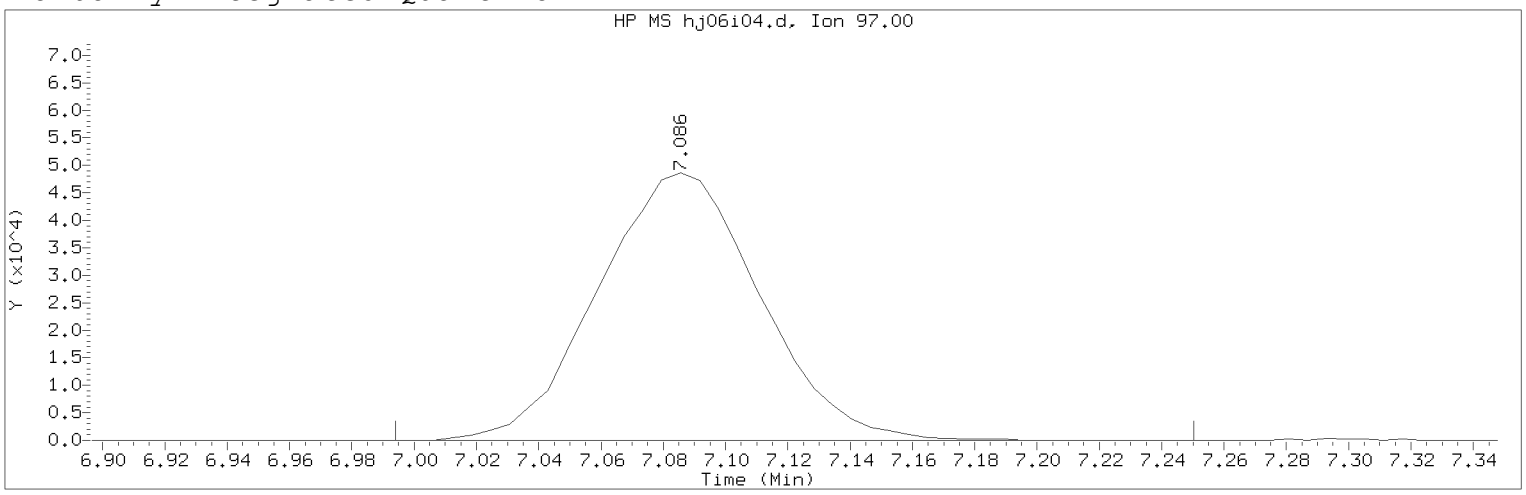
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

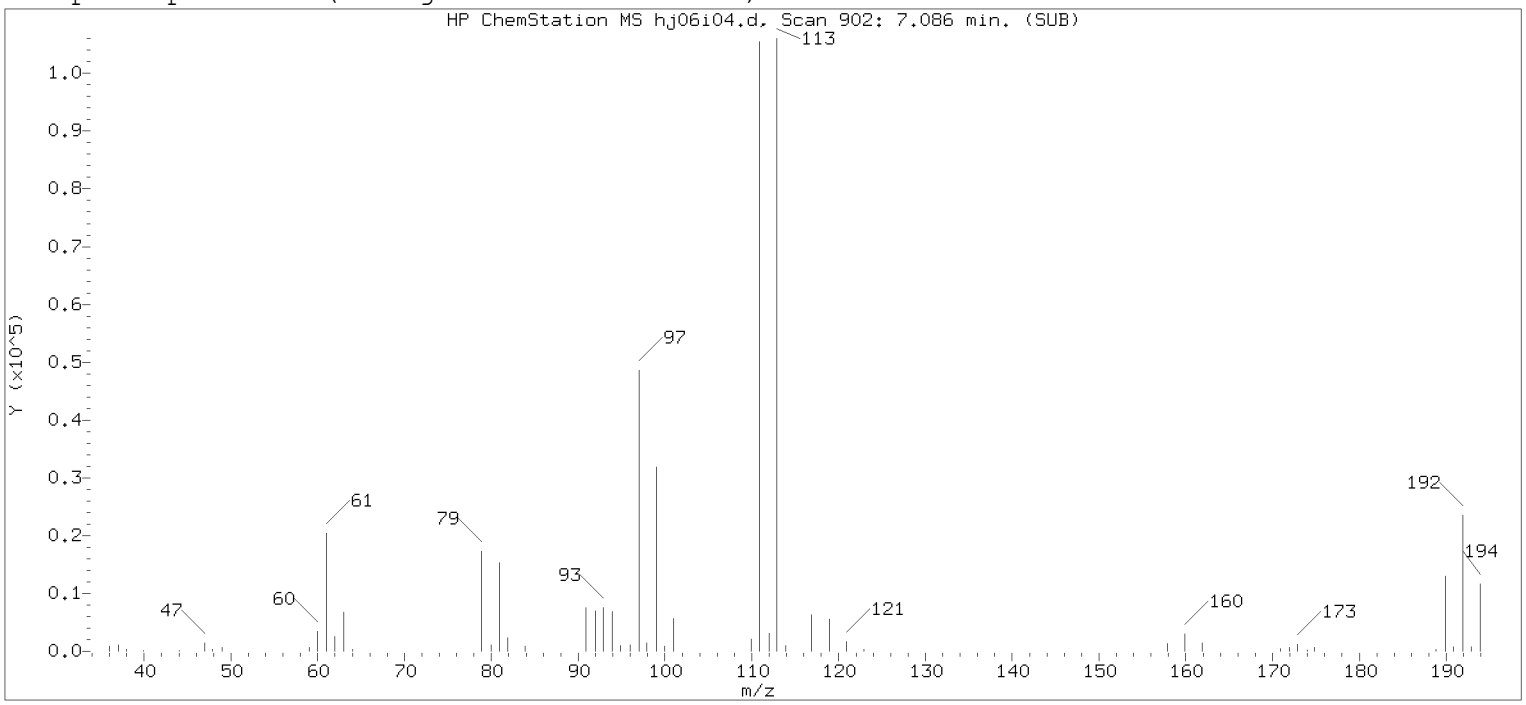
Compound Number : 52
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Quant Ion : 97.00
Area (flag) : 175404M
On-Column Amount (ng) : 2.0028
Integration start scan : 886 Integration stop scan: 928
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

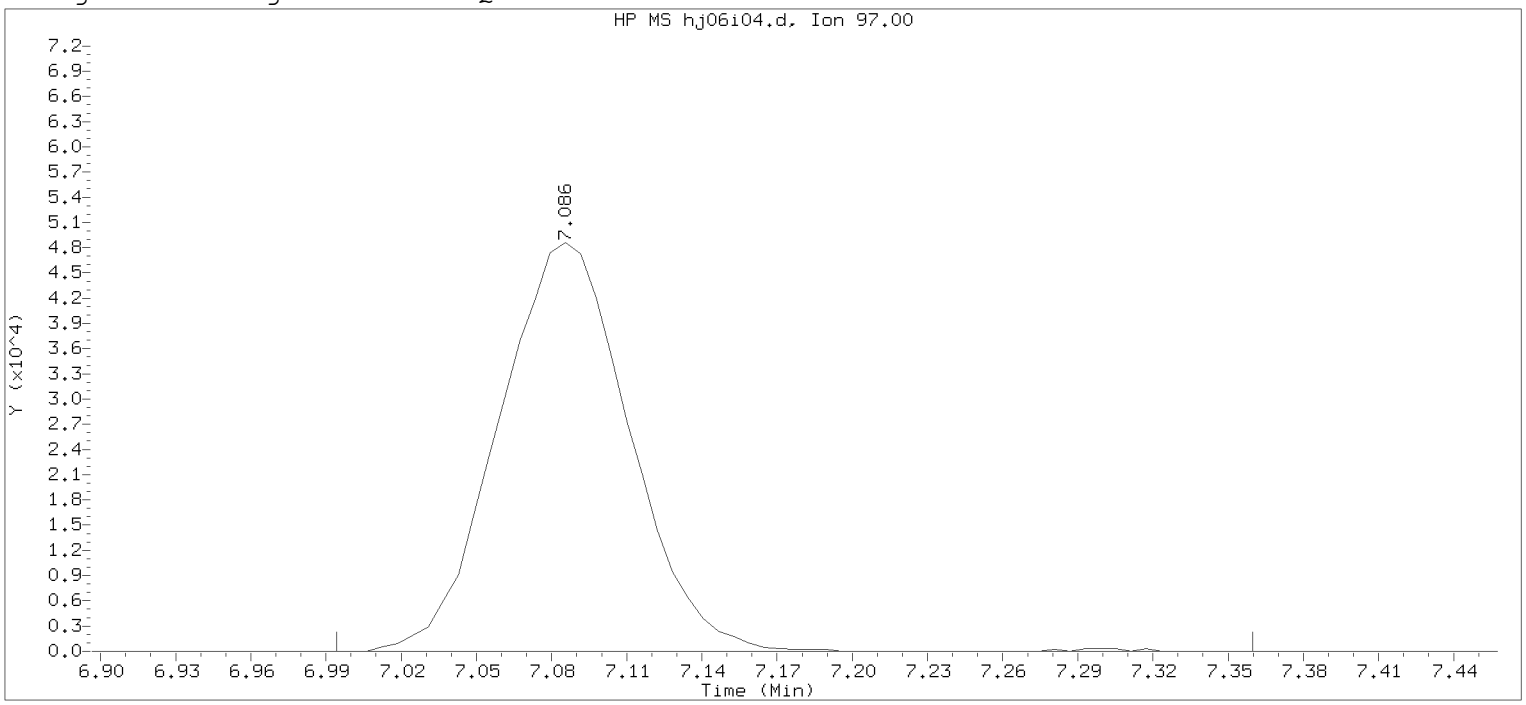
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

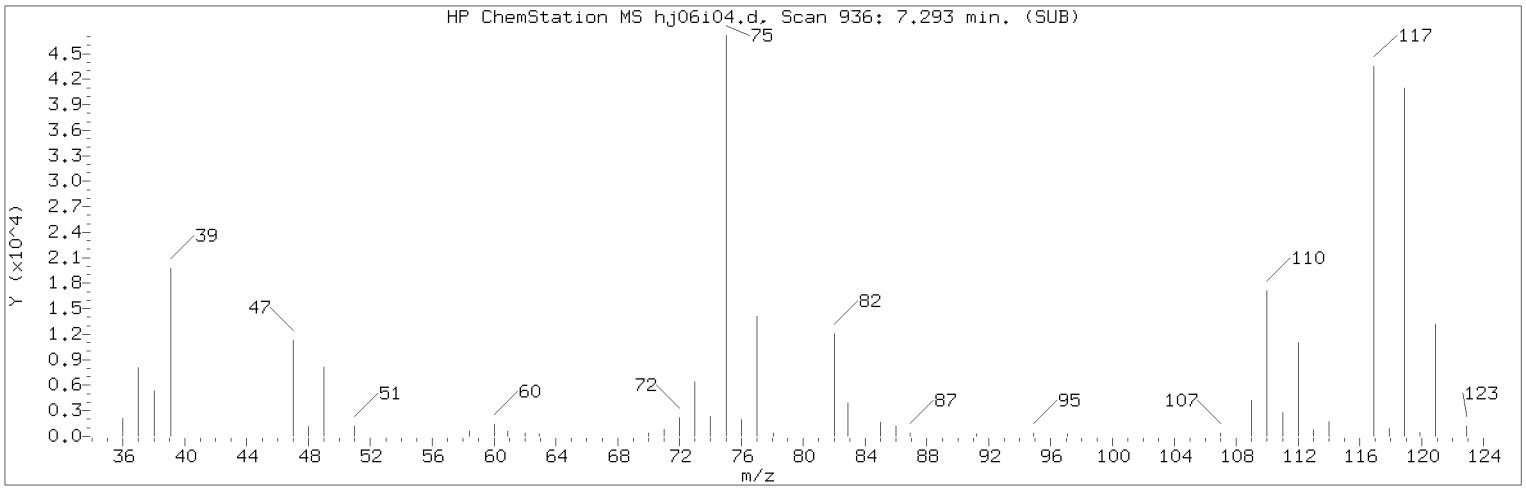
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

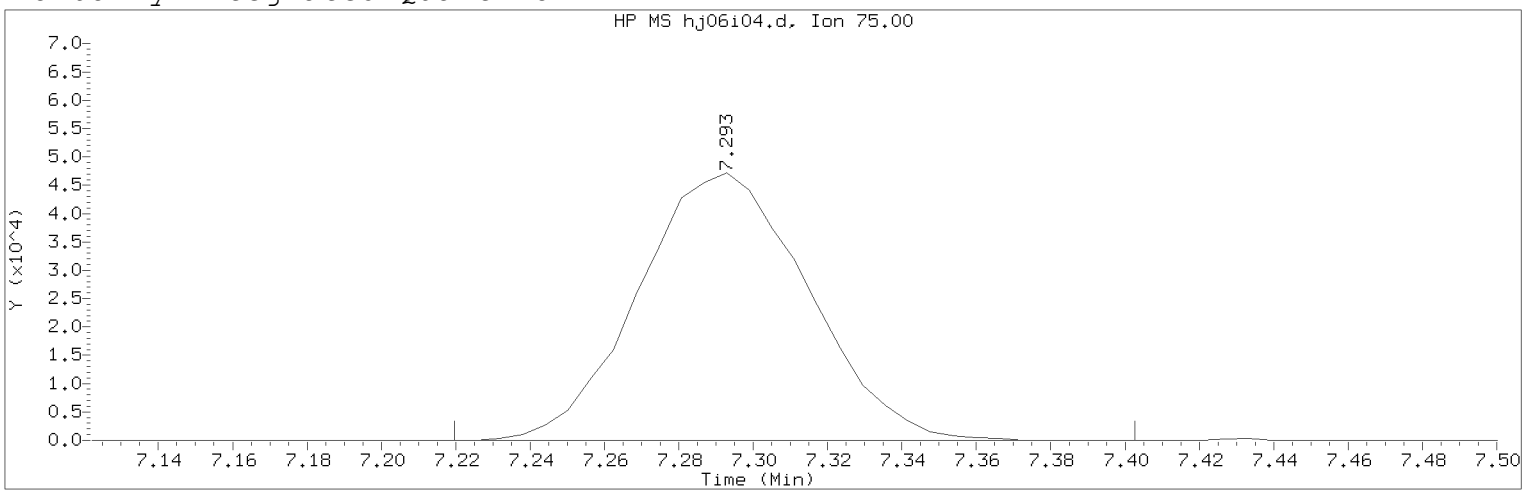
Compound Number : 52
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Quant Ion : 97.00
Area : 175914
On-column Amount (ng) : 2.0064
Integration start scan : 886 Integration stop scan: 946
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned 2020

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

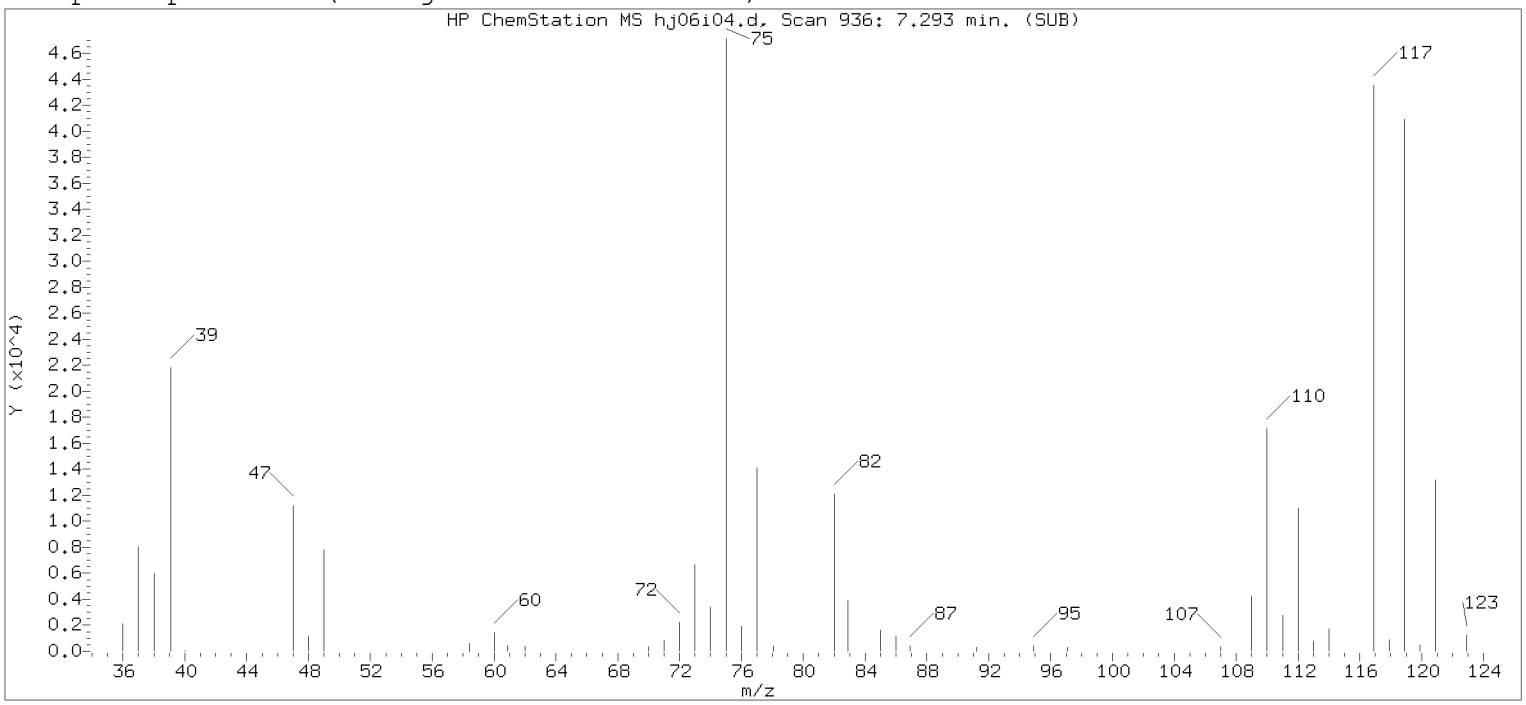
Compound Number : 56
Compound Name : 1,1-Dichloropropene
Scan Number : 936
Retention Time (minutes): 7.293
Quant Ion : 75.00
Area (flag) : 148995M
On-Column Amount (ng) : 2.0130
Integration start scan : 923 Integration stop scan: 953
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

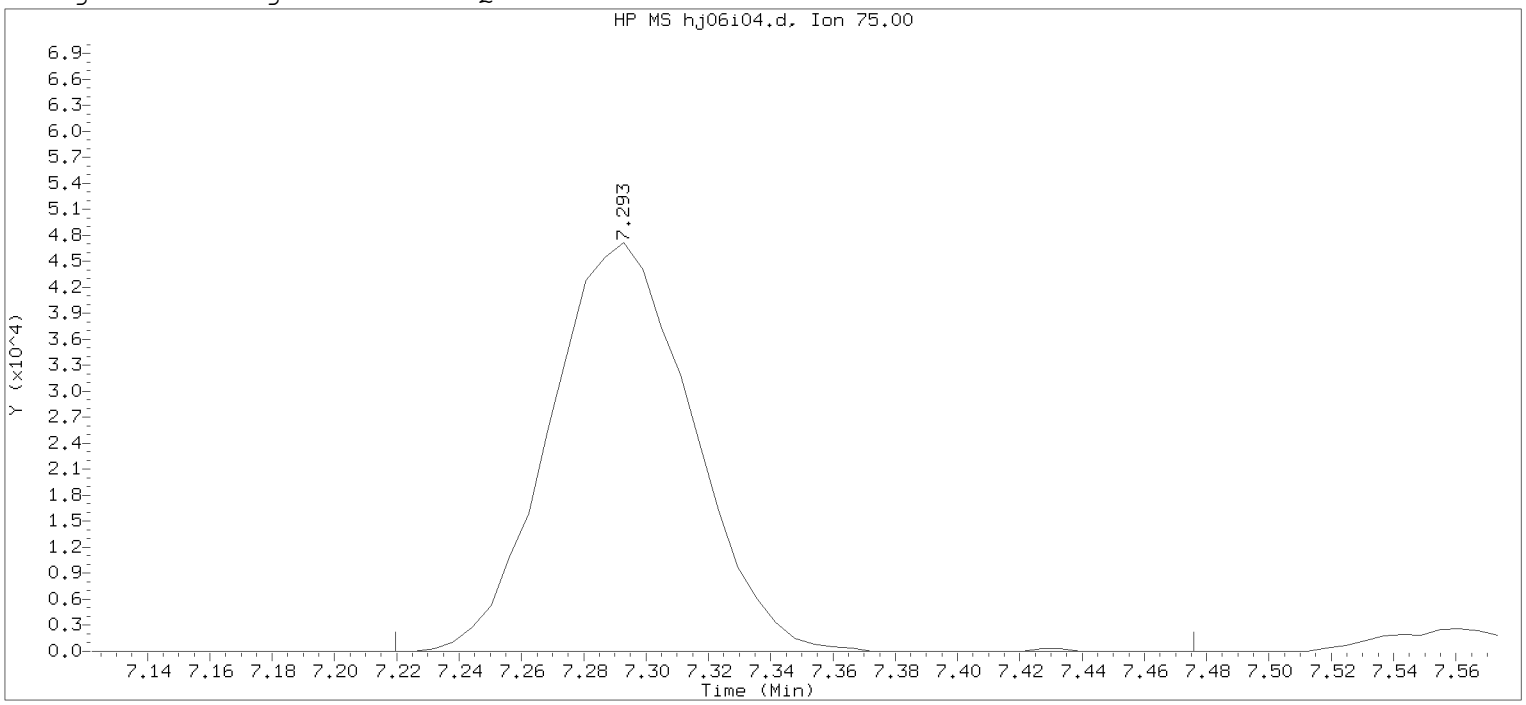
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

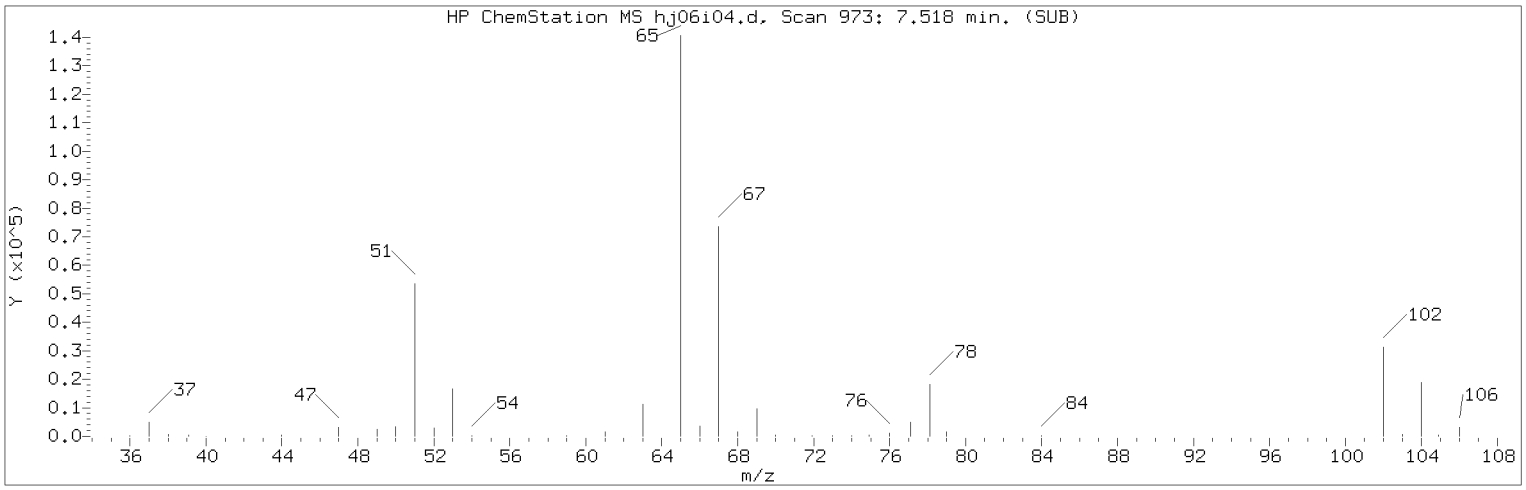
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

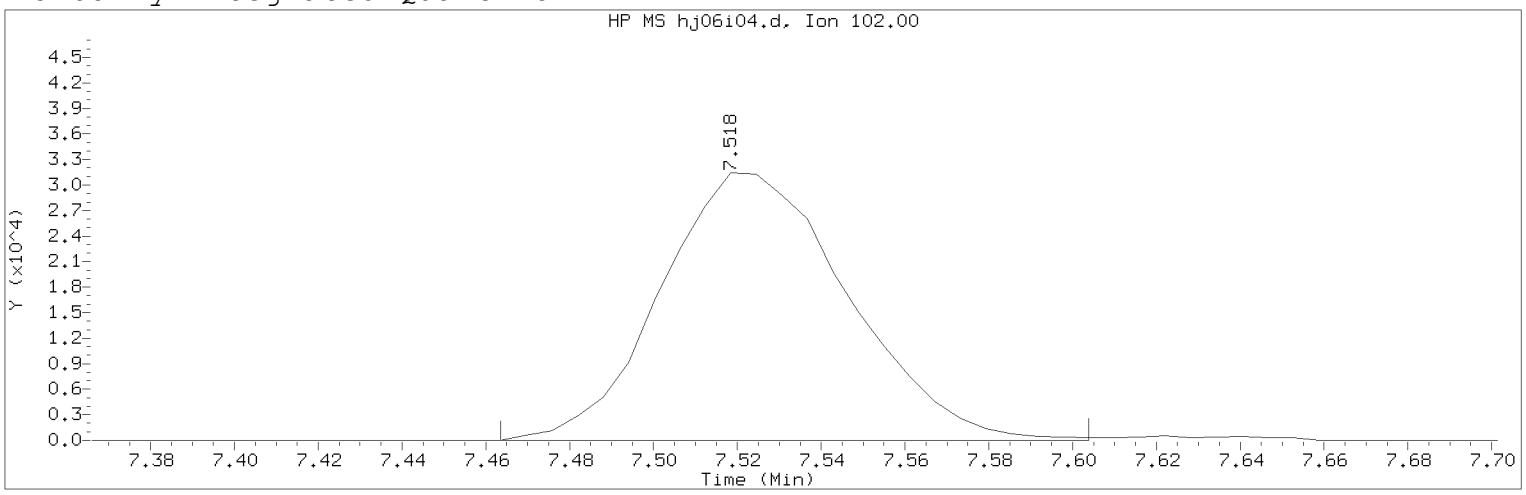
Compound Number : 56
Compound Name : 1,1-Dichloropropene
Scan Number : 936
Retention Time (minutes): 7.293
Quant Ion : 75.00
Area : 149204
On-column Amount (ng) : 2.0154
Integration start scan : 923 Integration stop scan: 965
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

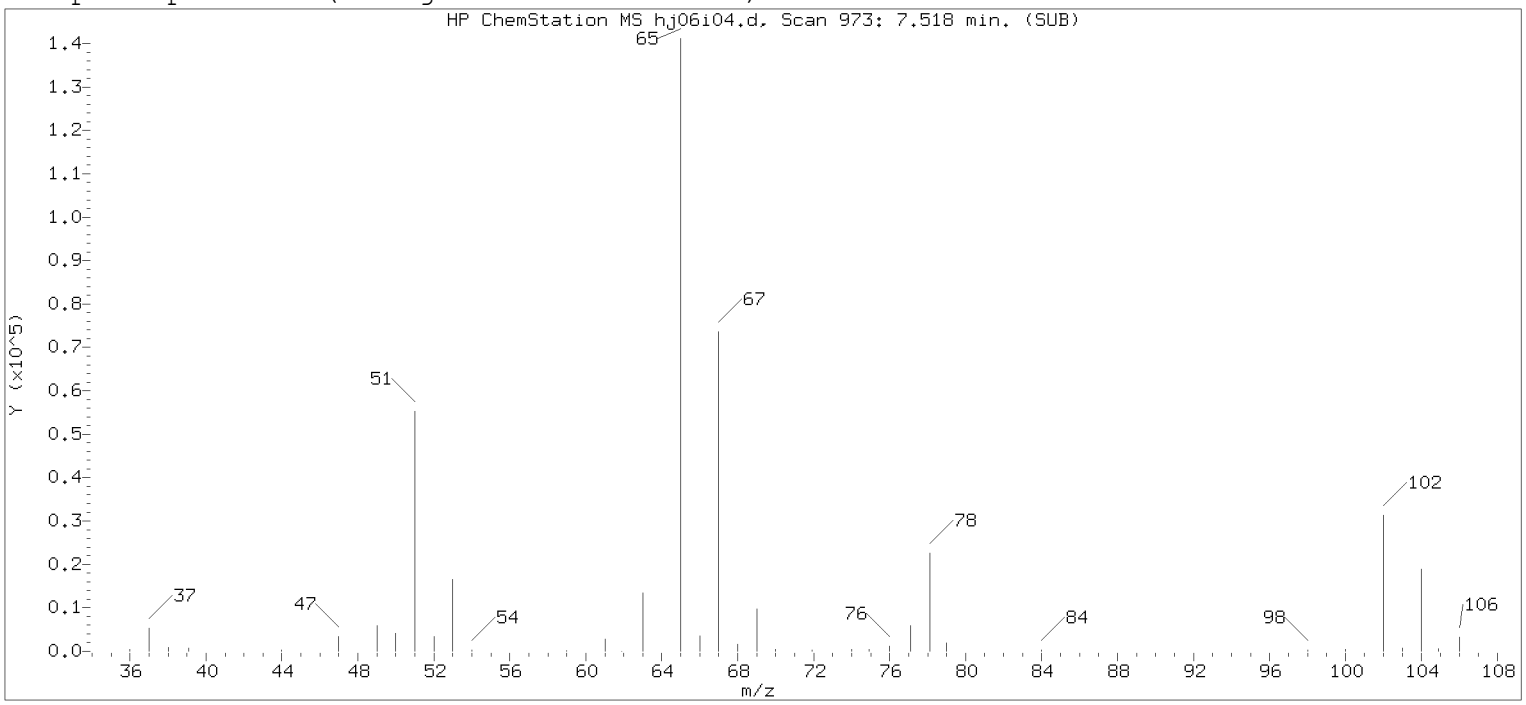
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 973
Retention Time (minutes): 7.518
Quant Ion : 102.00
Area (flag) : 97406M
On-Column Amount (ng) : 10.1598
Integration start scan : 963 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

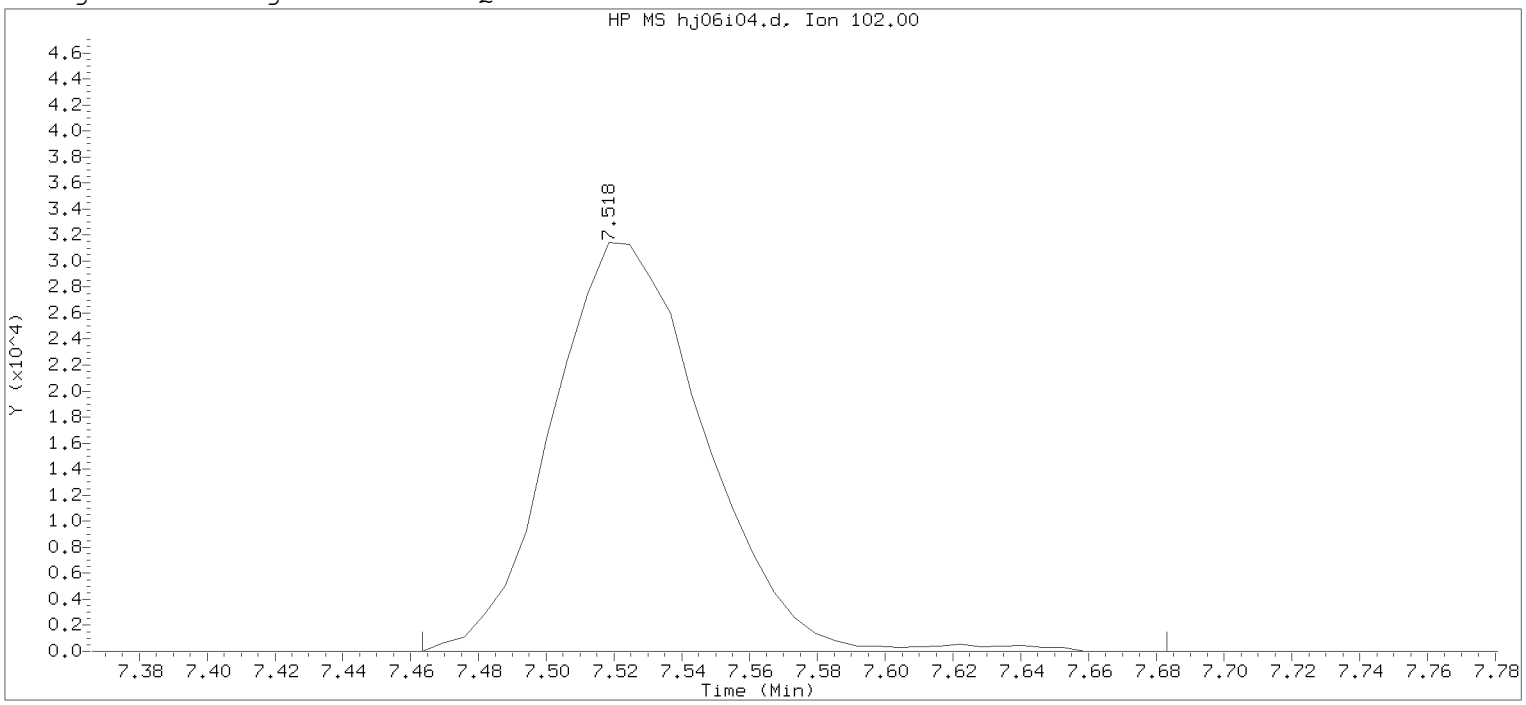
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

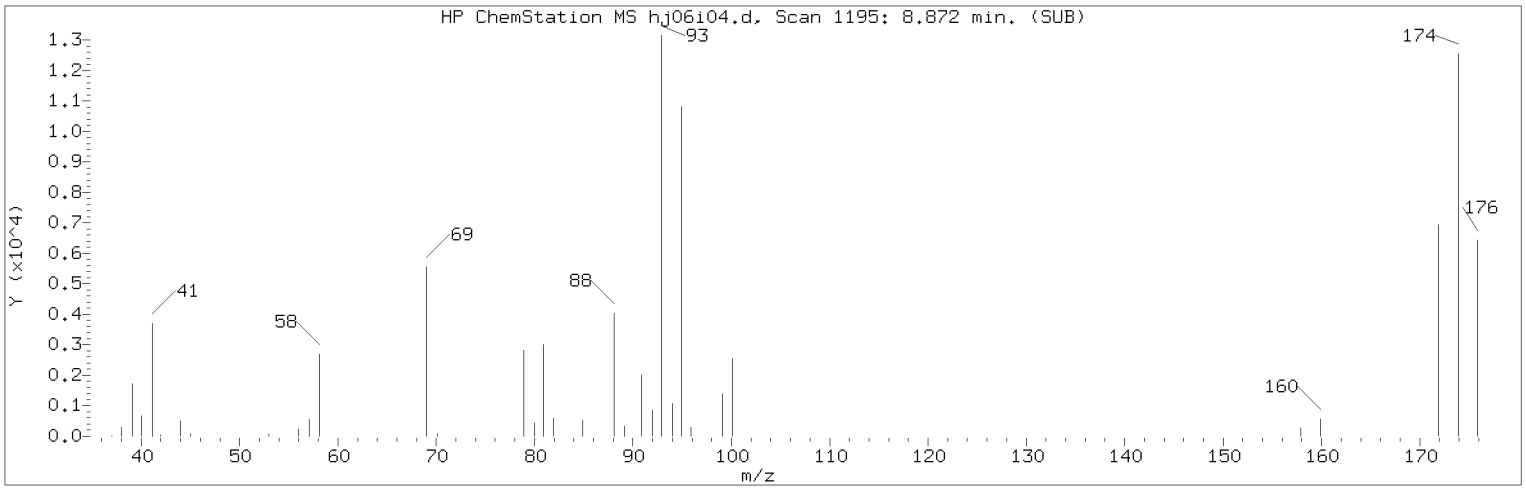
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

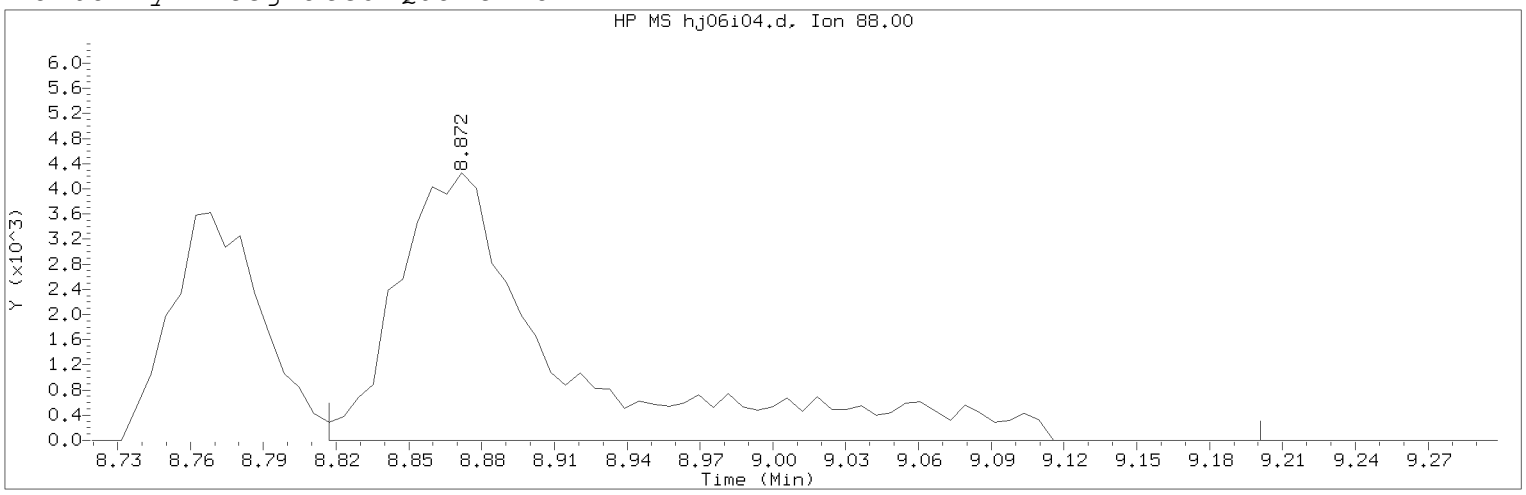
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 973
Retention Time (minutes): 7.518
Quant Ion : 102.00
Area : 98495
On-column Amount (ng) : 10.2568
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

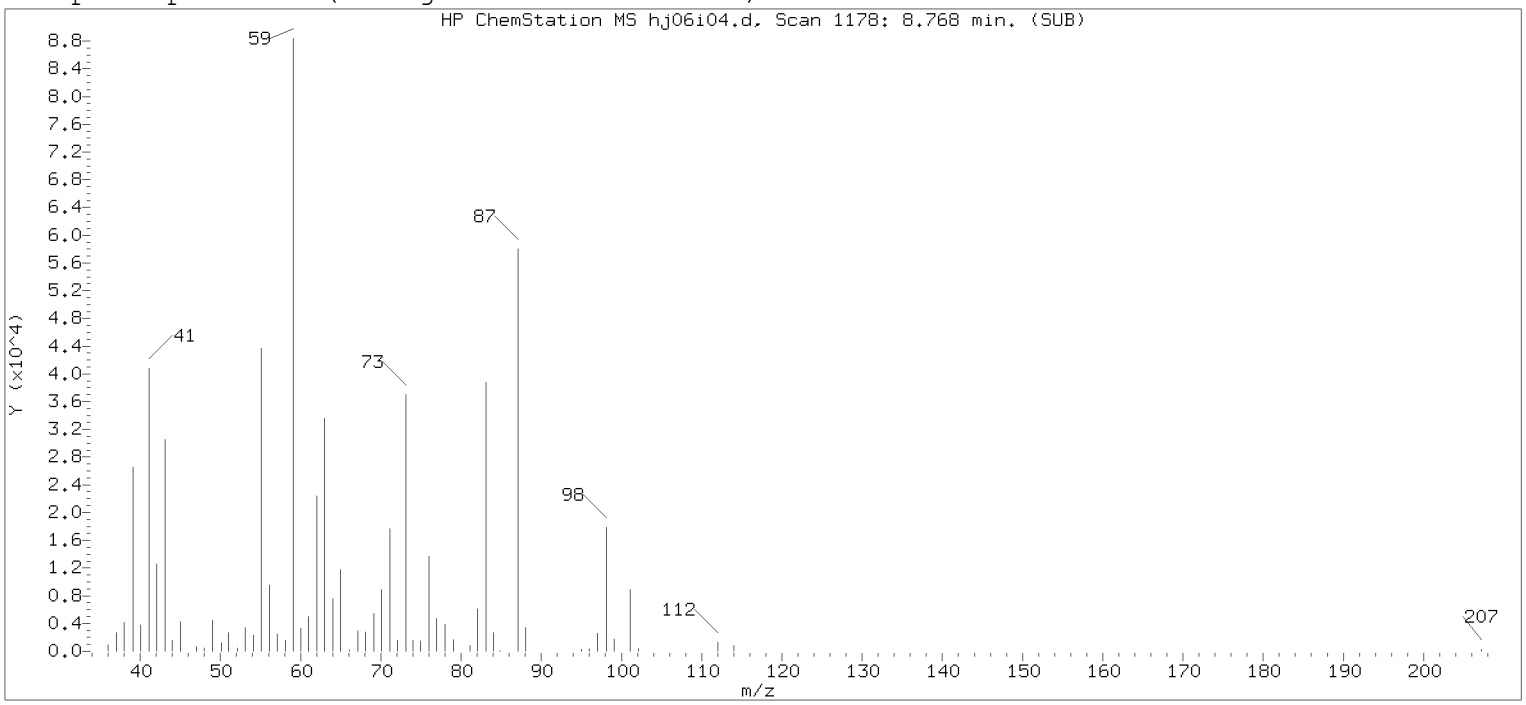
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 20263M
On-Column Amount (ng) : 113.7539
Integration start scan : 1185 Integration stop scan: 1248
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

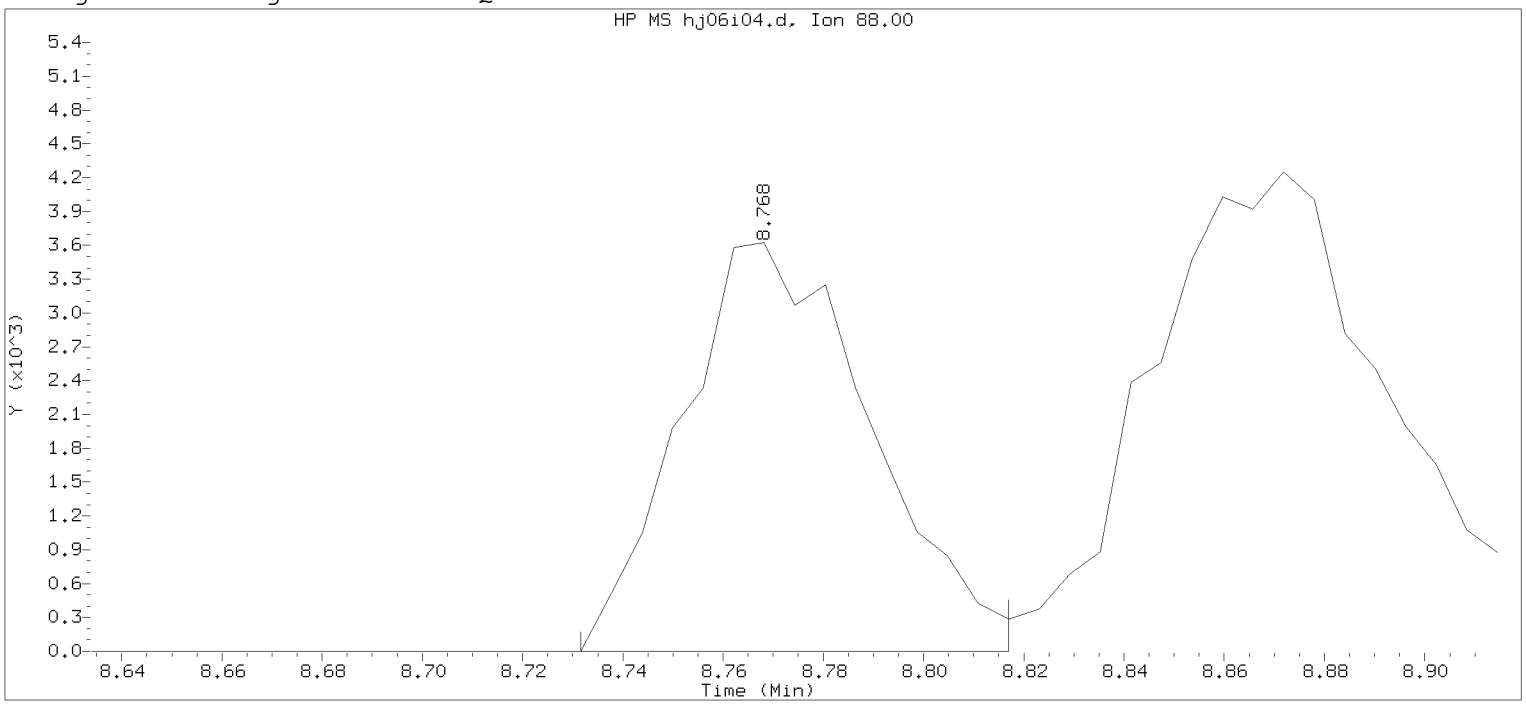
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

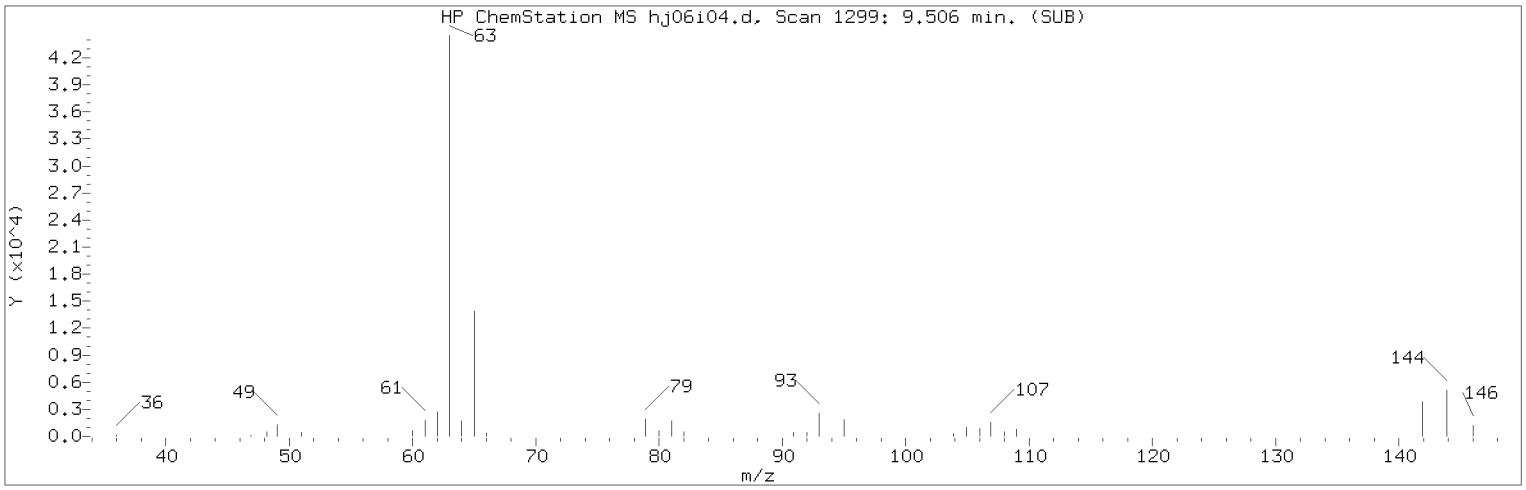
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

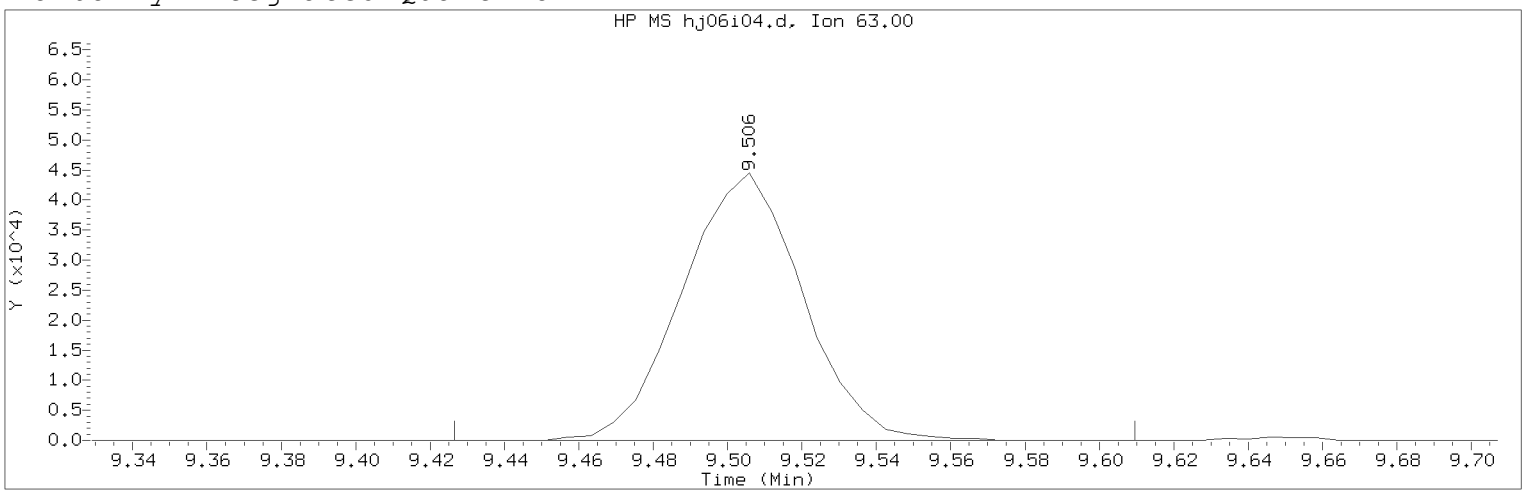
Compound Number	: 73		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 9474		
On-column Amount (ng)	: 67.7250		
Integration start scan	: 1171	Integration stop scan:	1185
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user has signed.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

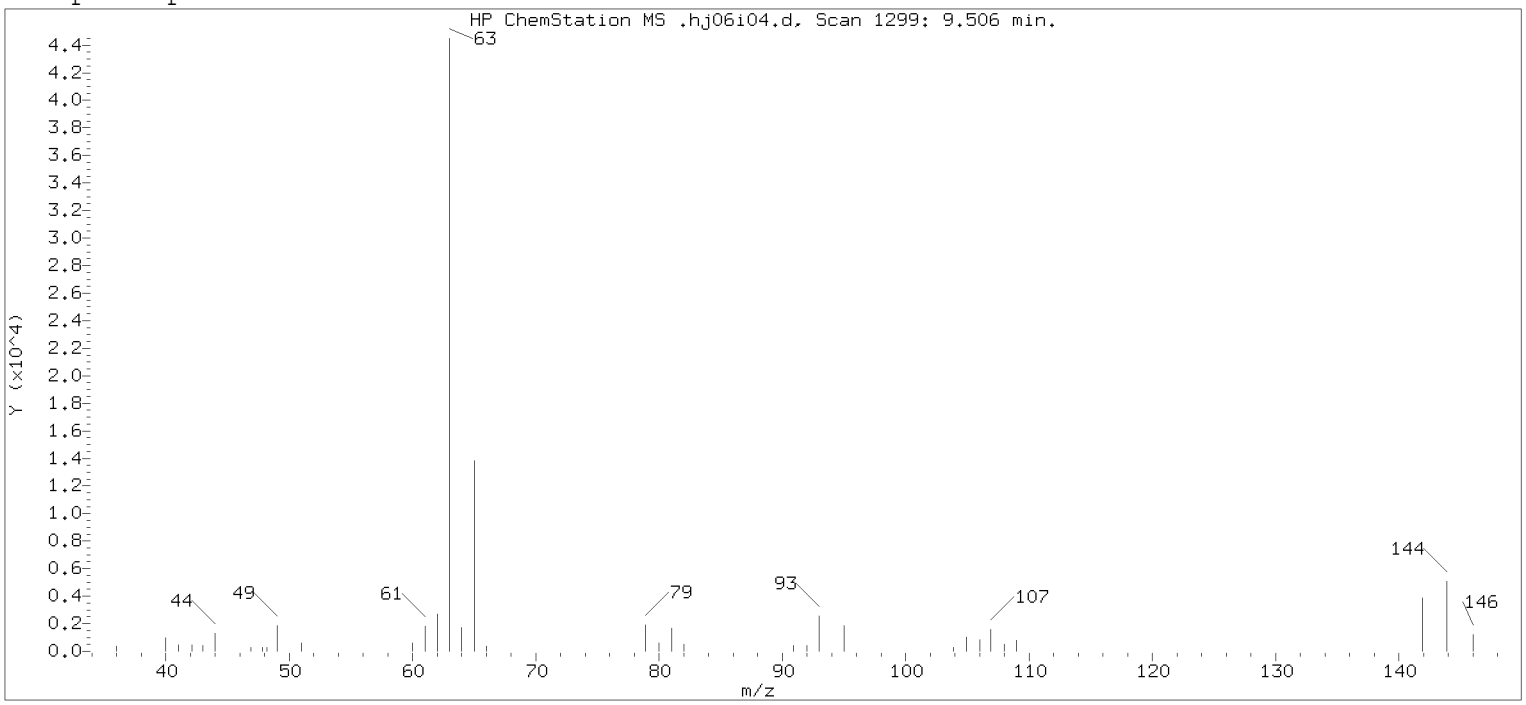
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 99821M
On-Column Amount (ng) : 1.9831
Integration start scan : 1285 Integration stop scan: 1315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

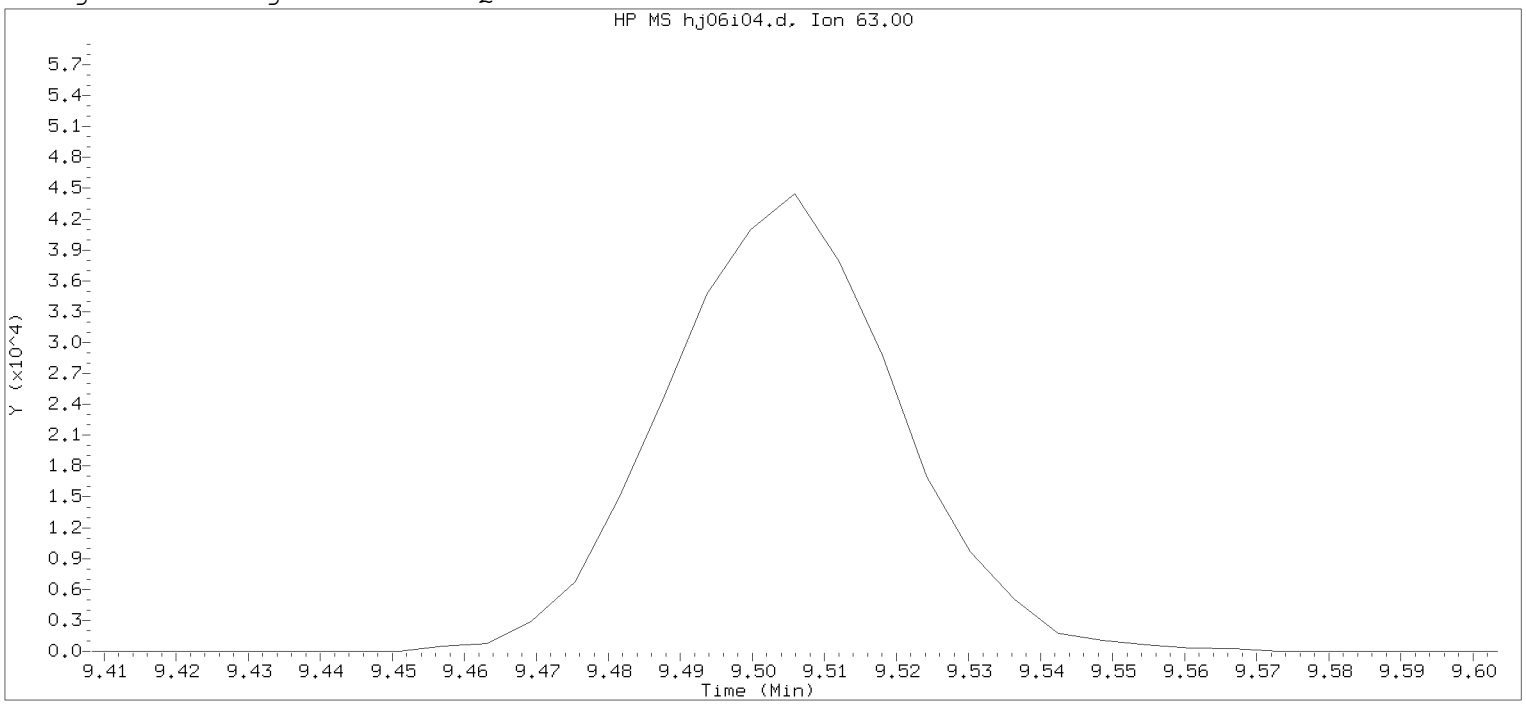
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

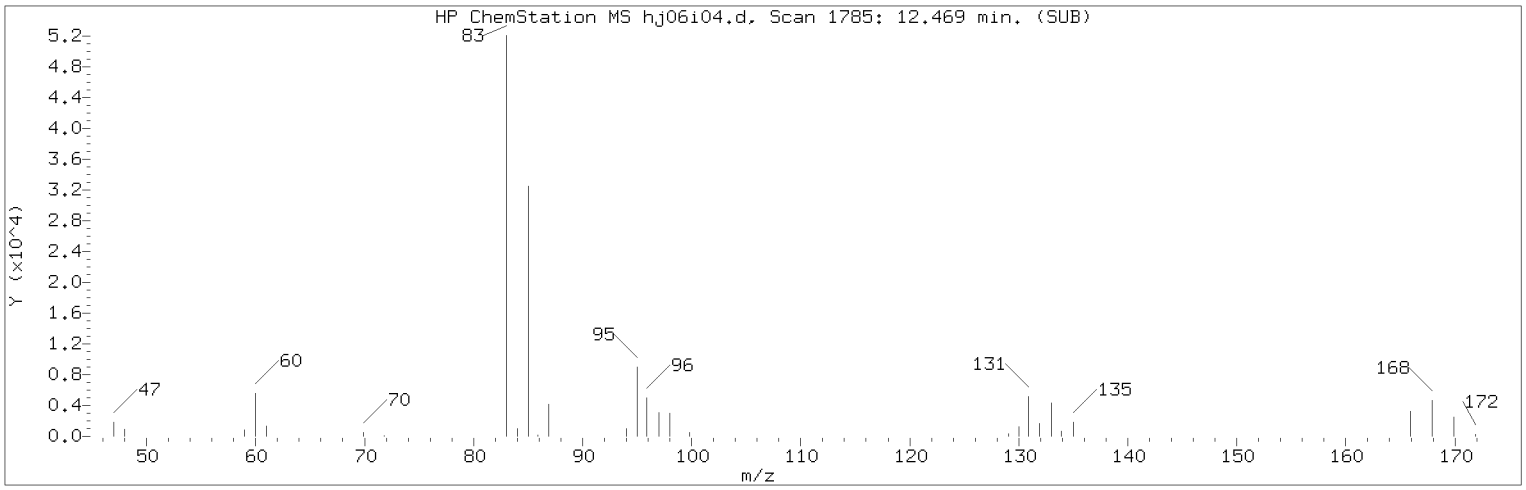
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

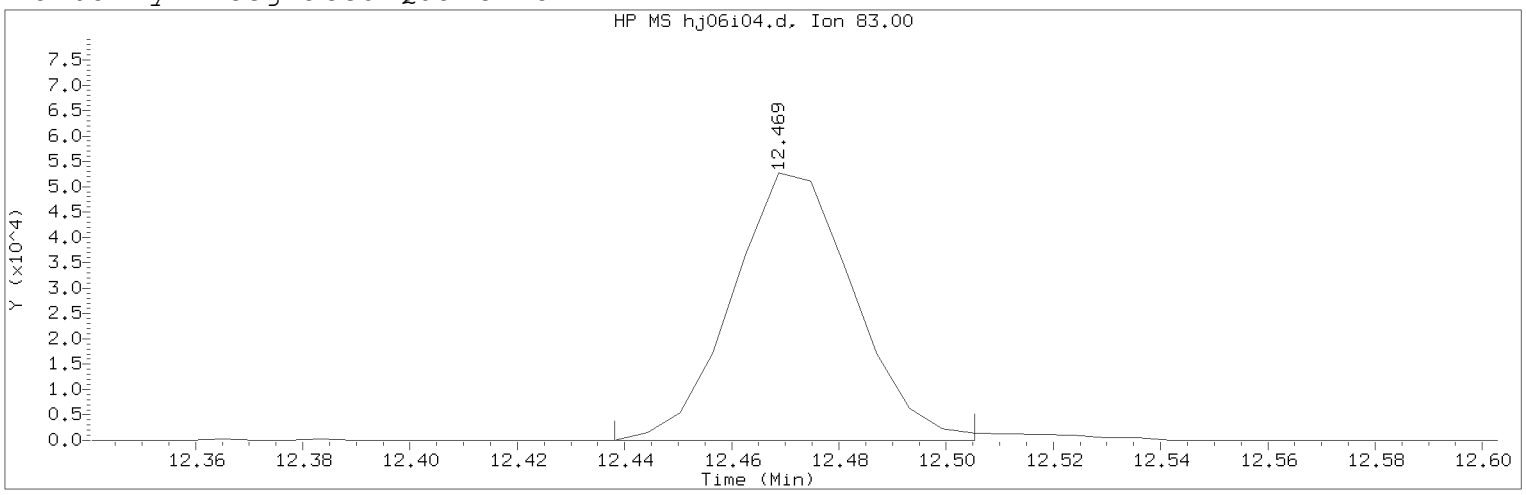
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

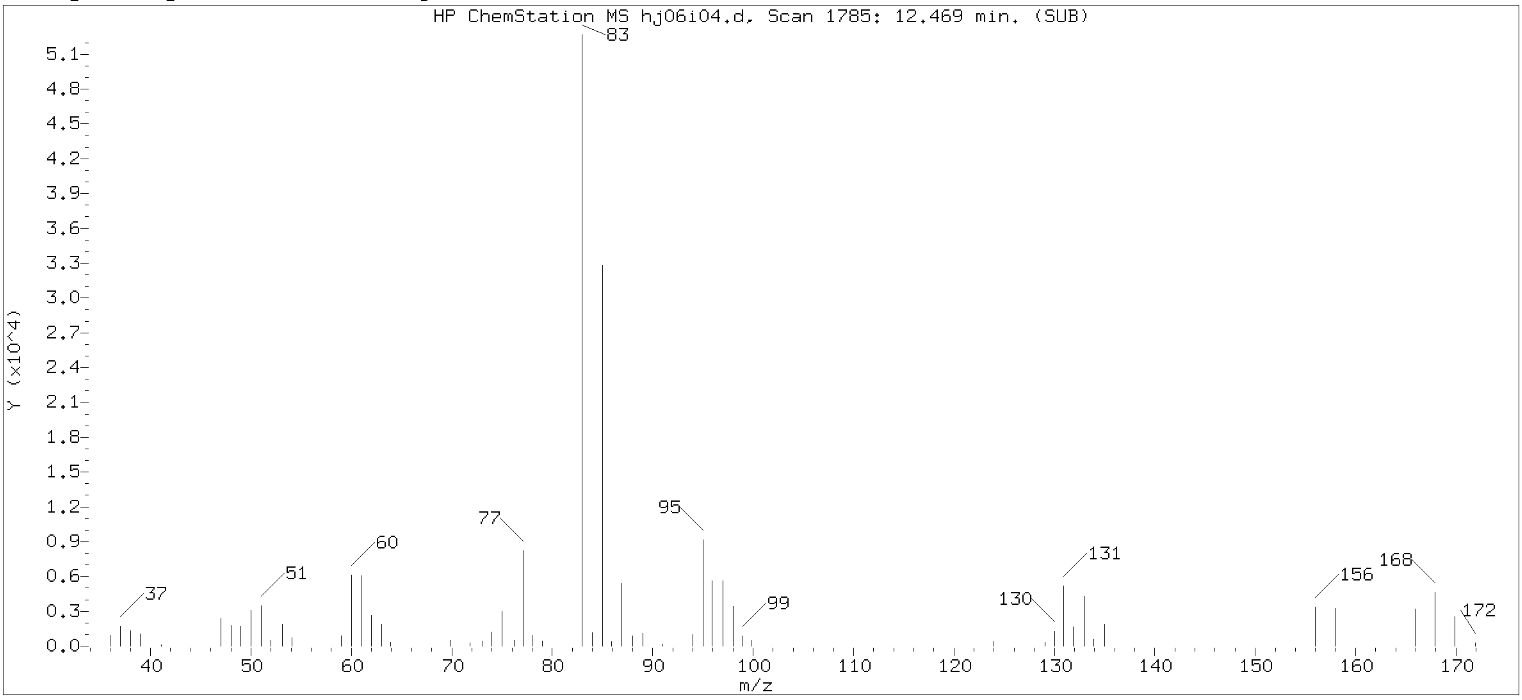
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 82697M
On-Column Amount (ng) : 1.9946
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

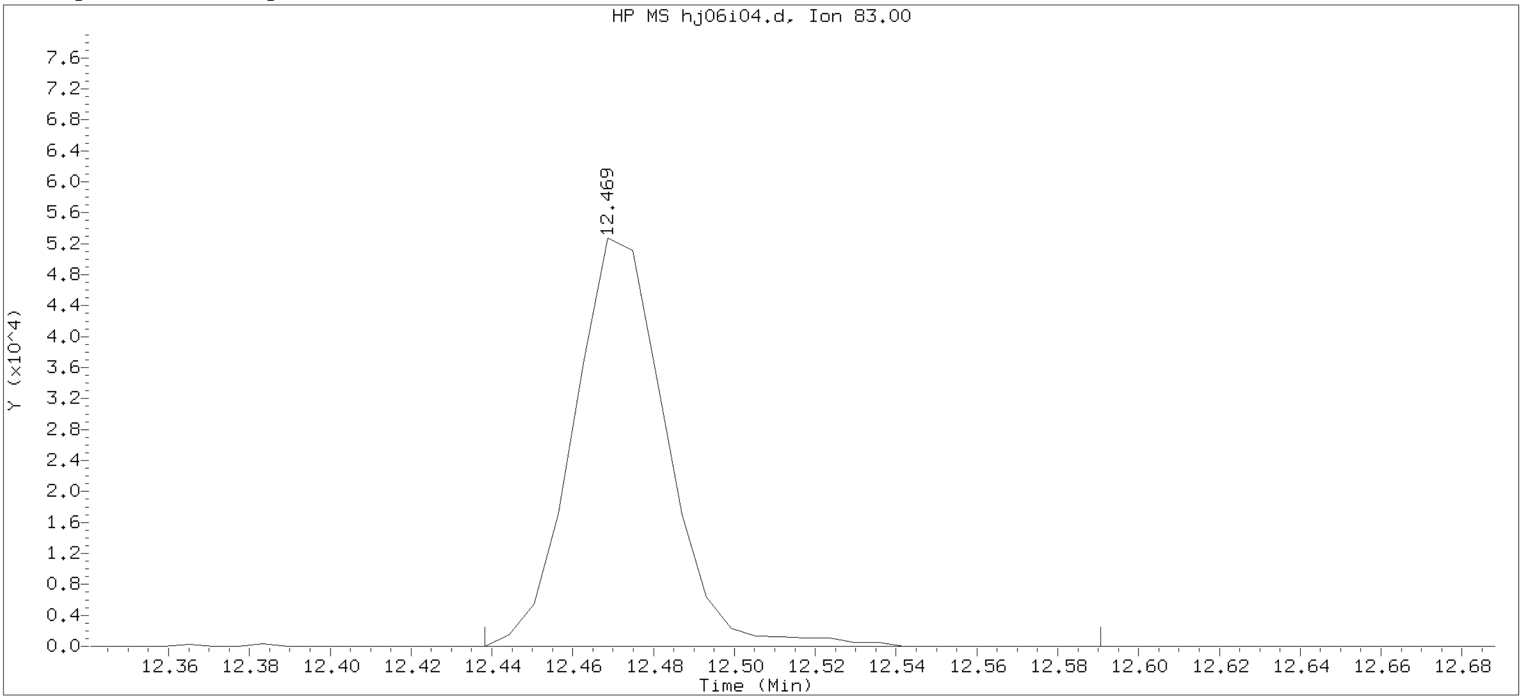
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39   Analyst ID: JKH09052

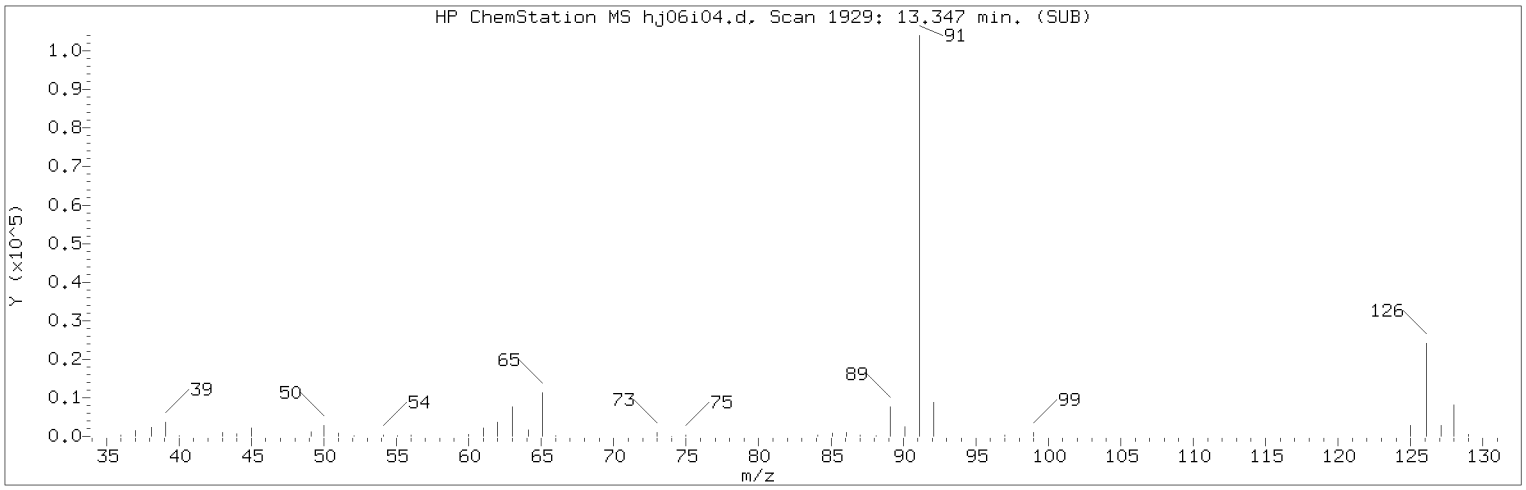
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002   Lab Sample ID: VSTD002

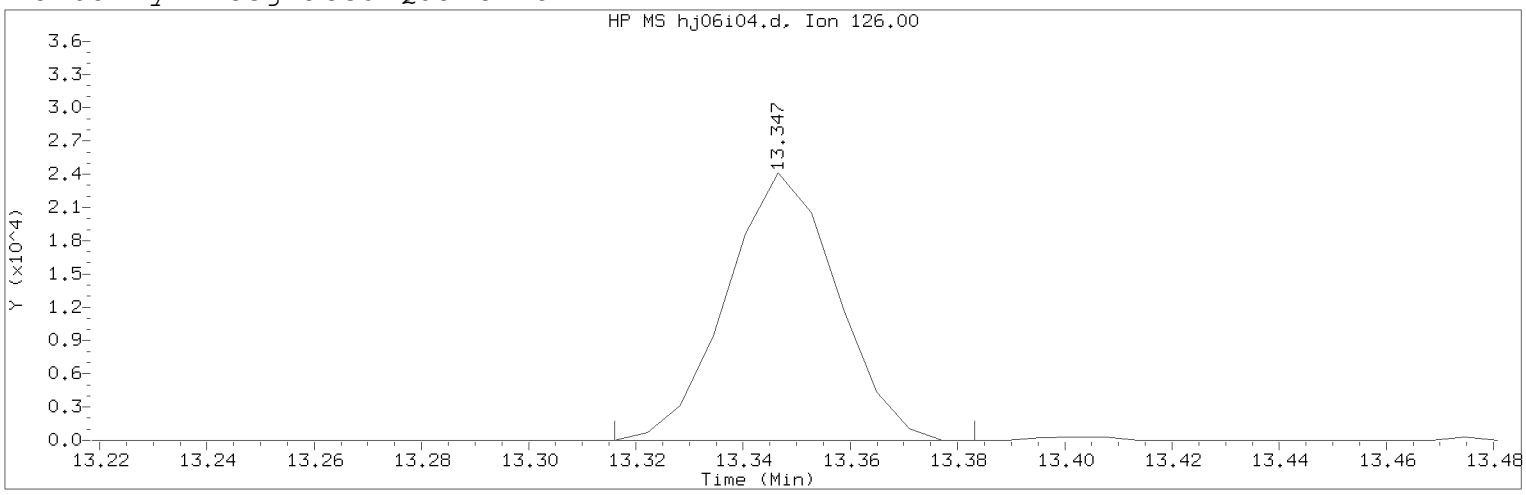
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 84320
On-column Amount (ng) : 1.9661
Integration start scan : 1779   Integration stop scan: 1804
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02036

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

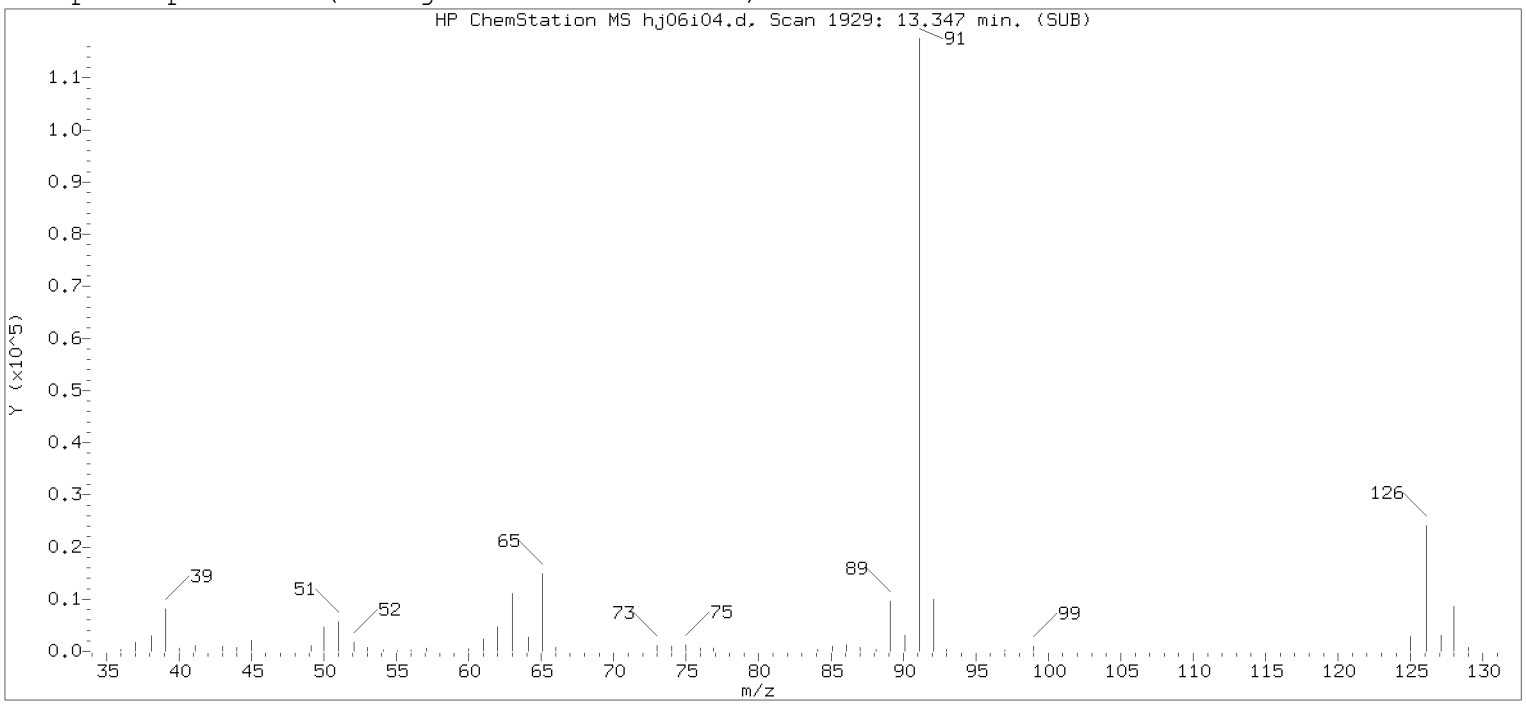
Compound Number : 137
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 34248M
On-Column Amount (ng) : 1.9649
Integration start scan : 1923 Integration stop scan: 1934
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

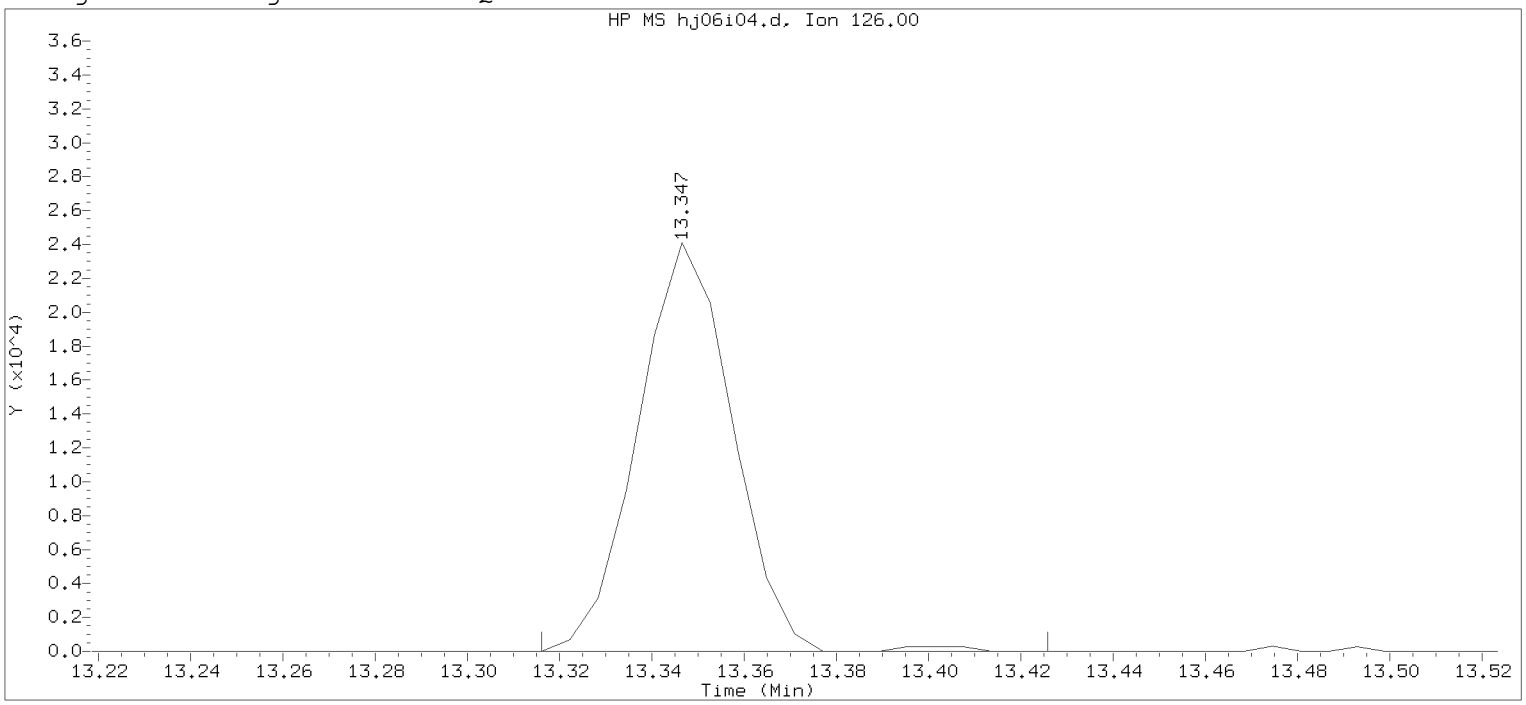
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



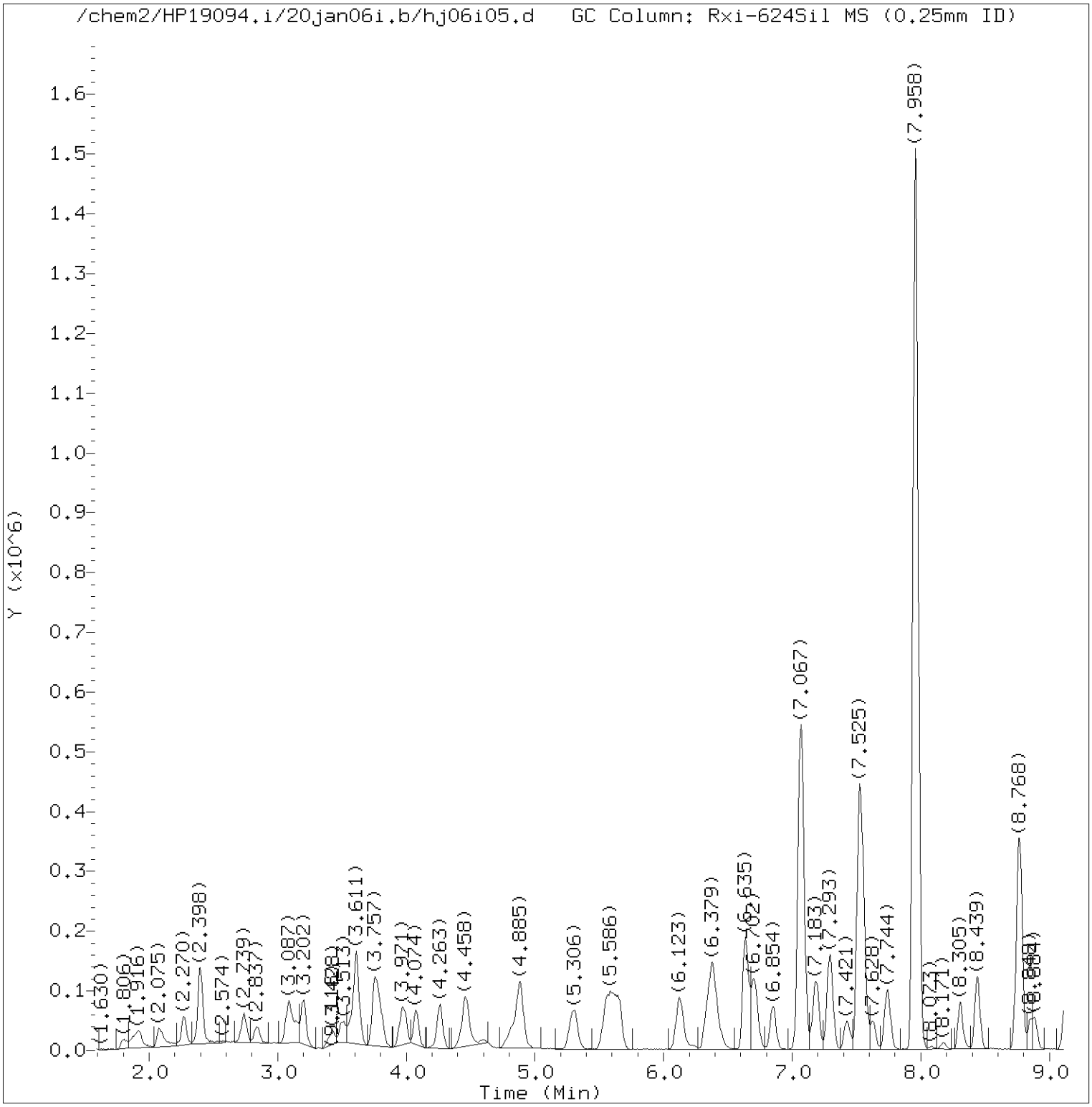
Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 137
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 34536
On-column Amount (ng) : 1.8856
Integration start scan : 1923 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: SJOHNSON



Total Ion Chromatogram (TIC)

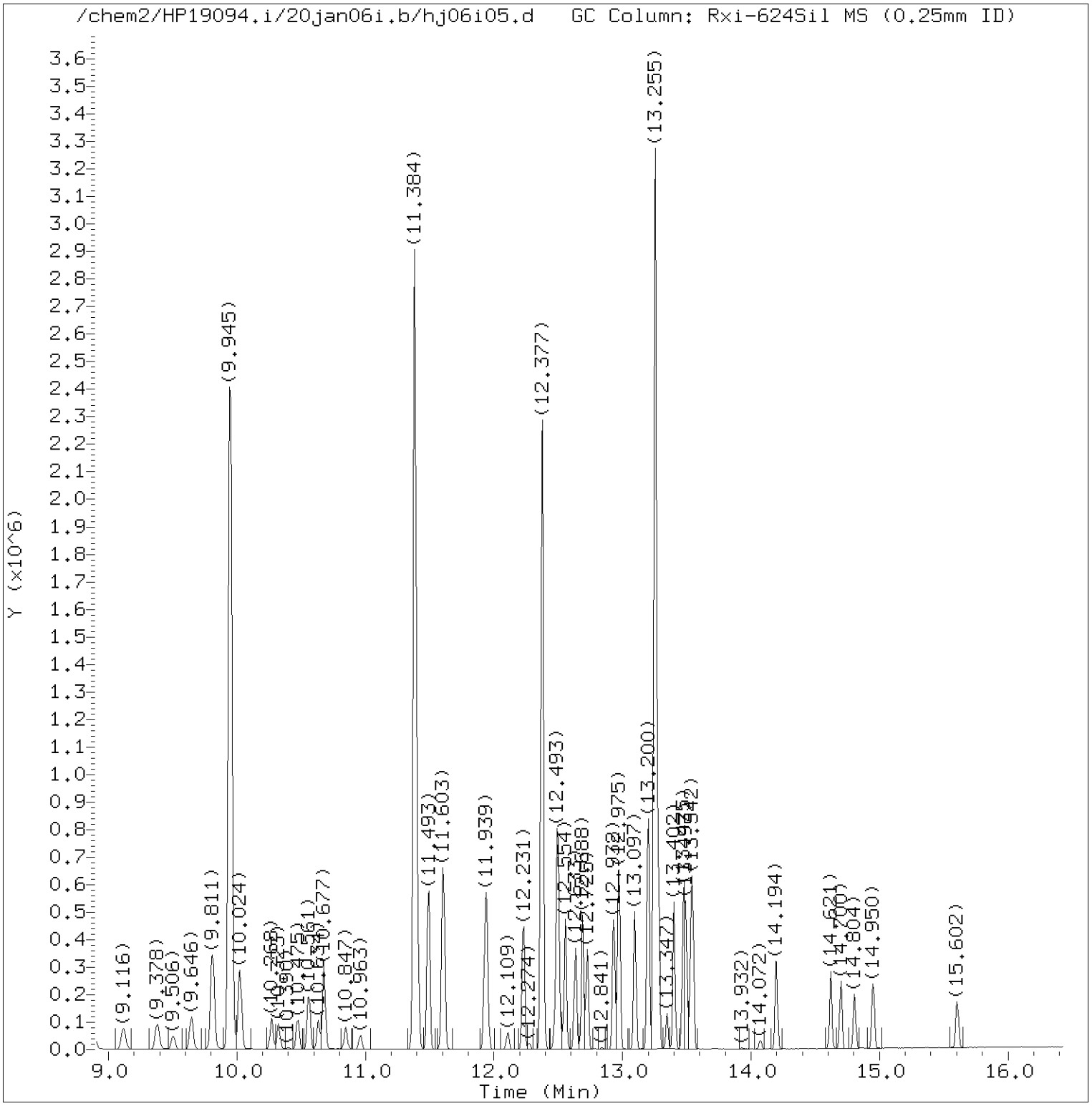
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	75278M	1.009
2) Chloromethane	(2)	2.270	50	72579	0.986
6) 1,3-Butadiene	(2)	2.398	39	56225M	1.016
5) Vinyl Chloride	(2)	2.398	62	69313	0.990
7) Bromomethane	(2)	2.739	94	48903	0.975
8) Chloroethane	(2)	2.843	64	40416	0.996
9) Dichlorofluoromethane	(2)	3.087	67	94550	0.982
10) Trichlorofluoromethane	(2)	3.148	101	79828M	0.999
11) Ethyl ether	(2)	3.428	59	34825	0.985
12) Freon 123a	(2)	3.513	67	63672	1.030
13) Acrolein	(1)	3.611	56	277191	49.634
15) 1,1-Dichloroethene	(2)	3.757	96	49369	1.016
14) Acetone	(1)	3.794	43	78581M	10.428
16) Freon 113	(2)	3.794	101	53987	1.063
17) Methyl Iodide	(2)	3.964	142	95675	1.020
18) Bromoethane	(2)	3.995	108	40968M	0.966
19) Carbon Disulfide	(2)	4.074	76	150610	1.013
22) Methyl Acetate	(1)	4.233	43	22660	1.192
23) Allyl Chloride	(2)	4.263	41	81917	0.992
24) Methylene Chloride	(2)	4.452	84	53061	1.014
27)*t-Butyl Alcohol-d10	(1)	4.458	65	124021	50.000
29) t-Butyl Alcohol	(1)	4.605	59	53216	20.329
30) Acrylonitrile	(1)	4.806	53	46077	5.011
31) Methyl Tertiary Butyl Ether	(2)	4.879	73	112679	1.014
32) trans-1,2-Dichloroethene	(2)	4.885	96	53314	0.998
33) n-Hexane	(2)	5.300	57	77385	1.027
34) 1,1-Dichloroethane	(2)	5.550	63	97205	1.008
35) di-Isopropyl Ether	(2)	5.592	45	159773	1.005
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	83728	1.014
41) 1,2-Dichloroethene (Total)	(2)		96	113693	2.015
38) Ethyl t-butyl ether	(2)	6.123	59	149284	1.001
39) 2-Butanone	(1)	6.330	43	117011	9.930
40) cis-1,2-Dichloroethene	(2)	6.373	96	60379	1.017
42) 2,2-Dichloropropane	(2)	6.391	77	82933	1.010
43) Propionitrile	(1)	6.427	54	64622	20.021
46) Methacrylonitrile	(1)	6.635	67	114480	9.917
48) Bromochloromethane	(2)	6.702	128	25252	1.007
49) Tetrahydrofuran	(1)	6.708	71	32211	9.895

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.848	83	94470	1.003
51)$Dibromofluoromethane	(2)	7.067	113	493947	9.987
51)$Dibromofluoromethane	(2)	7.067	111	508390	10.005
52) 1,1,1-Trichloroethane	(2)	7.086	97	88523	1.011
53) Cyclohexane	(2)	7.183	56	96178	1.028
53) Cyclohexane	(2)	7.189	84	84186M	1.051
53) Cyclohexane	(2)	7.189	69	30740	1.056
56) 1,1-Dichloropropene	(2)	7.287	75	75086	1.015
55) Carbon Tetrachloride	(2)	7.299	117	76382	1.017
57) Isobutyl Alcohol	(1)	7.421	41	44722	49.287
58)$1,2-Dichloroethane-d4	(2)	7.525	102	95955	10.010
58)$1,2-Dichloroethane-d4	(2)	7.525	65	445732	10.078
58)$1,2-Dichloroethane-d4	(2)	7.525	104	61459	10.123
59) Benzene	(2)	7.555	78	219939	1.016
60) 1,2-Dichloroethane	(2)	7.628	62	56848	1.019
61) t-Amyl methyl ether	(2)	7.738	73	131629	1.012
64)*Fluorobenzene	(2)	7.958	96	1989646	10.000
63) n-Heptane	(2)	7.964	43	82099	1.038
66) n-Butanol	(1)	8.305	56	74822	102.429
68) Trichloroethene	(2)	8.439	95	58033	1.023
70) Methylcyclohexane	(2)	8.750	83	101808	1.001
71) 1,2-Dichloropropane	(2)	8.774	63	54490	1.018
72) Methyl Methacrylate	(1)	8.848	69	23073	0.994
73) 1,4-Dioxane	(1)	8.860	88	8963M	50.873
74) Dibromomethane	(2)	8.890	93	25735	1.051
75) Bromodichloromethane	(2)	9.116	83	67078	1.008
77) 2-Nitropropane	(1)	9.378	41	73855M	9.683
80) 1-Bromo-2-chloroethane	(2)	9.506	63	49514M	0.984
81) cis-1,3-Dichloropropene	(2)	9.646	75	79397	1.011
82) 4-Methyl-2-Pentanone	(1)	9.811	43	289676	9.974
83)$Toluene-d8	(3)	9.945	98	1966268	9.999
83)$Toluene-d8	(3)	9.945	100	1275487	10.029
84) Toluene	(3)	10.024	92	140089	1.014
86) 1,3-Dichloropropene (total)	(3)		75	143344	2.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	63947	0.997
87) Ethyl Methacrylate	(3)	10.323	69	51380	1.034
89) 1,1,2-Trichloroethane	(3)	10.475	97	34882M	1.005
90) Tetrachloroethene	(3)	10.561	166	64653	1.030

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	61860	1.037
92) 2-Hexanone	(1)	10.677	43	202922	10.226
94) Dibromochloromethane	(3)	10.847	129	44756	1.007
96) 1,2-Dibromoethane	(3)	10.963	107	33220	1.002
97) 1-Chlorohexane	(3)	11.384	91	85376	1.025
98)*Chlorobenzene-d5	(3)	11.384	117	1476031	10.000
99) Chlorobenzene	(3)	11.408	112	154513	1.024
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	53585	0.998
101) Ethylbenzene	(3)	11.493	91	278238	1.024
102) m+p-Xylene	(3)	11.603	106	213632	2.055
106) Xylene (Total)	(3)		106	317727	3.074
105) o-Xylene	(3)	11.932	106	104095	1.018
107) Styrene	(3)	11.945	104	169055	1.019
108) Bromoform	(3)	12.109	173	25941	1.001
109) Isopropylbenzene	(3)	12.231	105	282474	1.020
112)$4-Bromofluorobenzene	(3)	12.377	95	730449	10.040
112)$4-Bromofluorobenzene	(3)	12.377	174	626077	10.057
114) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	41928M	1.006
115) Bromobenzene	(4)	12.493	156	63374	1.006
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	108468	9.943
117) 1,2,3-Trichloropropane	(4)	12.524	110	11040	0.989
118) n-Propylbenzene	(4)	12.554	91	334540	1.017
120) 2-Chlorotoluene	(4)	12.633	126	64837	0.999
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	242036	1.014
123) 4-Chlorotoluene	(4)	12.725	126	64685	0.998
126) tert-Butylbenzene	(4)	12.932	134	50094	1.015
127) Pentachloroethane	(4)	12.969	167	40050	0.952
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	248595	1.008
129) sec-Butylbenzene	(4)	13.097	105	311718	1.008
133) p-Isopropyltoluene	(4)	13.200	119	269425	1.012
132) 1,3-Dichlorobenzene	(4)	13.200	146	126298	1.006
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	798465	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	121684	0.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	101239M	0.985
137) Benzyl Chloride	(4)	13.347	126	17647	1.007
139) n-Butylbenzene	(4)	13.493	92	133283	1.013
140) 1,2-Dichlorobenzene	(4)	13.530	146	112044	1.012
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	6378	1.025

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

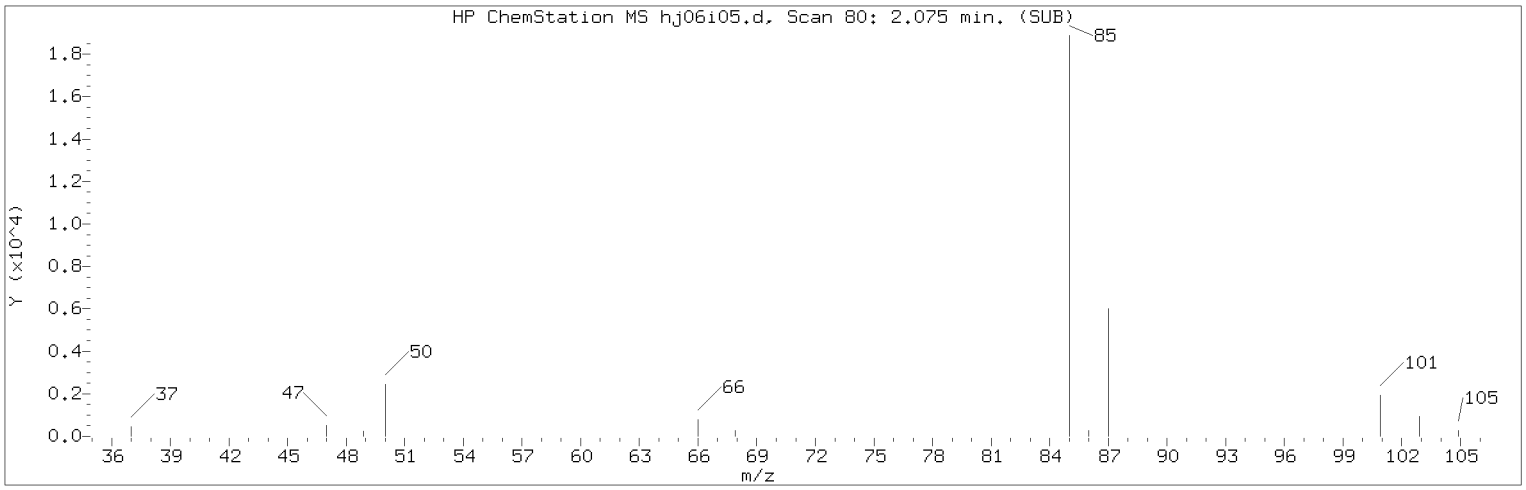
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

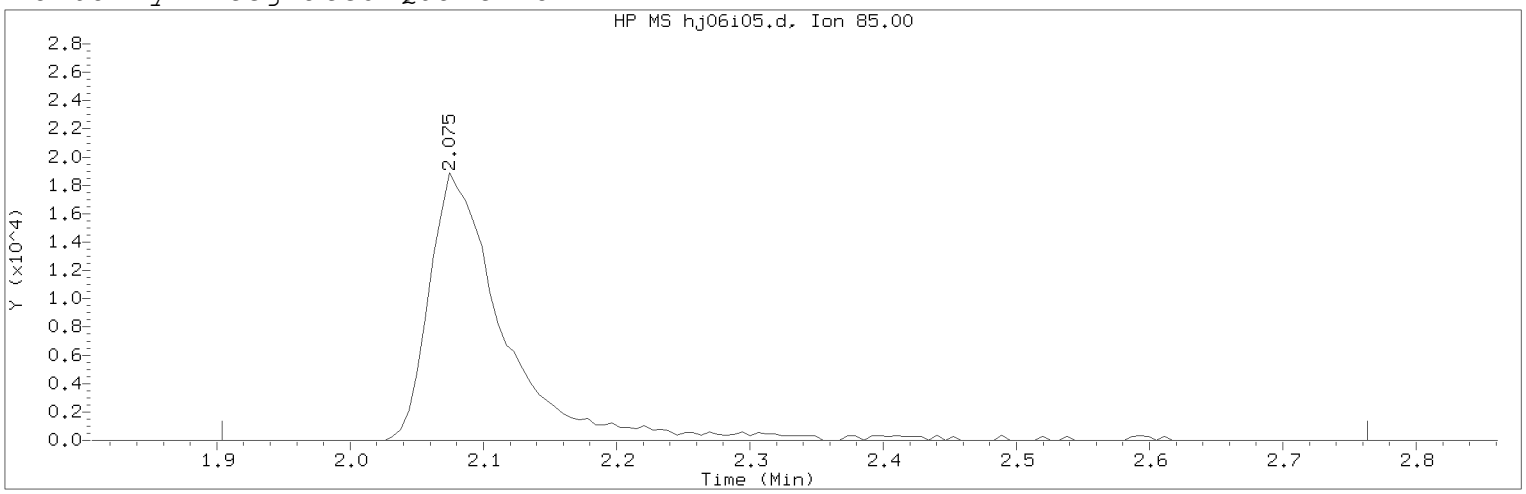
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	96296	0.980
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	78732	0.955
147) Hexachlorobutadiene	(4)	14.700	225	42759	0.994
148) Naphthalene	(4)	14.804	128	145072	1.009
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	68903	0.979

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

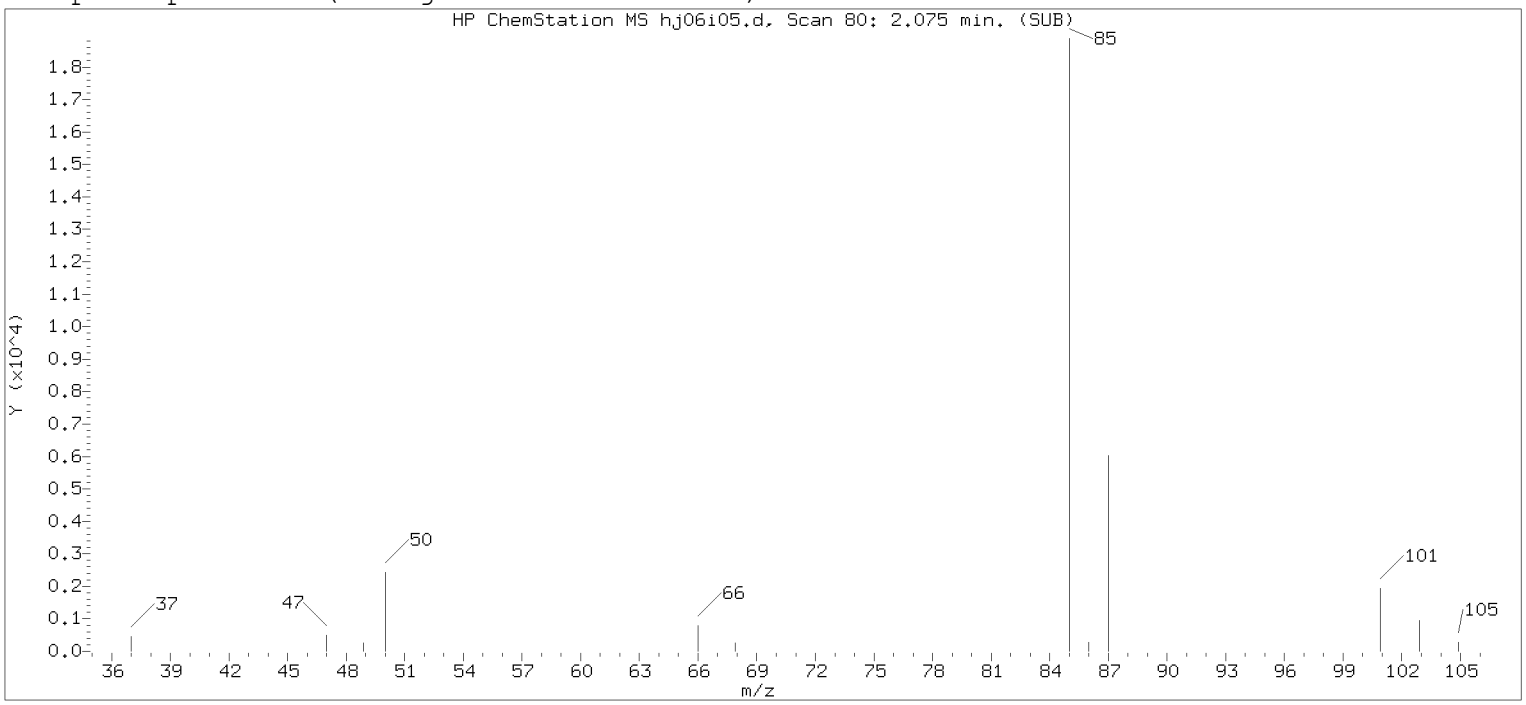
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area (flag) : 75278M
On-Column Amount (ng) : 1.0093
Integration start scan : 51 Integration stop scan: 192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

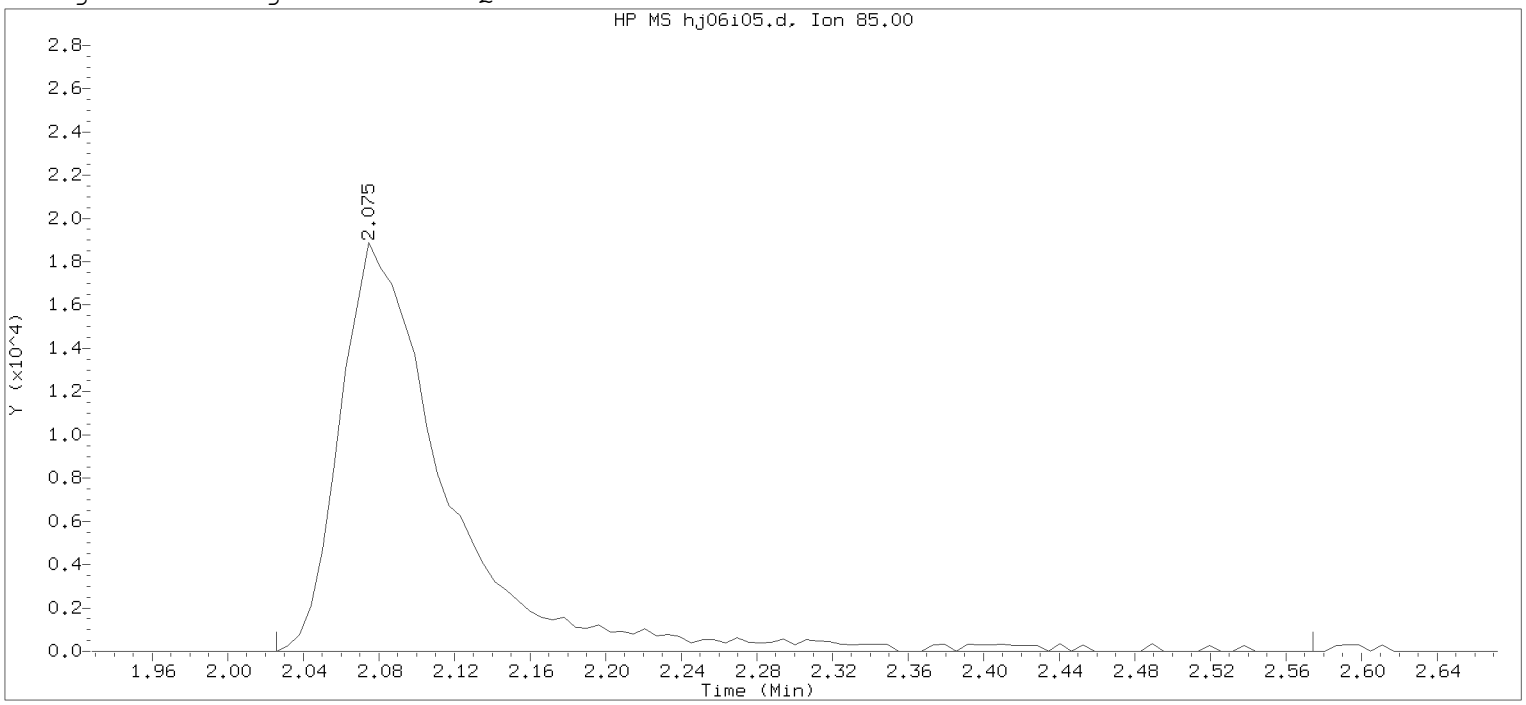
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

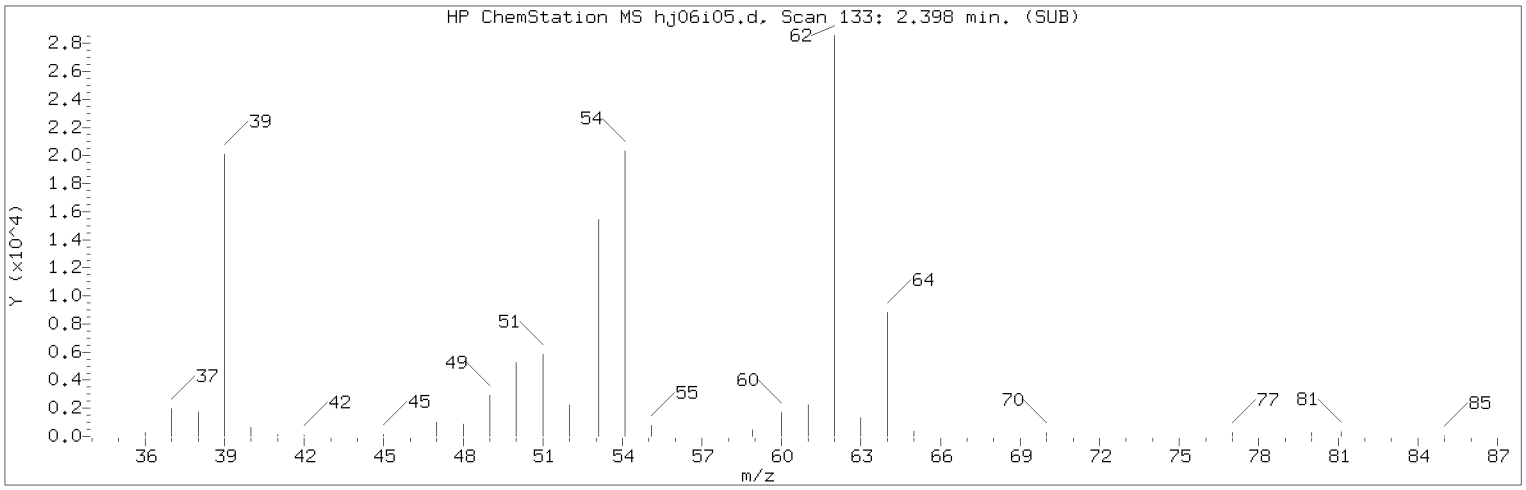
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

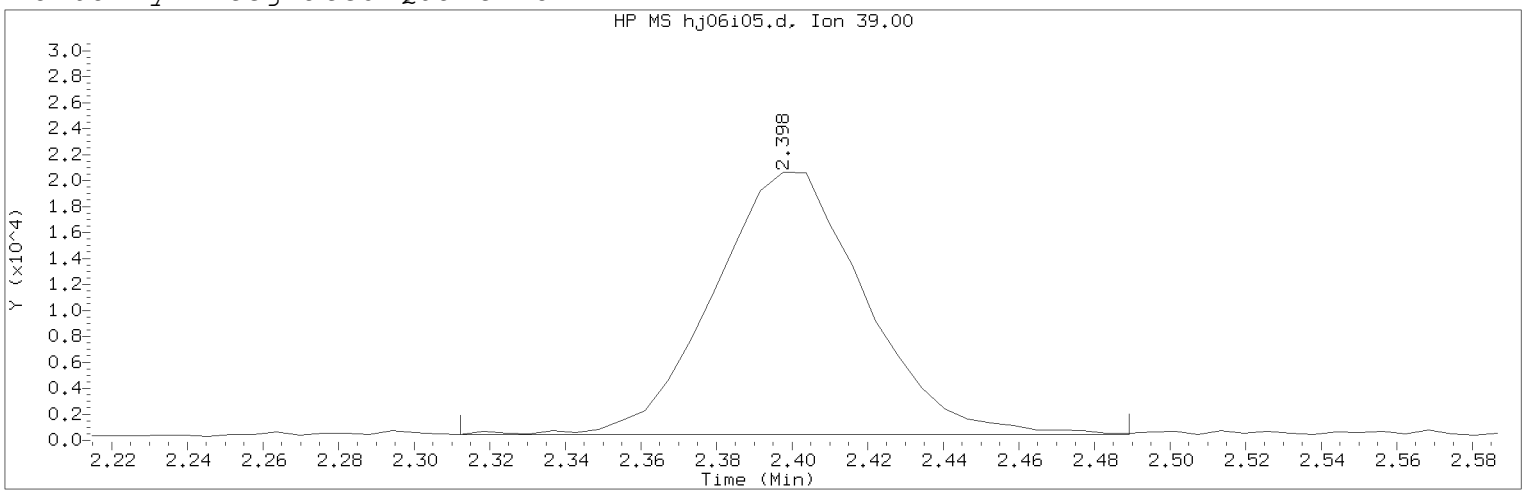
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area : 74859
On-column Amount (ng) : 1.0121
Integration start scan : 71 Integration stop scan: 161
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user: SEJohnson

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

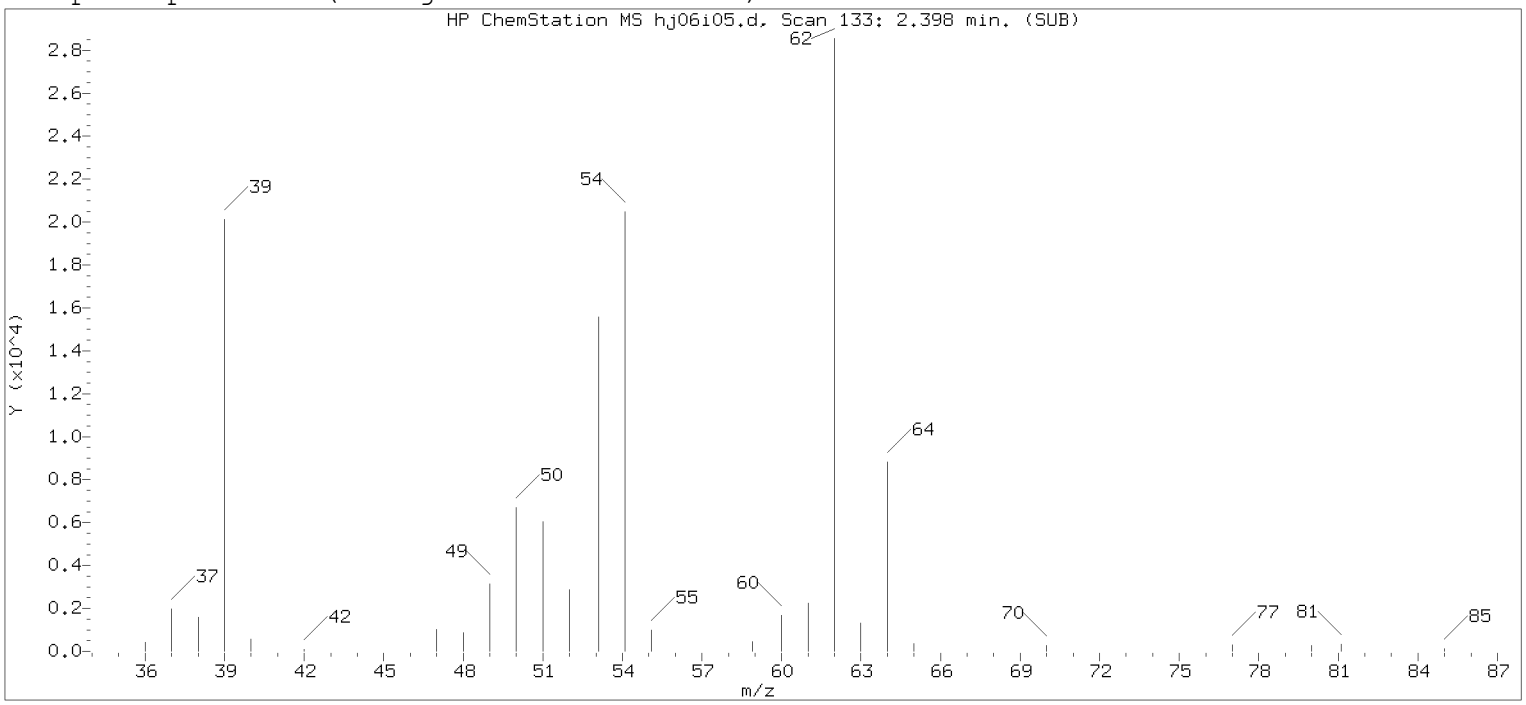
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 133
Retention Time (minutes): 2.398
Quant Ion : 39.00
Area (flag) : 56225M
On-Column Amount (ng) : 1.0163
Integration start scan : 118 Integration stop scan: 147
Y at integration start : 463 Y at integration end: 463

Reason for manual integration: improper integration

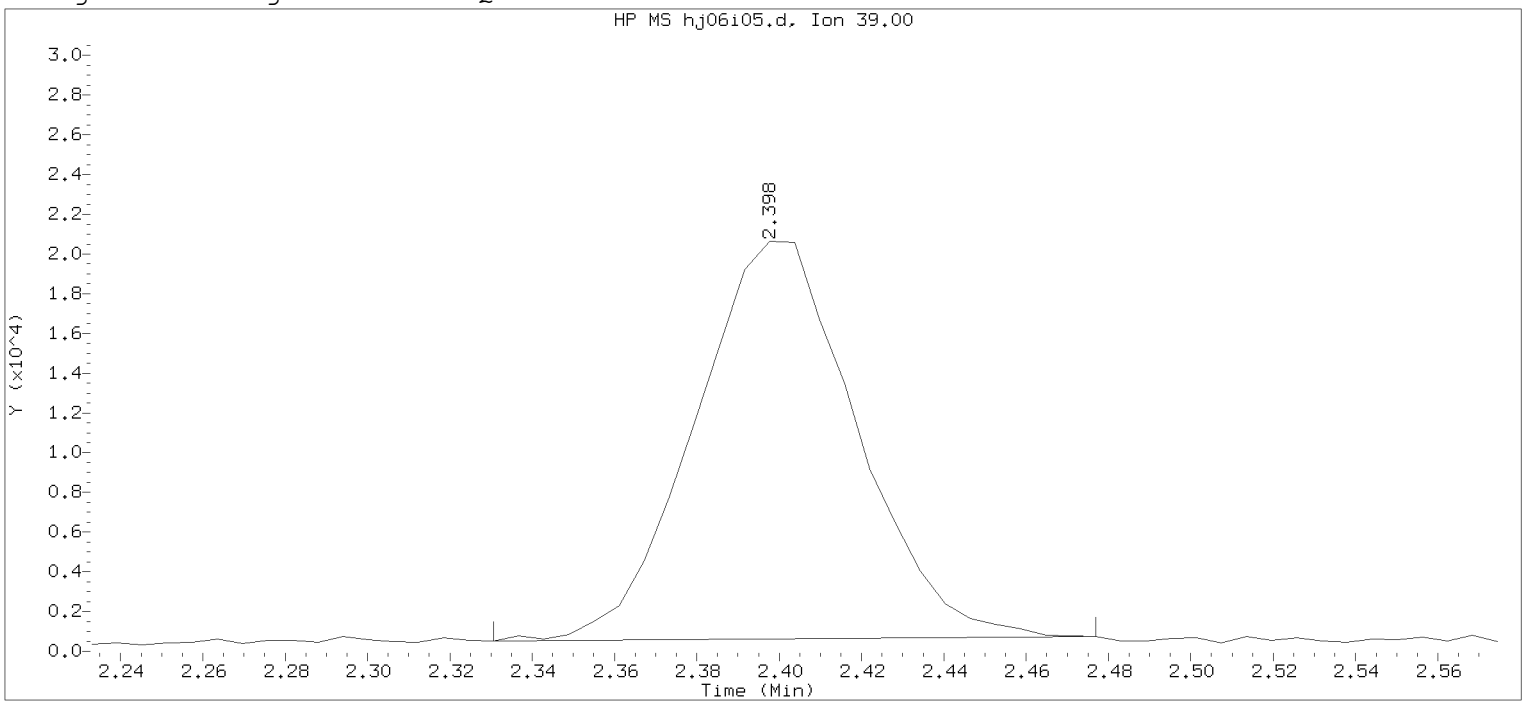
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

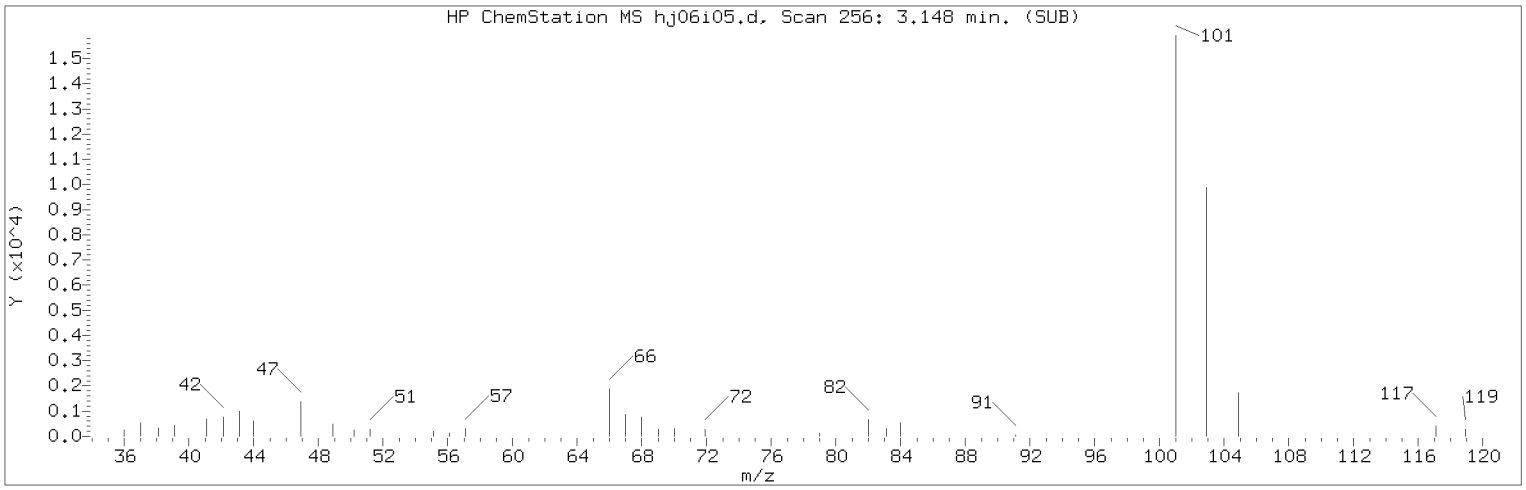
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

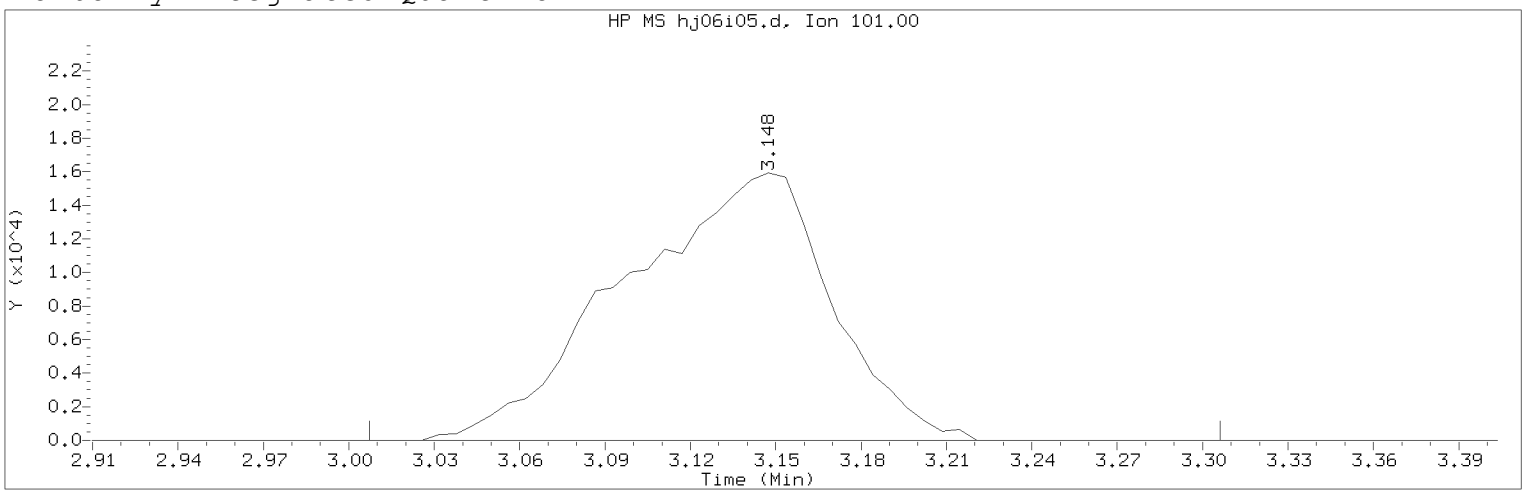
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 133
Retention Time (minutes): 2.398
Quant Ion : 39.00
Area : 54561
On-column Amount (ng) : 0.9985
Integration start scan : 121 Integration stop scan: 145
Y at integration start : 515 Y at integration end: 741

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

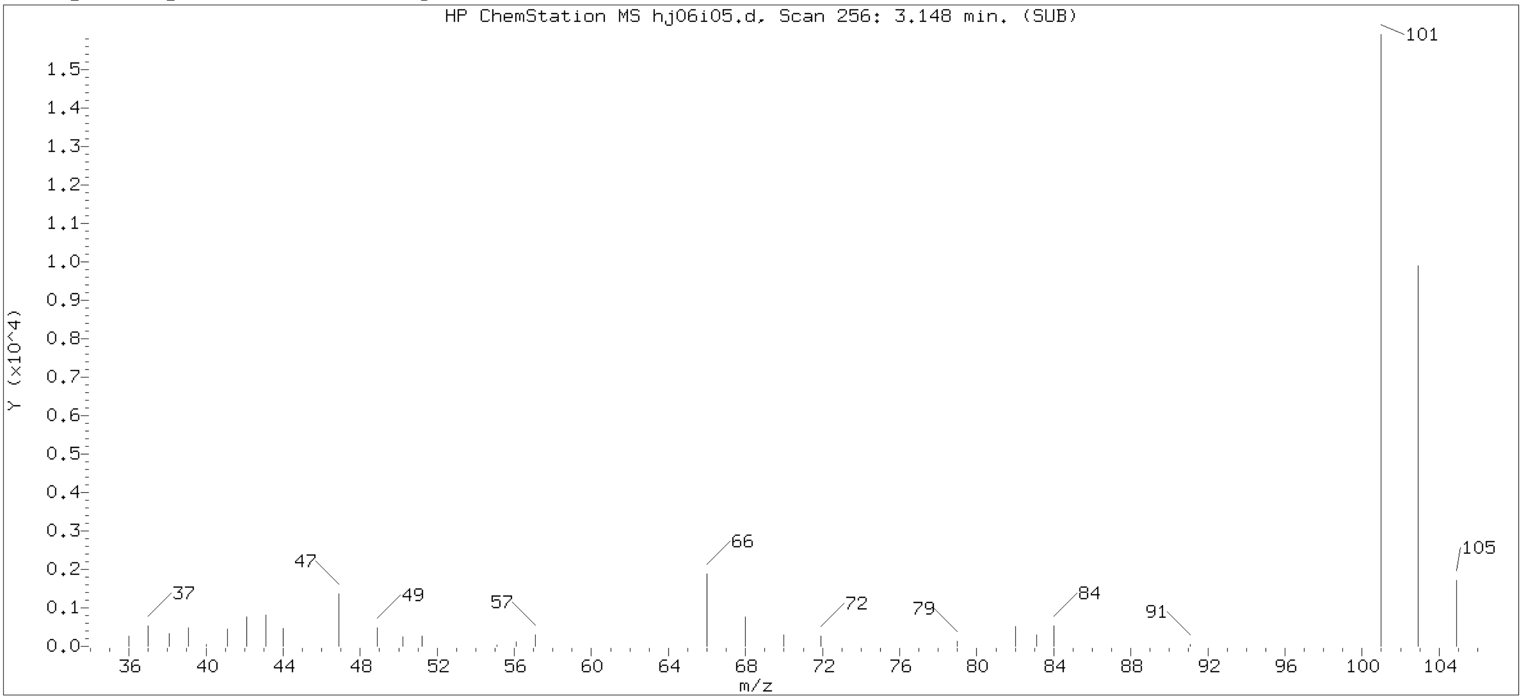
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 256
Retention Time (minutes): 3.148
Quant Ion : 101.00
Area (flag) : 79828M
On-Column Amount (ng) : 0.9988
Integration start scan : 232 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

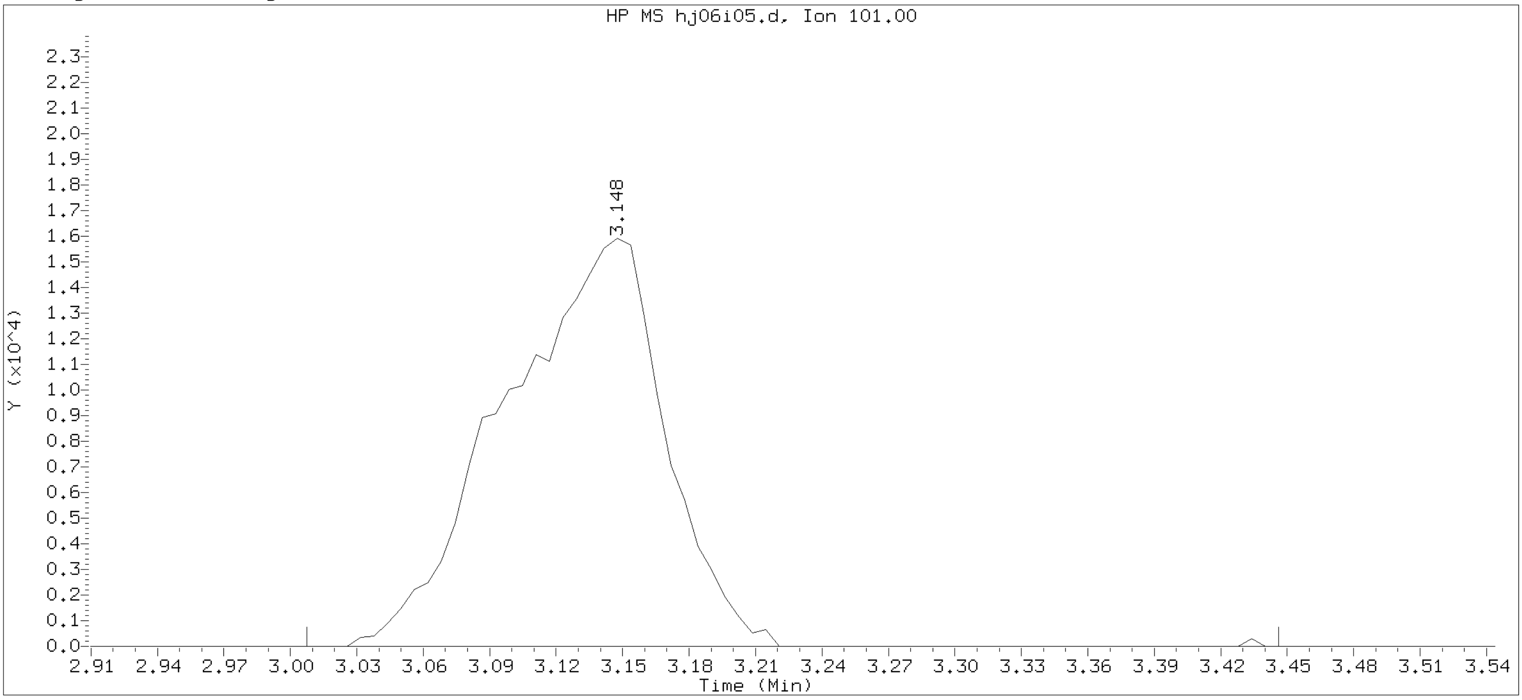
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01   Analyst ID: JKH09052

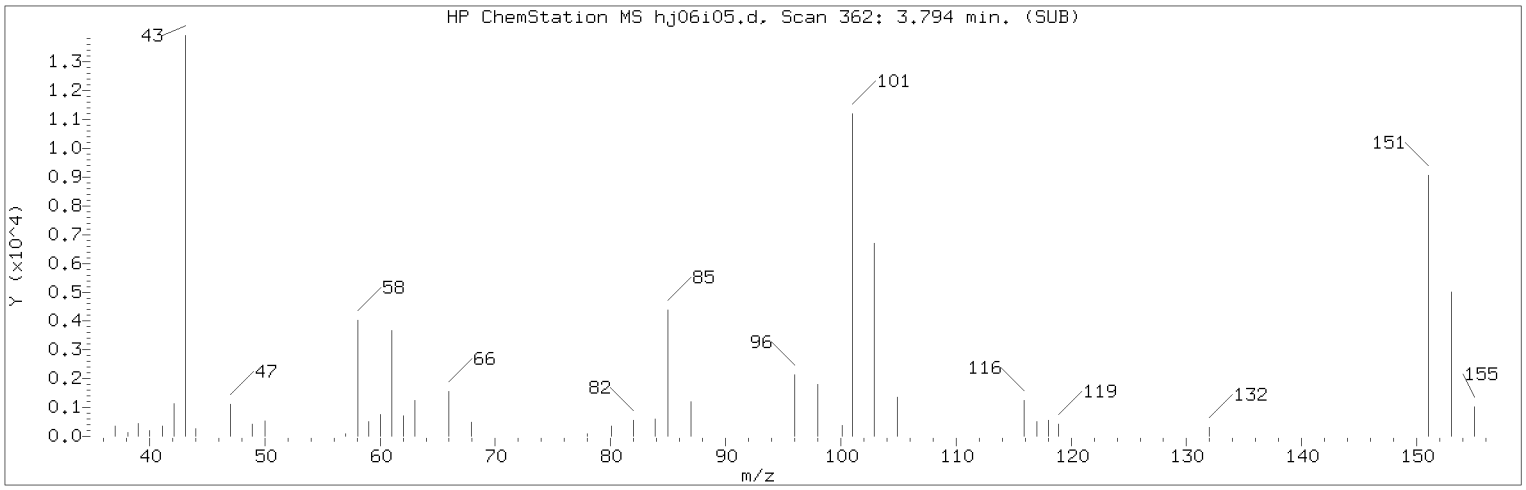
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001   Lab Sample ID: VSTD001

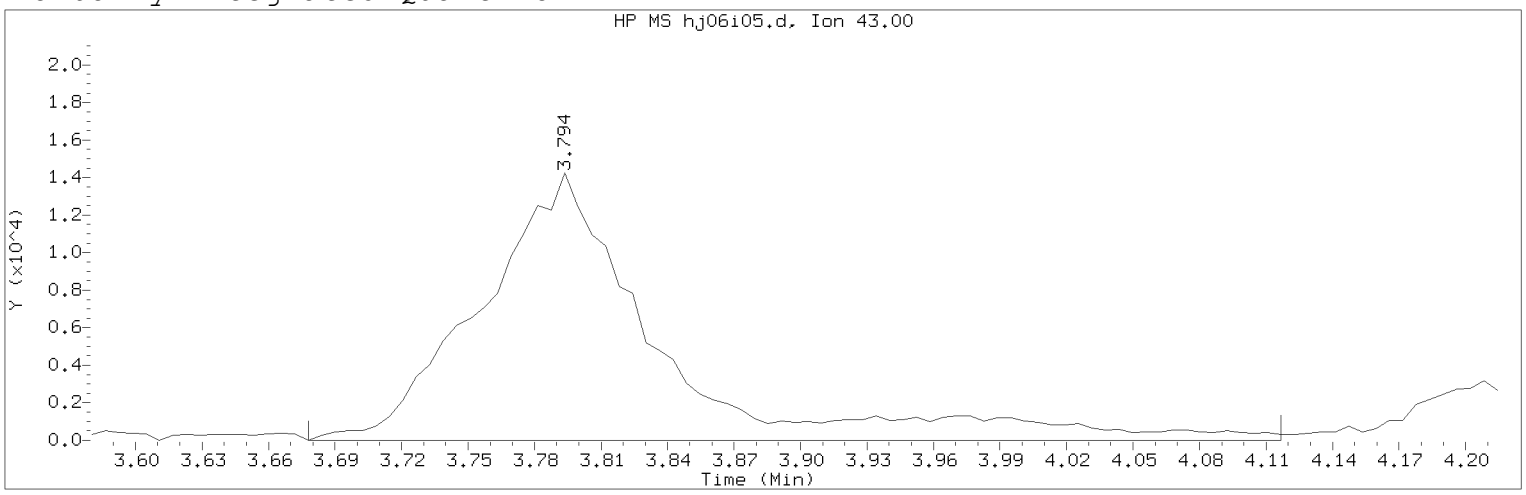
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 256
Retention Time (minutes): 3.148
Quant Ion : 101.00
Area : 79941
On-column Amount (ng) : 0.9992
Integration start scan : 232   Integration stop scan: 304
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

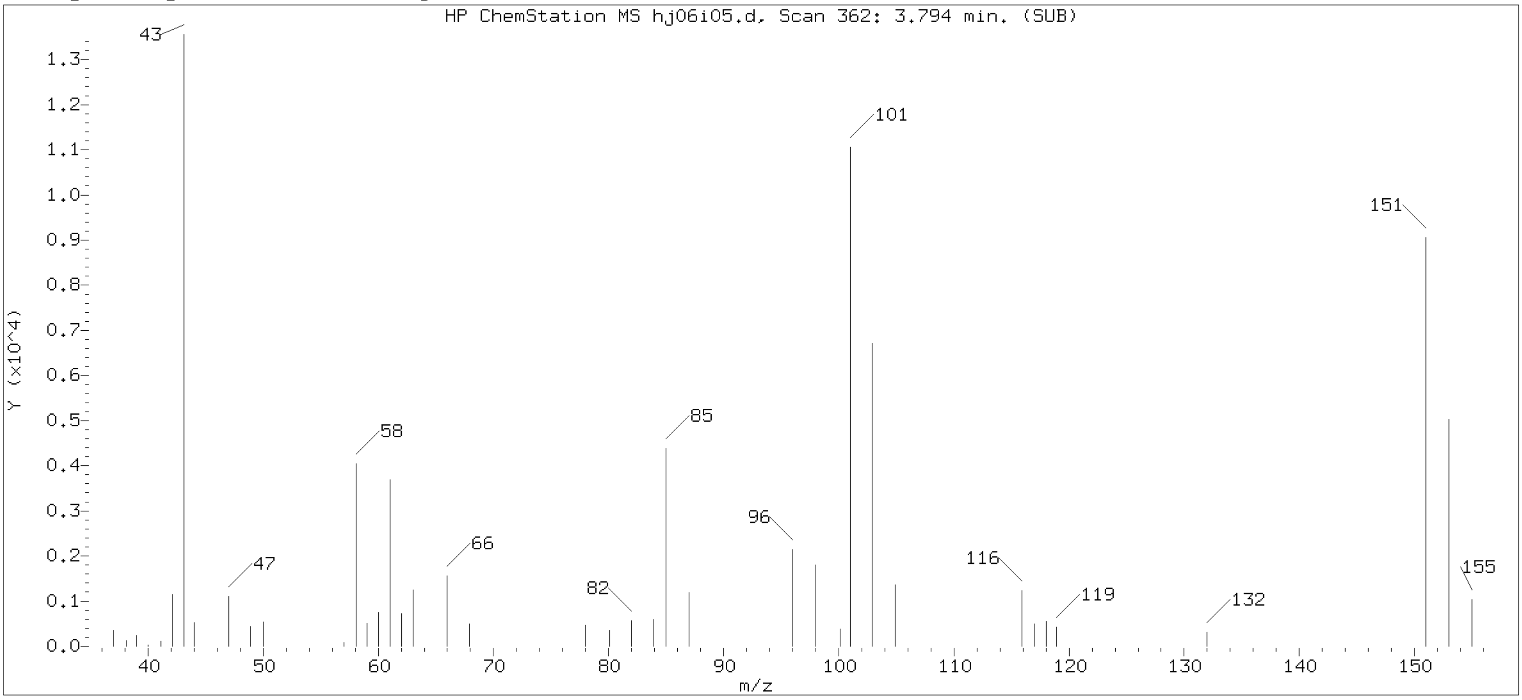
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 78581M
On-Column Amount (ng) : 10.4277
Integration start scan : 342 Integration stop scan: 414
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

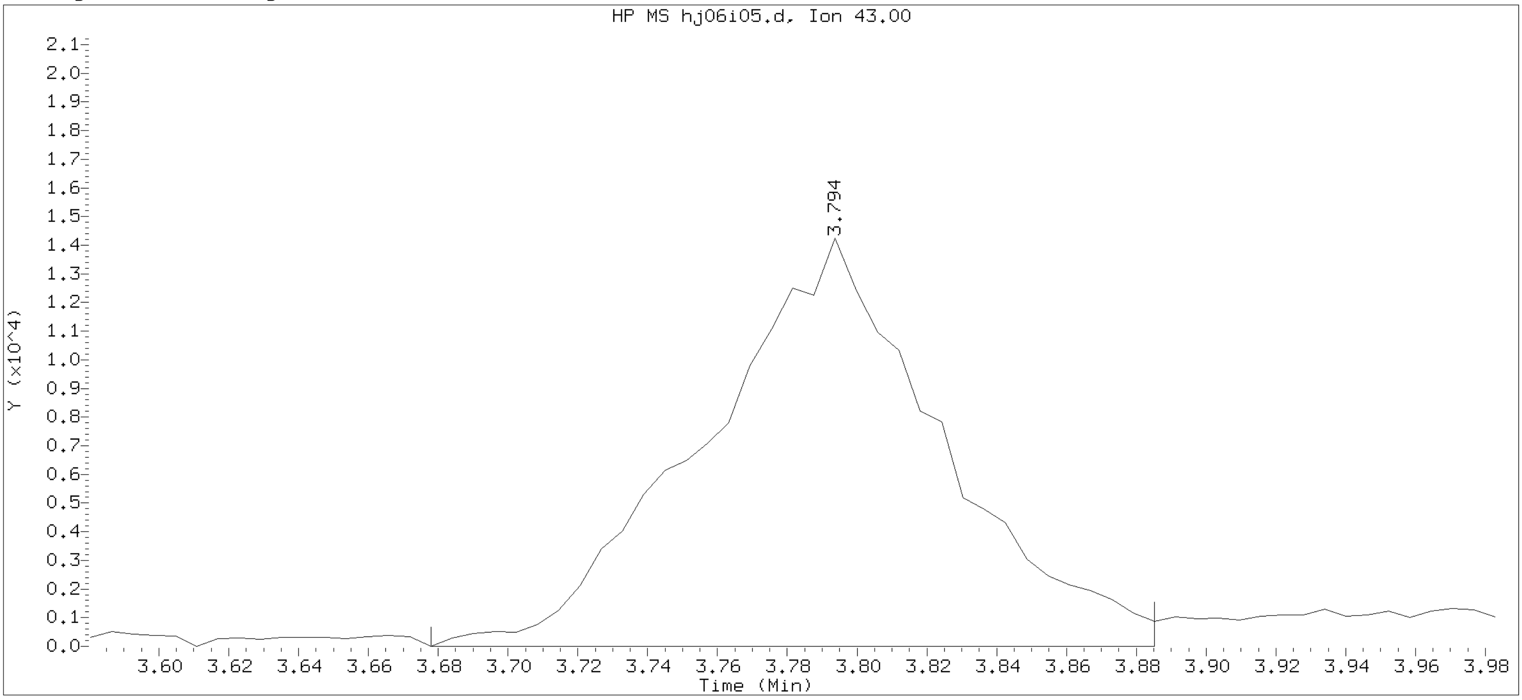
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01   Analyst ID: JKH09052

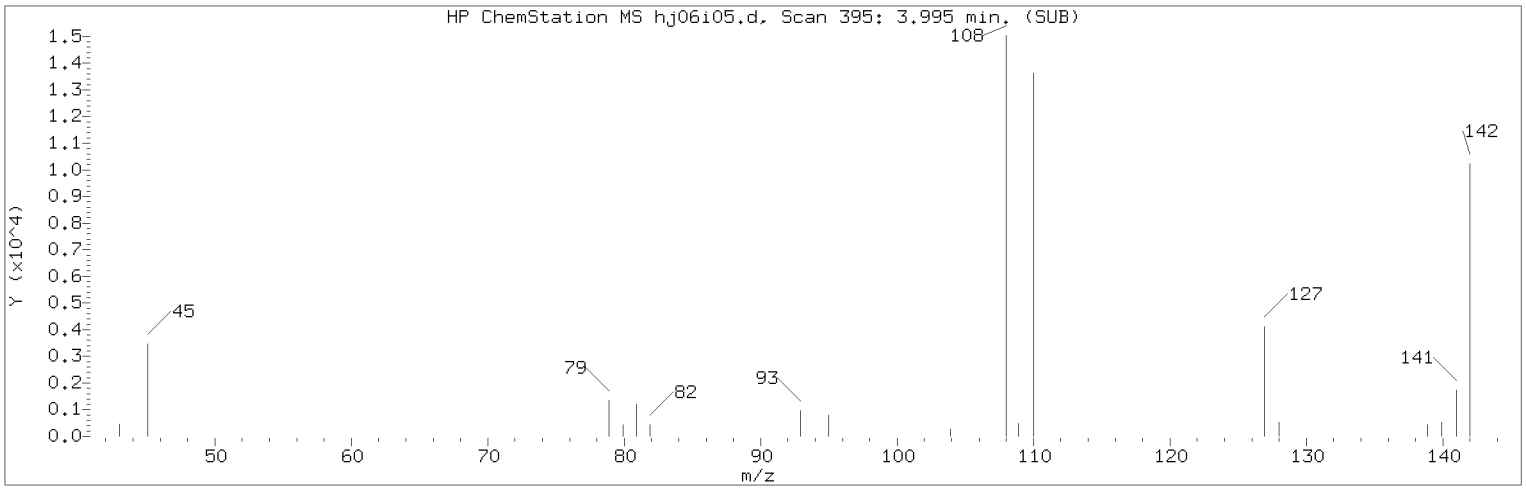
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001   Lab Sample ID: VSTD001

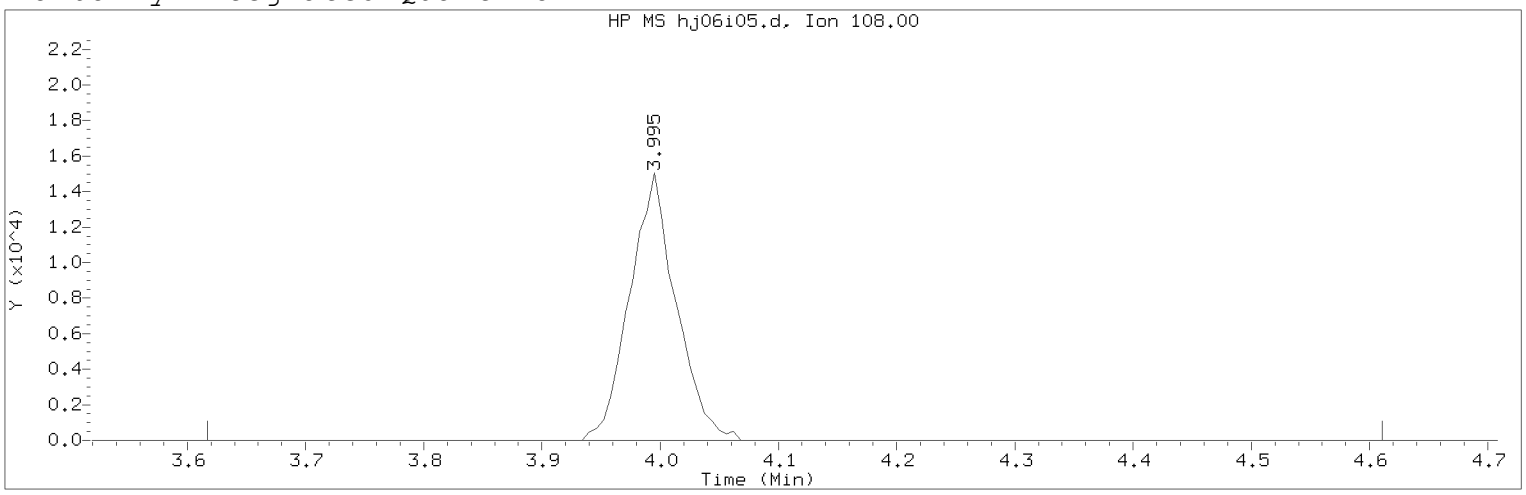
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 66893
On-column Amount (ng) : 8.8758
Integration start scan : 342   Integration stop scan: 376
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02051

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

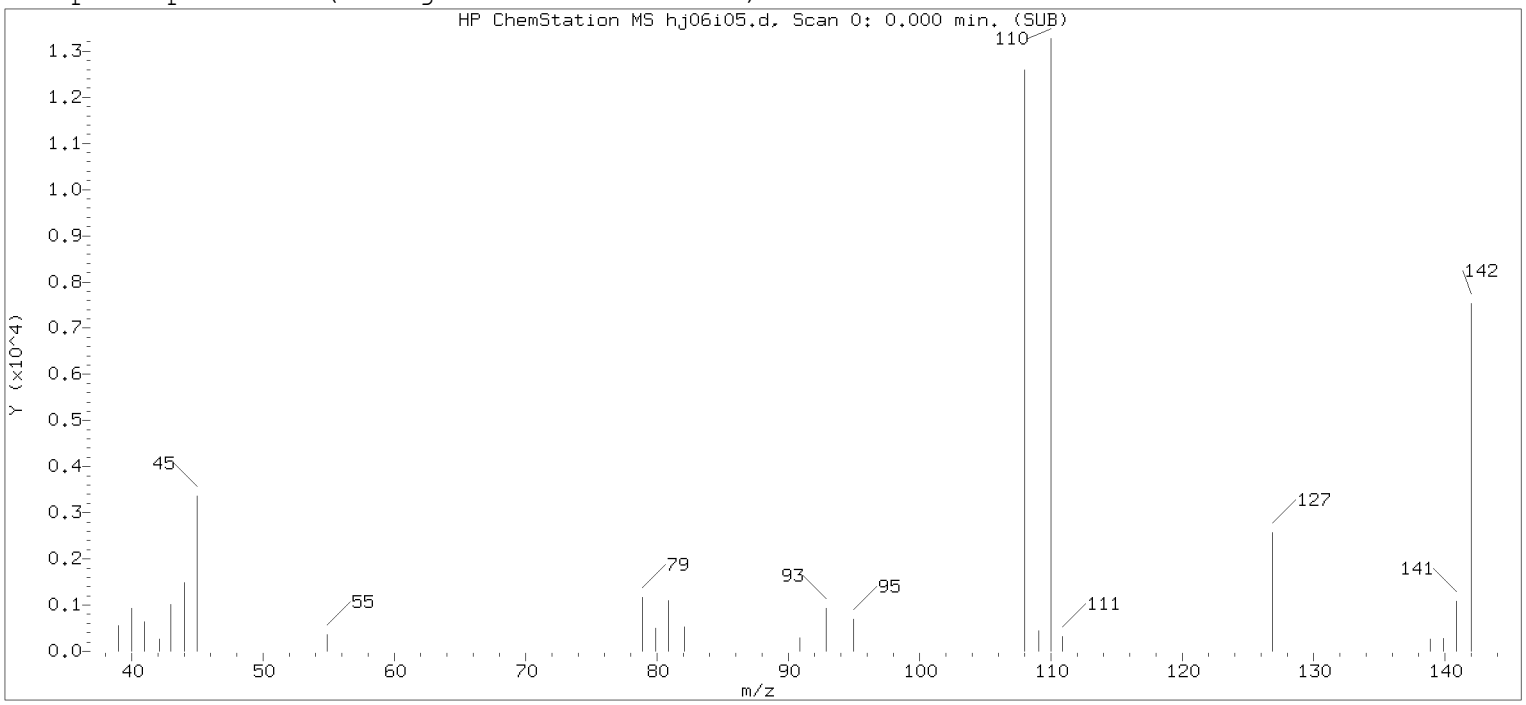
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 395
Retention Time (minutes): 3.995
Quant Ion : 108.00
Area (flag) : 40968M
On-Column Amount (ng) : 0.9660
Integration start scan : 332 Integration stop scan: 495
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

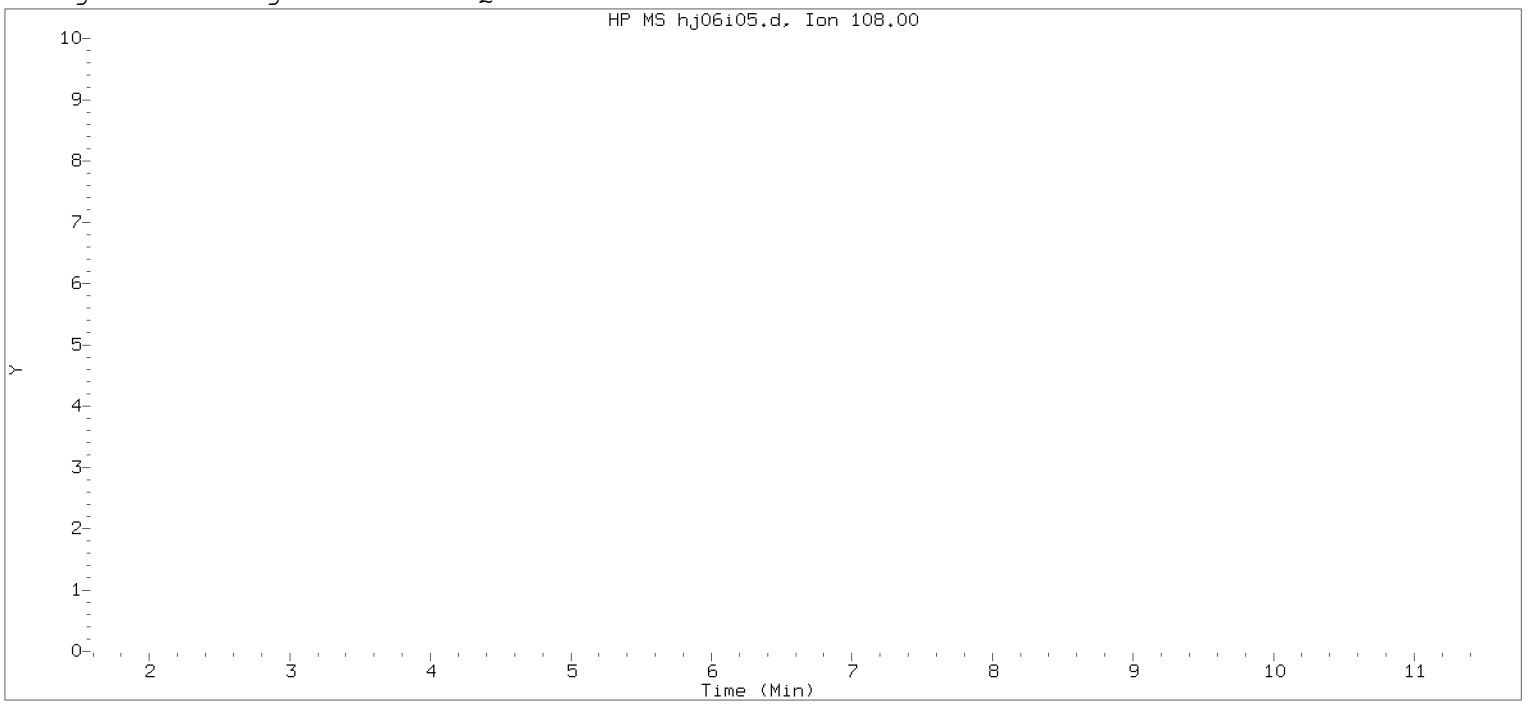
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

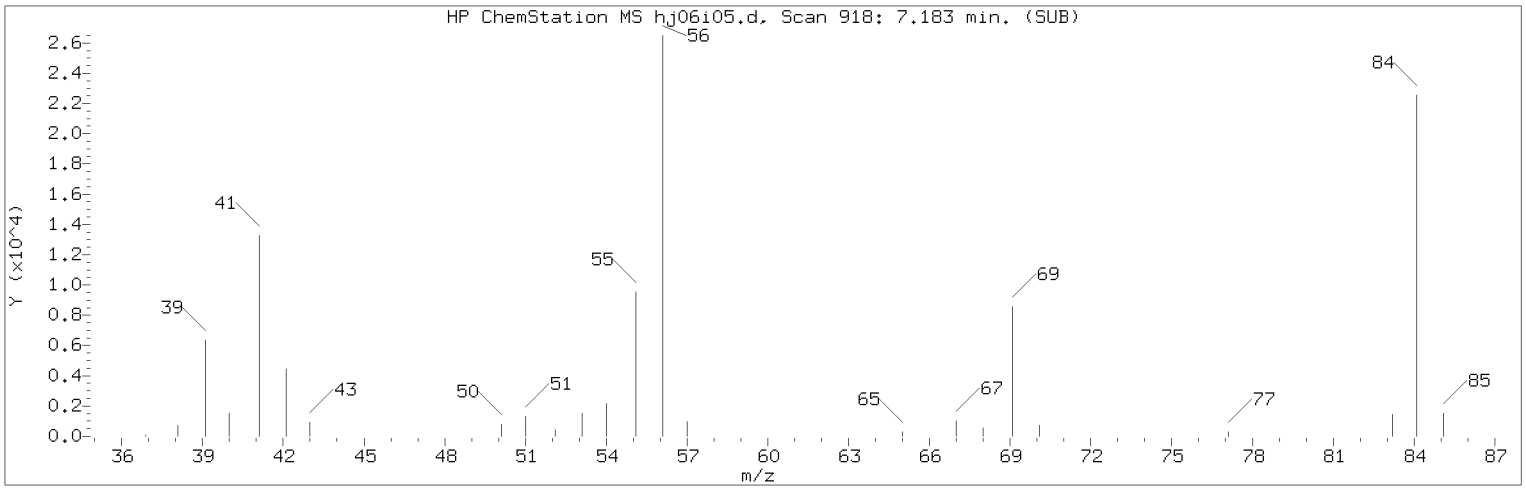
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

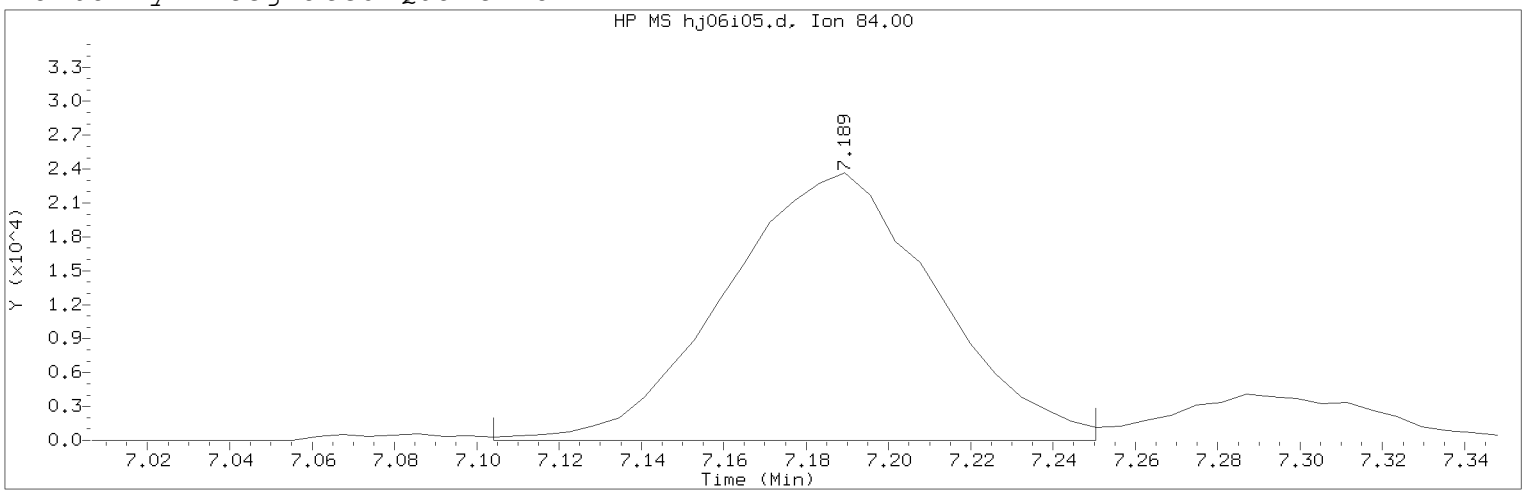
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

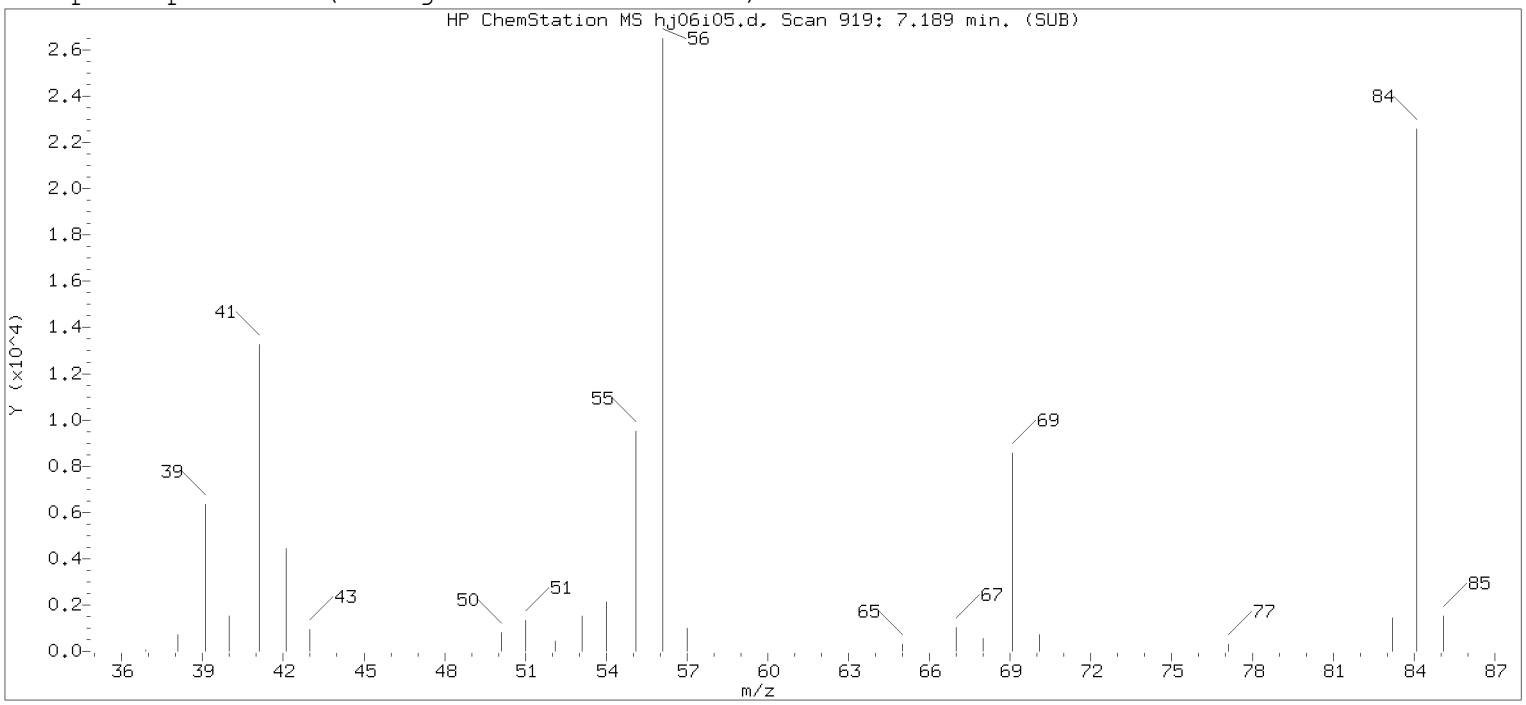
Compound Number : 53
Compound Name : Cyclohexane
Scan Number : 919
Retention Time (minutes): 7.189
Quant Ion : 84.00
Area (flag) : 84186M
On-Column Amount (ng) : 1.0510
Integration start scan : 904 Integration stop scan: 928
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

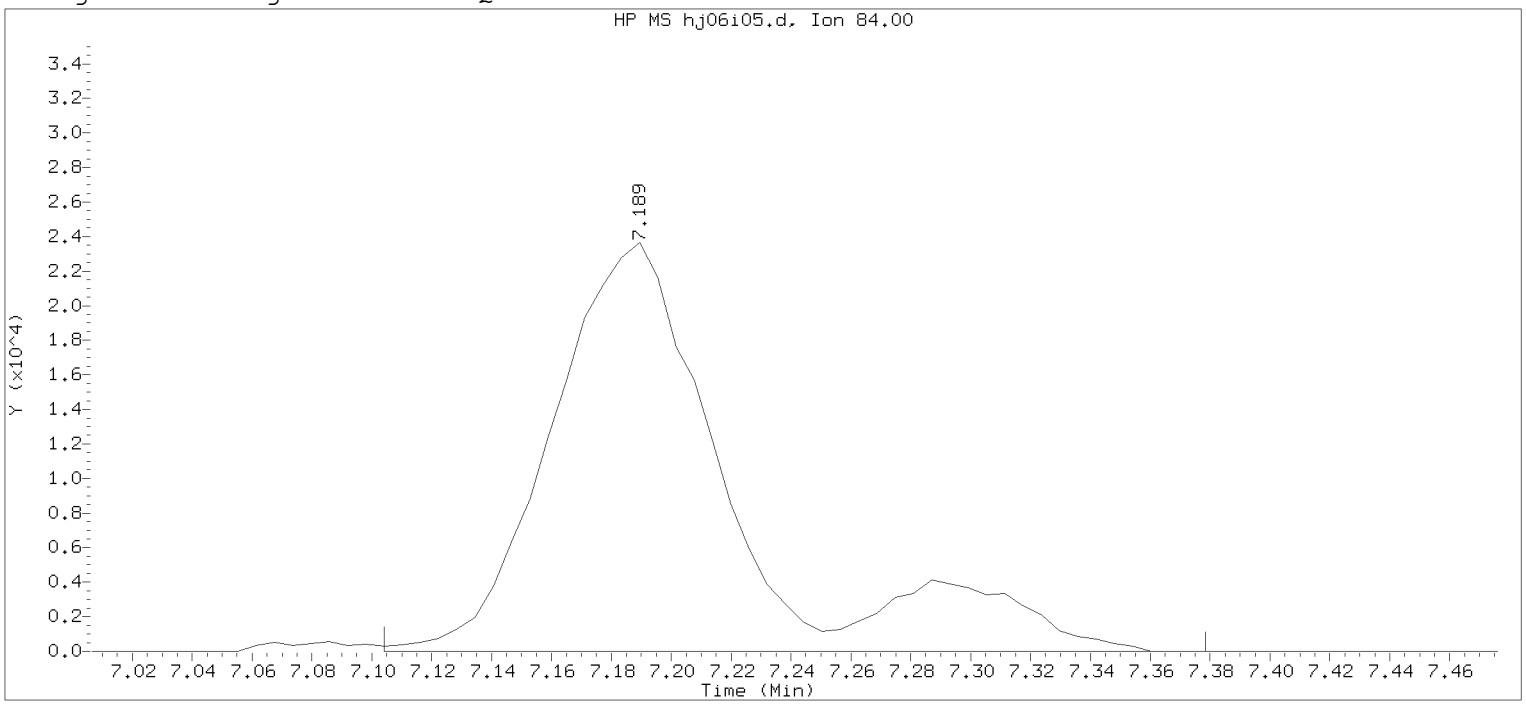
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

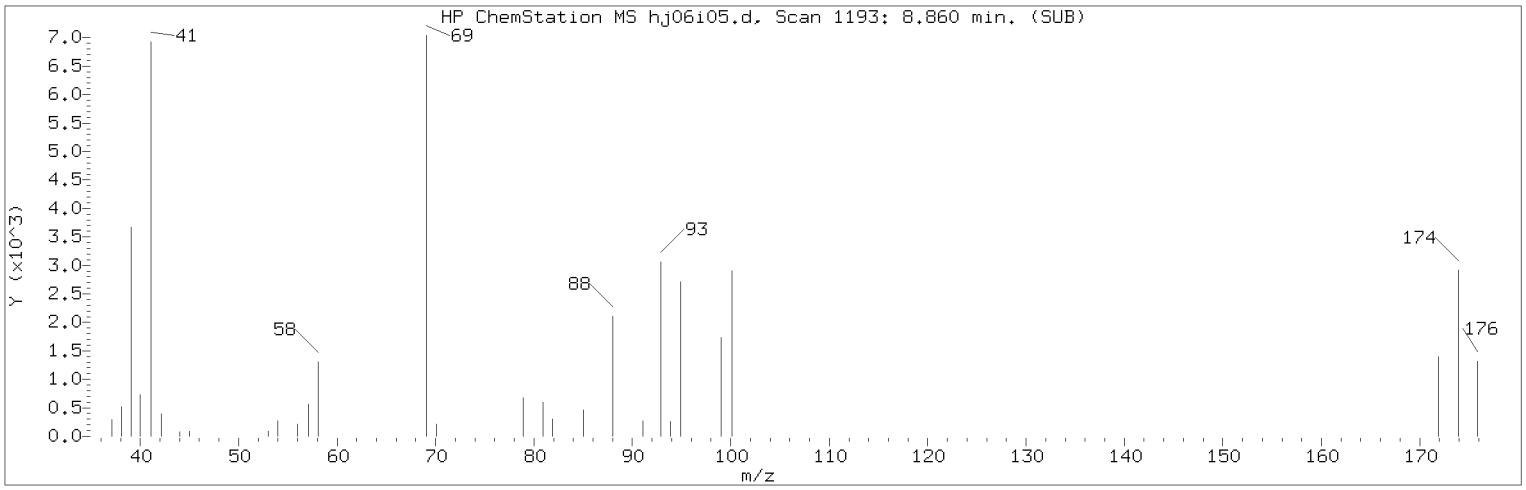
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

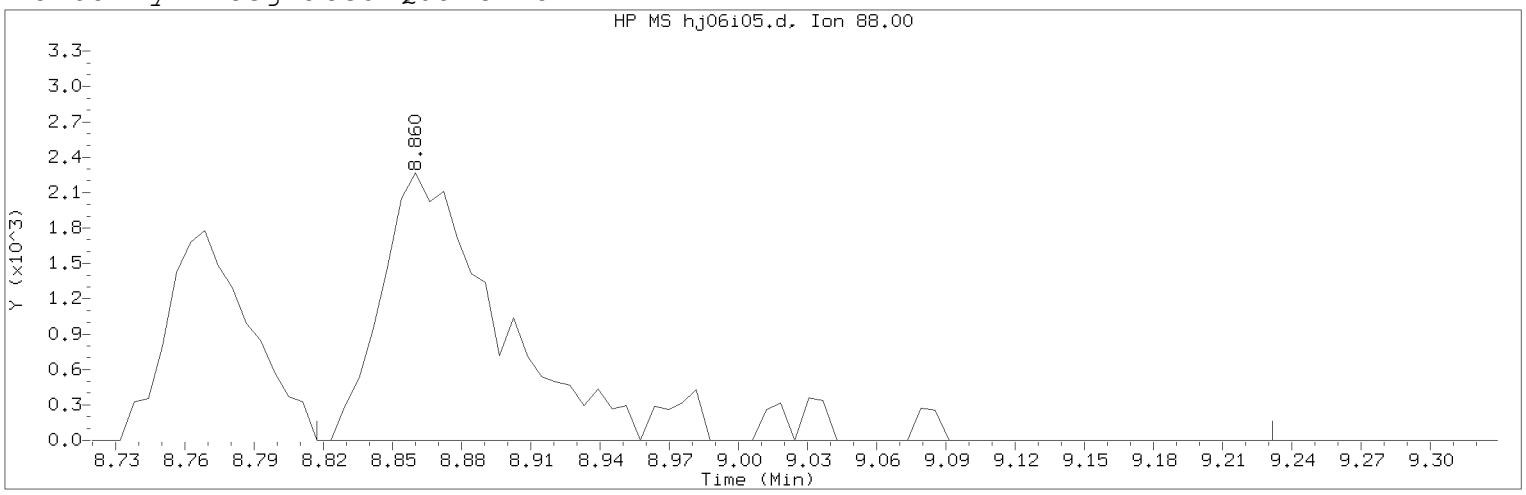
Compound Number : 53
Compound Name : Cyclohexane
Scan Number : 919
Retention Time (minutes): 7.189
Quant Ion : 84.00
Area : 98090
On-column Amount (ng) : 1.1949
Integration start scan : 904 Integration stop scan: 949
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

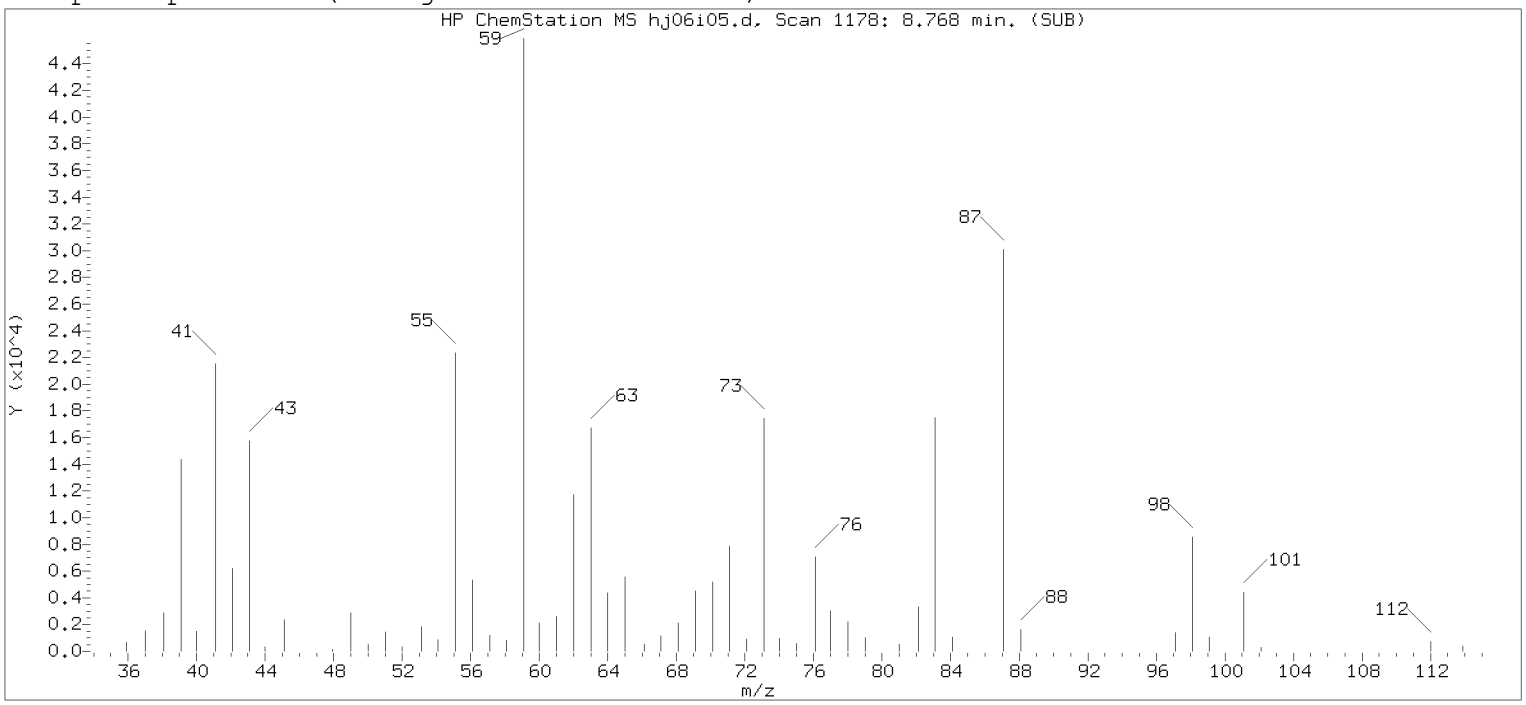
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 8963M
On-Column Amount (ng) : 50.8734
Integration start scan : 1185 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

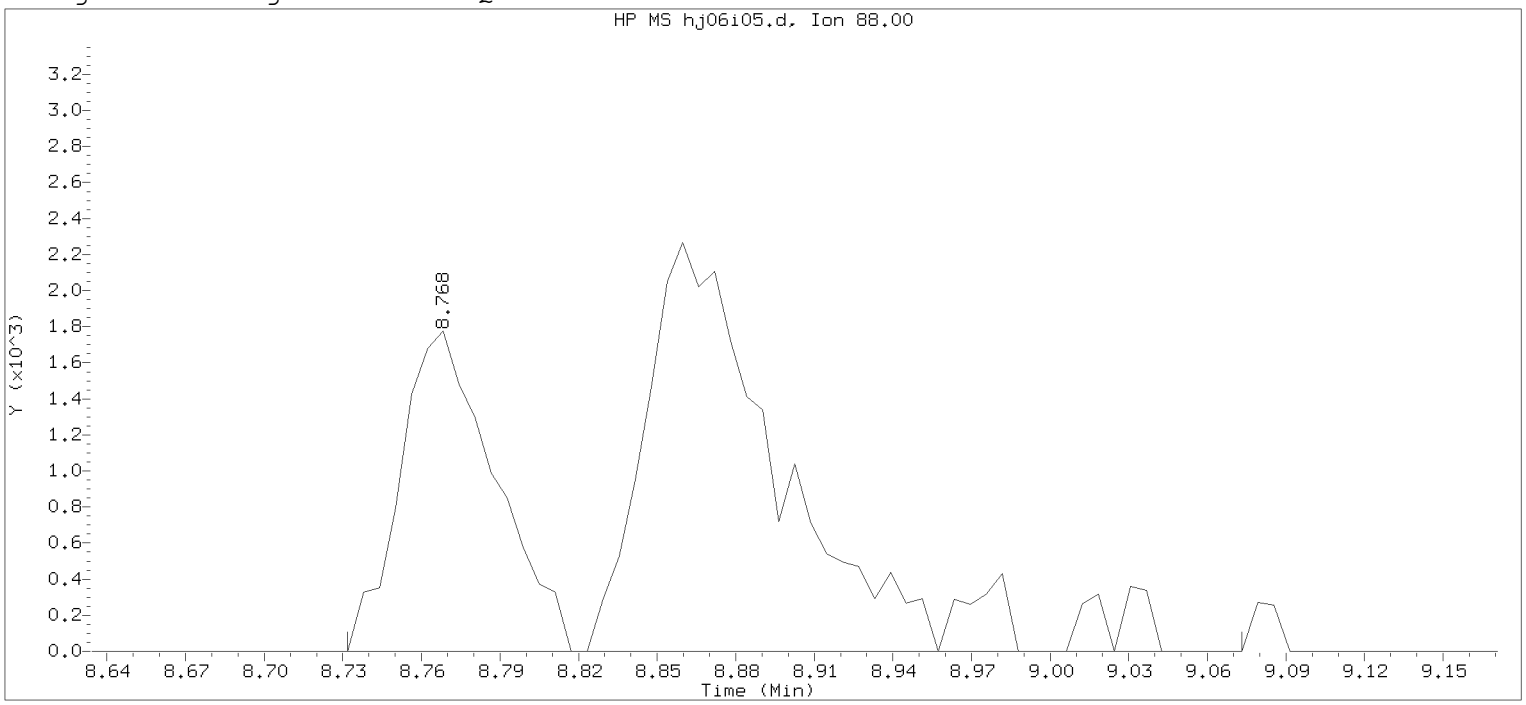
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

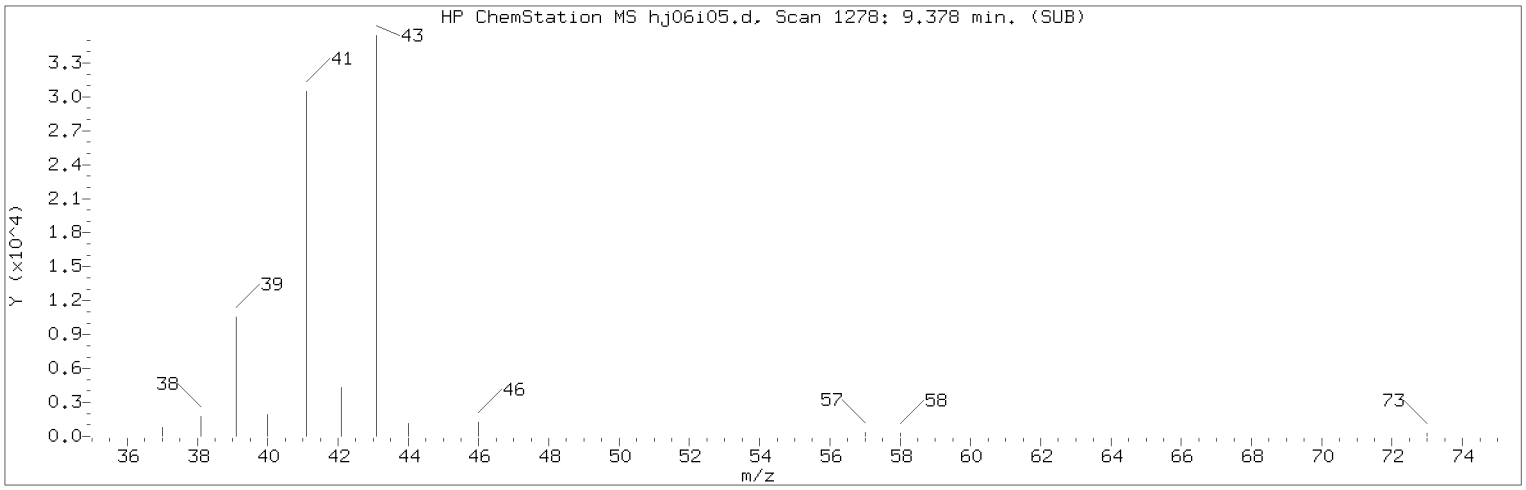
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

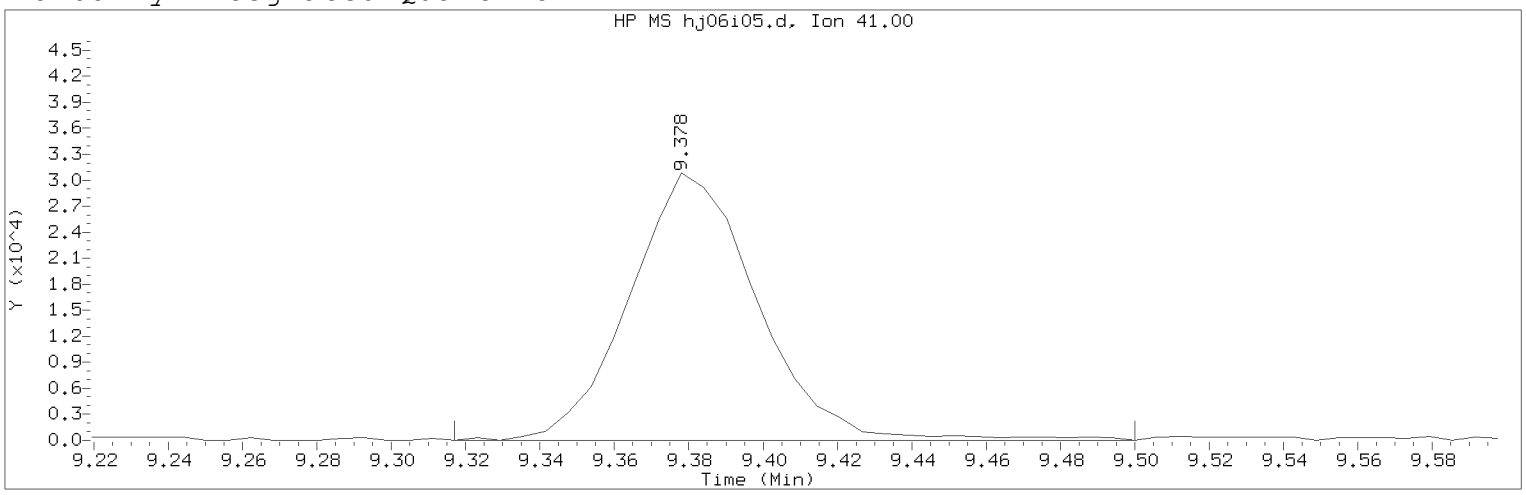
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1178
Retention Time (minutes): 8.768
Quant Ion : 88.00
Area : 13253
On-column Amount (ng) : 87.9916
Integration start scan : 1171 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

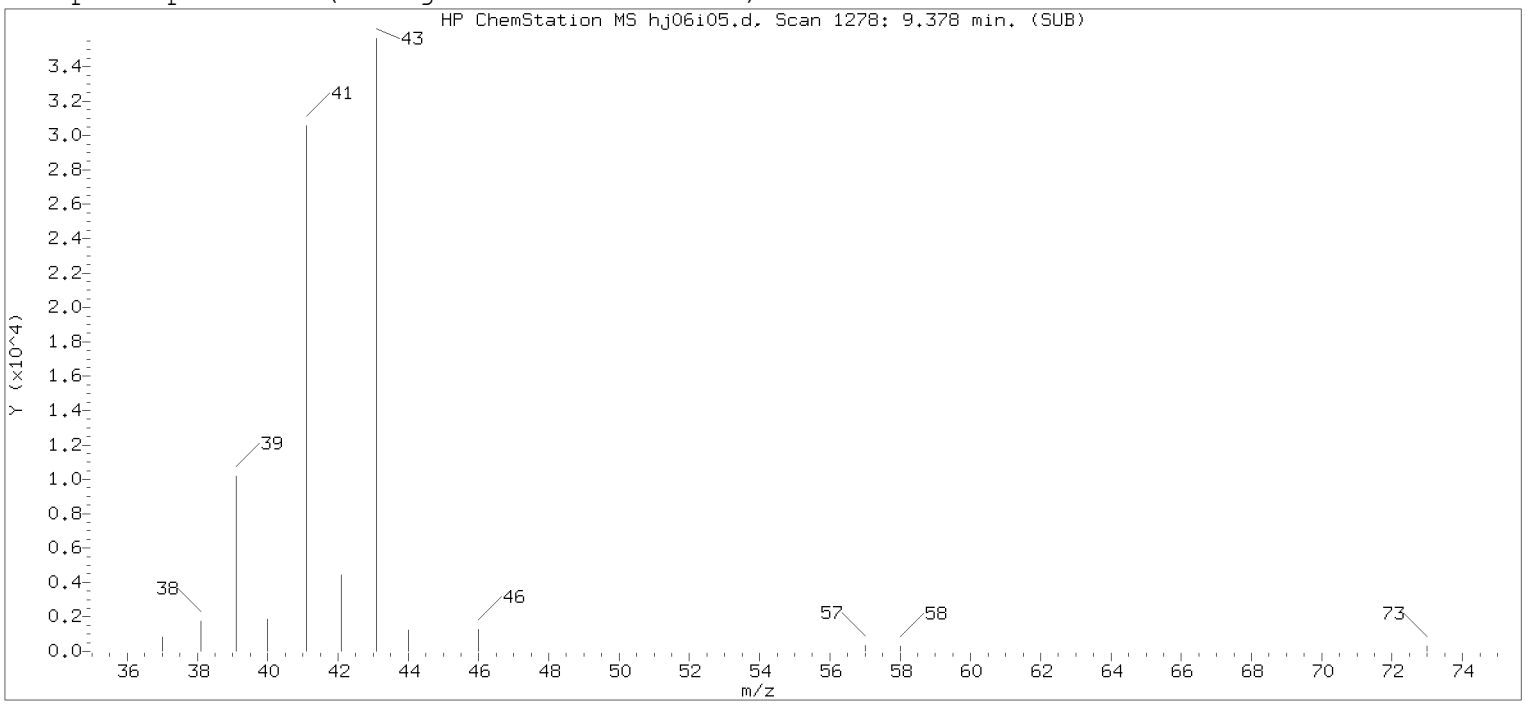
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 73855M
On-Column Amount (ng) : 9.6830
Integration start scan : 1267 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

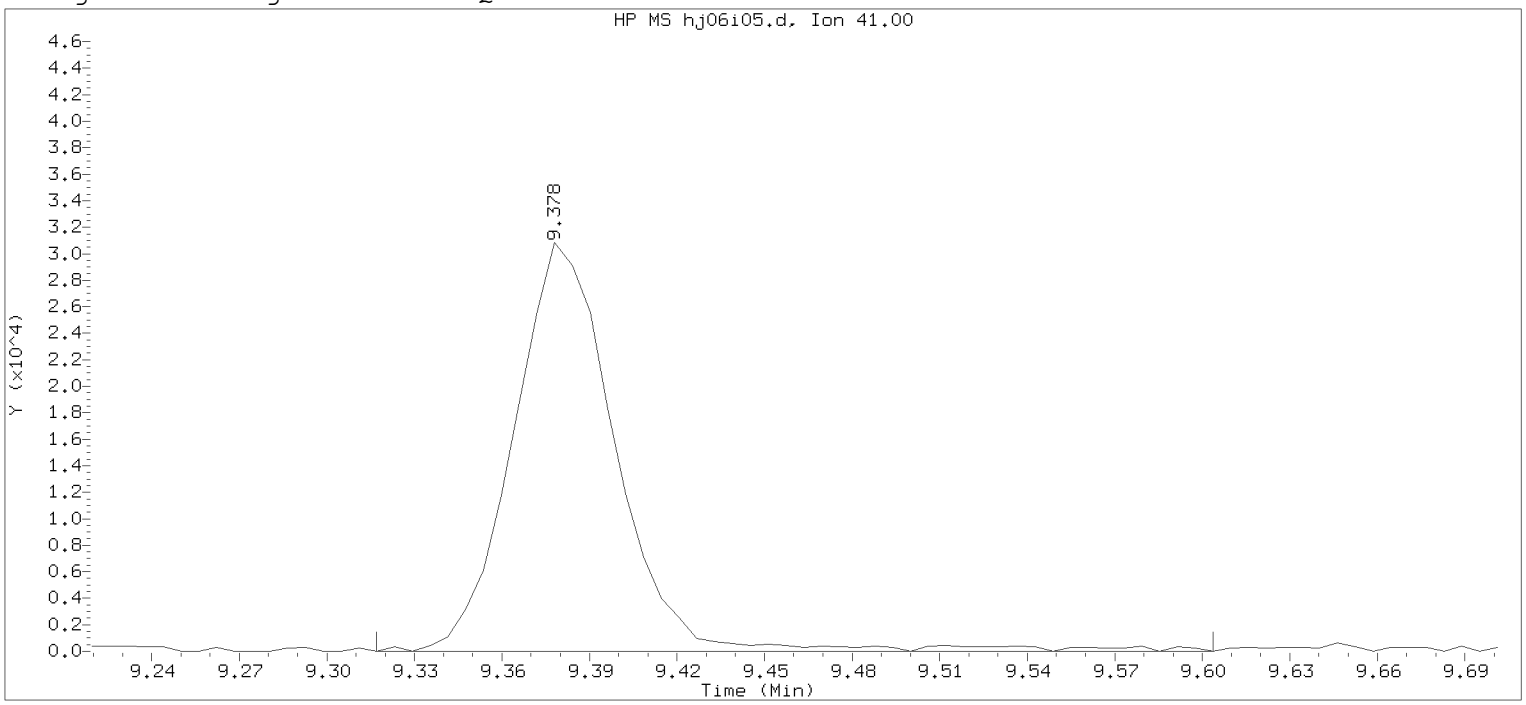
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

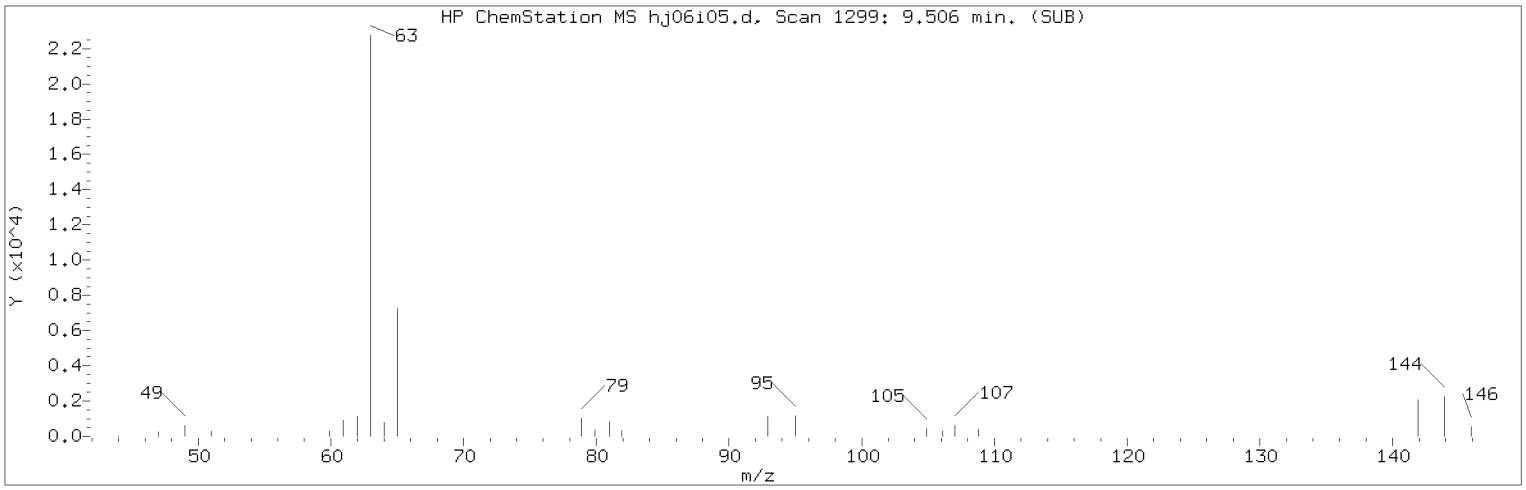
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

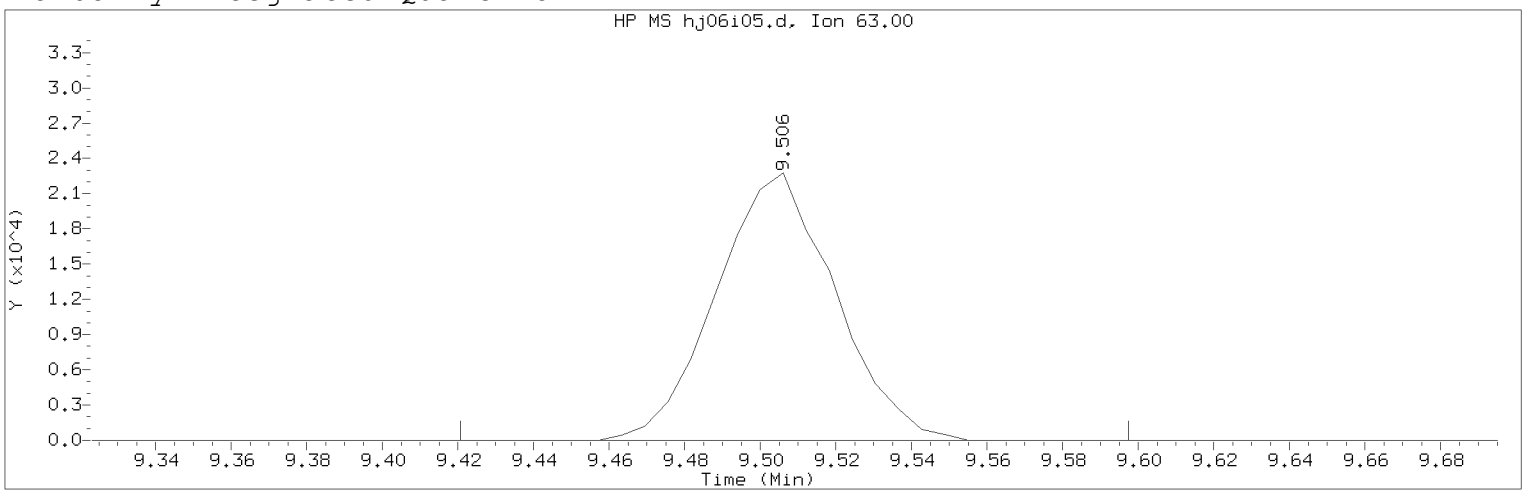
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area : 75580
On-column Amount (ng) : 9.7682
Integration start scan : 1267 Integration stop scan: 1314
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

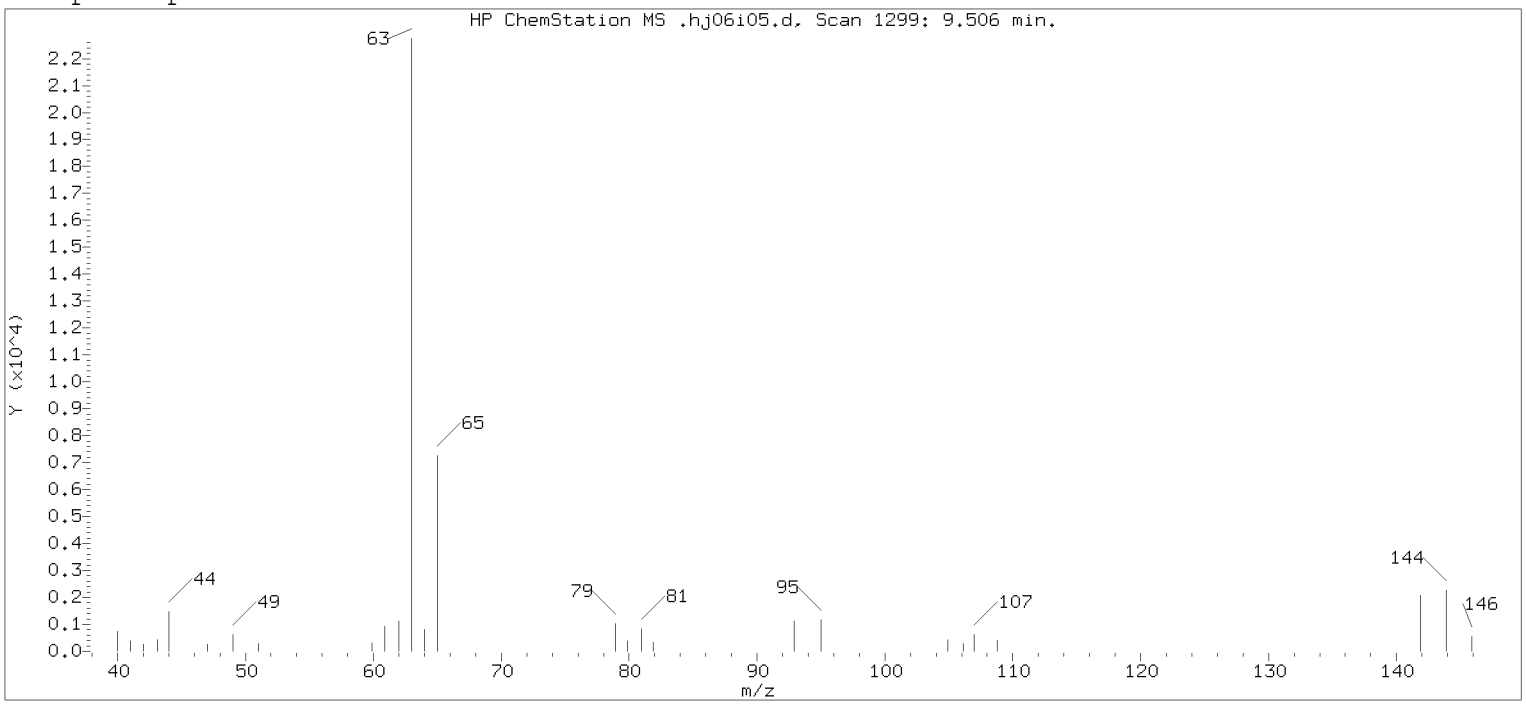
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 49514M
On-Column Amount (ng) : 0.9838
Integration start scan : 1284 Integration stop scan: 1313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

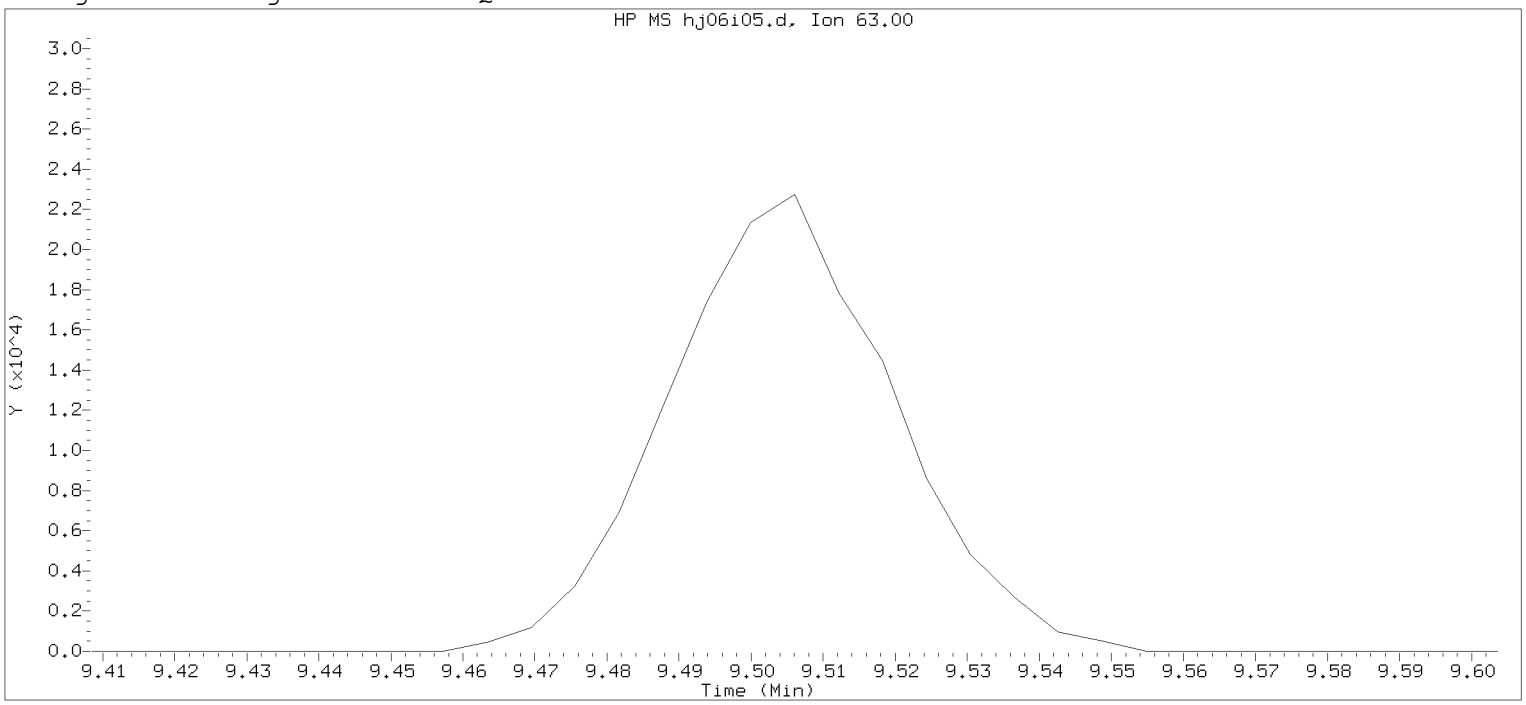
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

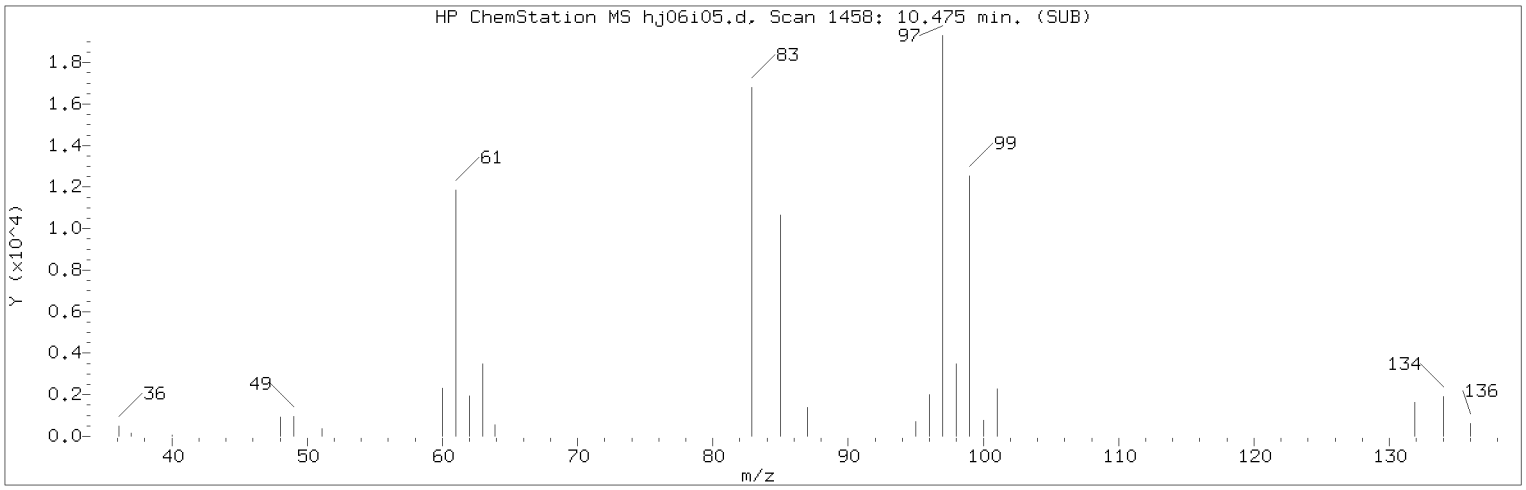
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

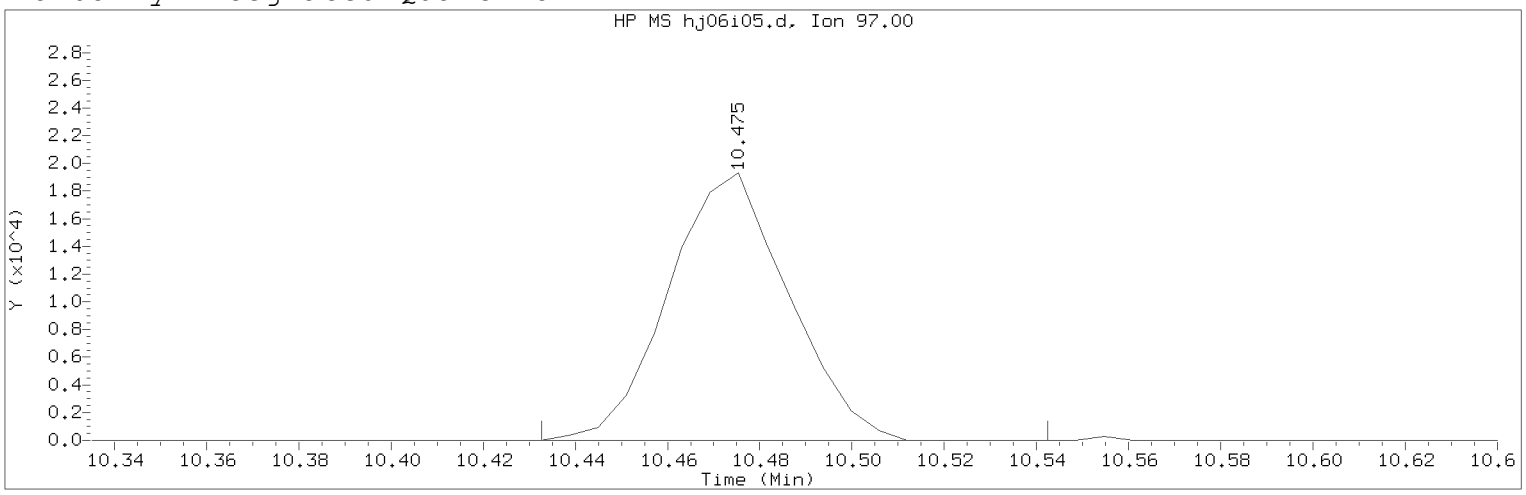
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

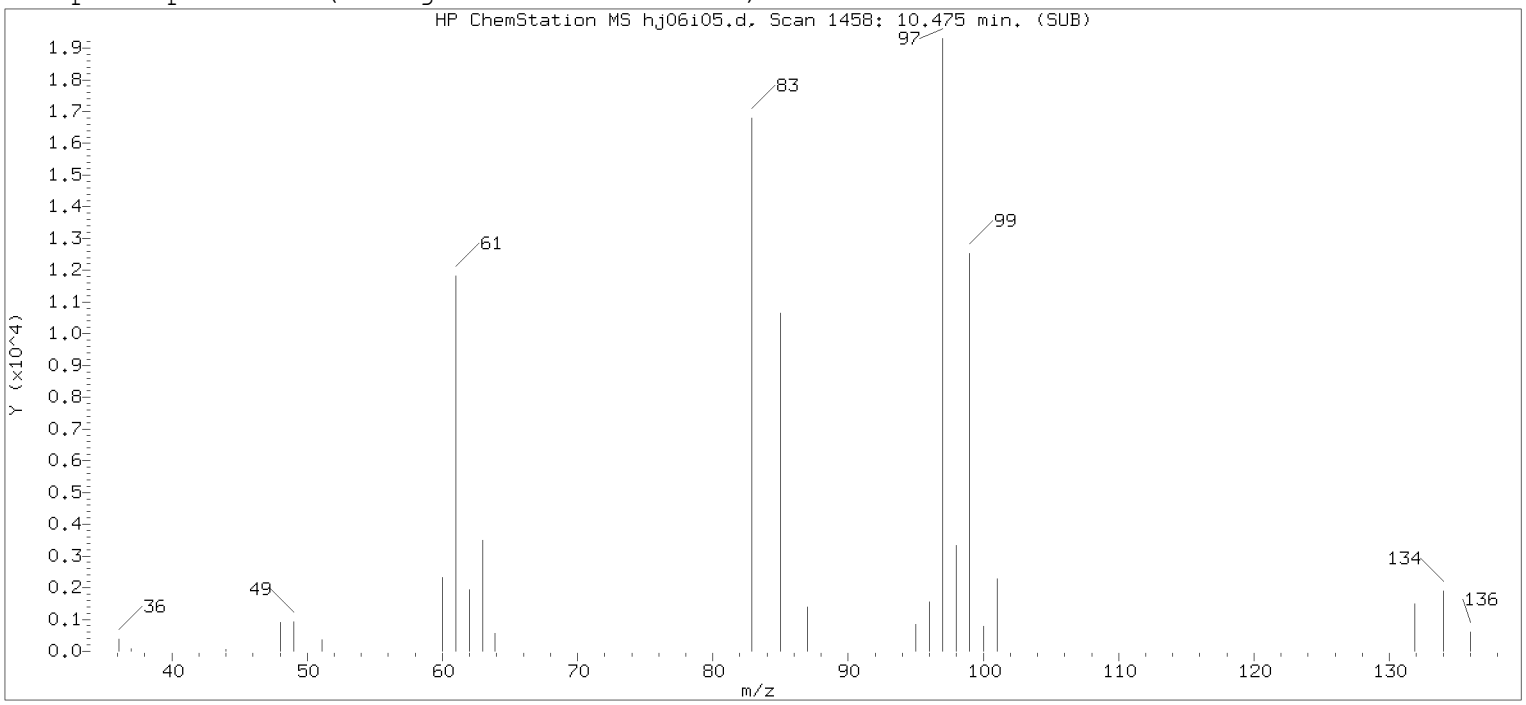
Compound Number : 89
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1458
Retention Time (minutes): 10.475
Quant Ion : 97.00
Area (flag) : 34882M
On-Column Amount (ng) : 1.0050
Integration start scan : 1450 Integration stop scan: 1468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

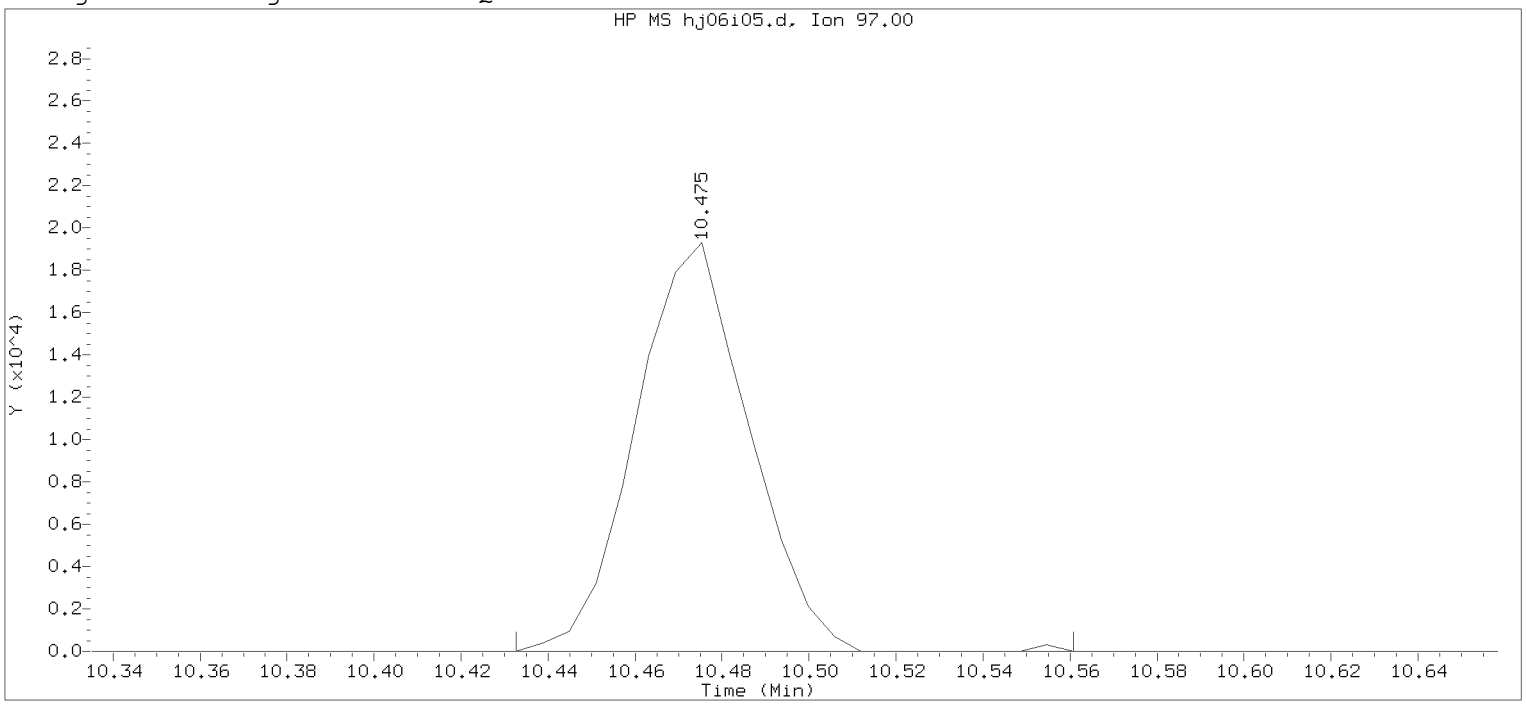
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

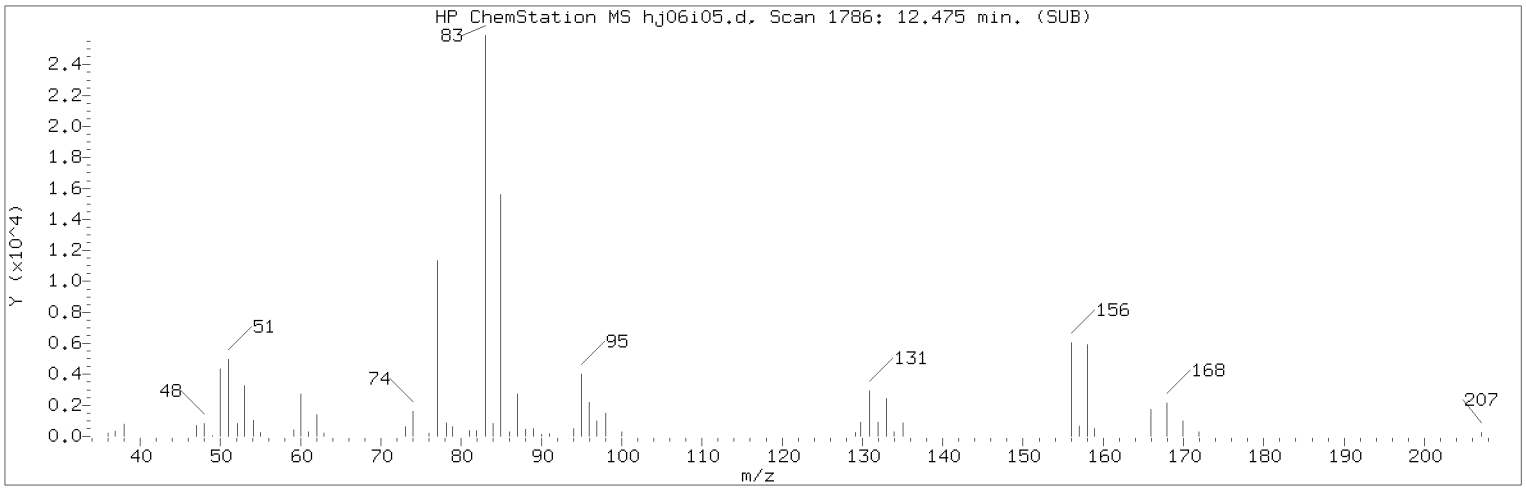
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

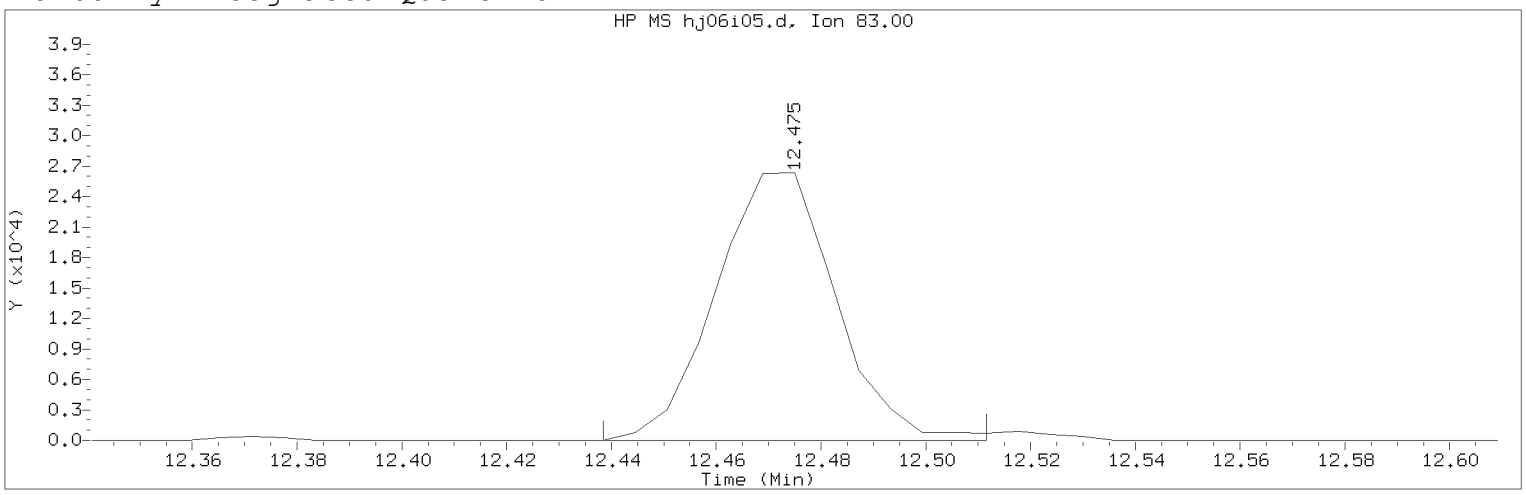
Compound Number : 89
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1458
Retention Time (minutes): 10.475
Quant Ion : 97.00
Area : 34988
On-column Amount (ng) : 1.0115
Integration start scan : 1450 Integration stop scan: 1471
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

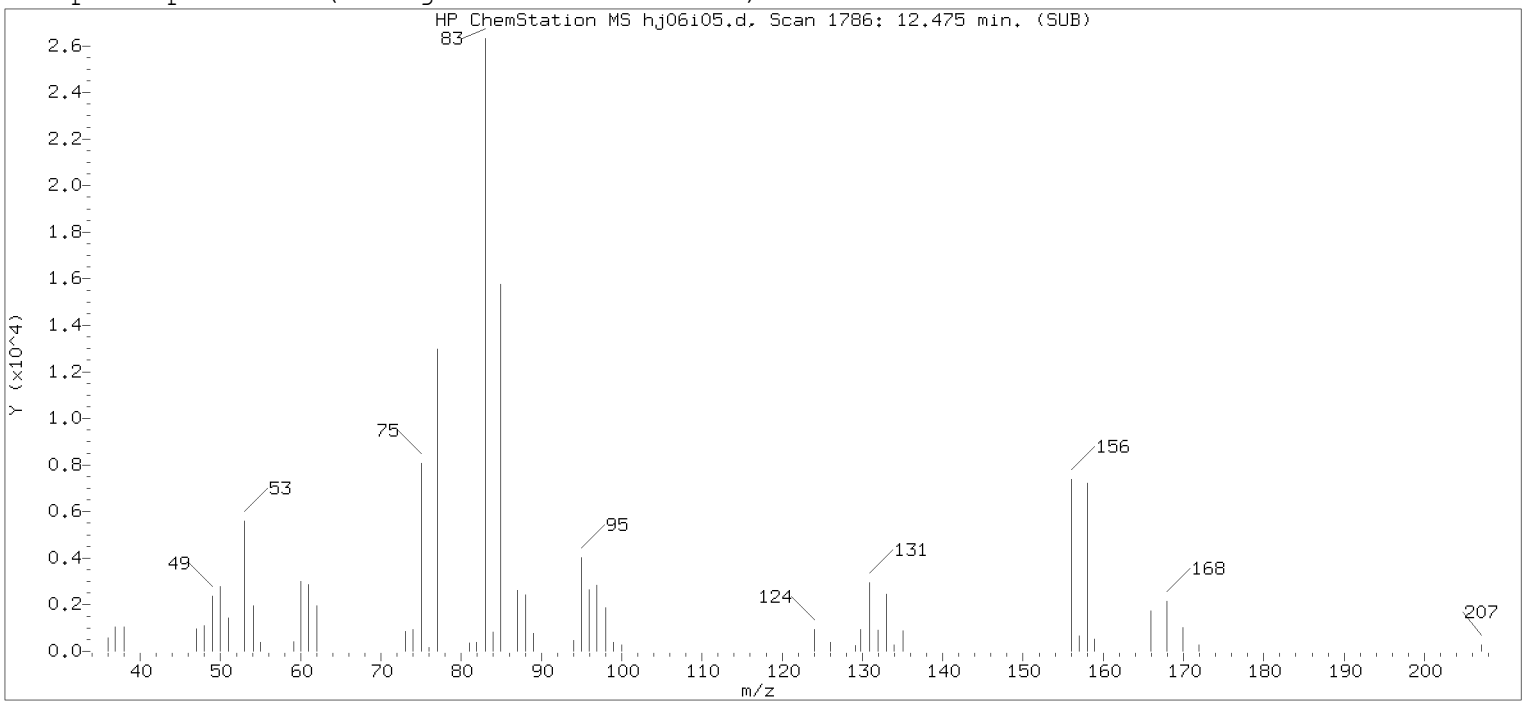
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 41928M
On-Column Amount (ng) : 1.0058
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

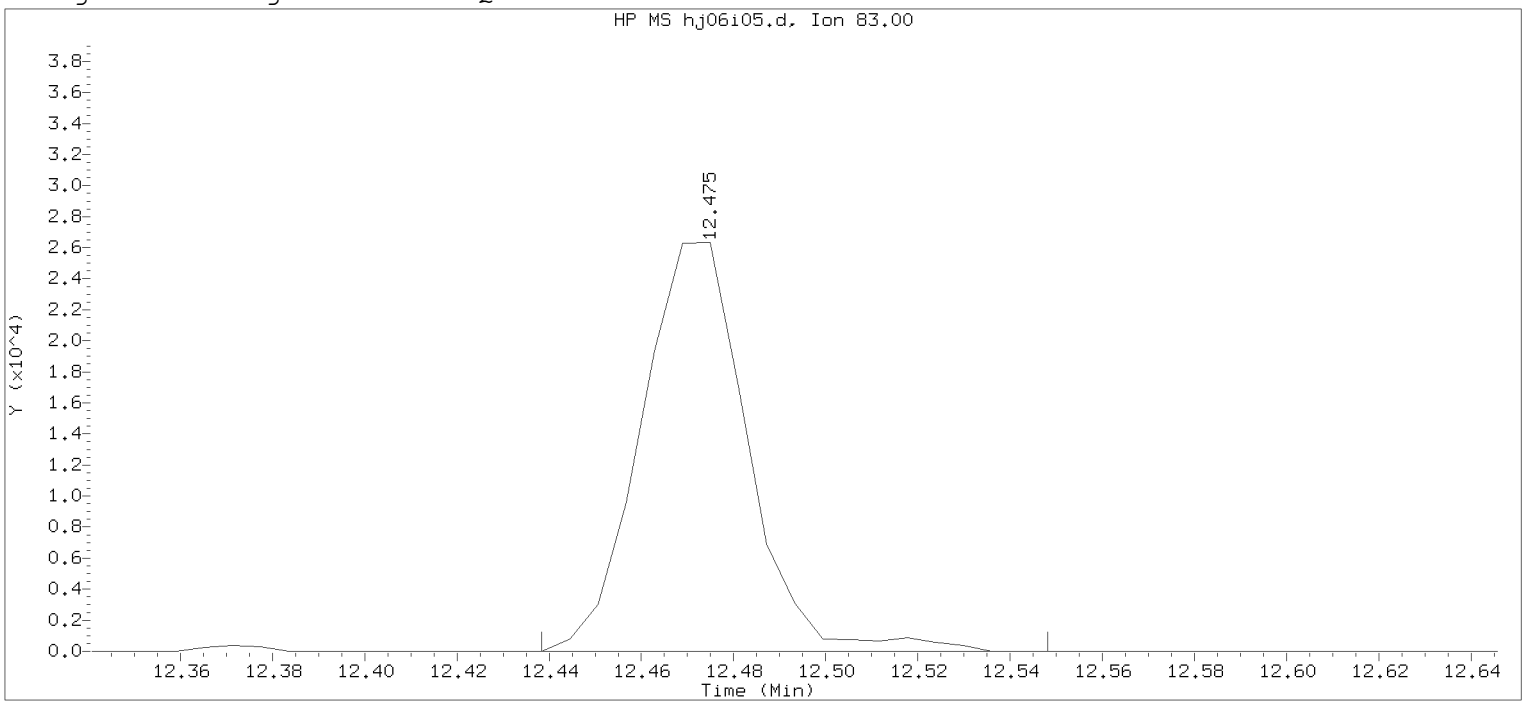
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

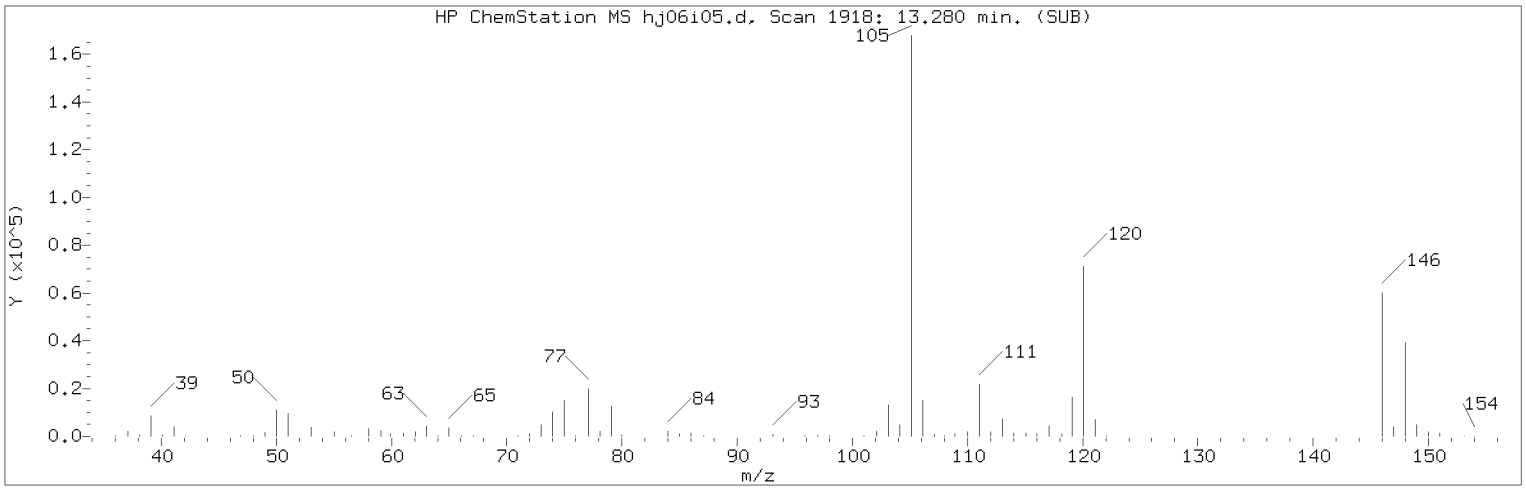
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

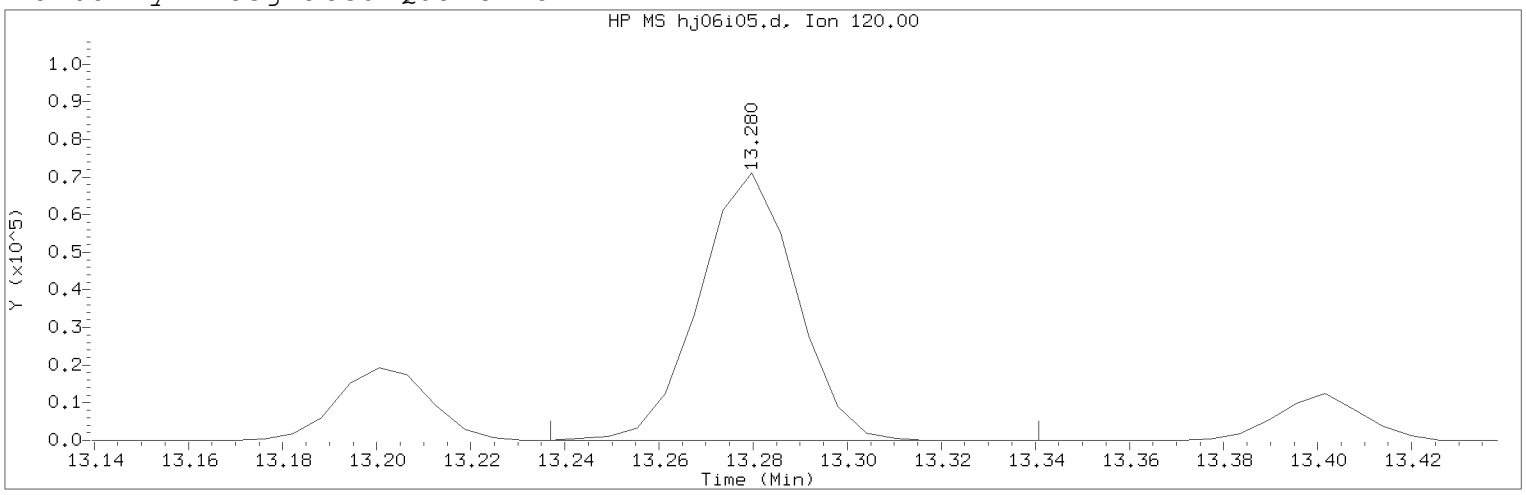
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 42599
On-column Amount (ng) : 0.9903
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

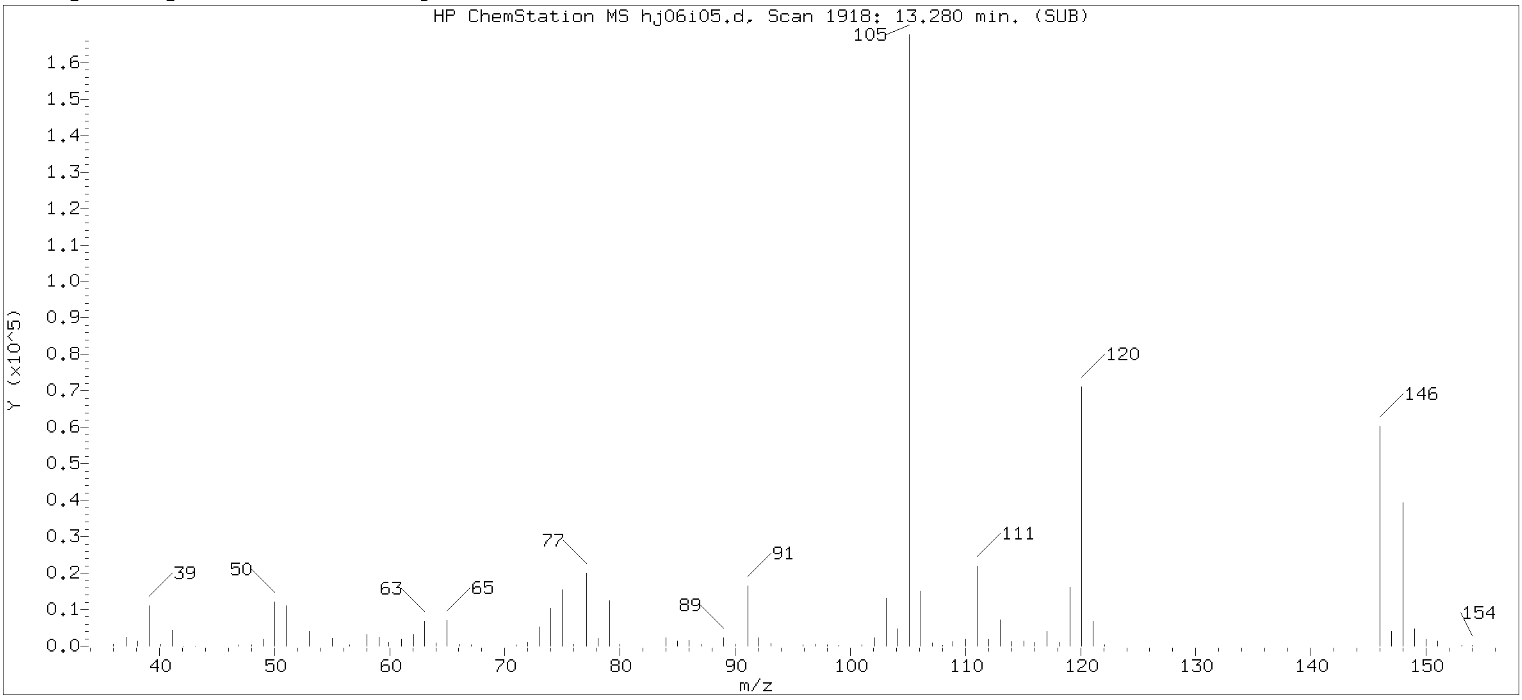
Compound Number : 136
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area (flag) : 101239M
On-Column Amount (ng) : 0.9849
Integration start scan : 1910 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

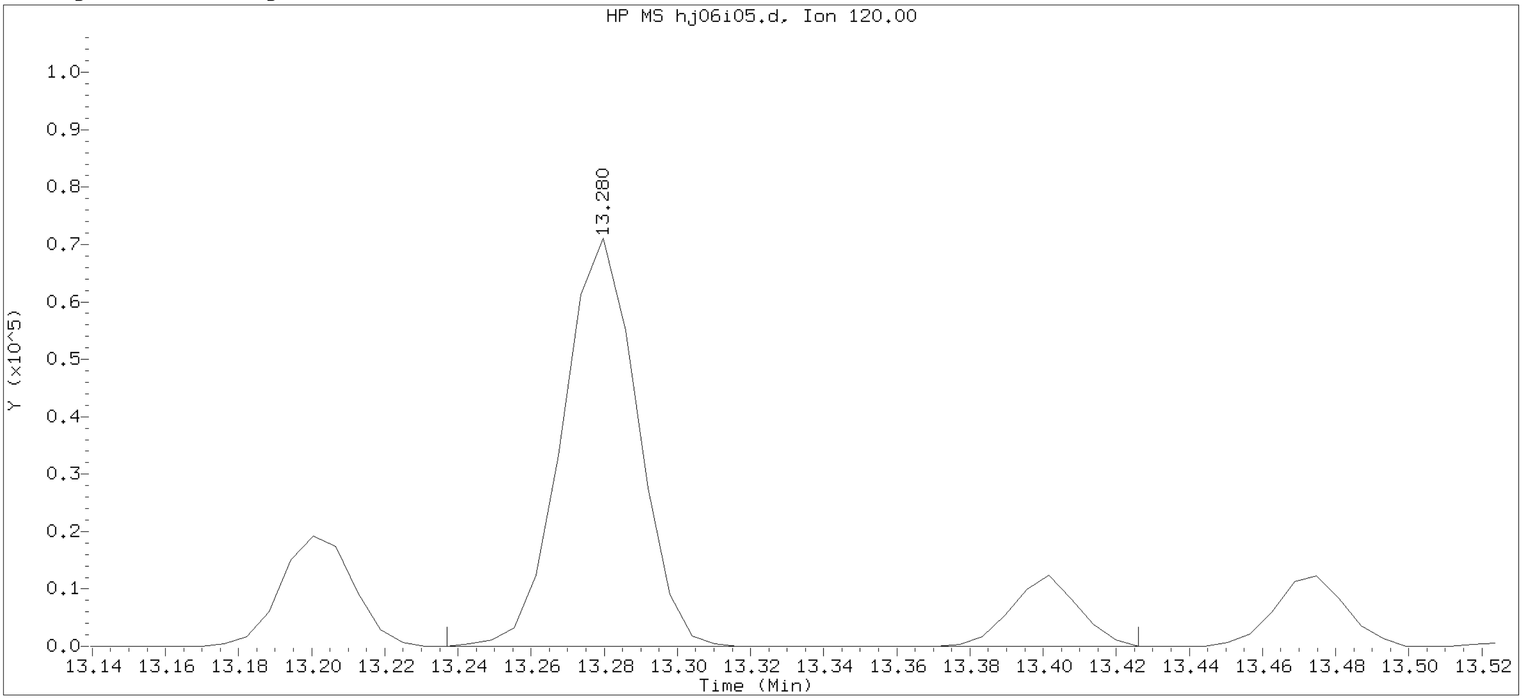
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



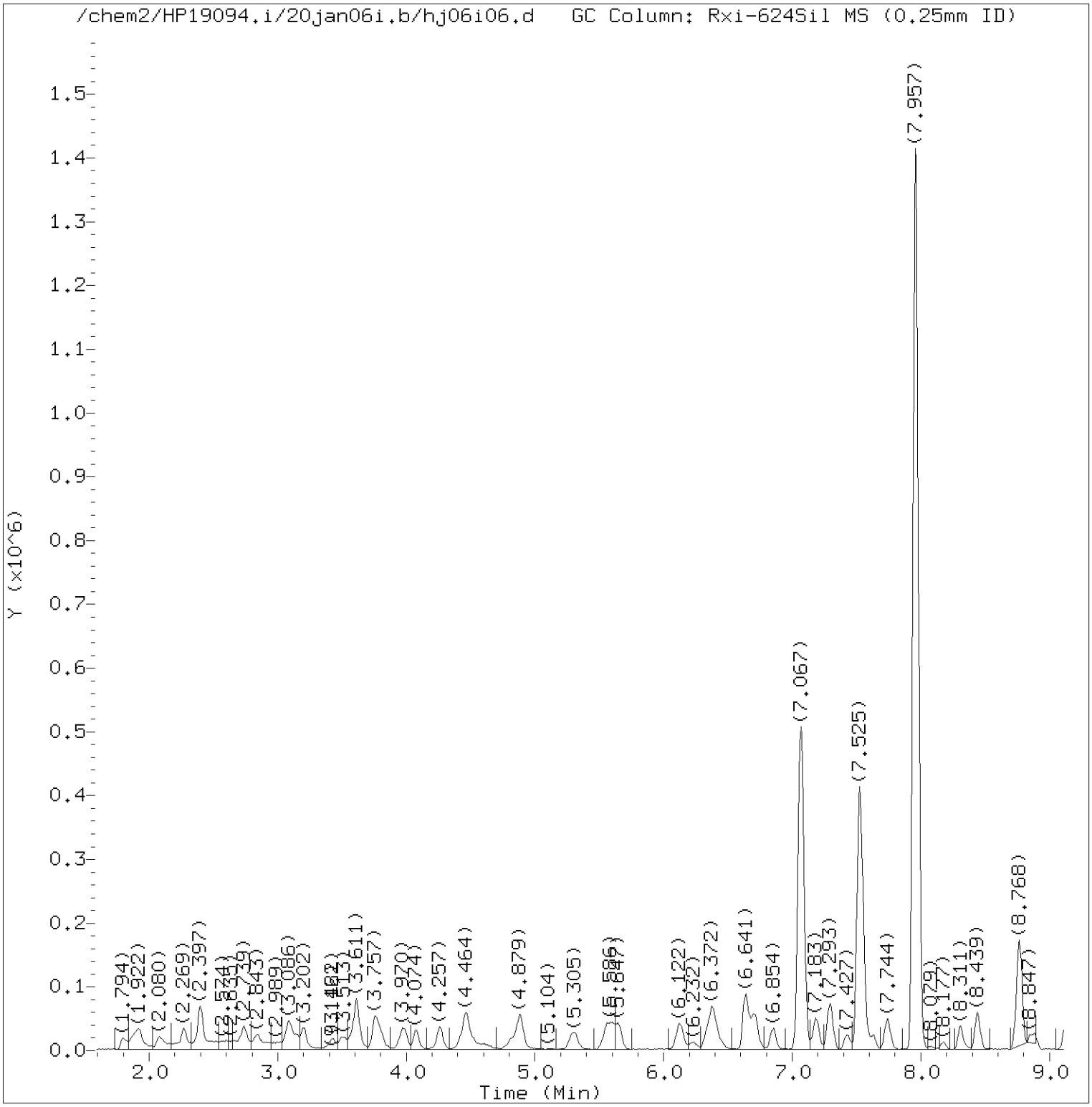
Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 136
Compound Name	: 1,2,3-Trimethylbenzene
Scan Number	: 1918
Retention Time (minutes)	: 13.280
Quant Ion	: 120.00
Area	: 116939
On-column Amount (ng)	: 1.1106
Integration start scan	: 1910 Integration stop scan: 1941
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02068



Total Ion Chromatogram (TIC)

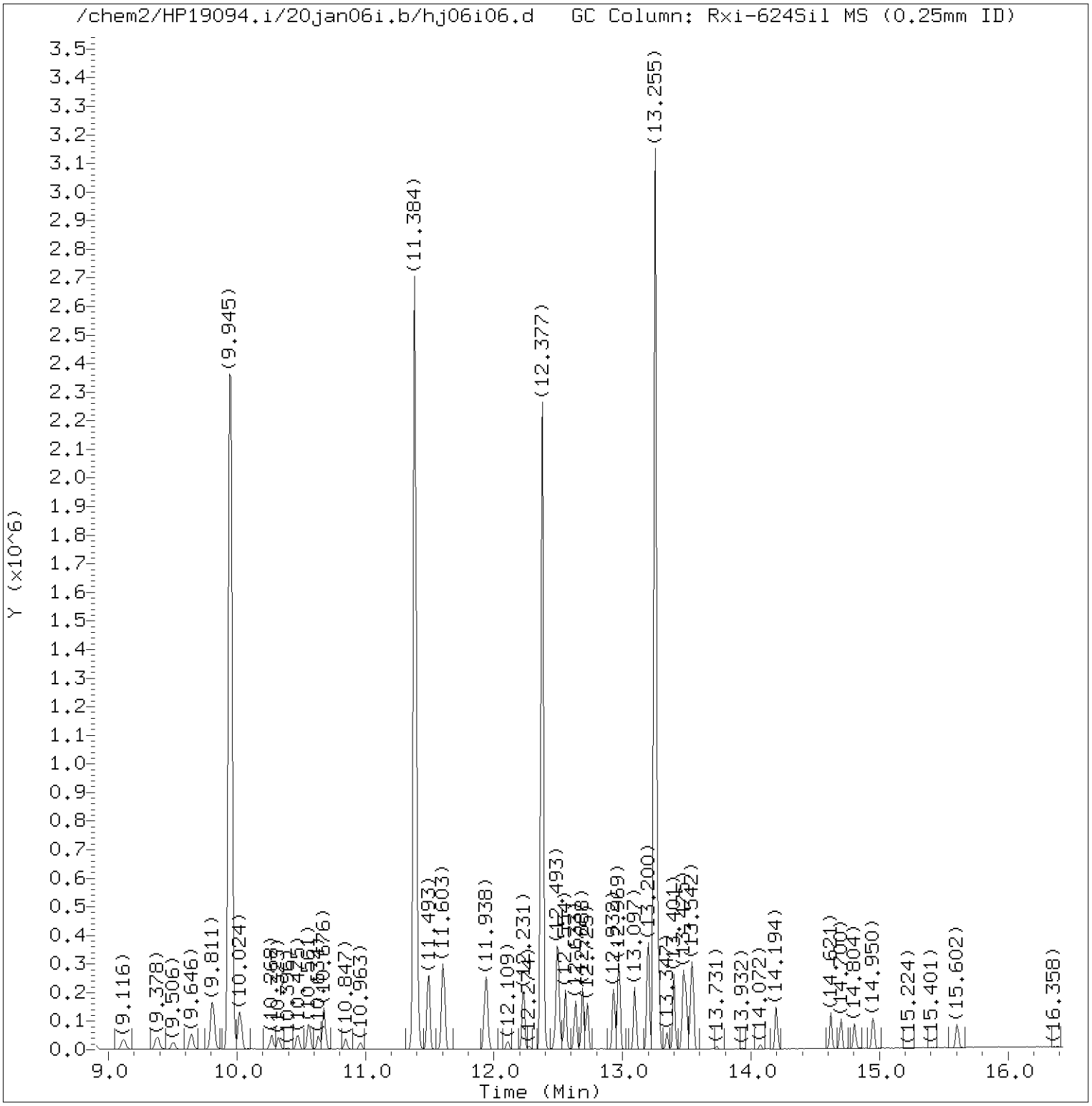
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.080	85	37646	0.513
2) Chloromethane	(2)	2.269	50	36253	0.501
5) Vinyl Chloride	(2)	2.391	62	33658	0.489
6) 1,3-Butadiene	(2)	2.404	39	24120M	0.443
7) Bromomethane	(2)	2.739	94	25193	0.511
8) Chloroethane	(2)	2.836	64	19680	0.494
9) Dichlorofluoromethane	(2)	3.080	67	48168	0.509
10) Trichlorofluoromethane	(2)	3.147	101	40642	0.517
11) Ethyl ether	(2)	3.422	59	16672	0.479
12) Freon 123a	(2)	3.513	67	27531	0.453
13) Acrolein	(1)	3.611	56	131907	24.773
15) 1,1-Dichloroethene	(2)	3.757	96	22510	0.471
14) Acetone	(1)	3.794	43	41187M	5.733
16) Freon 113	(2)	3.800	101	20991	0.420
17) Methyl Iodide	(2)	3.970	142	42798	0.464
18) Bromoethane	(2)	3.989	108	21118M	0.506
19) Carbon Disulfide	(2)	4.074	76	67993	0.465
22) Methyl Acetate	(1)	4.239	43	8769M	0.484
23) Allyl Chloride	(2)	4.257	41	39456	0.486
24) Methylene Chloride	(2)	4.458	84	25019	0.486
27)*t-Butyl Alcohol-d10	(1)	4.464	65	118243	50.000
29) t-Butyl Alcohol	(1)	4.617	59	24512	9.821
30) Acrylonitrile	(1)	4.812	53	21998	2.509
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	52026	0.476
32) trans-1,2-Dichloroethene	(2)	4.885	96	24900	0.474
33) n-Hexane	(2)	5.312	57	32680	0.441
34) 1,1-Dichloroethane	(2)	5.543	63	43072	0.454
35) di-Isopropyl Ether	(2)	5.592	45	73167	0.468
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	37519	0.462
41) 1,2-Dichloroethene (Total)	(2)		96	52826	0.952
38) Ethyl t-butyl ether	(2)	6.122	59	70601	0.481
39) 2-Butanone	(1)	6.330	43	57311	5.102
40) cis-1,2-Dichloroethene	(2)	6.372	96	27926	0.478
42) 2,2-Dichloropropane	(2)	6.391	77	36548	0.453
43) Propionitrile	(1)	6.427	54	29507	9.589
46) Methacrylonitrile	(1)	6.641	67	54315	4.935
48) Bromochloromethane	(2)	6.695	128	12252	0.497
49) Tetrahydrofuran	(1)	6.708	71	15239	4.910

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	43720	0.472
51)$Dibromofluoromethane	(2)	7.067	113	480514	9.881
51)$Dibromofluoromethane	(2)	7.067	111	497632	9.960
52) 1,1,1-Trichloroethane	(2)	7.092	97	40175	0.467
53) Cyclohexane	(2)	7.183	56	42220	0.459
53) Cyclohexane	(2)	7.189	84	33452	0.425
53) Cyclohexane	(2)	7.189	69	12293	0.430
55) Carbon Tetrachloride	(2)	7.293	117	33625	0.456
56) 1,1-Dichloropropene	(2)	7.299	75	33208	0.456
57) Isobutyl Alcohol	(1)	7.421	41	22212	25.676
58)$1,2-Dichloroethane-d4	(2)	7.525	102	94461	10.023
58)$1,2-Dichloroethane-d4	(2)	7.525	65	438476	10.083
58)$1,2-Dichloroethane-d4	(2)	7.525	104	59826	10.022
59) Benzene	(2)	7.555	78	99873	0.469
60) 1,2-Dichloroethane	(2)	7.634	62	26845	0.489
61) t-Amyl methyl ether	(2)	7.744	73	61999	0.485
64)*Fluorobenzene	(2)	7.957	96	1956262	10.000
63) n-Heptane	(2)	7.970	43	33106	0.426
66) n-Butanol	(1)	8.305	56	34095	48.956
68) Trichloroethene	(2)	8.439	95	24997	0.448
70) Methylcyclohexane	(2)	8.750	83	49093	0.491
71) 1,2-Dichloropropane	(2)	8.774	63	24757	0.470
72) Methyl Methacrylate	(1)	8.847	69	11056	0.499
73) 1,4-Dioxane	(1)	8.866	88	3390M	20.182
74) Dibromomethane	(2)	8.878	93	11571	0.481
75) Bromodichloromethane	(2)	9.116	83	31654	0.484
77) 2-Nitropropane	(1)	9.378	41	35799M	4.923
80) 1-Bromo-2-chloroethane	(2)	9.500	63	25119M	0.508
81) cis-1,3-Dichloropropene	(2)	9.646	75	35796	0.463
82) 4-Methyl-2-Pentanone	(1)	9.811	43	135330	4.888
83)$Toluene-d8	(3)	9.951	98	1938593	9.983
83)$Toluene-d8	(3)	9.945	100	1248997	9.945
84) Toluene	(3)	10.024	92	62903	0.461
86) 1,3-Dichloropropene (total)	(3)		75	64821	0.922
85) trans-1,3-Dichloropropene	(3)	10.274	75	29025	0.458
87) Ethyl Methacrylate	(3)	10.323	69	23667	0.482
89) 1,1,2-Trichloroethane	(3)	10.469	97	16570	0.483
90) Tetrachloroethene	(3)	10.561	166	28341	0.457

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	27848	0.473
92) 2-Hexanone	(1)	10.676	43	93633M	4.949
94) Dibromochloromethane	(3)	10.847	129	20398	0.465
96) 1,2-Dibromoethane	(3)	10.963	107	15595	0.476
97) 1-Chlorohexane	(3)	11.384	91	38520	0.468
98)*Chlorobenzene-d5	(3)	11.384	117	1457562	10.000
99) Chlorobenzene	(3)	11.408	112	70804	0.475
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	24559	0.463
101) Ethylbenzene	(3)	11.493	91	126427	0.471
102) m+p-Xylene	(3)	11.603	106	95677	0.932
106) Xylene (Total)	(3)		106	142489	1.396
105) o-Xylene	(3)	11.932	106	46812	0.464
107) Styrene	(3)	11.944	104	76860	0.469
108) Bromoform	(3)	12.109	173	11985	0.469
109) Isopropylbenzene	(3)	12.231	105	128912	0.471
112)$4-Bromofluorobenzene	(3)	12.377	95	721534	10.043
112)$4-Bromofluorobenzene	(3)	12.377	174	616551	10.029
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	19540M	0.477
115) Bromobenzene	(4)	12.493	156	27982	0.452
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	50262M	4.832
117) 1,2,3-Trichloropropane	(4)	12.524	110	5294	0.483
118) n-Propylbenzene	(4)	12.554	91	147570	0.456
120) 2-Chlorotoluene	(4)	12.633	126	29146	0.457
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	107335	0.457
123) 4-Chlorotoluene	(4)	12.725	126	29421	0.462
126) tert-Butylbenzene	(4)	12.932	134	21922	0.452
127) Pentachloroethane	(4)	12.969	167	20333	0.492
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	110138	0.455
129) sec-Butylbenzene	(4)	13.097	105	137070M	0.451
133) p-Isopropyltoluene	(4)	13.200	119	116856	0.447
132) 1,3-Dichlorobenzene	(4)	13.200	146	57146	0.463
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	784772	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	56476	0.469
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	49264	0.488
137) Benzyl Chloride	(4)	13.347	126	7426	0.431
139) n-Butylbenzene	(4)	13.493	92	56899	0.440
140) 1,2-Dichlorobenzene	(4)	13.529	146	51602	0.474
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	2597	0.438

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	42778	0.443
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	35605	0.440
147) Hexachlorobutadiene	(4)	14.700	225	17895	0.423
148) Naphthalene	(4)	14.804	128	65064	0.460
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	31413	0.454

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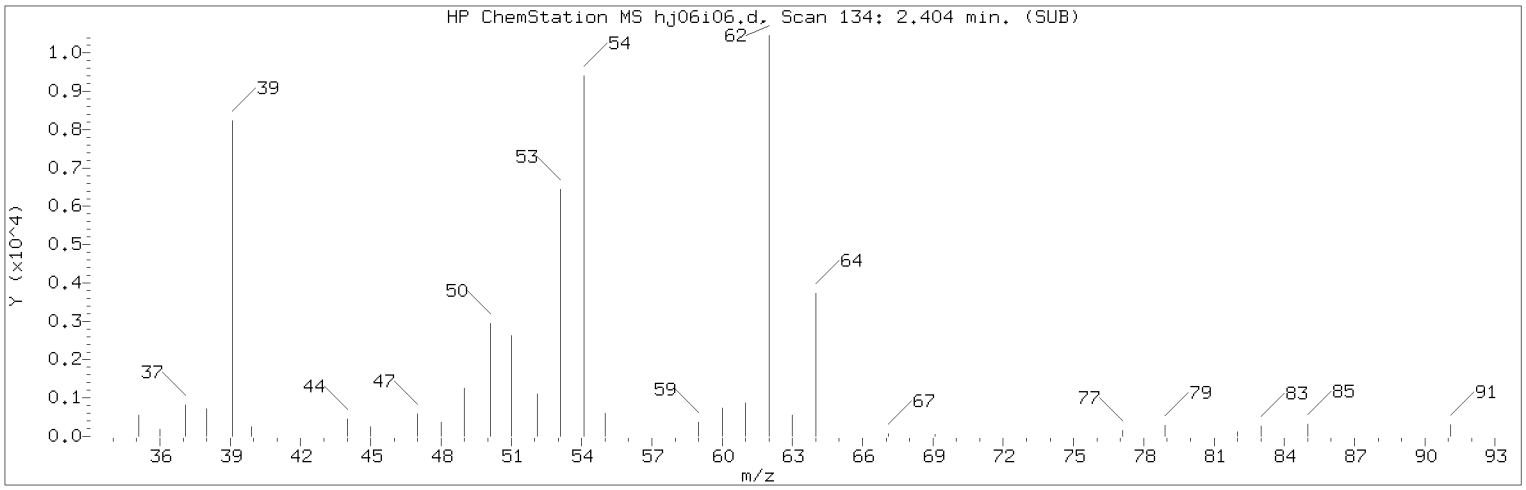
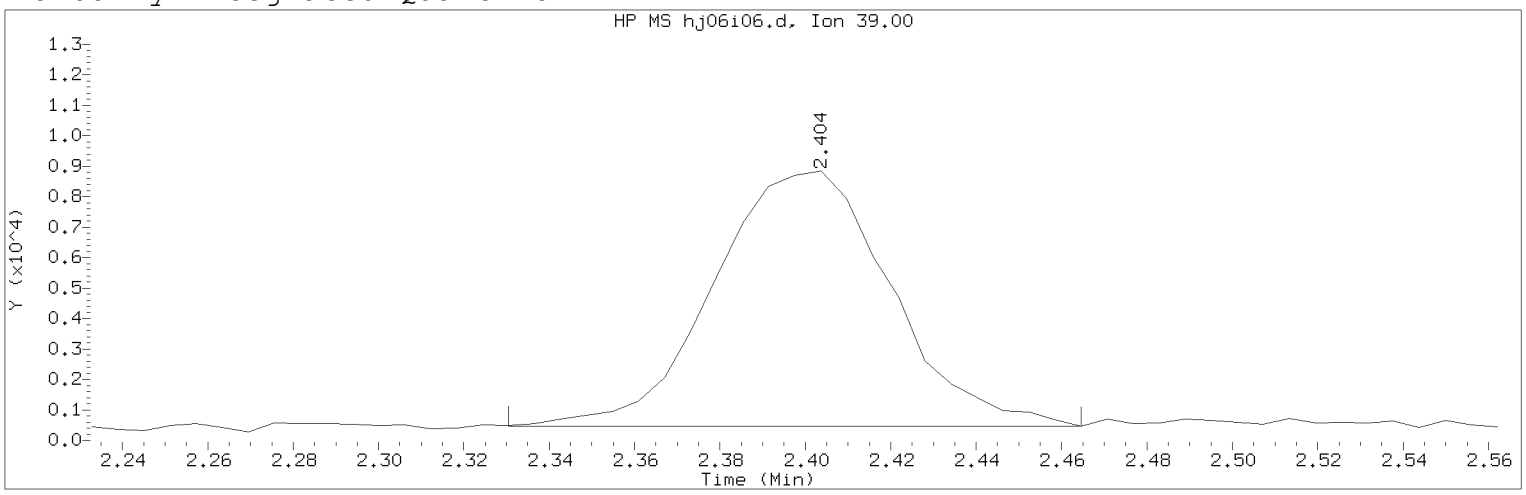
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

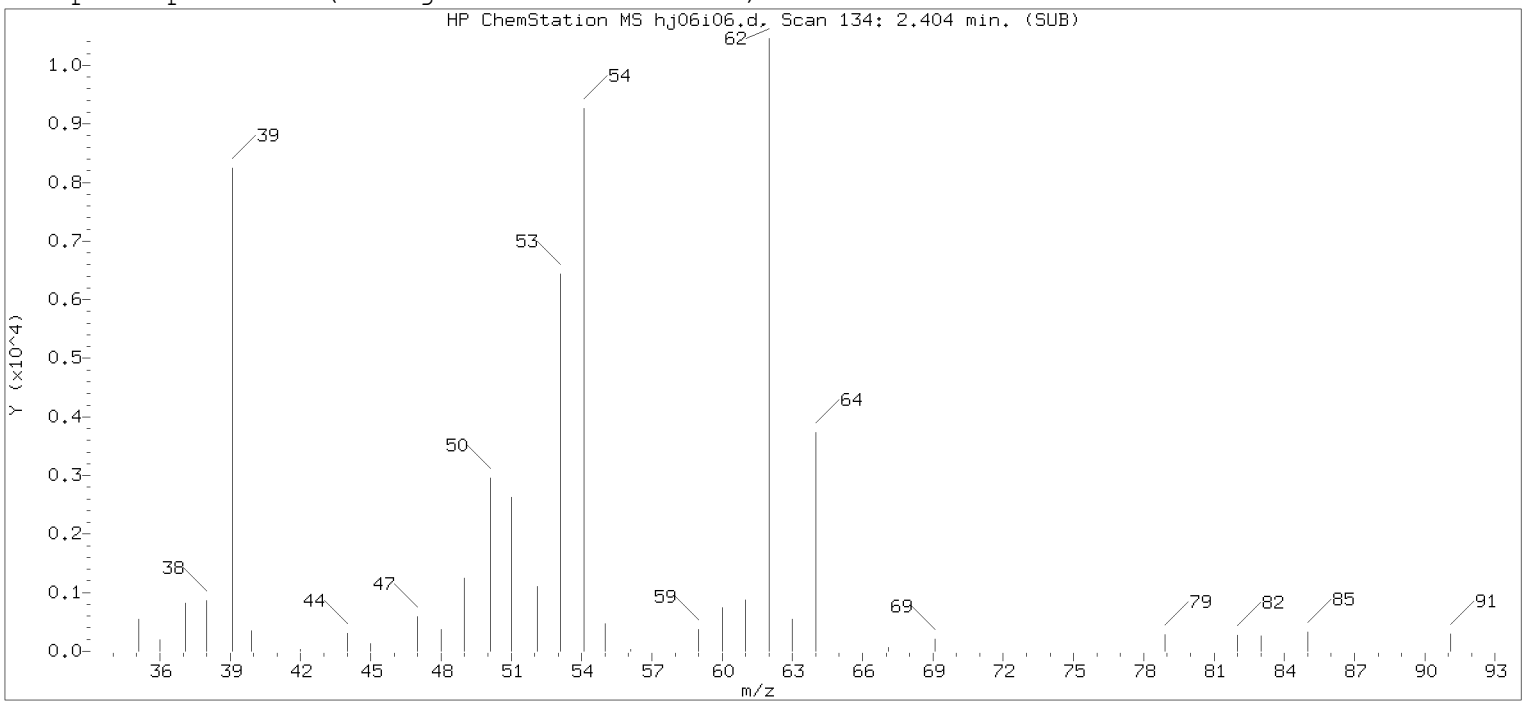
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 24120M
On-Column Amount (ng) : 0.4434
Integration start scan : 121 Integration stop scan: 143
Y at integration start : 453 Y at integration end: 453

Reason for manual integration: improper integration

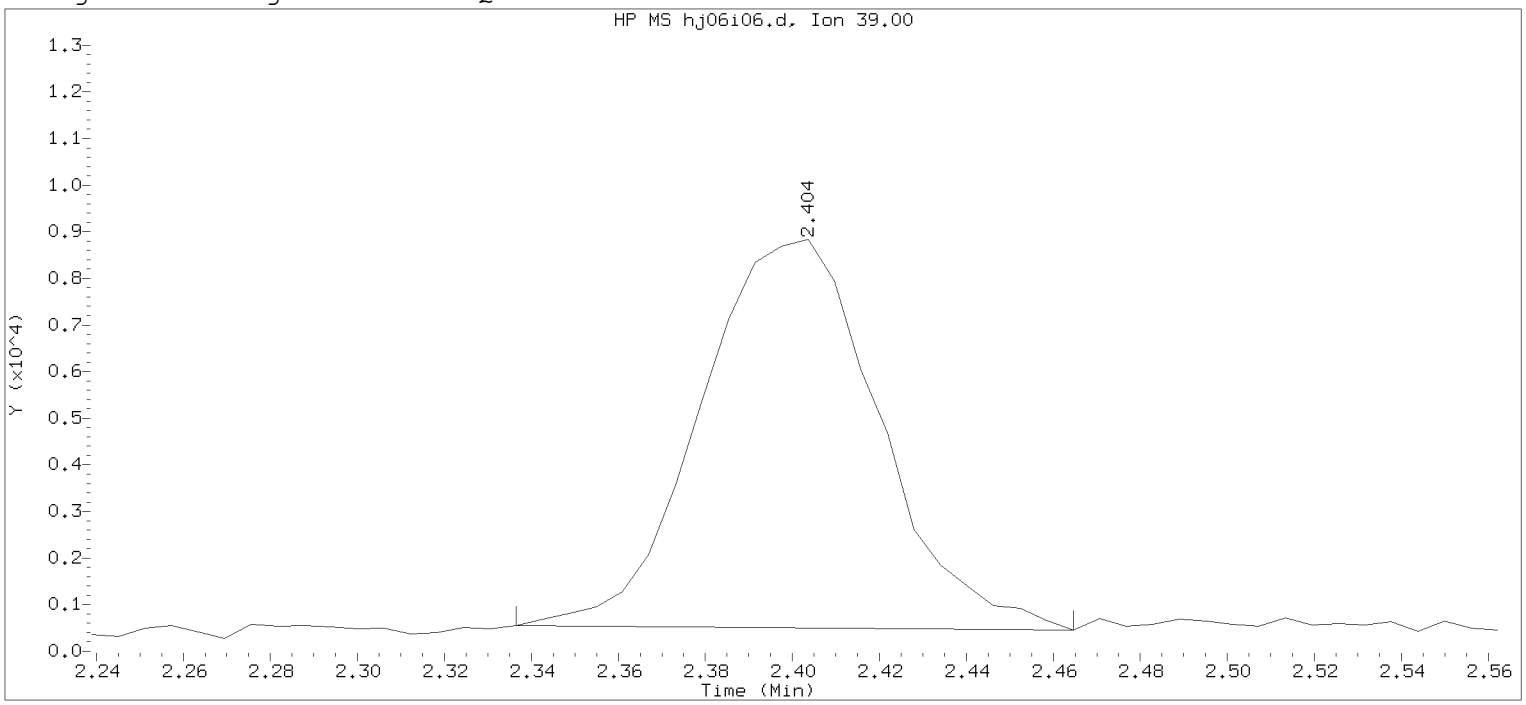
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

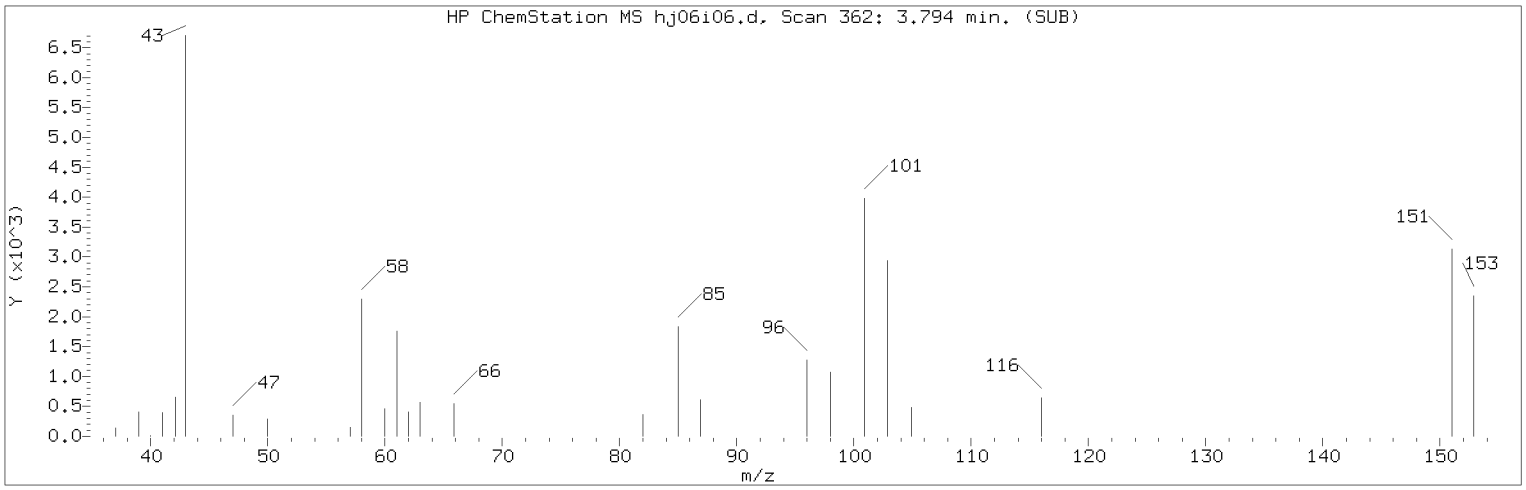
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

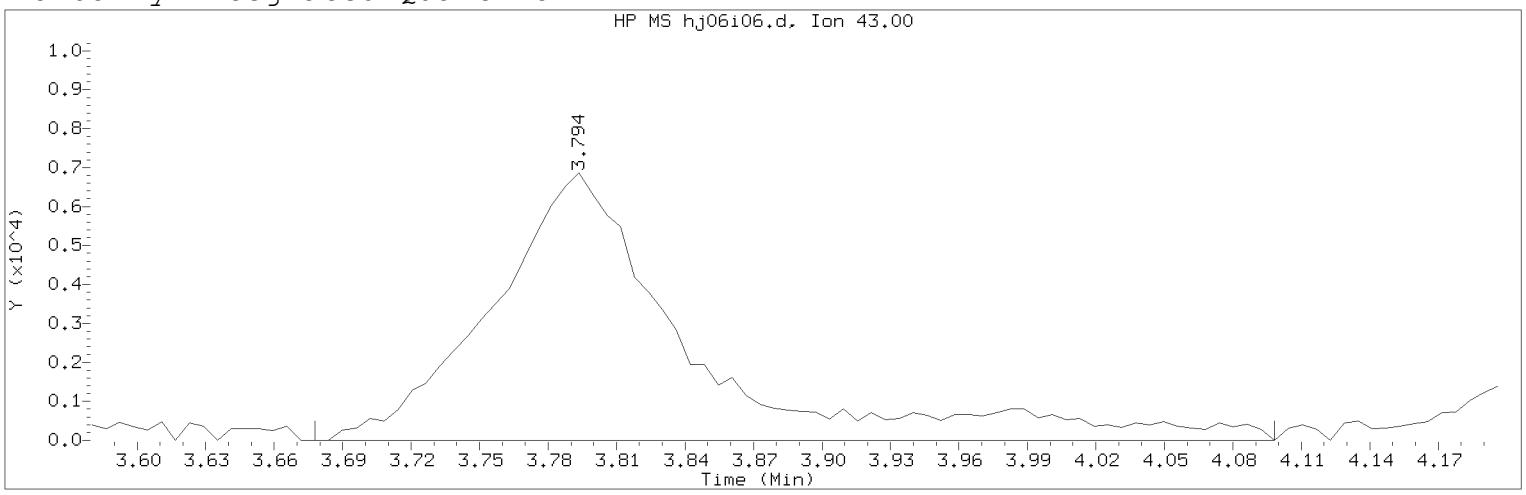
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area : 23728
On-column Amount (ng) : 0.4429
Integration start scan : 122 Integration stop scan: 143
Y at integration start : 545 Y at integration end: 455

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

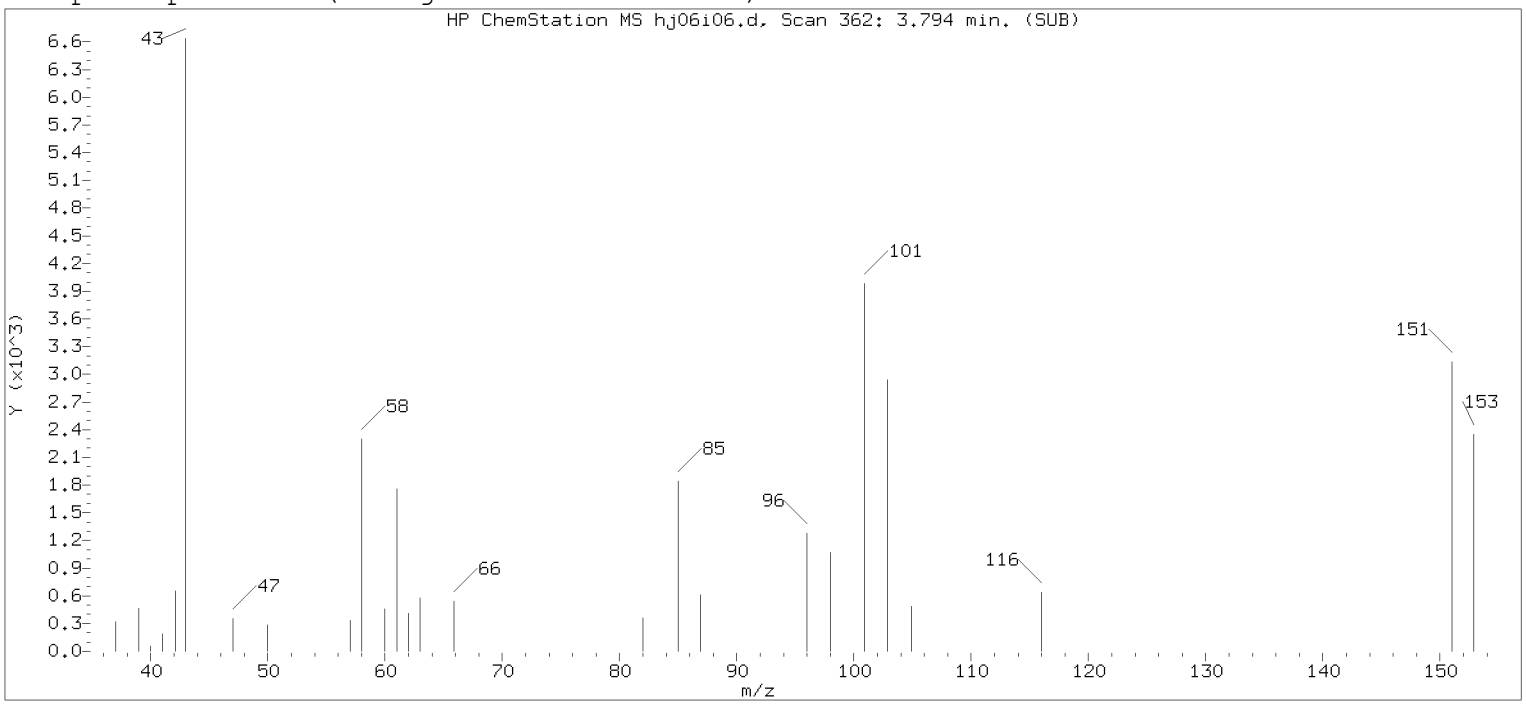
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 41187M
On-Column Amount (ng) : 5.7326
Integration start scan : 342 Integration stop scan: 411
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

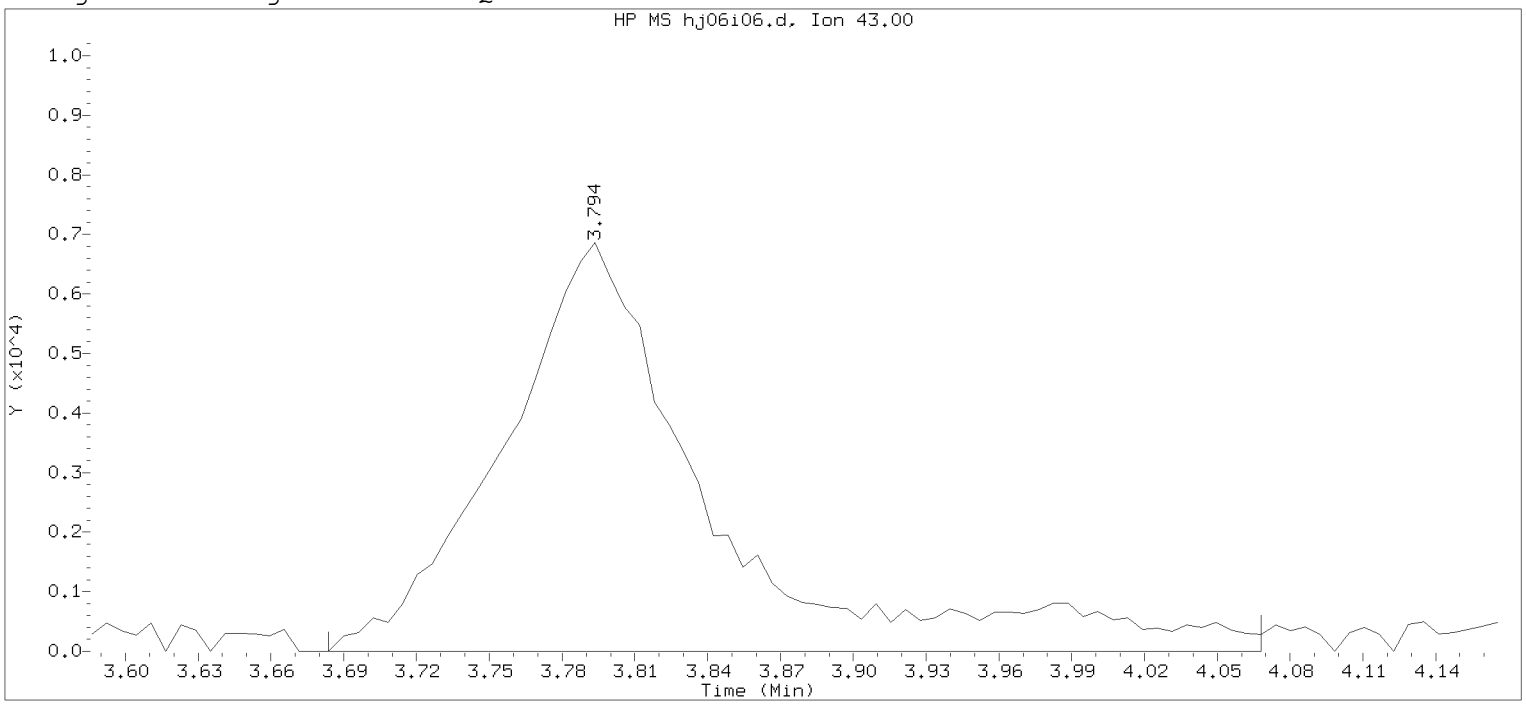
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

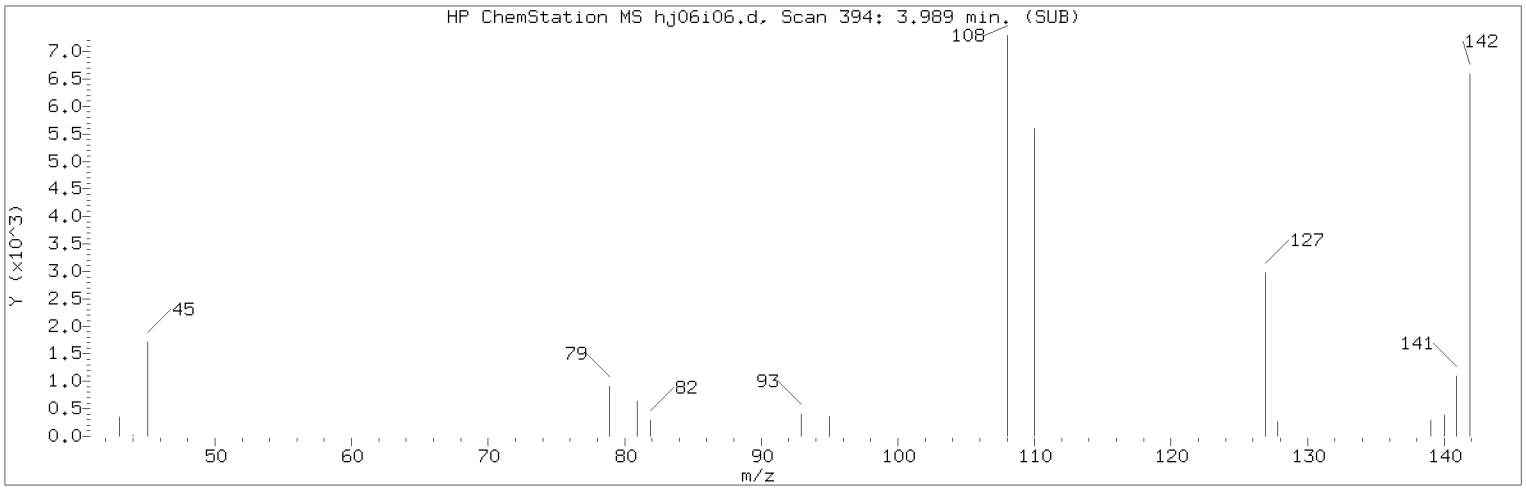
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

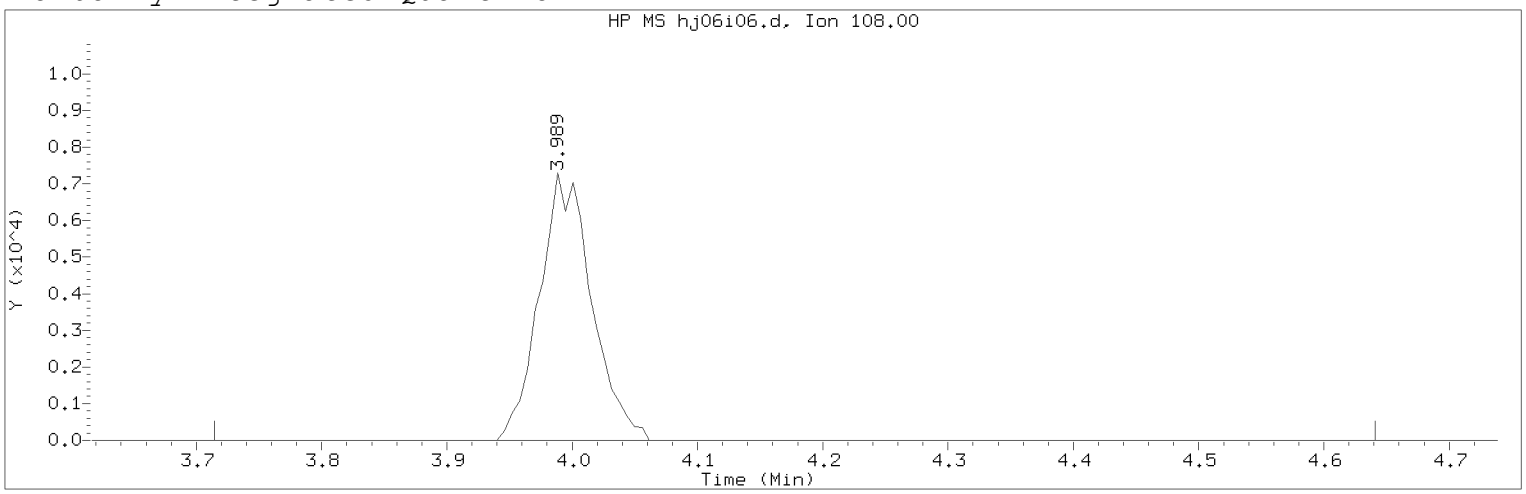
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 362		
Retention Time (minutes)	: 3.794		
Quant Ion	: 43.00		
Area	: 40599		
On-column Amount (ng)	: 5.6634		
Integration start scan	: 343	Integration stop scan:	406
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

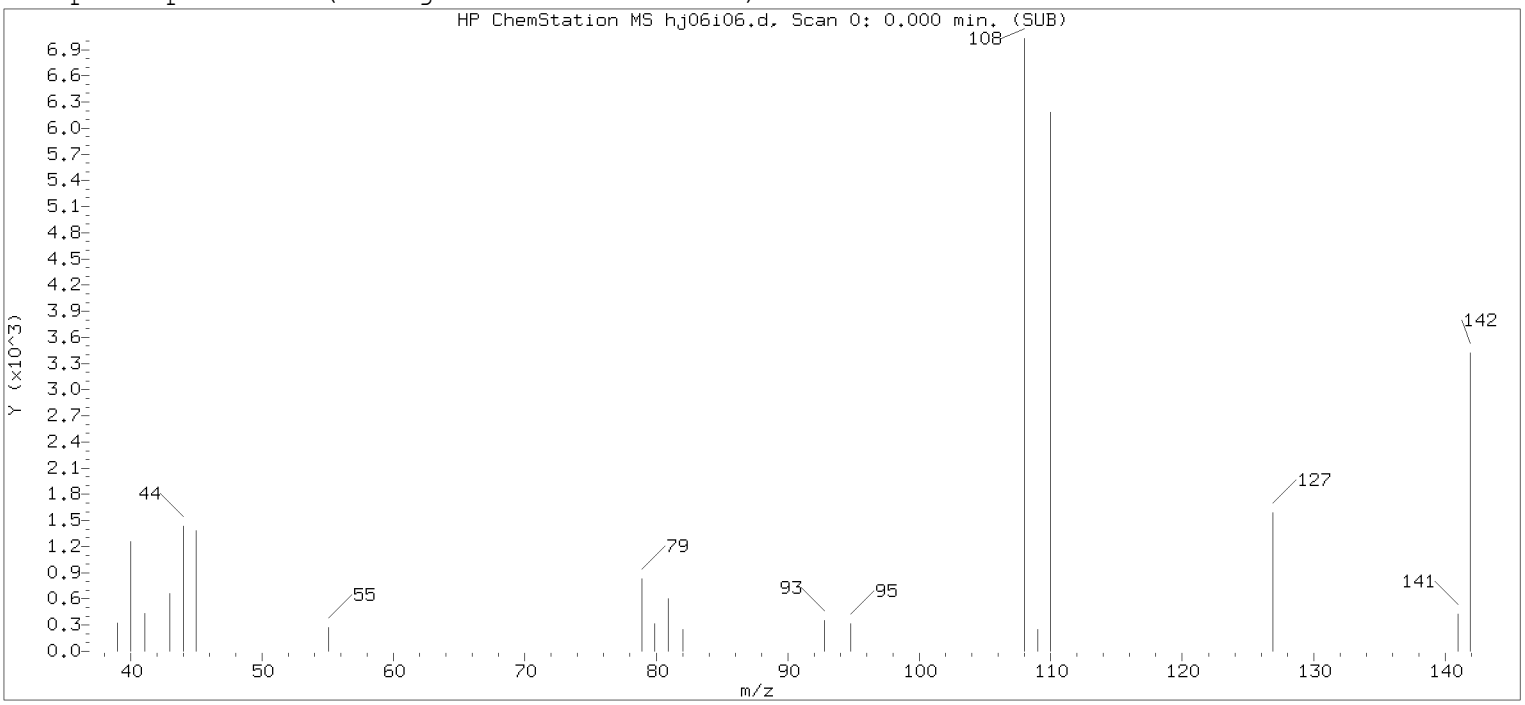
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 108.00
Area (flag) : 21118M
On-Column Amount (ng) : 0.5064
Integration start scan : 348 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

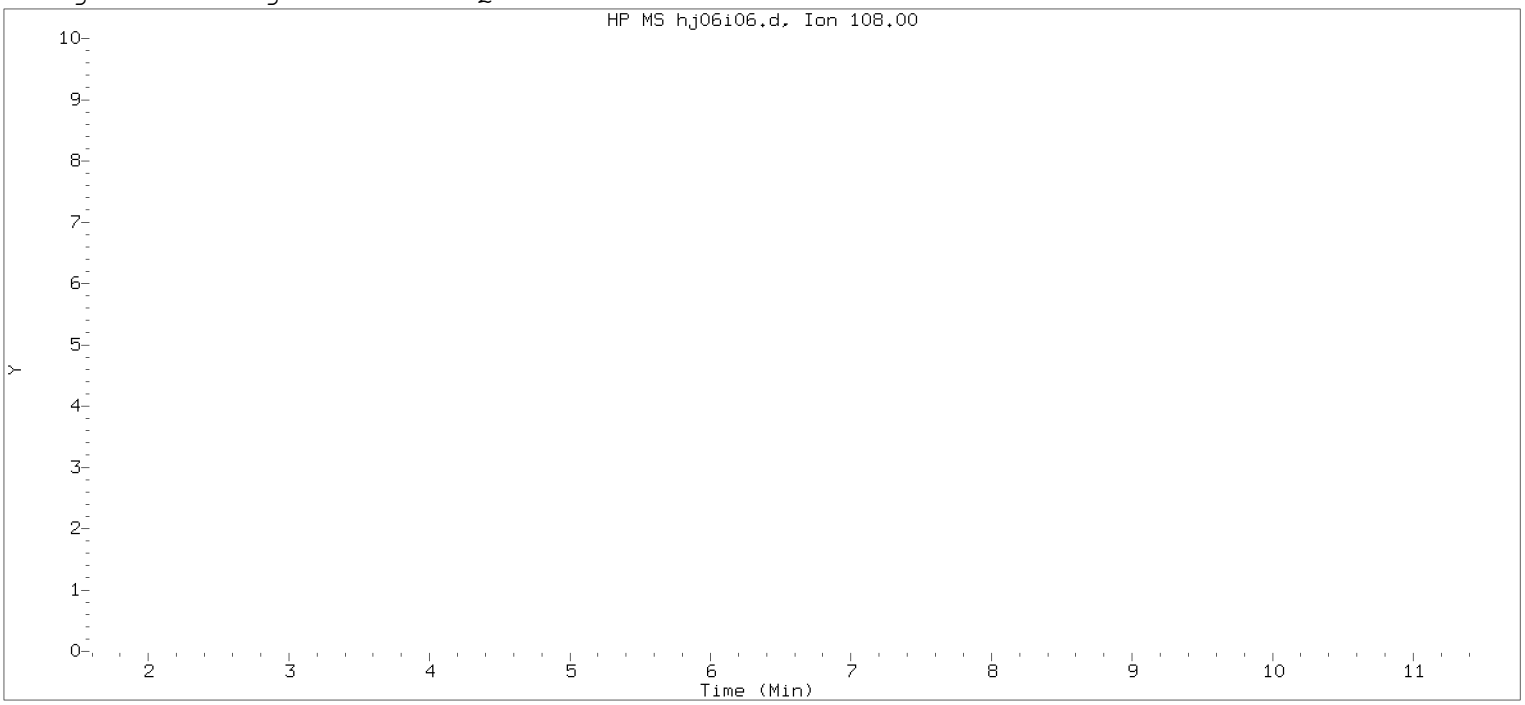
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

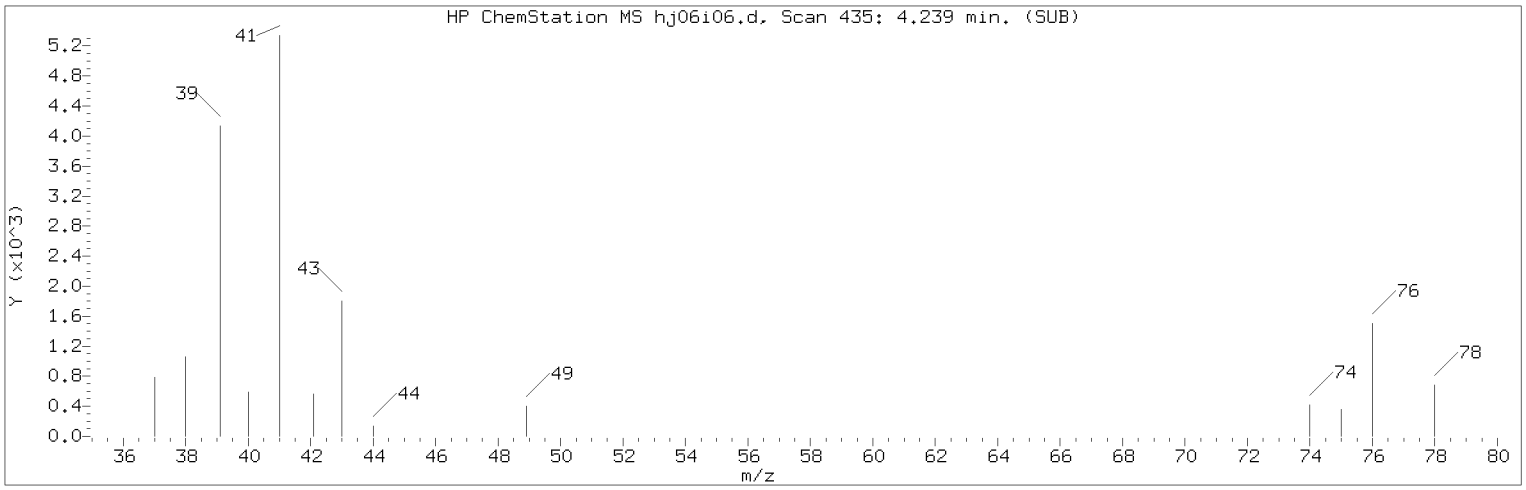
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

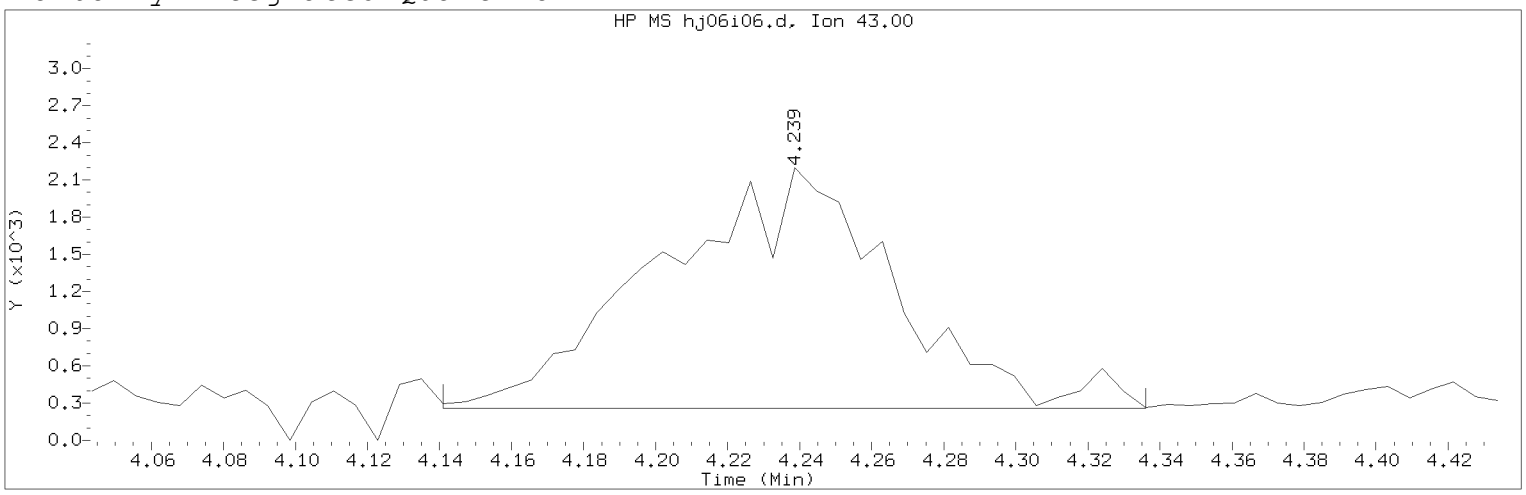
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 566707 Integration stop scan: 477822
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

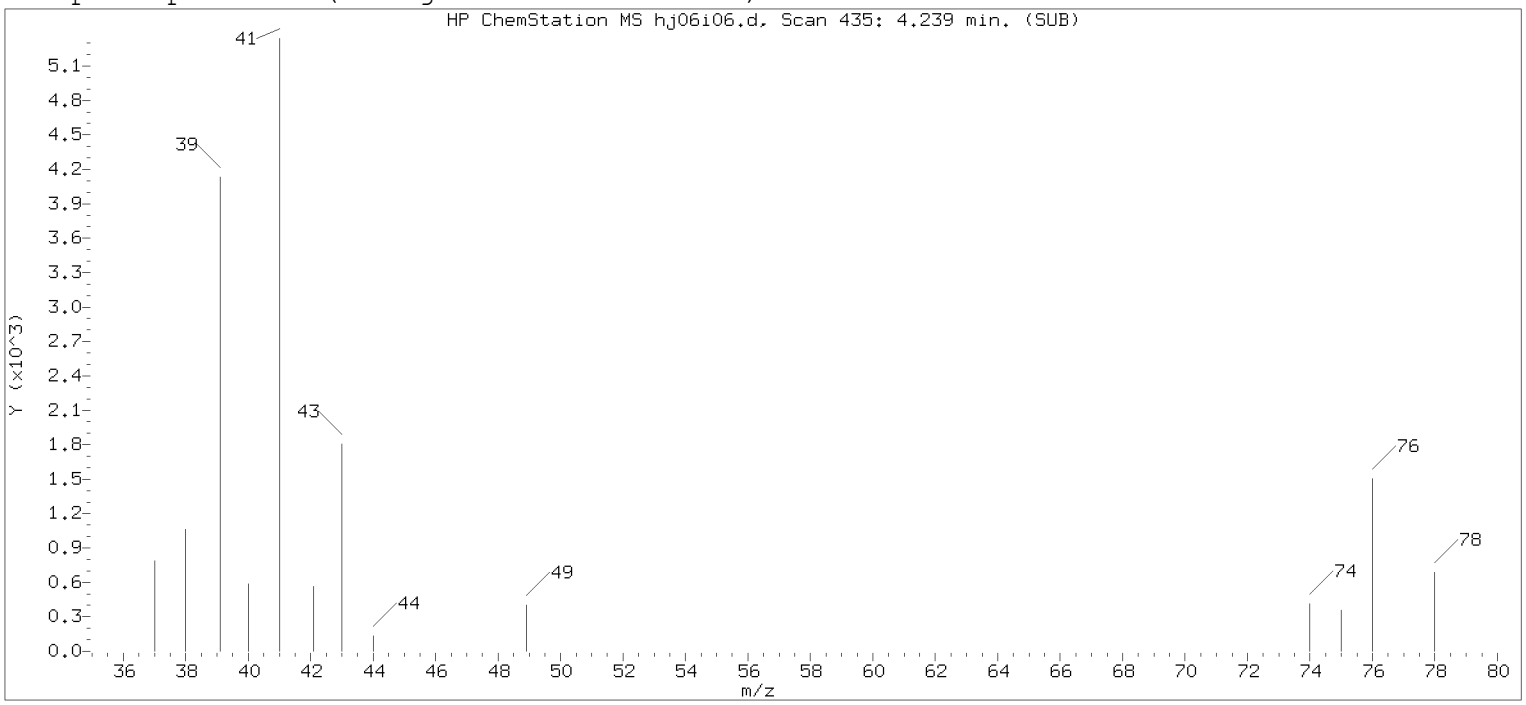
Compound Number : 22
Compound Name : Methyl Acetate
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 43.00
Area (flag) : 8769M
On-Column Amount (ng) : 0.4837
Integration start scan : 418 Integration stop scan: 450
Y at integration start : 258 Y at integration end: 258

Reason for manual integration: improper integration

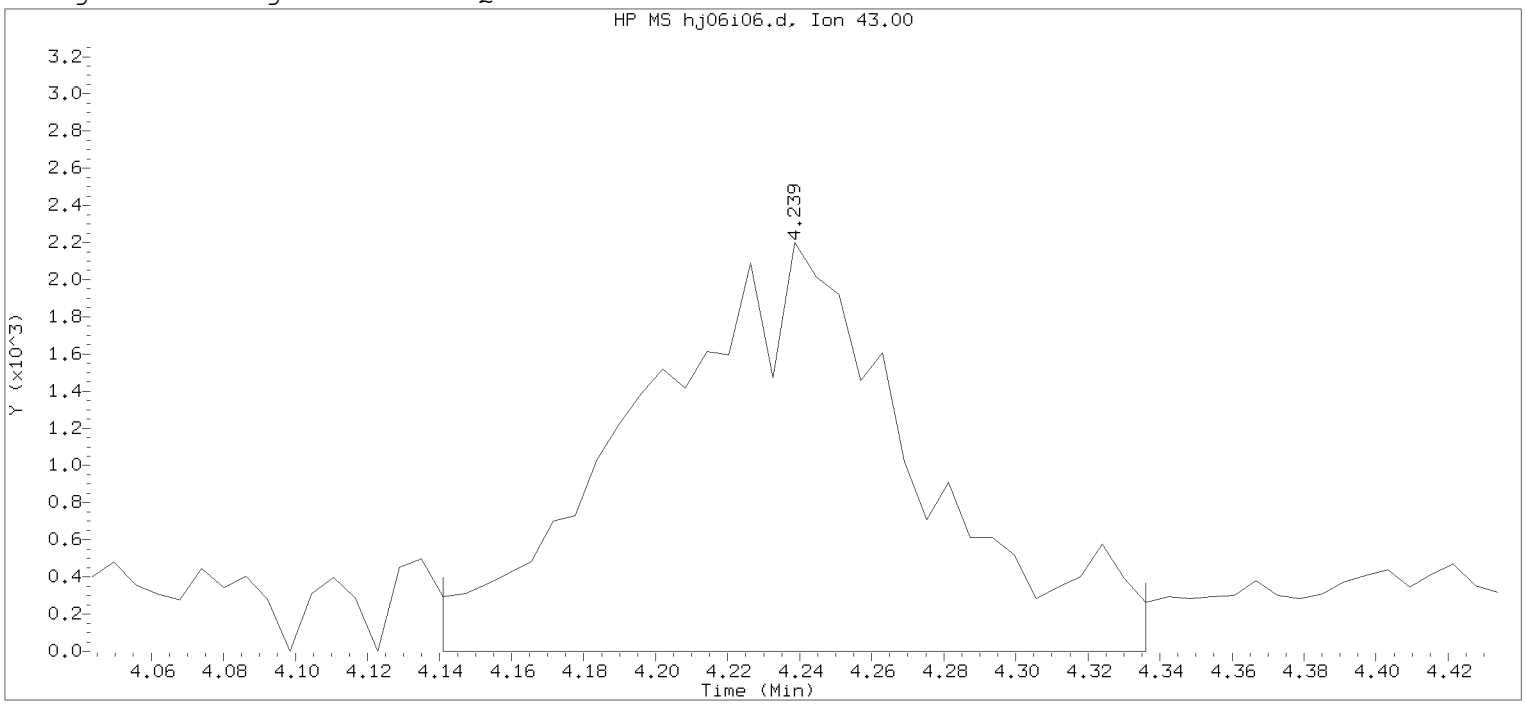
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

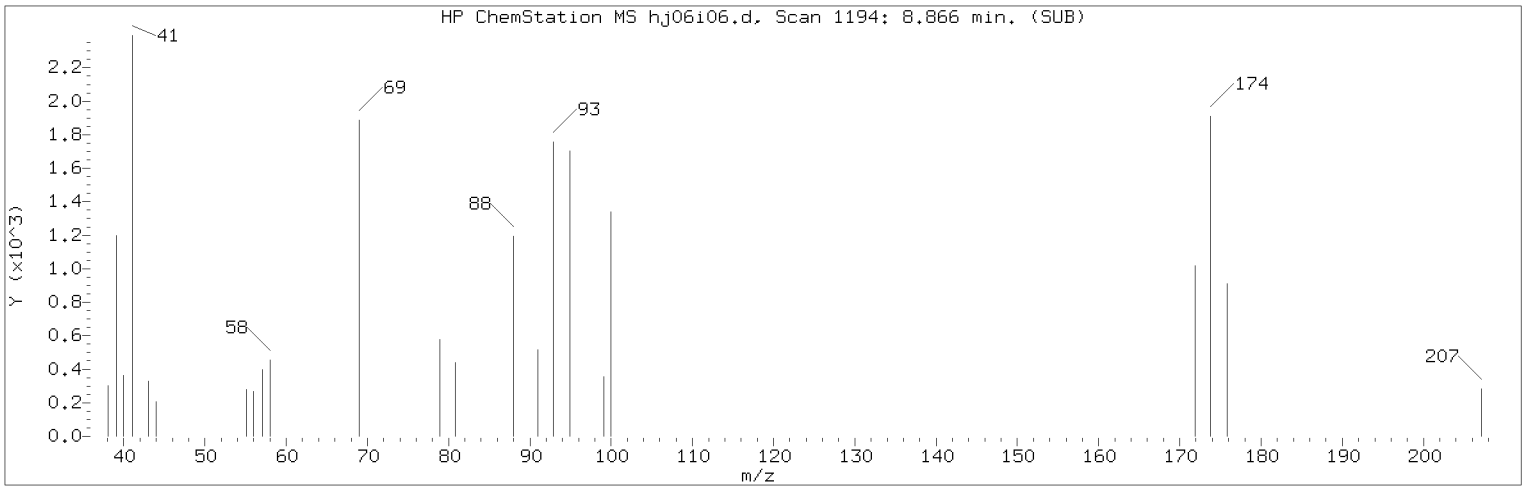
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

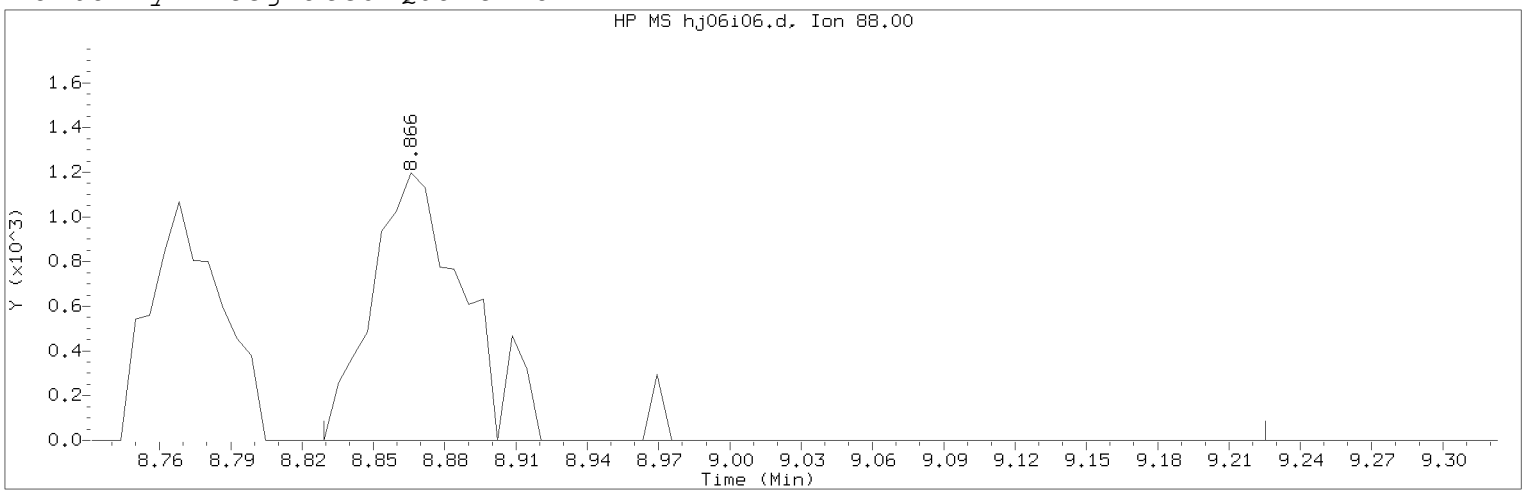
Compound Number : 22
Compound Name : Methyl Acetate
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 43.00
Area : 11782
On-column Amount (ng) : 0.5416
Integration start scan : 418 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

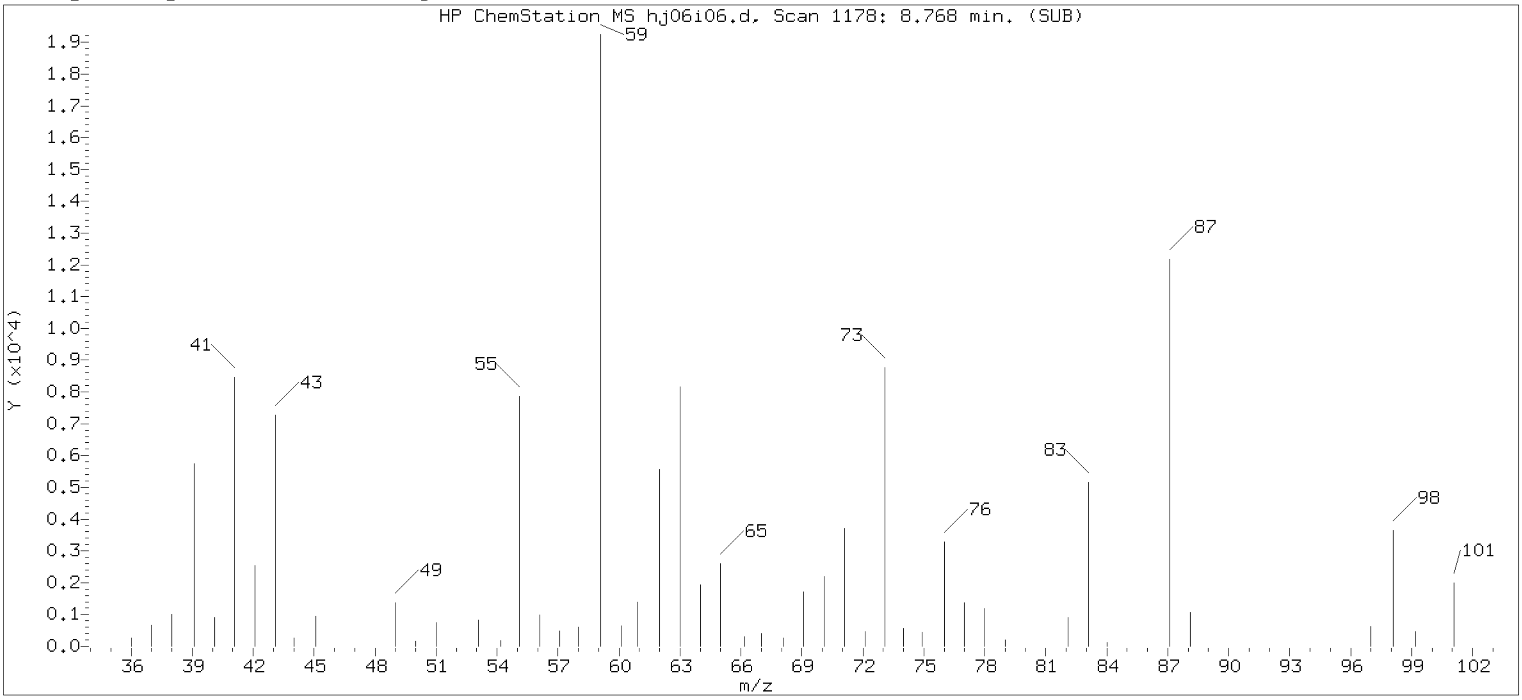
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 3390M
On-Column Amount (ng) : 20.1816
Integration start scan : 1187 Integration stop scan: 1252
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

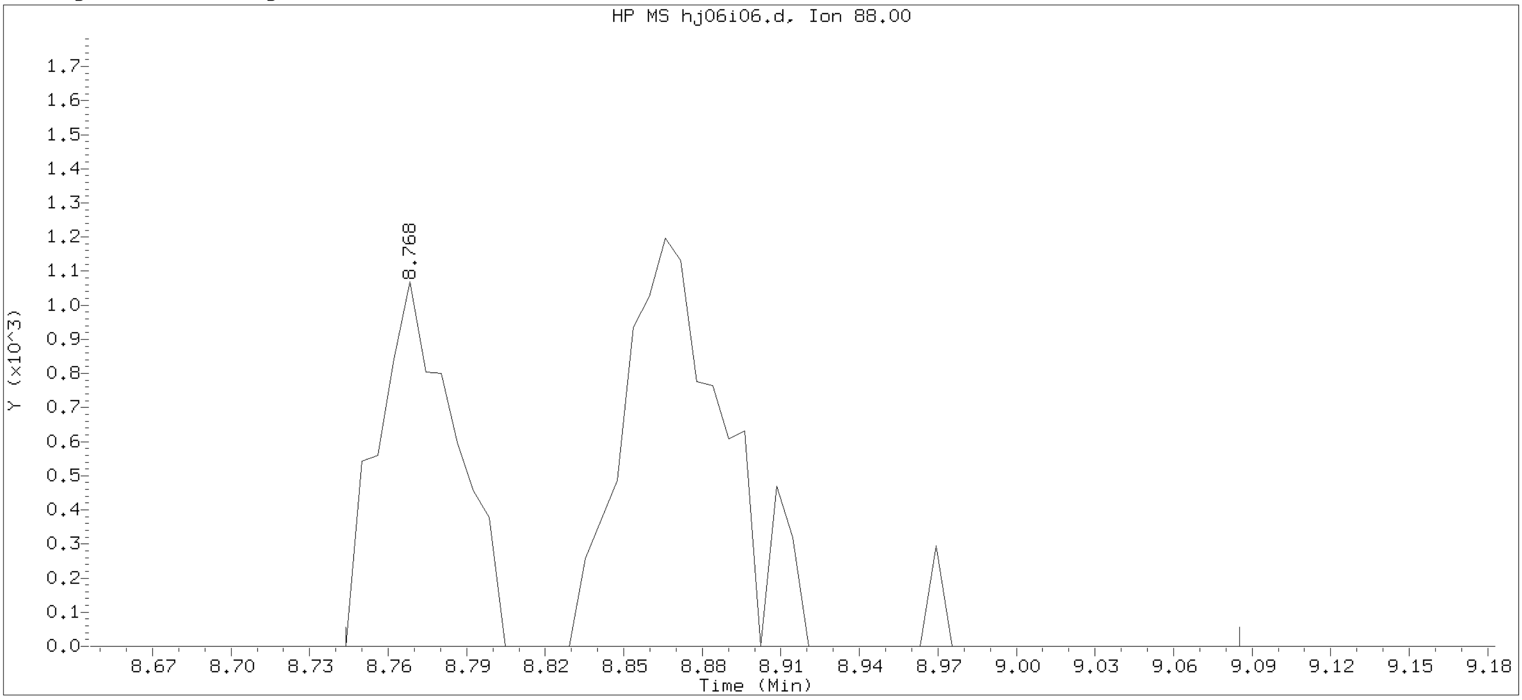
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

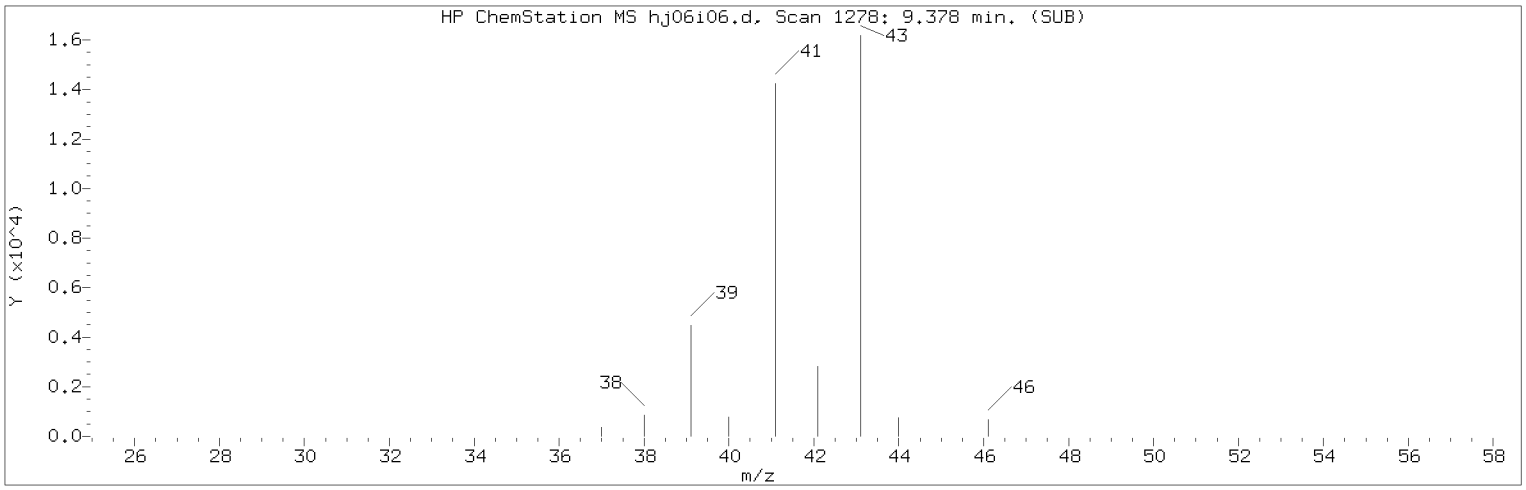
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

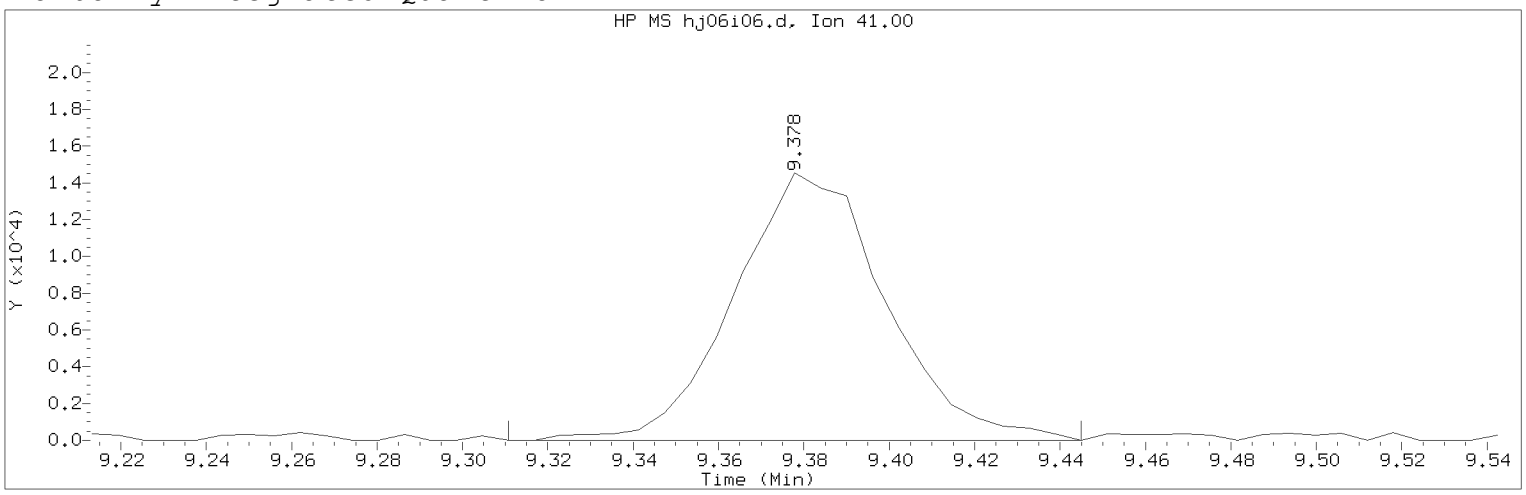
Compound Number	: 73		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 5603		
On-column Amount (ng)	: 35.8595		
Integration start scan	: 1173	Integration stop scan:	1229
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

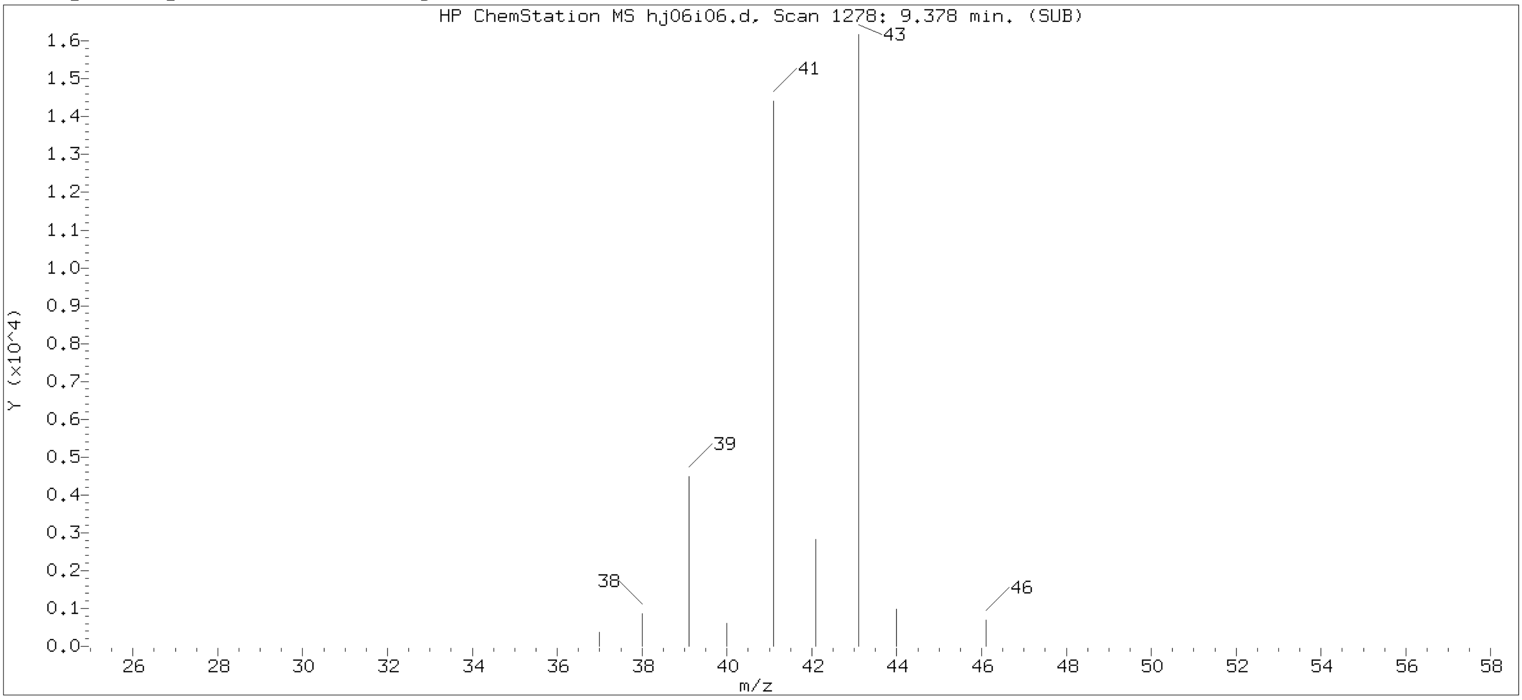
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 35799M
On-Column Amount (ng) : 4.9229
Integration start scan : 1266 Integration stop scan: 1288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

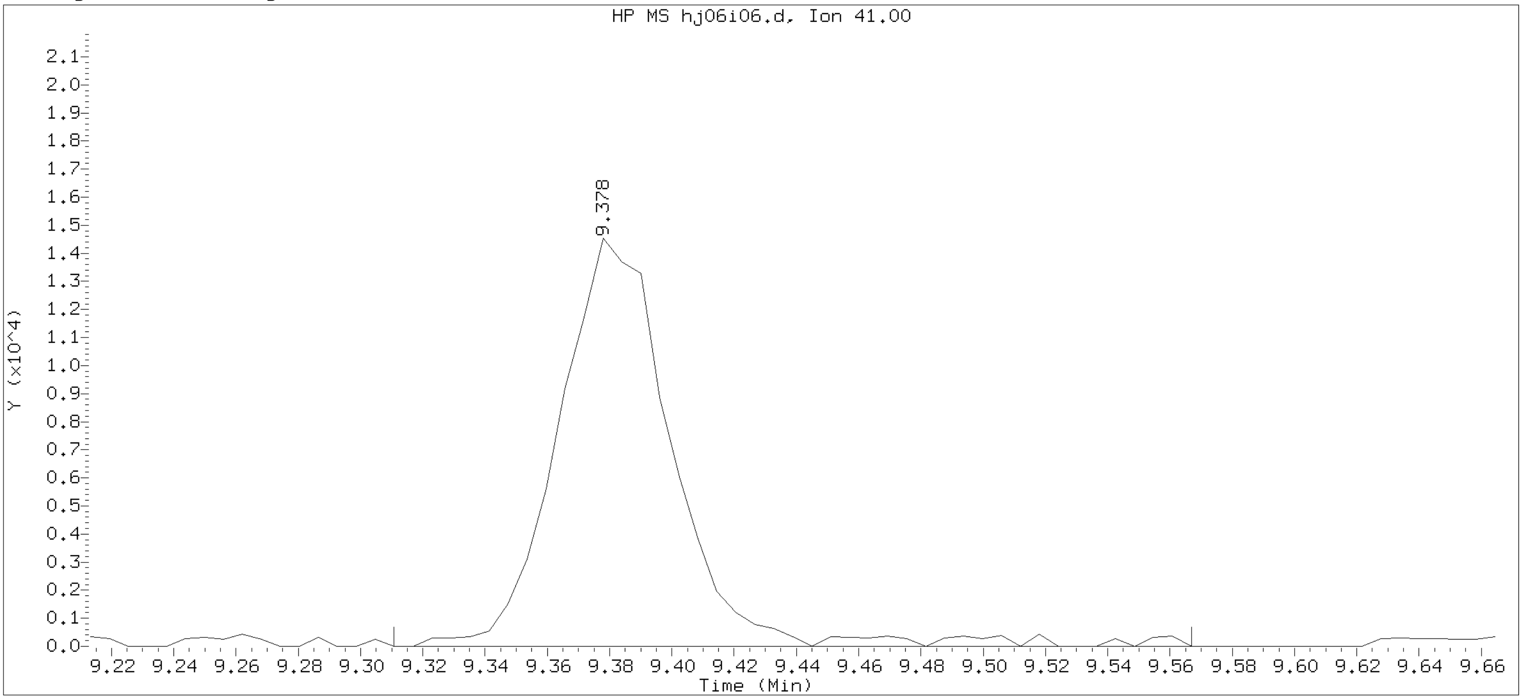
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

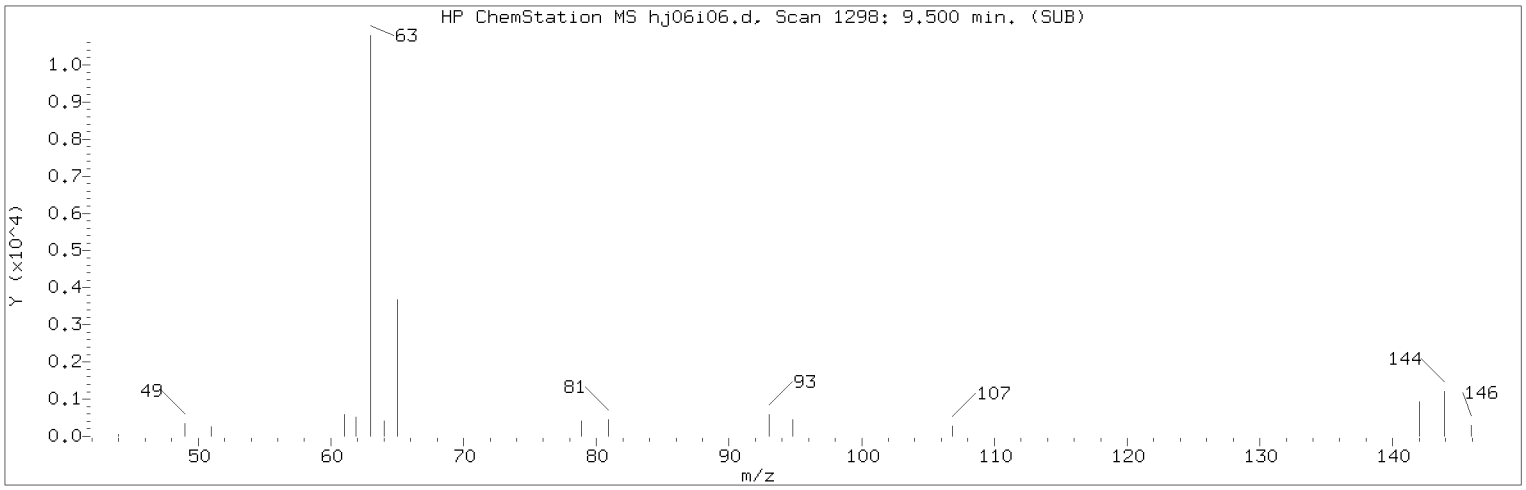
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

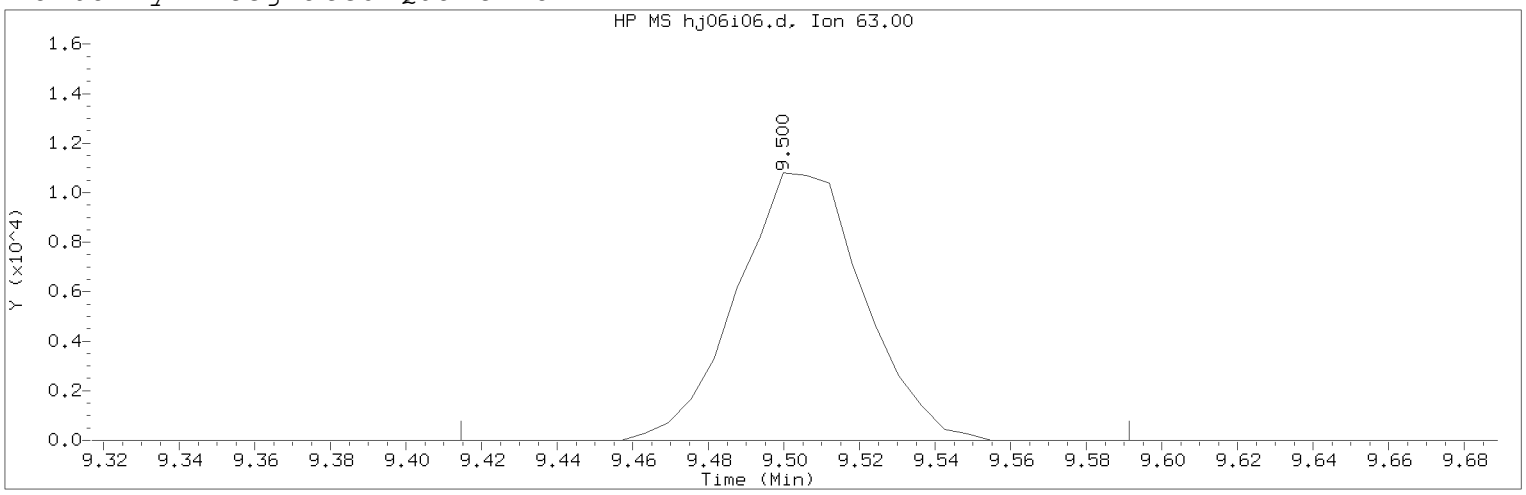
Compound Number	: 77
Compound Name	: 2-Nitropropane
Scan Number	: 1278
Retention Time (minutes)	: 9.378
Quant Ion	: 41.00
Area	: 37377
On-column Amount (ng)	: 5.0667
Integration start scan	: 1266 Integration stop scan: 1308
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

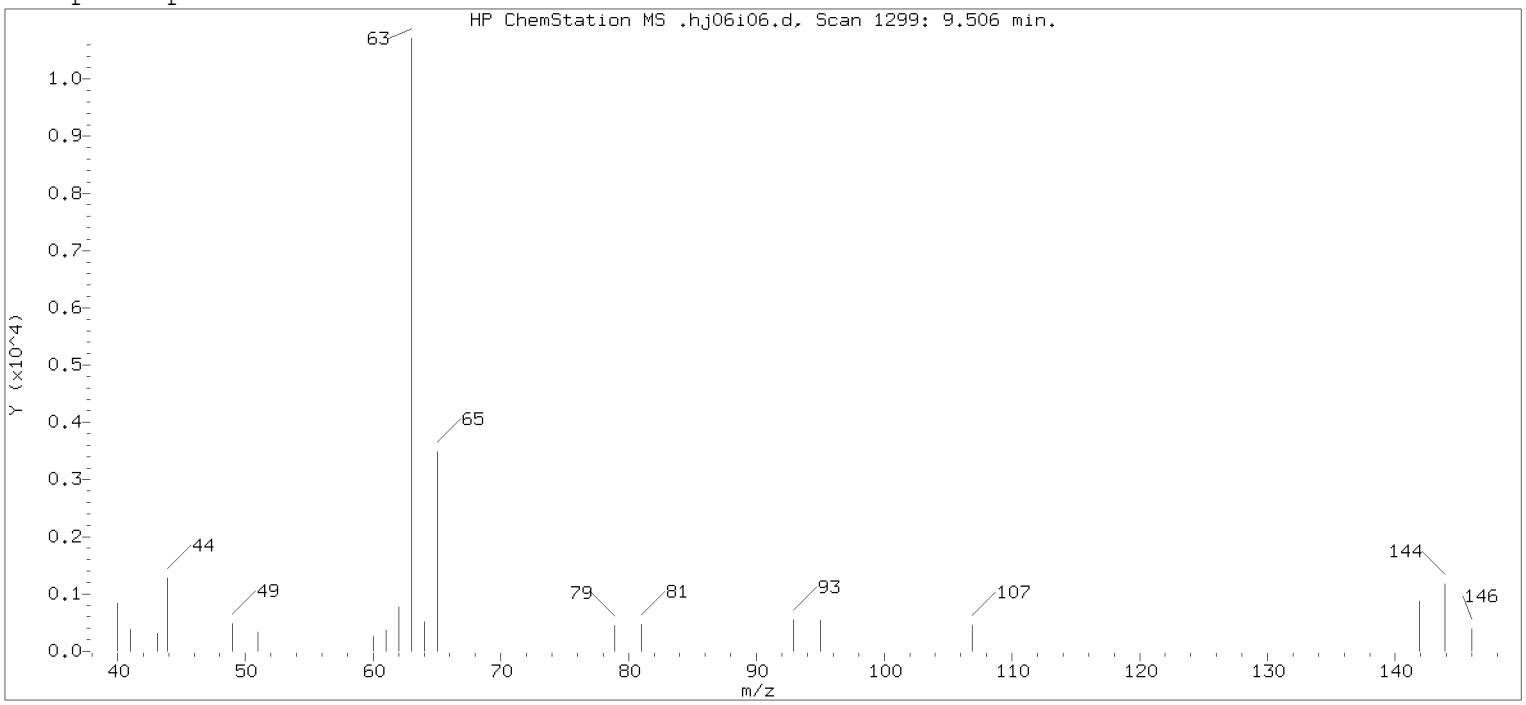
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1298
Retention Time (minutes): 9.500
Quant Ion : 63.00
Area (flag) : 25119M
On-Column Amount (ng) : 0.5076
Integration start scan : 1283 Integration stop scan: 1312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

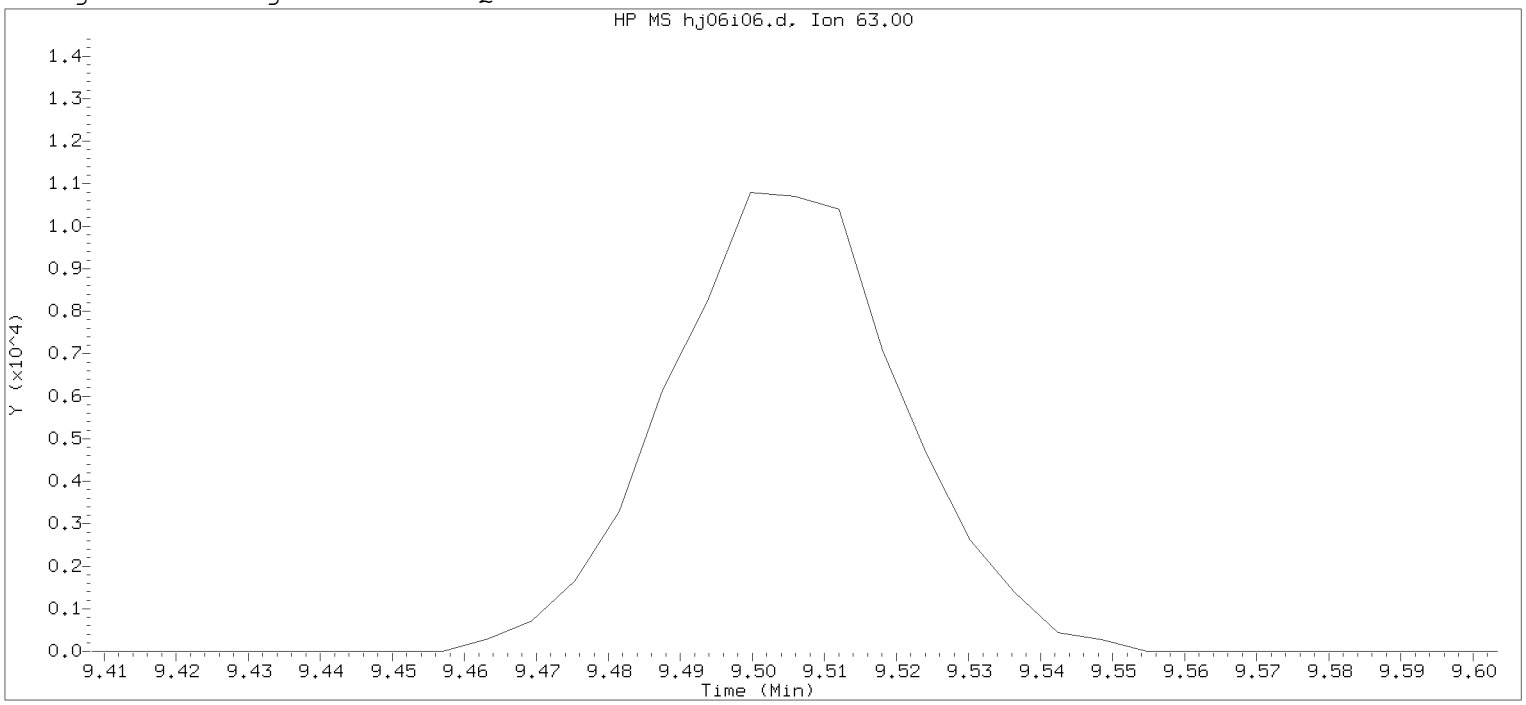
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

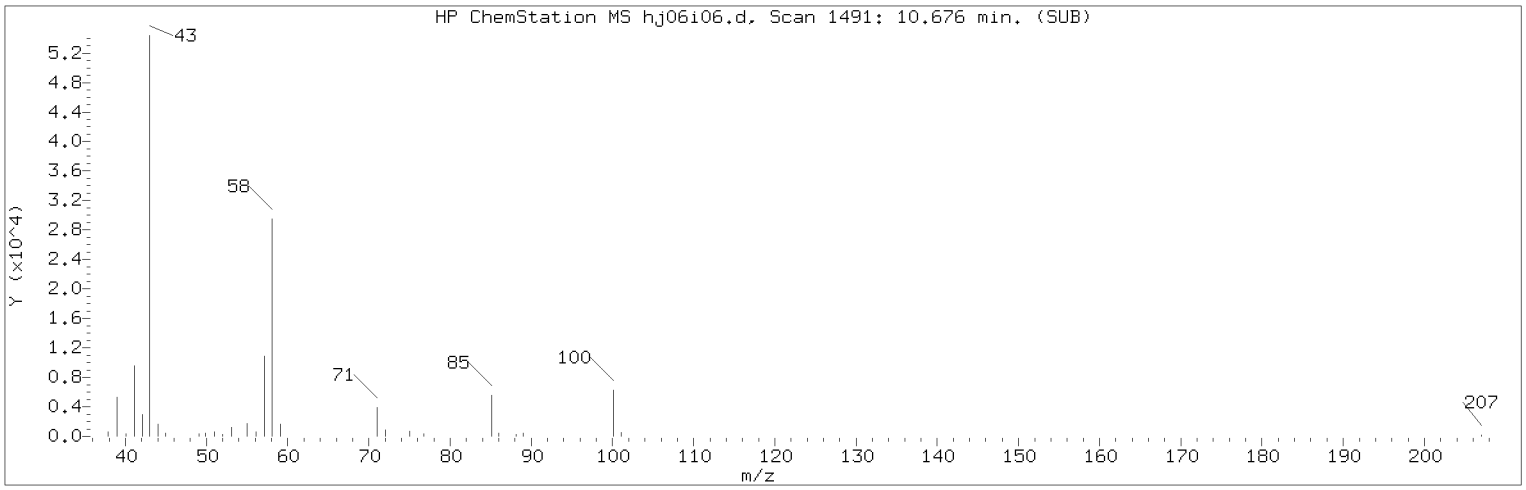
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

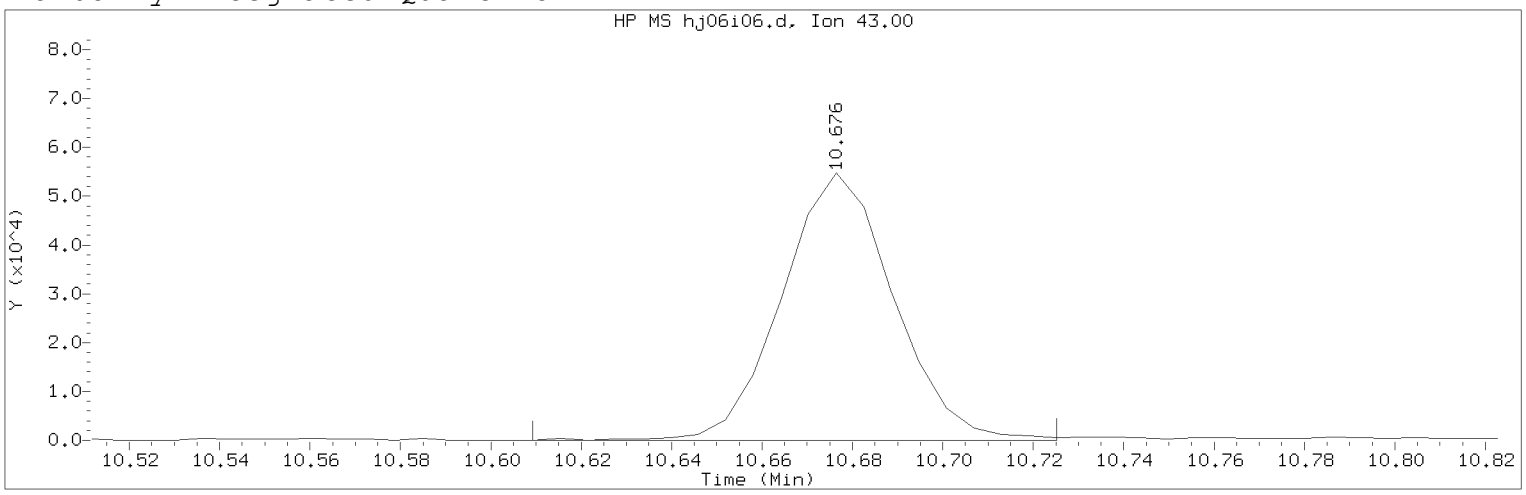
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

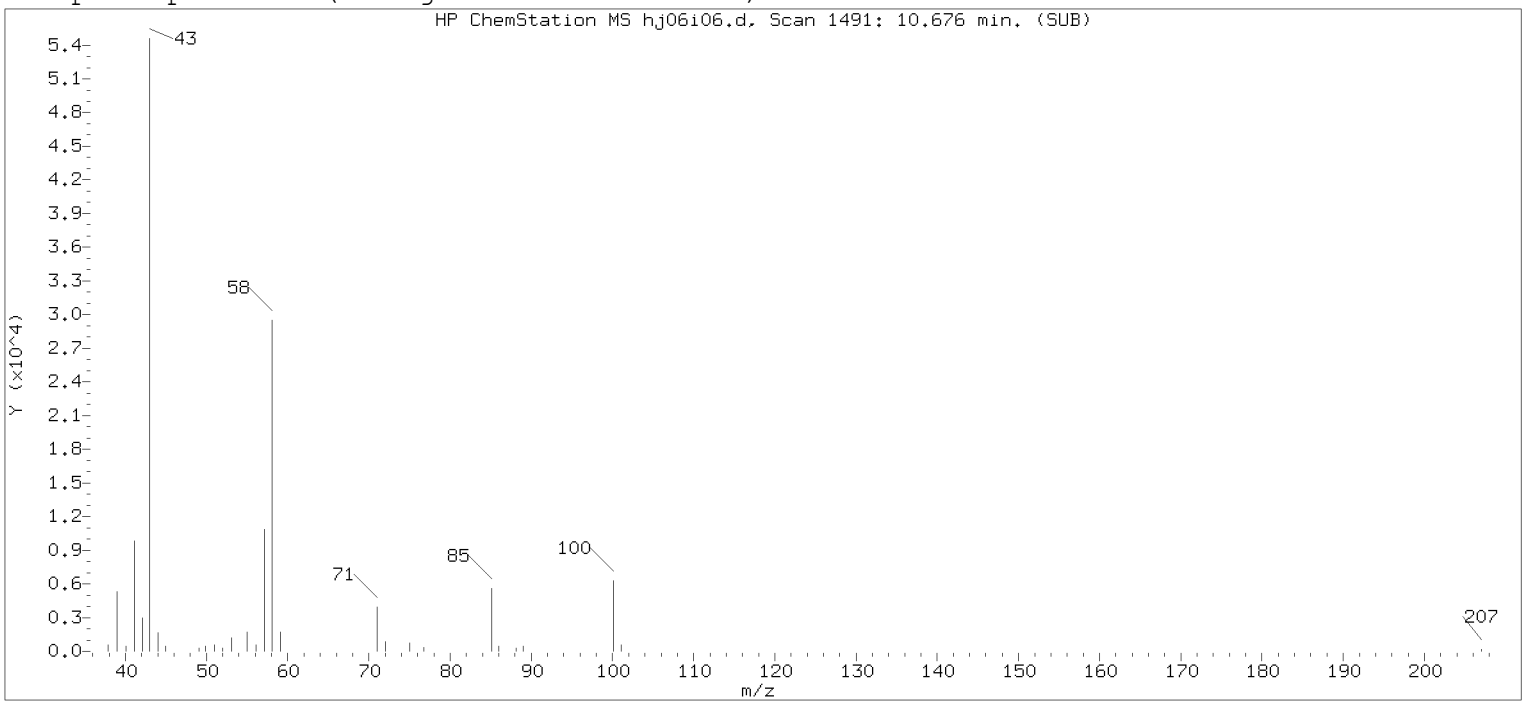
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area (flag) : 93633M
On-Column Amount (ng) : 4.9489
Integration start scan : 1479 Integration stop scan: 1498
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

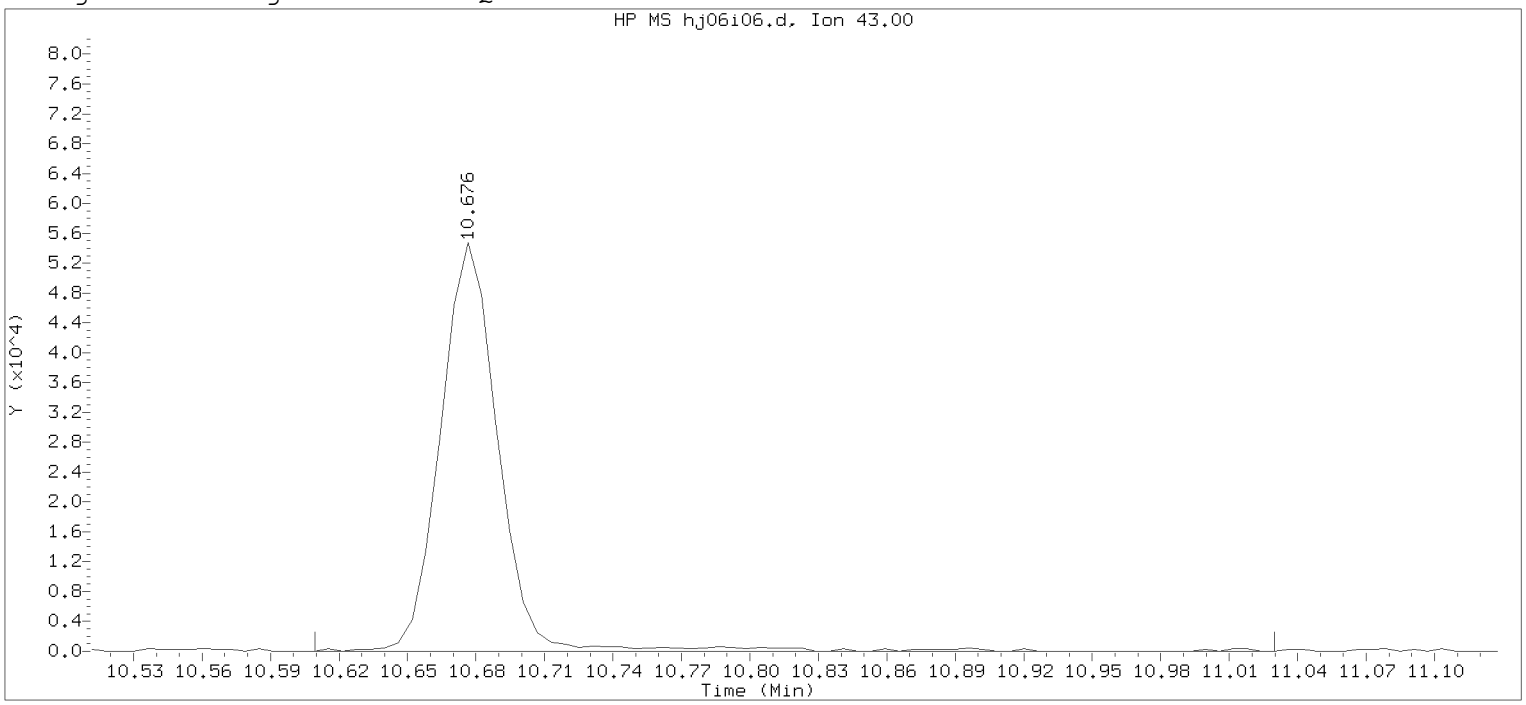
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

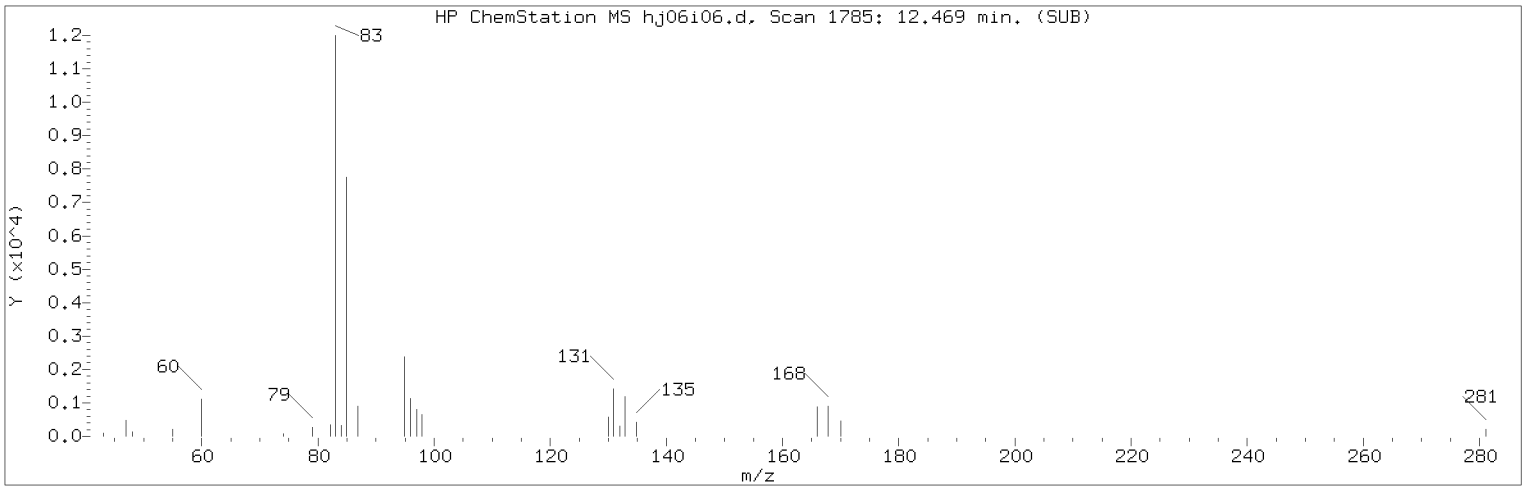
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

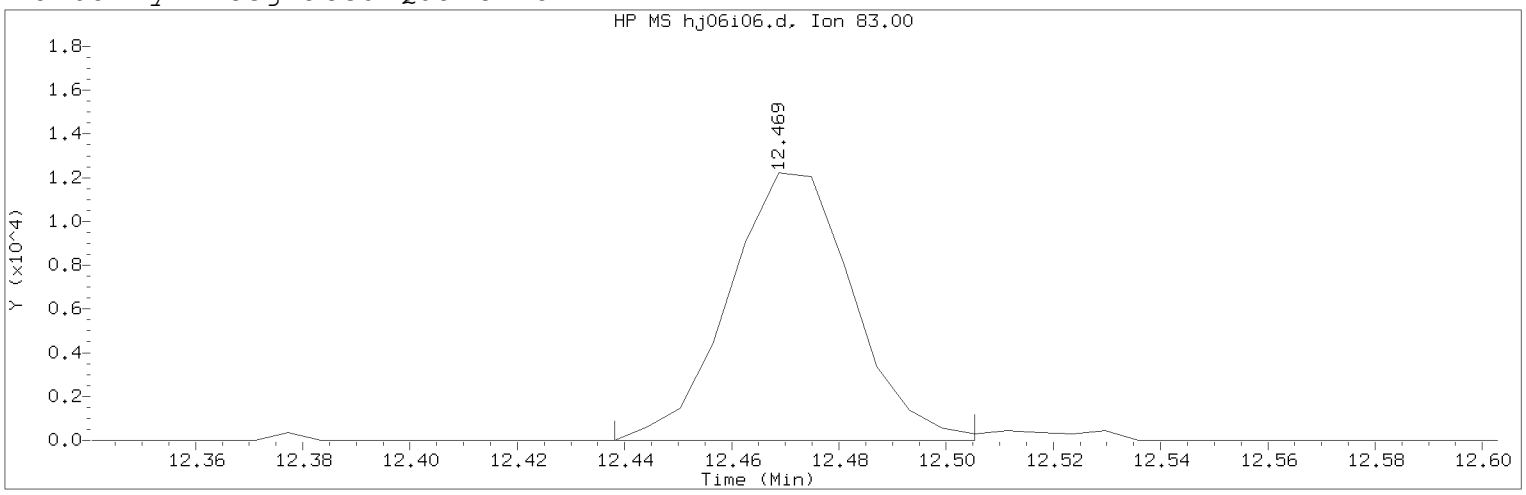
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area : 97785
On-column Amount (ng) : 5.0909
Integration start scan : 1479 Integration stop scan: 1548
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

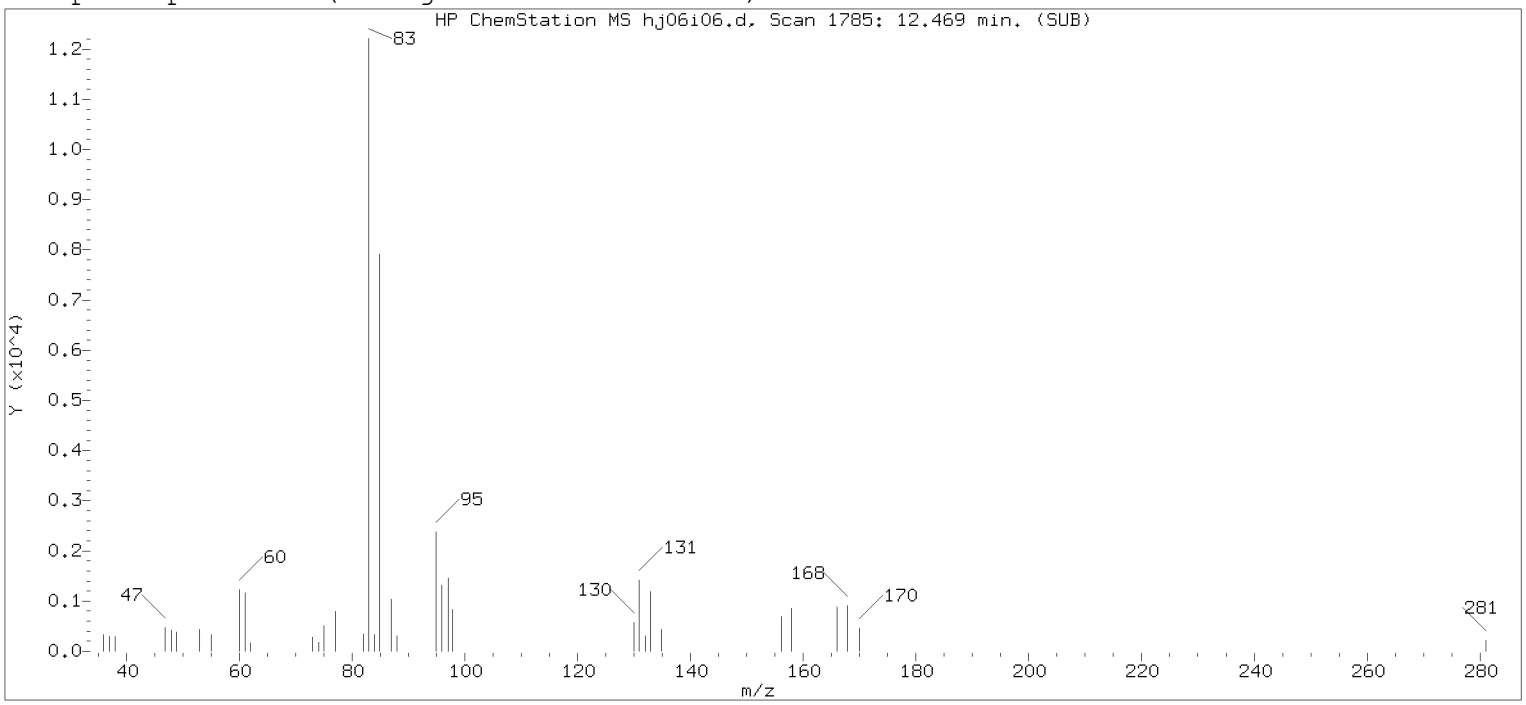
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 19540M
On-Column Amount (ng) : 0.4769
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

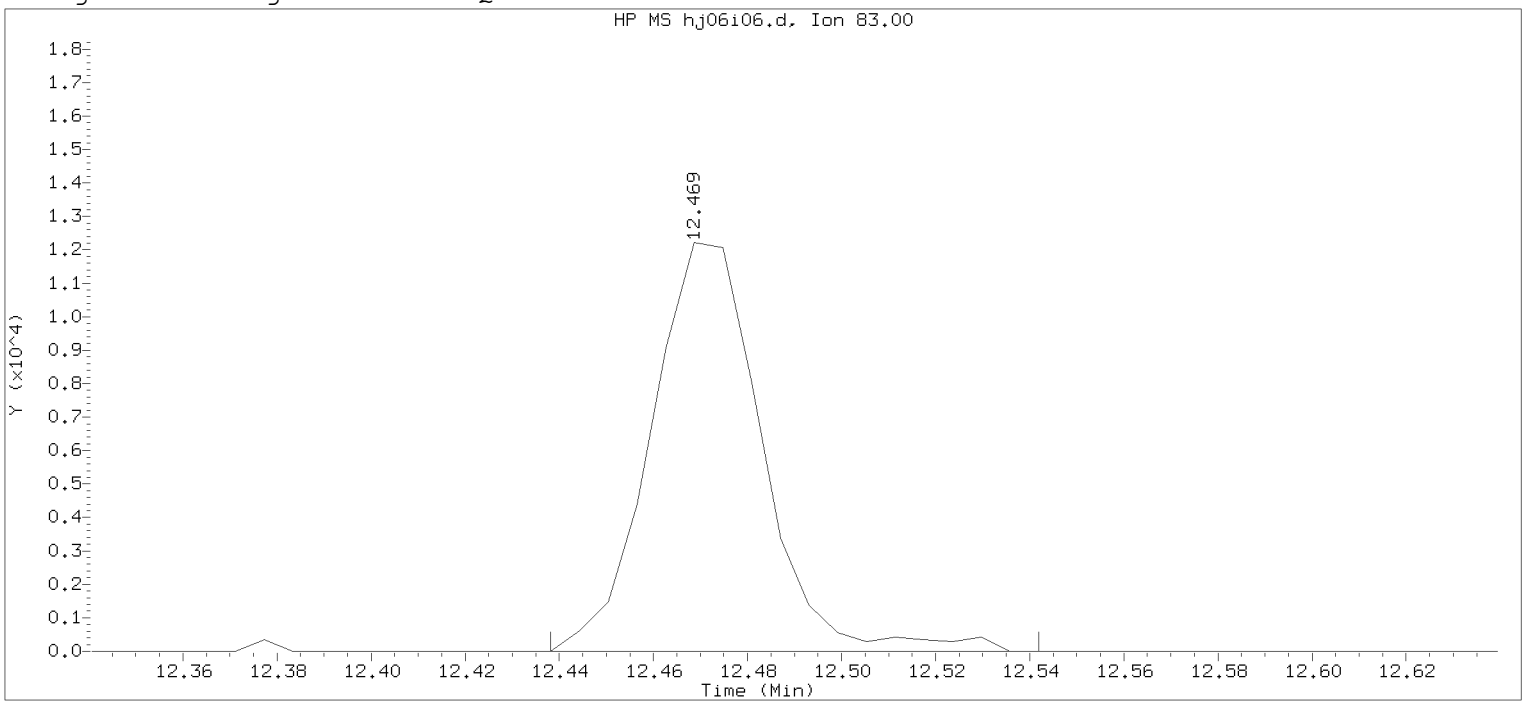
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

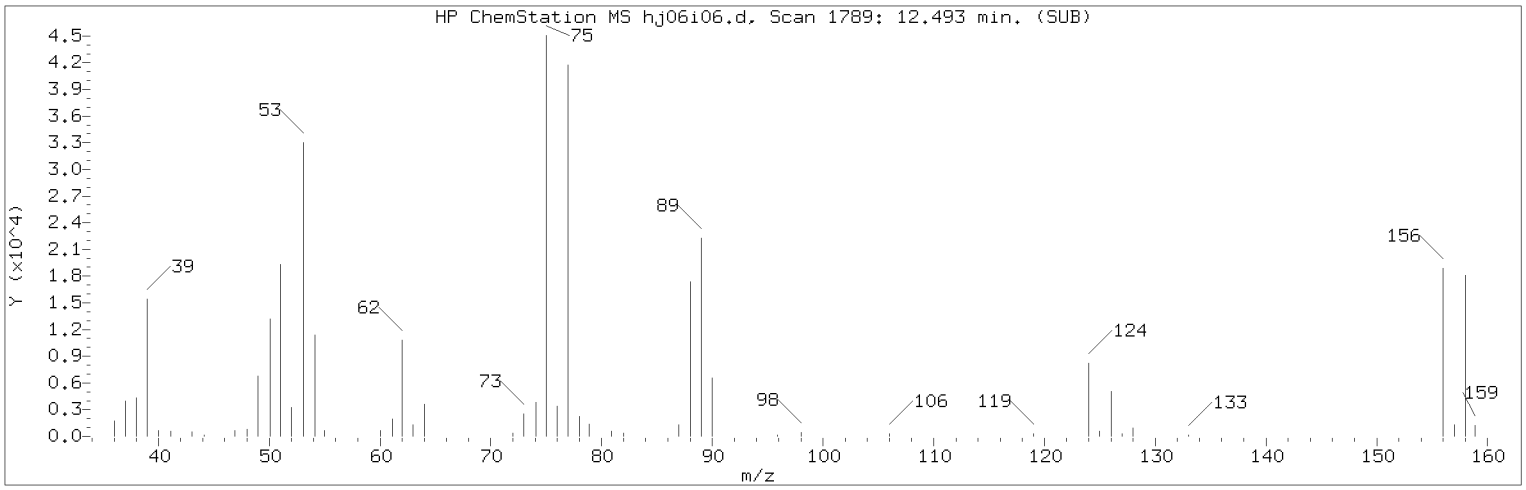
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

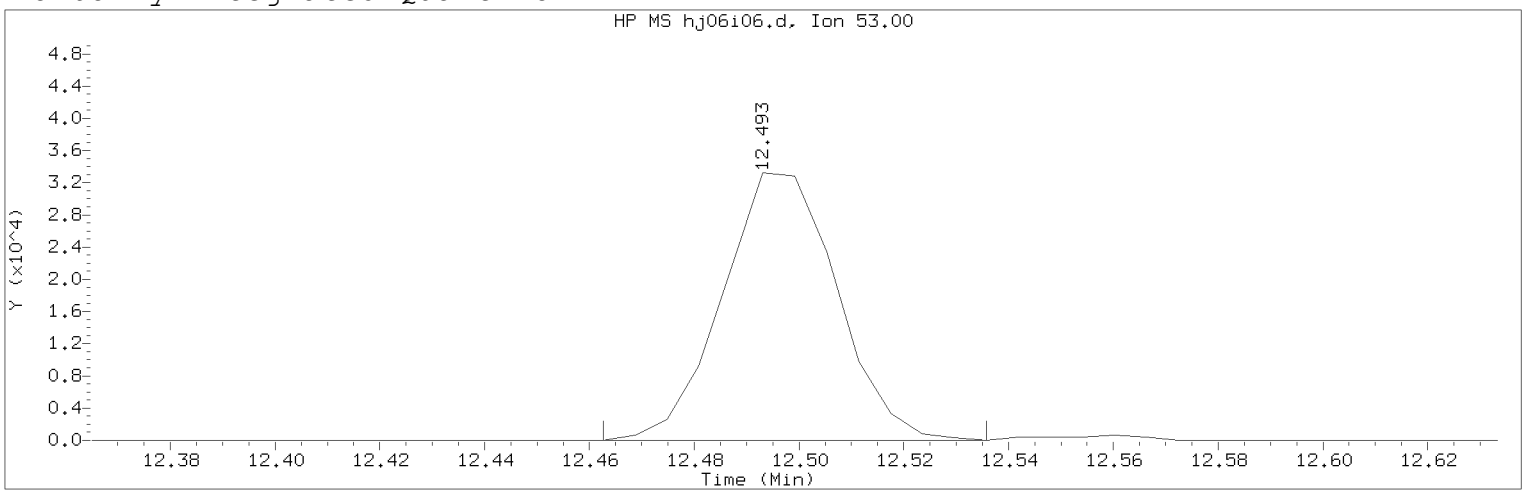
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 20088
On-column Amount (ng) : 0.4791
Integration start scan : 1779 Integration stop scan: 1796
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user's page 2

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

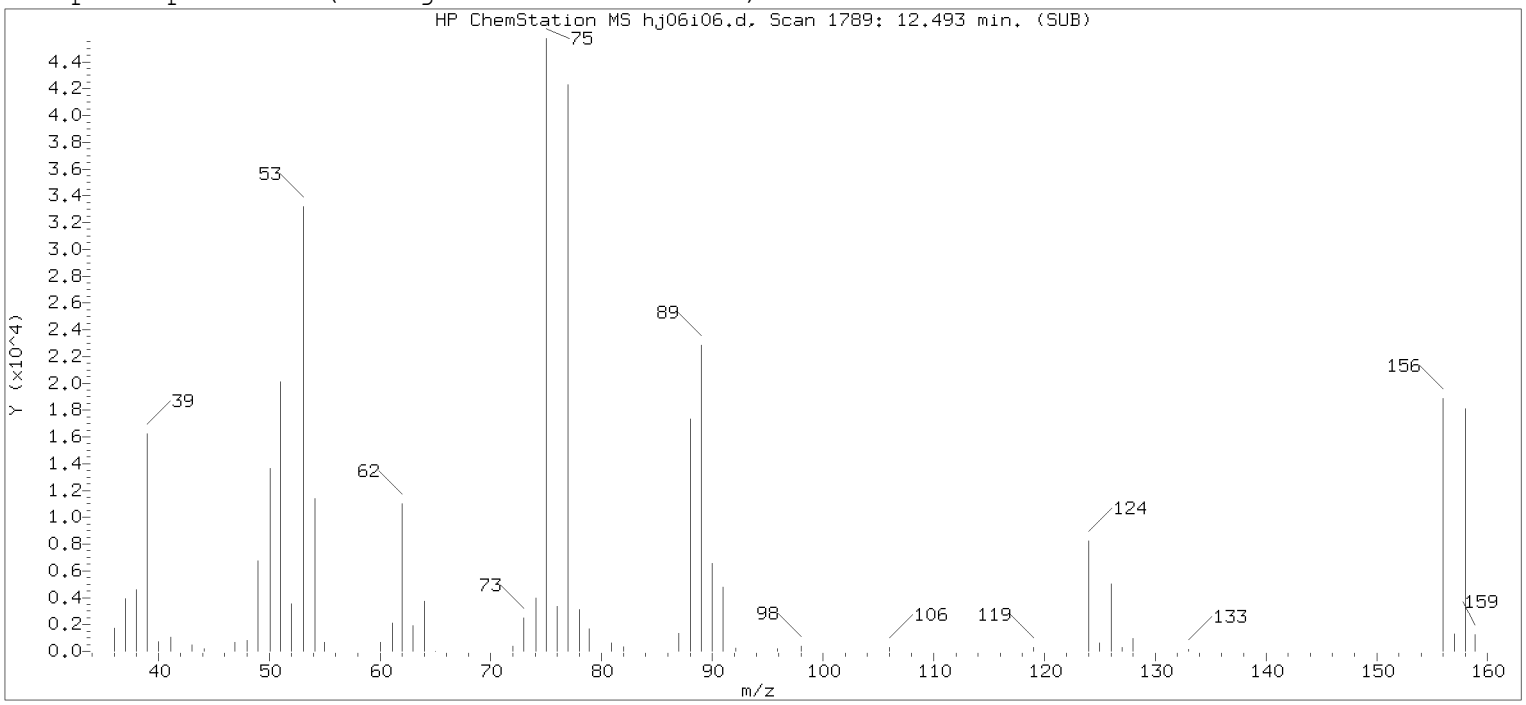
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 50262M
On-Column Amount (ng) : 4.8323
Integration start scan : 1783 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

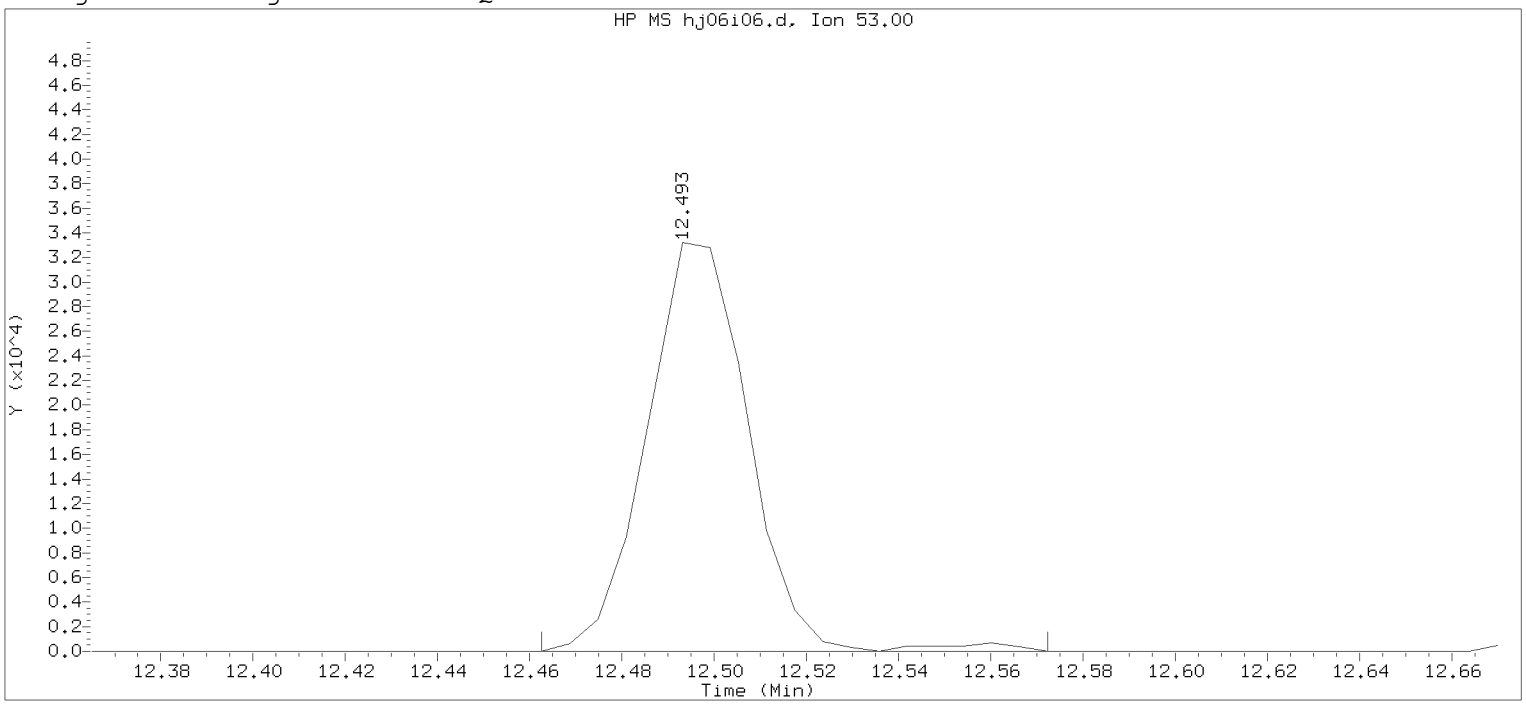
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

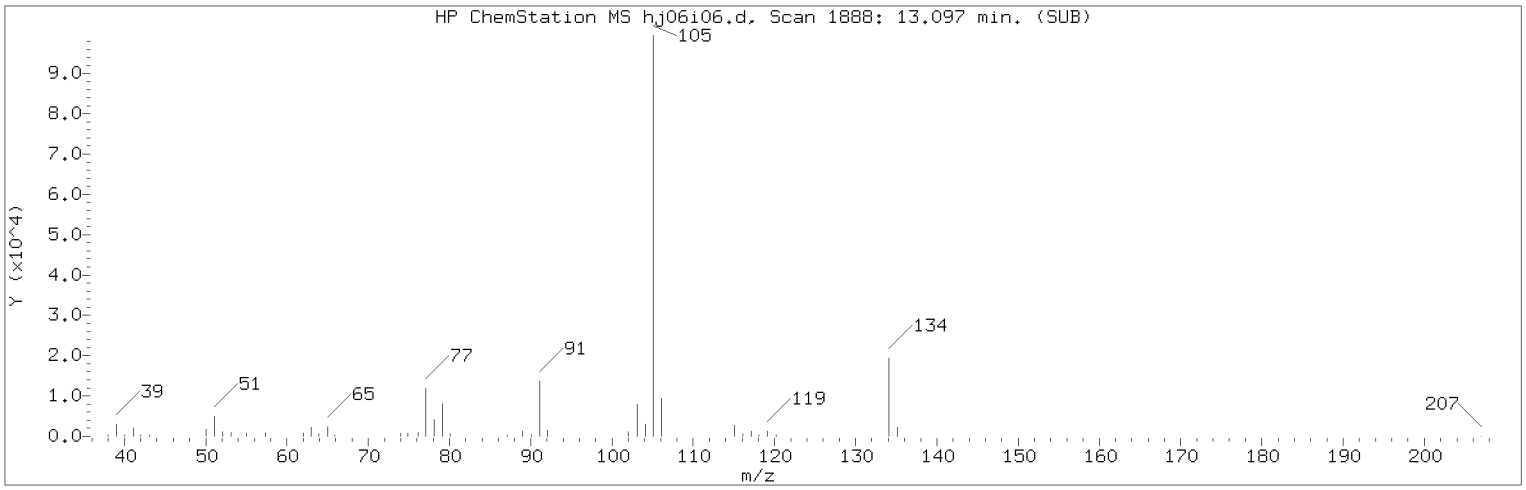
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

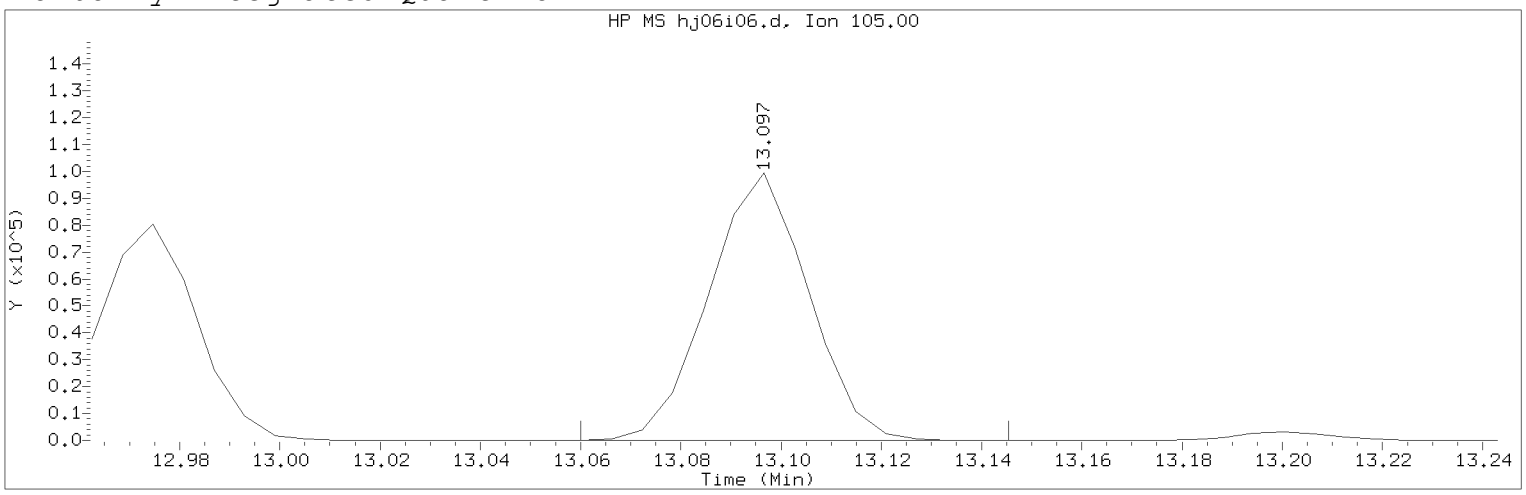
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 51107
On-column Amount (ng) : 7.3908
Integration start scan : 1783 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

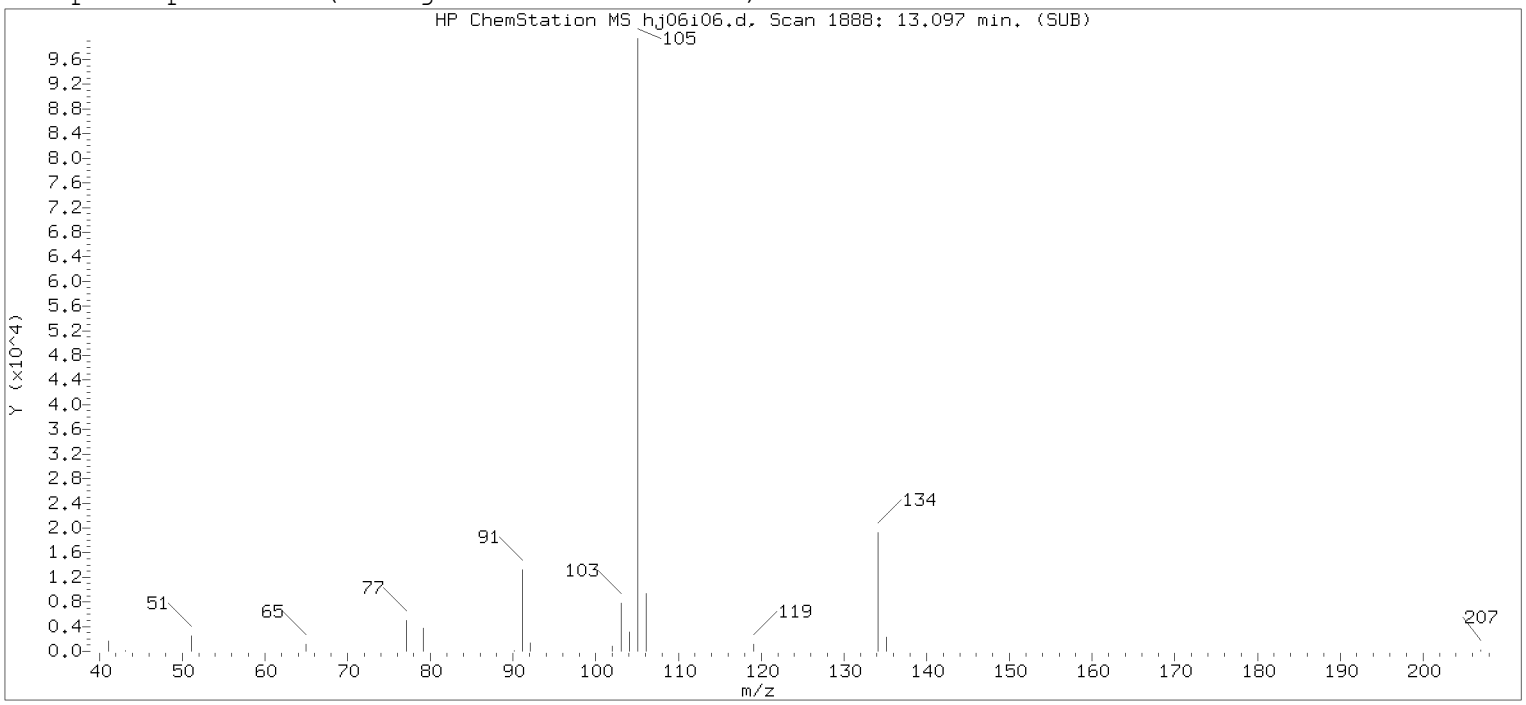
Compound Number : 129
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 137070M
On-Column Amount (ng) : 0.4509
Integration start scan : 1881 Integration stop scan: 1895
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

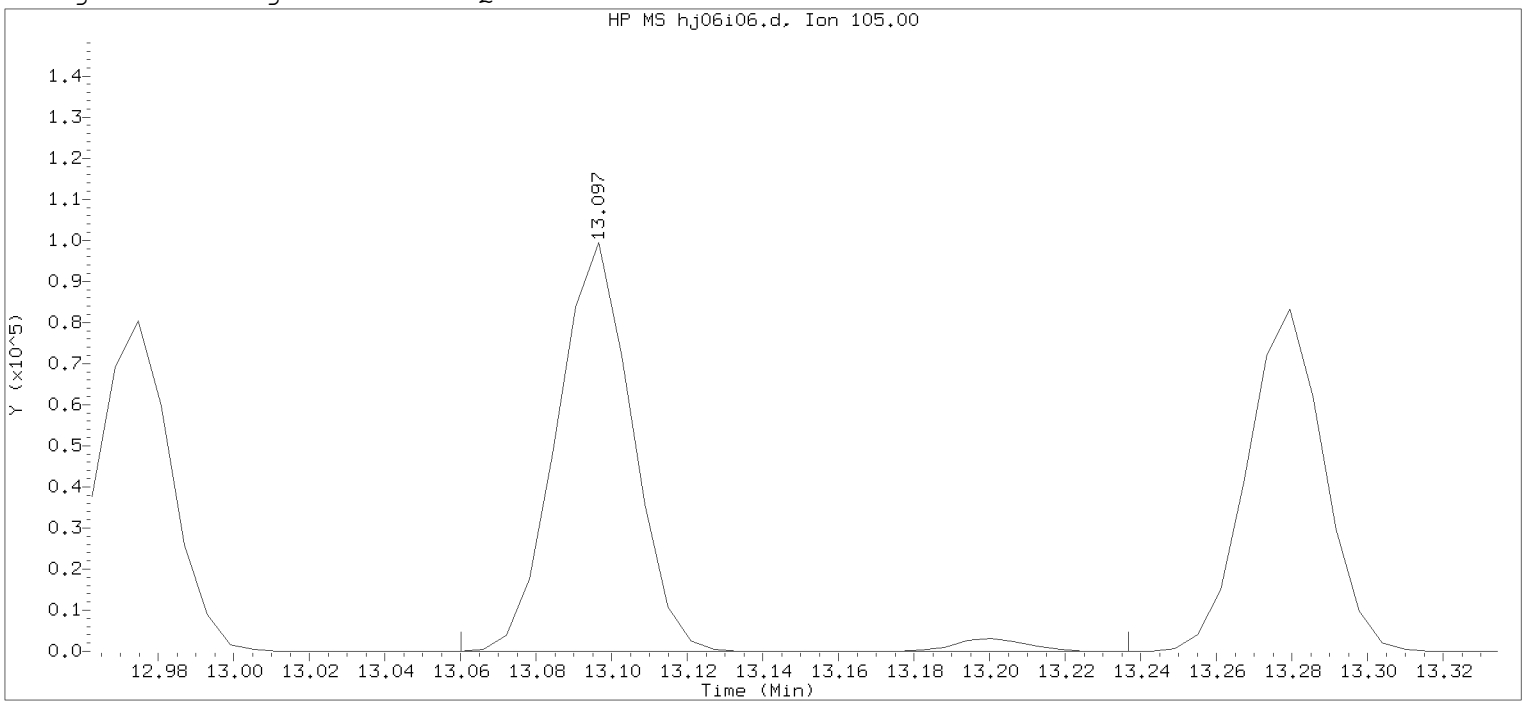
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



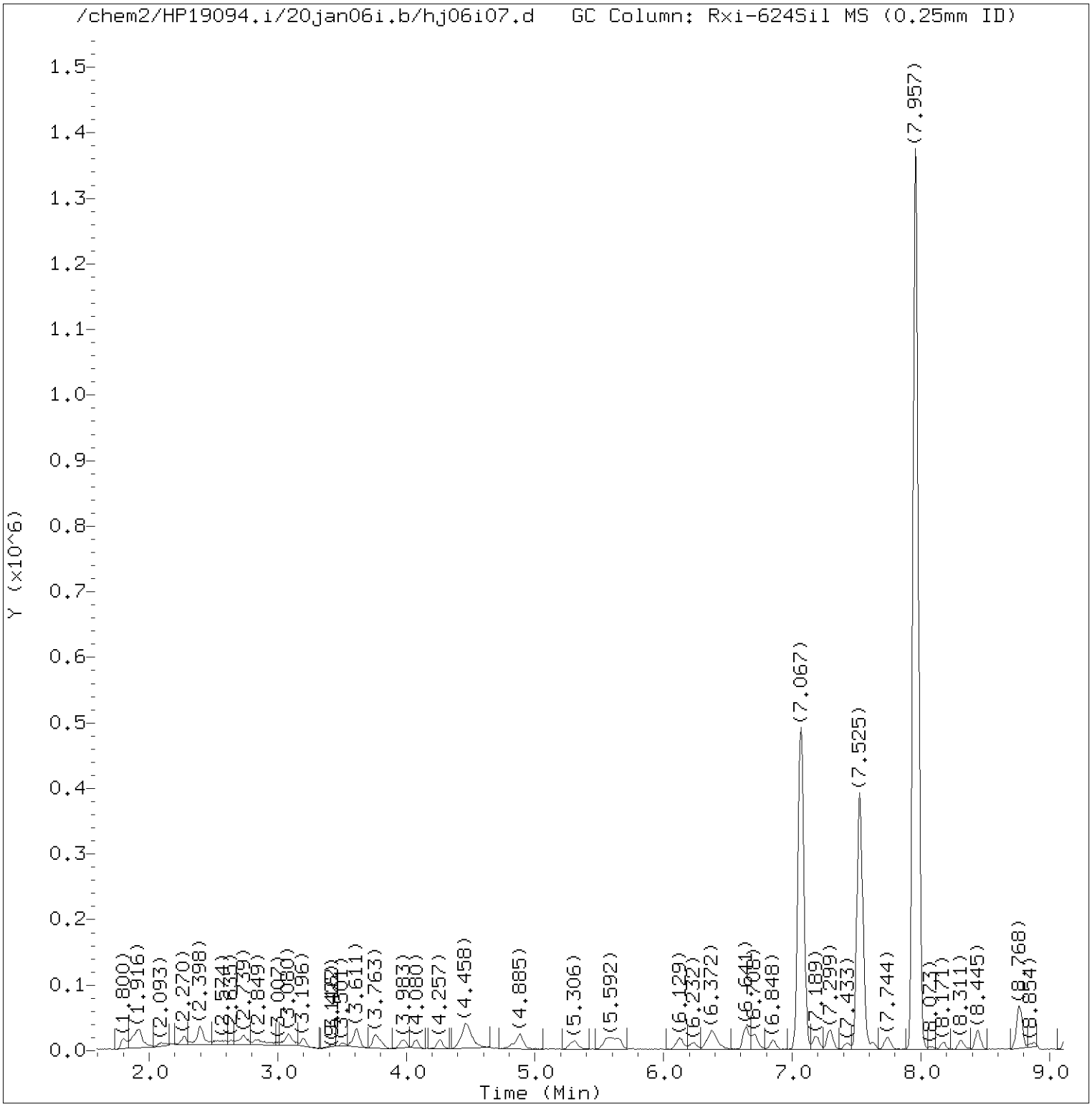
Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 129
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area : 141150
On-column Amount (ng) : 0.4582
Integration start scan : 1881 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.



Total Ion Chromatogram (TIC)

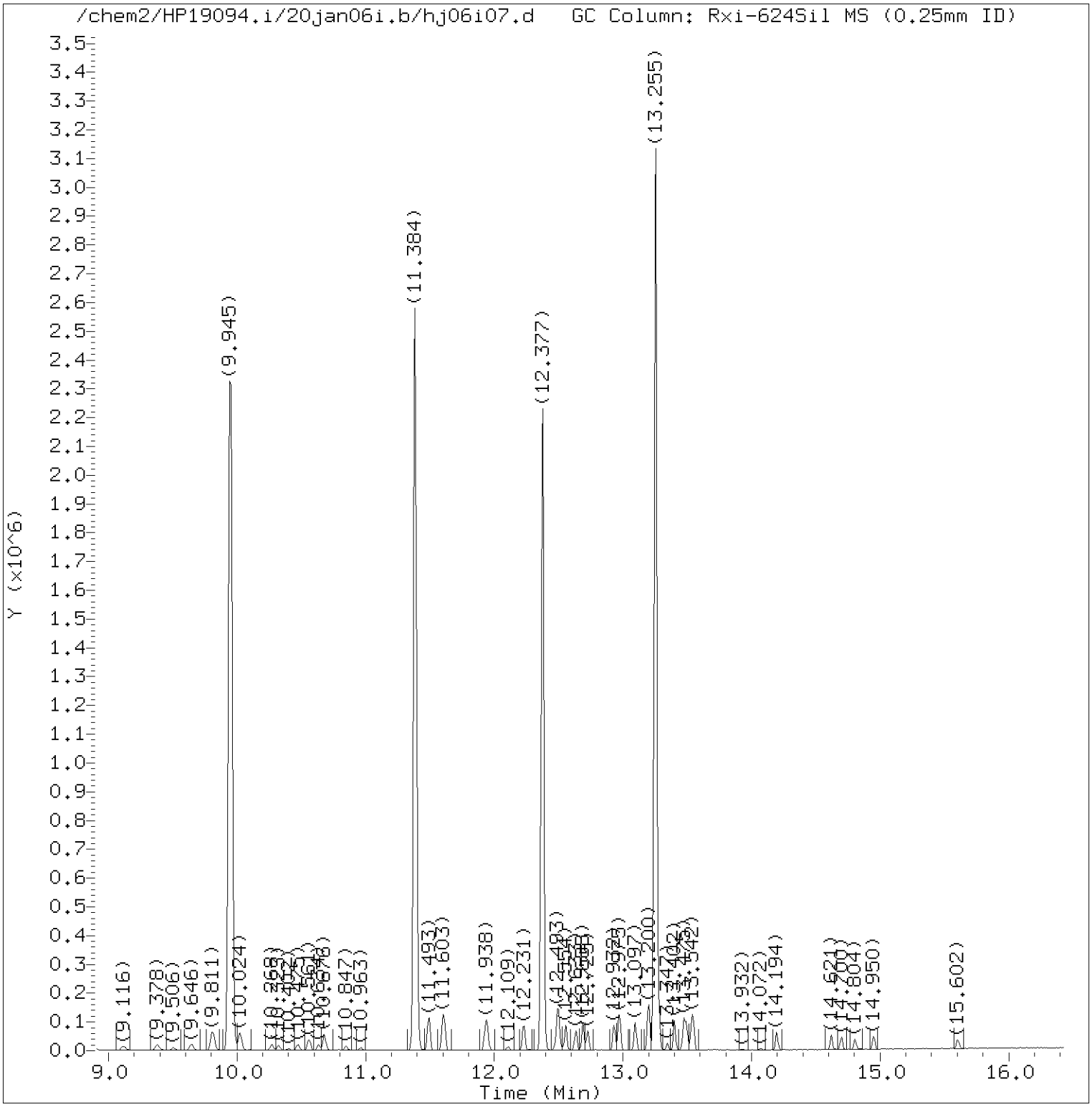
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.081	85	11989	0.165
2) Chloromethane	(2)	2.270	50	14879	0.208
5) Vinyl Chloride	(2)	2.391	62	13112	0.192
6) 1,3-Butadiene	(2)	2.404	39	11243M	0.209
7) Bromomethane	(2)	2.733	94	10156M	0.208
8) Chloroethane	(2)	2.830	64	7859	0.199
9) Dichlorofluoromethane	(2)	3.086	67	20087	0.214
10) Trichlorofluoromethane	(2)	3.147	101	13546	0.174
11) Ethyl ether	(2)	3.422	59	6871	0.200
12) Freon 123a	(2)	3.507	67	12258	0.204
13) Acrolein	(1)	3.611	56	53039	10.168
15) 1,1-Dichloroethene	(2)	3.757	96	9534	0.202
16) Freon 113	(2)	3.775	101	9289	0.188
14) Acetone	(1)	3.806	43	15152M	2.153
17) Methyl Iodide	(2)	3.964	142	18138	0.199
18) Bromoethane	(2)	3.989	108	8482M	0.206
19) Carbon Disulfide	(2)	4.080	76	30690	0.212
22) Methyl Acetate	(1)	4.239	43	5507M	0.310
23) Allyl Chloride	(2)	4.257	41	18327	0.228
24) Methylene Chloride	(2)	4.458	84	10838	0.213
27)*t-Butyl Alcohol-d10	(1)	4.470	65	115841M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	9882M	4.042
30) Acrylonitrile	(1)	4.800	53	8442	0.983
32) trans-1,2-Dichloroethene	(2)	4.879	96	11087	0.213
31) Methyl Tertiary Butyl Ether	(2)	4.885	73	21337	0.197
33) n-Hexane	(2)	5.306	57	14319M	0.195
34) 1,1-Dichloroethane	(2)	5.549	63	19215	0.205
35) di-Isopropyl Ether	(2)	5.586	45	31171	0.202
36) 2-Chloro-1,3-Butadiene	(2)	5.665	53	15984	0.199
41) 1,2-Dichloroethene (Total)	(2)		96	22727	0.415
38) Ethyl t-butyl ether	(2)	6.122	59	29014	0.200
39) 2-Butanone	(1)	6.330	43	23703	2.154
40) cis-1,2-Dichloroethene	(2)	6.372	96	11640	0.202
42) 2,2-Dichloropropane	(2)	6.397	77	16477	0.206
43) Propionitrile	(1)	6.433	54	12117	4.019
46) Methacrylonitrile	(1)	6.635	67	20799	1.929
49) Tetrahydrofuran	(1)	6.702	71	6070	1.996
48) Bromochloromethane	(2)	6.702	128	4931	0.202

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.854	83	18066	0.197
51)$Dibromofluoromethane	(2)	7.067	113	479375	9.963
51)$Dibromofluoromethane	(2)	7.067	111	493409	9.982
52) 1,1,1-Trichloroethane	(2)	7.092	97	17203	0.202
53) Cyclohexane	(2)	7.189	56	18085	0.199
53) Cyclohexane	(2)	7.195	84	14733	0.189
53) Cyclohexane	(2)	7.183	69	5670	0.200
56) 1,1-Dichloropropene	(2)	7.287	75	13774	0.191
55) Carbon Tetrachloride	(2)	7.305	117	14470	0.198
57) Isobutyl Alcohol	(1)	7.433	41	10874	12.830
58)$1,2-Dichloroethane-d4	(2)	7.525	102	91347	9.796
58)$1,2-Dichloroethane-d4	(2)	7.525	65	426576	9.915
58)$1,2-Dichloroethane-d4	(2)	7.525	104	58205	9.855
59) Benzene	(2)	7.555	78	41985	0.199
60) 1,2-Dichloroethane	(2)	7.634	62	11801	0.217
61) t-Amyl methyl ether	(2)	7.744	73	24609	0.194
64)*Fluorobenzene	(2)	7.957	96	1935544	10.000
63) n-Heptane	(2)	7.964	43	16086M	0.209
66) n-Butanol	(1)	8.311	56	13133M	19.248
68) Trichloroethene	(2)	8.445	95	11243	0.204
70) Methylcyclohexane	(2)	8.756	83	17590	0.178
71) 1,2-Dichloropropane	(2)	8.787	63	10438	0.200
72) Methyl Methacrylate	(1)	8.841	69	4212	0.194
73) 1,4-Dioxane	(1)	8.860	88	978M	5.943
74) Dibromomethane	(2)	8.884	93	4691	0.197
75) Bromodichloromethane	(2)	9.116	83	12406	0.192
77) 2-Nitropropane	(1)	9.378	41	14974M	2.102
80) 1-Bromo-2-chloroethane	(2)	9.506	63	9415M	0.192
81) cis-1,3-Dichloropropene	(2)	9.646	75	14299	0.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	54162	1.997
83)$Toluene-d8	(3)	9.945	98	1911418	10.001
83)$Toluene-d8	(3)	9.945	100	1233939	9.983
84) Toluene	(3)	10.024	92	27492	0.205
86) 1,3-Dichloropropene (total)	(3)		75	26879	0.389
85) trans-1,3-Dichloropropene	(3)	10.274	75	12580	0.202
87) Ethyl Methacrylate	(3)	10.323	69	9292	0.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	6901	0.205
90) Tetrachloroethene	(3)	10.561	166	12517	0.205

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.634	76	11599	0.200
92) 2-Hexanone	(1)	10.676	43	36737M	1.982
94) Dibromochloromethane	(3)	10.847	129	8426	0.195
96) 1,2-Dibromoethane	(3)	10.963	107	6178	0.192
97) 1-Chlorohexane	(3)	11.384	91	18428	0.228
98)*Chlorobenzene-d5	(3)	11.384	117	1434543	10.000
99) Chlorobenzene	(3)	11.408	112	29799	0.203
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	10751	0.206
101) Ethylbenzene	(3)	11.493	91	54029	0.205
102) m+p-Xylene	(3)	11.603	106	40506	0.401
106) Xylene (Total)	(3)		106	60180	0.599
105) o-Xylene	(3)	11.932	106	19674	0.198
107) Styrene	(3)	11.944	104	31053	0.193
108) Bromoform	(3)	12.109	173	4686	0.186
109) Isopropylbenzene	(3)	12.231	105	53040	0.197
112)$4-Bromofluorobenzene	(3)	12.377	95	715402	10.118
112)$4-Bromofluorobenzene	(3)	12.377	174	608061	10.050
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	7770	0.191
115) Bromobenzene	(4)	12.493	156	12538	0.204
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	19411M	1.905
117) 1,2,3-Trichloropropane	(4)	12.524	110	2067	0.190
118) n-Propylbenzene	(4)	12.554	91	62293	0.194
120) 2-Chlorotoluene	(4)	12.639	126	12809	0.203
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	44627	0.192
123) 4-Chlorotoluene	(4)	12.725	126	12785	0.203
126) tert-Butylbenzene	(4)	12.932	134	9273M	0.193
127) Pentachloroethane	(4)	12.969	167	8325	0.203
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	47406	0.197
129) sec-Butylbenzene	(4)	13.097	105	56997M	0.189
133) p-Isopropyltoluene	(4)	13.200	119	49995	0.193
132) 1,3-Dichlorobenzene	(4)	13.200	146	24141	0.197
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	777924	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	23977	0.201
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	21146	0.211
137) Benzyl Chloride	(4)	13.347	126	3230	0.189
139) n-Butylbenzene	(4)	13.493	92	24039	0.188
140) 1,2-Dichlorobenzene	(4)	13.530	146	20632	0.191
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	1045	0.180

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

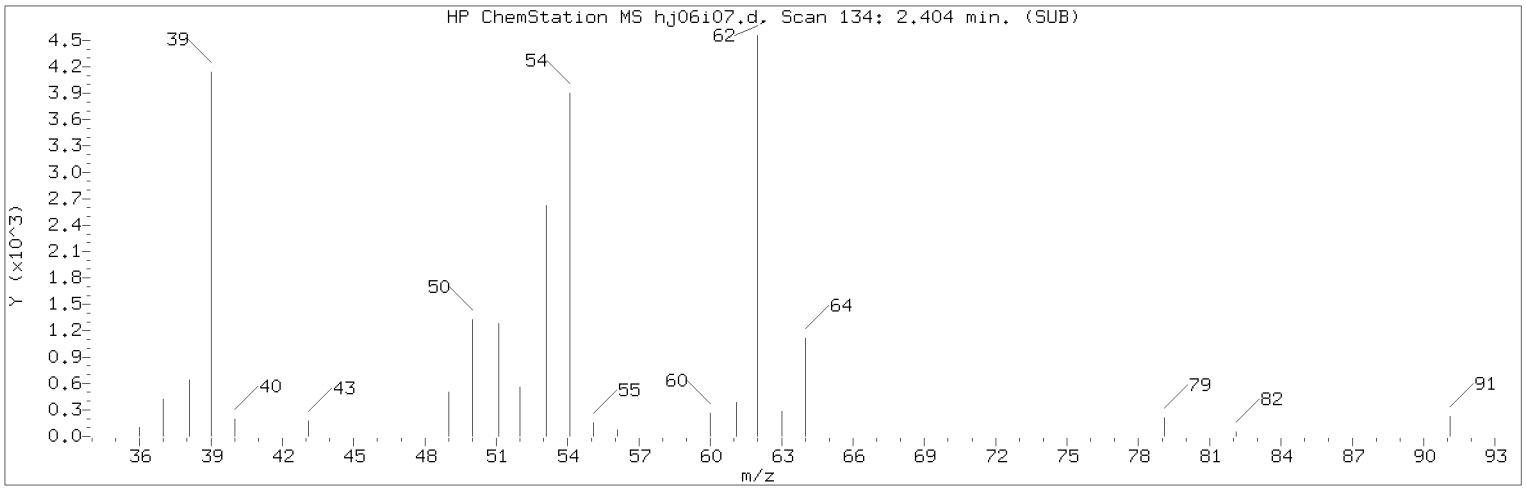
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

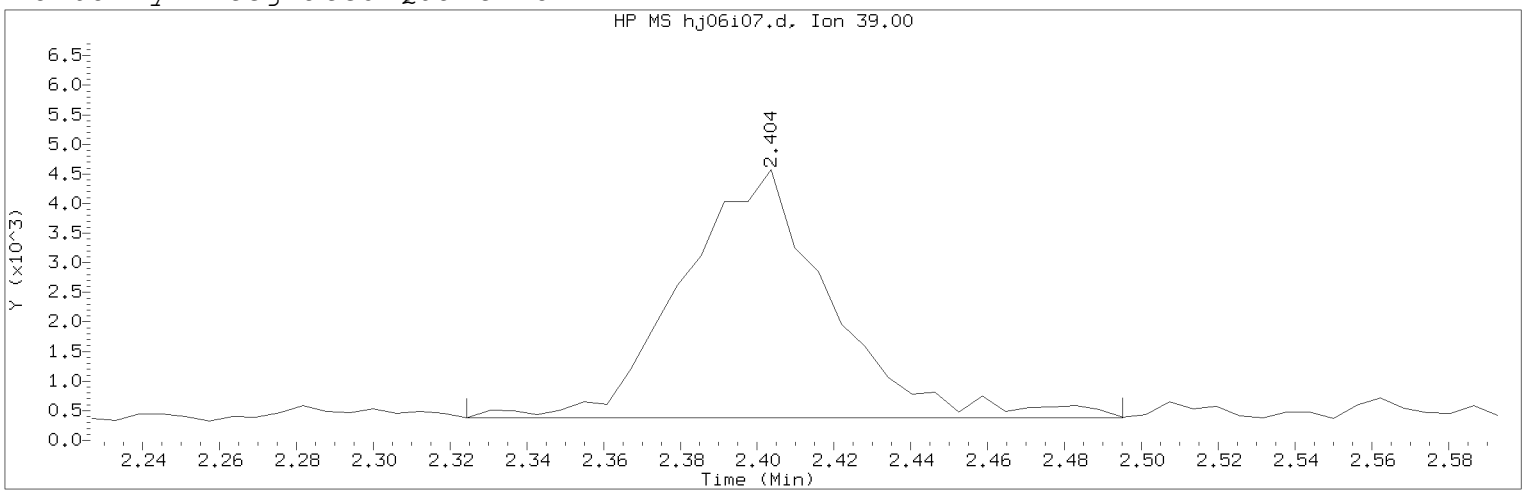
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	17748	0.185
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	15600	0.194
147) Hexachlorobutadiene	(4)	14.700	225	7990	0.191
148) Naphthalene	(4)	14.804	128	26111	0.186
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	12441	0.181

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

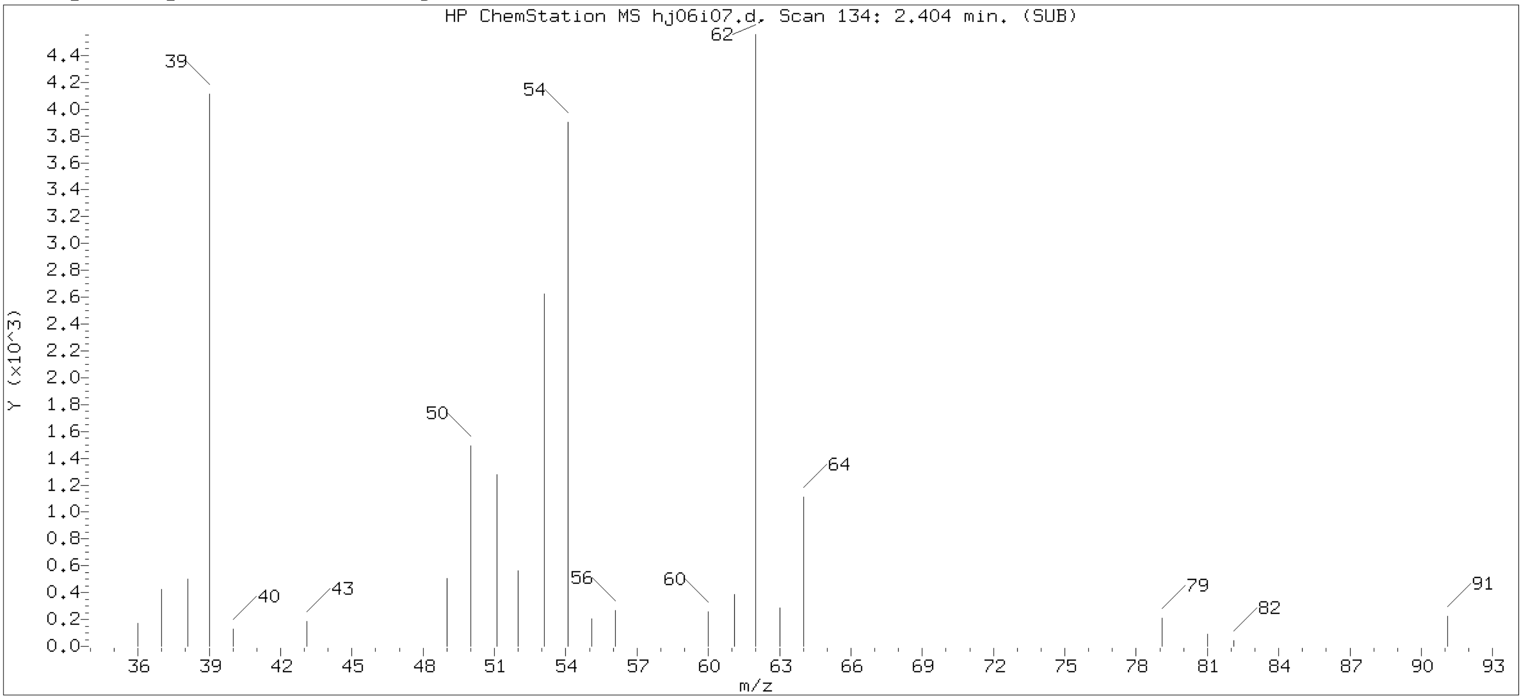
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 11243M
On-Column Amount (ng) : 0.2089
Integration start scan : 120 Integration stop scan: 148
Y at integration start : 379 Y at integration end: 379

Reason for manual integration: improper integration

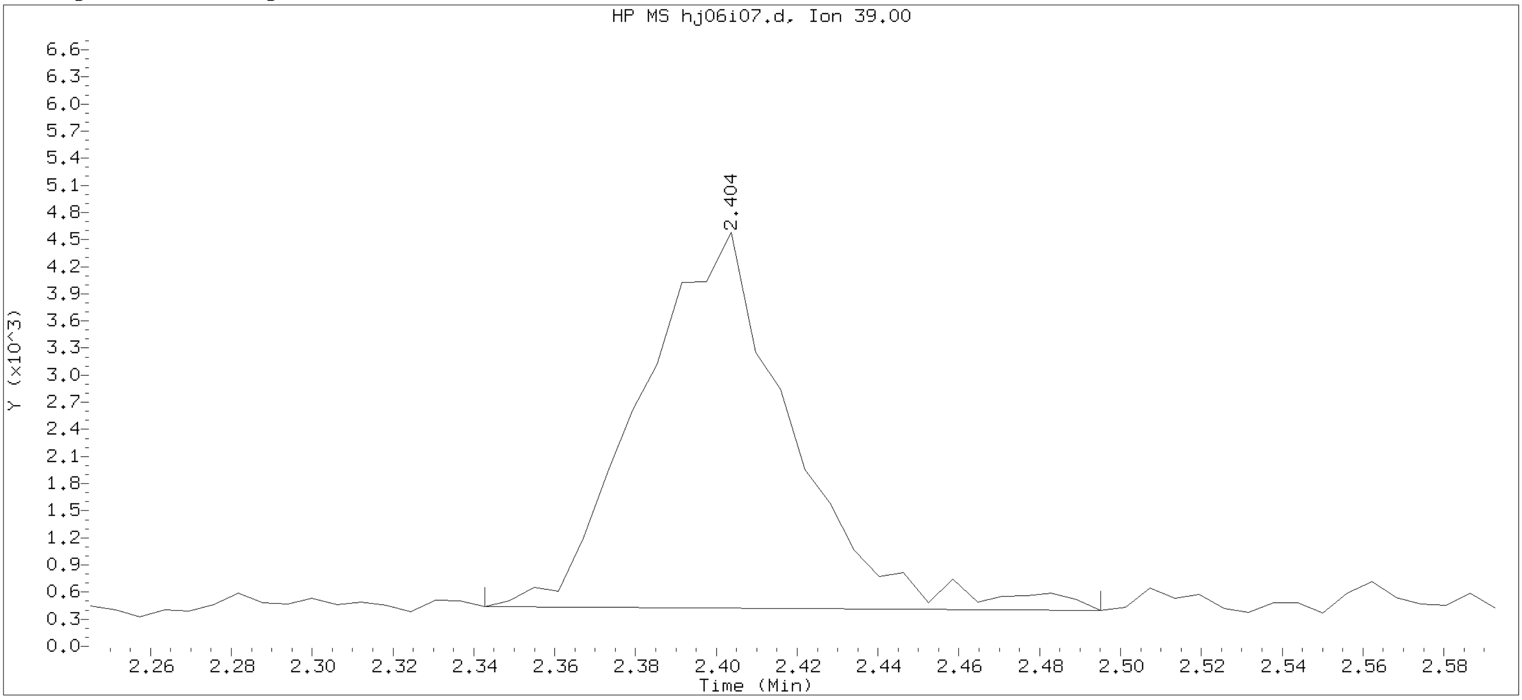
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44   Analyst ID: JKH09052

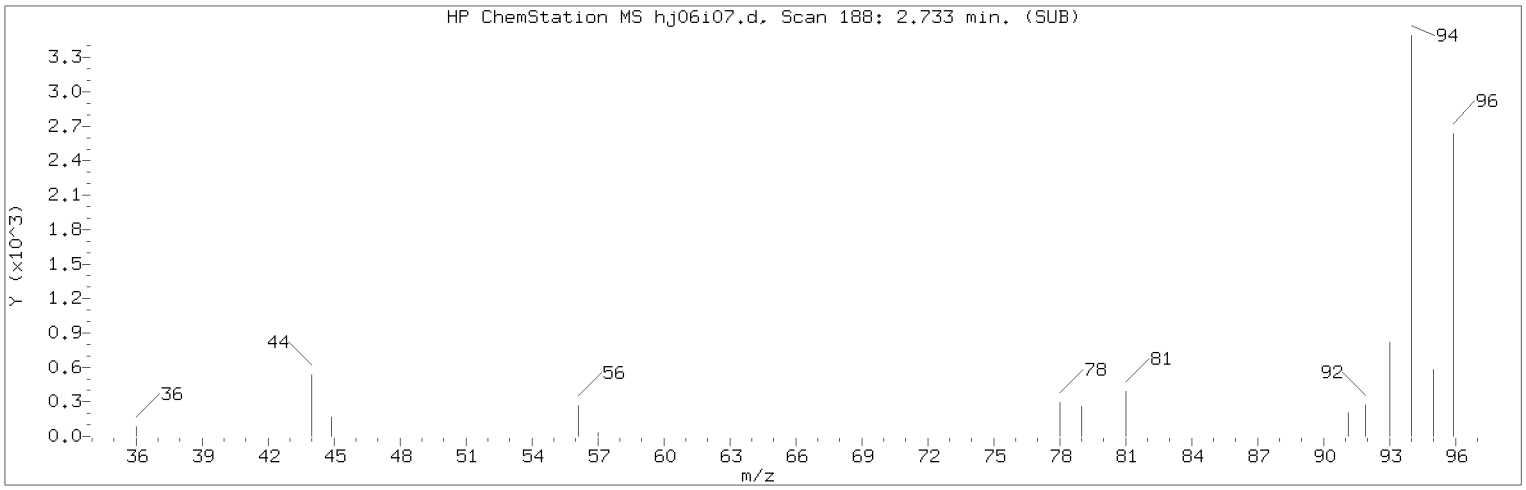
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2   Lab Sample ID: VSTD0.2

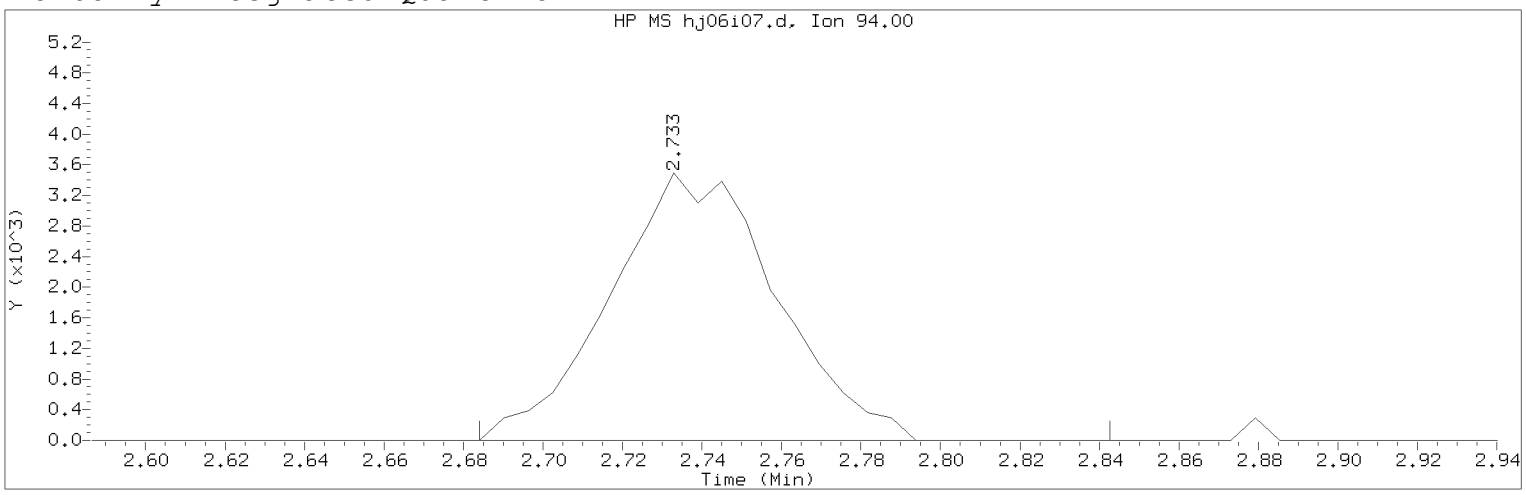
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area : 10798
On-column Amount (ng) : 0.2037
Integration start scan : 123   Integration stop scan: 148
Y at integration start : 438   Y at integration end: 394

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02304

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

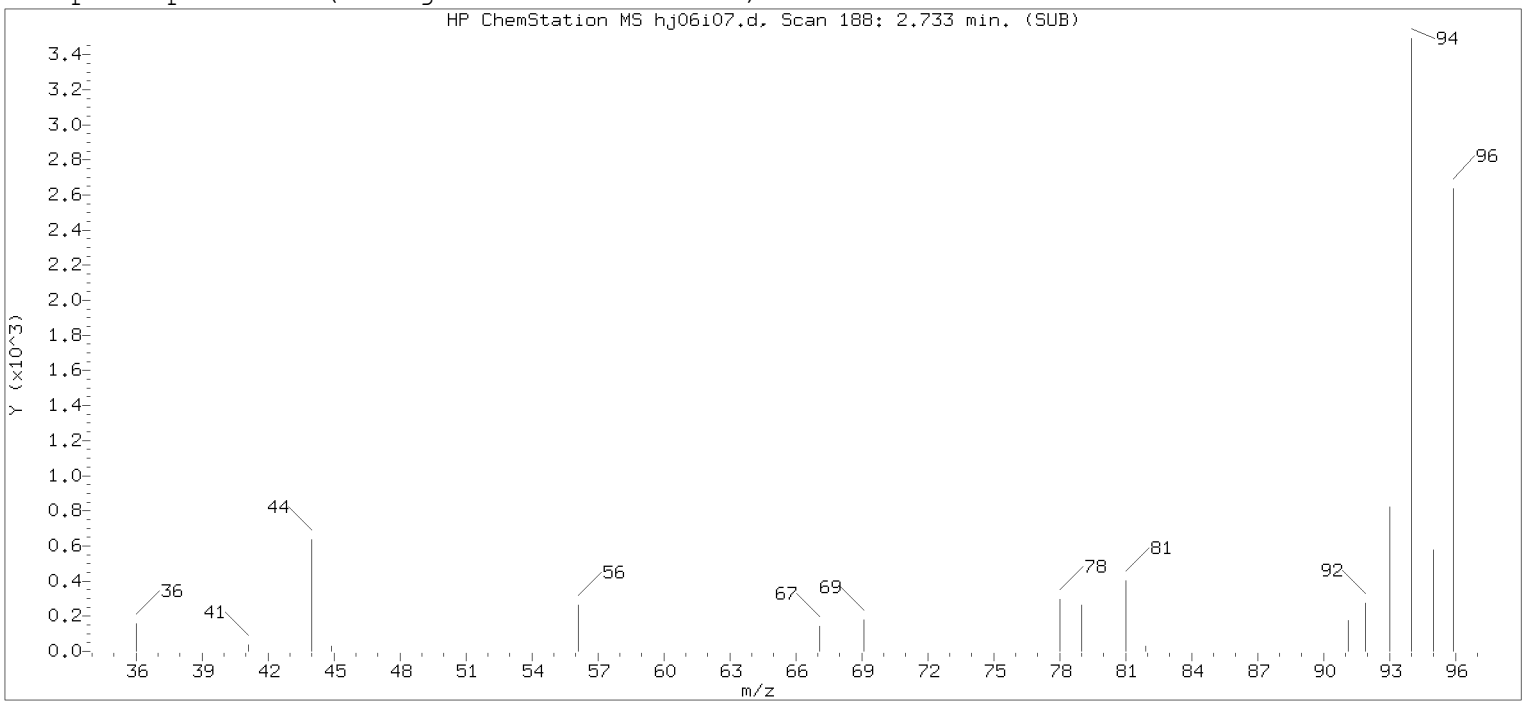
Compound Number : 7
Compound Name : Bromomethane
Scan Number : 188
Retention Time (minutes): 2.733
Quant Ion : 94.00
Area (flag) : 10156M
On-Column Amount (ng) : 0.2081
Integration start scan : 179 Integration stop scan: 205
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

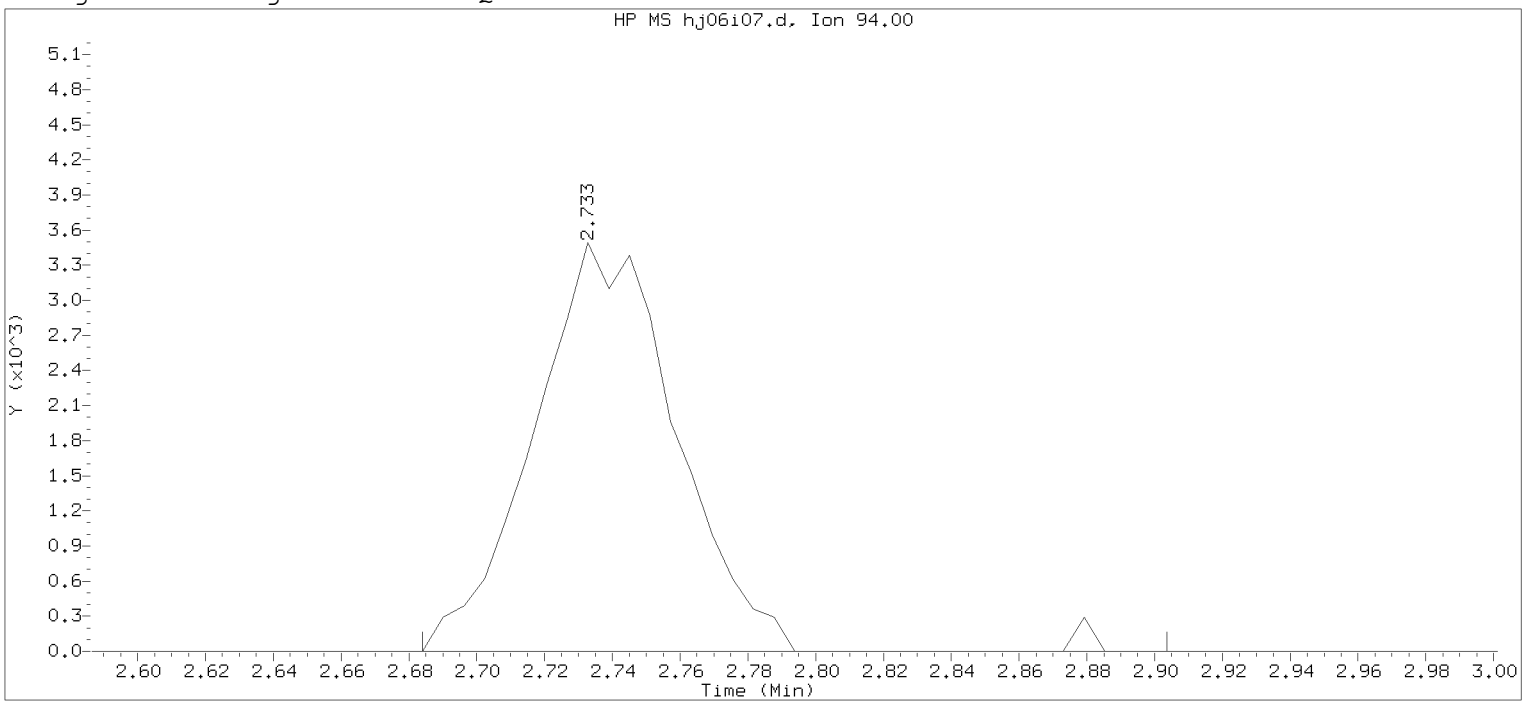
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

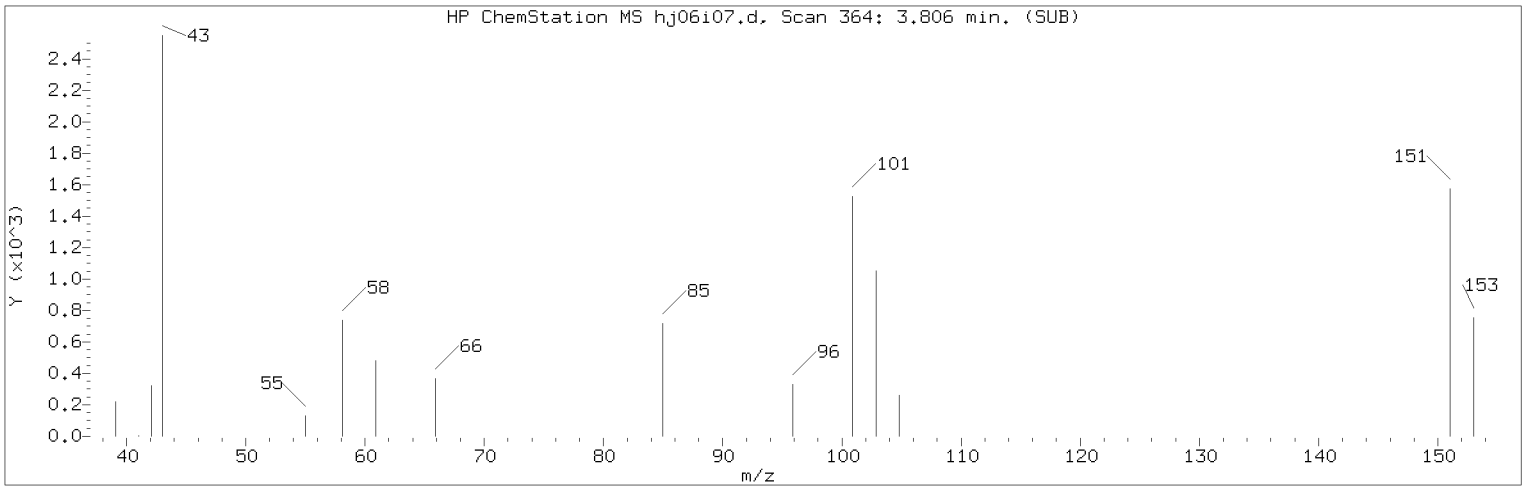
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

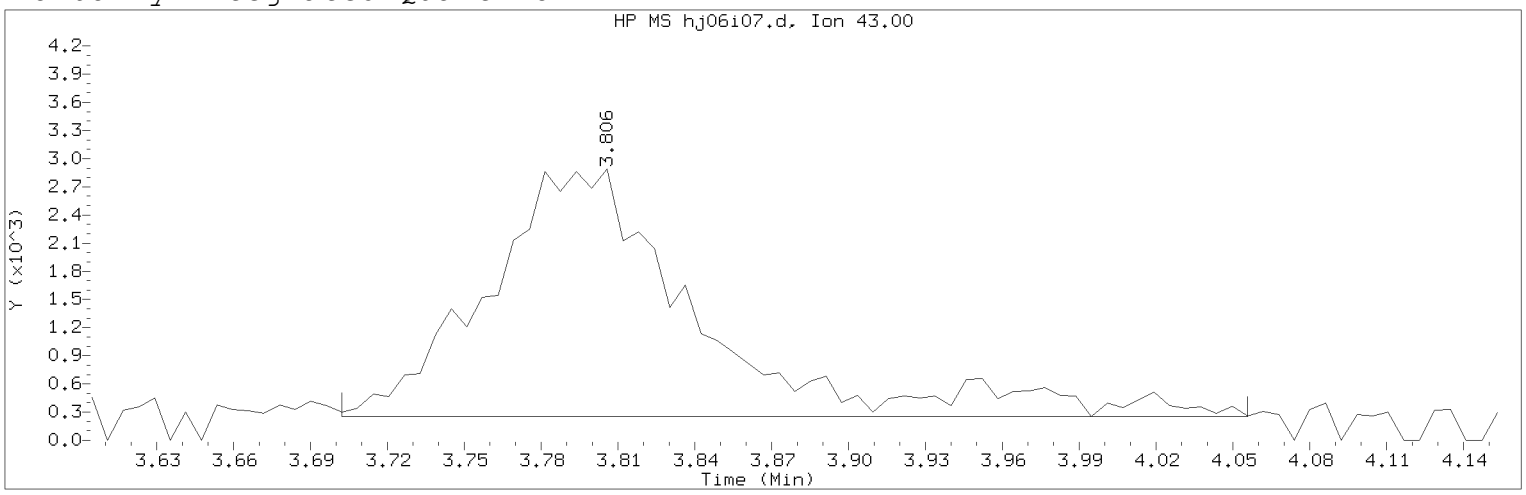
Compound Number : 7
Compound Name : Bromomethane
Scan Number : 188
Retention Time (minutes): 2.733
Quant Ion : 94.00
Area : 10263
On-column Amount (ng) : 0.2100
Integration start scan : 179 Integration stop scan: 215
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: SJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

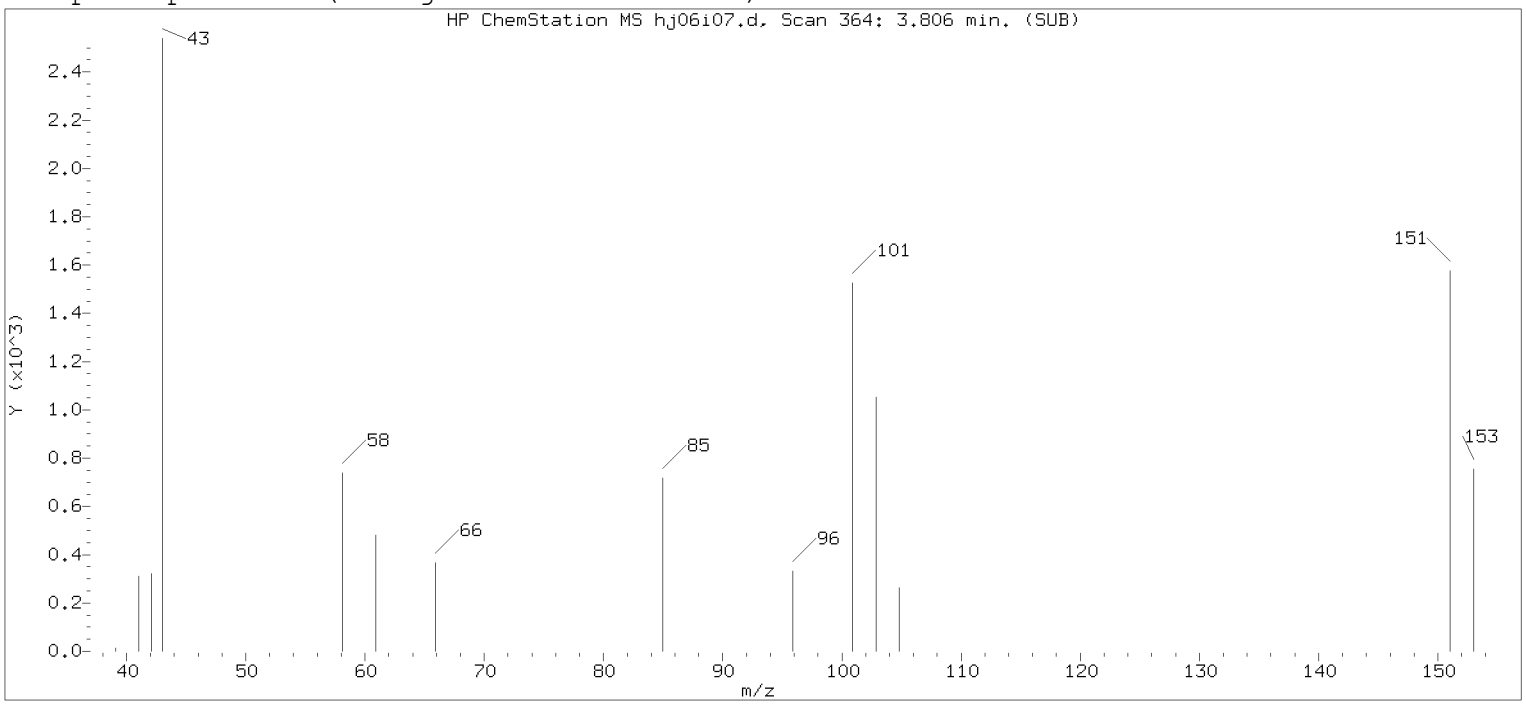
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 15152M
On-Column Amount (ng) : 2.1527
Integration start scan : 346 Integration stop scan: 404
Y at integration start : 254 Y at integration end: 254

Reason for manual integration: improper integration

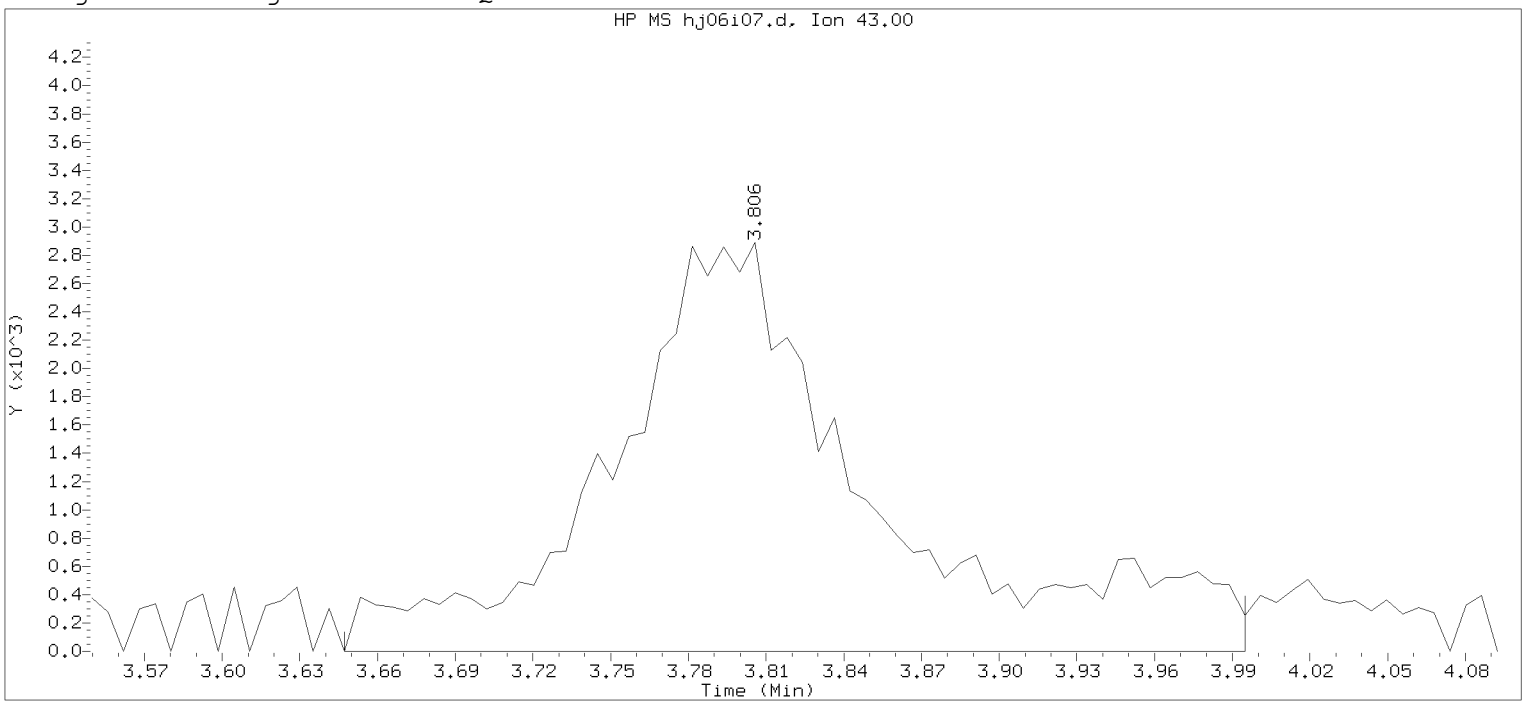
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

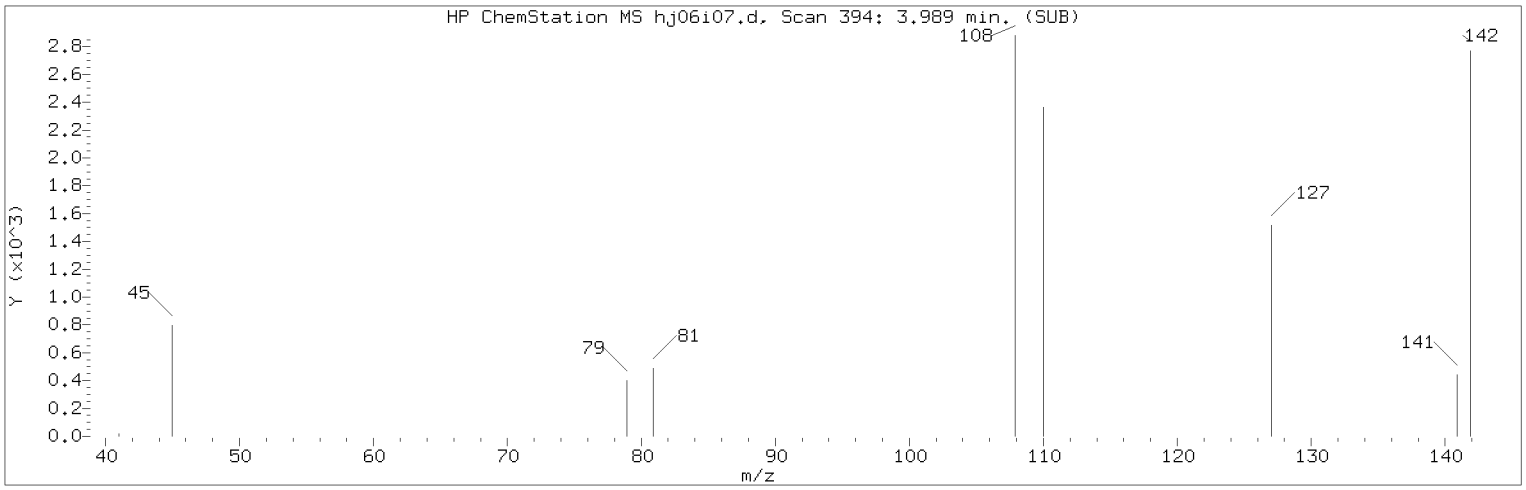
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

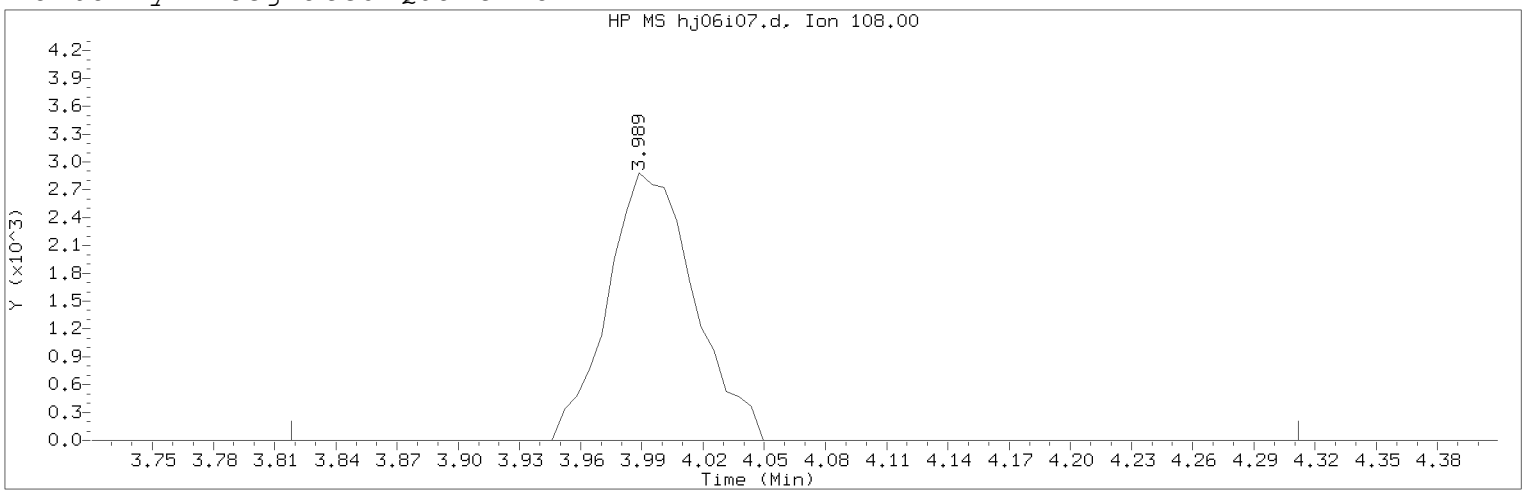
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 364		
Retention Time (minutes)	: 3.806		
Quant Ion	: 43.00		
Area	: 20270		
On-column Amount (ng)	: 2.8983		
Integration start scan	: 337	Integration stop scan:	394
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

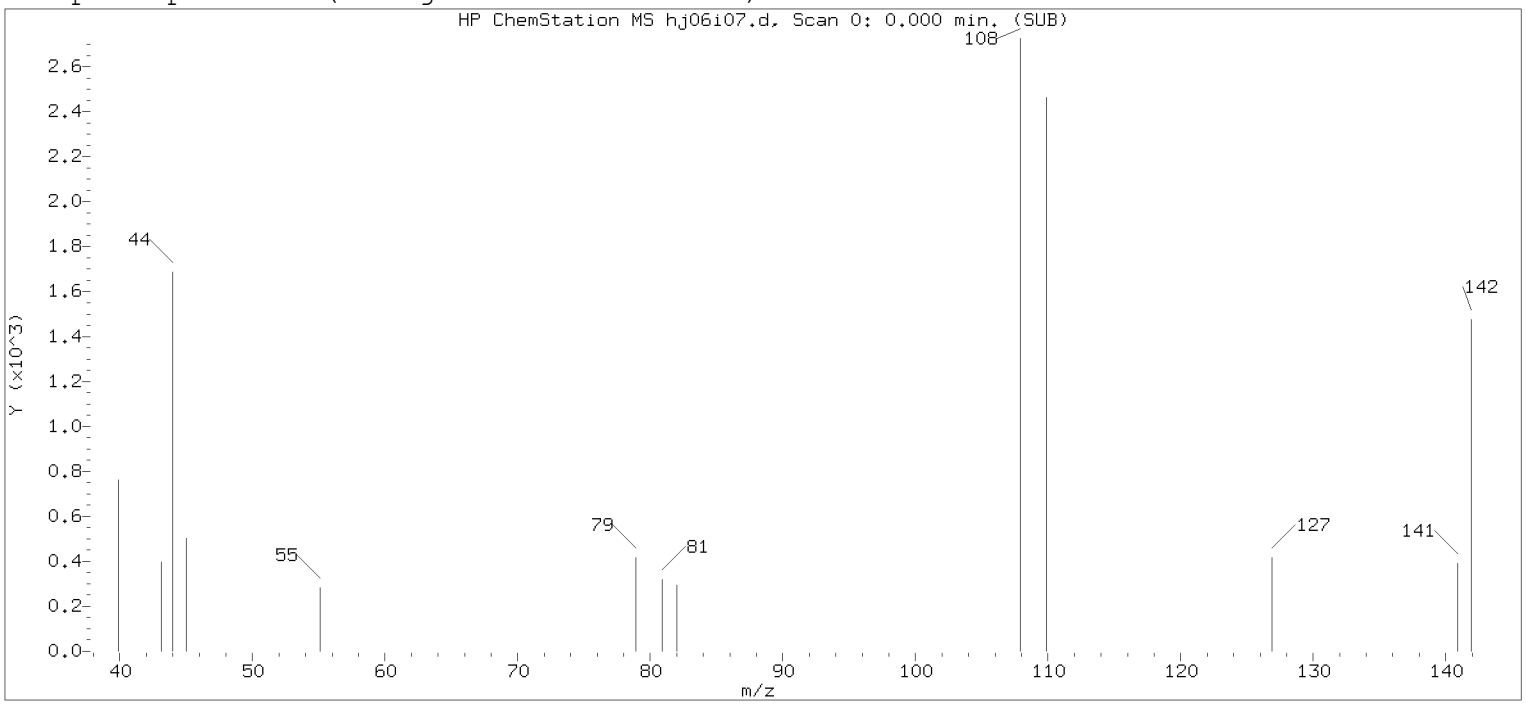
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 108.00
Area (flag) : 8482M
On-Column Amount (ng) : 0.2056
Integration start scan : 365 Integration stop scan: 446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

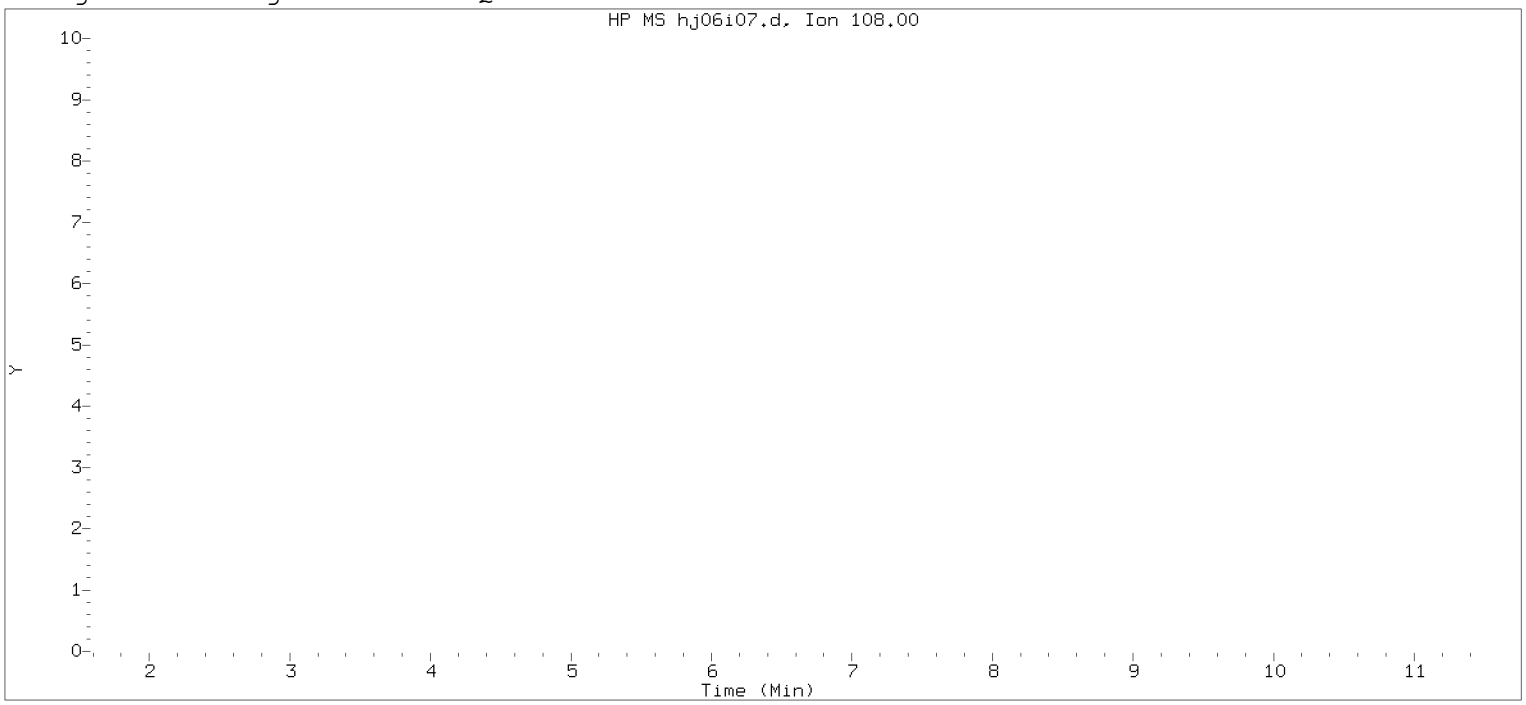
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

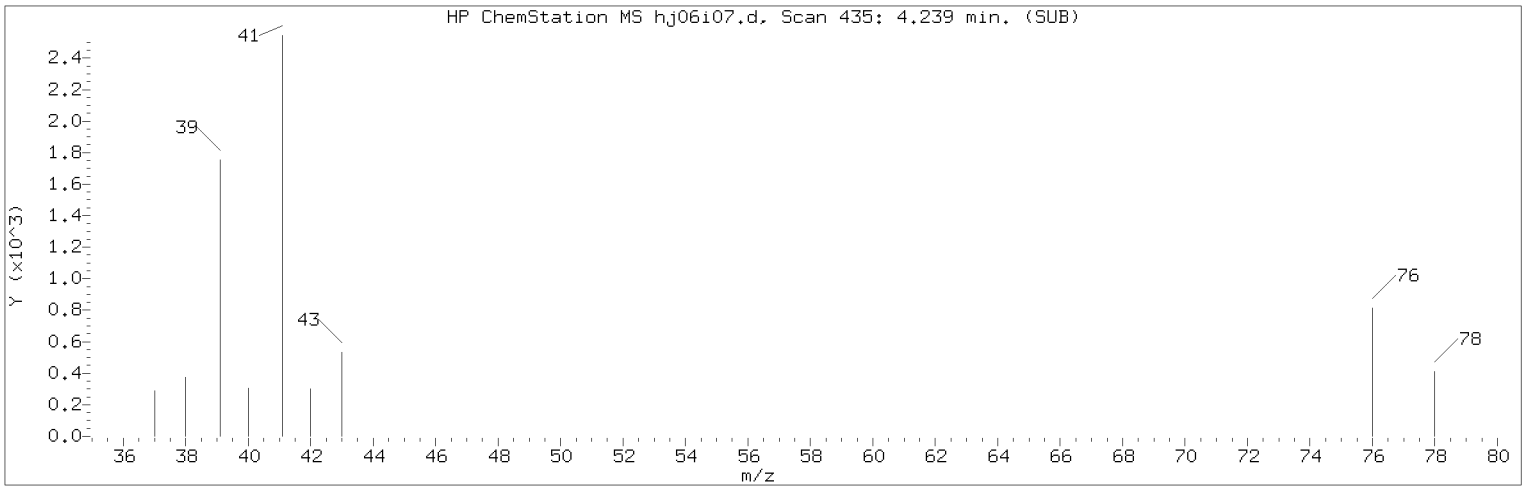
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

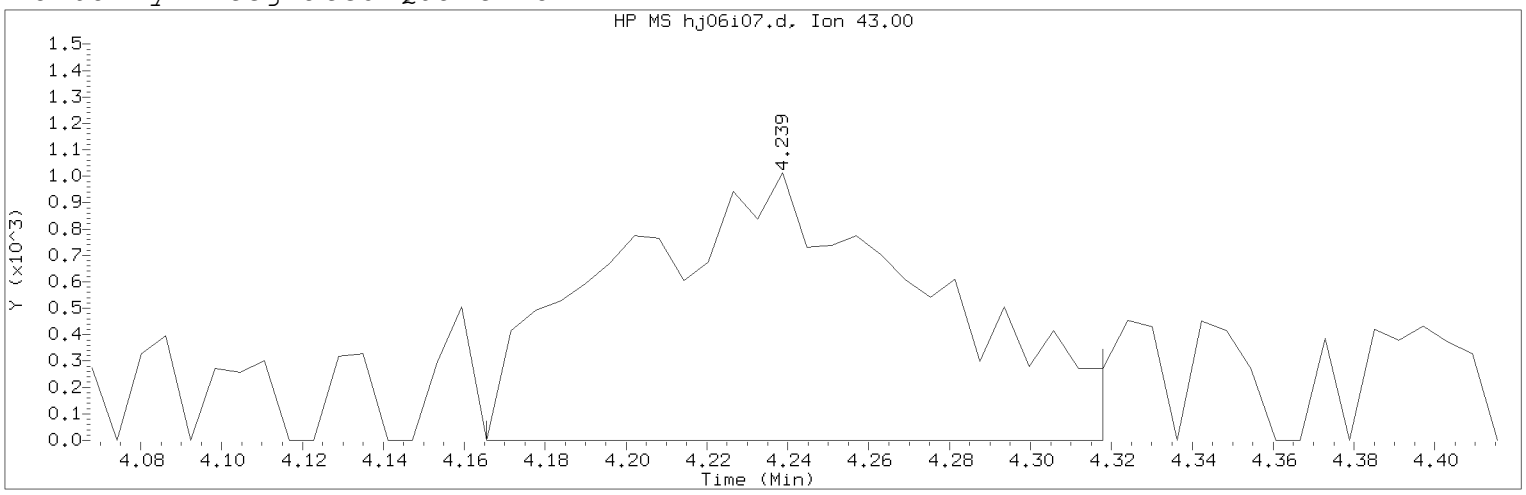
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

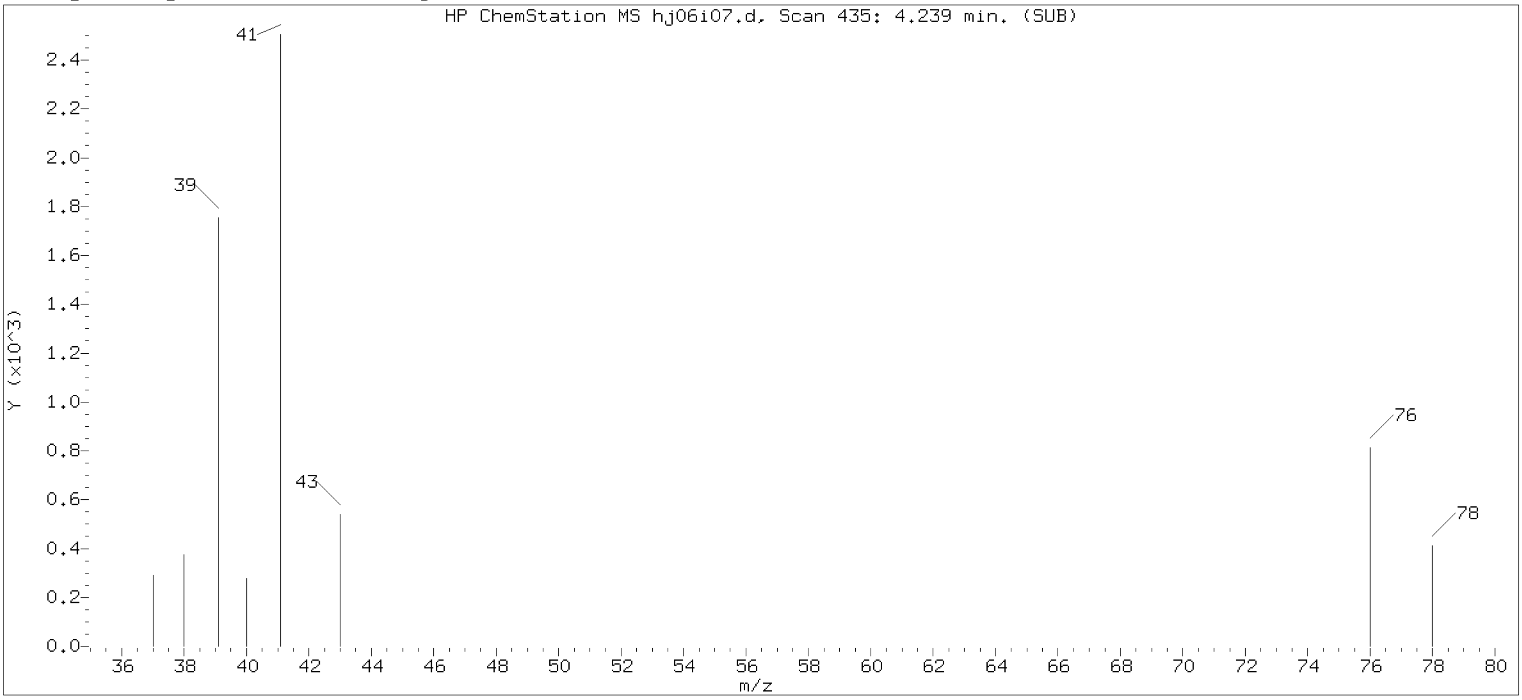
Compound Number : 22
Compound Name : Methyl Acetate
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 43.00
Area (flag) : 5507M
On-Column Amount (ng) : 0.3100
Integration start scan : 422 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

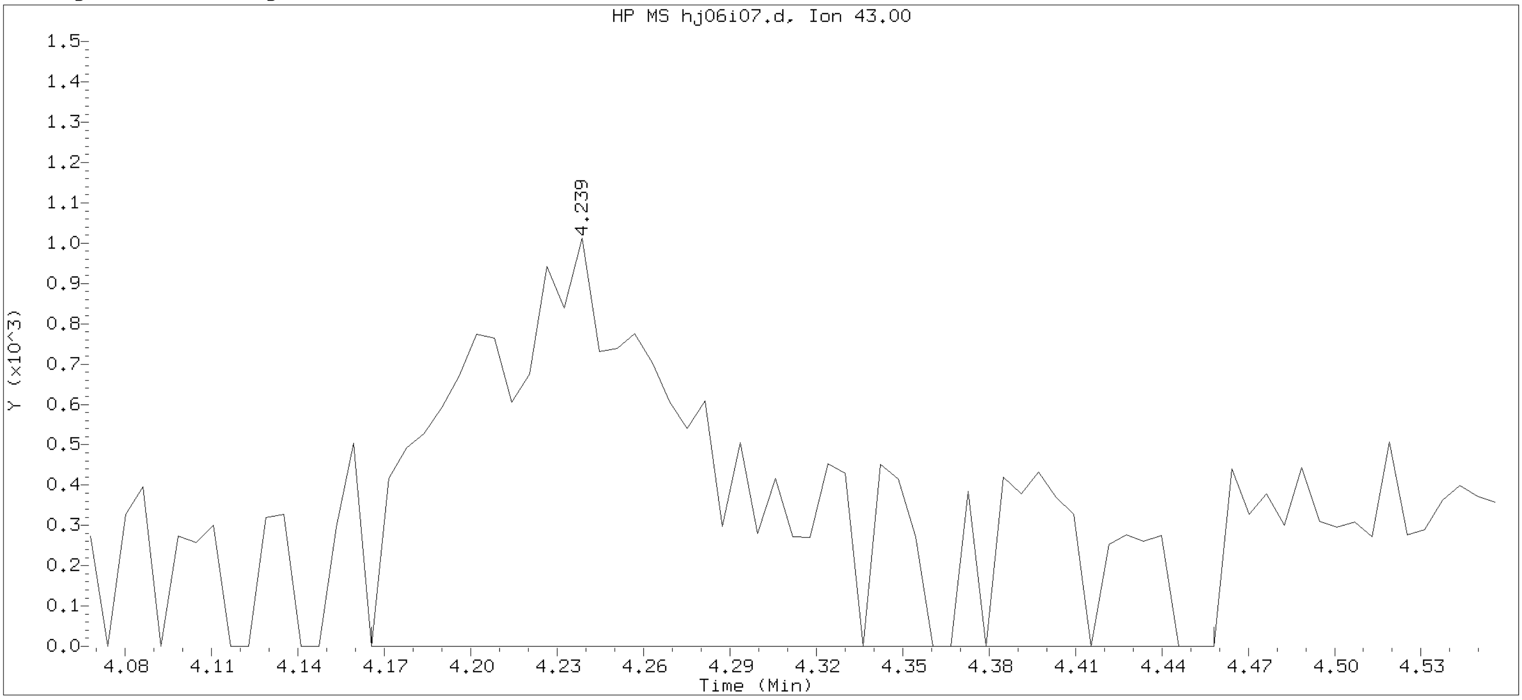
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44   Analyst ID: JKH09052

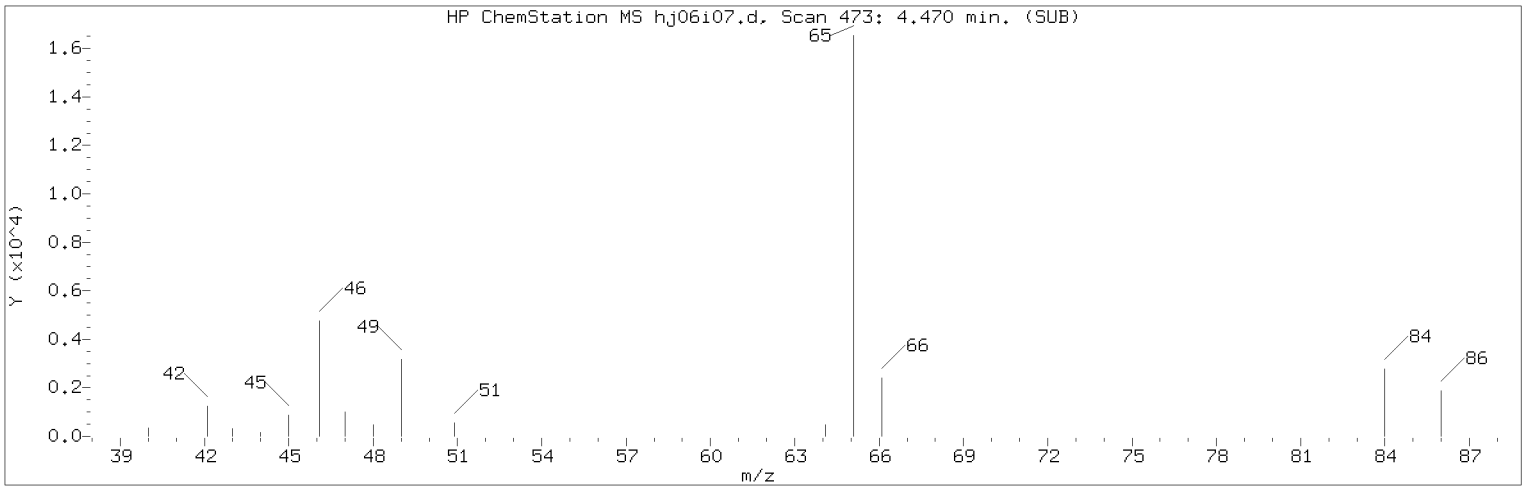
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2   Lab Sample ID: VSTD0.2

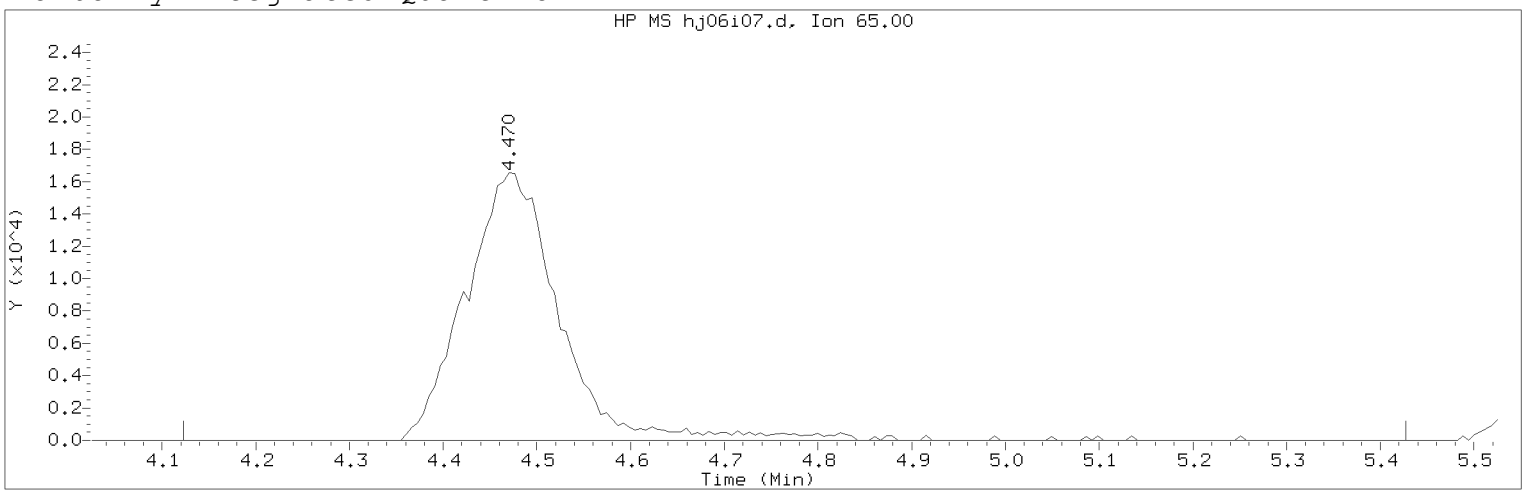
Compound Number : 22
Compound Name : Methyl Acetate
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 43.00
Area : 7482
On-column Amount (ng) : 0.3525
Integration start scan : 422   Integration stop scan: 470
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02302

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

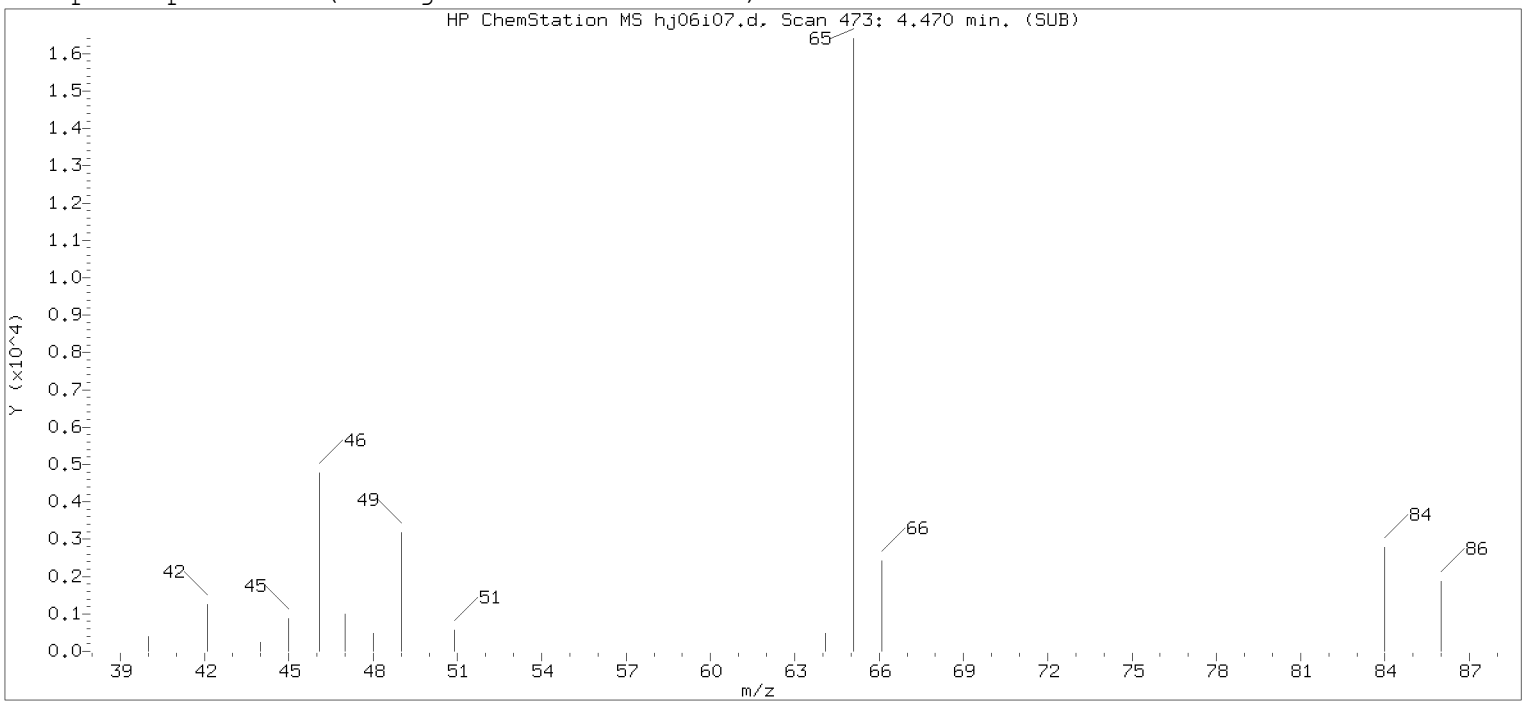
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 115841M
On-Column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 629
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

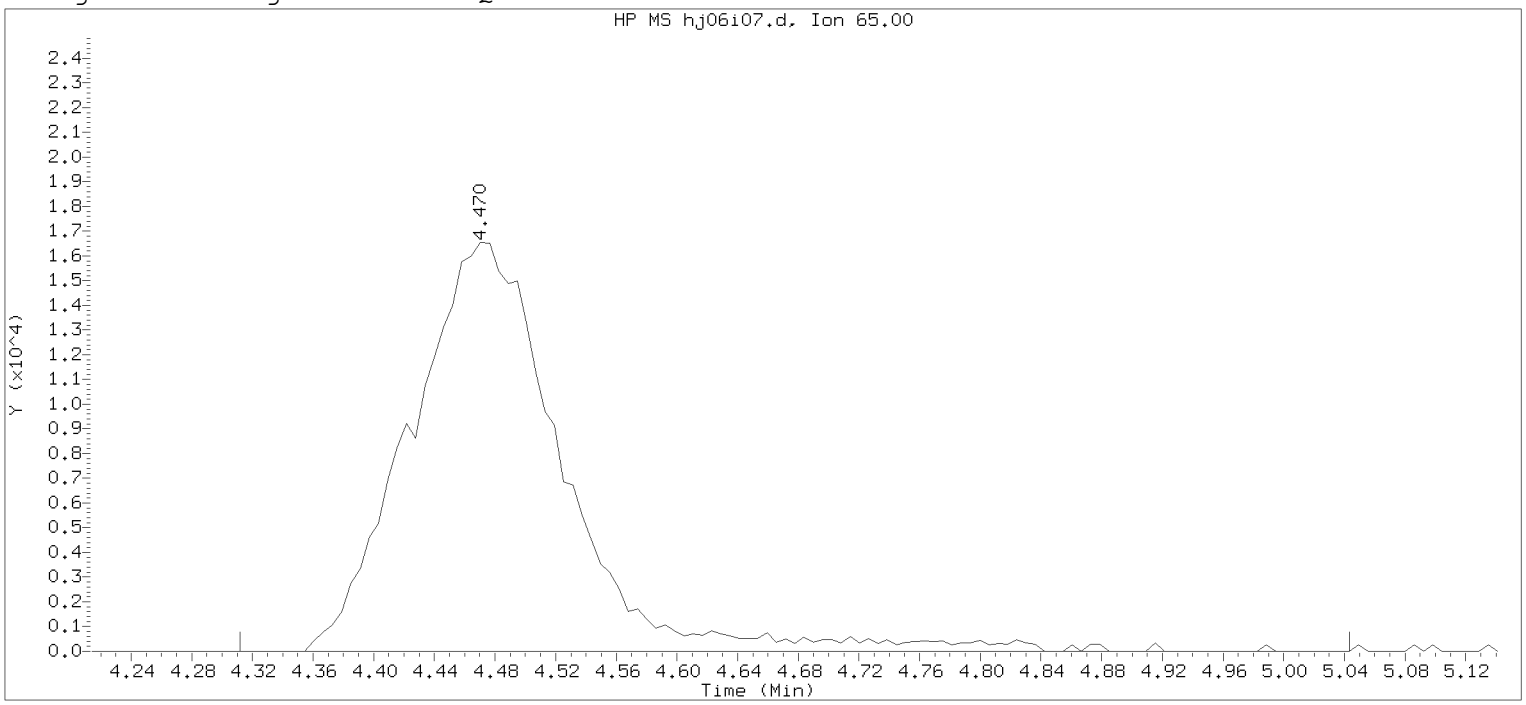
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

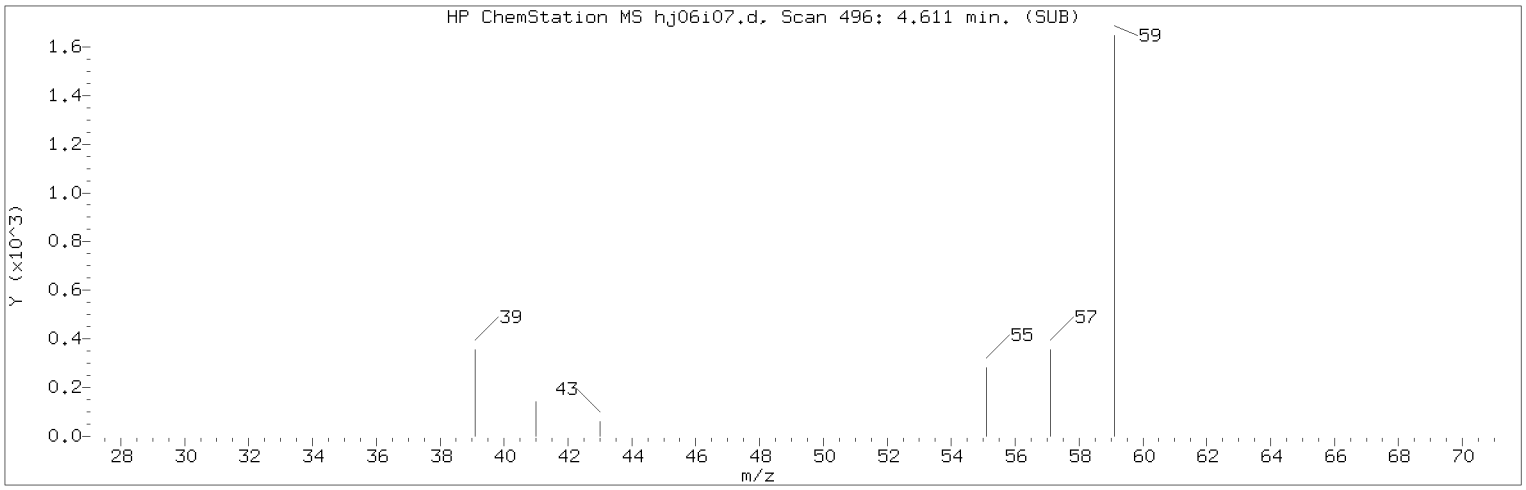
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

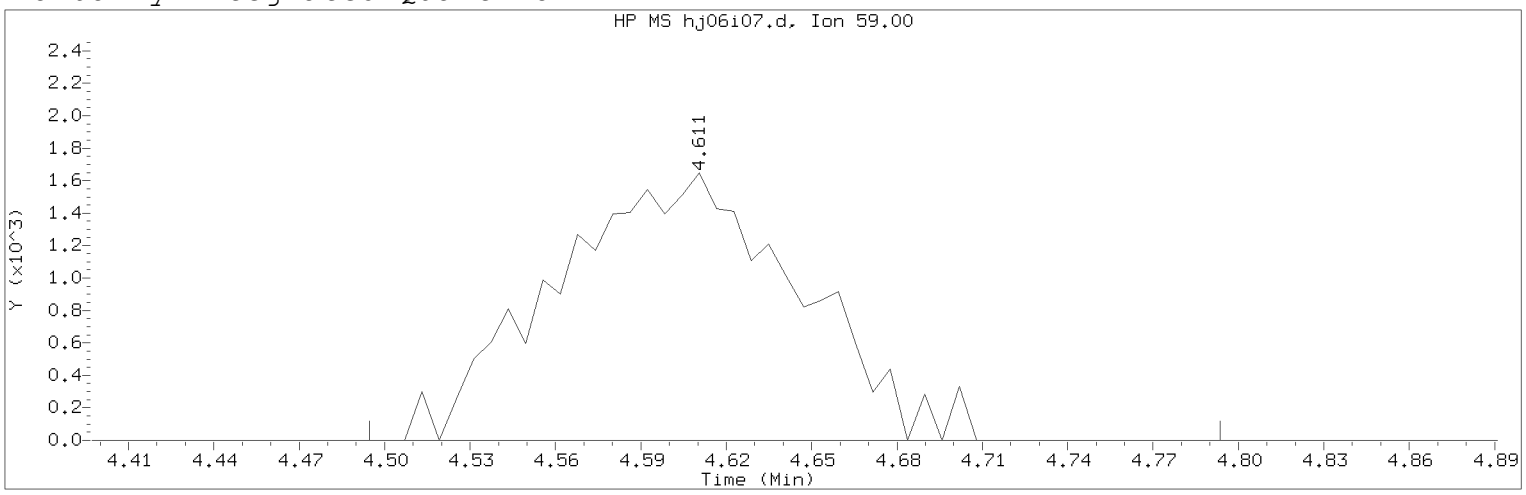
Compound Number	: 27		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 473		
Retention Time (minutes)	: 4.470		
Quant Ion	: 65.00		
Area	: 115359		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 446	Integration stop scan:	566
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: SEJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

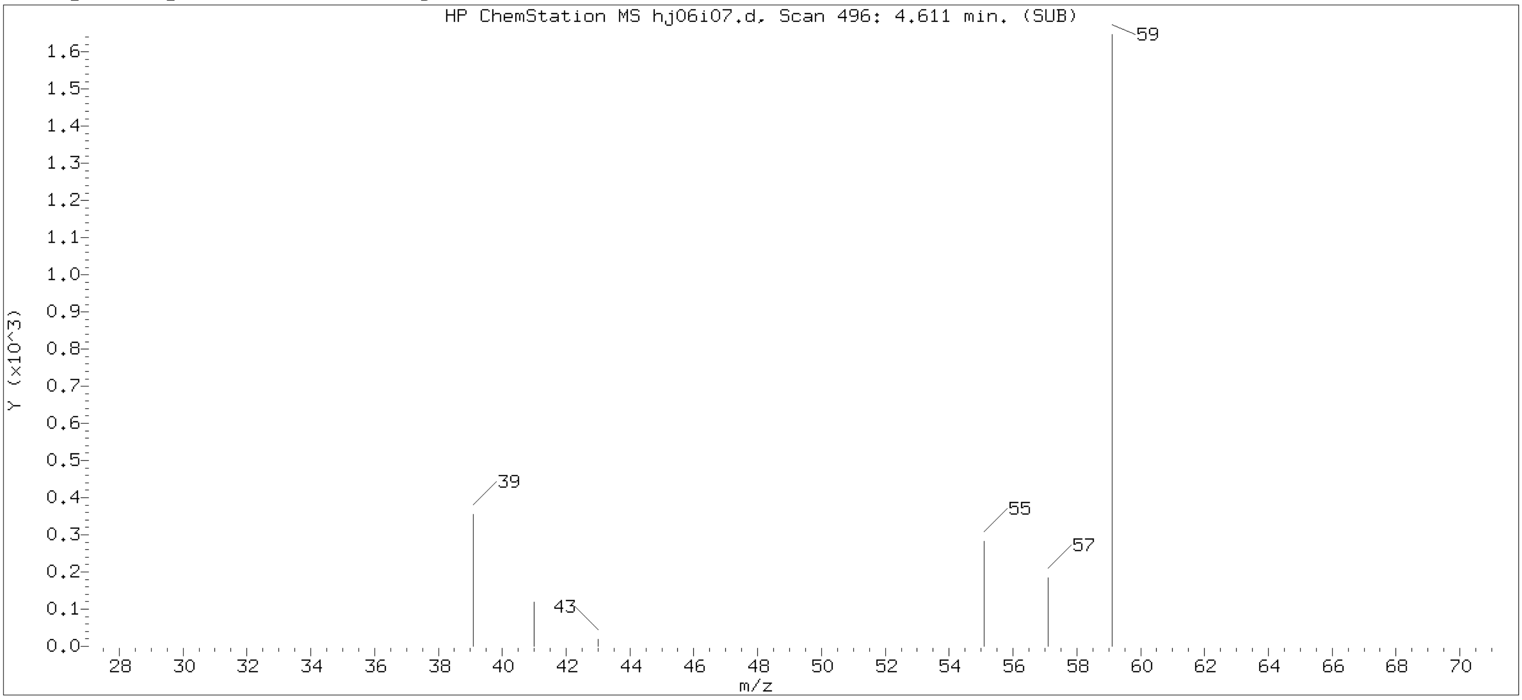
Compound Number : 29
Compound Name : t-Butyl Alcohol
Scan Number : 496
Retention Time (minutes): 4.611
Quant Ion : 59.00
Area (flag) : 9882M
On-Column Amount (ng) : 4.0416
Integration start scan : 476 Integration stop scan: 525
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

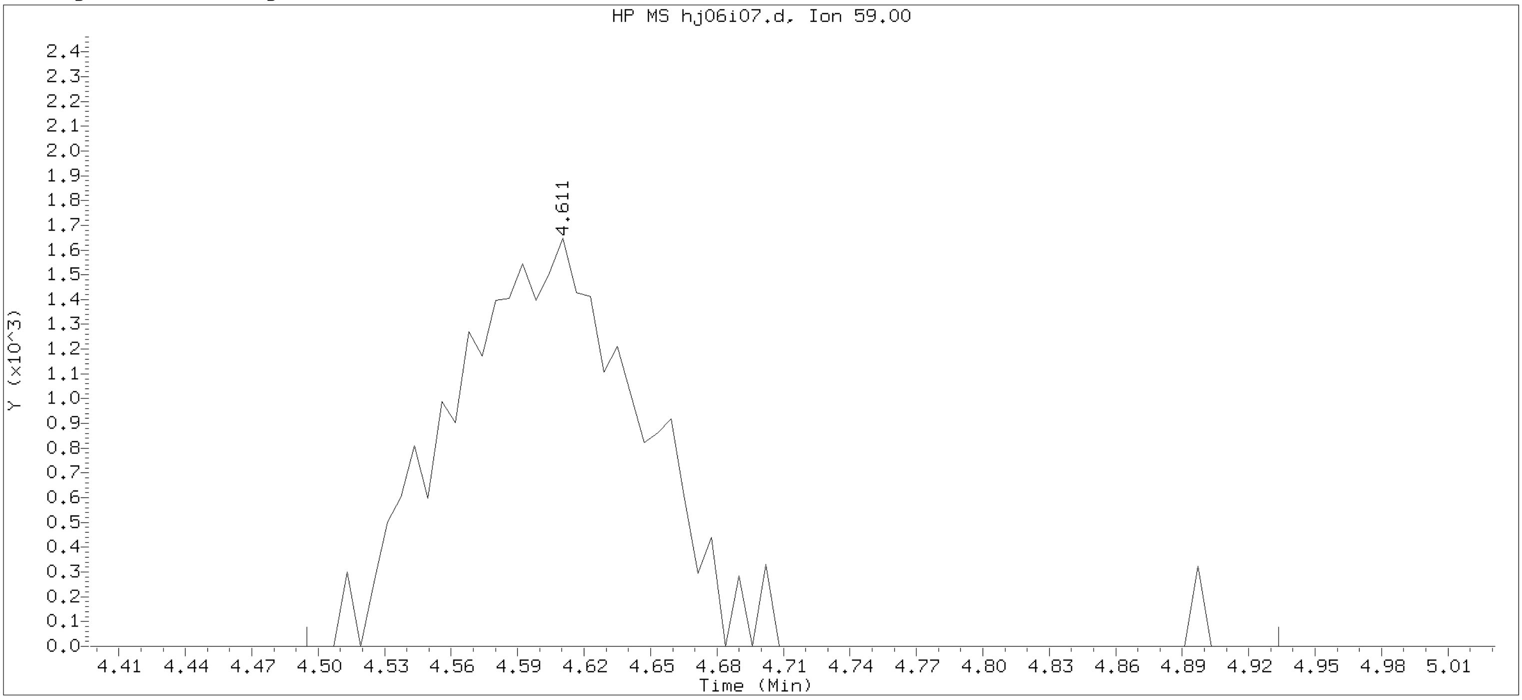
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion

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Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d      Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44            Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2                        Lab Sample ID: VSTD0.2

Compound Number            : 29
Compound Name              : t-Butyl Alcohol
Scan Number                : 496
Retention Time (minutes)   : 4.611
Quant Ion                  : 59.00
Area                       : 10000
On-column Amount (ng)      : 4.1260
Integration start scan     :  476     Integration stop scan:  548
Y at integration start     :    0     Y at integration end:     0
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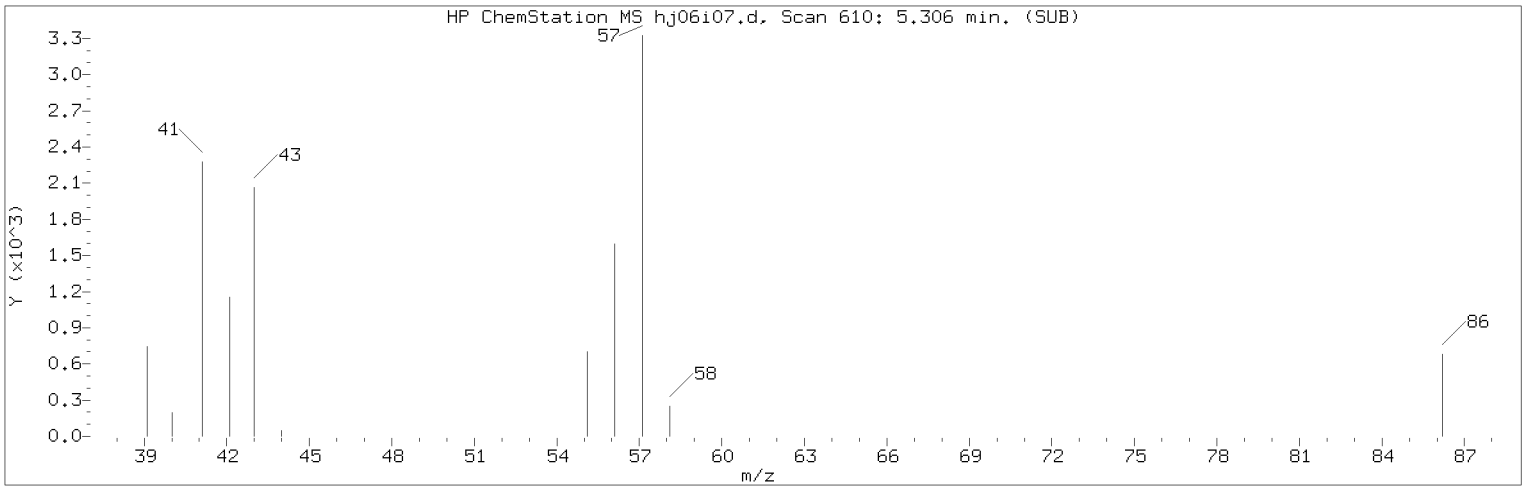
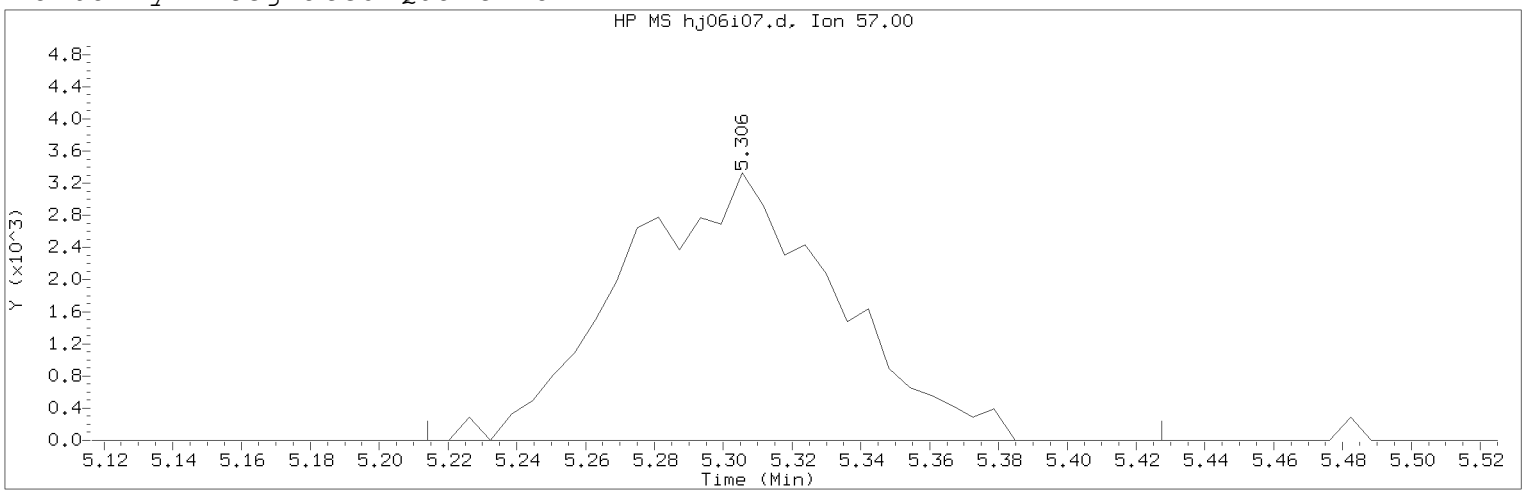
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

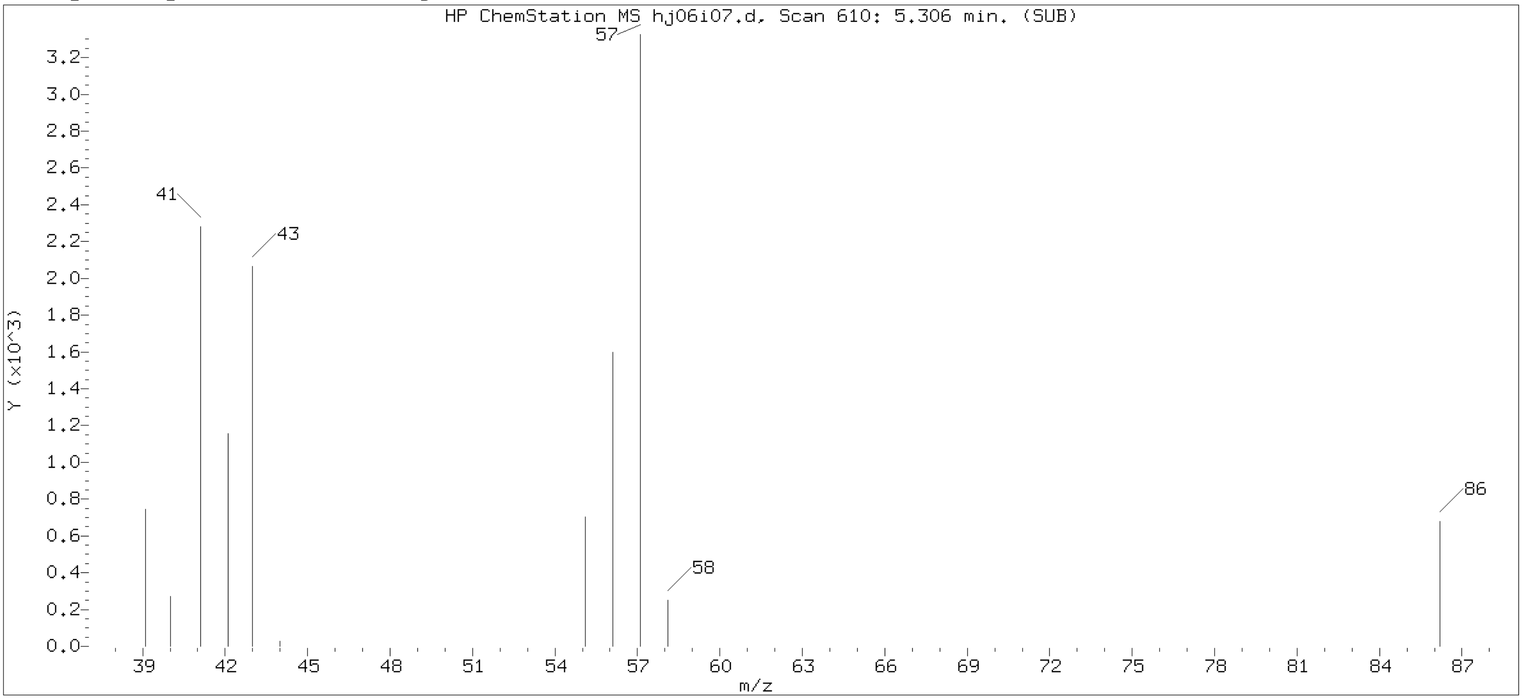
Compound Number : 33
Compound Name : n-Hexane
Scan Number : 610
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area (flag) : 14319M
On-Column Amount (ng) : 0.1953
Integration start scan : 594 Integration stop scan: 629
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

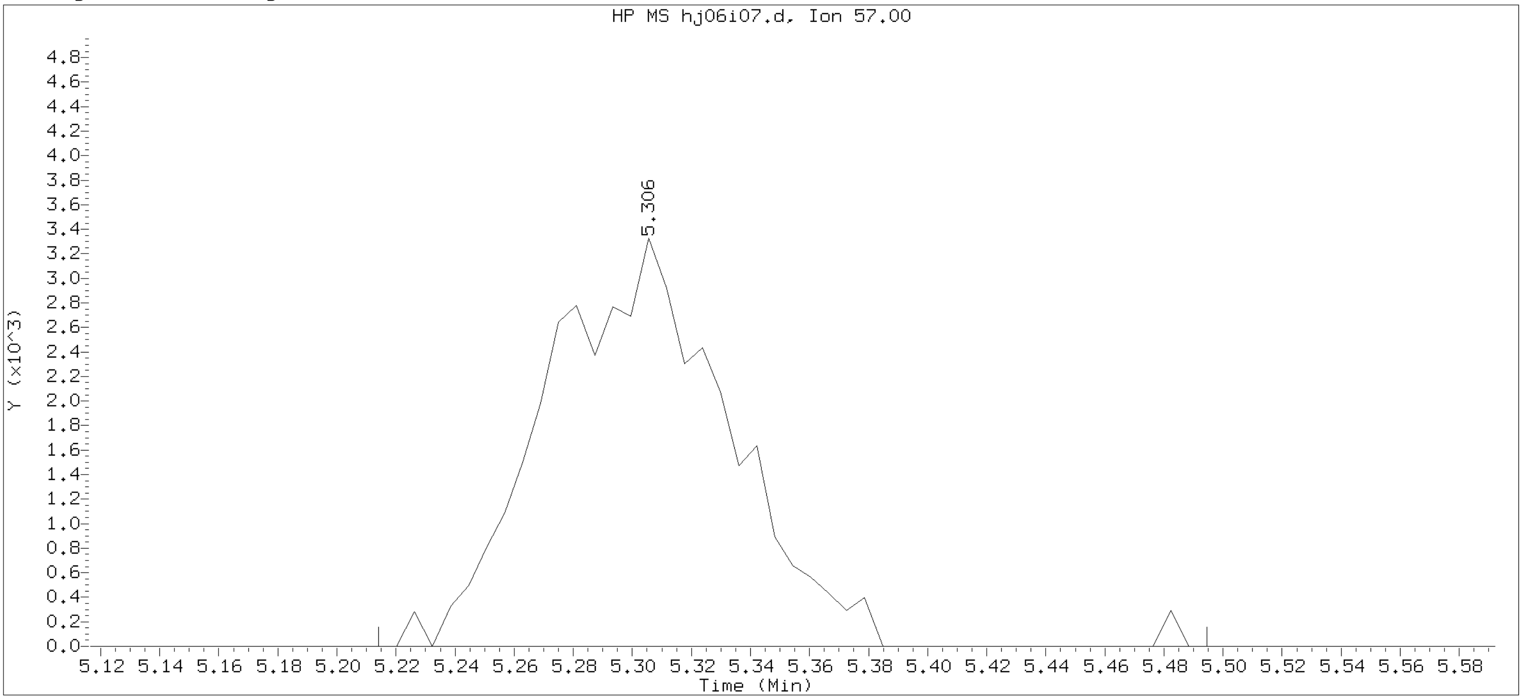
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

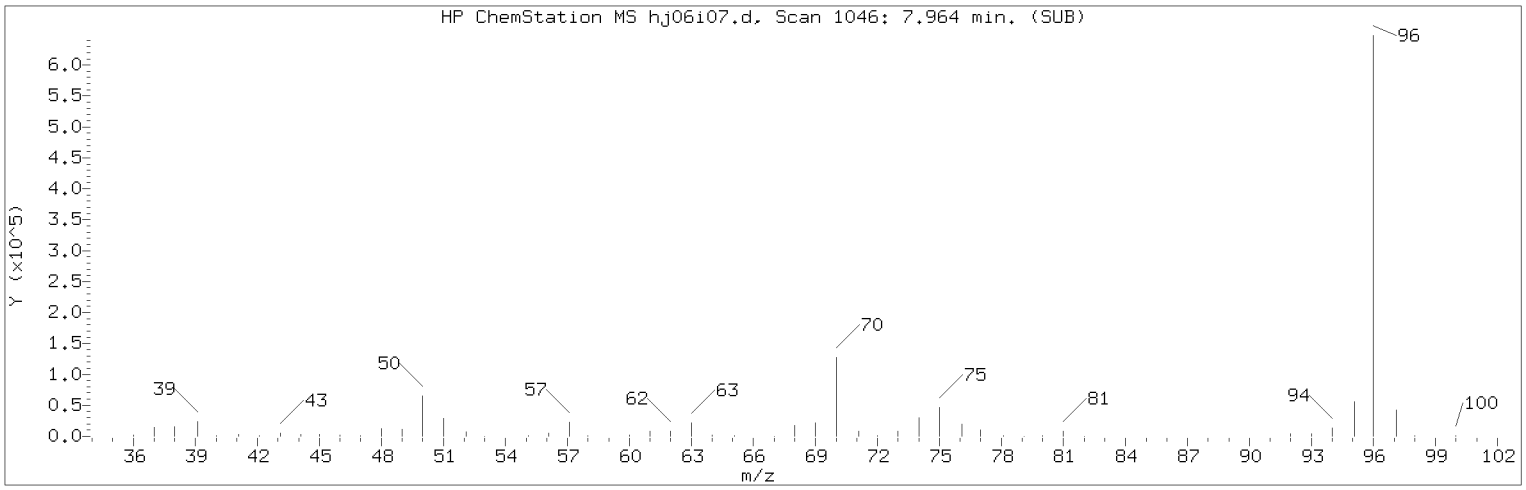
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

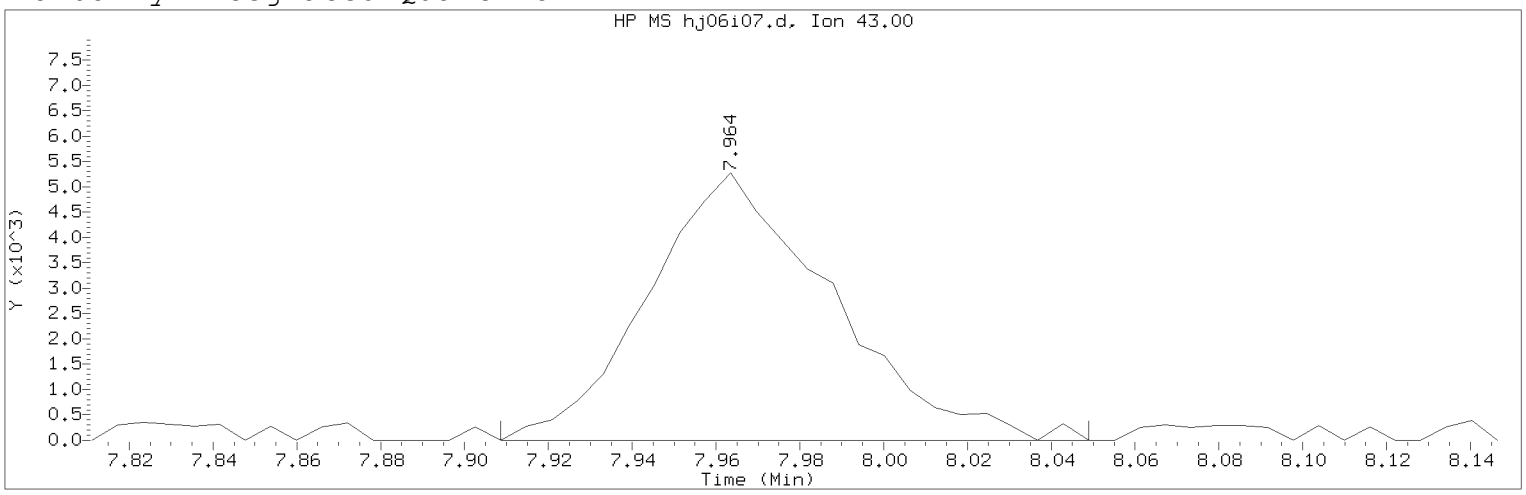
Compound Number : 33
Compound Name : n-Hexane
Scan Number : 610
Retention Time (minutes): 5.306
Quant Ion : 57.00
Area : 14425
On-column Amount (ng) : 0.1965
Integration start scan : 594 Integration stop scan: 640
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

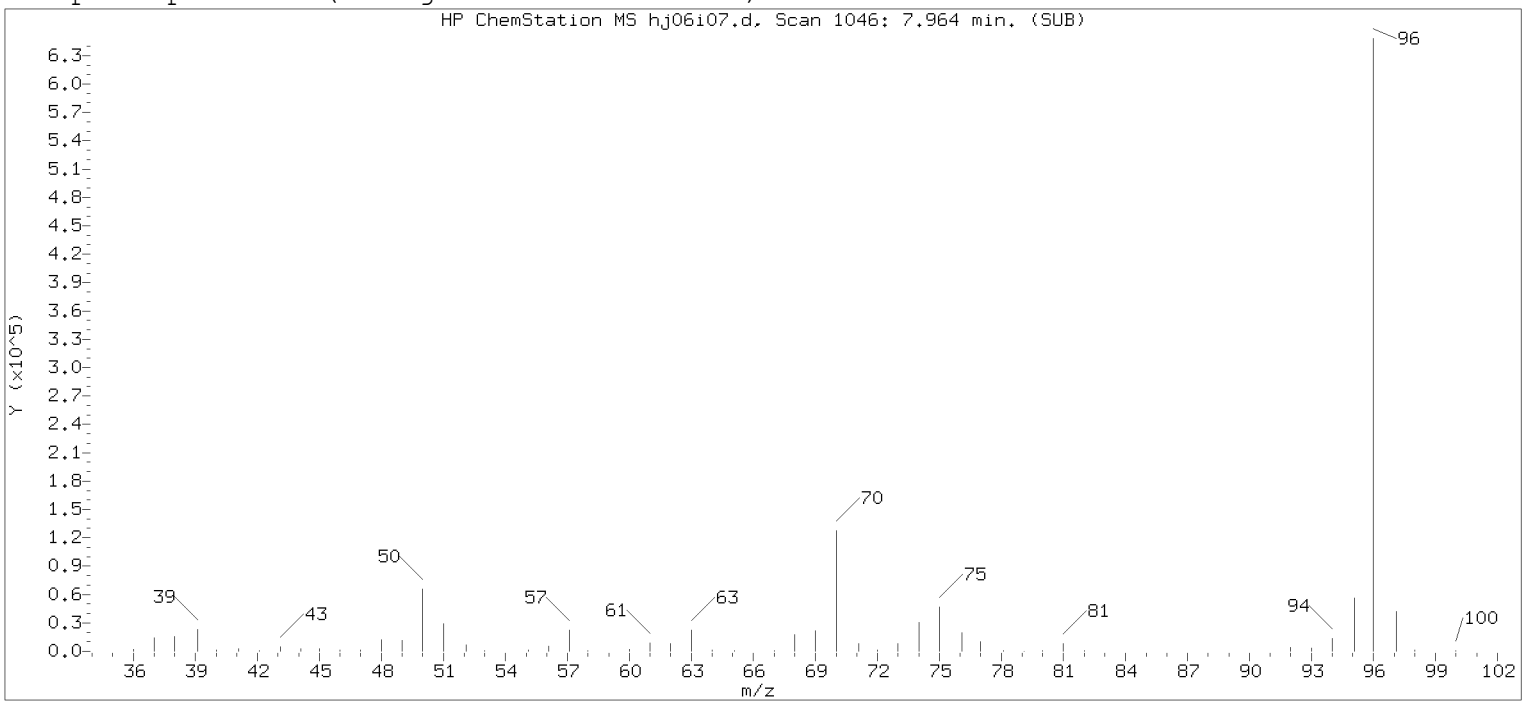
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 16086M
On-Column Amount (ng) : 0.2091
Integration start scan : 1036 Integration stop scan: 1059
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

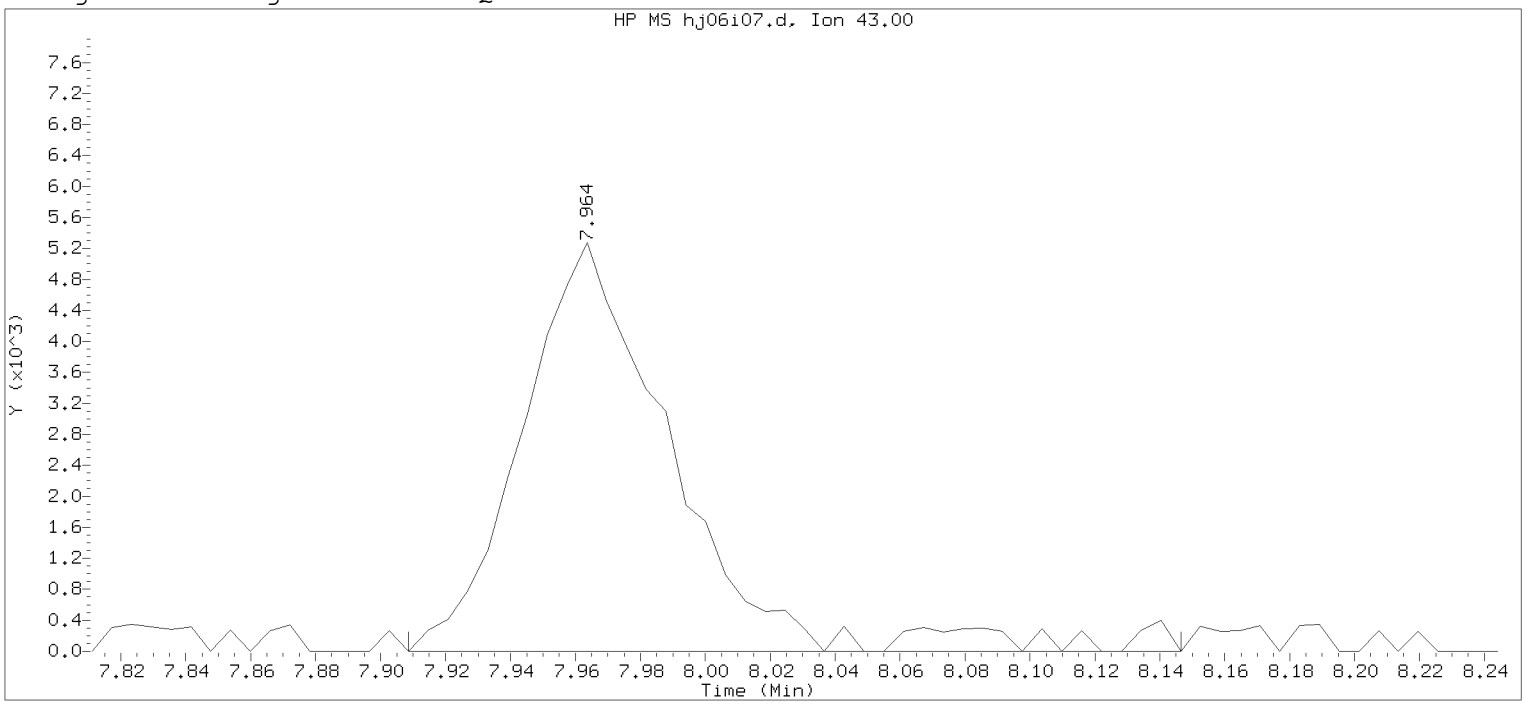
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

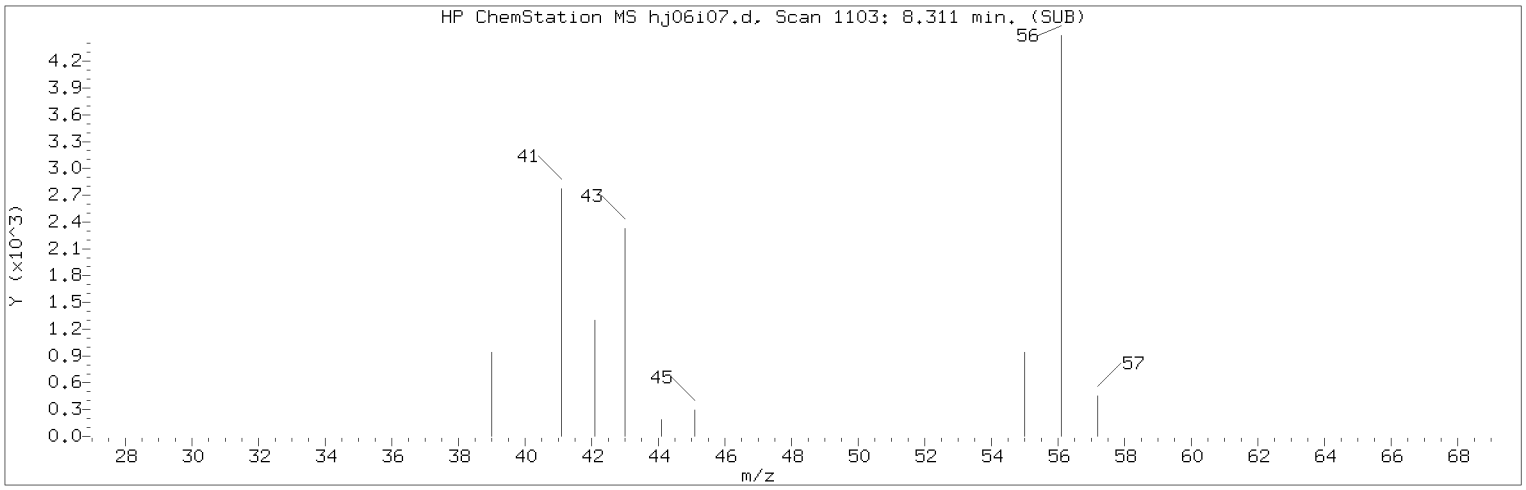
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

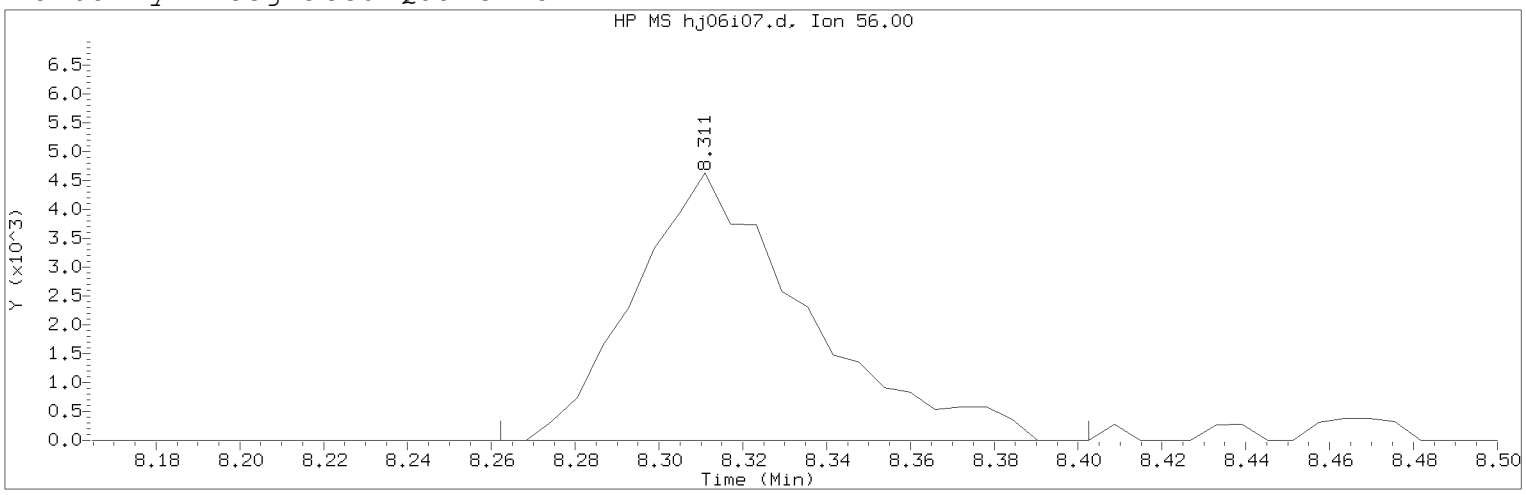
Compound Number	: 63		
Compound Name	: n-Heptane		
Scan Number	: 1046		
Retention Time (minutes)	: 7.964		
Quant Ion	: 43.00		
Area	: 17141		
On-column Amount (ng)	: 0.2207		
Integration start scan	: 1036	Integration stop scan:	1075
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

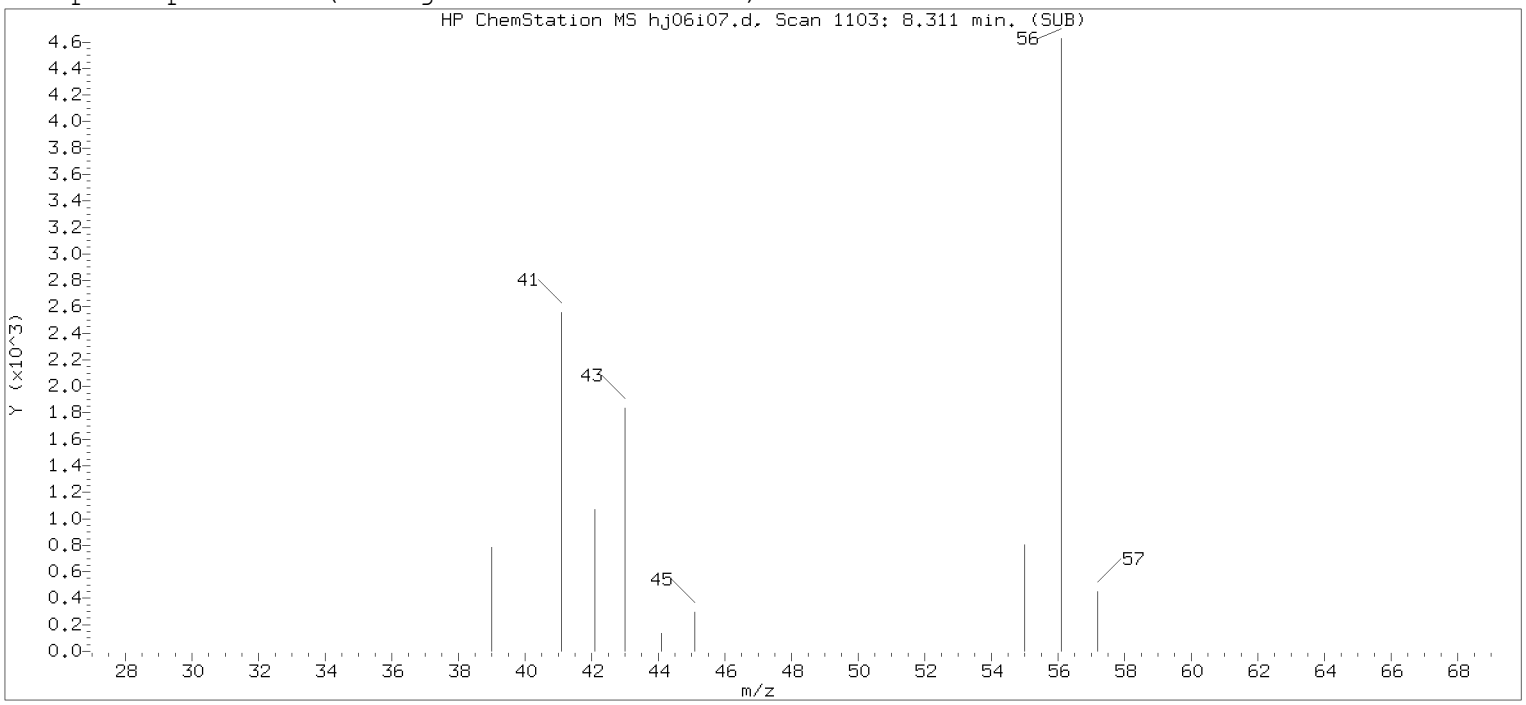
Compound Number : 66
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area (flag) : 13133M
On-Column Amount (ng) : 19.2483
Integration start scan : 1094 Integration stop scan: 1117
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

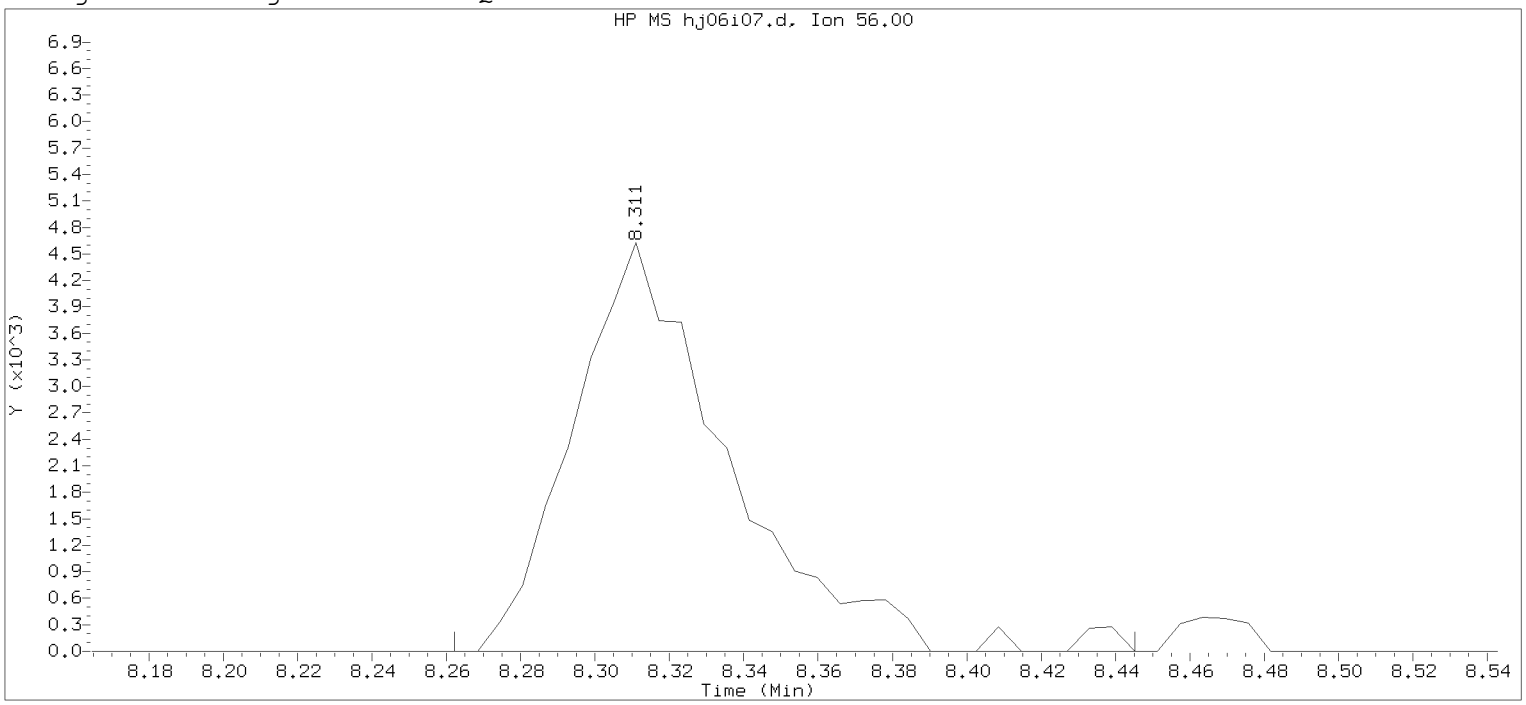
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

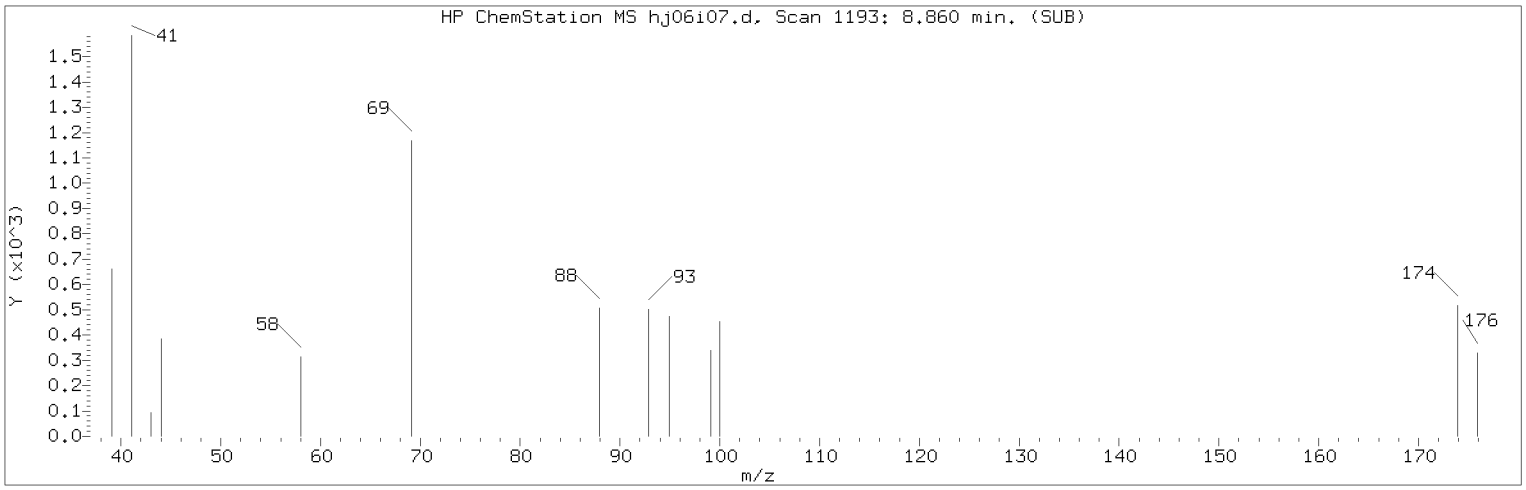
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

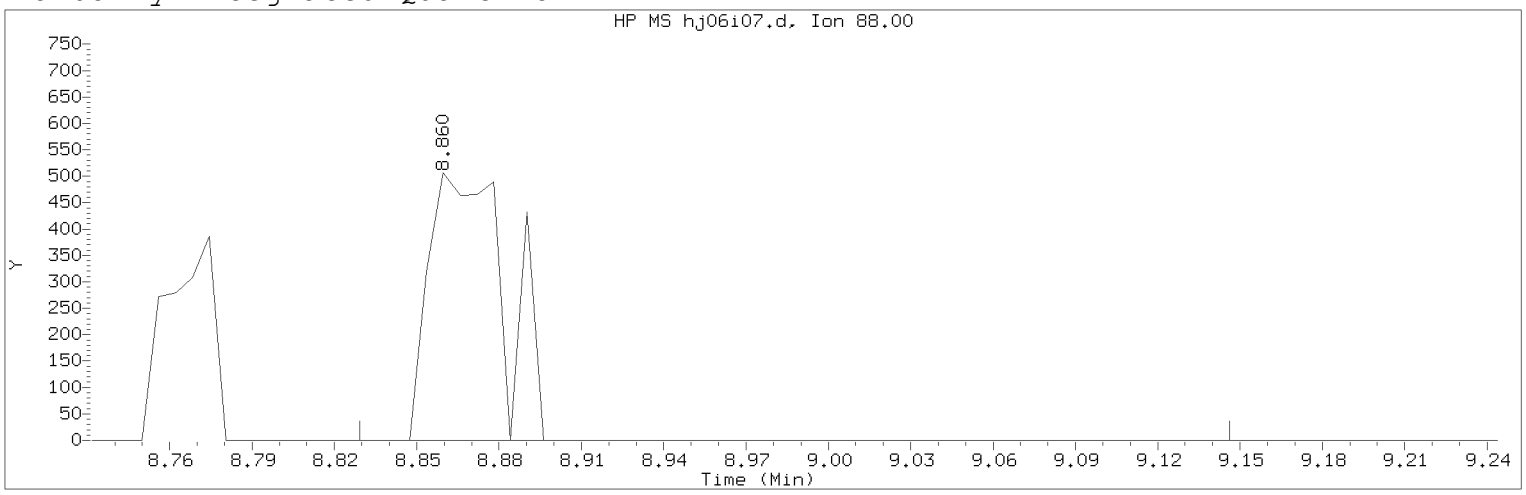
Compound Number	: 66		
Compound Name	: n-Butanol		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 56.00		
Area	: 13430		
On-column Amount (ng)	: 19.8365		
Integration start scan	: 1094	Integration stop scan:	1124
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

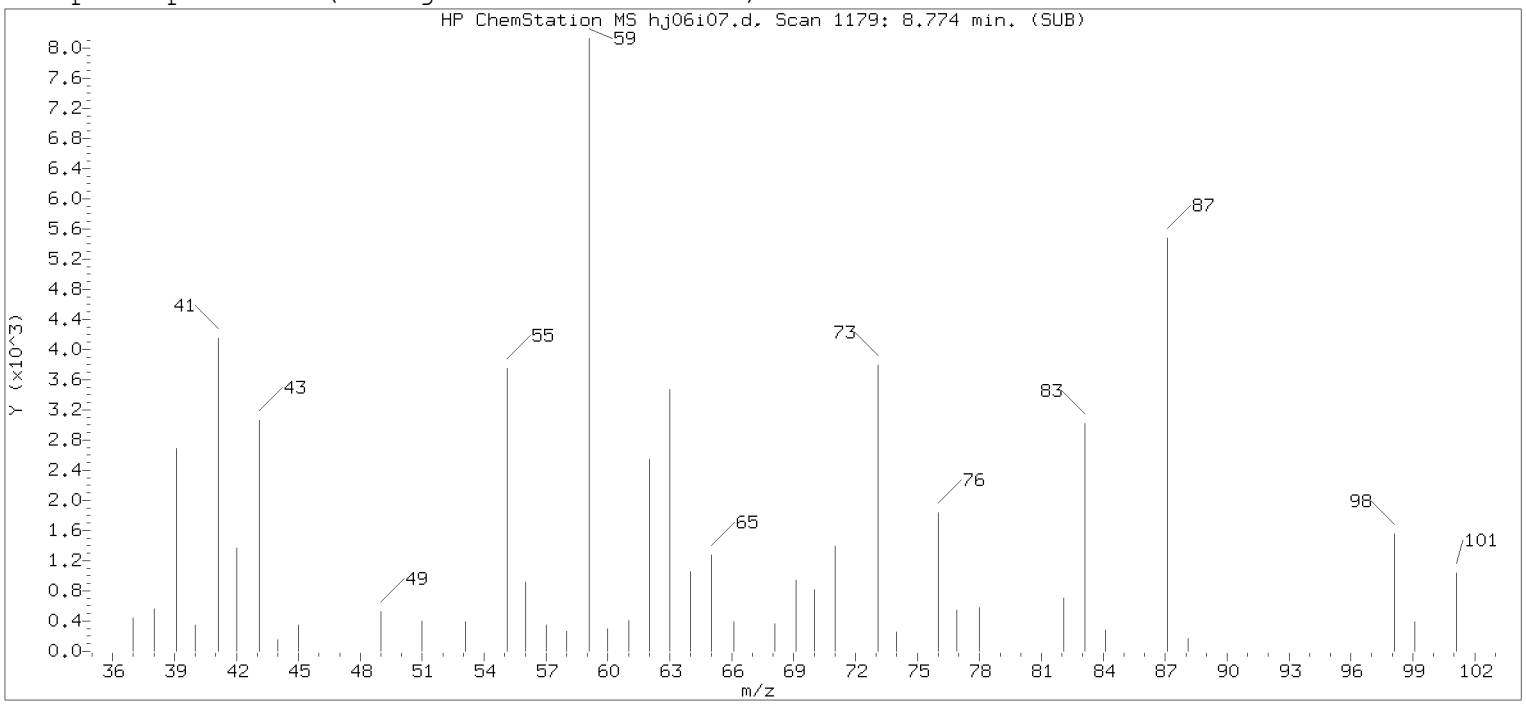
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 978M
On-Column Amount (ng) : 5.9430
Integration start scan : 1187 Integration stop scan: 1239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

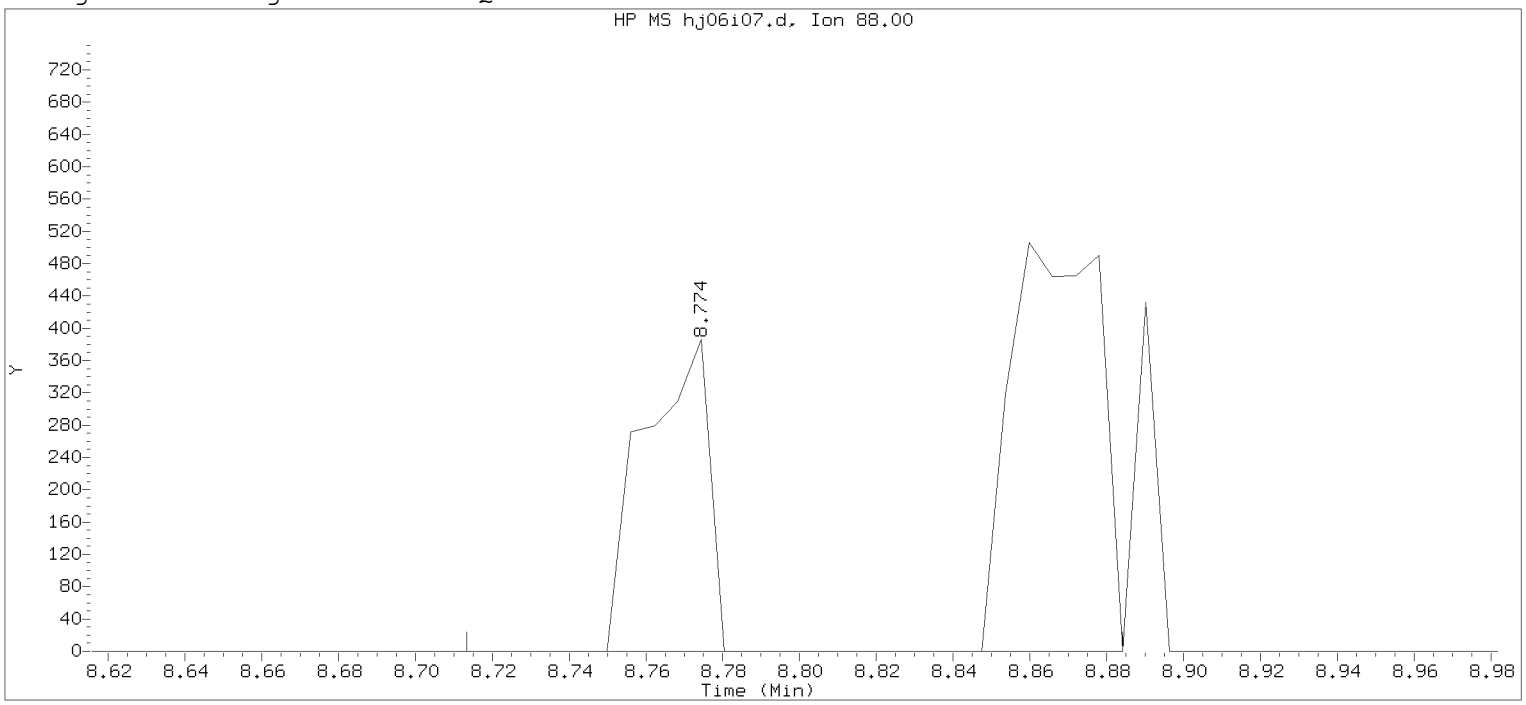
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

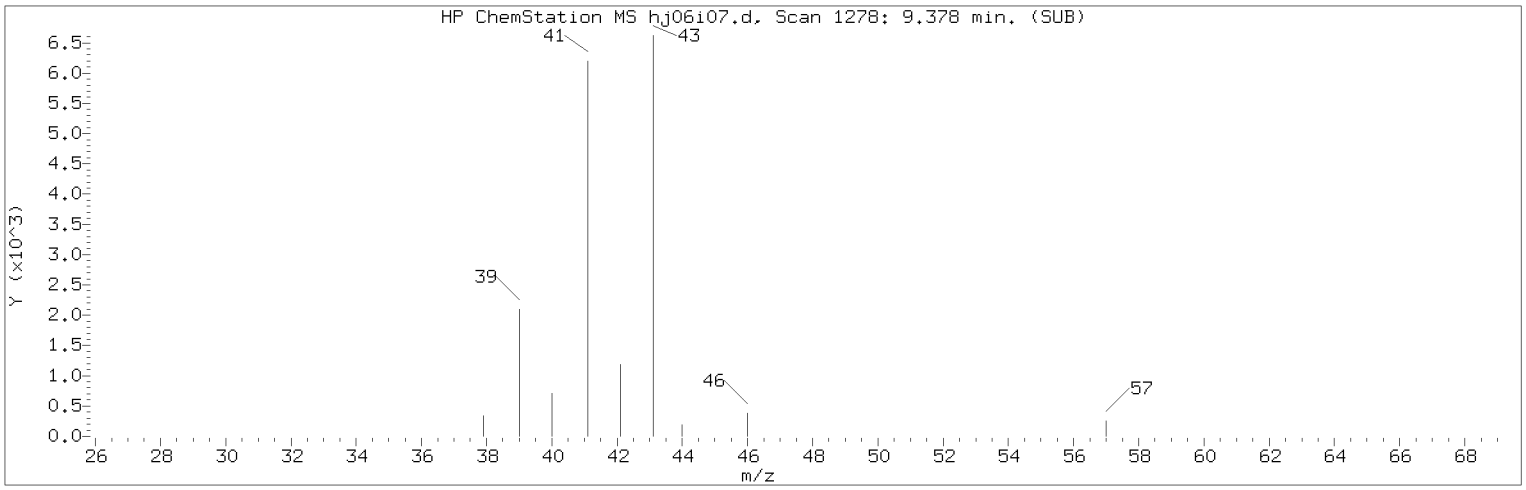
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

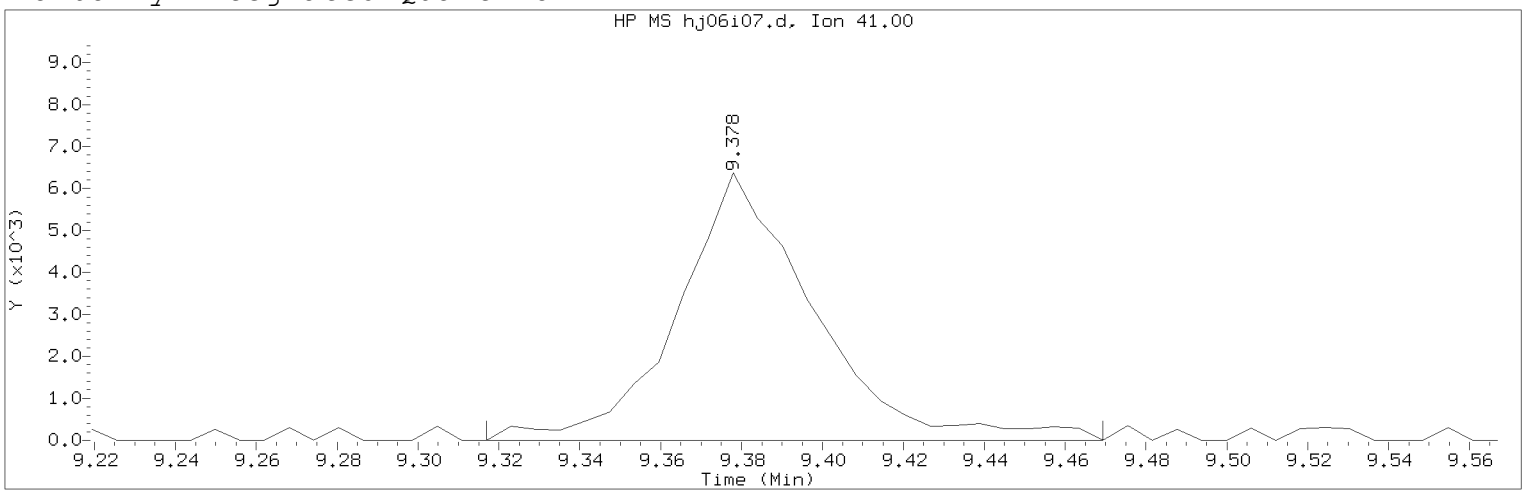
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 1276
On-column Amount (ng) : 8.3739
Integration start scan : 1168 Integration stop scan: 1196
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

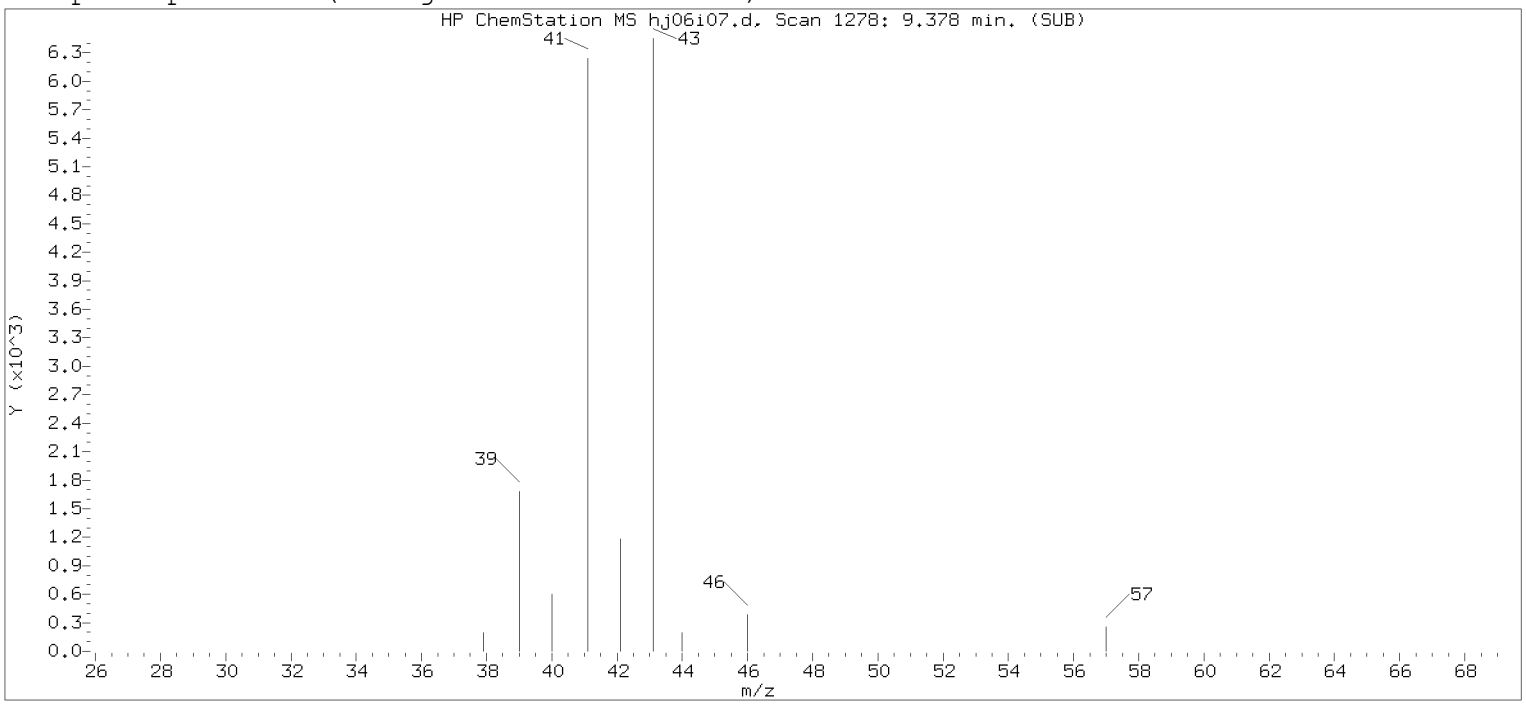
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 14974M
On-Column Amount (ng) : 2.1018
Integration start scan : 1267 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

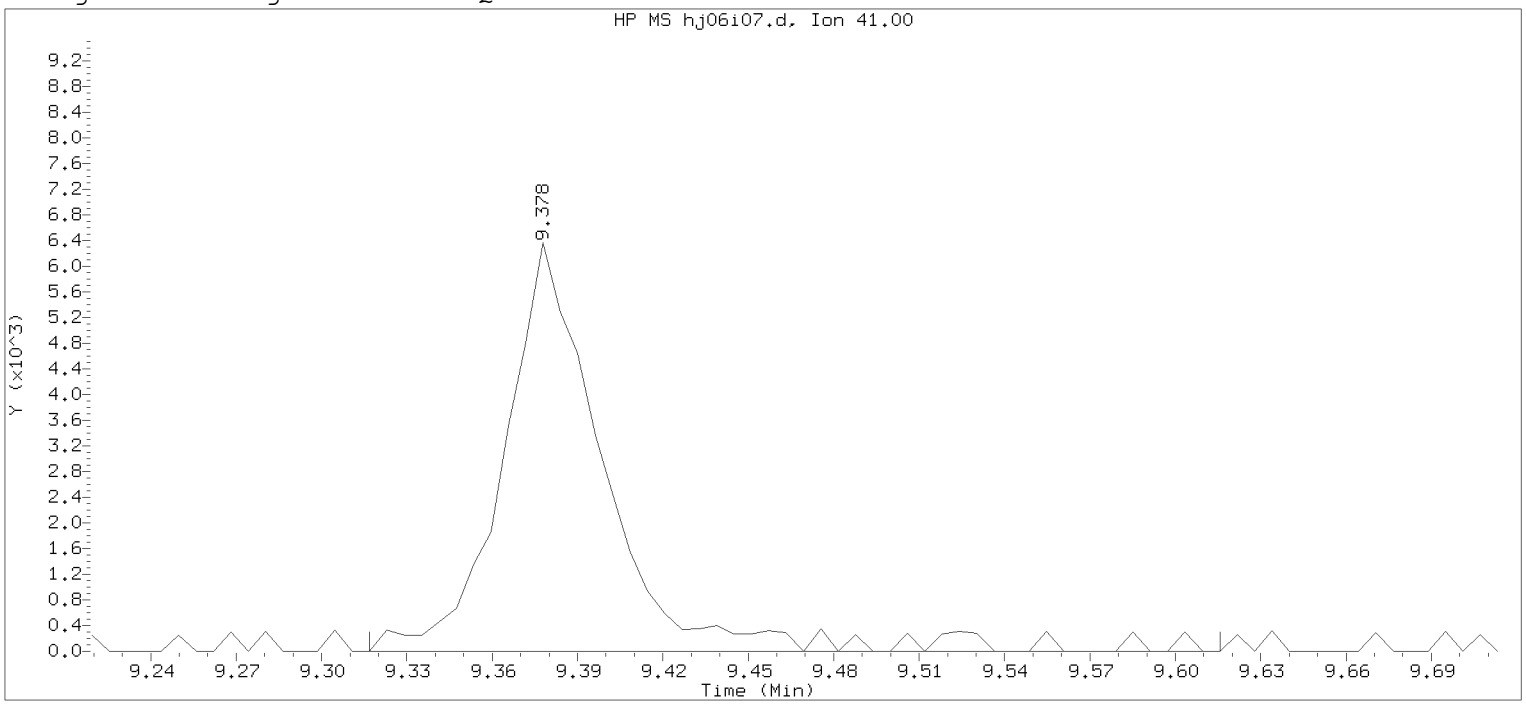
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

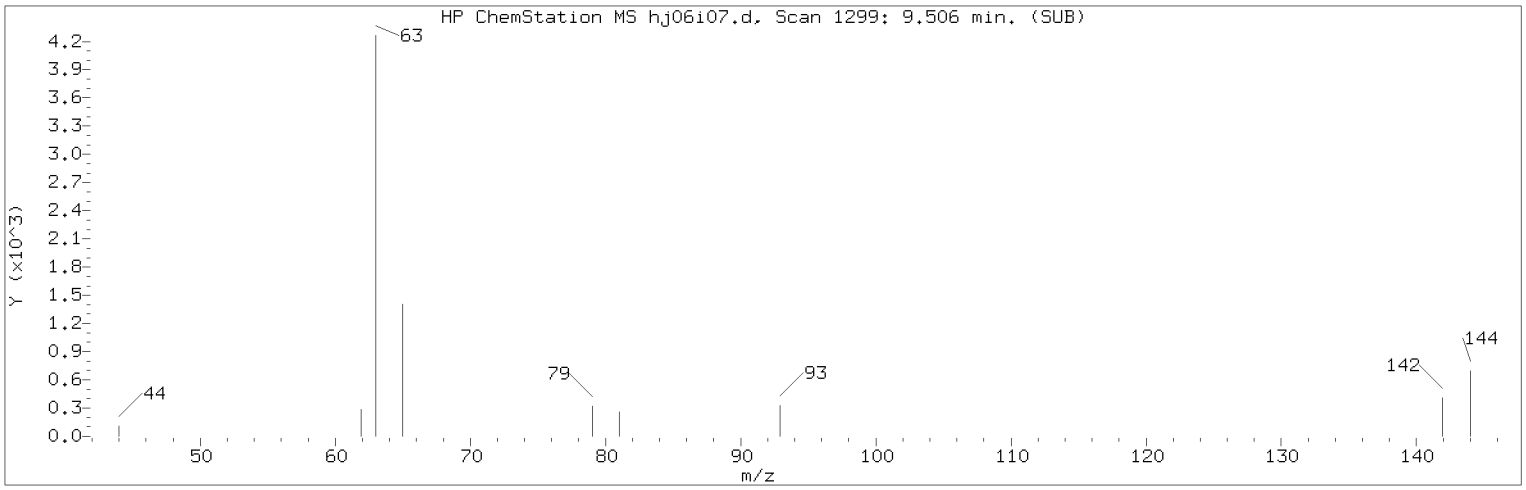
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

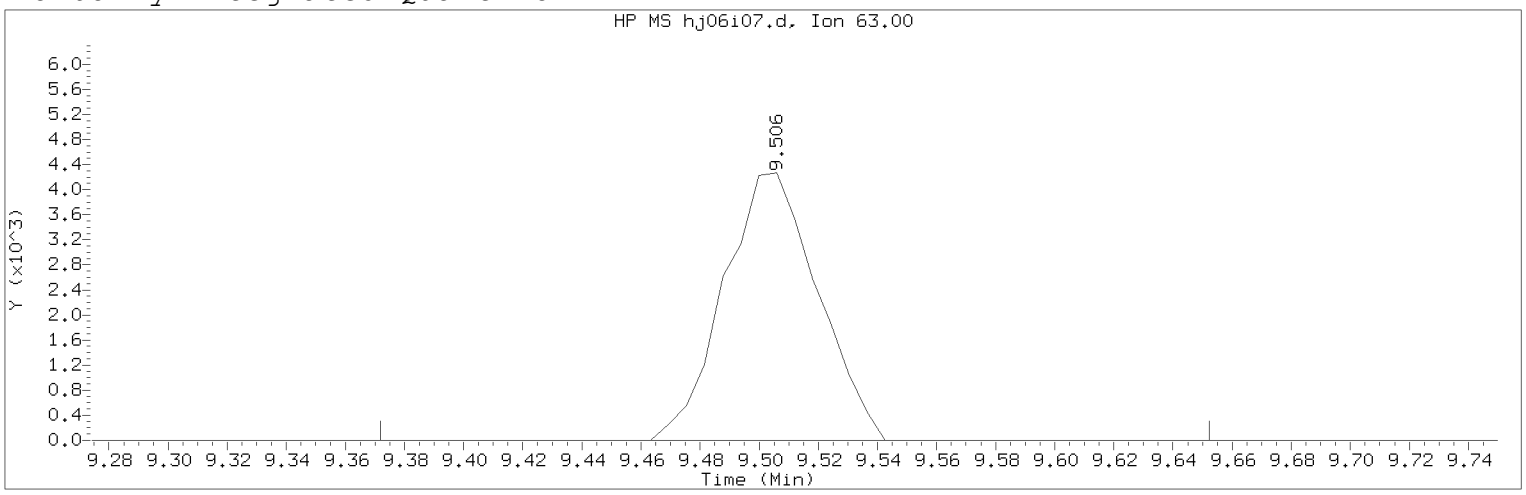
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area : 15947
On-column Amount (ng) : 2.2158
Integration start scan : 1267 Integration stop scan: 1316
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: SEJOHNSON

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

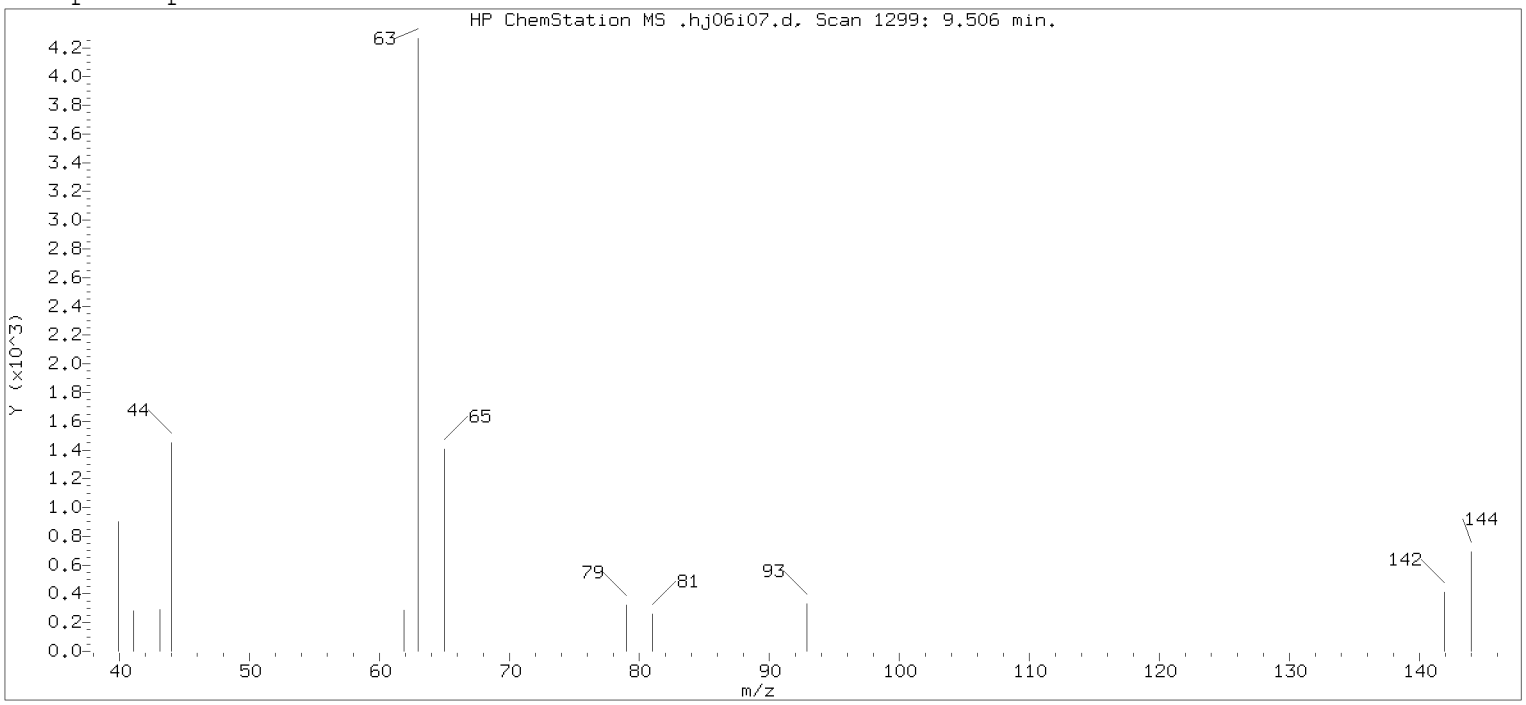
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 9415M
On-Column Amount (ng) : 0.1923
Integration start scan : 1276 Integration stop scan: 1322
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

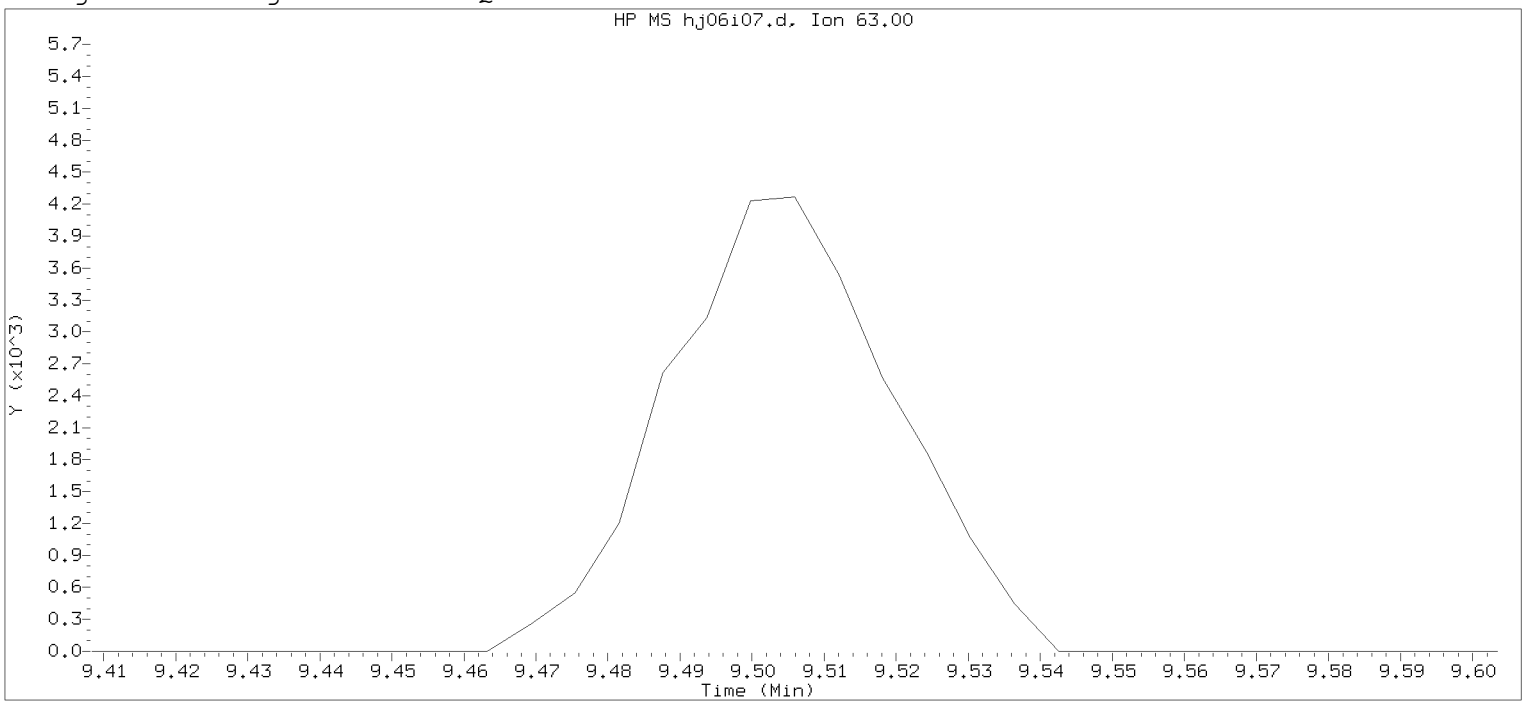
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

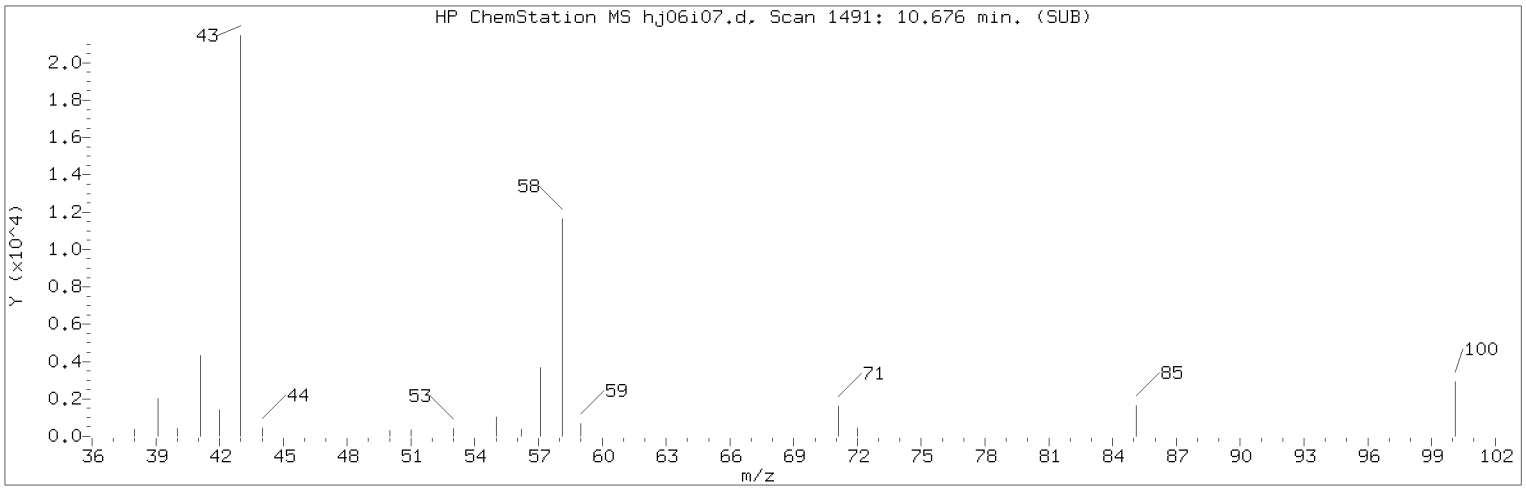
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

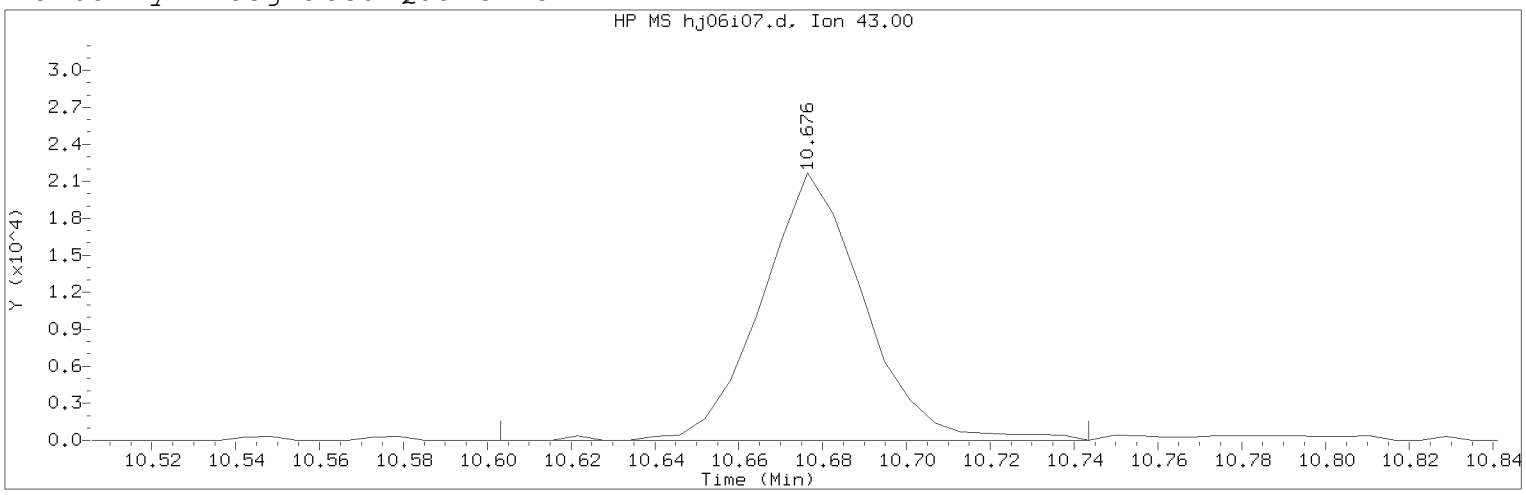
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

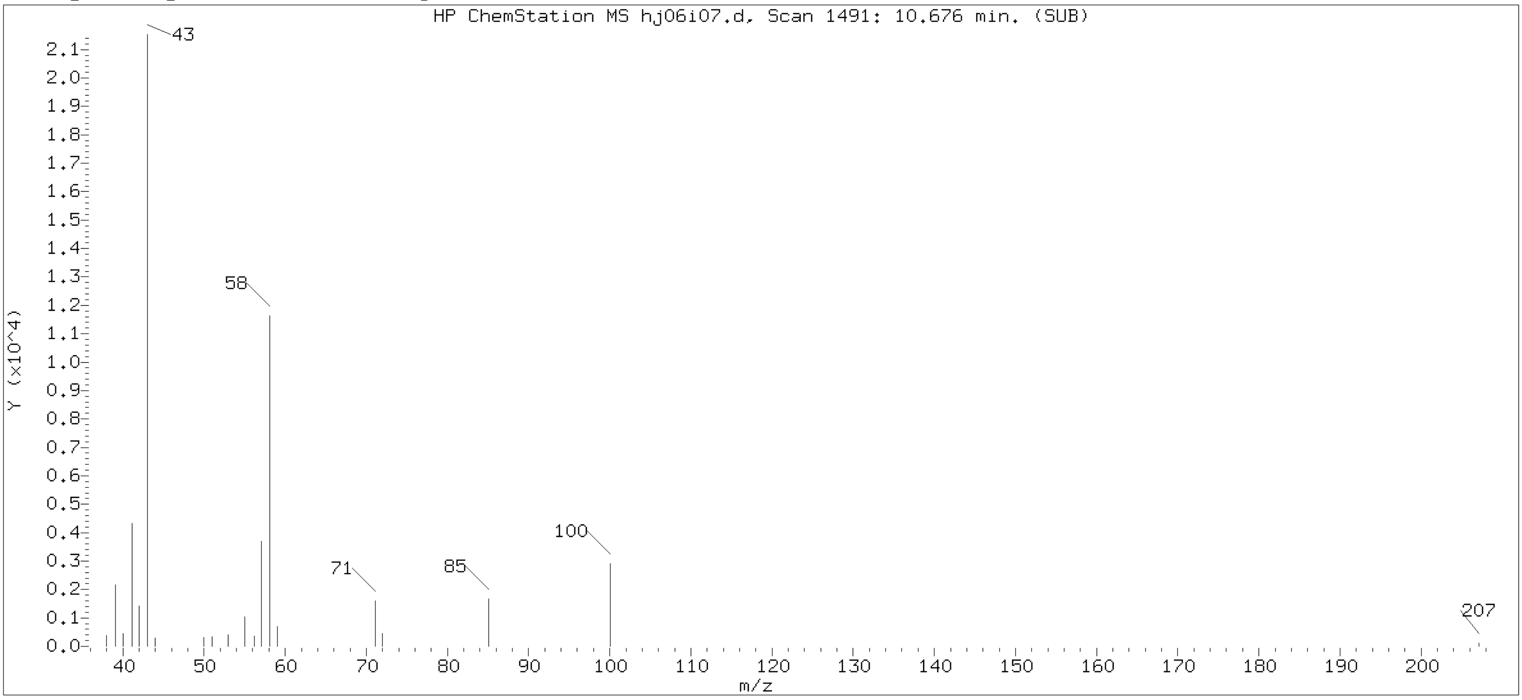
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area (flag) : 36737M
On-Column Amount (ng) : 1.9820
Integration start scan : 1478 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

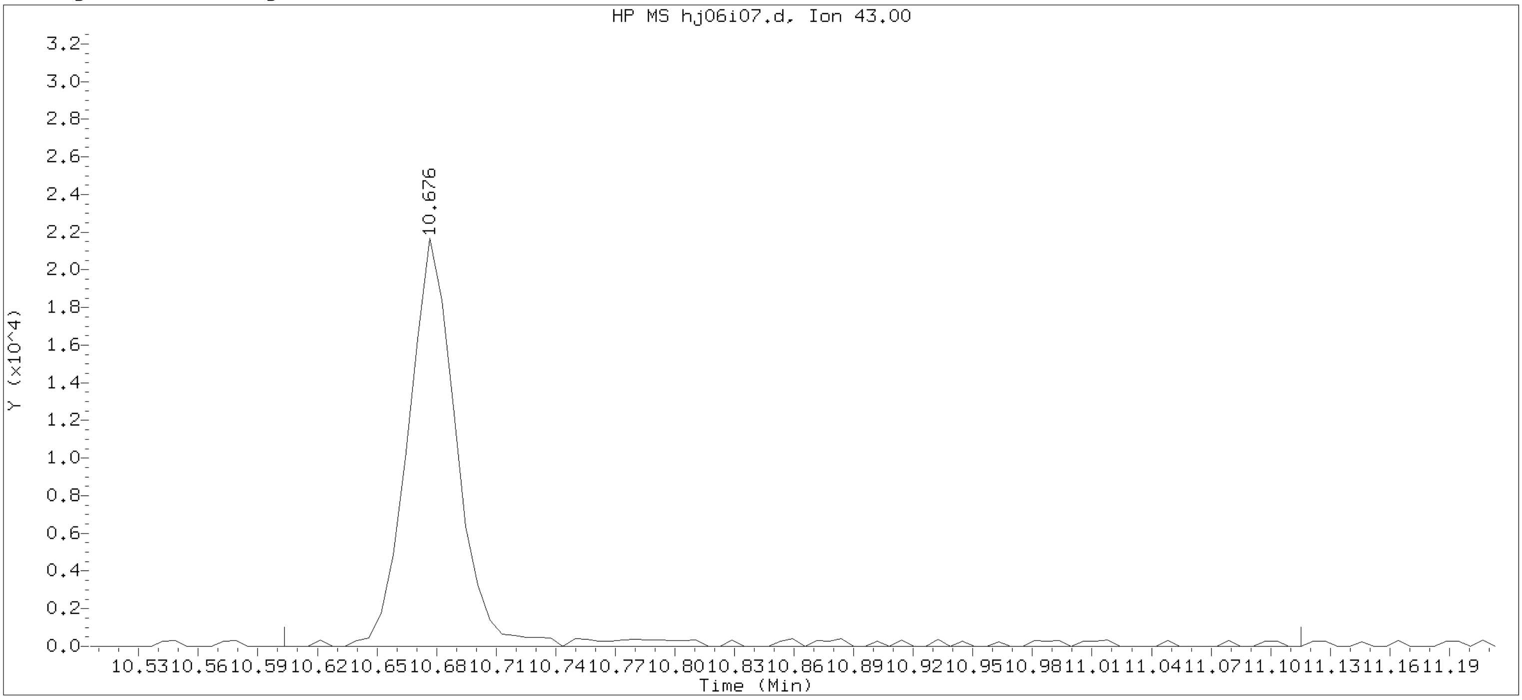
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44   Analyst ID: JKH09052

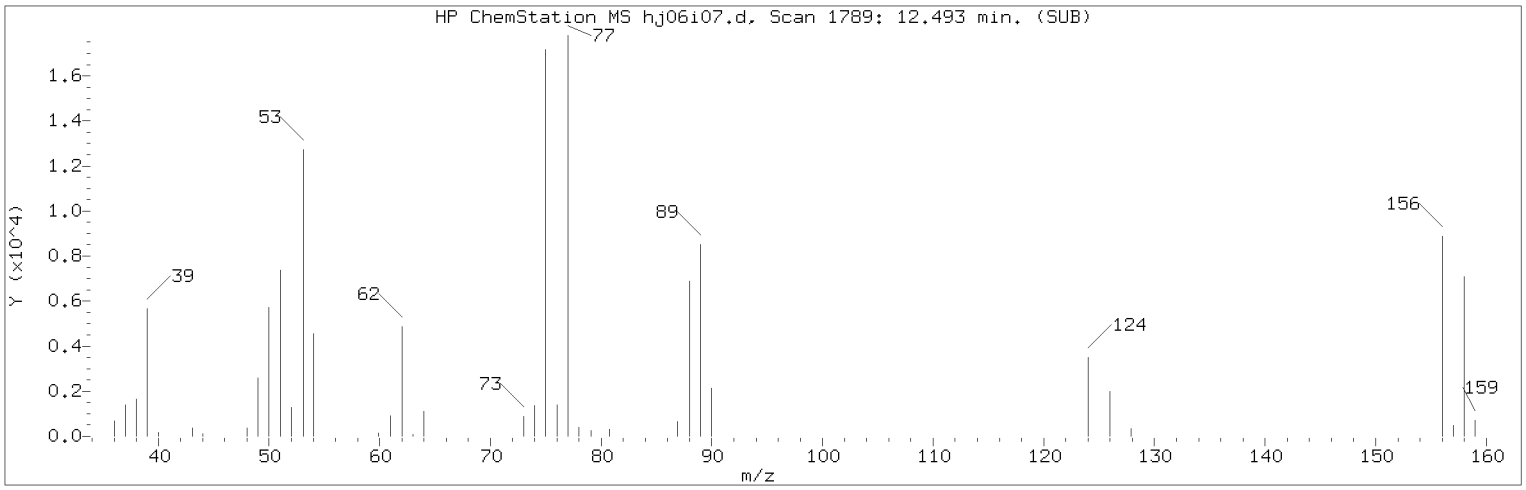
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2   Lab Sample ID: VSTD0.2

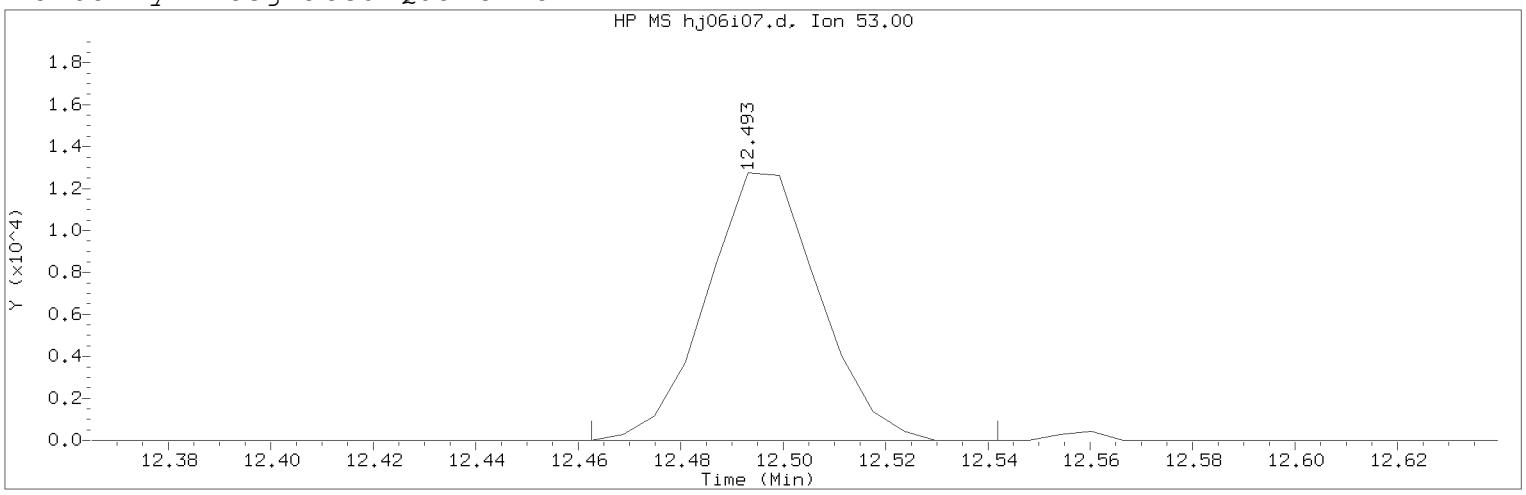
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area : 40437
On-column Amount (ng) : 2.1579
Integration start scan : 1478   Integration stop scan: 1562
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02030

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

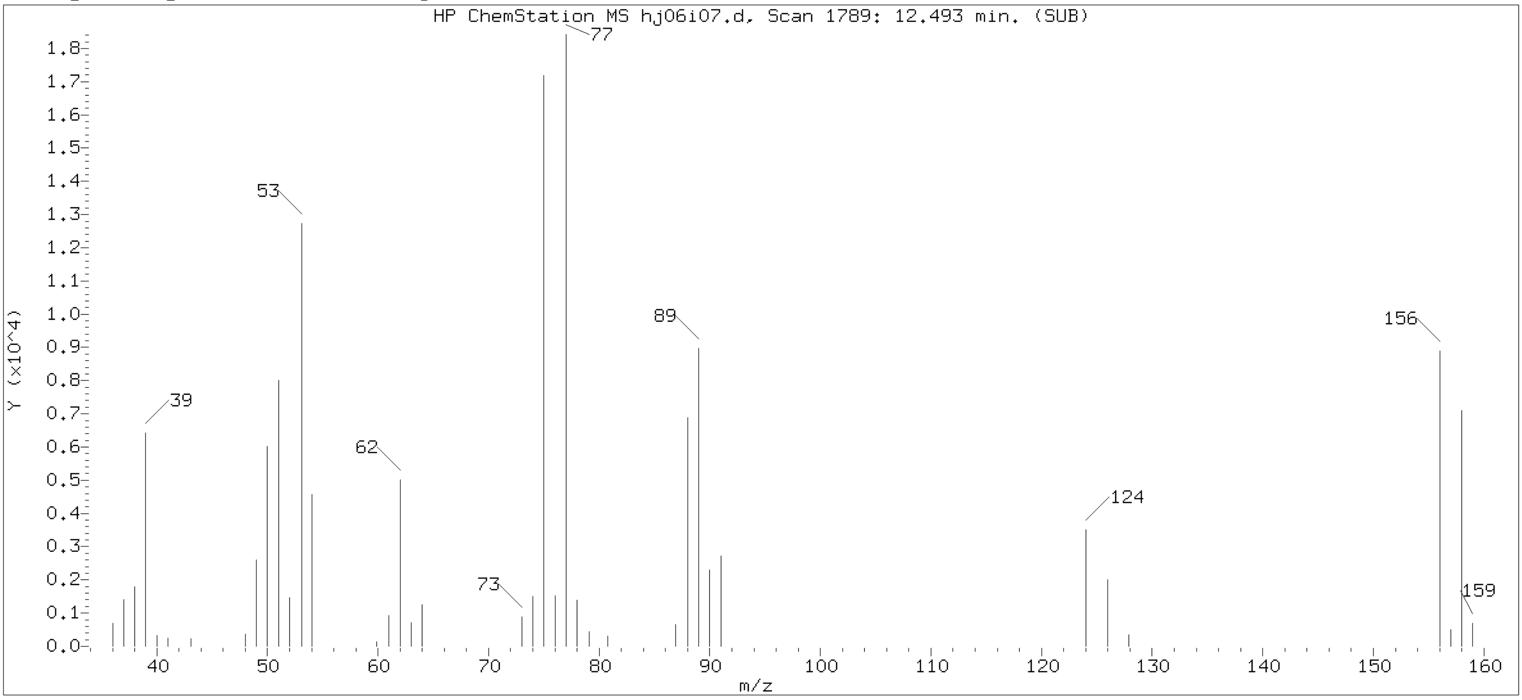
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 19411M
On-Column Amount (ng) : 1.9049
Integration start scan : 1783 Integration stop scan: 1796
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

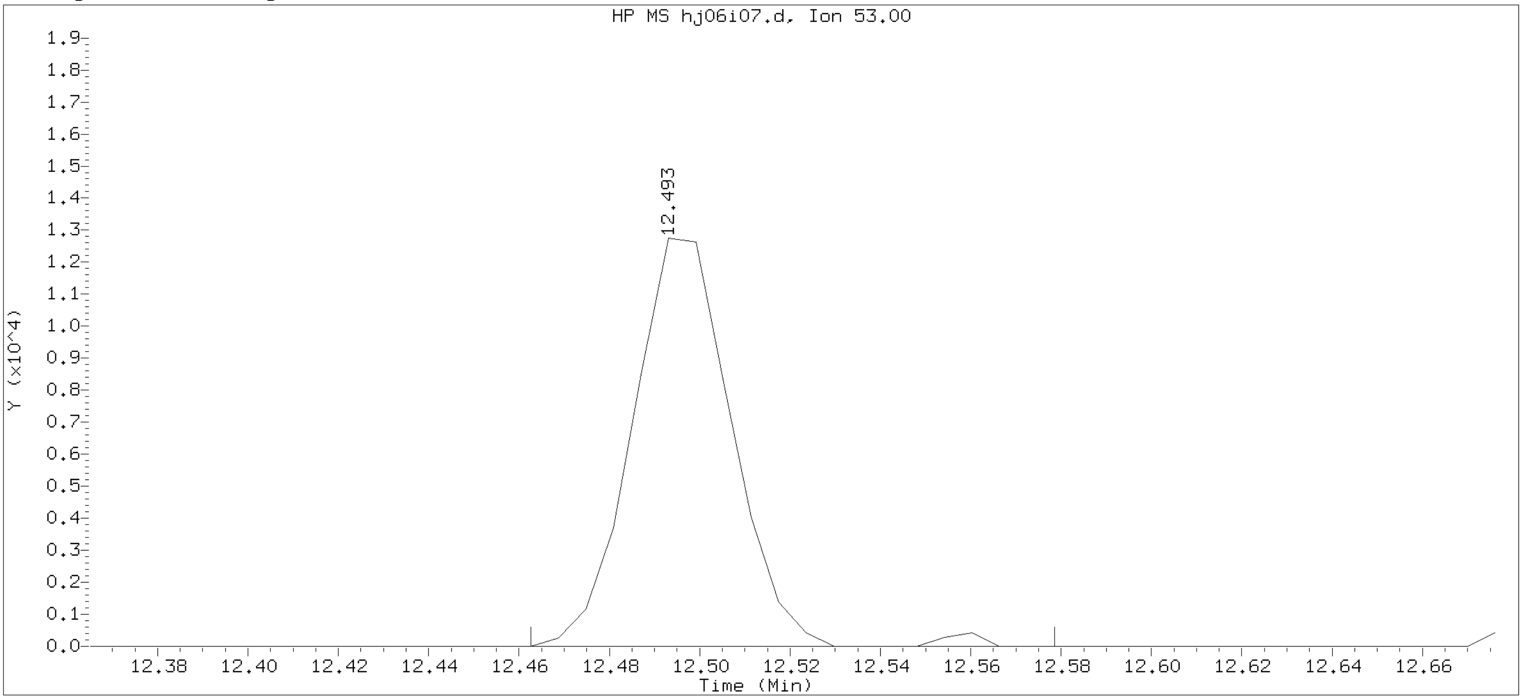
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44   Analyst ID: JKH09052

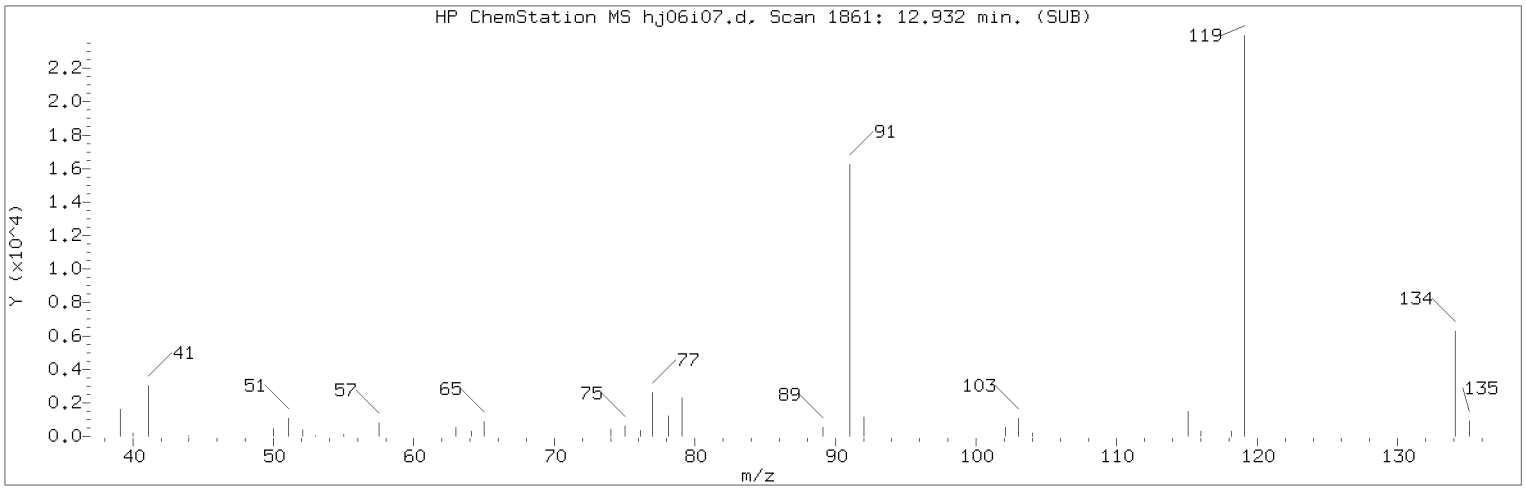
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2   Lab Sample ID: VSTD0.2

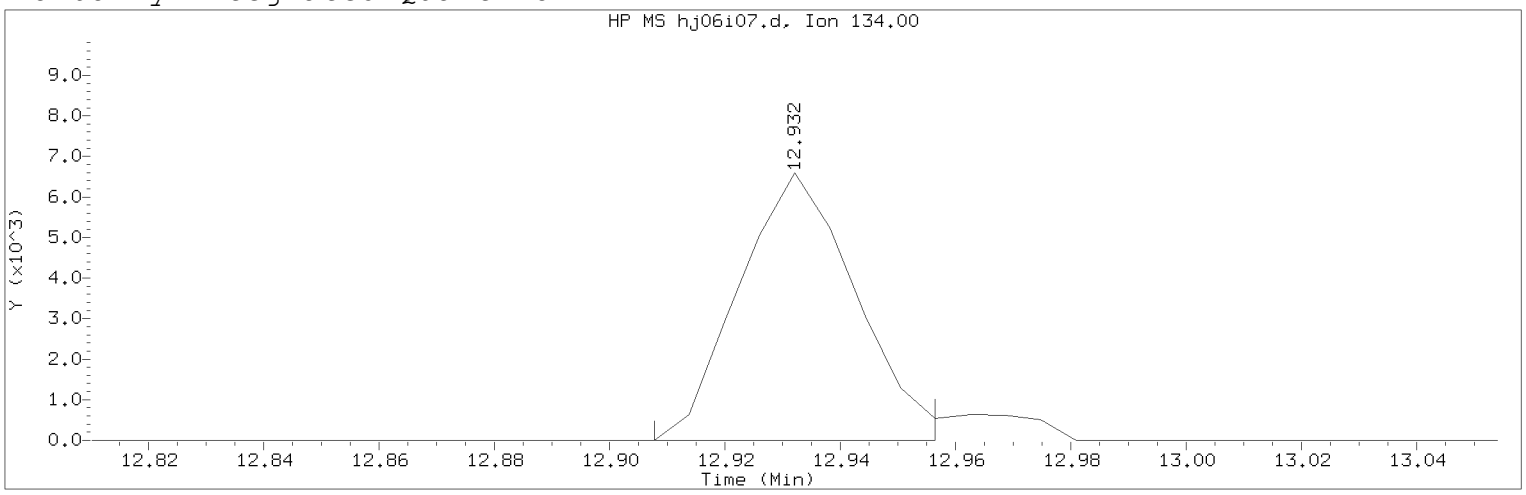
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 19667
On-column Amount (ng) : 2.7364
Integration start scan : 1783   Integration stop scan: 1802
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02033

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

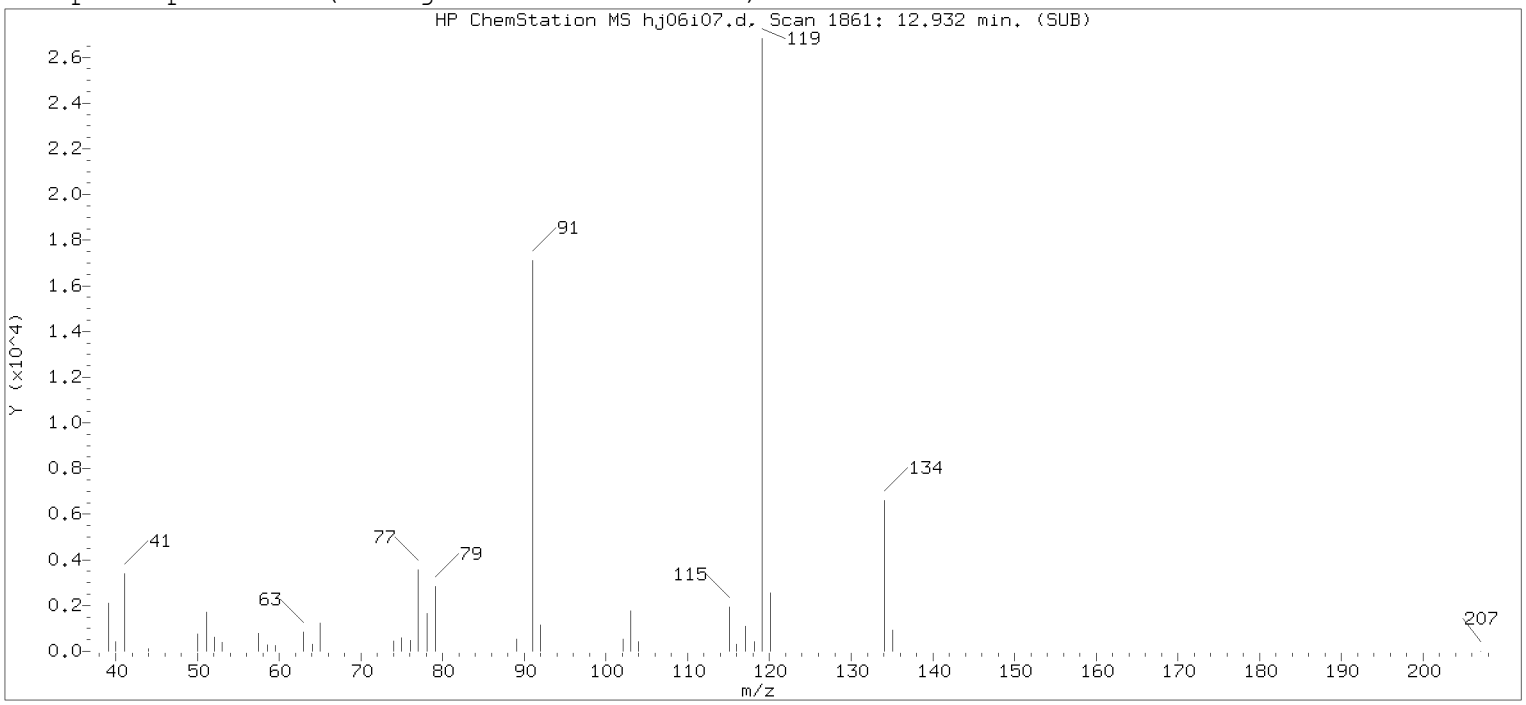
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 9273M
On-Column Amount (ng) : 0.1928
Integration start scan : 1856 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

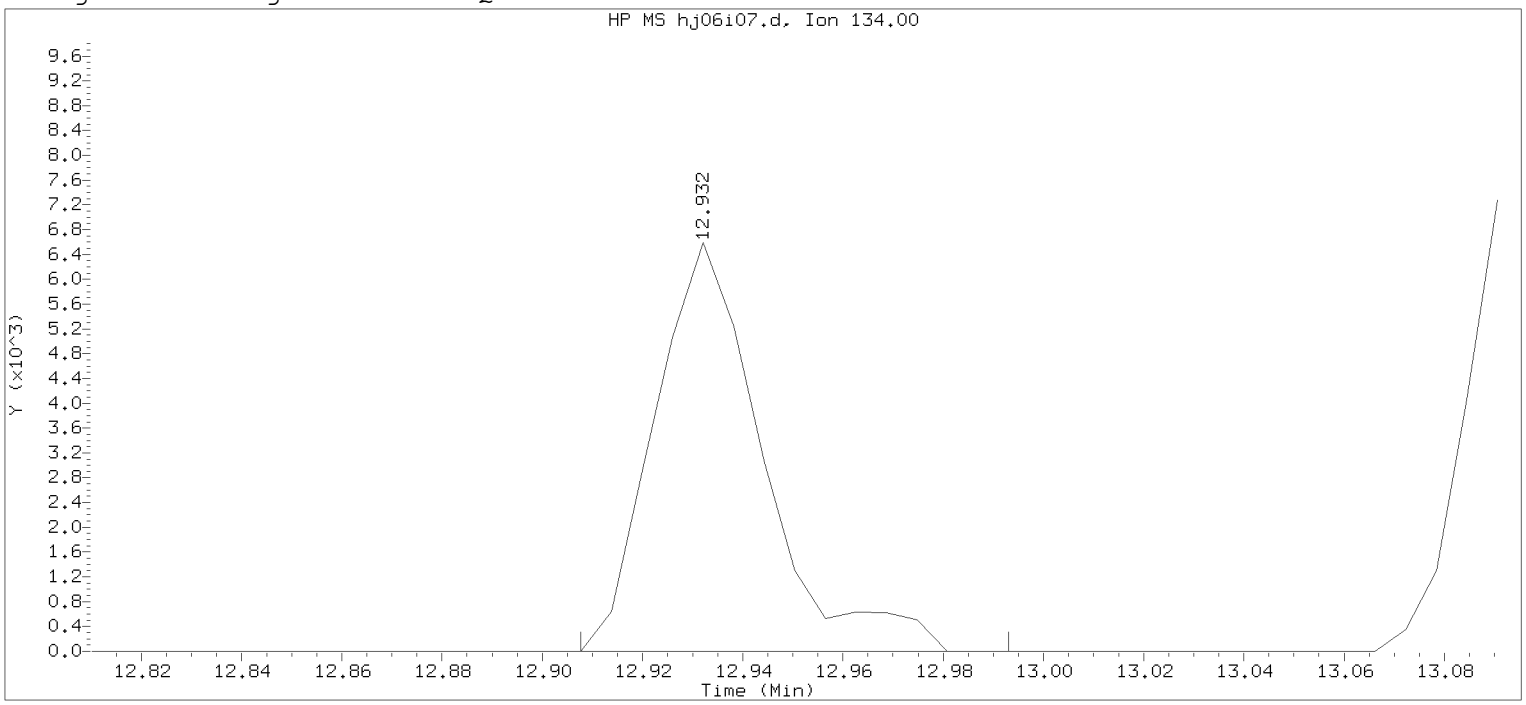
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

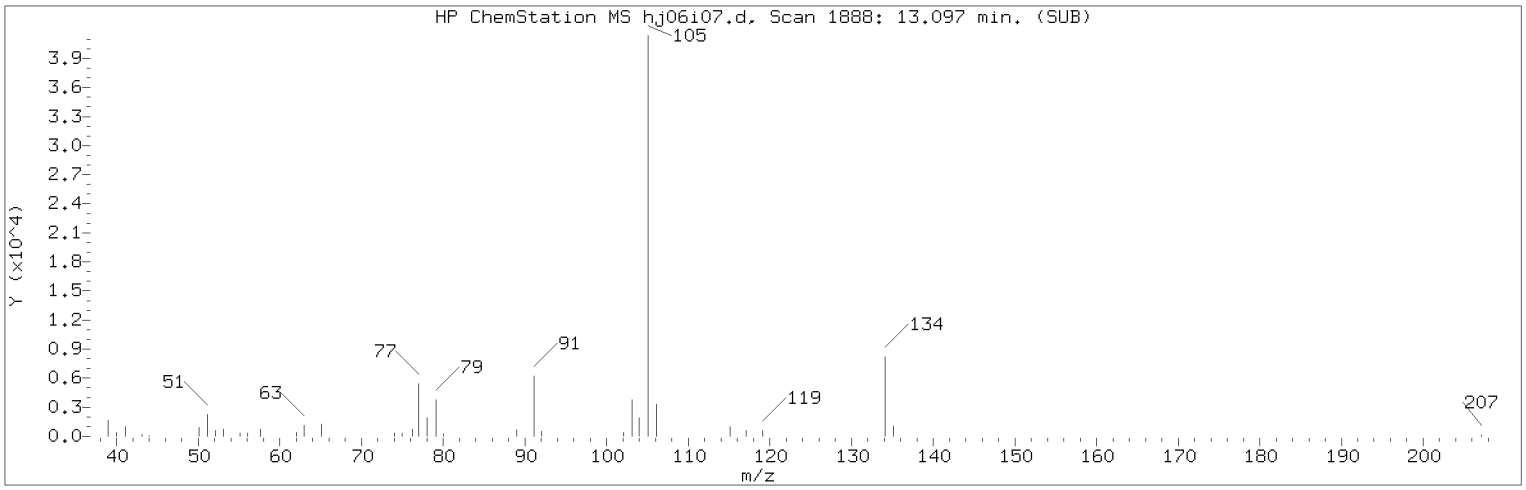
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

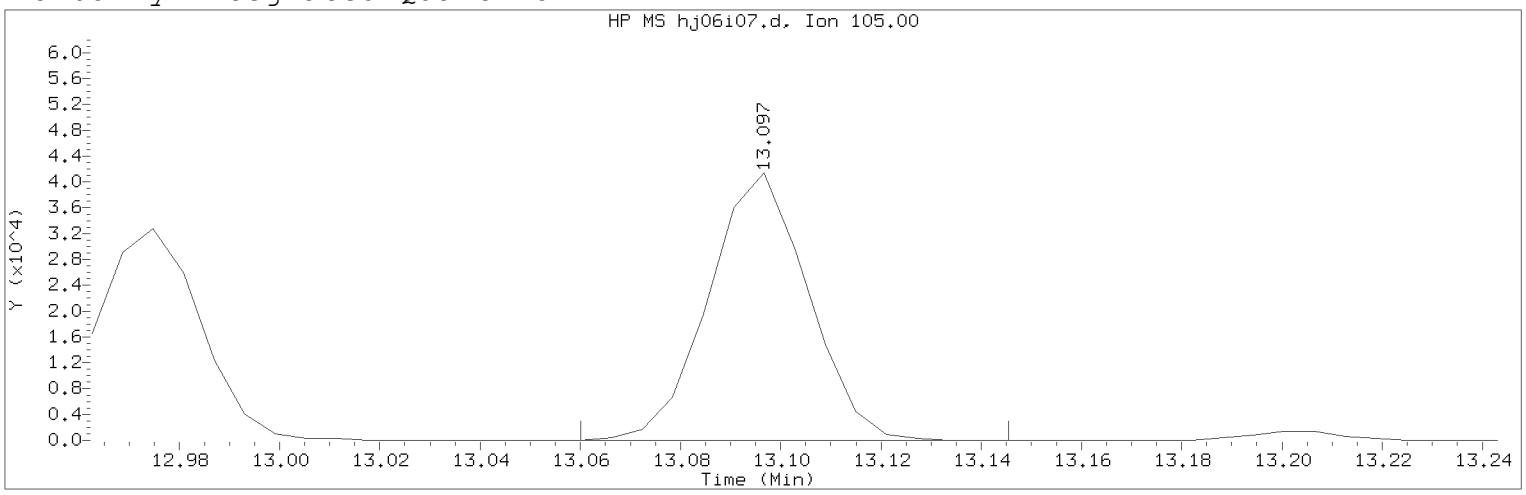
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 9916
On-column Amount (ng) : 0.2019
Integration start scan : 1856 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user is sjohnson

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

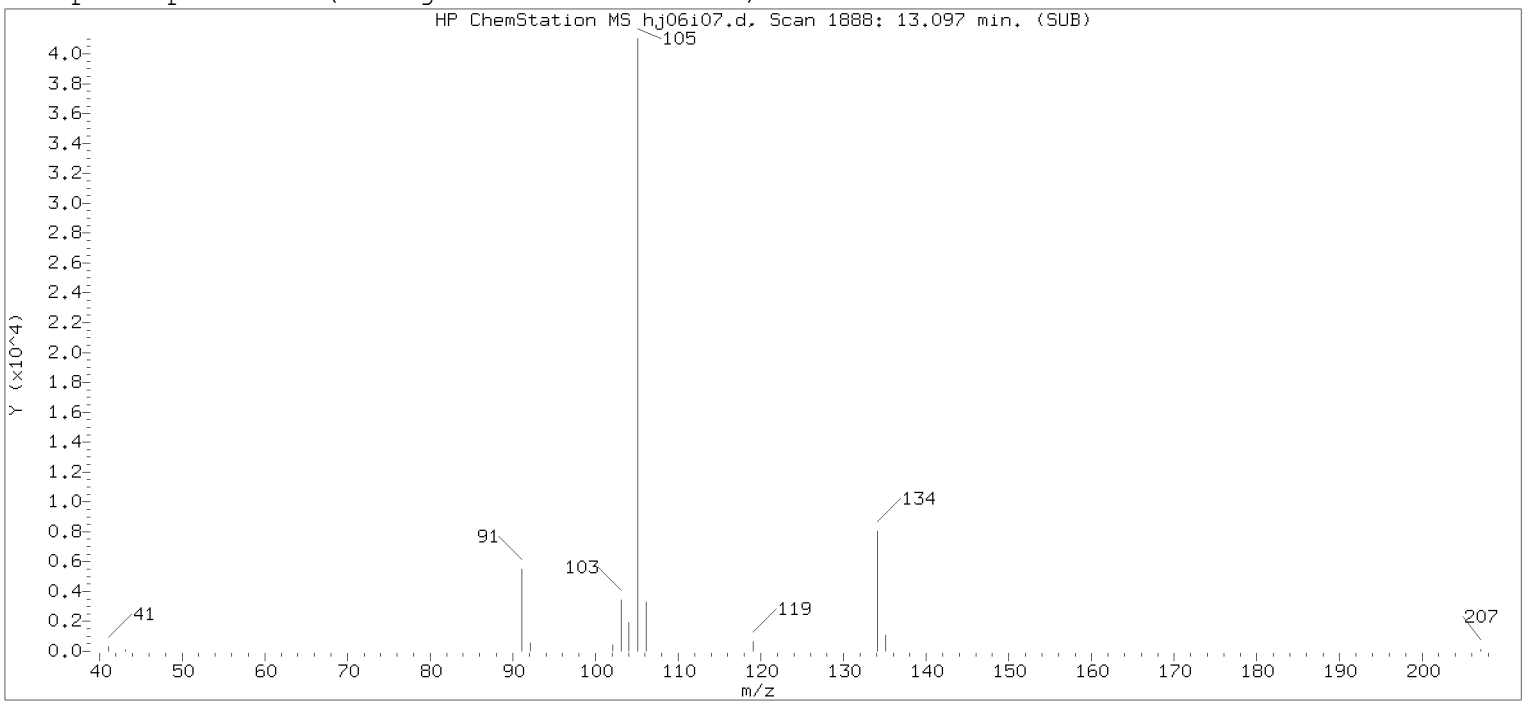
Compound Number : 129
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 56997M
On-Column Amount (ng) : 0.1892
Integration start scan : 1881 Integration stop scan: 1895
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

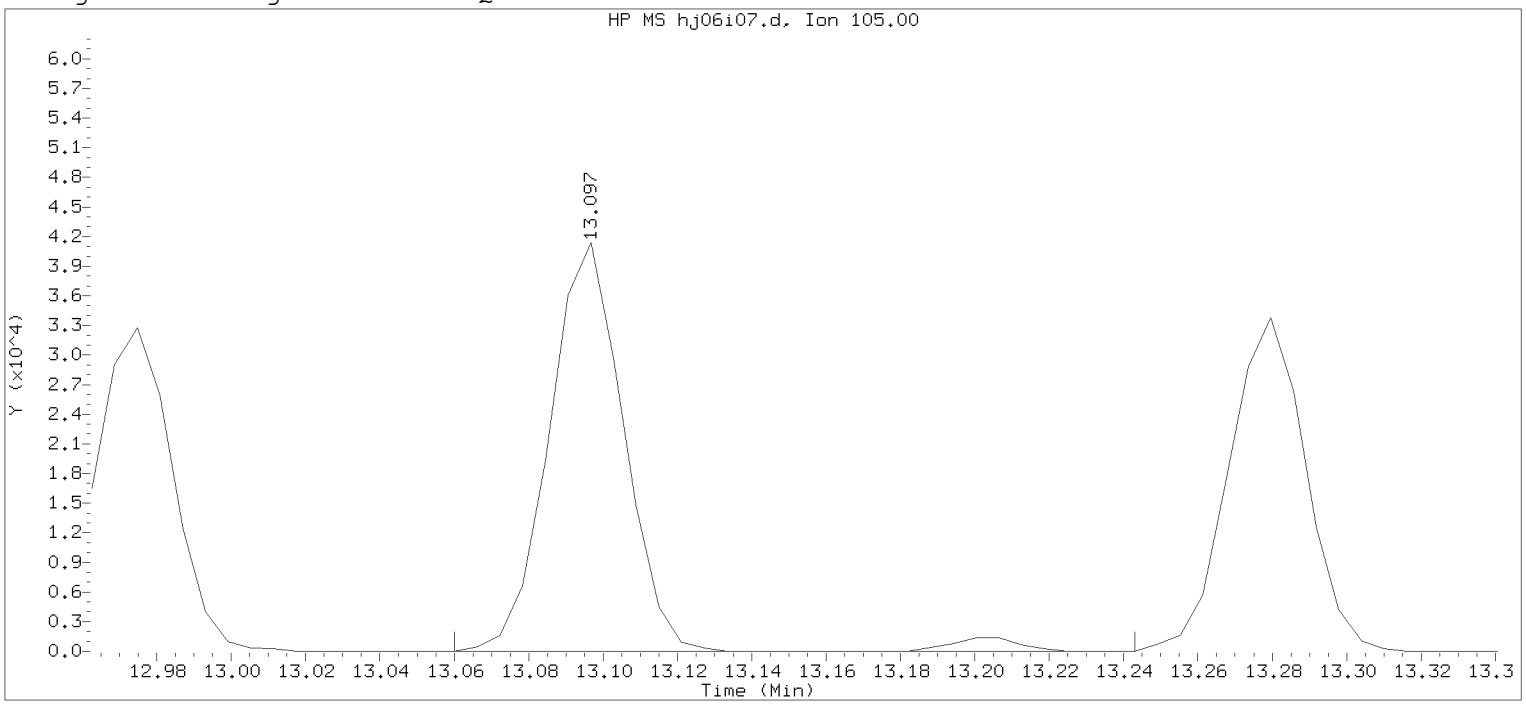
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



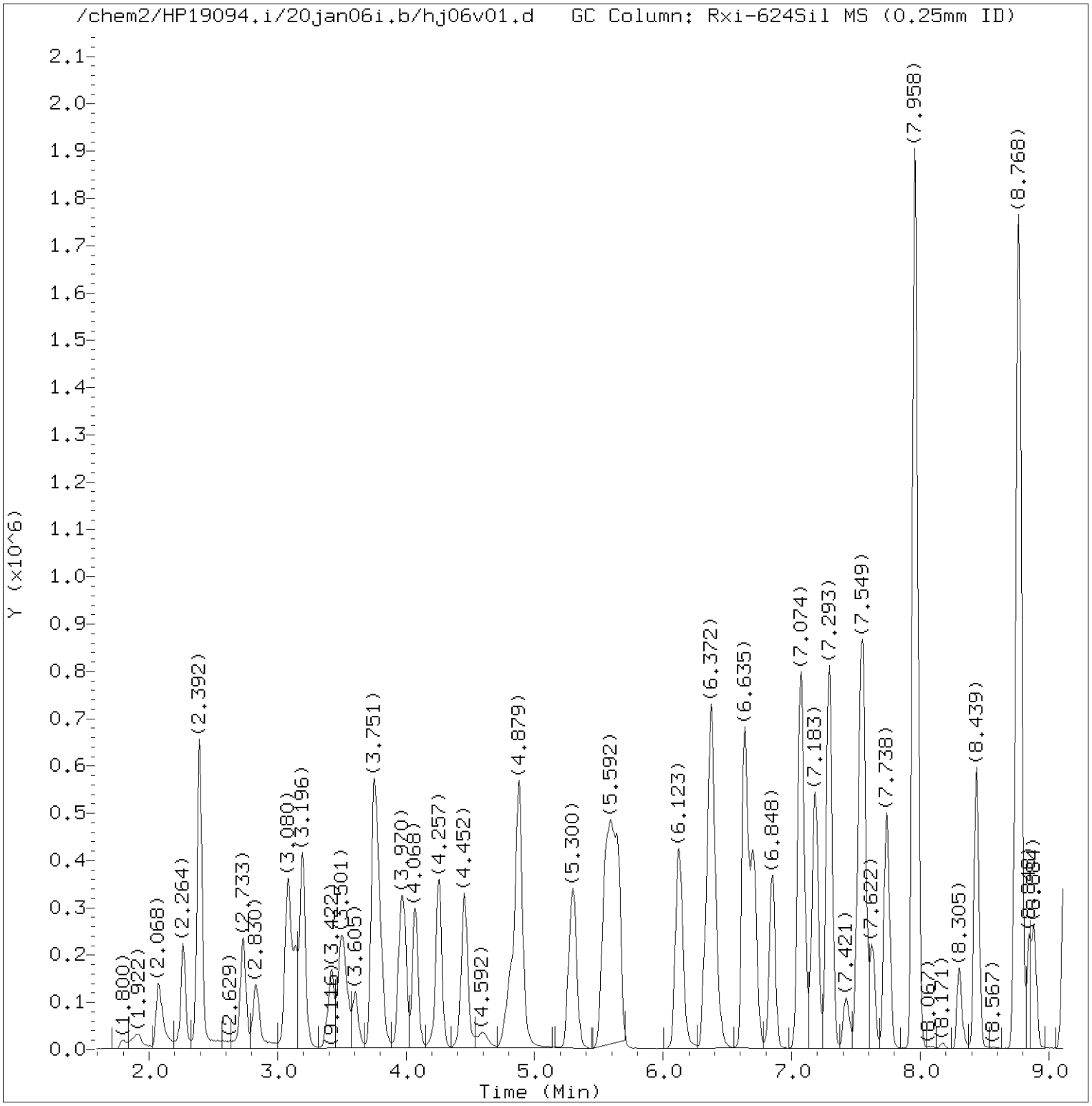
Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 129
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area : 58739
On-column Amount (ng) : 0.1934
Integration start scan : 1881 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user assigned.



Total Ion Chromatogram (TIC)

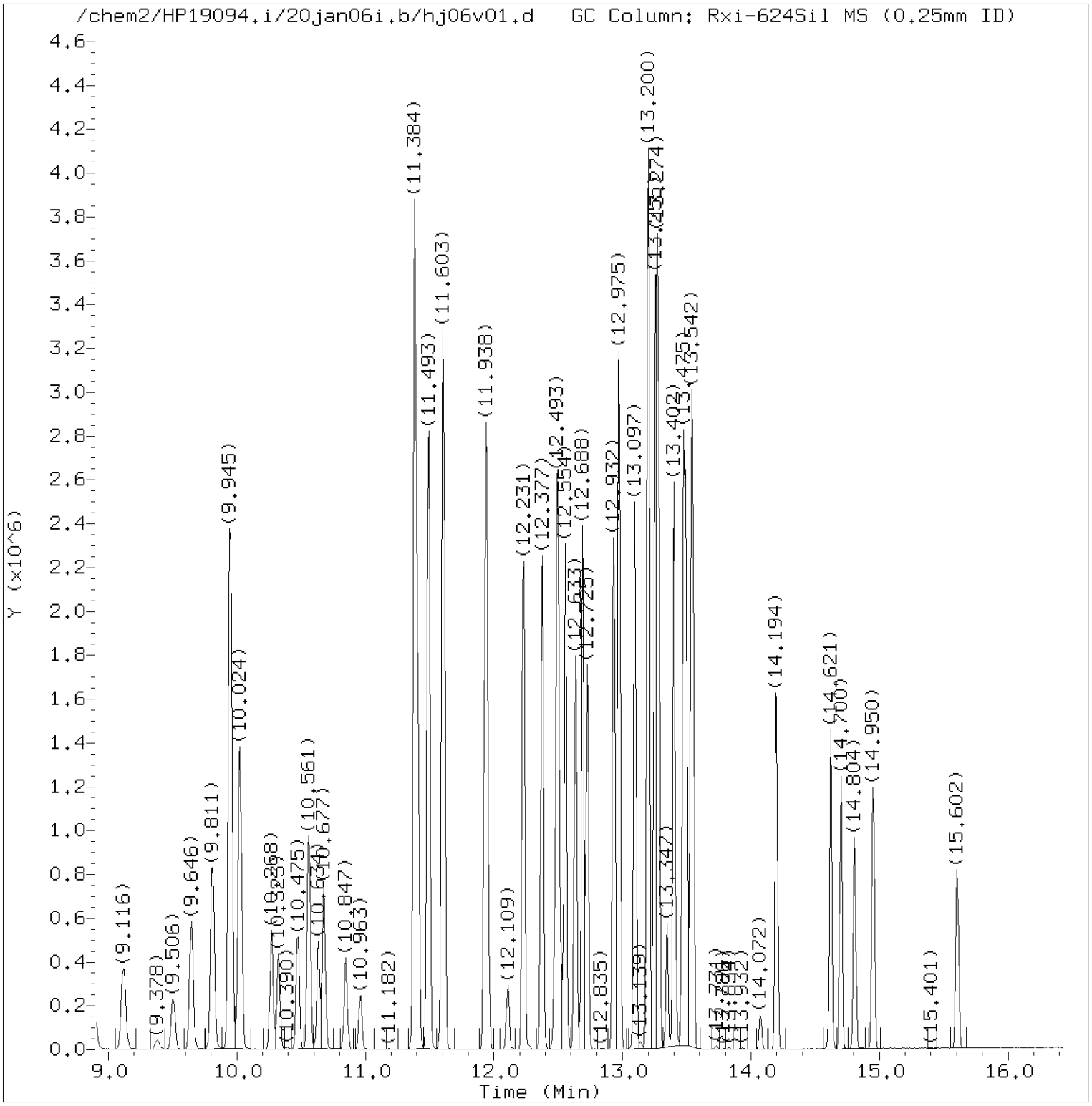
Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	312946M	4.270
2) Chloromethane	(2)	2.264	50	331733	4.585
5) Vinyl Chloride	(2)	2.392	62	333154	4.841
6) 1,3-Butadiene	(2)	2.398	39	297778	5.477
7) Bromomethane	(2)	2.733	94	237855	4.824
8) Chloroethane	(2)	2.830	64	199931	5.016
9) Dichlorofluoromethane	(2)	3.080	67	465314	4.916
10) Trichlorofluoromethane	(2)	3.141	101	423736	5.395
11) Ethyl ether	(2)	3.422	59	175545	5.050
12) Freon 123a	(2)	3.501	67	318598	5.247
13) Acrolein	(1)	3.605	56	194313	36.882
15) 1,1-Dichloroethene	(2)	3.751	96	243211	5.091
16) Freon 113	(2)	3.782	101	261455	5.236
14) Acetone	(1)	3.788	43	242221M	34.072
17) Methyl Iodide	(2)	3.958	142	457754	4.965
18) Bromoethane	(2)	3.989	108	221120M	5.305
19) Carbon Disulfide	(2)	4.068	76	716993	4.906
22) Methyl Acetate	(1)	4.227	43	87739	4.891
23) Allyl Chloride	(2)	4.257	41	388062	4.782
24) Methylene Chloride	(2)	4.452	84	260231	5.061
27)*t-Butyl Alcohol-d10	(1)	4.464	65	116998M	50.000
29) t-Butyl Alcohol	(1)	4.592	59	120368	48.742
30) Acrylonitrile	(1)	4.806	53	219540	25.307
31) Methyl Tertiary Butyl Ether	(2)	4.861	73	570006	5.219
32) trans-1,2-Dichloroethene	(2)	4.885	96	264736	5.041
33) n-Hexane	(2)	5.300	57	378770	5.114
34) 1,1-Dichloroethane	(2)	5.537	63	491073	5.179
35) di-Isopropyl Ether	(2)	5.592	45	793854	5.083
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	420278	5.177
41) 1,2-Dichloroethene (Total)	(2)		96	581205	10.464
38) Ethyl t-butyl ether	(2)	6.123	59	751383	5.125
39) 2-Butanone	(1)	6.324	43	411075	36.981
40) cis-1,2-Dichloroethene	(2)	6.372	96	316469	5.423
42) 2,2-Dichloropropane	(2)	6.385	77	411925	5.106
43) Propionitrile	(1)	6.415	54	117128	38.467
46) Methacrylonitrile	(1)	6.635	67	432272	39.694
48) Bromochloromethane	(2)	6.702	128	119932	4.868
49) Tetrahydrofuran	(1)	6.708	71	81302	26.474

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.848	83	487364	5.267
51)$Dibromofluoromethane	(2)	7.067	113	491795	10.118
52) 1,1,1-Trichloroethane	(2)	7.086	97	437394	5.083
53) Cyclohexane	(2)	7.183	56	459015	4.994
56) 1,1-Dichloropropene	(2)	7.293	75	376002	5.170
55) Carbon Tetrachloride	(2)	7.293	117	388052	5.259
57) Isobutyl Alcohol	(1)	7.421	41	96355	112.565
58)$1,2-Dichloroethane-d4	(2)	7.519	102	94524	10.034
59) Benzene	(2)	7.555	78	1085702	5.105
60) 1,2-Dichloroethane	(2)	7.628	62	277749M	5.065
61) t-Amyl methyl ether	(2)	7.738	73	651737	5.097
64)*Fluorobenzene	(2)	7.958	96	1955366	10.000
63) n-Heptane	(2)	7.964	43	374113M	4.815
66) n-Butanol	(1)	8.305	56	149877	217.493
68) Trichloroethene	(2)	8.439	95	289520	5.191
70) Methylcyclohexane	(2)	8.750	83	489000	4.894
71) 1,2-Dichloropropane	(2)	8.781	63	272288	5.175
72) Methyl Methacrylate	(1)	8.848	69	116054	5.298
73) 1,4-Dioxane	(1)	8.860	88	17432M	104.882
74) Dibromomethane	(2)	8.884	93	123299	5.126
75) Bromodichloromethane	(2)	9.122	83	343766	5.258
77) 2-Nitropropane	(1)	9.378	41	36462M	5.067
80) 1-Bromo-2-chloroethane	(2)	9.506	63	253199M	5.119
81) cis-1,3-Dichloropropene	(2)	9.646	75	400425	5.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	697252	25.450
83)$Toluene-d8	(3)	9.945	98	1944618	10.029
84) Toluene	(3)	10.024	92	699711	5.137
86) 1,3-Dichloropropene (total)	(3)		75	721435	10.264
85) trans-1,3-Dichloropropene	(3)	10.268	75	321010	5.078
87) Ethyl Methacrylate	(3)	10.323	69	243318	4.965
89) 1,1,2-Trichloroethane	(3)	10.475	97	177313	5.181
90) Tetrachloroethene	(3)	10.561	166	325053	5.251
91) 1,3-Dichloropropane	(3)	10.634	76	297803	5.065
92) 2-Hexanone	(1)	10.677	43	493986	26.387
94) Dibromochloromethane	(3)	10.847	129	232732	5.311
96) 1,2-Dibromoethane	(3)	10.963	107	169893	5.195
97) 1-Chlorohexane	(3)	11.384	91	397229	4.837
98)*Chlorobenzene-d5	(3)	11.384	117	1455329	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

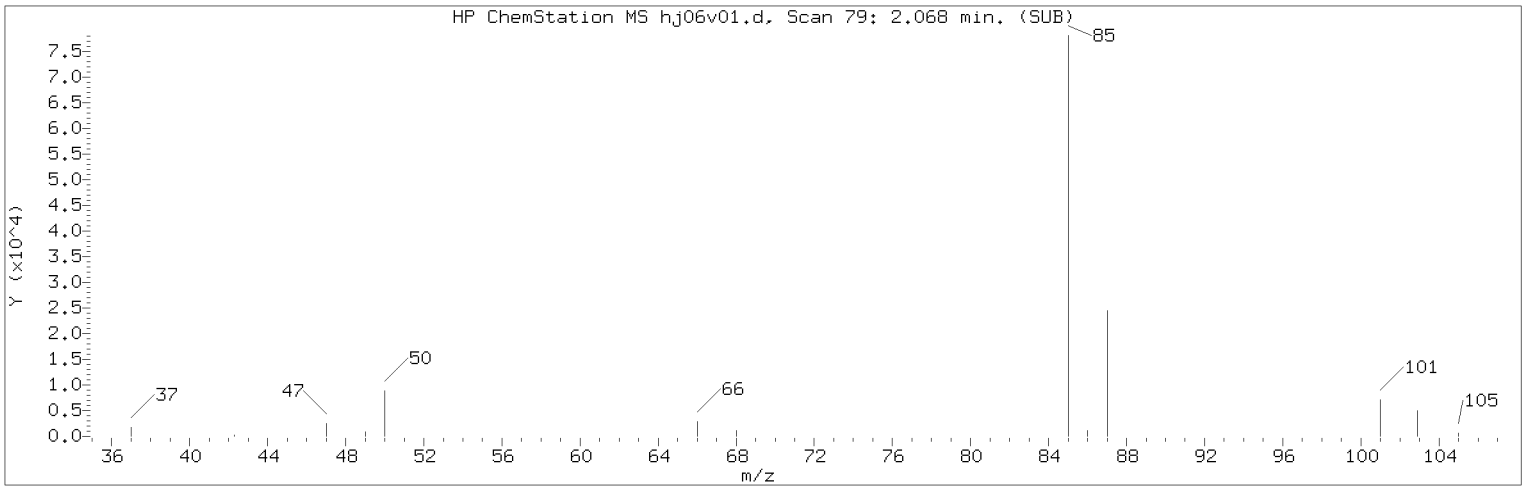
Sample Name: ICVH00 Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
99) Chlorobenzene	(3)	11.408	112	767246	5.156
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	270472	5.110
101) Ethylbenzene	(3)	11.493	91	1370398	5.113
102) m+p-Xylene	(3)	11.603	106	1064975	10.392
106) Xylene (Total)	(3)		106	1584607	15.548
105) o-Xylene	(3)	11.932	106	519632	5.156
107) Styrene	(3)	11.945	104	854957	5.228
108) Bromoform	(3)	12.109	173	131963	5.167
109) Isopropylbenzene	(3)	12.231	105	1427155	5.225
112)$4-Bromofluorobenzene	(3)	12.377	95	715490	9.974
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	205652	5.125
115) Bromobenzene	(4)	12.493	156	313664	5.171
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	274302	26.653
117) 1,2,3-Trichloropropane	(4)	12.524	110	57312M	5.333
118) n-Propylbenzene	(4)	12.554	91	1664747	5.256
120) 2-Chlorotoluene	(4)	12.633	126	324946	5.200
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1189822	5.178
123) 4-Chlorotoluene	(4)	12.725	126	321514	5.155
126) tert-Butylbenzene	(4)	12.932	134	248450	5.228
127) Pentachloroethane	(4)	12.969	167	199764	4.932
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1209946	5.099
129) sec-Butylbenzene	(4)	13.097	105	1556811	5.229
133) p-Isopropyltoluene	(4)	13.200	119	1334943	5.210
132) 1,3-Dichlorobenzene	(4)	13.200	146	622186	5.147
134)*1,4-Dichlorobenzene-d4	(4)	13.255	152	768618	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	615335	5.218
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	494653	4.999
137) Benzyl Chloride	(4)	13.347	126	76618	4.542
139) n-Butylbenzene	(4)	13.493	92	656303	5.181
140) 1,2-Dichlorobenzene	(4)	13.530	146	556271	5.220
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	31589	5.382
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	489765	5.177
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	411933	5.192
147) Hexachlorobutadiene	(4)	14.700	225	215902	5.214
148) Naphthalene	(4)	14.804	128	709427	5.124
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	351724	5.193

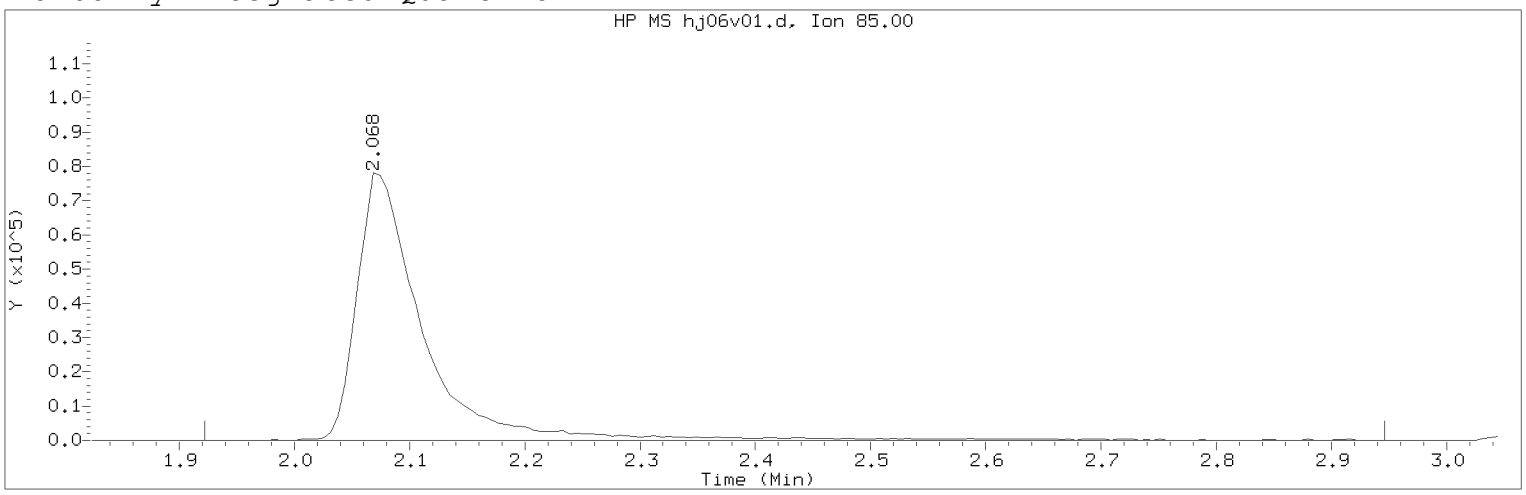
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

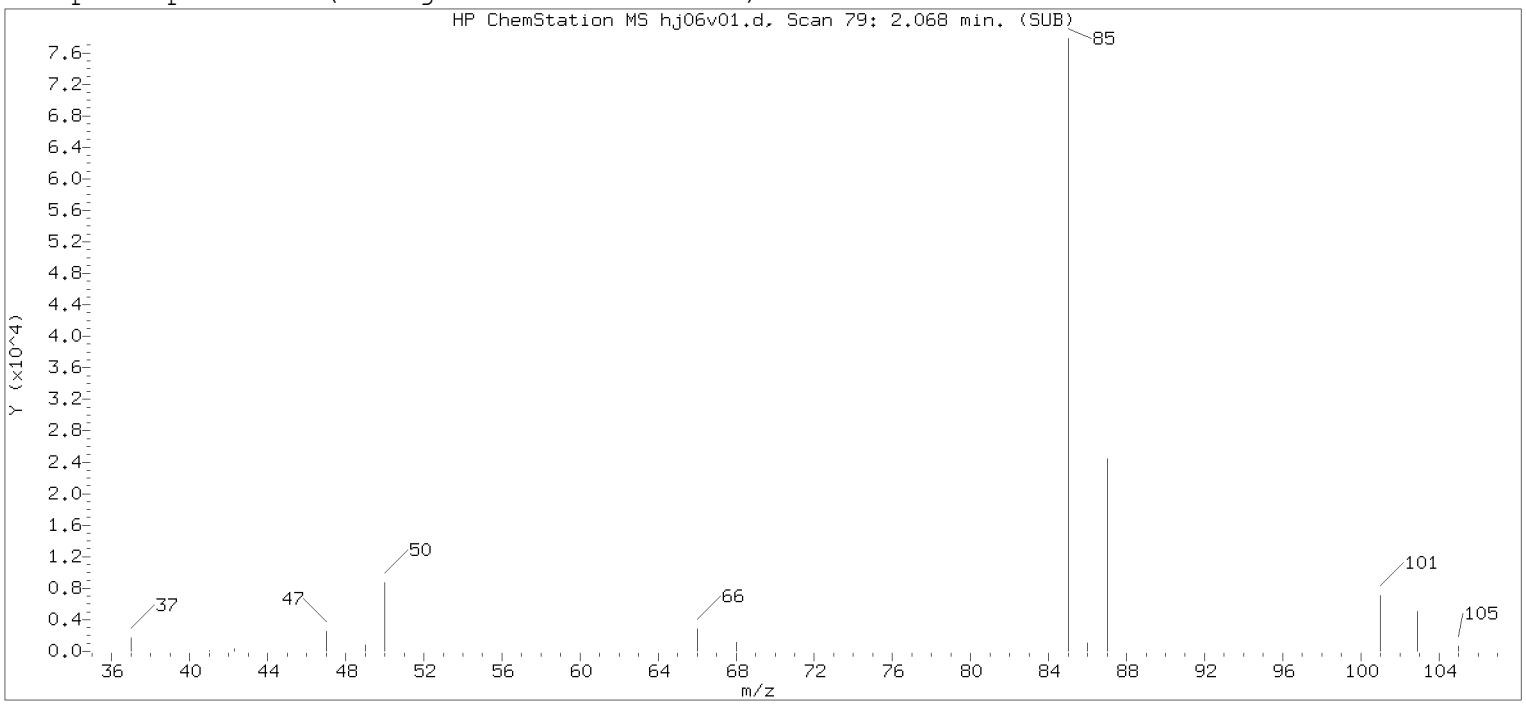
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 79
Retention Time (minutes): 2.068
Quant Ion : 85.00
Area (flag) : 312946M
On-Column Amount (ng) : 4.2695
Integration start scan : 54 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

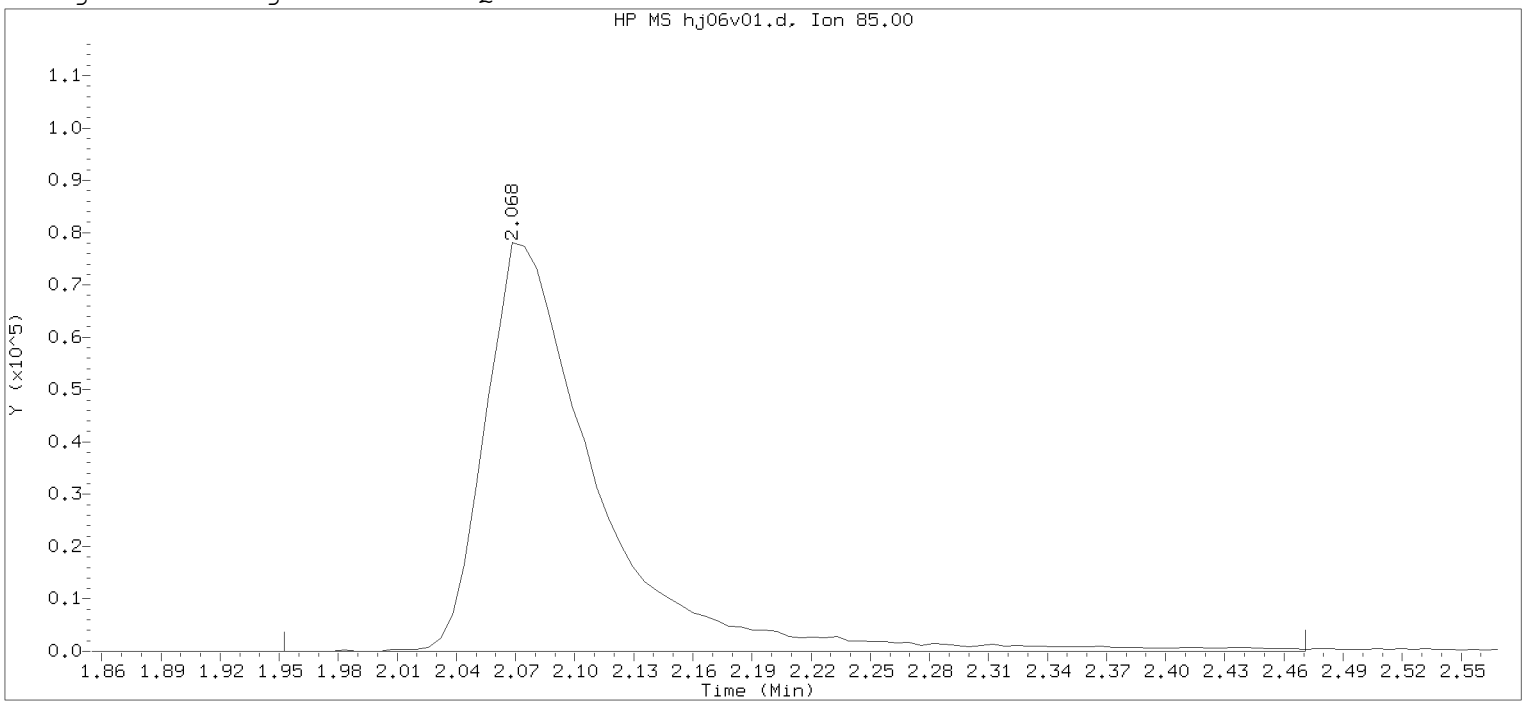
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

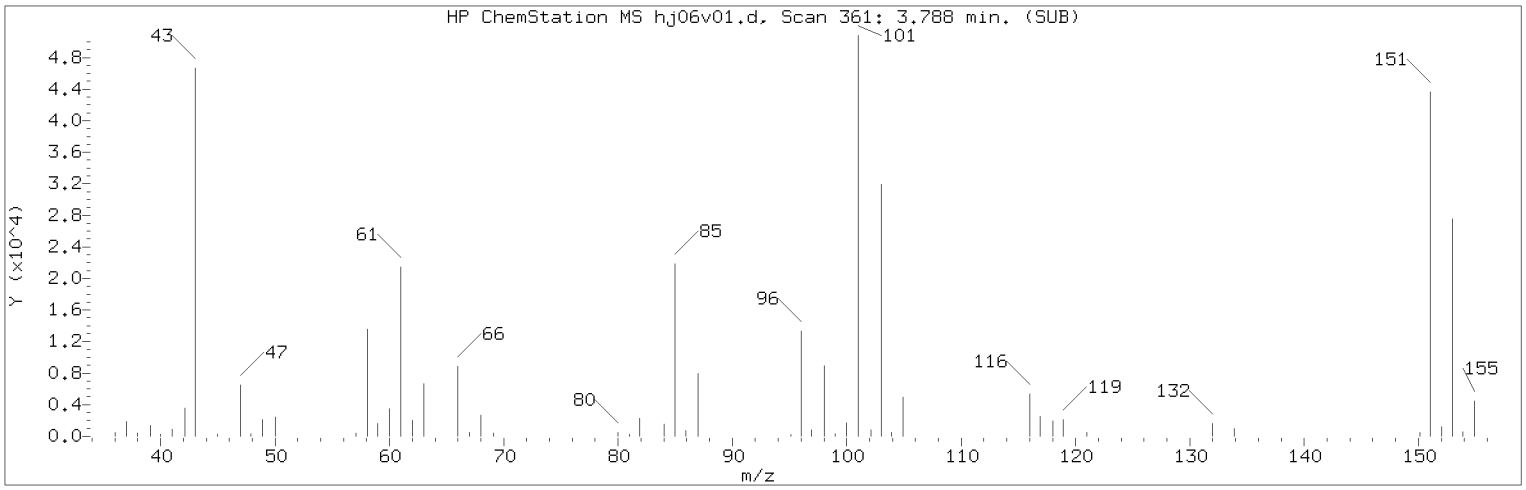
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

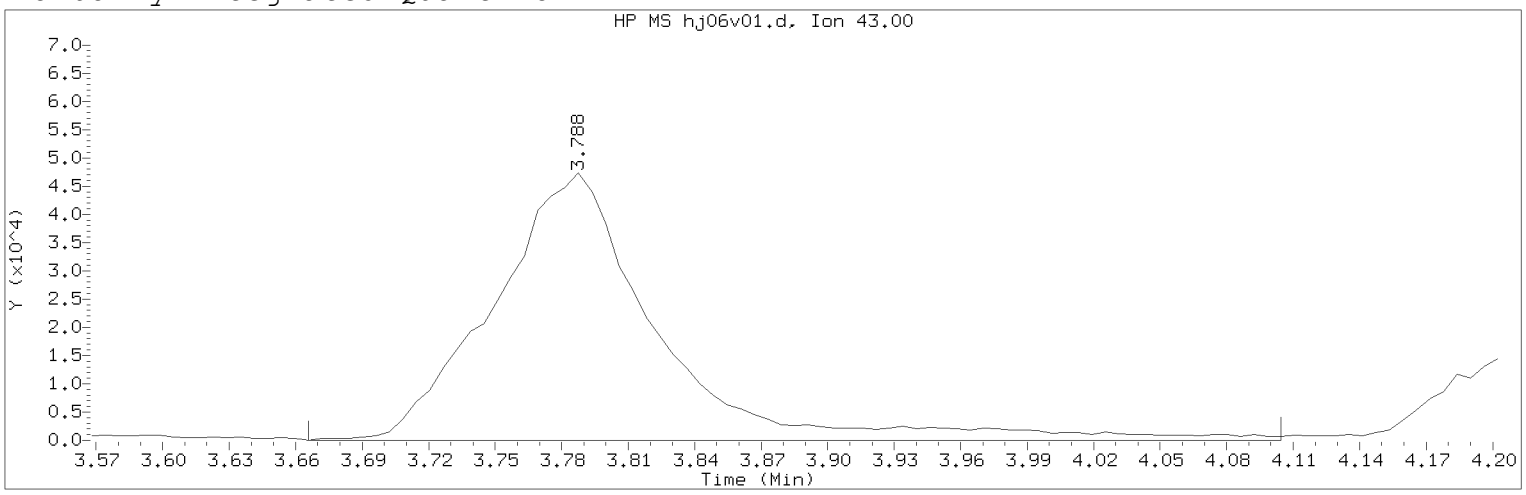
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 79
Retention Time (minutes): 2.068
Quant Ion : 85.00
Area : 306455
On-column Amount (ng) : 4.1810
Integration start scan : 59 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

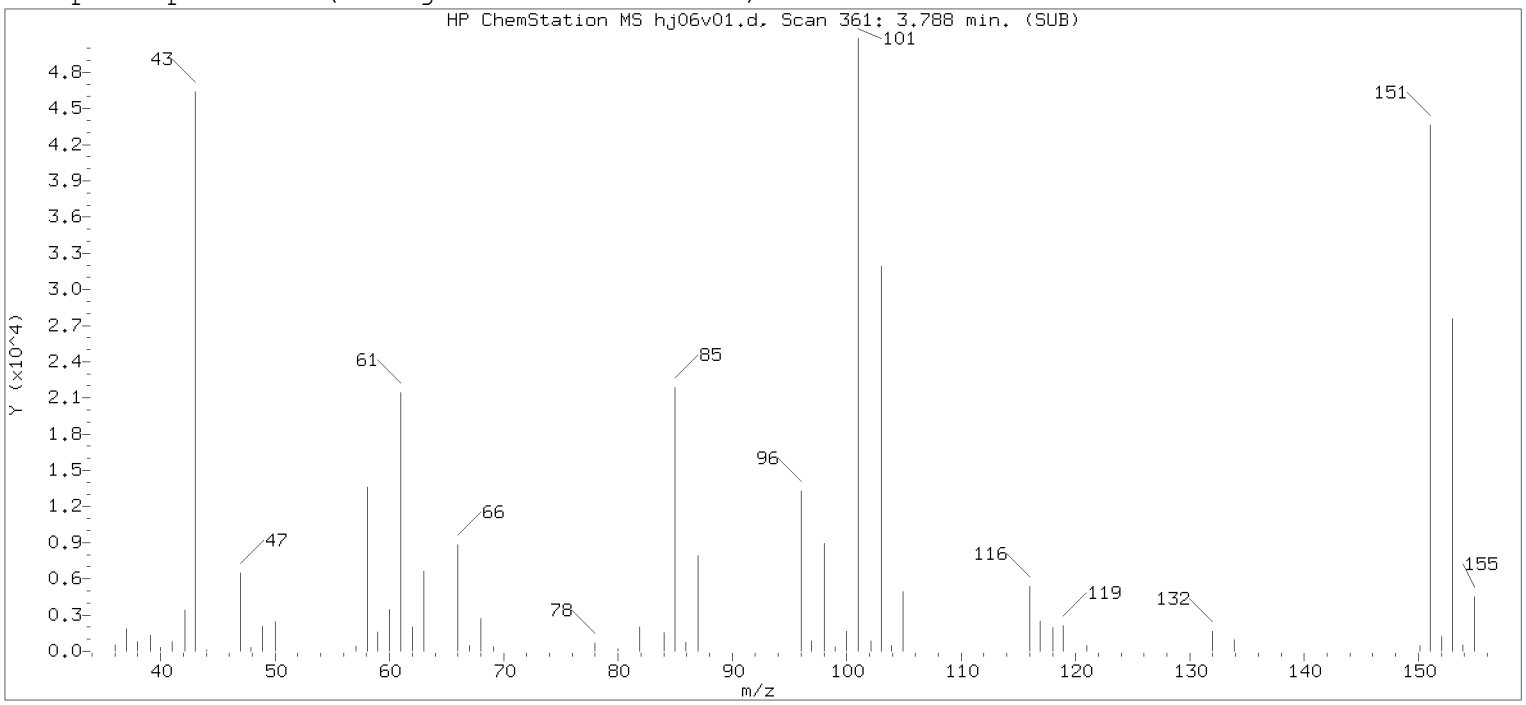
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area (flag) : 242221M
On-Column Amount (ng) : 34.0723
Integration start scan : 340 Integration stop scan: 412
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

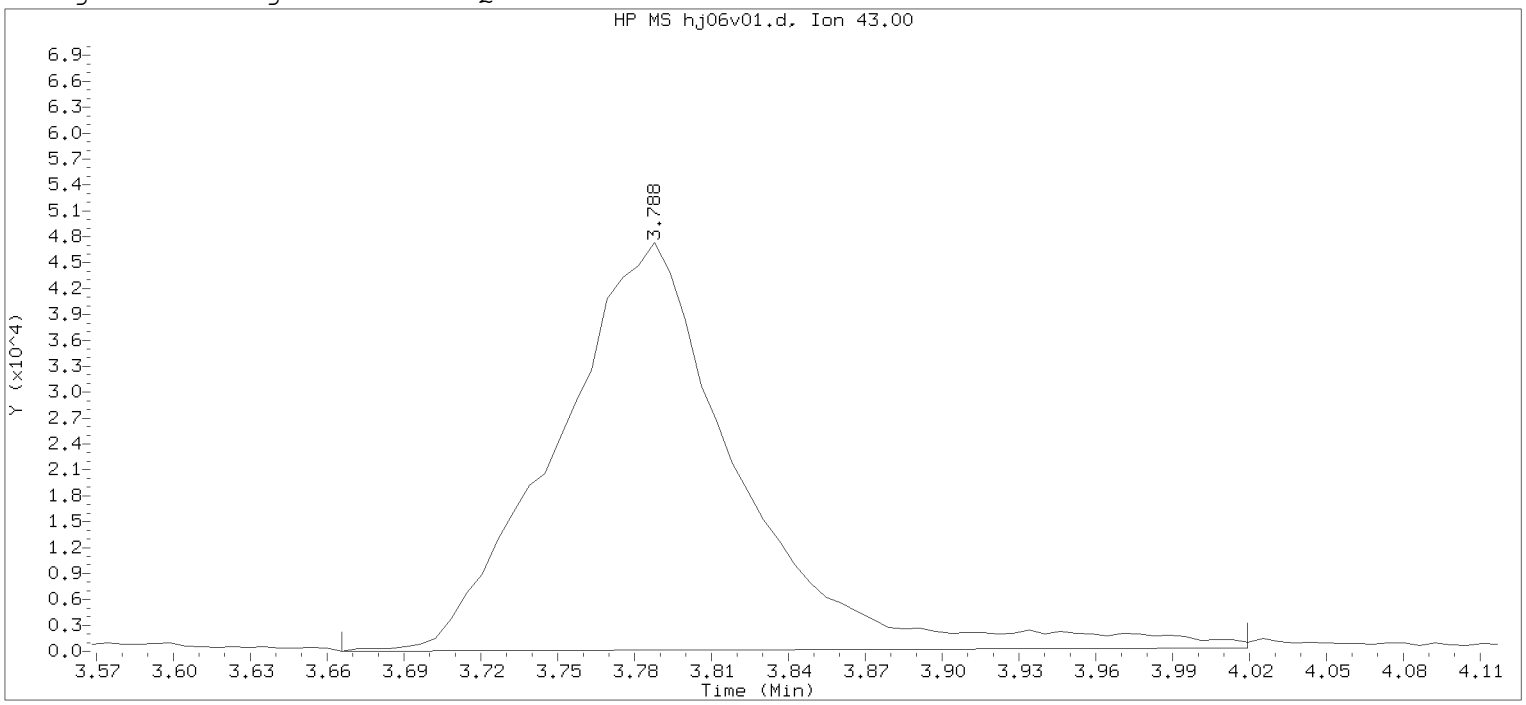
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

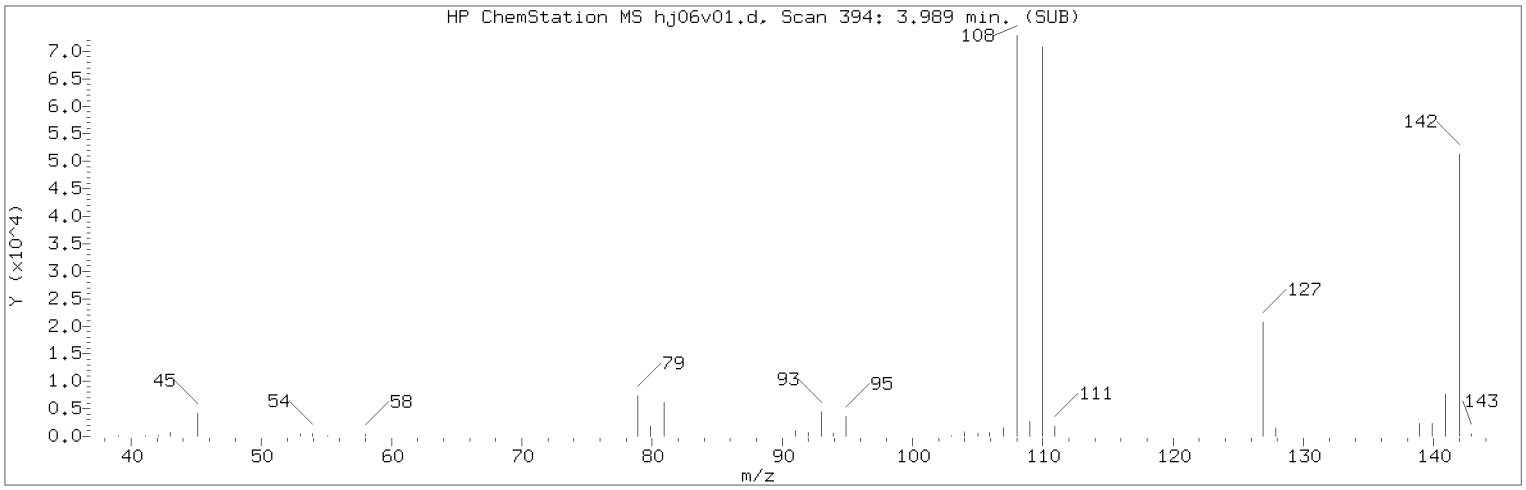
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

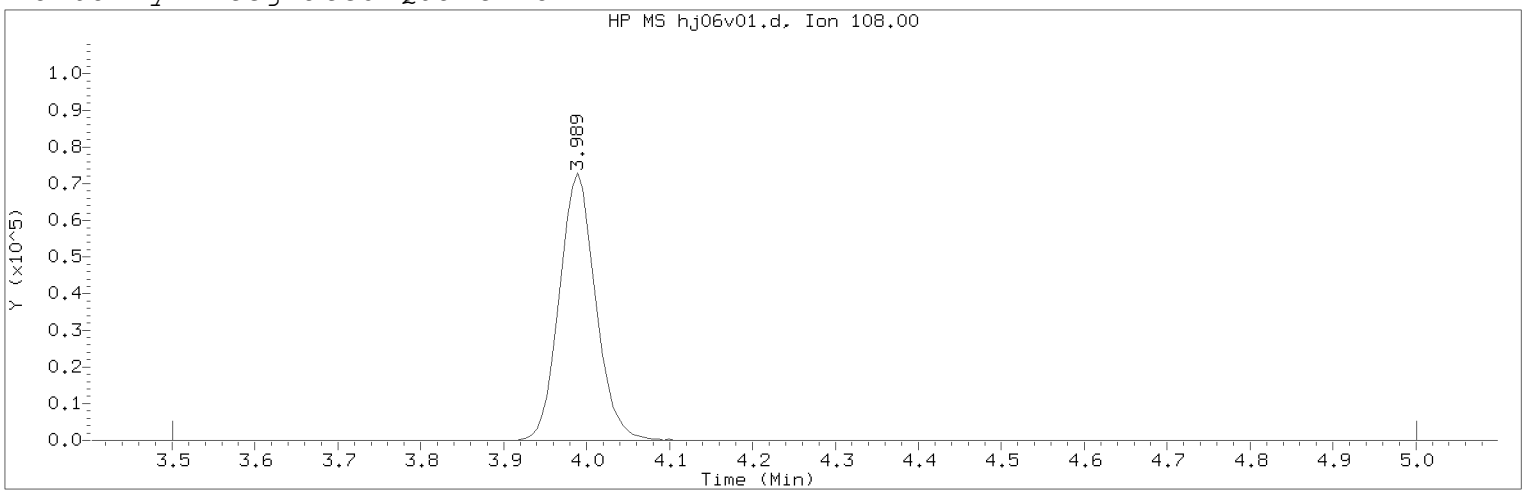
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.788		
Quant Ion	: 43.00		
Area	: 233636		
On-column Amount (ng)	: 33.2885		
Integration start scan	: 340	Integration stop scan:	398
Y at integration start	: 0	Y at integration end:	335

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

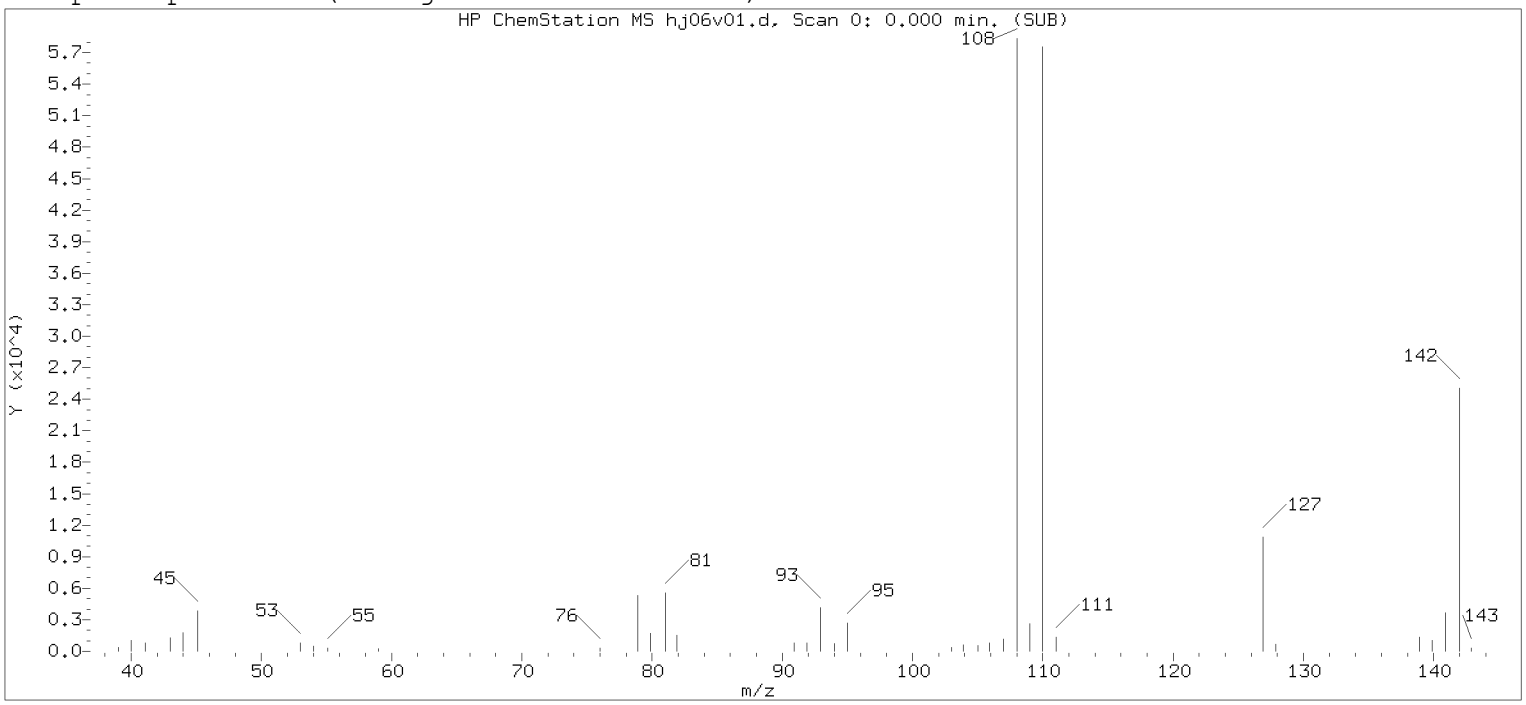
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 108.00
Area (flag) : 221120M
On-Column Amount (ng) : 5.3053
Integration start scan : 313 Integration stop scan: 559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

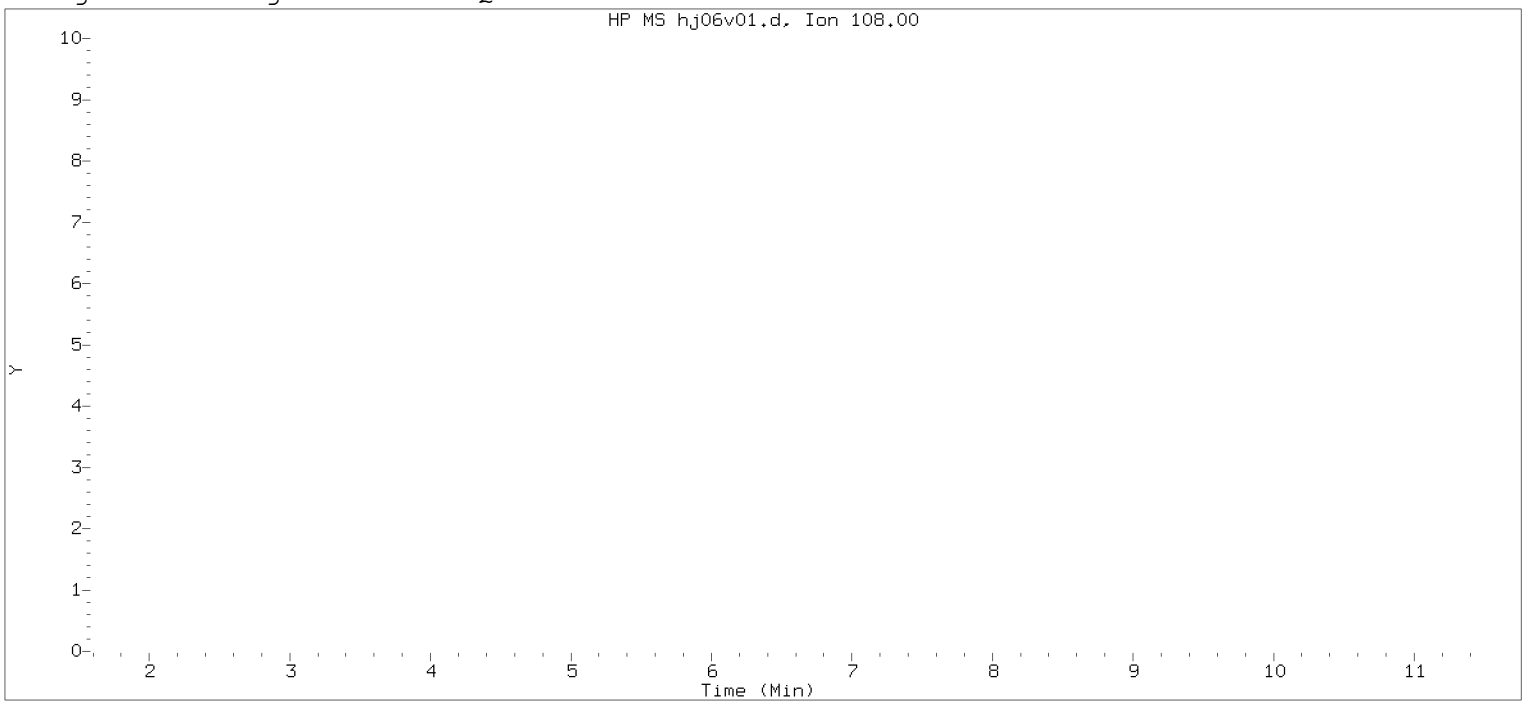
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

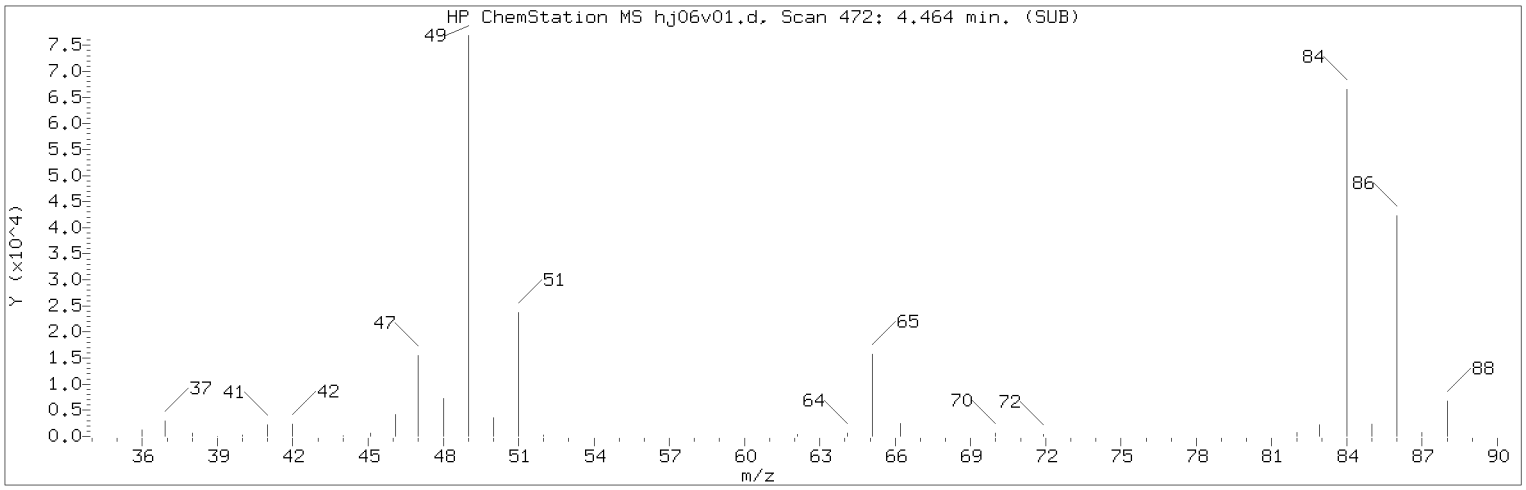
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

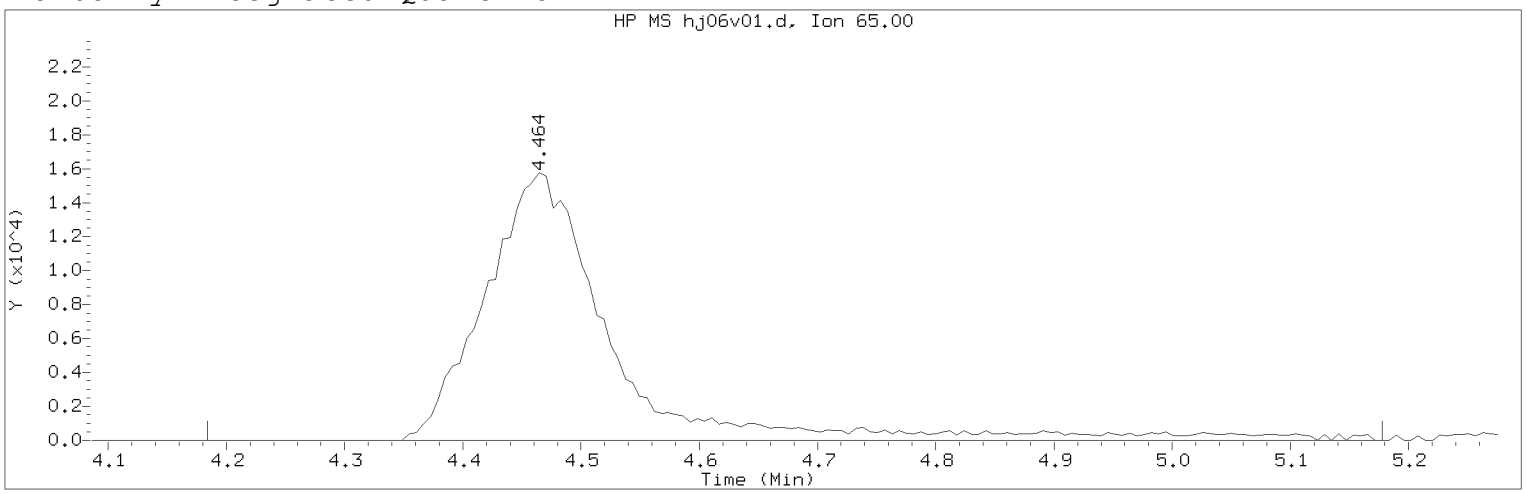
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 1112014848 Integration stop scan: 195124375
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

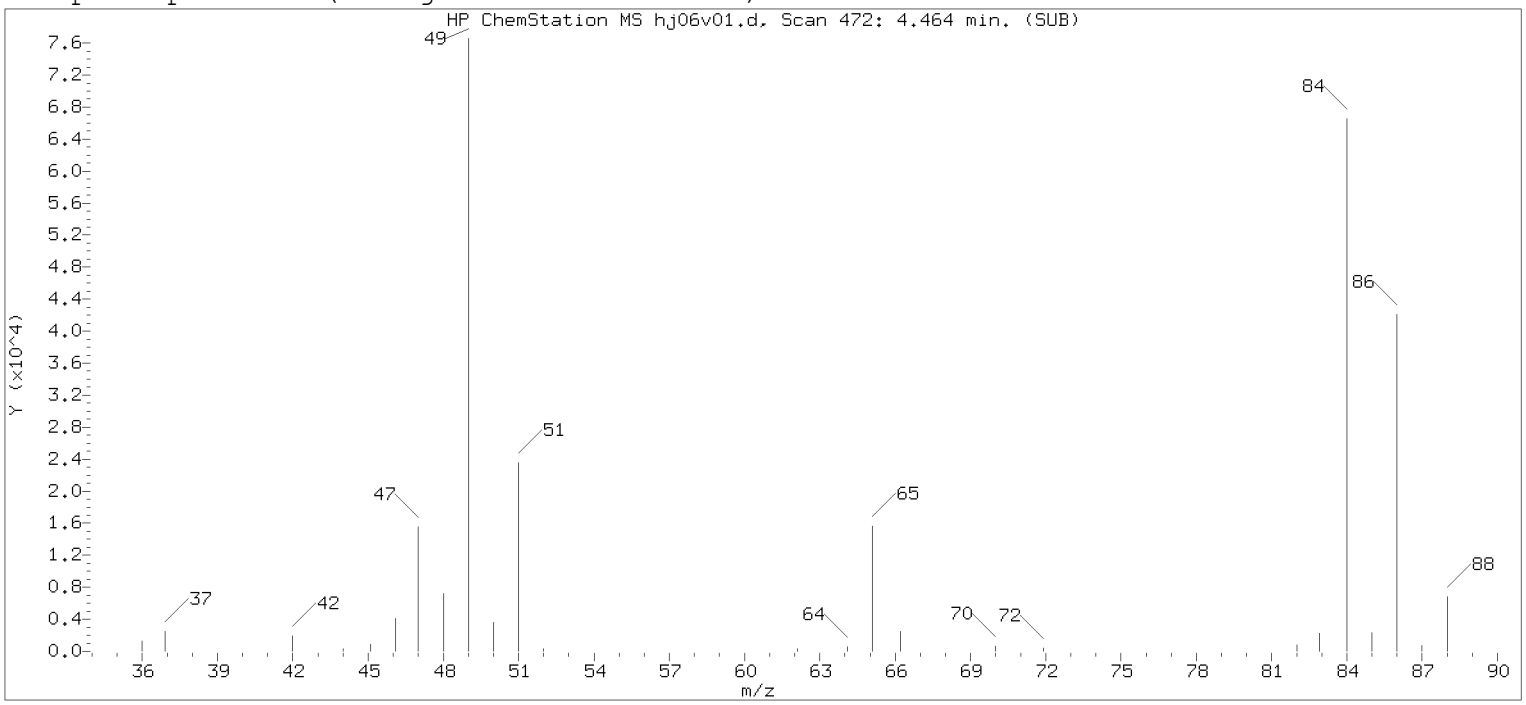
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 116998M
On-Column Amount (ng) : 50.0000
Integration start scan : 425 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

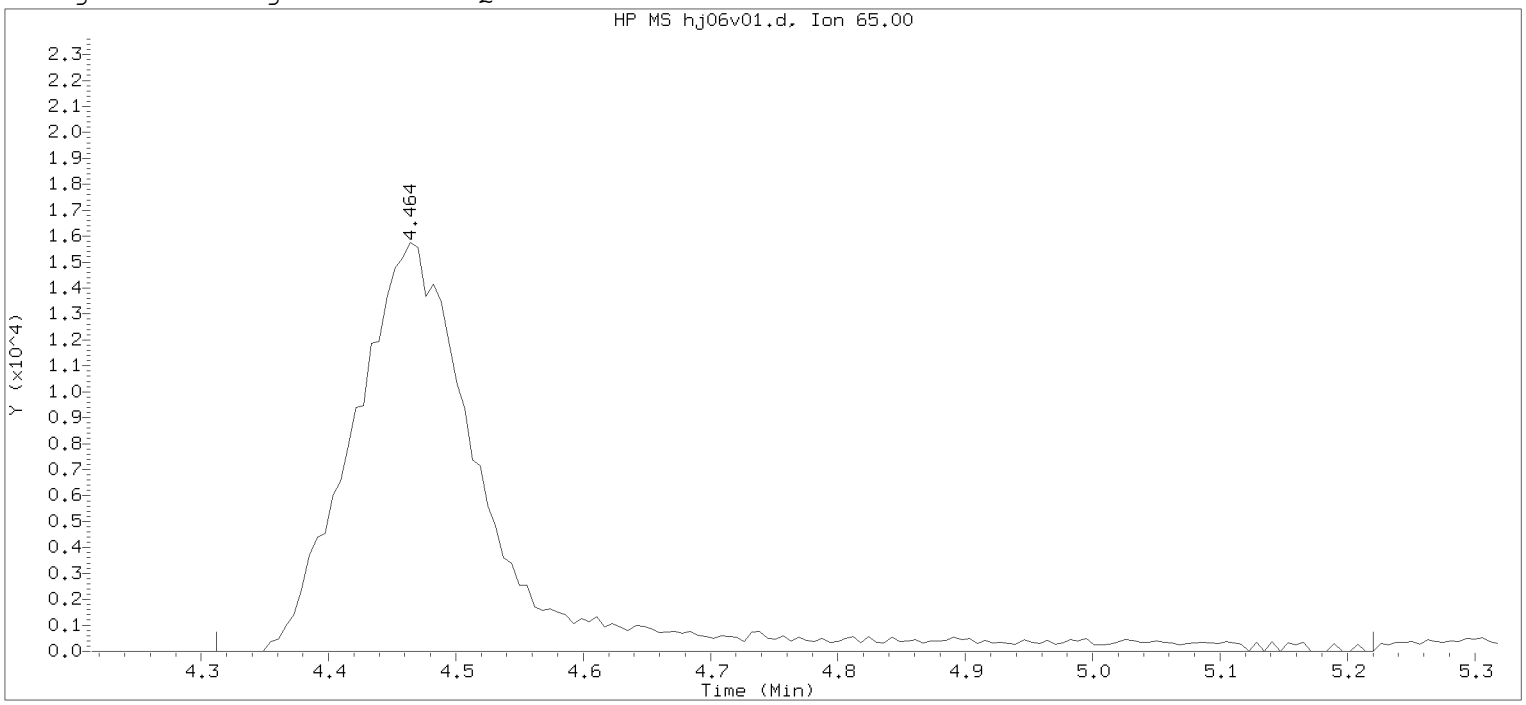
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

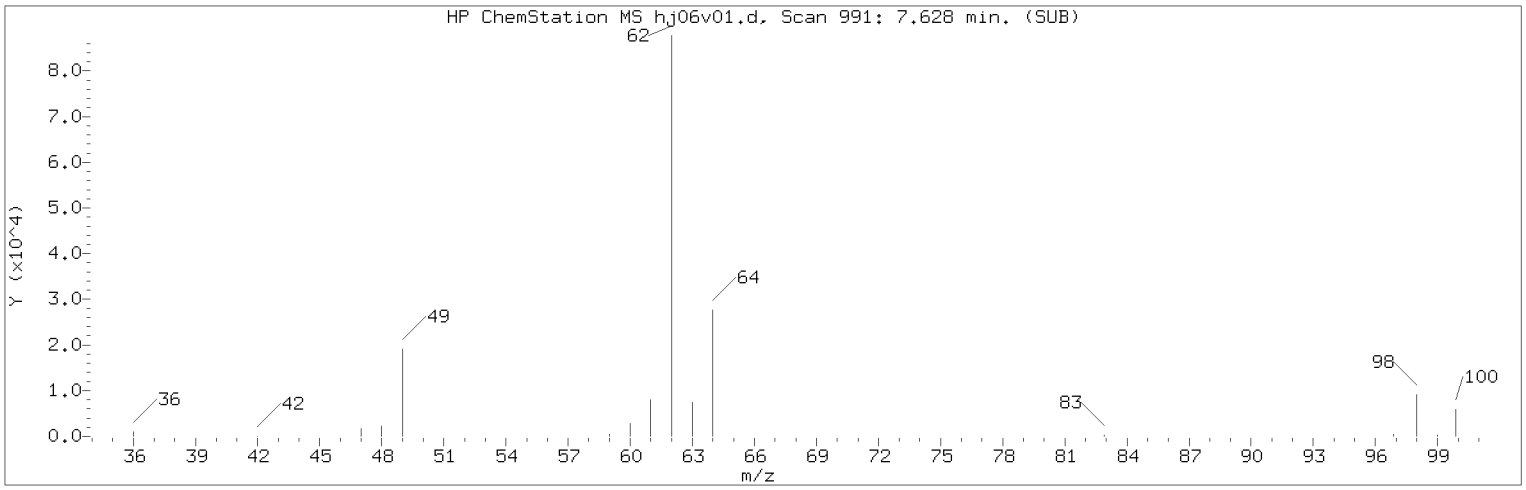
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

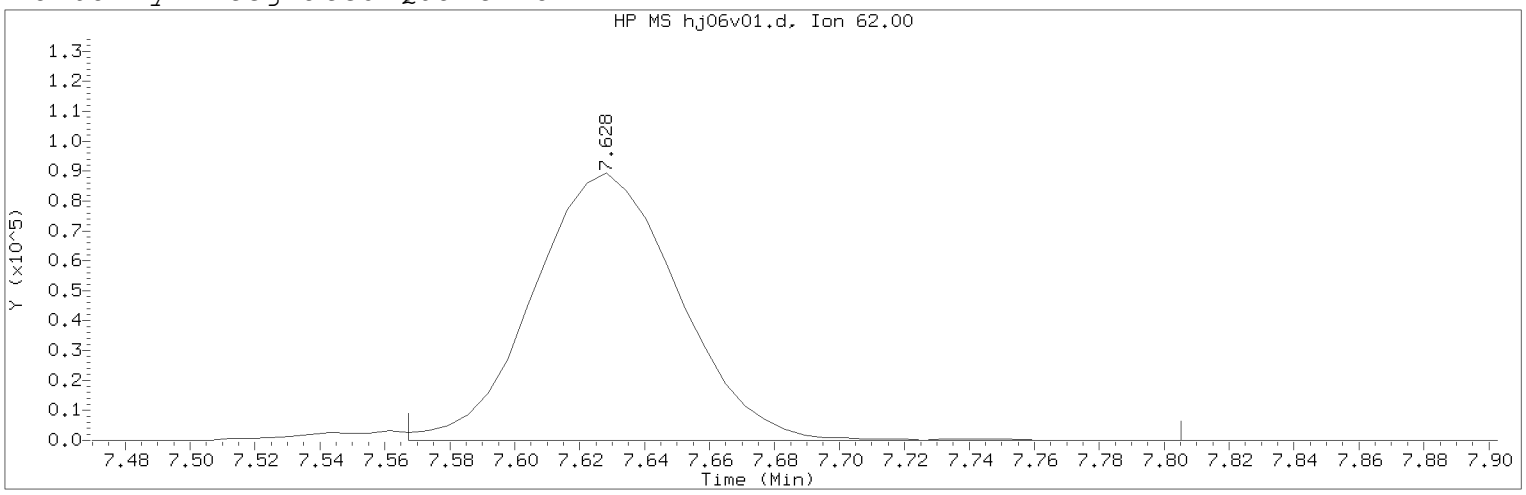
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area : 117211
On-column Amount (ng) : 50.0000
Integration start scan : 446 Integration stop scan: 595
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

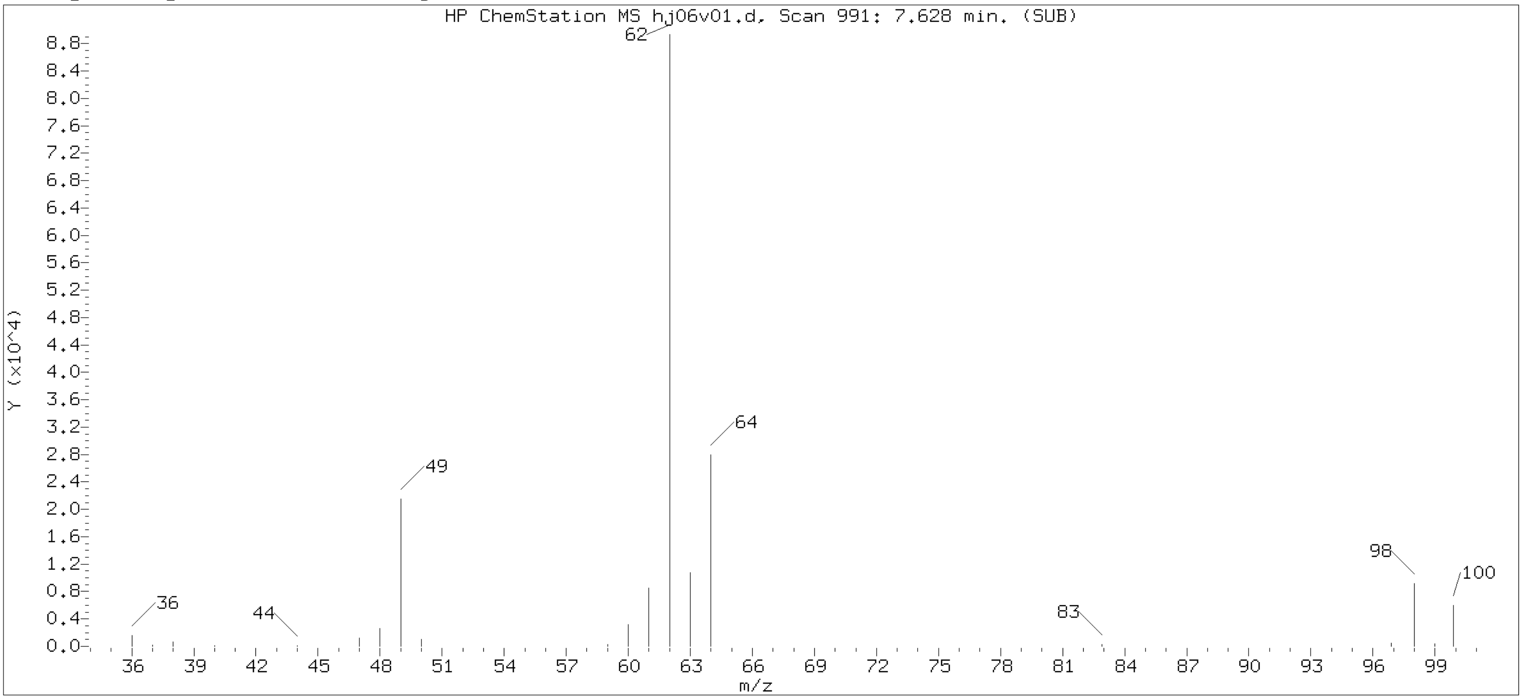
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 277749M
On-Column Amount (ng) : 5.0652
Integration start scan : 980 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

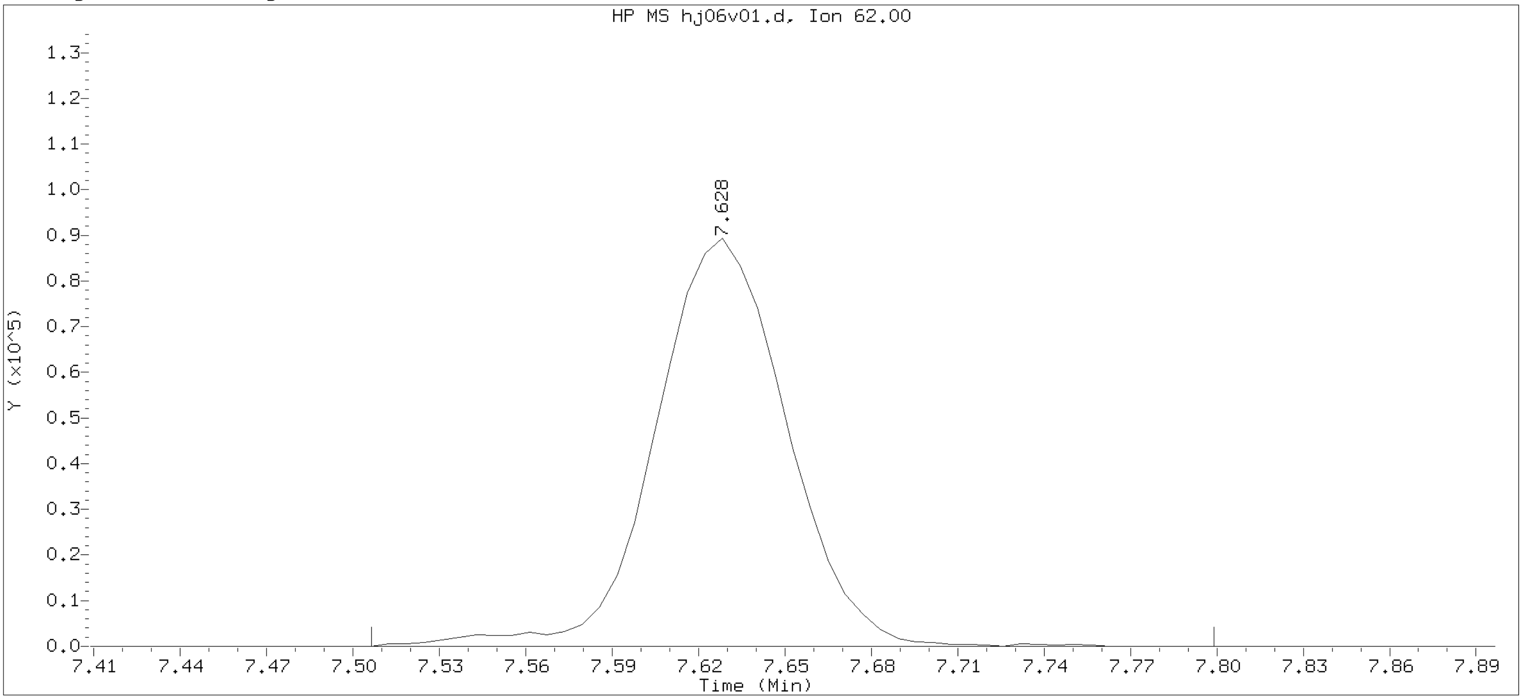
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

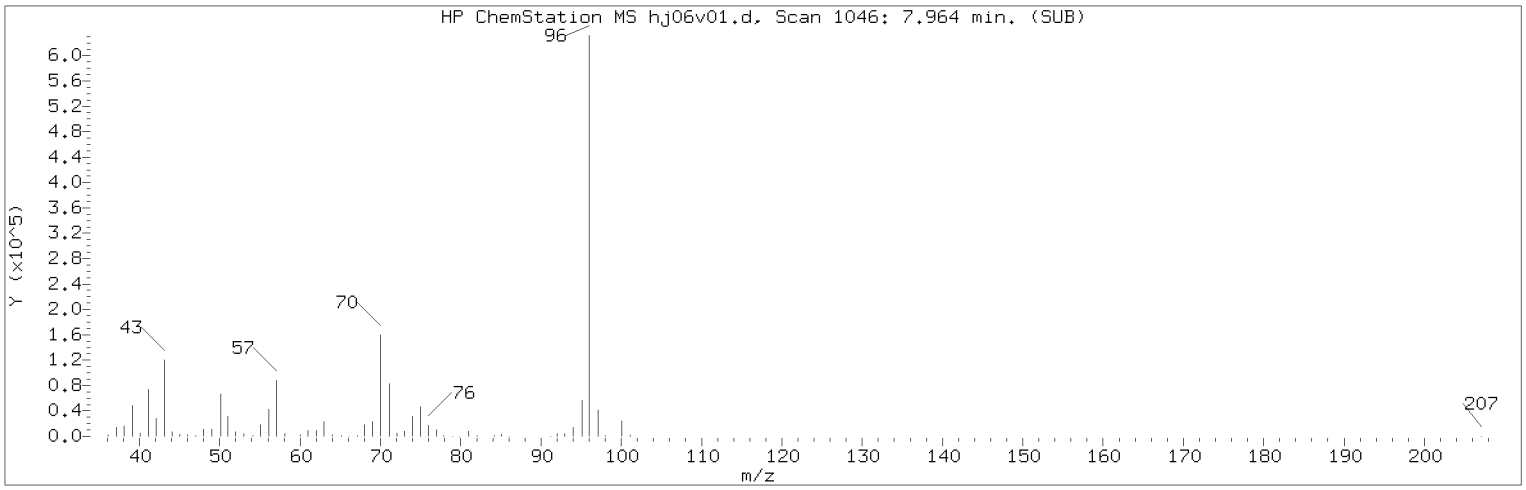
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

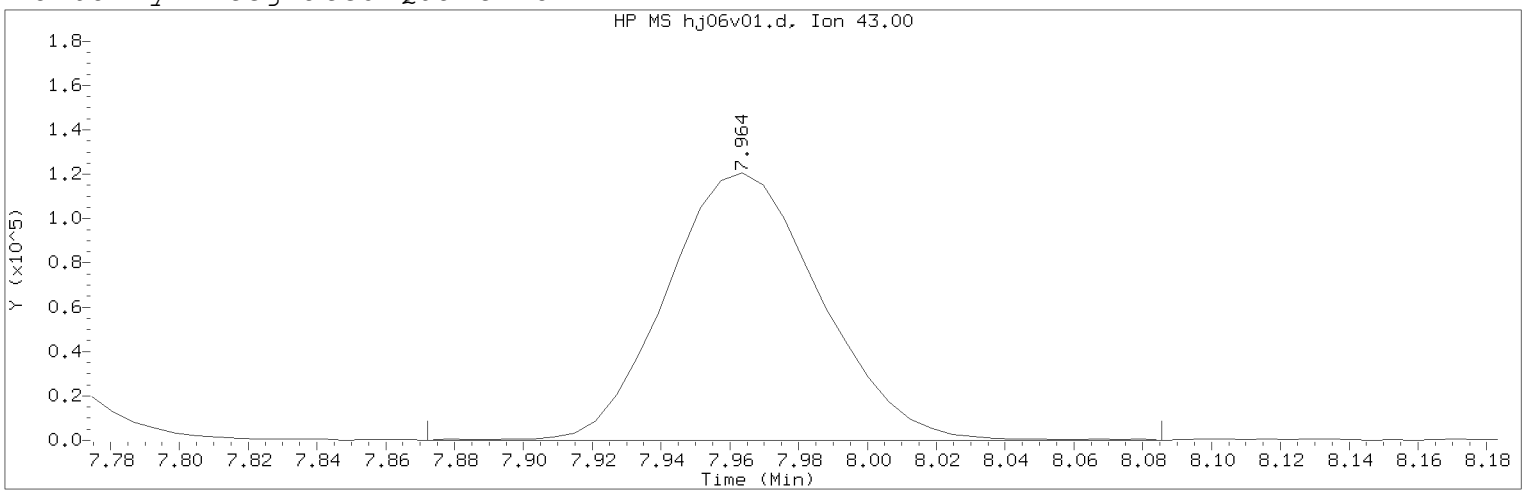
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 283519
On-column Amount (ng) : 5.1704
Integration start scan : 970 Integration stop scan: 1018
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

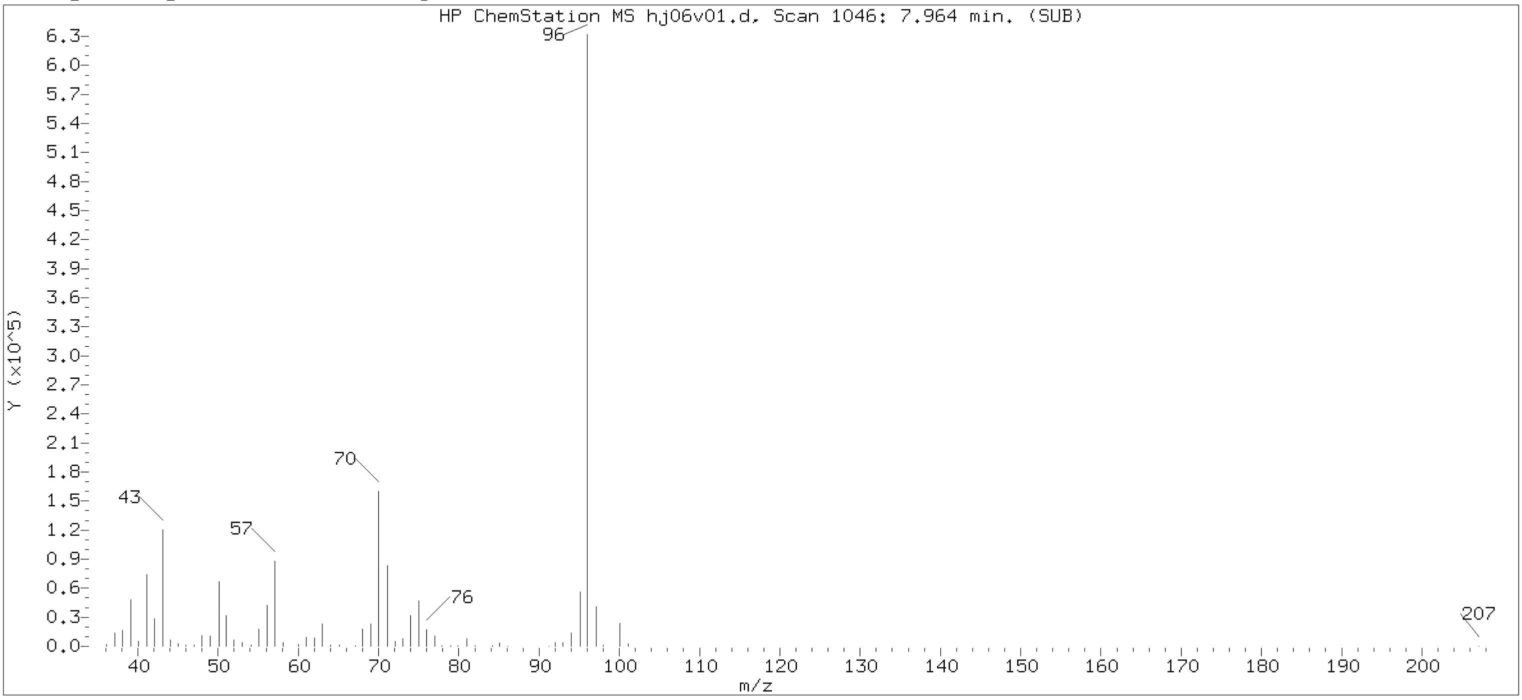
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 374113M
On-Column Amount (ng) : 4.8147
Integration start scan : 1030 Integration stop scan: 1065
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

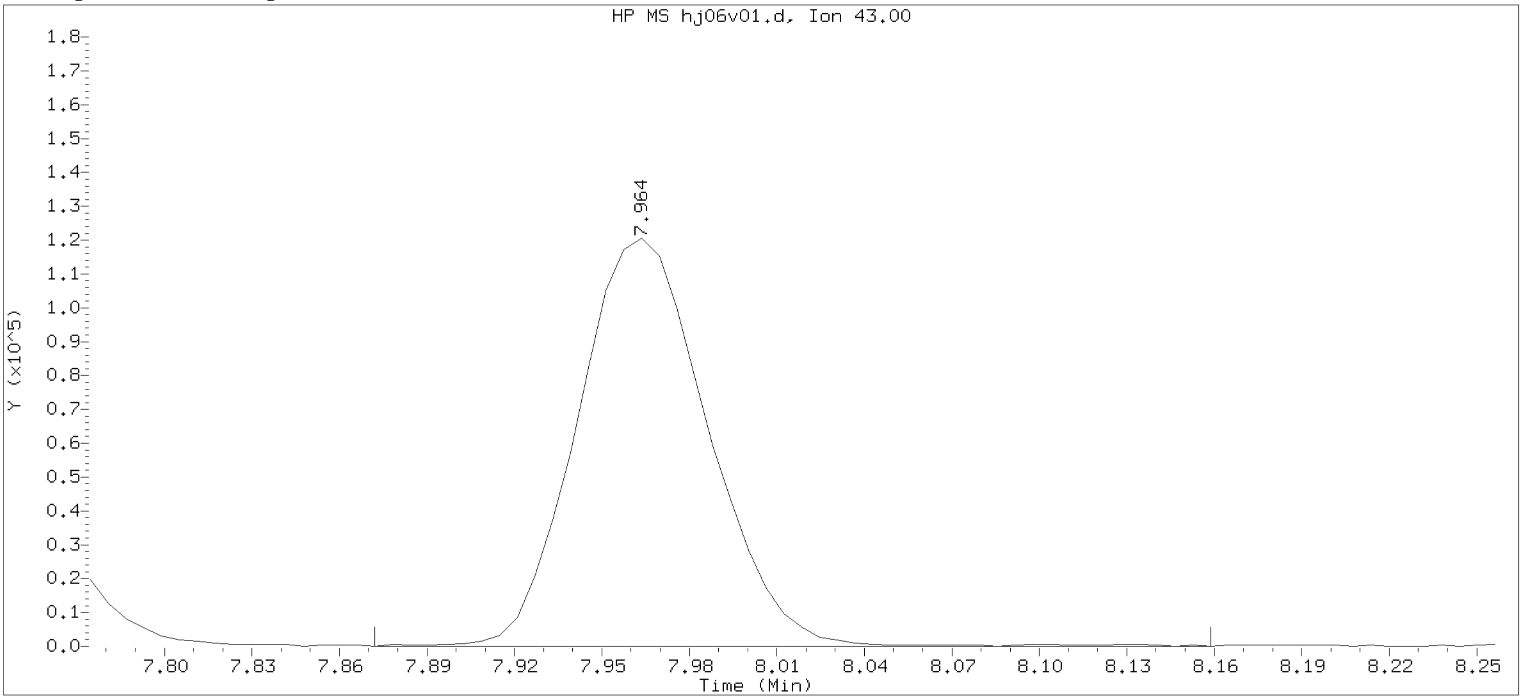
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

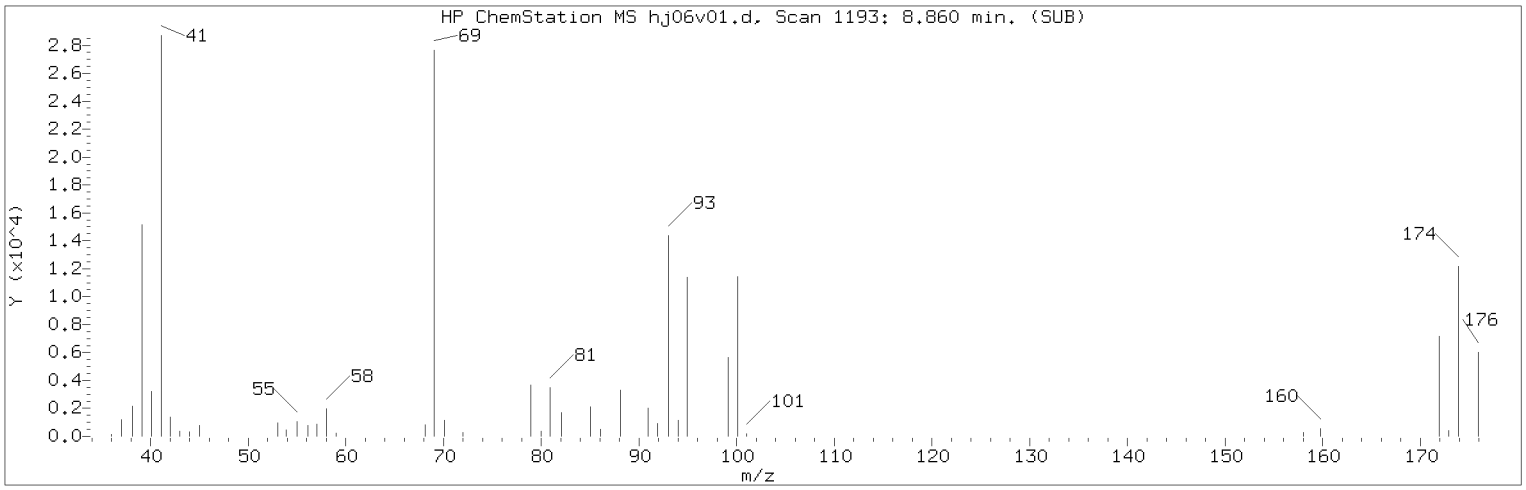
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

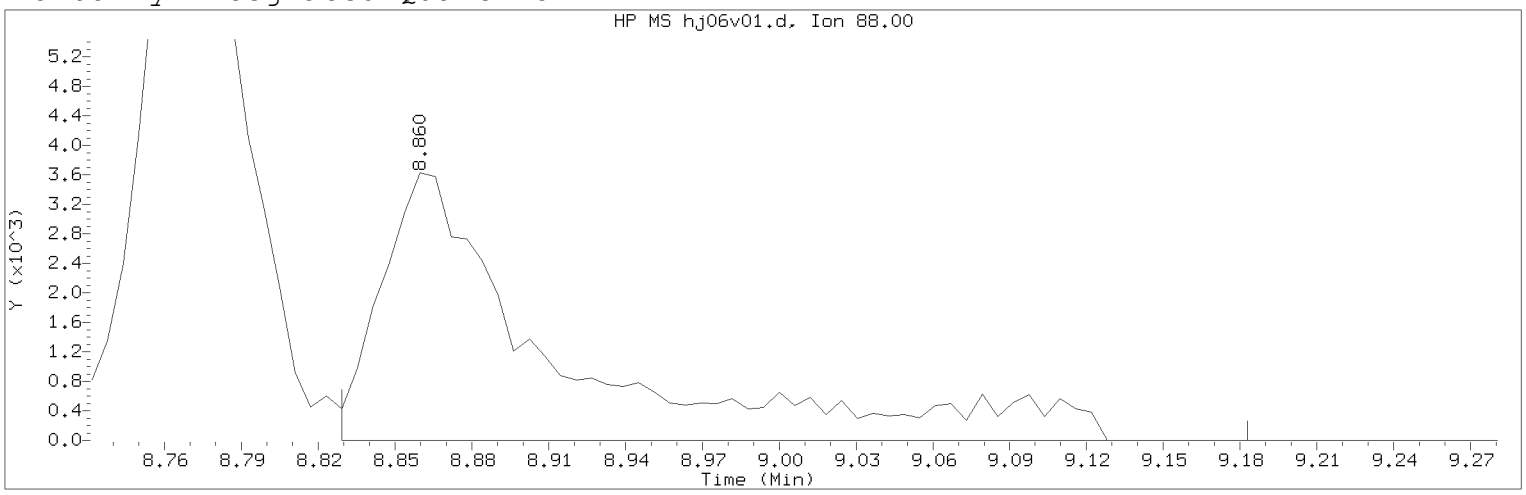
Compound Number	: 63
Compound Name	: n-Heptane
Scan Number	: 1046
Retention Time (minutes)	: 7.964
Quant Ion	: 43.00
Area	: 375659
On-column Amount (ng)	: 4.8345
Integration start scan	: 1030
Integration stop scan	: 1077
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

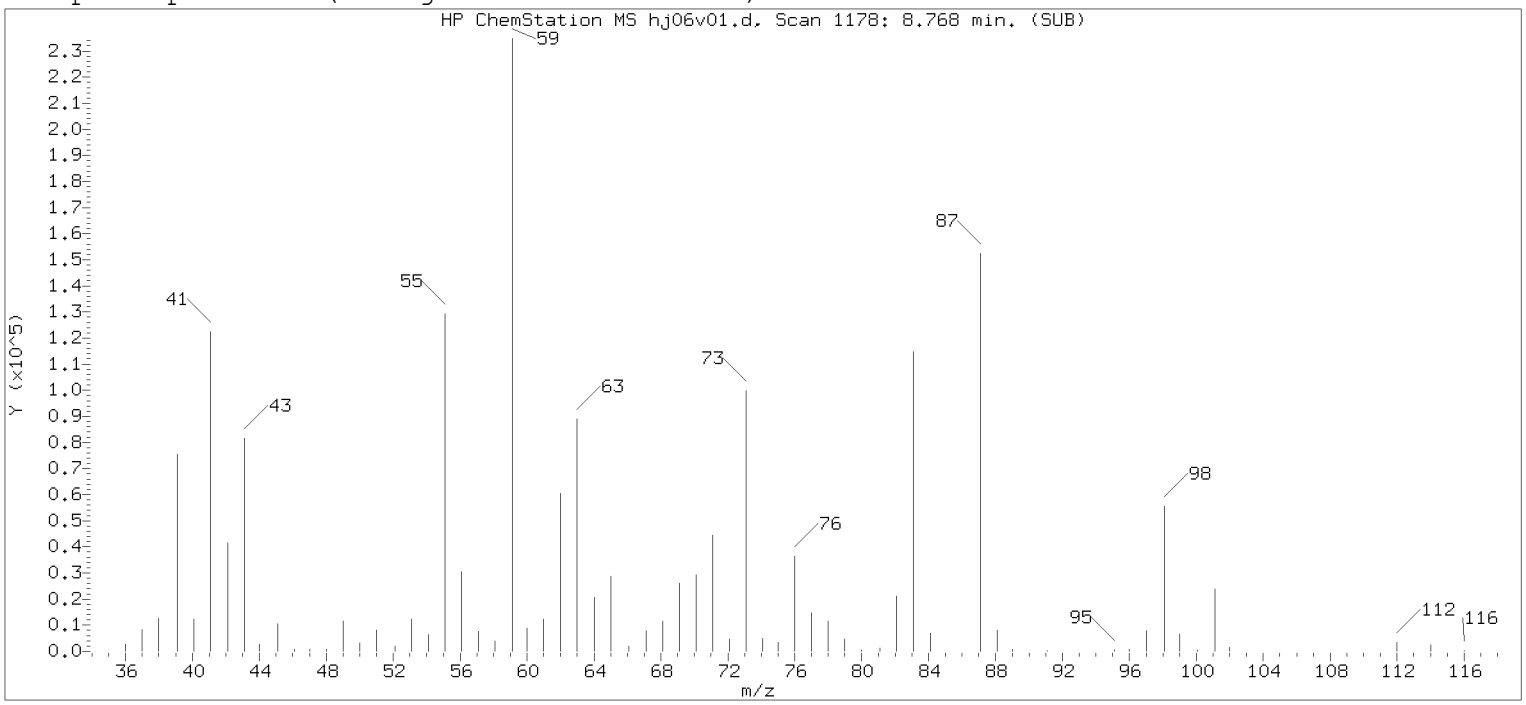
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 17432M
On-Column Amount (ng) : 104.8820
Integration start scan : 1187 Integration stop scan: 1245
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

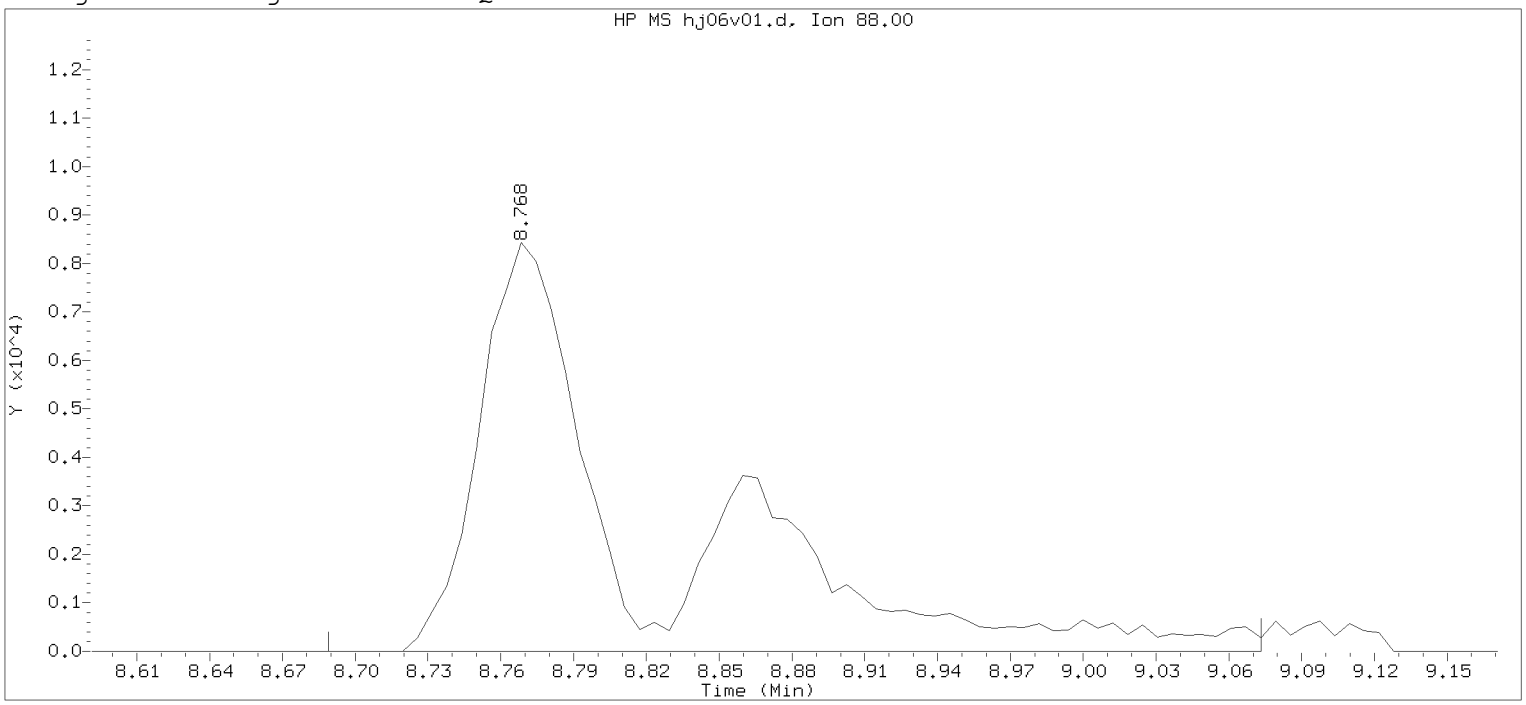
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

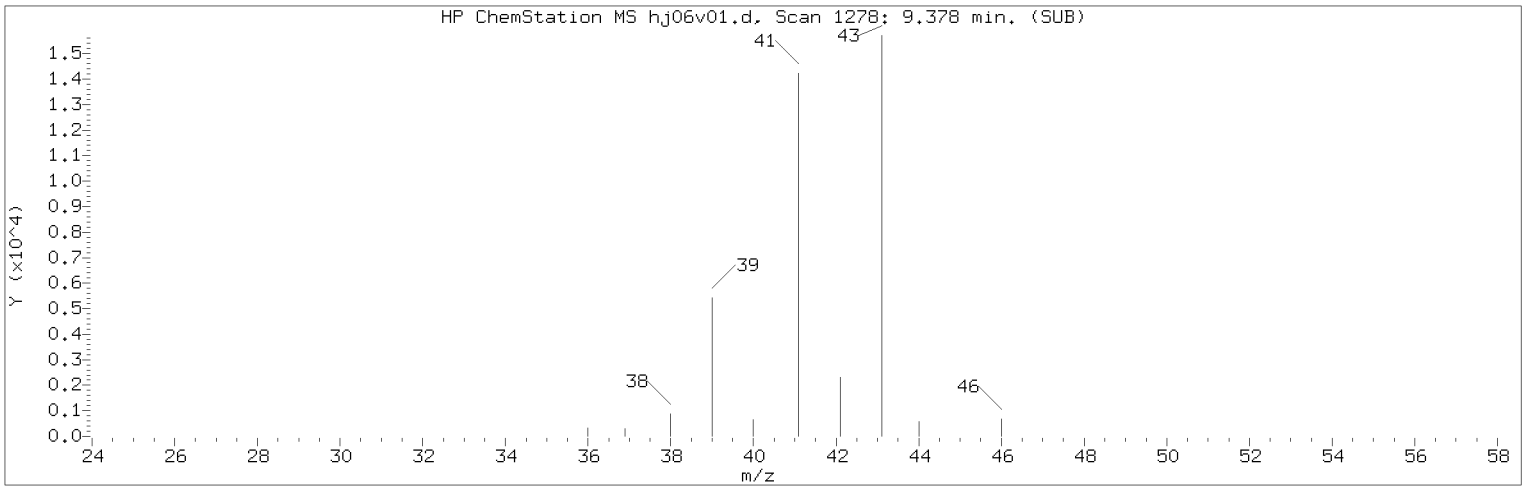
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

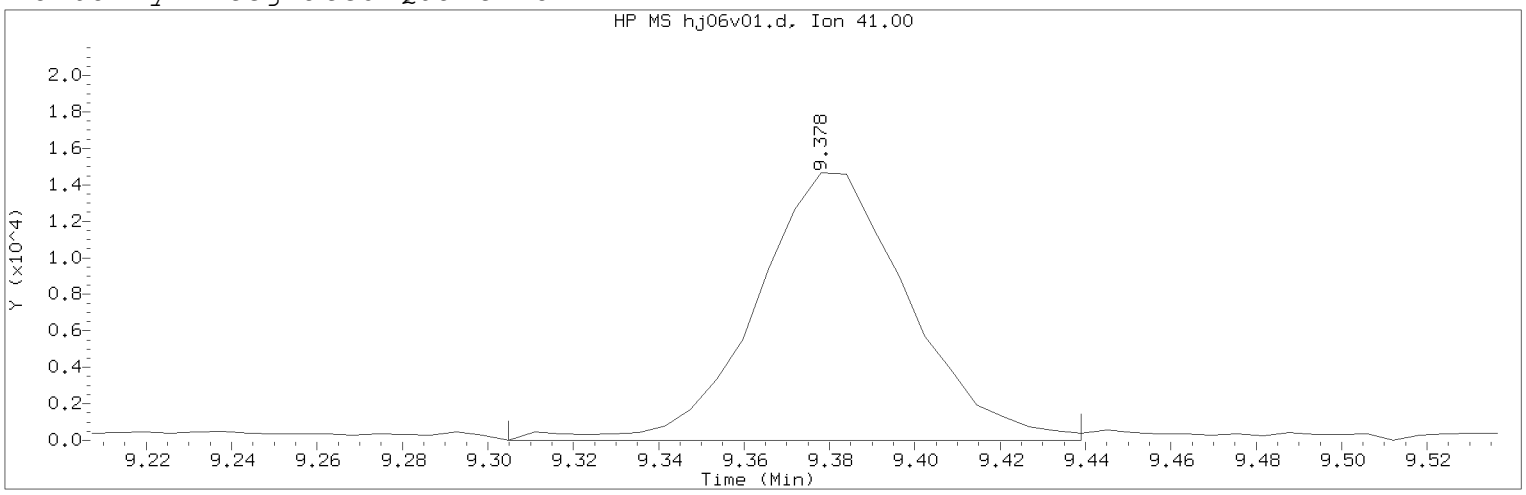
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1178
Retention Time (minutes): 8.768
Quant Ion : 88.00
Area : 39311
On-column Amount (ng) : 240.1787
Integration start scan : 1164 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

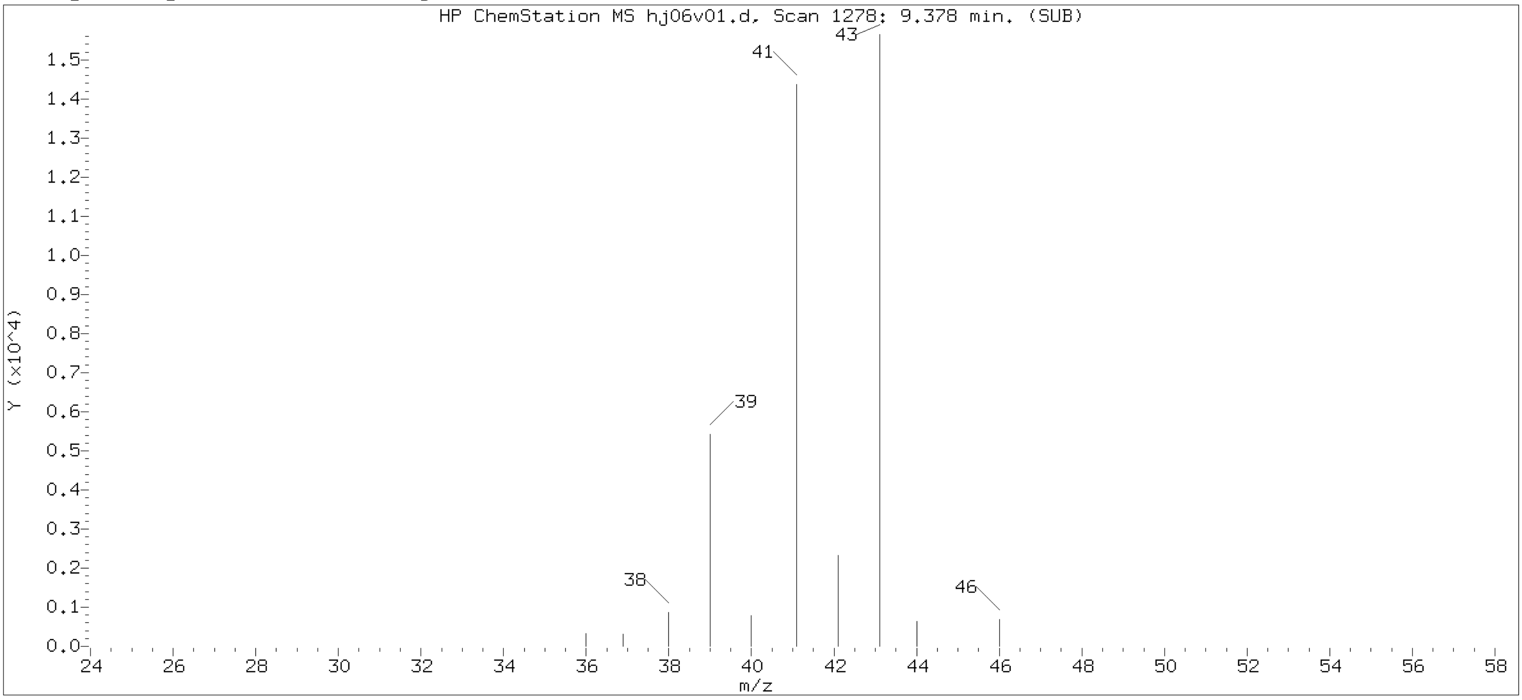
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 36462M
On-Column Amount (ng) : 5.0674
Integration start scan : 1265 Integration stop scan: 1287
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

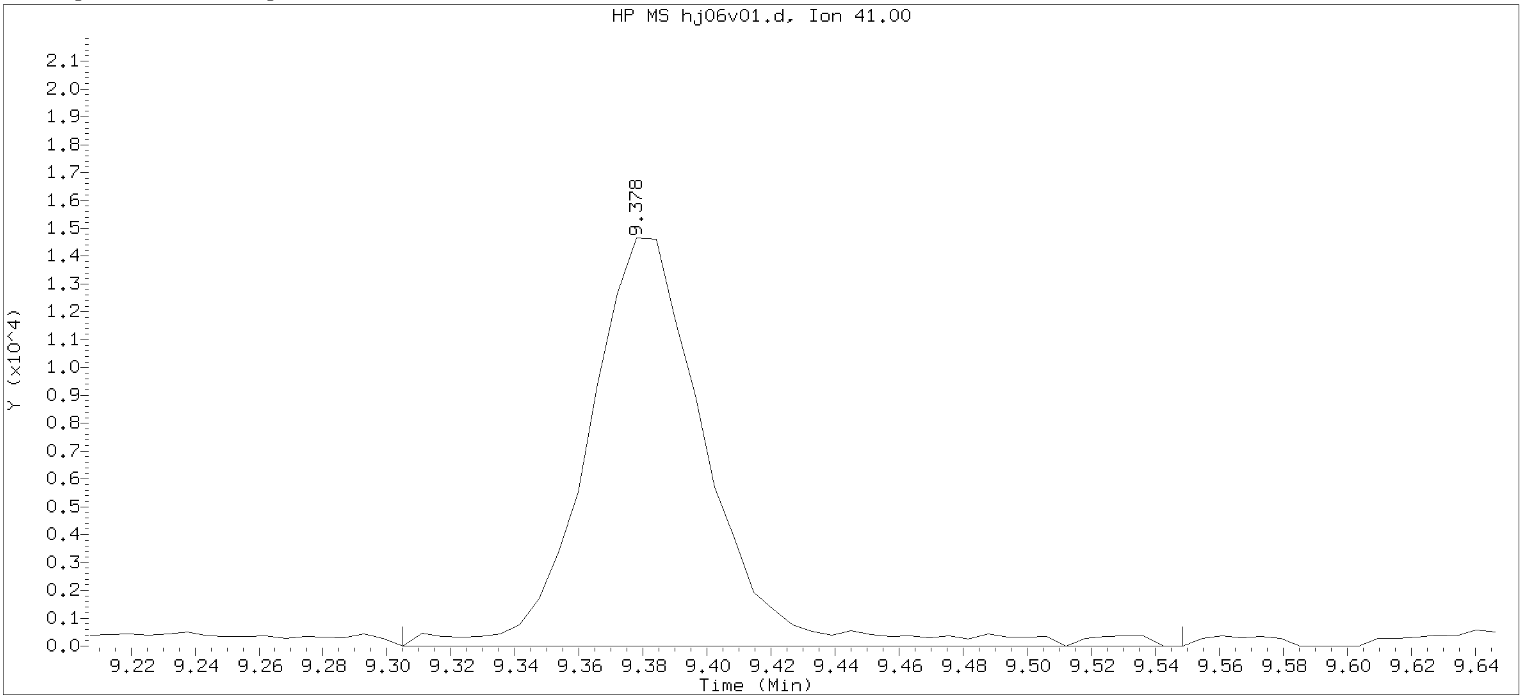
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d   Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06   Analyst ID: JKH09052

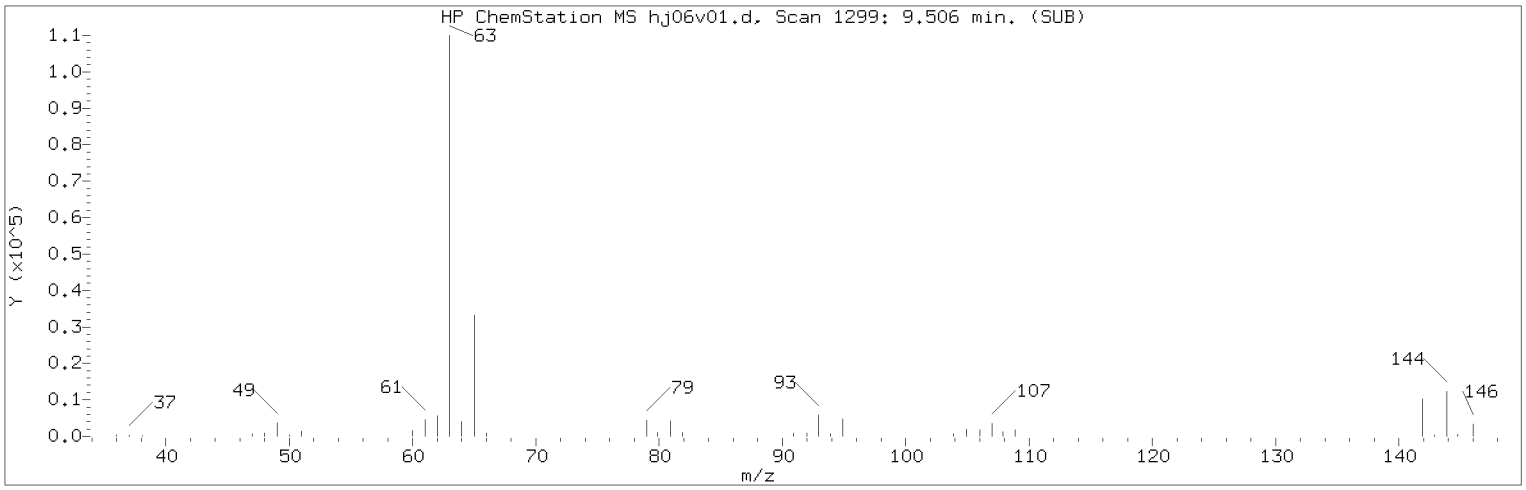
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m   Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00   Lab Sample ID: ICVH00

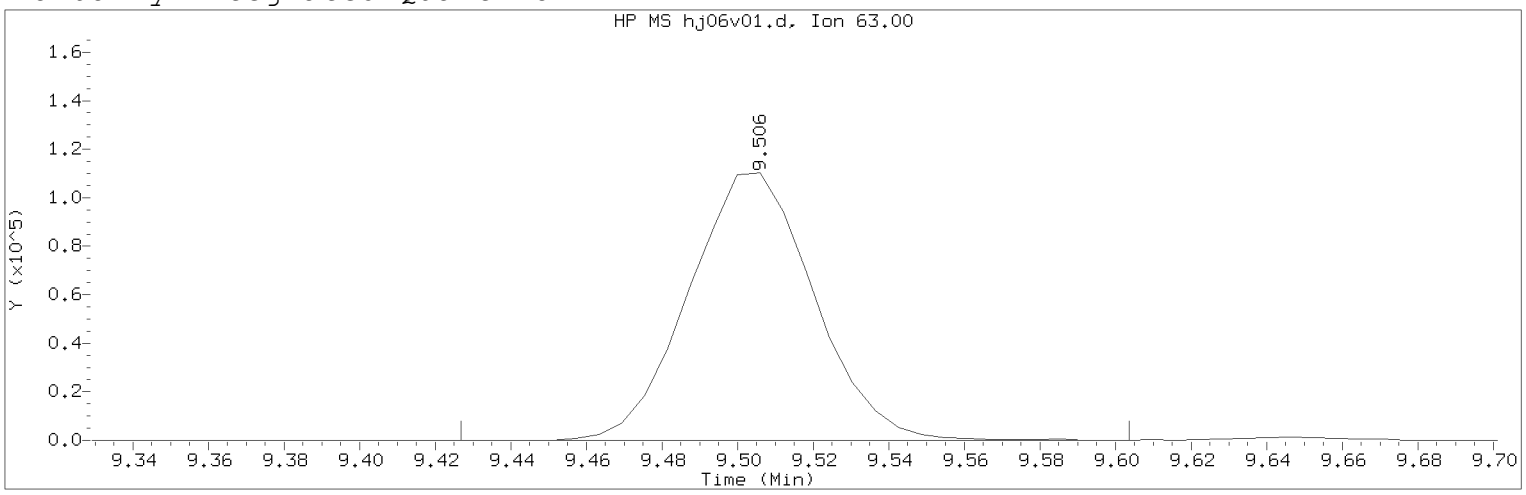
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area : 38430
On-column Amount (ng) : 5.4180
Integration start scan : 1265   Integration stop scan: 1305
Y at integration start : 0   Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02357

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

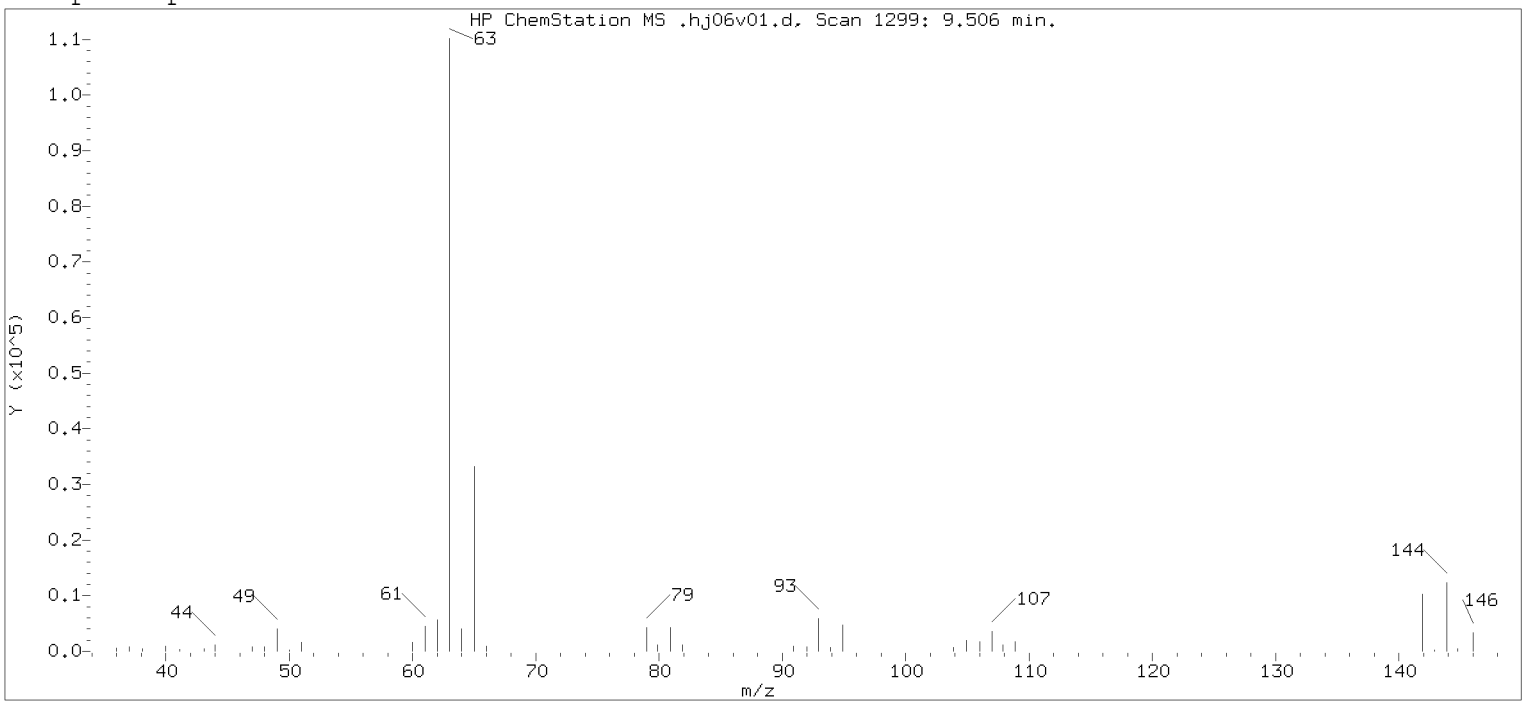
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 253199M
On-Column Amount (ng) : 5.1192
Integration start scan : 1285 Integration stop scan: 1314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

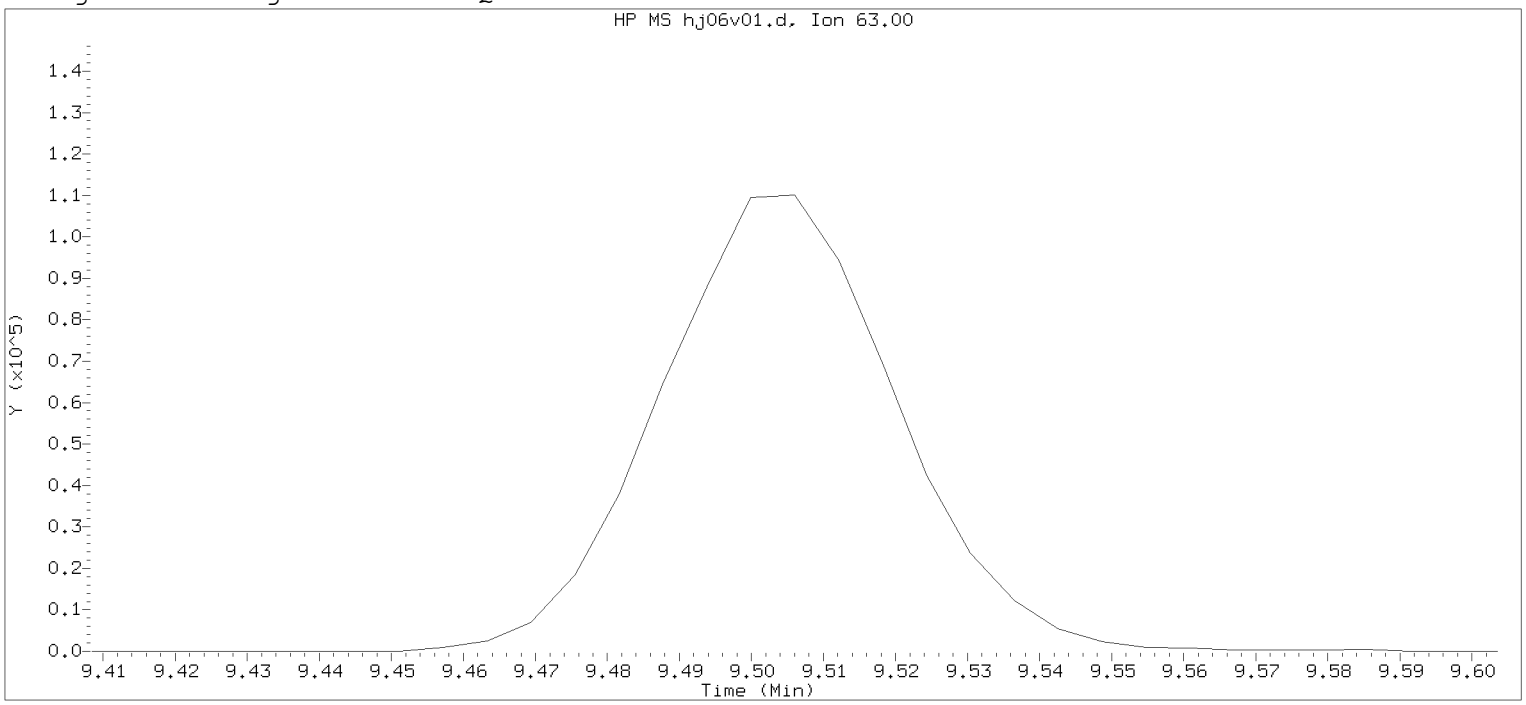
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

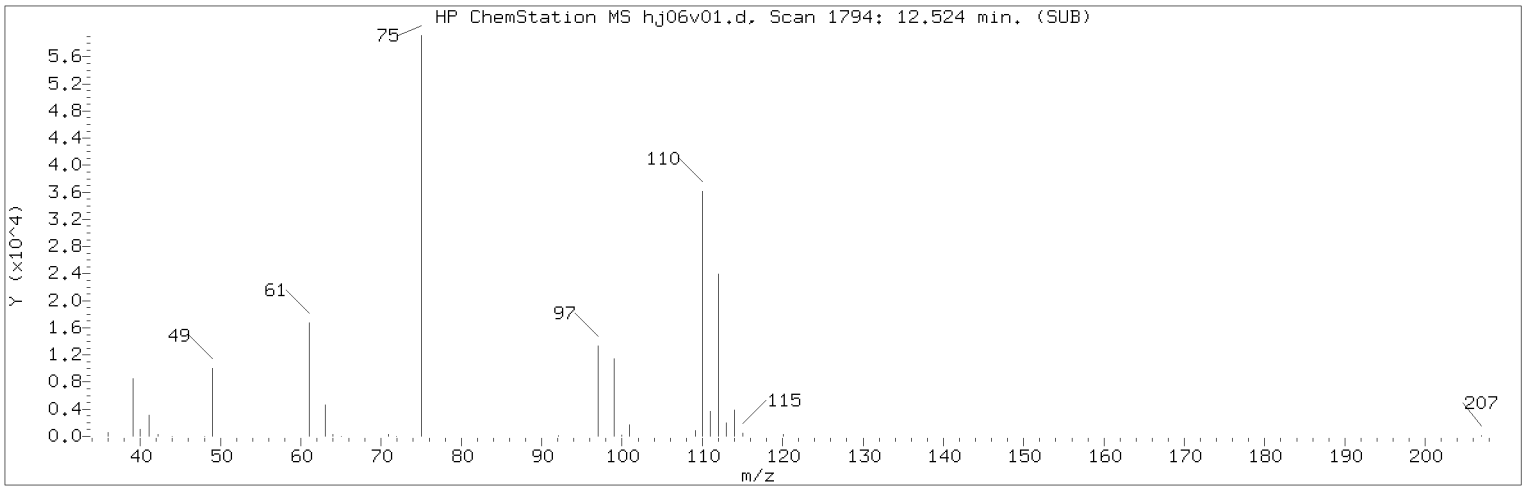
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

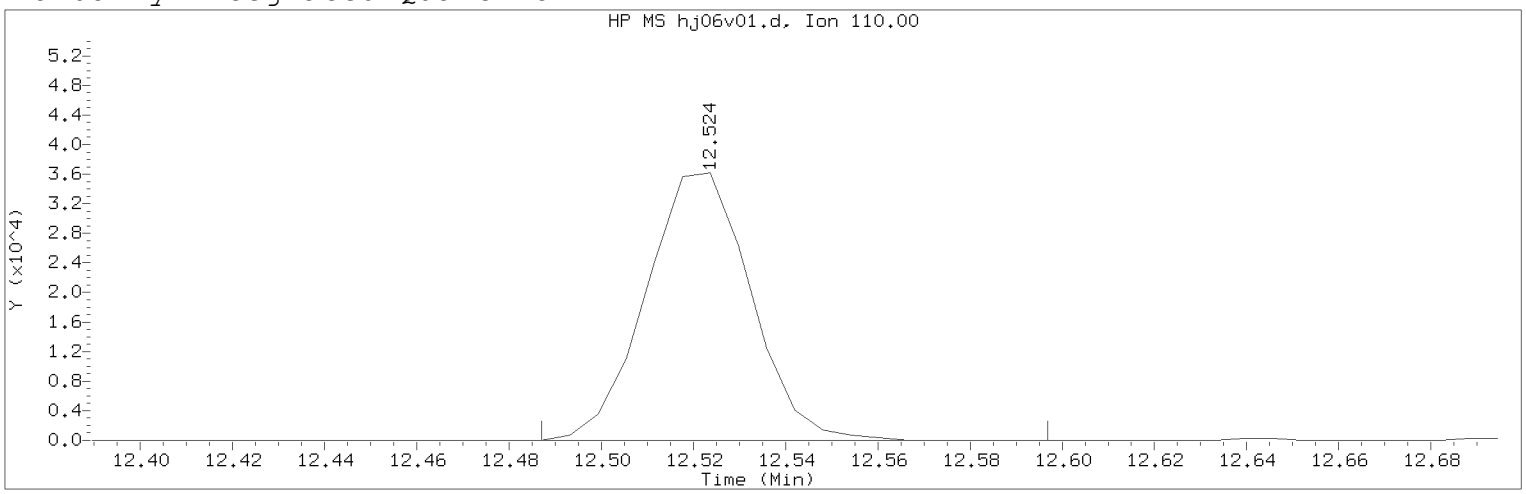
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00 Lab Sample ID: ICVH00

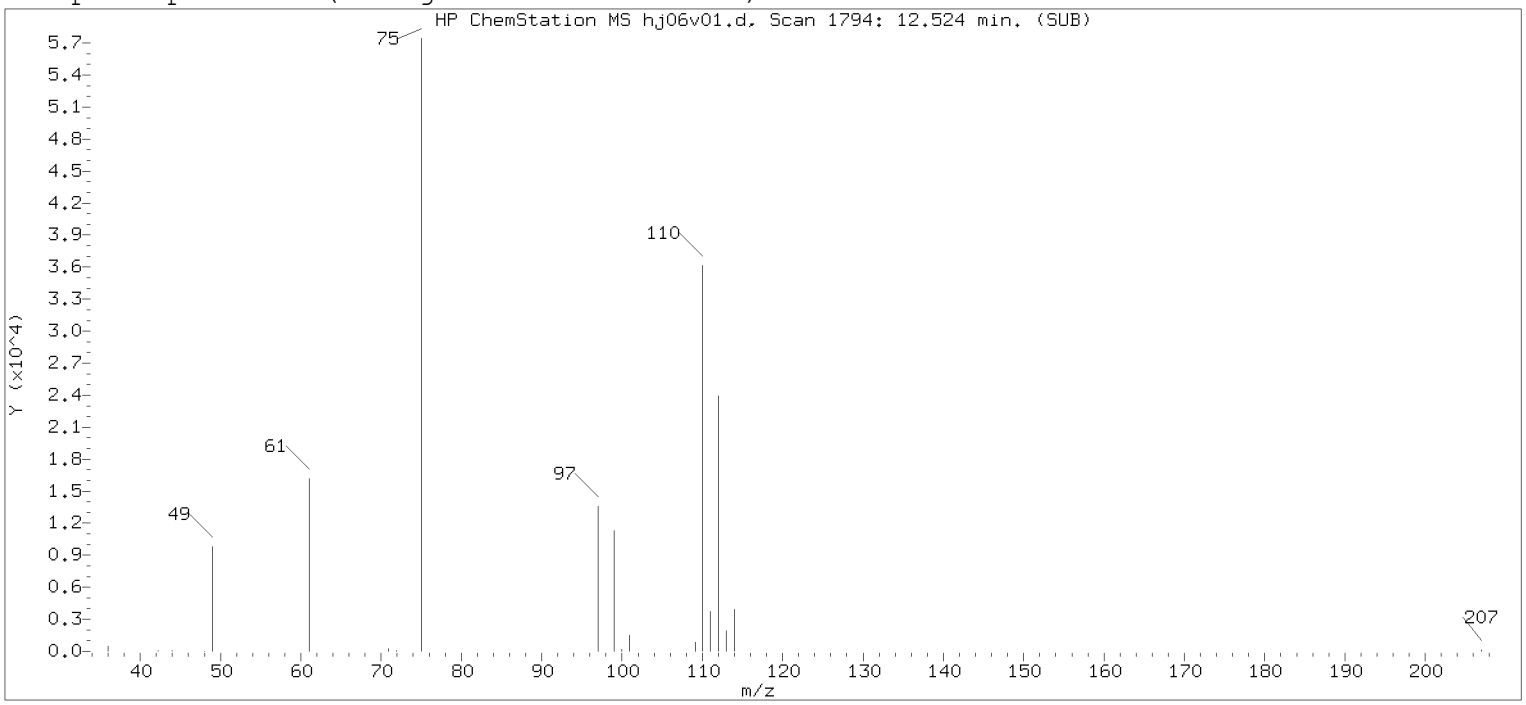
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57312M
On-Column Amount (ng) : 5.3333
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

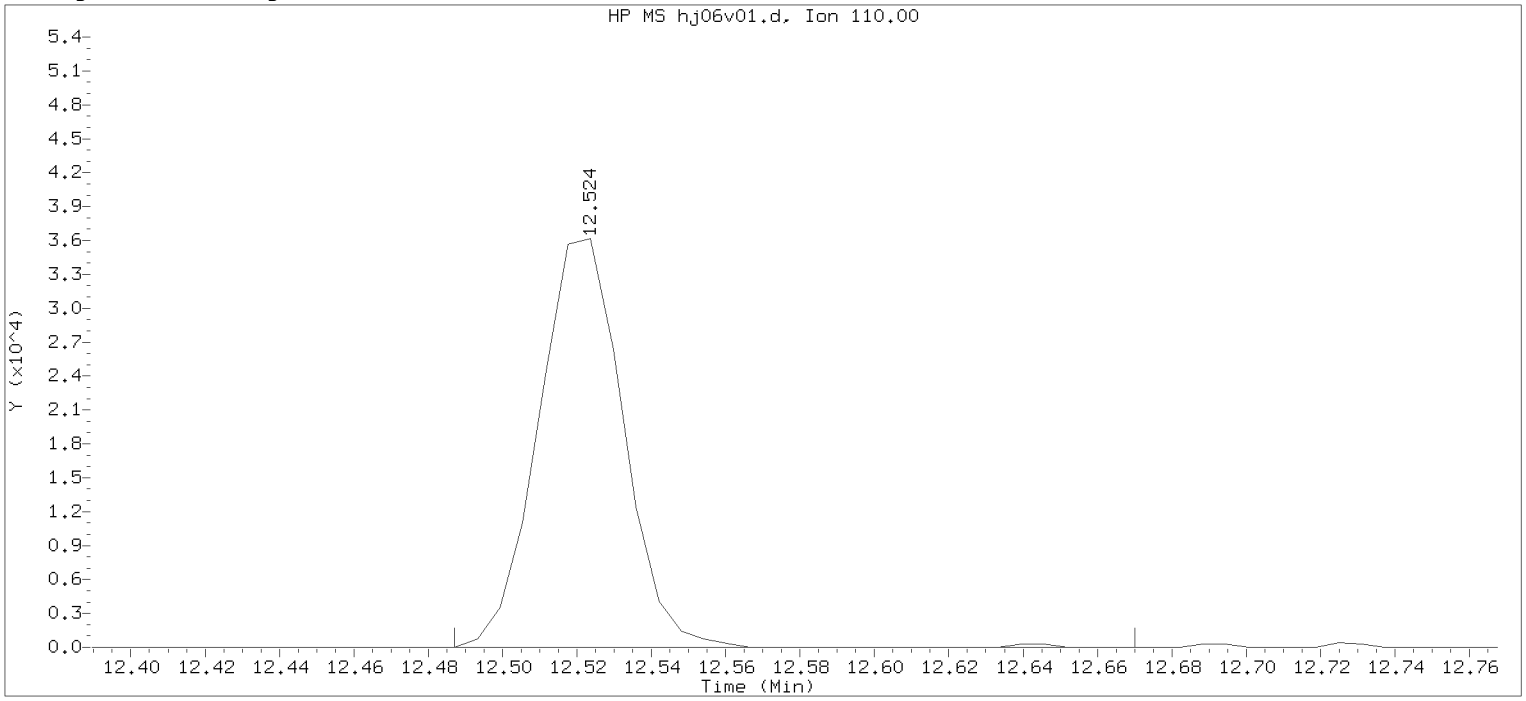
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00 Lab Sample ID: ICVH00

Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 57524
On-column Amount (ng) : 5.3530
Integration start scan : 1787 Integration stop scan: 1817
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user assigned.

Data File: /chem2/HP19094.i/20apr29a.b/ha29t01.d

Date : 29-APR-2020 08:14

Client ID: 50NG BFB

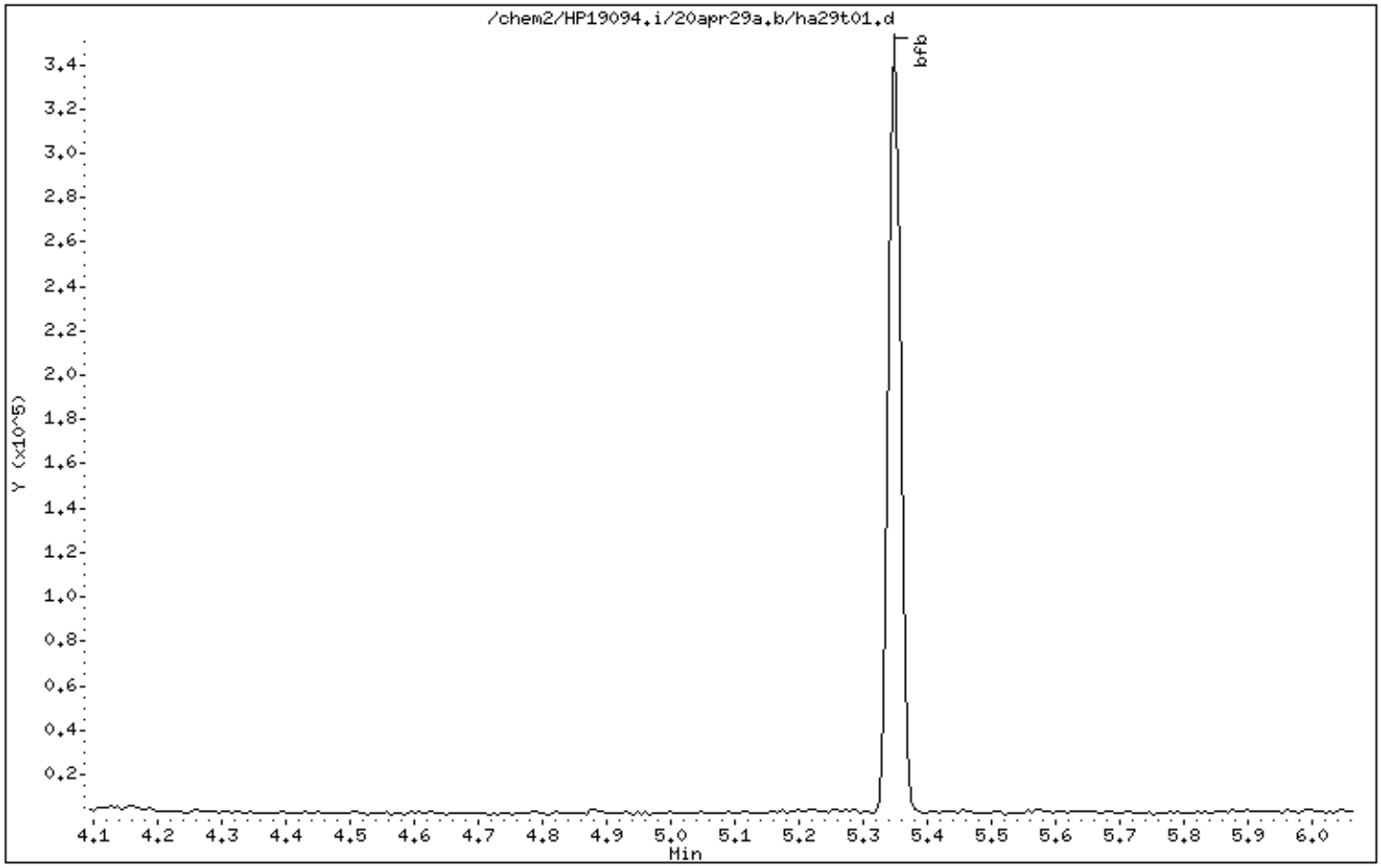
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB jan28 2020 ;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Data File: /chem2/HP19094.i/20apr29a.b/ha29t01.d

Date : 29-APR-2020 08:14

Client ID: 50NG BFB

Instrument: HP19094.i

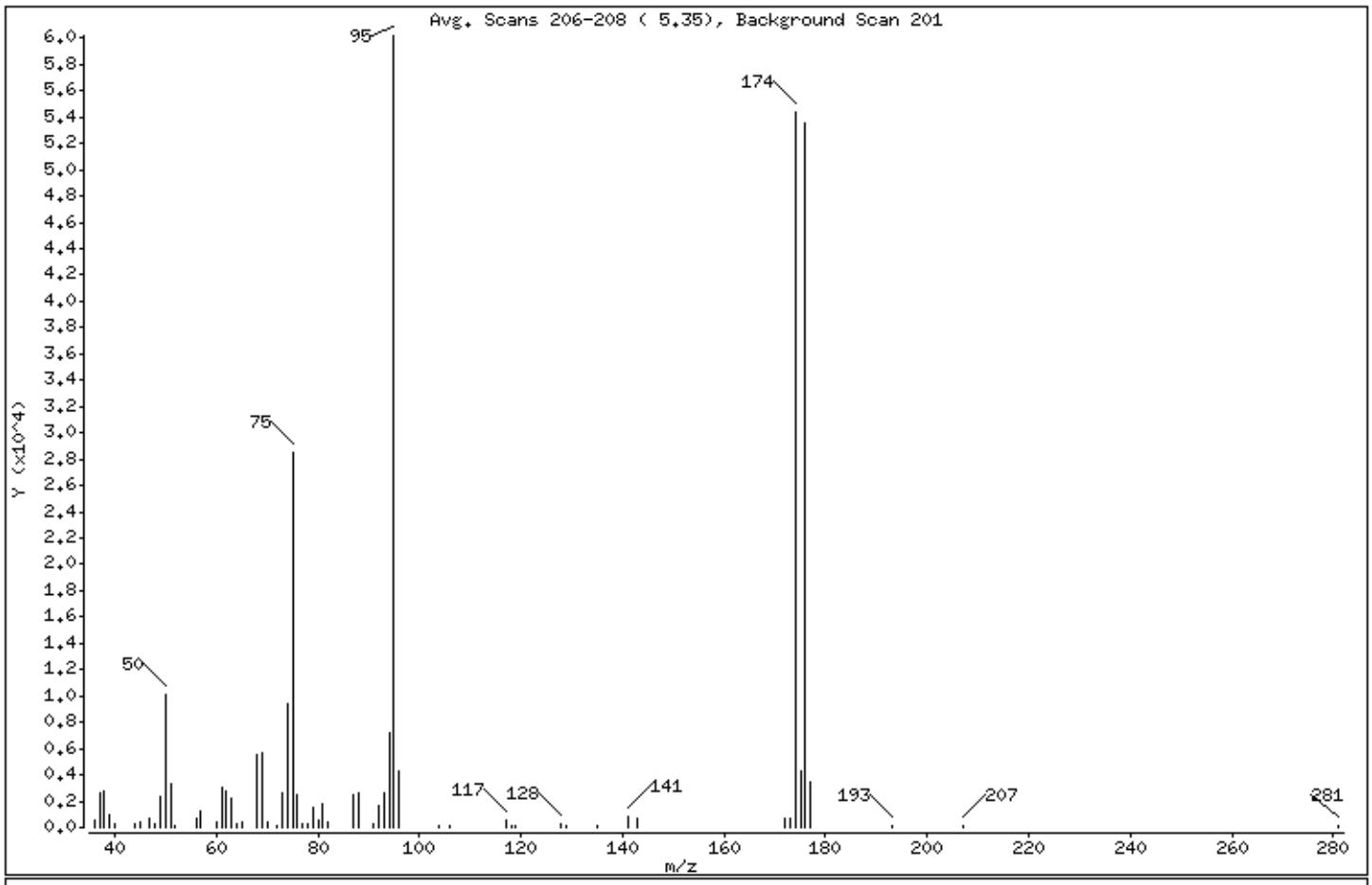
Sample Info: 50NG BFB;BFB jan28 2020 ;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.78
75	30.00 - 60.00% of mass 95	47.37
96	5.00 - 9.00% of mass 95	7.17
173	Less than 2.00% of mass 174	1.20 (1.32)
174	50.00 - 100.00% of mass 95	90.42
175	5.00 - 9.00% of mass 174	7.11 (7.86)
176	95.00 - 101.00% of mass 174	88.88 (98.30)
177	5.00 - 9.00% of mass 176	5.66 (6.37)

Data File: /chem2/HP19094.i/20apr29a.b/ha29t01.d

Date : 29-APR-2020 08:14

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB jan28 2020 ;1;3;;;;;

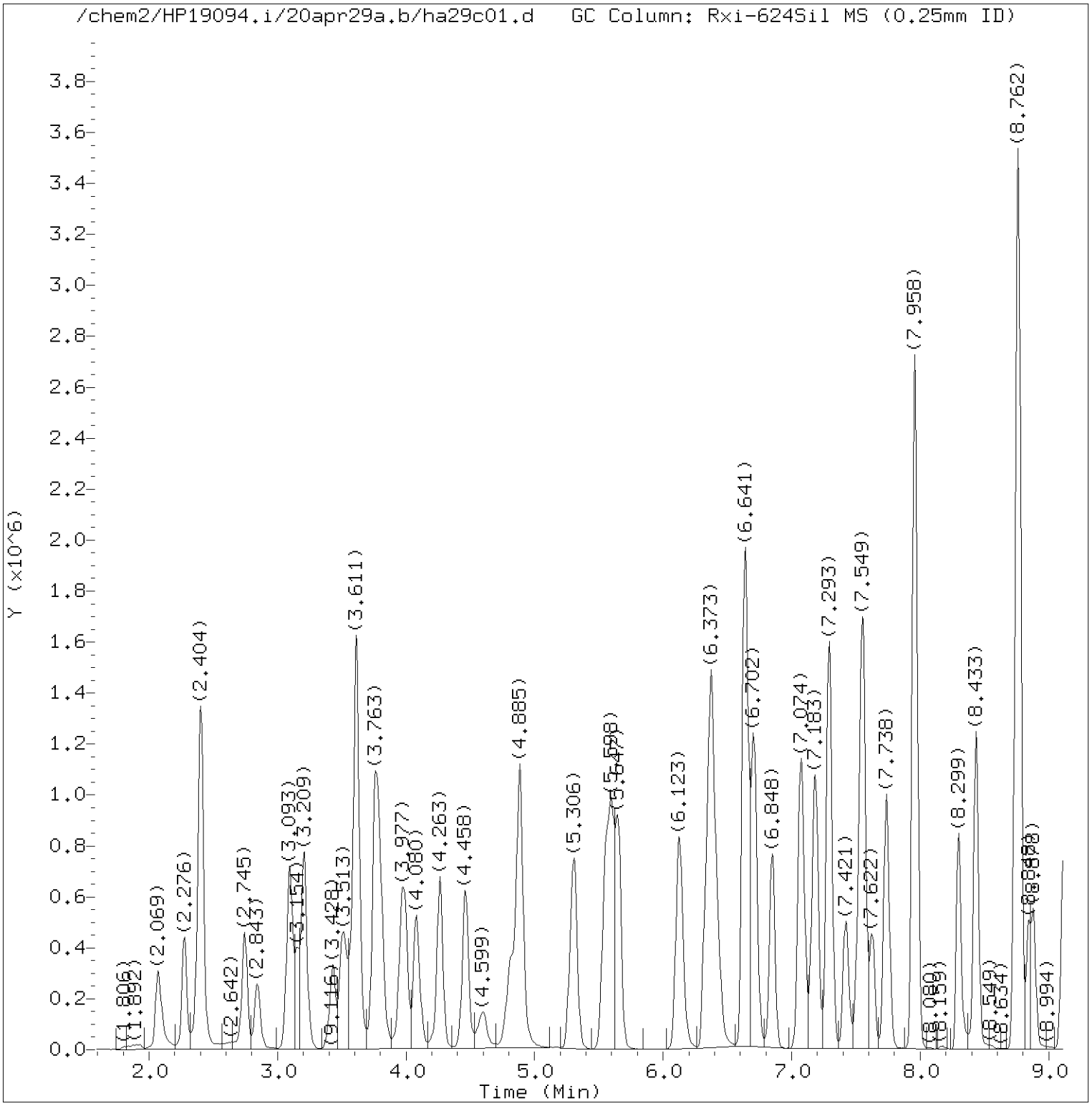
Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ha29t01.d
Spectrum: Avg. Scans 206-208 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 62

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	578	61.00	2980	80.00	552	128.00	310
37.00	2588	62.00	2803	81.00	1826	129.00	89
38.00	2769	63.00	2234	82.00	460	135.00	93
39.00	961	64.00	235	87.00	2456	141.00	768
40.00	280	65.00	422	88.00	2588	143.00	700
44.00	216	68.00	5578	91.00	213	172.00	726
45.00	441	69.00	5697	92.00	1670	173.00	720
47.00	658	70.00	449	93.00	2654	174.00	54416
48.00	338	72.00	106	94.00	7159	175.00	4278
49.00	2383	73.00	2615	95.00	60184	176.00	53496
50.00	10100	74.00	9399	96.00	4313	177.00	3407
51.00	3378	75.00	28512	104.00	102	193.00	129
52.00	93	76.00	2545	106.00	99	207.00	106
56.00	736	77.00	241	117.00	495	281.00	94
57.00	1266	78.00	325	118.00	136		
60.00	446	79.00	1519	119.00	195		



Total Ion Chromatogram (TIC)

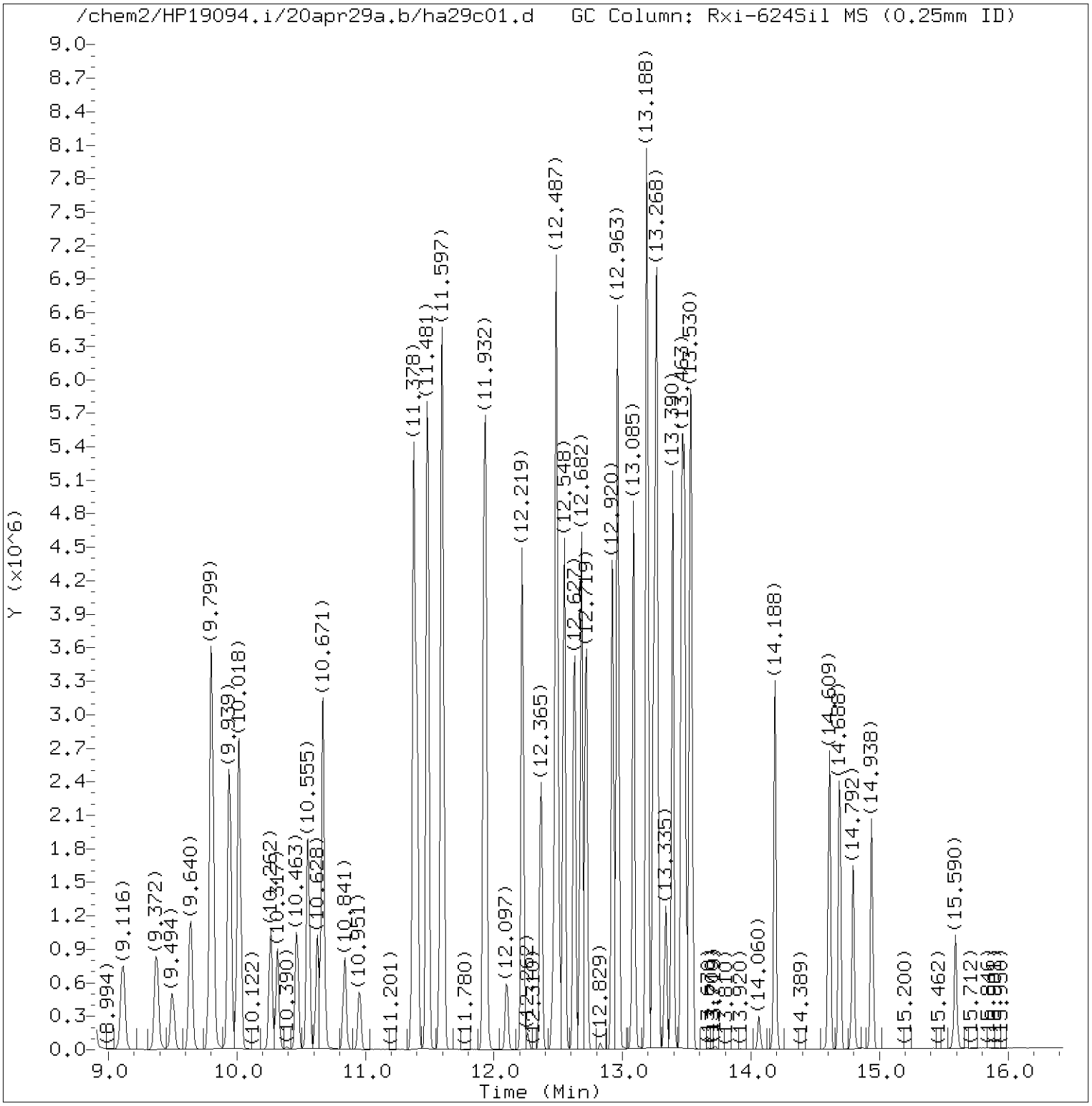
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.069	85	690001	8.761
2) Chloromethane	(2)	2.276	50	742693	9.553
5) Vinyl Chloride	(2)	2.404	62	717883	9.708
6) 1,3-Butadiene	(2)	2.404	39	816003	13.968
7) Bromomethane	(2)	2.745	94	496294	9.368
8) Chloroethane	(2)	2.843	64	405744	9.473
9) Dichlorofluoromethane	(2)	3.093	67	973638	9.572
10) Trichlorofluoromethane	(2)	3.148	101	853599	10.114
11) Ethyl ether	(2)	3.428	59	326854	8.751
12) Freon 123a	(2)	3.513	67	623099	9.550
13) Acrolein	(1)	3.611	56	2754447	469.991
15) 1,1-Dichloroethene	(2)	3.757	96	450503	8.777
16) Freon 113	(2)	3.788	101	492836	9.185
14) Acetone	(1)	3.788	43	715442M	90.470
17) Methyl Iodide	(2)	3.965	142	908504	9.172
18) Bromoethane	(2)	4.001	108	384265	8.580
19) Carbon Disulfide	(2)	4.080	76	1381764	8.800
22) Methyl Acetate	(1)	4.227	43	194394	9.741
23) Allyl Chloride	(2)	4.263	41	739754	8.484
24) Methylene Chloride	(2)	4.458	84	517080	9.359
27)*t-Butyl Alcohol-d10	(1)	4.464	65	130148	50.000
29) t-Butyl Alcohol	(1)	4.599	59	466554	169.838
30) Acrylonitrile	(1)	4.806	53	490151	50.792
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	1028510	8.764
32) trans-1,2-Dichloroethene	(2)	4.885	96	508444	9.011
33) n-Hexane	(2)	5.312	57	758673	9.532
34) 1,1-Dichloroethane	(2)	5.543	63	969660M	9.518
35) di-Isopropyl Ether	(2)	5.598	45	1673408	9.972
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	804275	9.220
41) 1,2-Dichloroethene (Total)	(2)		96	1101384	18.467
38) Ethyl t-butyl ether	(2)	6.123	59	1409816	8.949
39) 2-Butanone	(1)	6.330	43	1255157	101.508
40) cis-1,2-Dichloroethene	(2)	6.373	96	592940	9.456
42) 2,2-Dichloropropane	(2)	6.385	77	773466	8.923
43) Propionitrile	(1)	6.427	54	725134	214.085
46) Methacrylonitrile	(1)	6.641	67	1263928	104.335
48) Bromochloromethane	(2)	6.702	128	240895	9.099
49) Tetrahydrofuran	(1)	6.714	71	338393	99.057

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Chloroform	(2)	6.848	83	946408	9.519
51)$Dibromofluoromethane	(2)	7.068	113	516480	9.889
51)$Dibromofluoromethane	(2)	7.061	111	527195	9.825
52) 1,1,1-Trichloroethane	(2)	7.080	97	825635	8.929
53) Cyclohexane	(2)	7.183	56	926652	9.383
53) Cyclohexane	(2)	7.183	84	765399	9.049
53) Cyclohexane	(2)	7.189	69	280122	9.114
55) Carbon Tetrachloride	(2)	7.293	117	734798	9.268
56) 1,1-Dichloropropene	(2)	7.293	75	752036	9.623
57) Isobutyl Alcohol	(1)	7.421	41	450006	472.596
58)$1,2-Dichloroethane-d4	(2)	7.525	102	104210M	10.295
58)$1,2-Dichloroethane-d4	(2)	7.525	65	467424	10.008
58)$1,2-Dichloroethane-d4	(2)	7.525	104	64836	10.113
59) Benzene	(2)	7.555	78	2236931	9.788
60) 1,2-Dichloroethane	(2)	7.622	62	554738M	9.415
61) t-Amyl methyl ether	(2)	7.738	73	1245023	9.062
64)*Fluorobenzene	(2)	7.958	96	2101028	10.000
63) n-Heptane	(2)	7.964	43	843199	10.099
66) n-Butanol	(1)	8.299	56	809619	1056.168
68) Trichloroethene	(2)	8.433	95	575843	9.609
70) Methylcyclohexane	(2)	8.744	83	912346	8.497
71) 1,2-Dichloropropane	(2)	8.775	63	579511	10.250
72) Methyl Methacrylate	(1)	8.842	69	238866	9.802
73) 1,4-Dioxane	(1)	8.854	88	91007M	492.232
74) Dibromomethane	(2)	8.878	93	252057	9.752
75) Bromodichloromethane	(2)	9.116	83	684629	9.746
77) 2-Nitropropane	(1)	9.372	41	676478	84.516
80) 1-Bromo-2-chloroethane	(2)	9.494	63	559599	10.530
81) cis-1,3-Dichloropropene	(2)	9.640	75	829922	10.004
82) 4-Methyl-2-Pentanone	(1)	9.799	43	3089377	101.369
83)$Toluene-d8	(3)	9.939	98	2056679	9.864
83)$Toluene-d8	(3)	9.939	100	1337701	9.920
84) Toluene	(3)	10.018	92	1433694	9.789
86) 1,3-Dichloropropene (total)	(3)		75	1478446	19.544
85) trans-1,3-Dichloropropene	(3)	10.262	75	648524	9.540
87) Ethyl Methacrylate	(3)	10.317	69	508982	9.659
89) 1,1,2-Trichloroethane	(3)	10.463	97	370188	10.060
90) Tetrachloroethene	(3)	10.555	166	651447	9.785

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 1,3-Dichloropropane	(3)	10.628	76	646804	10.231
92) 2-Hexanone	(1)	10.671	43	2140948	102.806
94) Dibromochloromethane	(3)	10.841	129	467361	9.919
96) 1,2-Dibromoethane	(3)	10.951	107	362779	10.316
98)*Chlorobenzene-d5	(3)	11.372	117	1564978	10.000
97) 1-Chlorohexane	(3)	11.378	91	802353	9.087
99) Chlorobenzene	(3)	11.402	112	1580832	9.879
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	557061	9.787
101) Ethylbenzene	(3)	11.481	91	2763556	9.589
102) m+p-Xylene	(3)	11.597	106	2173741	19.725
106) Xylene (Total)	(3)		106	3218363	29.367
105) o-Xylene	(3)	11.920	106	1044622	9.640
107) Styrene	(3)	11.939	104	1749028	9.946
108) Bromoform	(3)	12.103	173	271421	9.883
109) Isopropylbenzene	(3)	12.219	105	2773829	9.445
112)$4-Bromofluorobenzene	(3)	12.365	95	735715	9.538
112)$4-Bromofluorobenzene	(3)	12.365	174	649115	9.834
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	438805M	10.264
115) Bromobenzene	(4)	12.487	156	659164	10.200
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	864356	75.500
117) 1,2,3-Trichloropropane	(4)	12.512	110	114557M	10.007
118) n-Propylbenzene	(4)	12.548	91	3297208	9.771
120) 2-Chlorotoluene	(4)	12.627	126	653284	9.813
122) 1,3,5-Trimethylbenzene	(4)	12.682	105	2371926	9.689
123) 4-Chlorotoluene	(4)	12.719	126	670849	10.096
126) tert-Butylbenzene	(4)	12.926	134	506290M	10.000
127) Pentachloroethane	(4)	12.957	167	410542	9.515
128) 1,2,4-Trimethylbenzene	(4)	12.963	105	2443313	9.666
129) sec-Butylbenzene	(4)	13.085	105	3091213	9.746
132) 1,3-Dichlorobenzene	(4)	13.188	146	1297050	10.071
133) p-Isopropyltoluene	(4)	13.194	119	2660232	9.746
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	818818	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	1259996	10.030
136) 1,2,3-Trimethylbenzene	(4)	13.268	120	978471	9.282
137) Benzyl Chloride	(4)	13.335	126	183822	10.228
139) n-Butylbenzene	(4)	13.481	92	1340520	9.934
140) 1,2-Dichlorobenzene	(4)	13.524	146	1134785	9.996
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	59505	9.114

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	14.188	180	995297	9.875
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	771189	9.124
147) Hexachlorobutadiene	(4)	14.688	225	422034	9.568
148) Naphthalene	(4)	14.792	128	1225069	8.306
149) 1,2,3-Trichlorobenzene	(4)	14.938	180	621558	8.615

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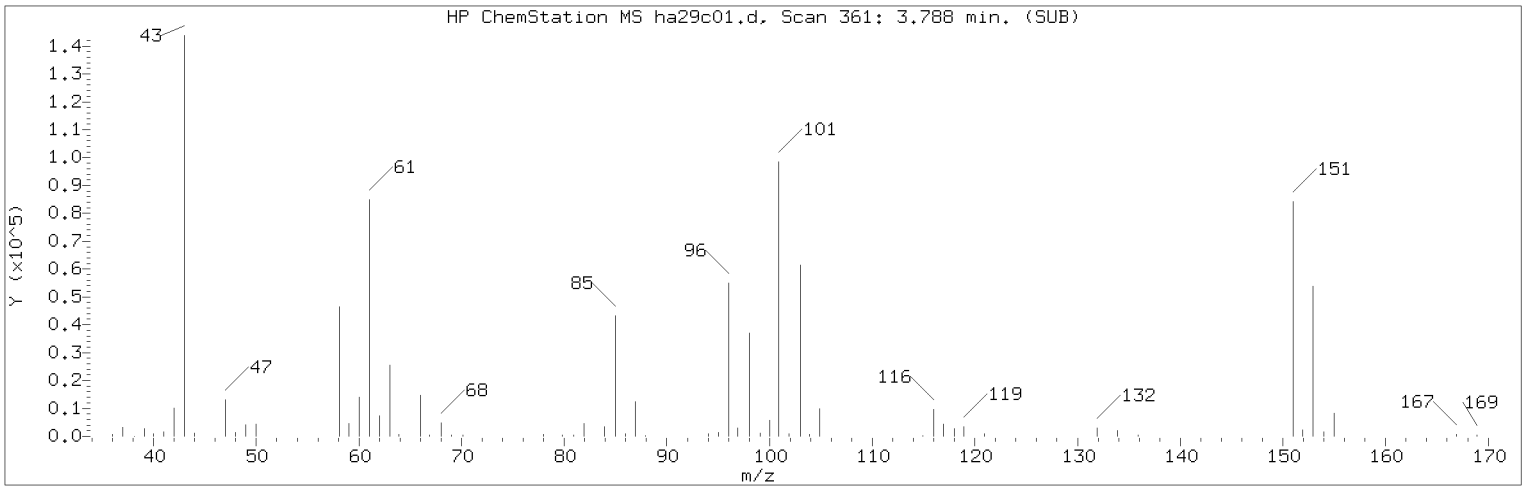
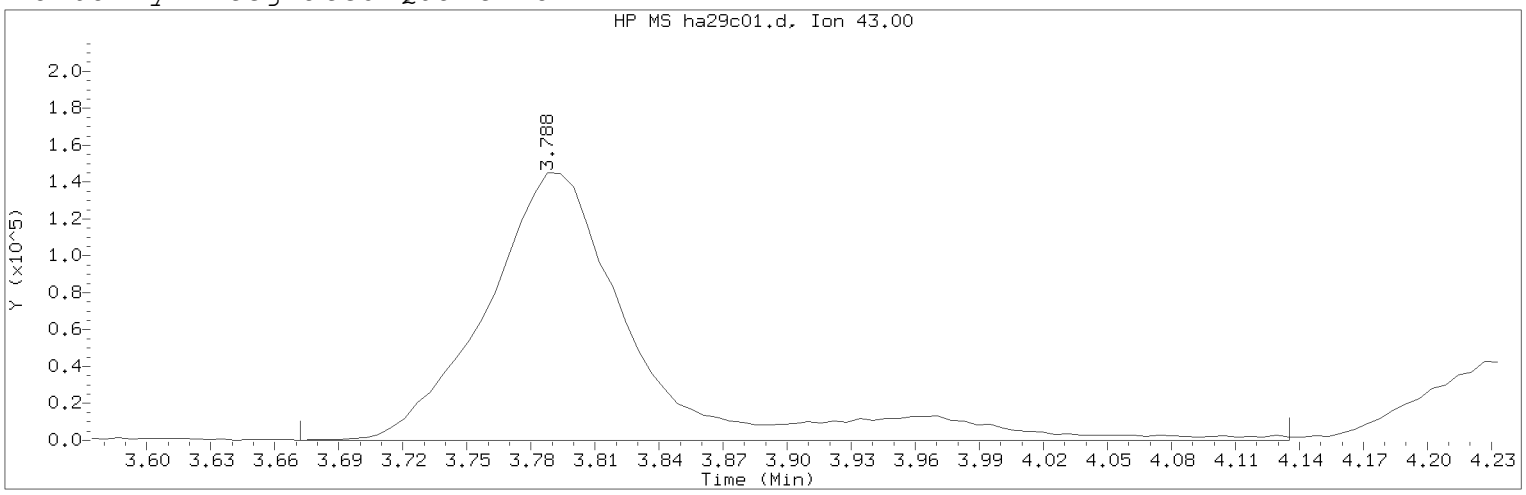
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

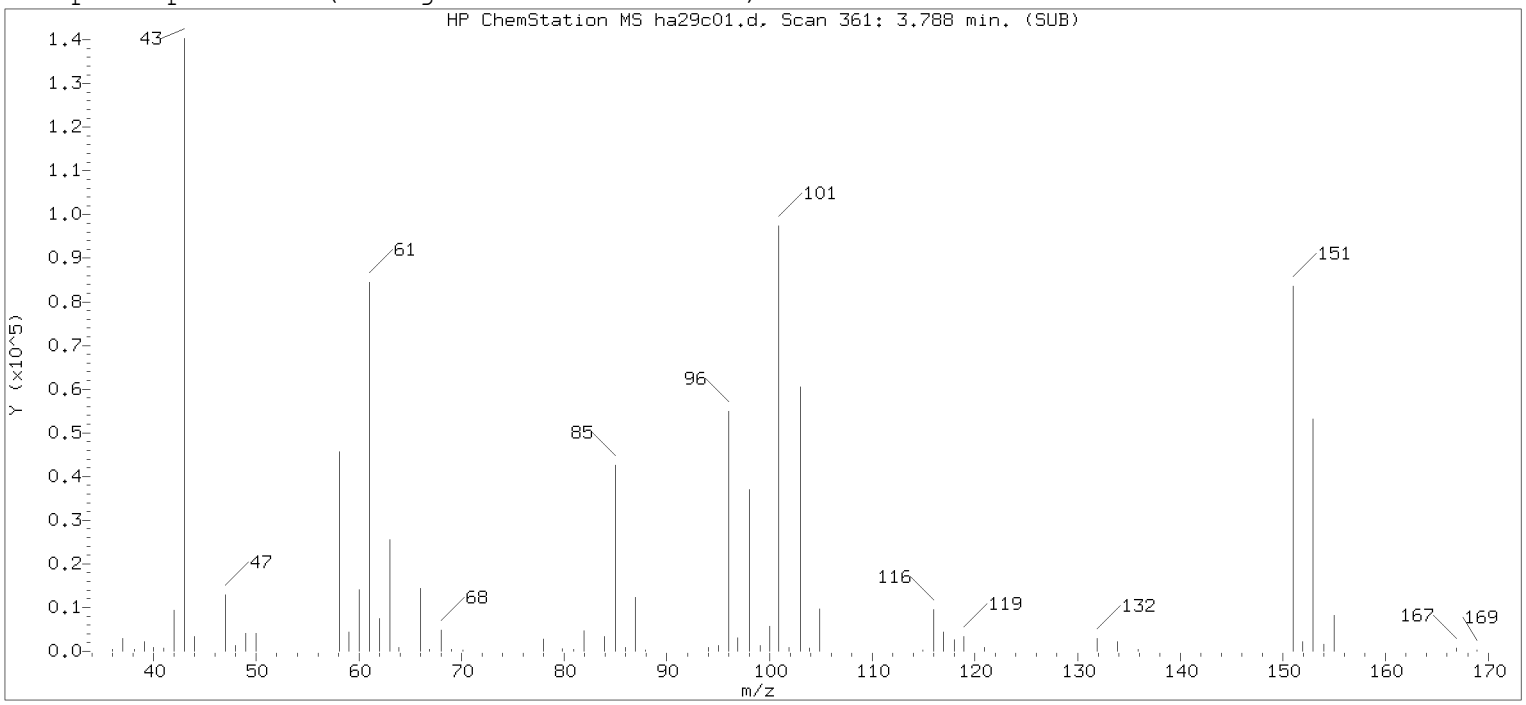
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area (flag) : 715442M
On-Column Amount (ng) : 90.4701
Integration start scan : 341 Integration stop scan: 417
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

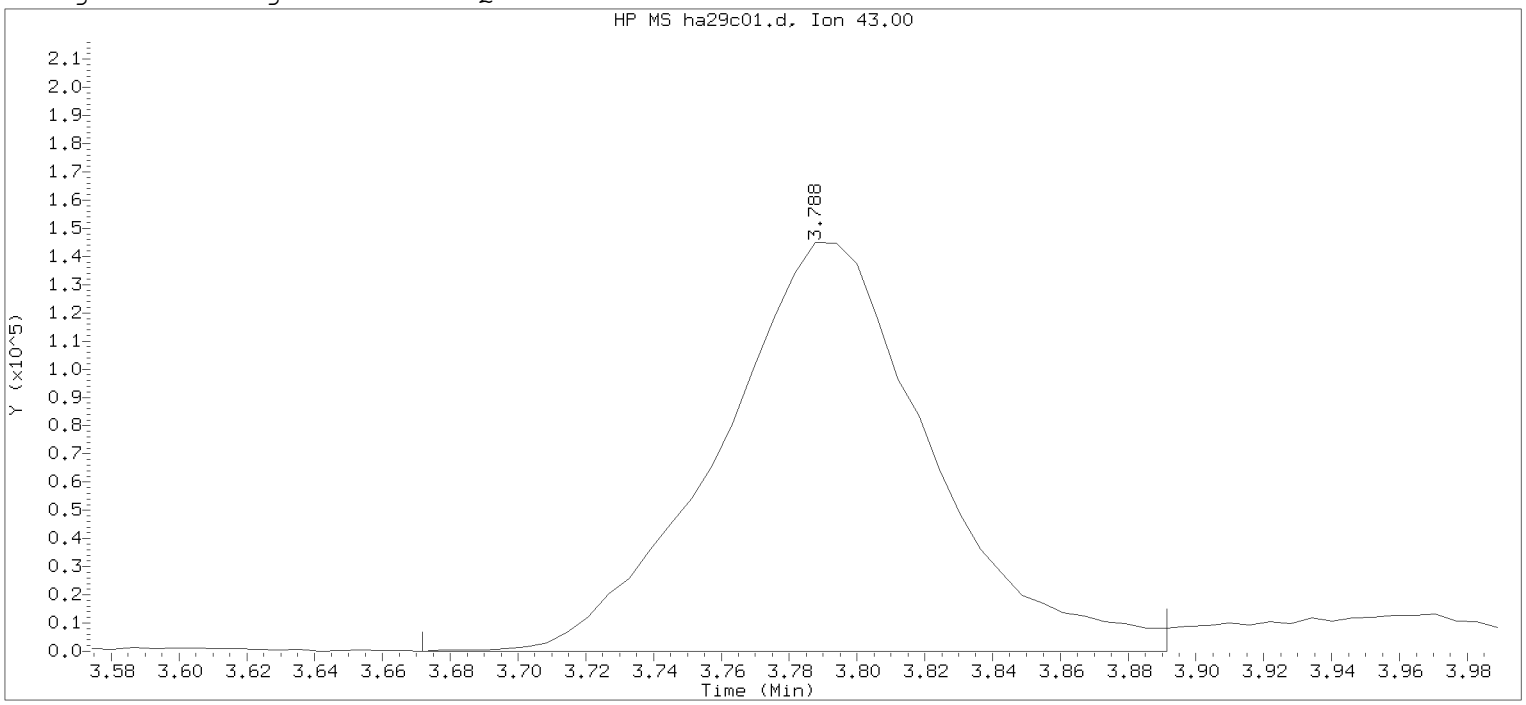
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

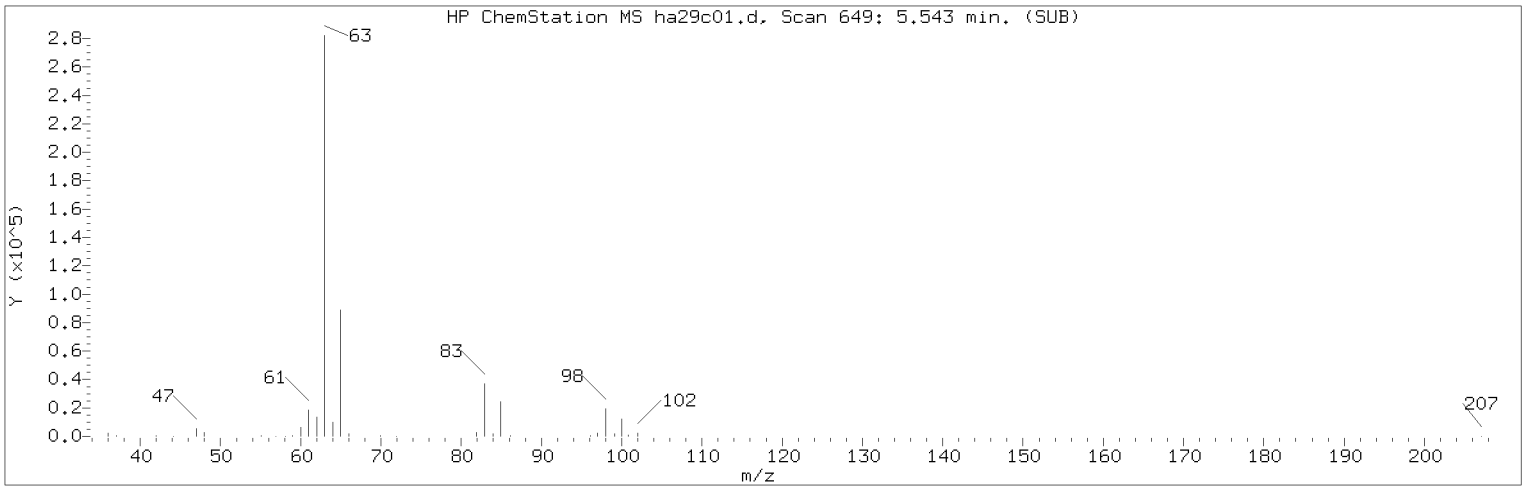
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

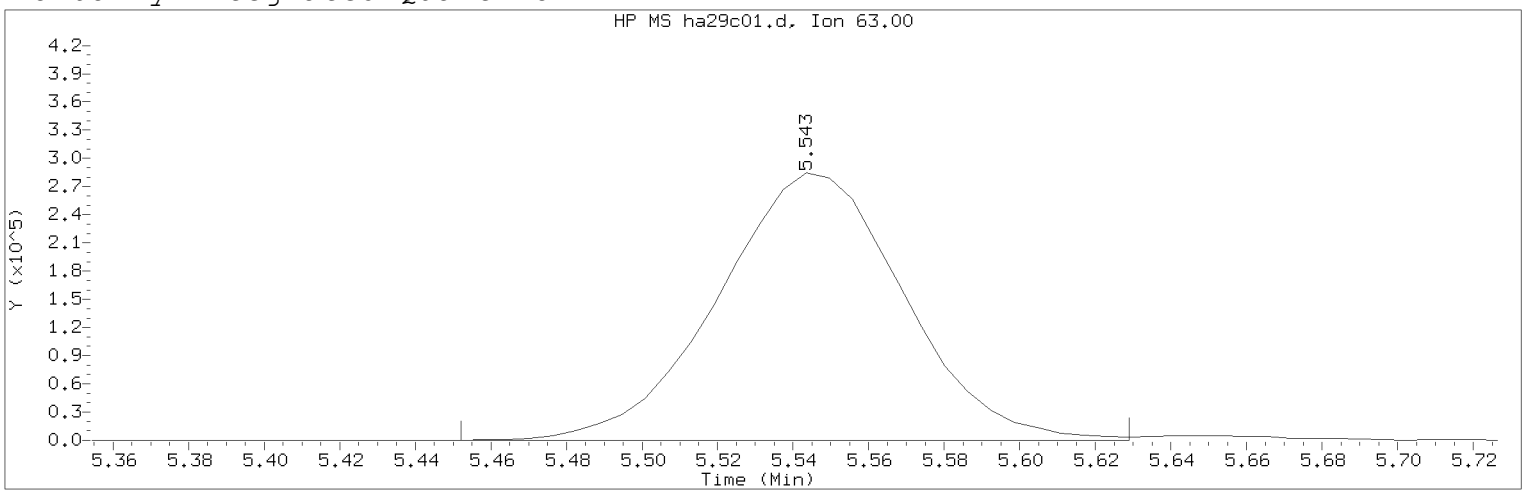
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.788		
Quant Ion	: 43.00		
Area	: 623166		
On-column Amount (ng)	: 78.8013		
Integration start scan	: 341	Integration stop scan:	377
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

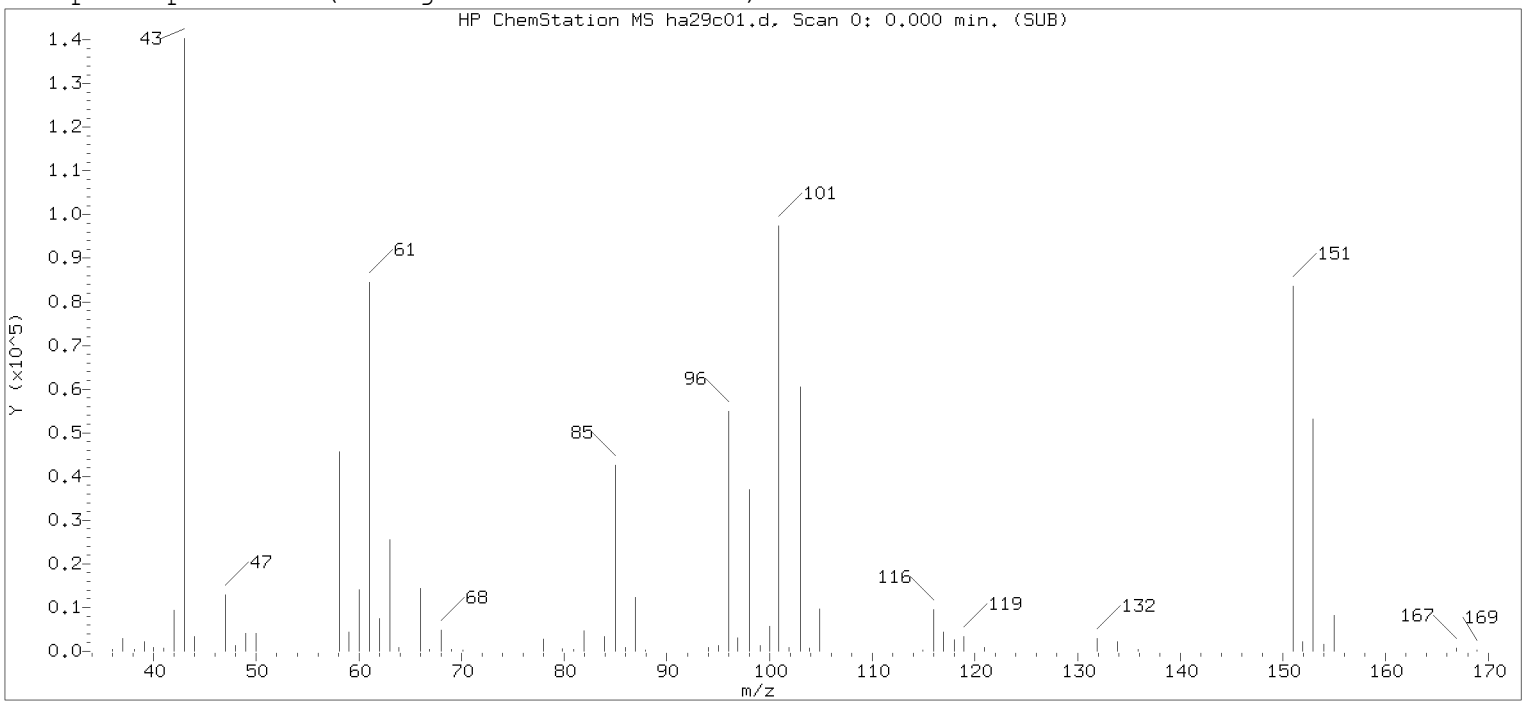
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area (flag) : 969660M
On-Column Amount (ng) : 9.5180
Integration start scan : 633 Integration stop scan: 662
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

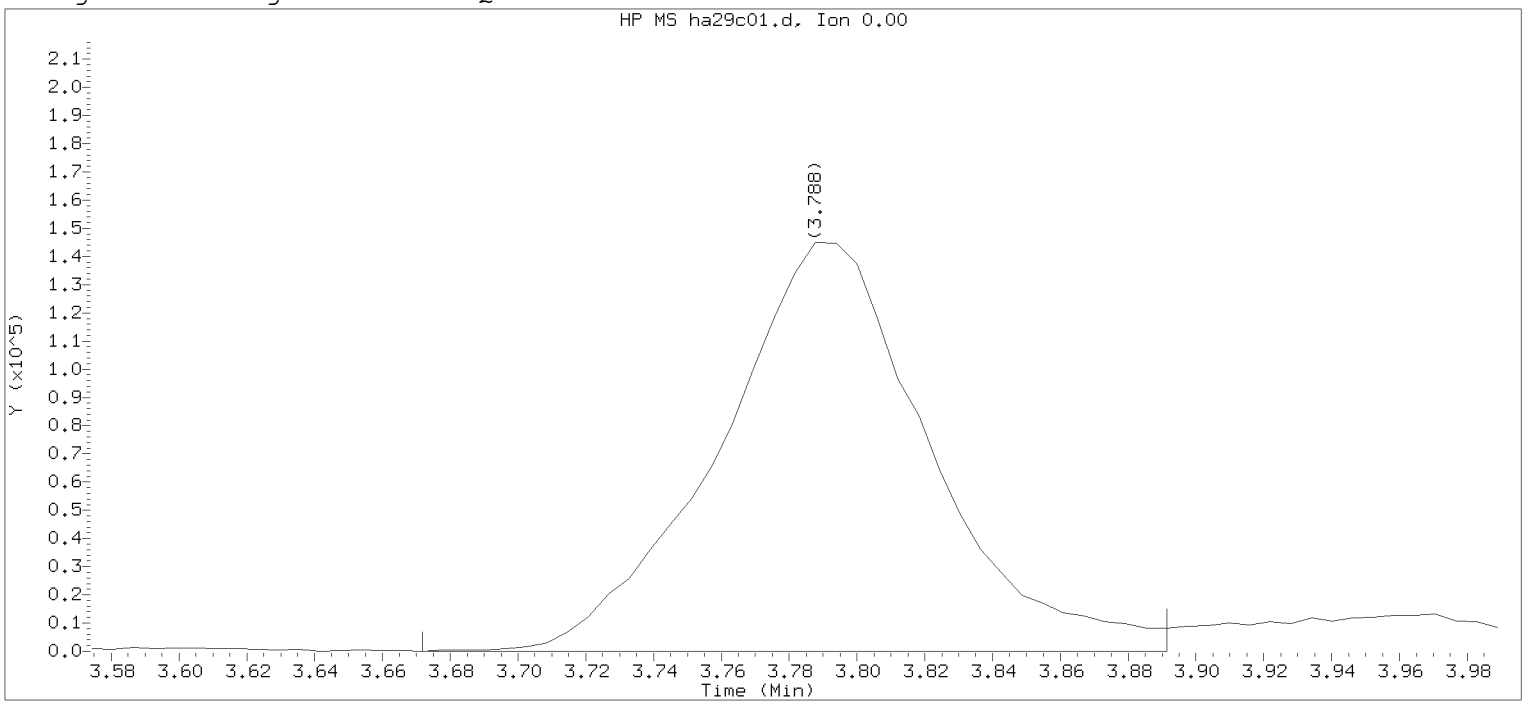
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

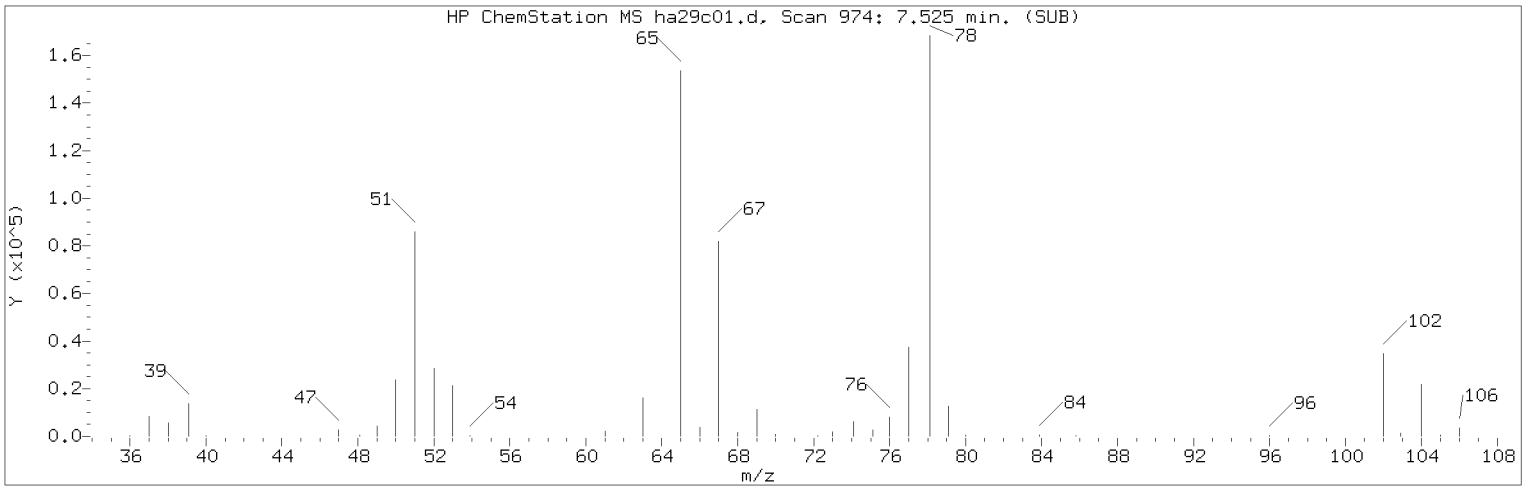
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

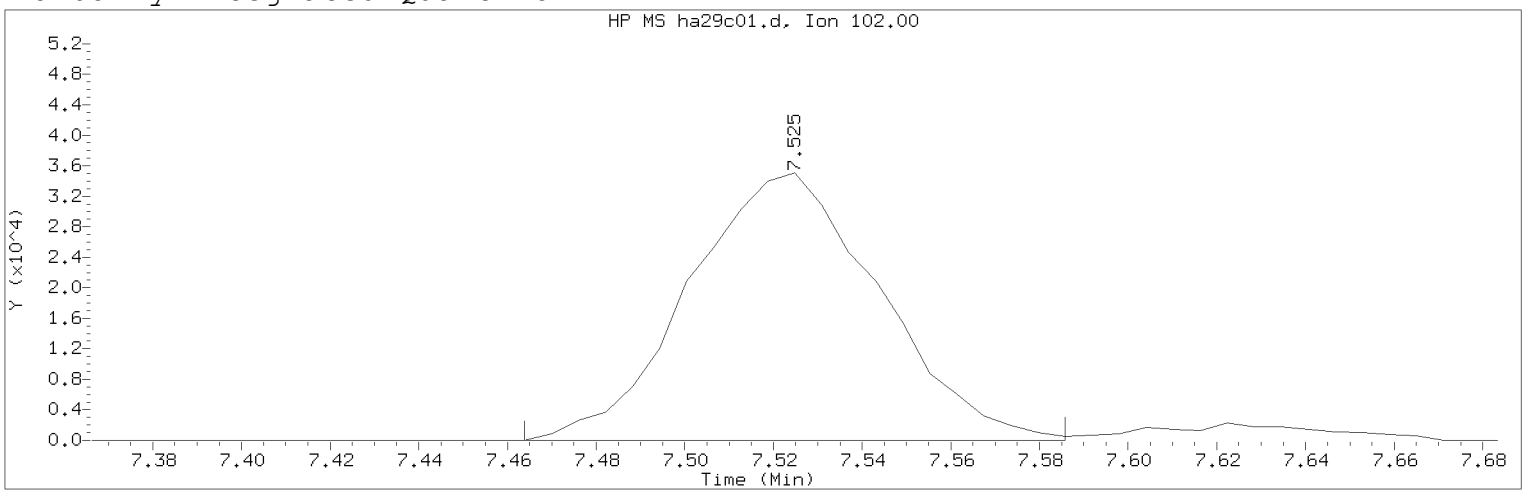
Compound Number : 0
Compound Name : 1,1-Dichloroethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 0.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

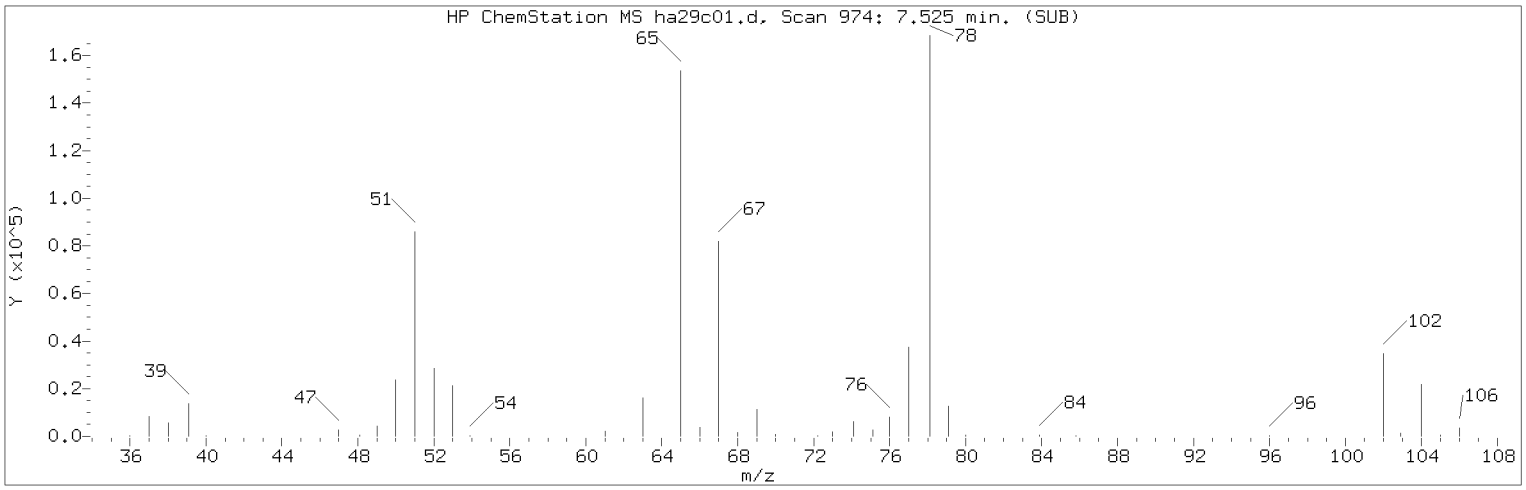
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 974
Retention Time (minutes): 7.525
Quant Ion : 102.00
Area (flag) : 104210M
On-Column Amount (ng) : 10.2951
Integration start scan : 963 Integration stop scan: 983
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

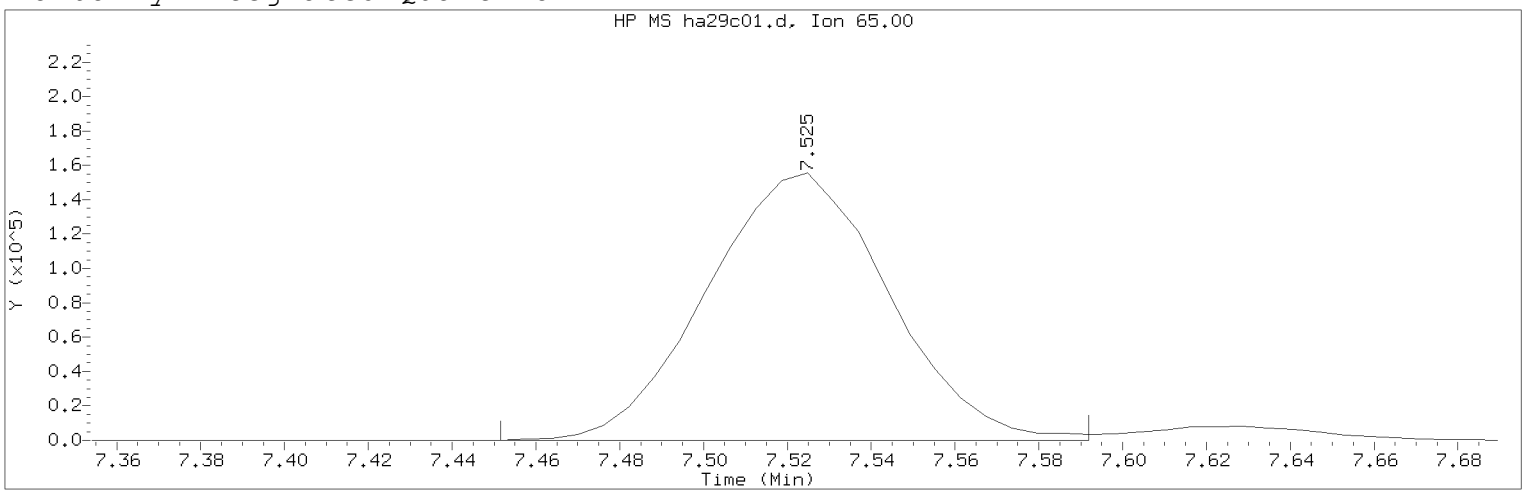
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

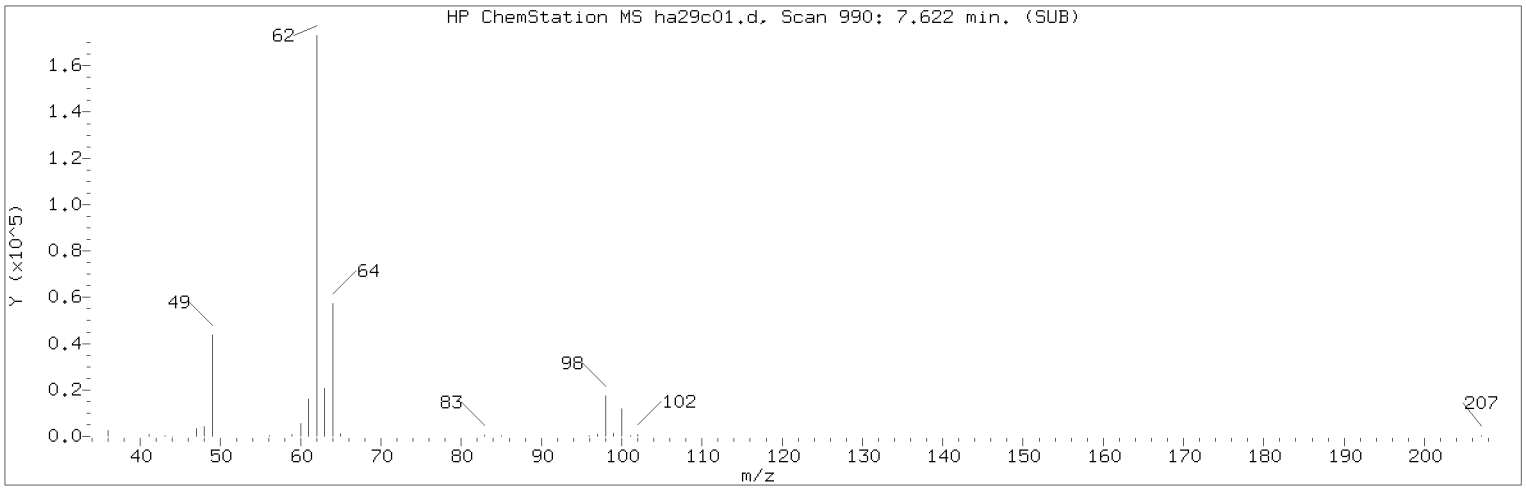
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 974
Retention Time (minutes): 7.525
Quant Ion : 65.00
Area (flag) : 467424M
On-Column Amount (ng) : 10.0083
Integration start scan : 961 Integration stop scan: 984
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

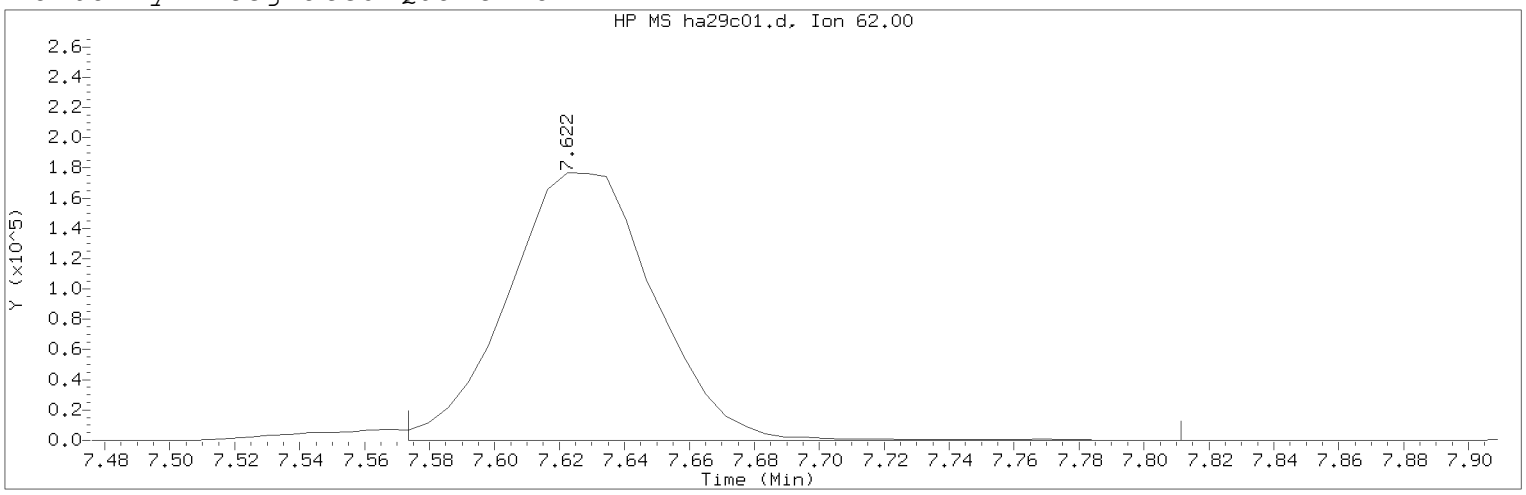
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

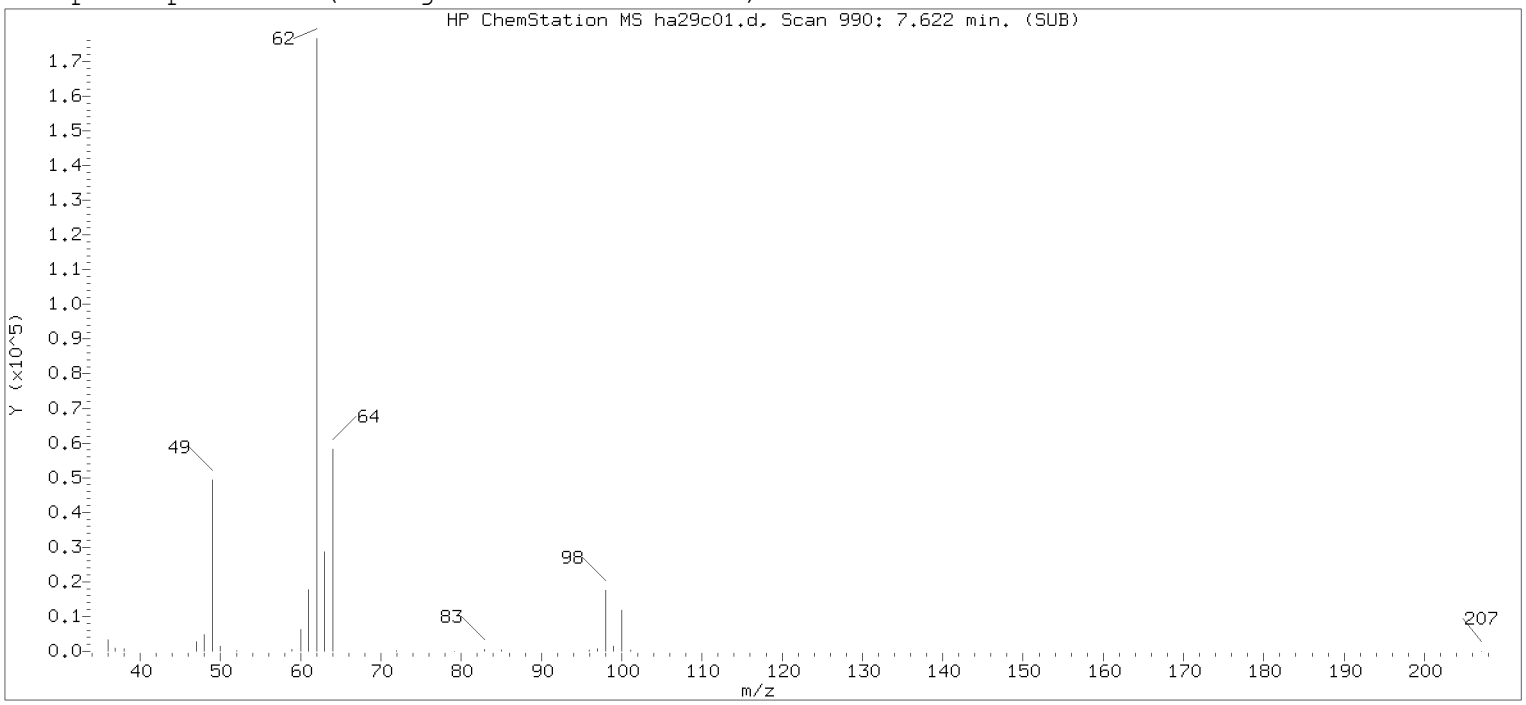
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area (flag) : 554738M
On-Column Amount (ng) : 9.4152
Integration start scan : 981 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

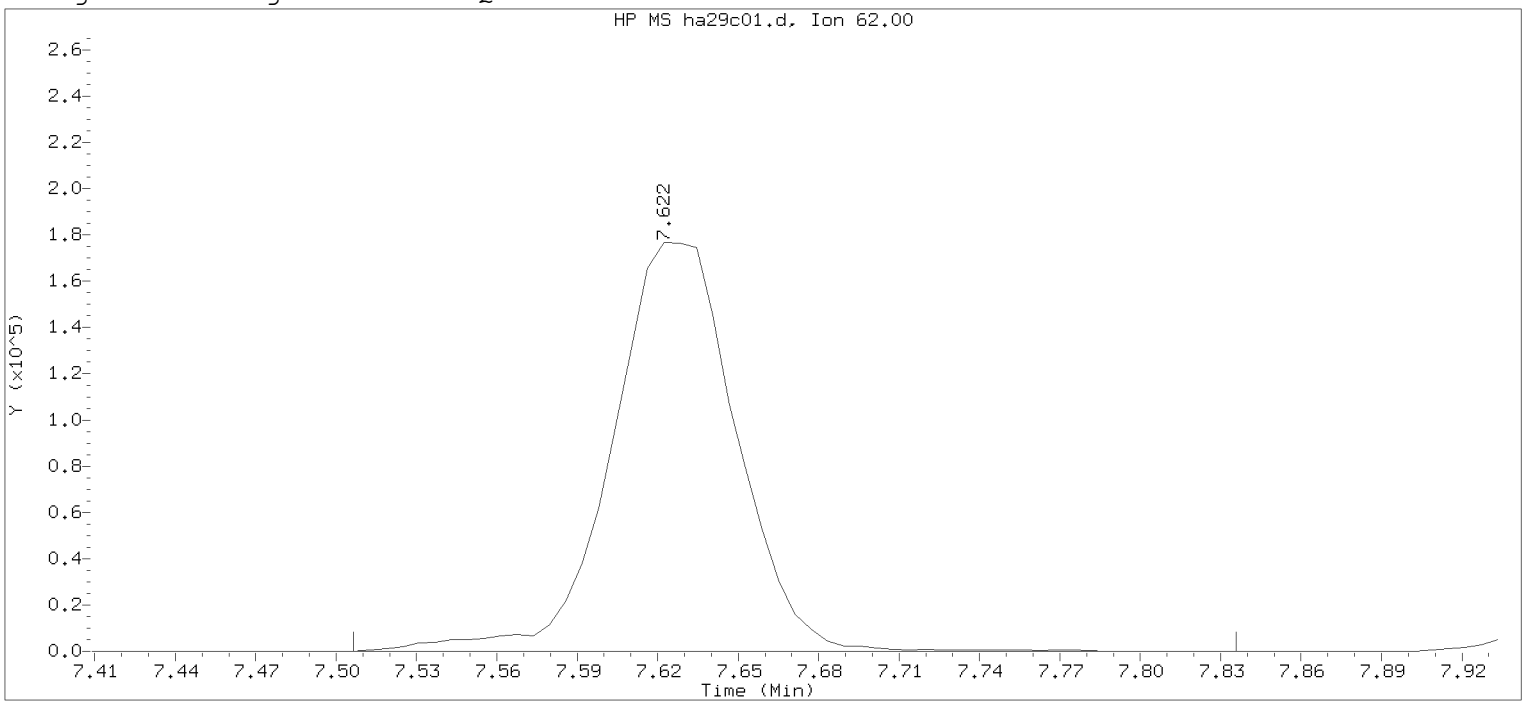
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

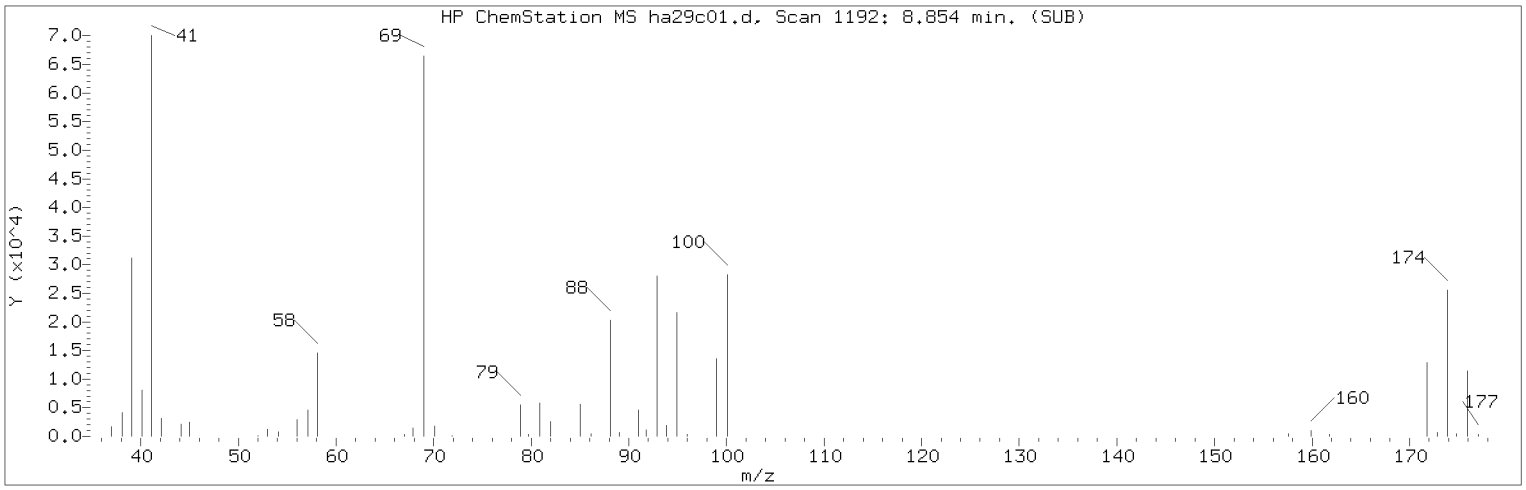
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

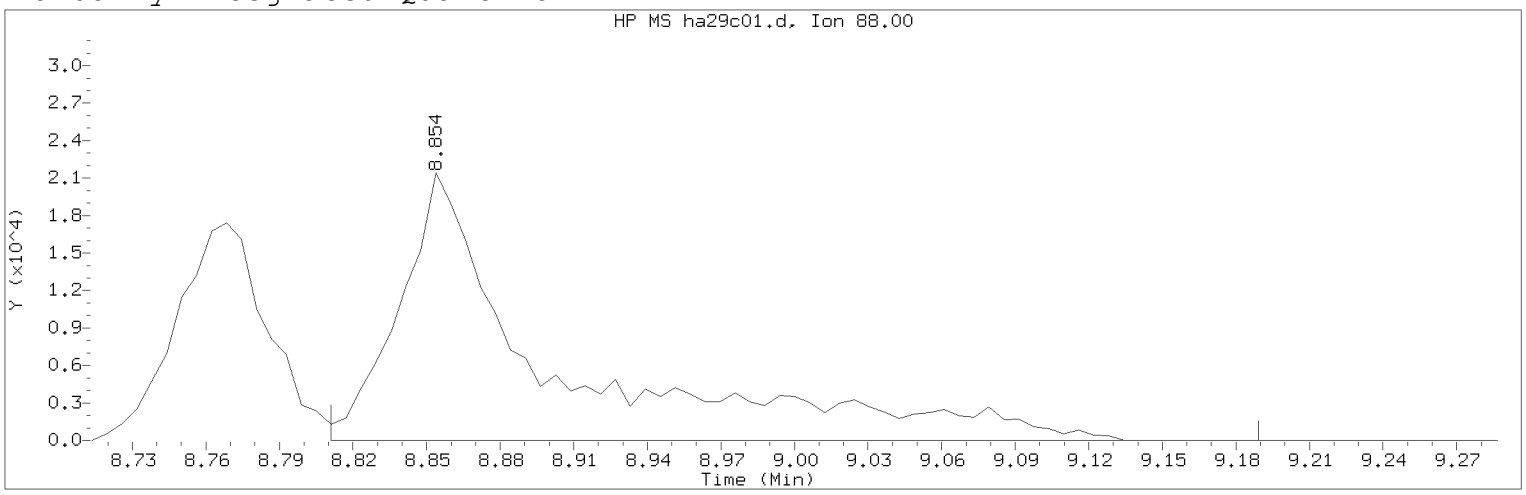
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area : 569517
On-column Amount (ng) : 9.6660
Integration start scan : 970 Integration stop scan: 1024
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

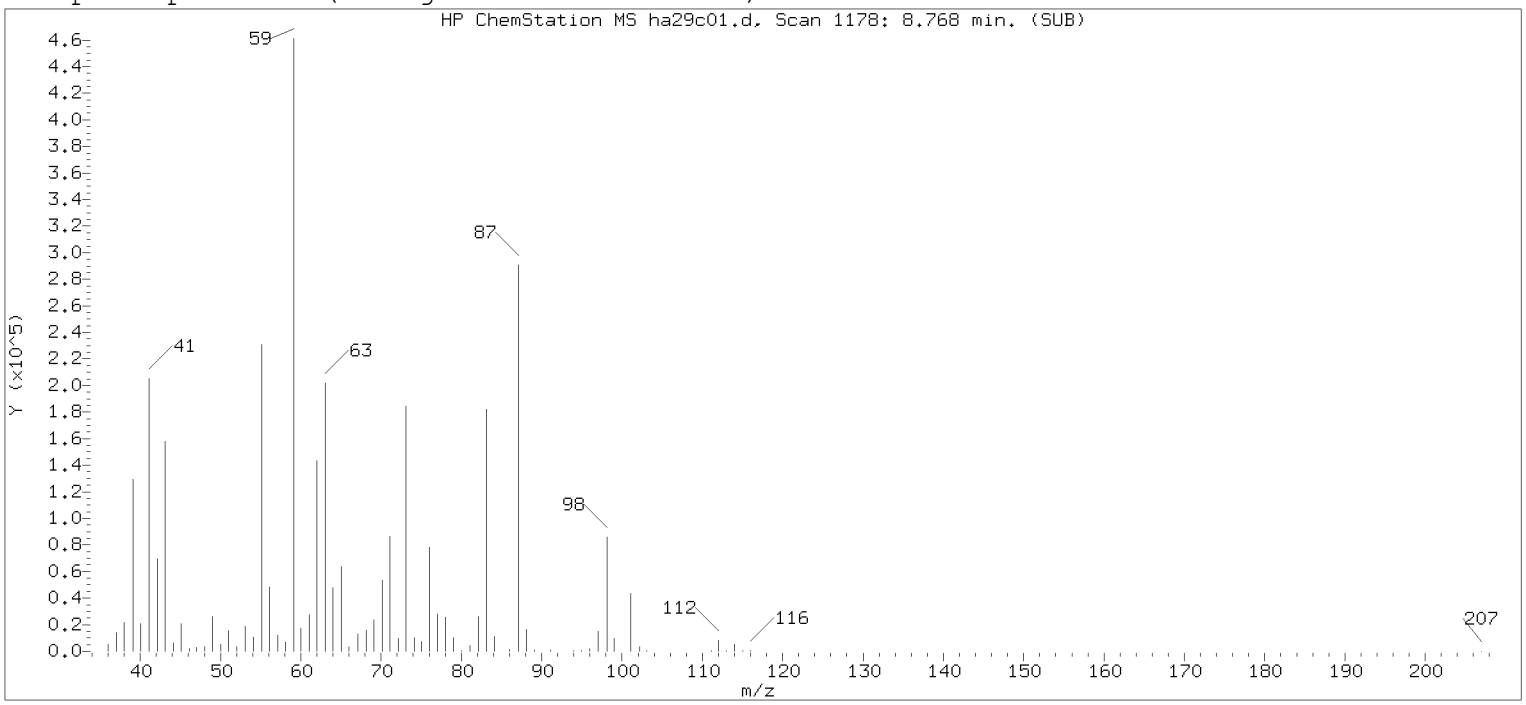
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 88.00
Area (flag) : 91007M
On-Column Amount (ng) : 492.2324
Integration start scan : 1184 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

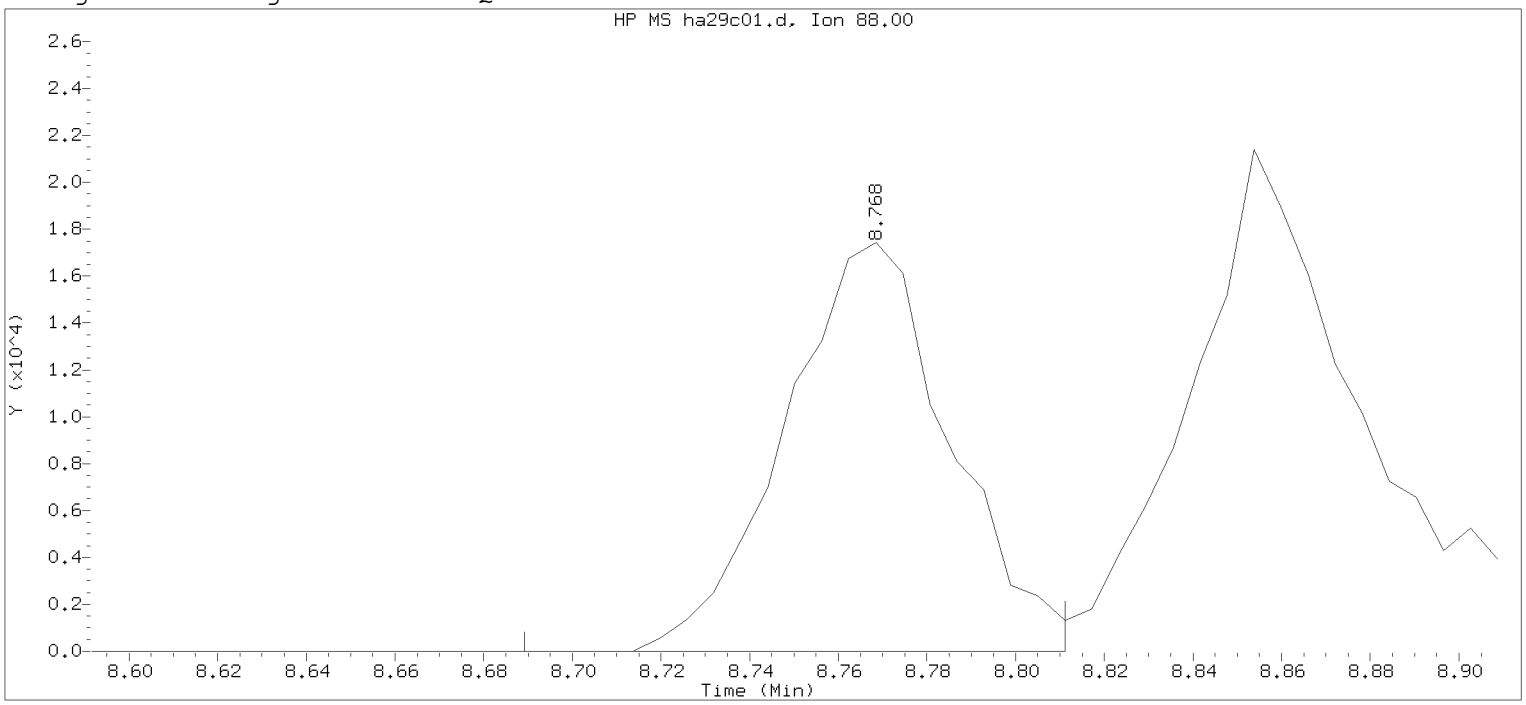
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

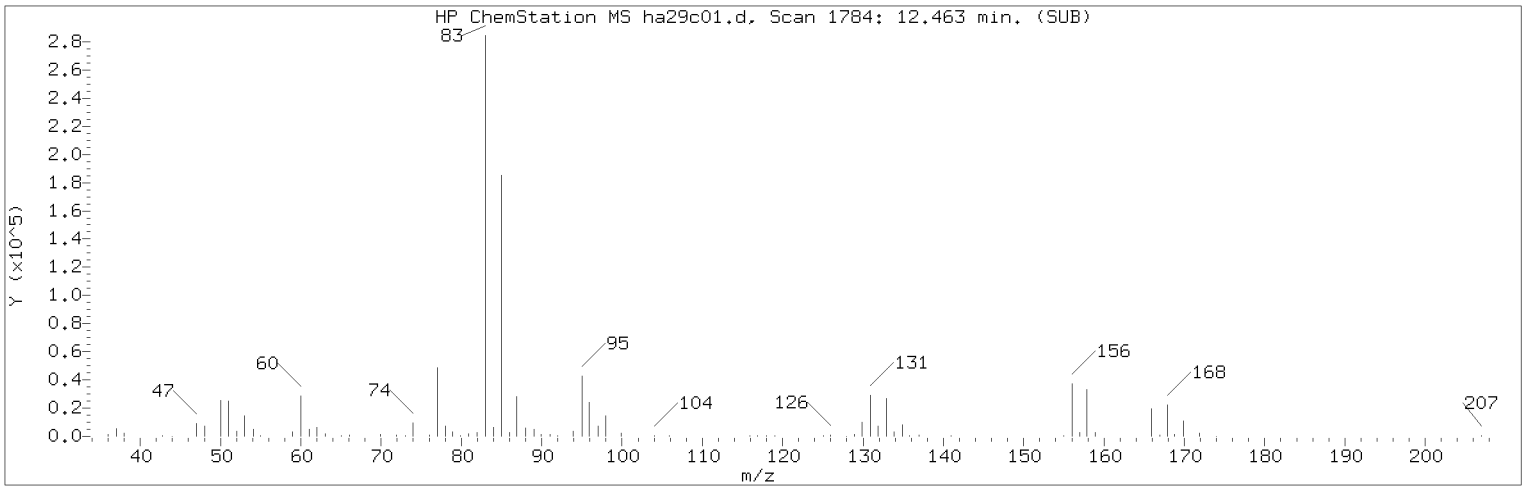
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

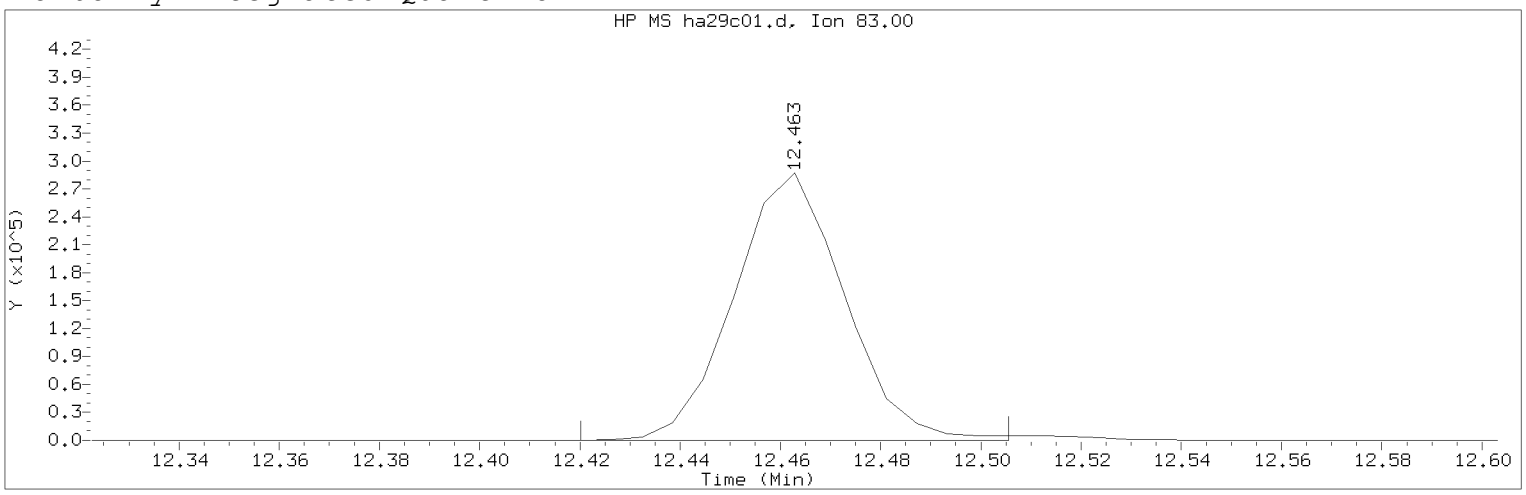
Compound Number	: 73		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 44763		
On-column Amount (ng)	: 242.1147		
Integration start scan	: 1164	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

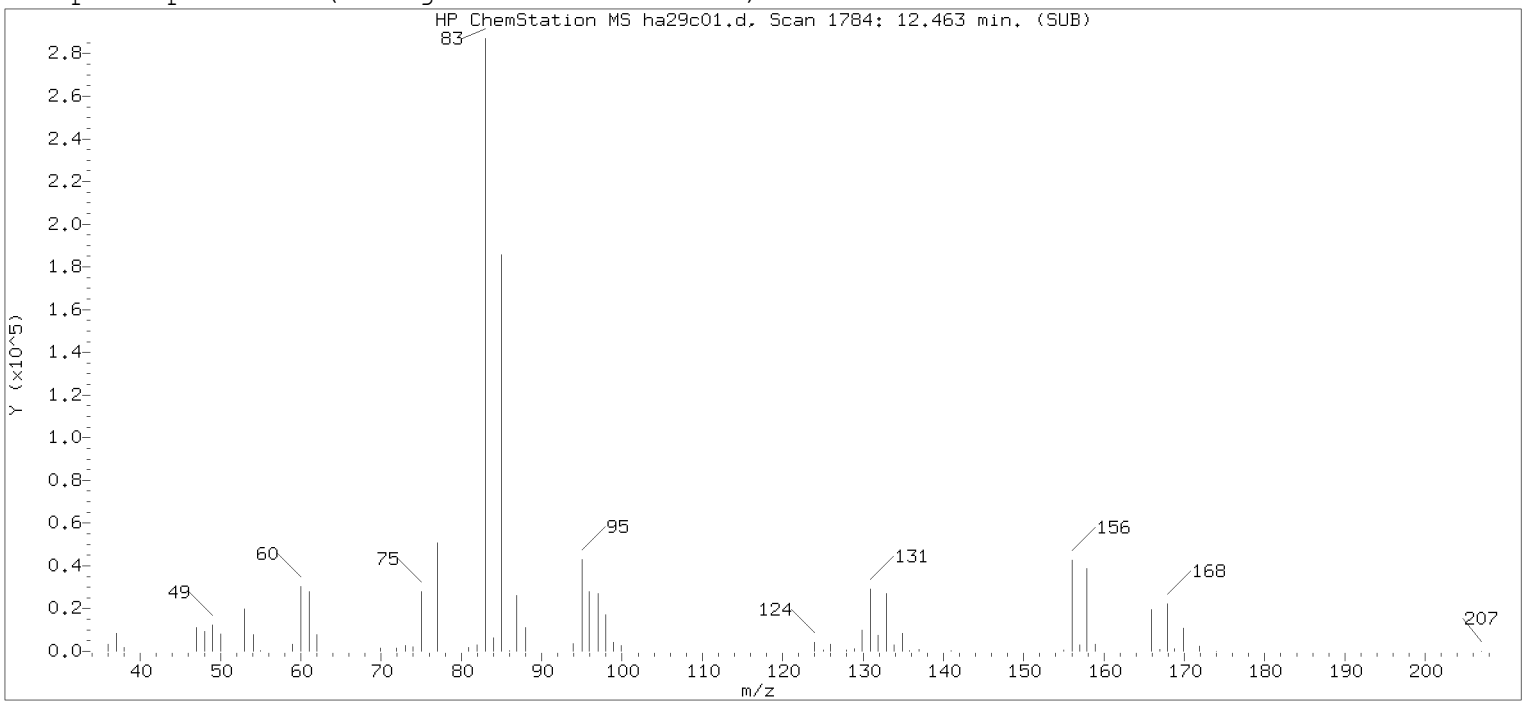
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1784
Retention Time (minutes): 12.463
Quant Ion : 83.00
Area (flag) : 438805M
On-Column Amount (ng) : 10.2643
Integration start scan : 1776 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

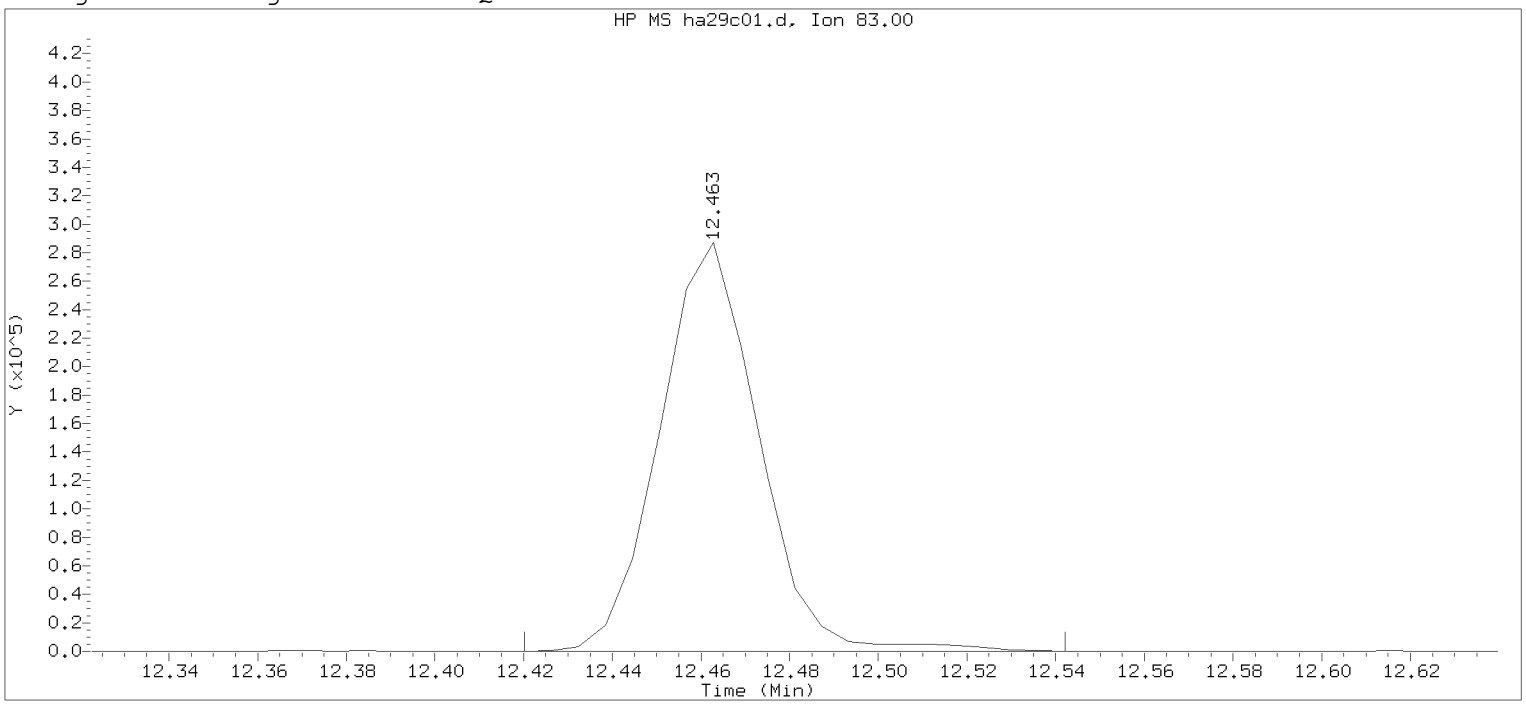
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

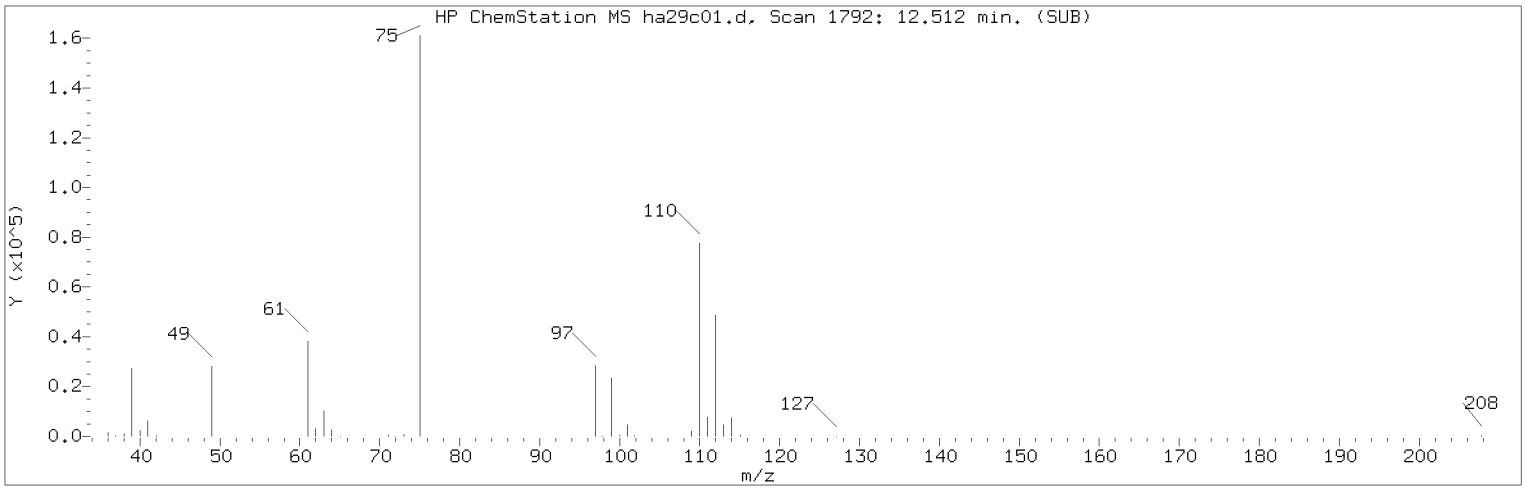
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

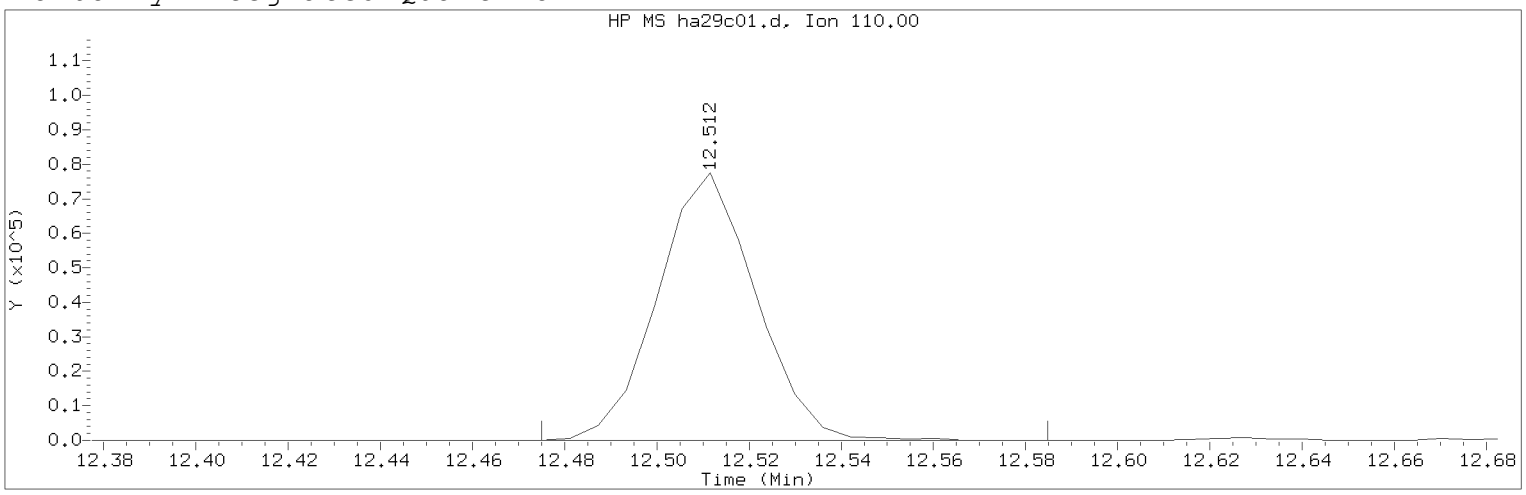
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1784
Retention Time (minutes): 12.463
Quant Ion : 83.00
Area : 443534
On-column Amount (ng) : 10.3749
Integration start scan : 1776 Integration stop scan: 1796
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

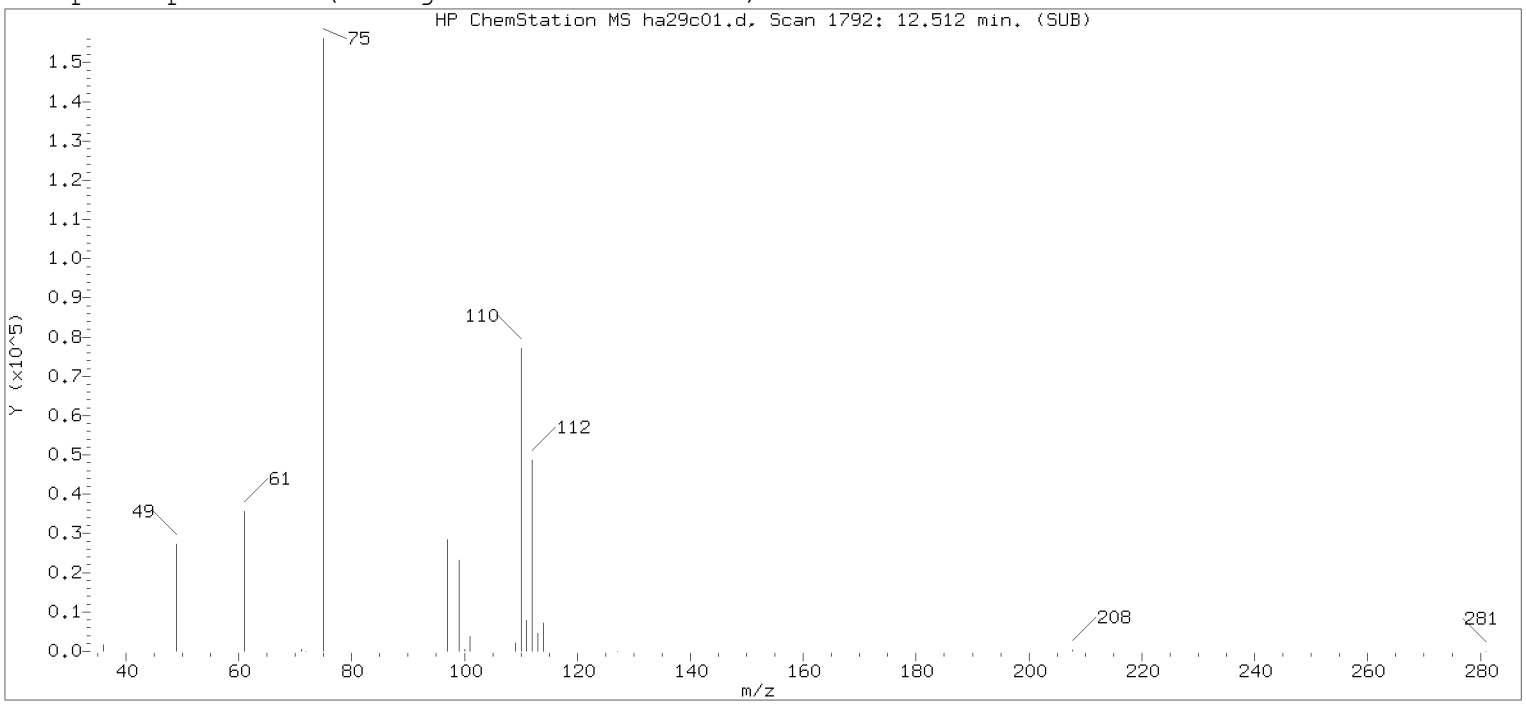
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1792
Retention Time (minutes): 12.512
Quant Ion : 110.00
Area (flag) : 114557M
On-Column Amount (ng) : 10.0068
Integration start scan : 1785 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

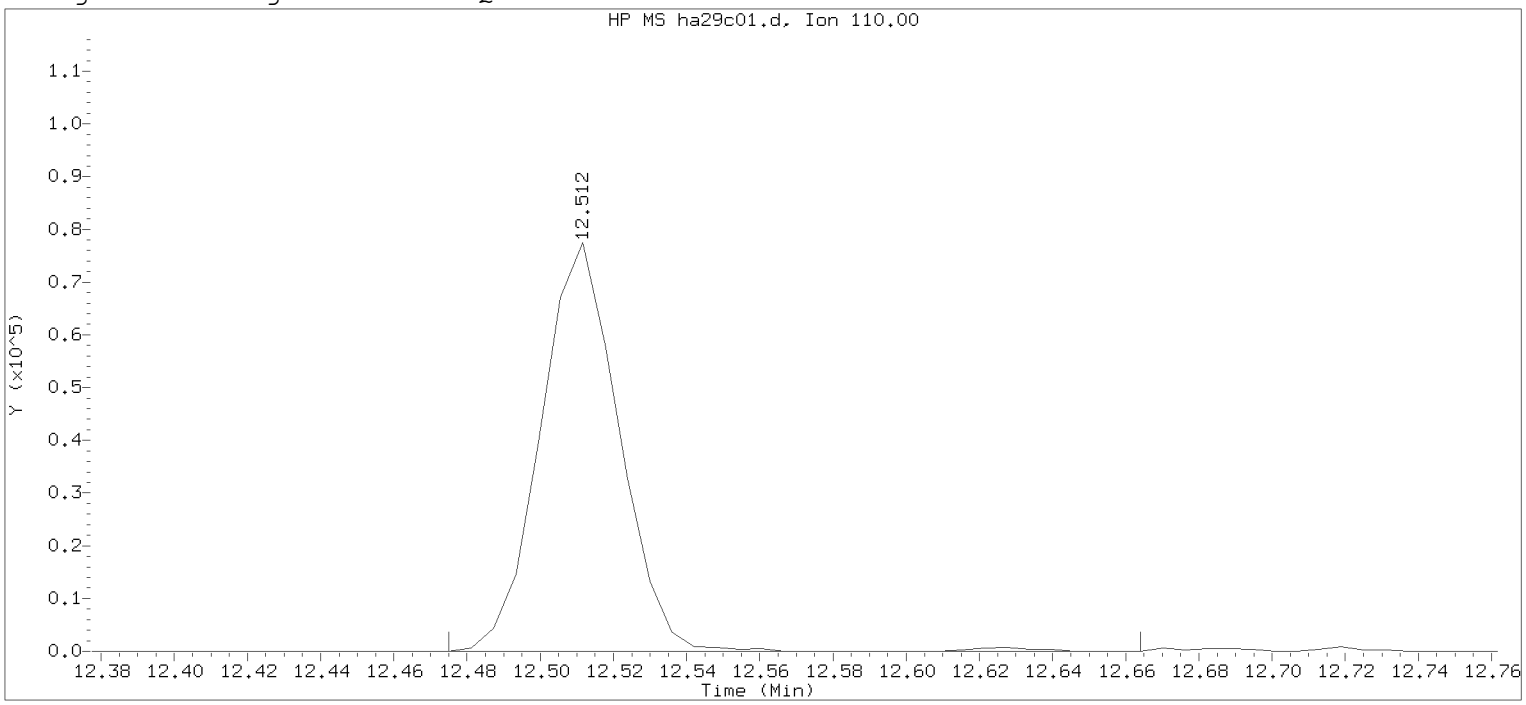
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

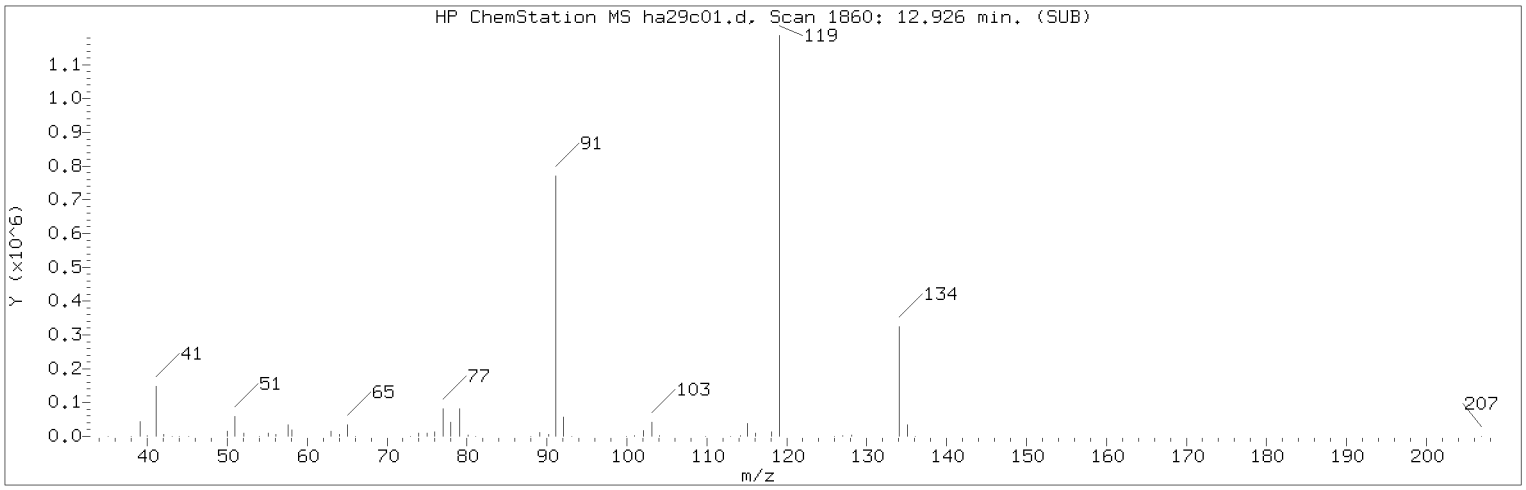
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

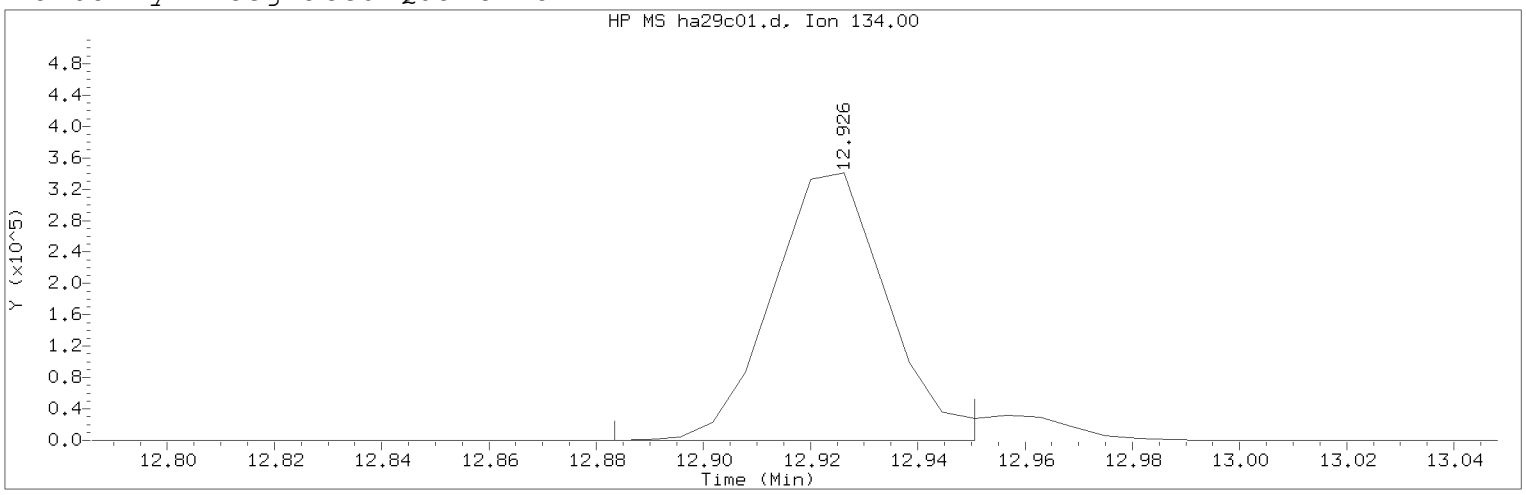
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1792
Retention Time (minutes): 12.512
Quant Ion : 110.00
Area : 115392
On-column Amount (ng) : 10.0797
Integration start scan : 1785 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user: JKHowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:17 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

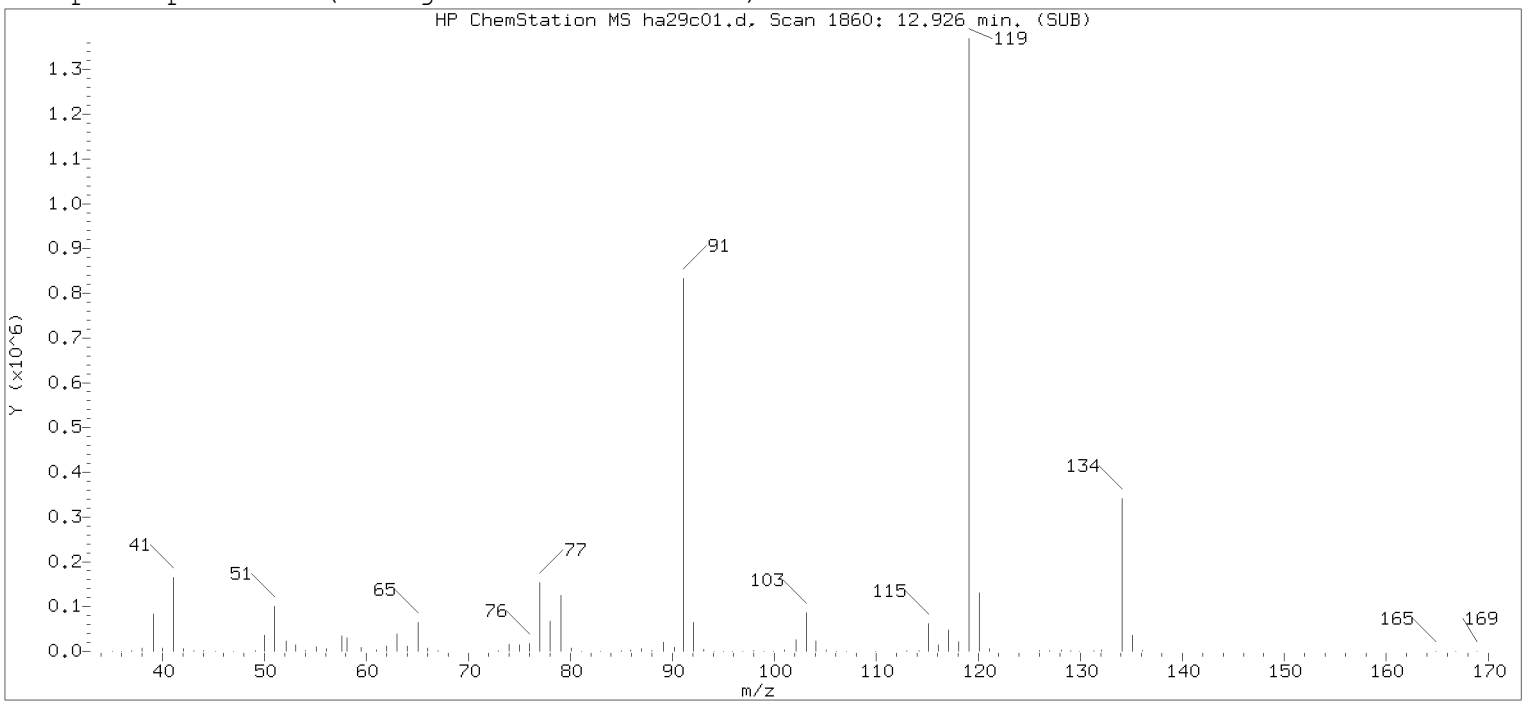
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area (flag) : 506290M
On-Column Amount (ng) : 9.9998
Integration start scan : 1852 Integration stop scan: 1863
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

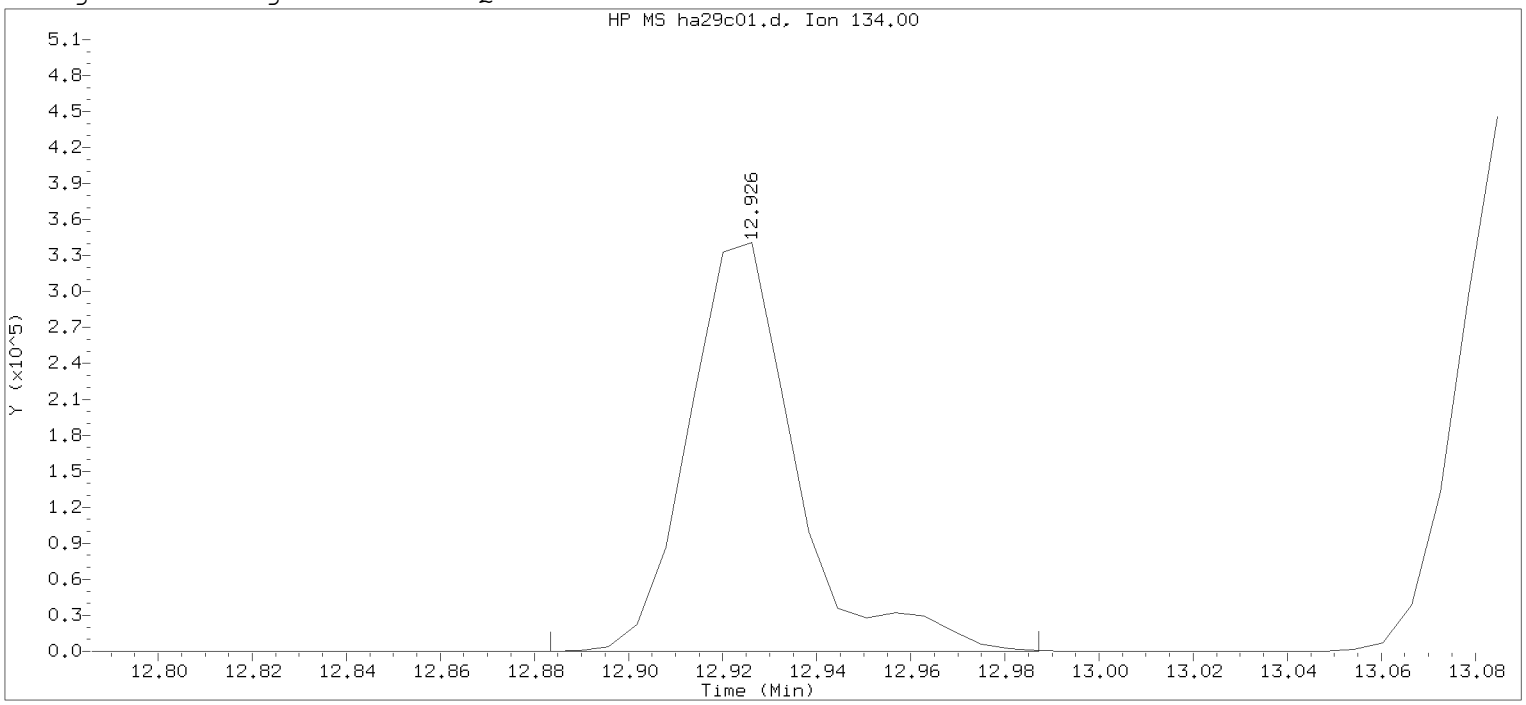
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 09:18.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29c01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 08:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 29-APR-2020 09:08
Date, time and analyst ID of latest file update: 29-Apr-2020 09:08 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area : 538231
On-column Amount (ng) : 10.6306
Integration start scan : 1852 Integration stop scan: 1869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 09:18.
Target 3.5 esignature user: JKH09052

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH63

Data file: /chem2/HP19094.i/20apr29a.b/ha29b01.d Injection date and time: **29-APR-2020 09:55**
Data file Sample Info. Line: VBLKH63;VBLKH63;1;3;;;DAA3568;;; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 10:13 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.470	(-0.006)	473	65	140188	(8)	50.00	
64) Fluorobenzene	7.951	(0.006)	1044	96	2060358	(-2)	10.00	
98) Chlorobenzene-d5	11.371	(0.000)	1605	117	1551137	(-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243	(0.000)	1912	152	816619	(0)	10.00	

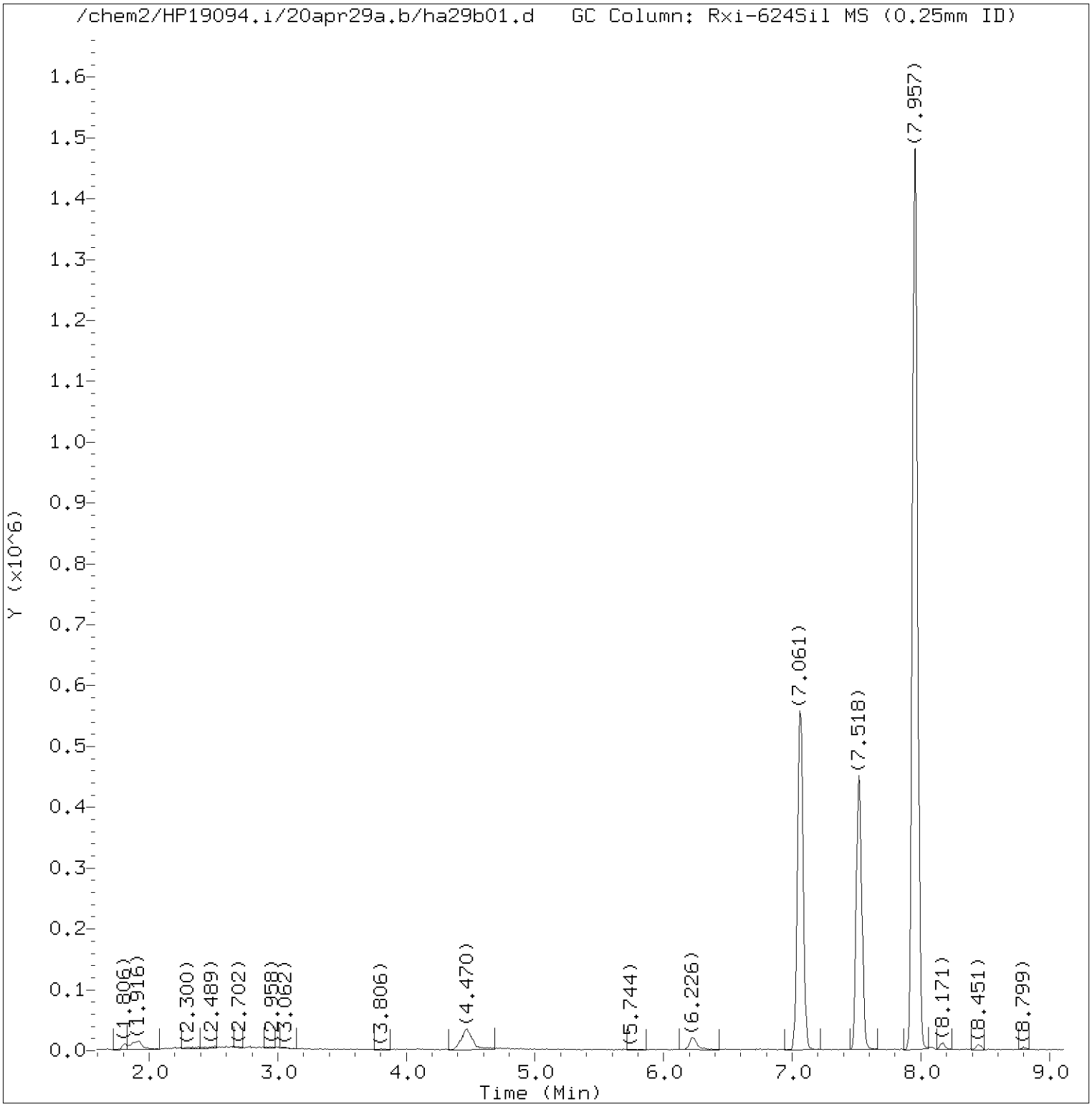
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061	(0.000)	113	528436	10.318	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518	(0.000)	102	106742	10.753	108%		80 - 120
83) Toluene-d8	(3)	9.939	(0.000)	98	2039128	9.867	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	706523	9.241	92%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
24) Methylene Chloride	(2)				Not Detected					0.2	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
40) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
39) 2-Butanone	(1)				Not Detected					1	10
50) Chloroform	(2)				Not Detected					0.1	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
84) Toluene	(3)				Not Detected					0.1	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 10:14. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

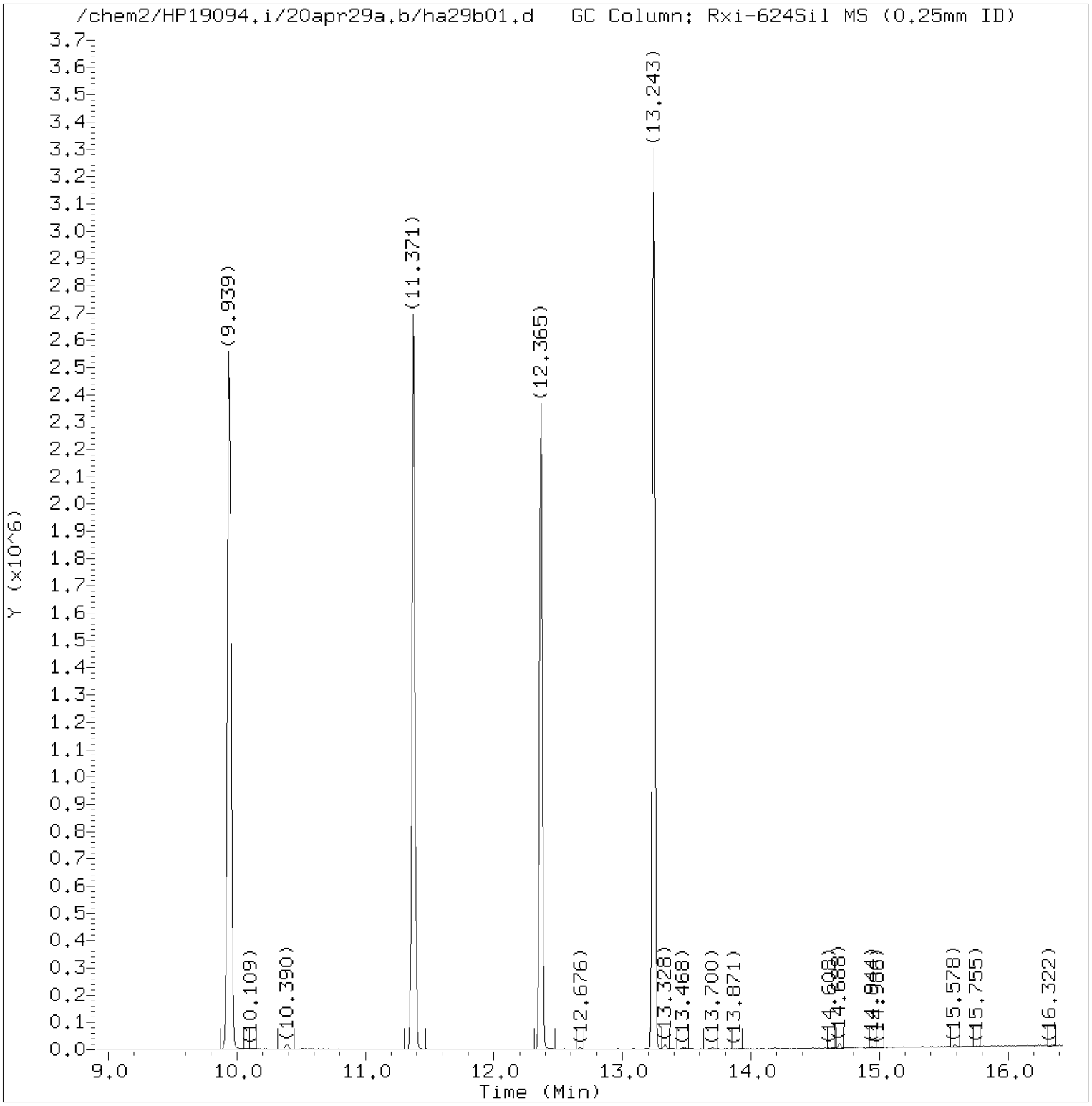
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29b01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:55 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:13 jkh09052

Sample Name: VBLKH63 Lab Sample ID: VBLKH63

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:14.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29b01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:55 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:13 jkh09052

Sample Name: VBLKH63 Lab Sample ID: VBLKH63

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:14.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29b01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:55 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:13 jkh09052

Sample Name: VBLKH63 Lab Sample ID: VBLKH63

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27)*t-Butyl Alcohol-d10	(1)	4.470	65	140188	50.000
51)$Dibromofluoromethane	(2)	7.061	113	528436	10.318
58)$1,2-Dichloroethane-d4	(2)	7.518	102	106742	10.753
64)*Fluorobenzene	(2)	7.951	96	2060358	10.000
83)$Toluene-d8	(3)	9.939	98	2039128	9.867
98)*Chlorobenzene-d5	(3)	11.371	117	1551137	10.000
112)$4-Bromofluorobenzene	(3)	12.365	95	706523	9.241
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	816619	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:14.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/20apr29a.b/ha29s06.d Injection date and time: **29-APR-2020 11:44**
Data file Sample Info. Line: 5WB03MS;1302096MS;1;3;MS;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452(0.012)	470	65	133219M (2)	50.00	
64) Fluorobenzene	7.951(0.006)	1044	96	2078451 (-1)	10.00	
98) Chlorobenzene-d5	11.371(0.000)	1605	117	1551573 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	819451 (0)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061(0.000)	113	511451	9.899	99%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512(0.001)	102	101284	10.115	101%		80 - 120
83) Toluene-d8	(3)	9.939(0.000)	98	2049403	9.914	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	722960	9.453	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.062(0.000)	85	384778	4.939	4.94			0.3	1
5) Vinyl Chloride	(2)	2.392(0.001)	62	413198	5.648	5.65			0.1	1
11) Ethyl ether	(2)	3.422(0.000)	59	222971	6.035	6.03		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.739(0.001)	96	265366	5.226	5.23			0.4	1
14) Acetone	(1)	3.775(0.000)	43	261568	32.314	32.31			3	10
24) Methylene Chloride	(2)	4.452(0.000)	84	290285	5.311	5.31			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.879(0.000)	96	289193	5.181	5.18			0.8	1
40) cis-1,2-Dichloroethene	(2)	6.360(0.000)	96	343814	5.543	5.54			0.1	1
39) 2-Butanone	(1)	6.330(-0.003)	43	482426	38.116	38.12			1	10
50) Chloroform	(2)	6.842(0.000)	83	658525	6.695	6.70			0.1	1
60) 1,2-Dichloroethane	(2)	7.622(-0.000)	62	300339M	5.153	5.15			0.1	1
68) Trichloroethene	(2)	8.427(-0.000)	95	345350	5.825	5.83			0.2	1
84) Toluene	(3)	10.012(0.000)	92	784075	5.400	5.40			0.1	1
102) m+p-Xylene	(3)	11.597(-0.000)	106	1180805	10.807	10.81			0.1	0.5
105) o-Xylene	(3)	11.920(-0.000)	106	556441	5.179	5.18			0.05	0.5
106) Xylene (Total)	(3)		106	1737246	15.986	15.99			0.2	3

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:21. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/20apr29a.b/ha29s06.d Injection date and time: **29-APR-2020 11:44**
Data file Sample Info. Line: 5WB03MS;1302096MS;1;3;MS;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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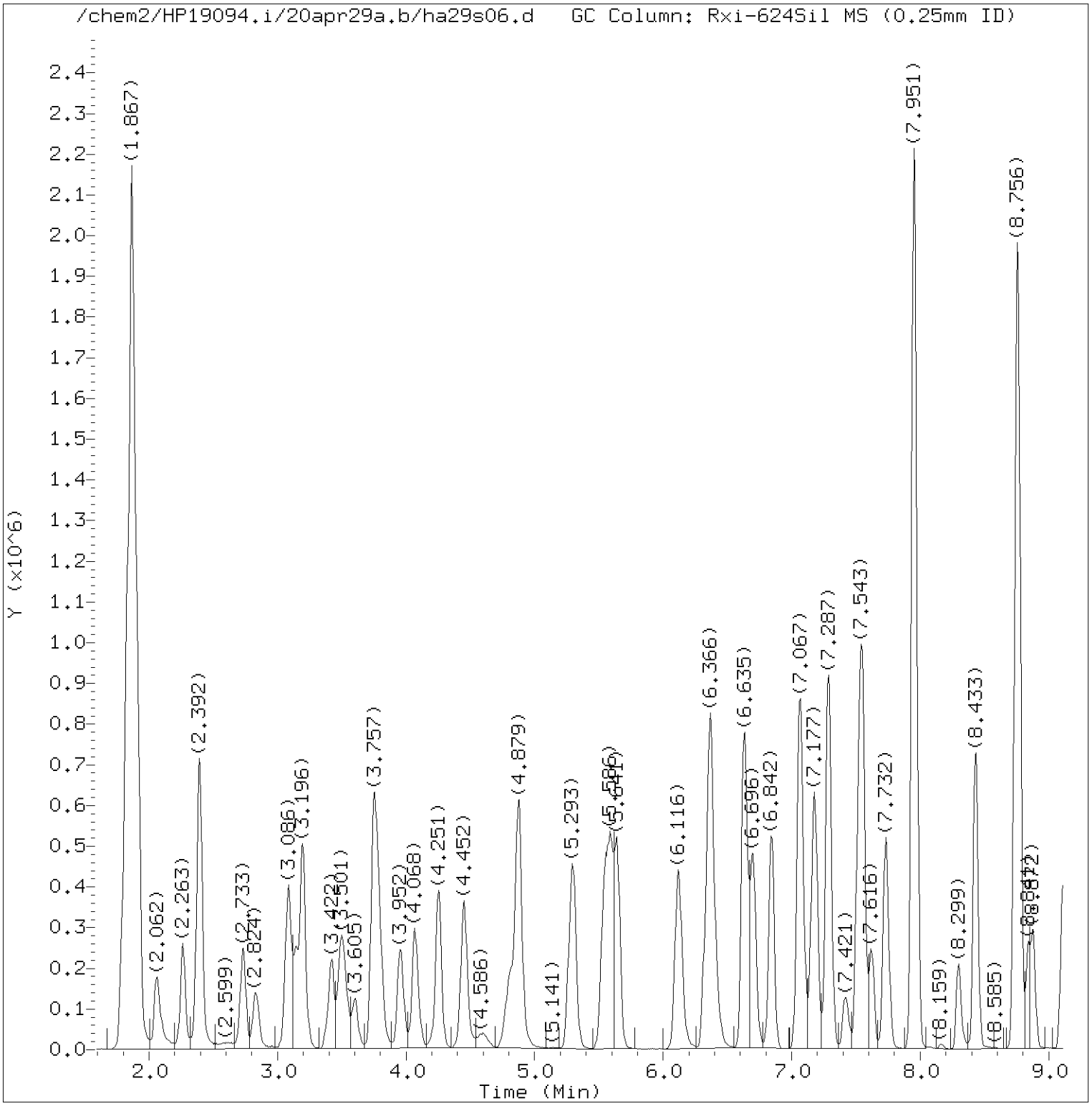
Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:21. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

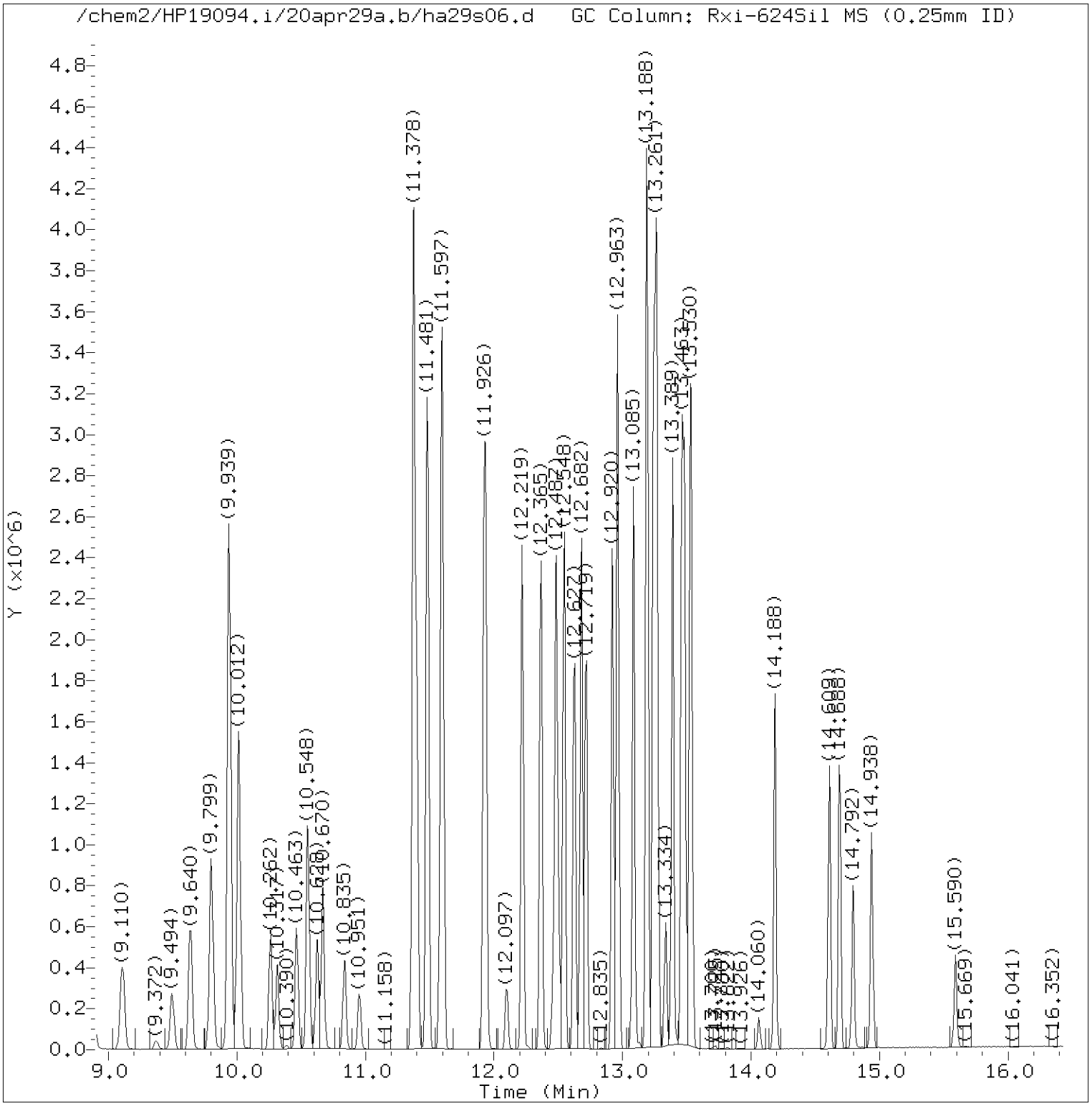
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

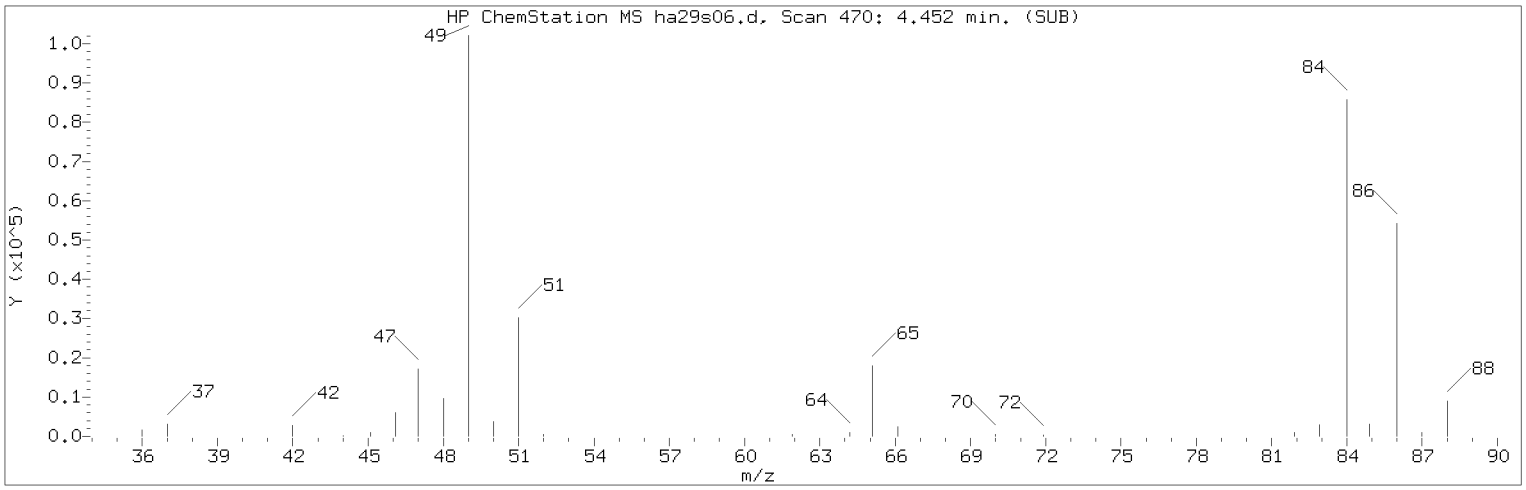
Sample Name: 5WB03MS Lab Sample ID: 1302096MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	384778	4.939
5) Vinyl Chloride	(2)	2.392	62	413198	5.648
11) Ethyl ether	(2)	3.422	59	222971	6.035
15) 1,1-Dichloroethene	(2)	3.739	96	265366	5.226
14) Acetone	(1)	3.775	43	261568	32.314
24) Methylene Chloride	(2)	4.452	84	290285	5.311
27)*t-Butyl Alcohol-d10	(1)	4.452	65	133219M	50.000
32) trans-1,2-Dichloroethene	(2)	4.879	96	289193	5.181
39) 2-Butanone	(1)	6.330	43	482426	38.116
40) cis-1,2-Dichloroethene	(2)	6.360	96	343814	5.543
50) Chloroform	(2)	6.842	83	658525	6.695
51)$Dibromofluoromethane	(2)	7.061	113	511451	9.899
58)$1,2-Dichloroethane-d4	(2)	7.512	102	101284	10.115
60) 1,2-Dichloroethane	(2)	7.622	62	300339M	5.153
64)*Fluorobenzene	(2)	7.951	96	2078451	10.000
68) Trichloroethene	(2)	8.427	95	345350	5.825
83)$Toluene-d8	(3)	9.939	98	2049403	9.914
84) Toluene	(3)	10.012	92	784075	5.400
98)*Chlorobenzene-d5	(3)	11.371	117	1551573	10.000
102) m+p-Xylene	(3)	11.597	106	1180805	10.807
106) Xylene (Total)	(3)		106	1737246	15.986
105) o-Xylene	(3)	11.920	106	556441	5.179
112)$4-Bromofluorobenzene	(3)	12.365	95	722960	9.453
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	819451	10.000

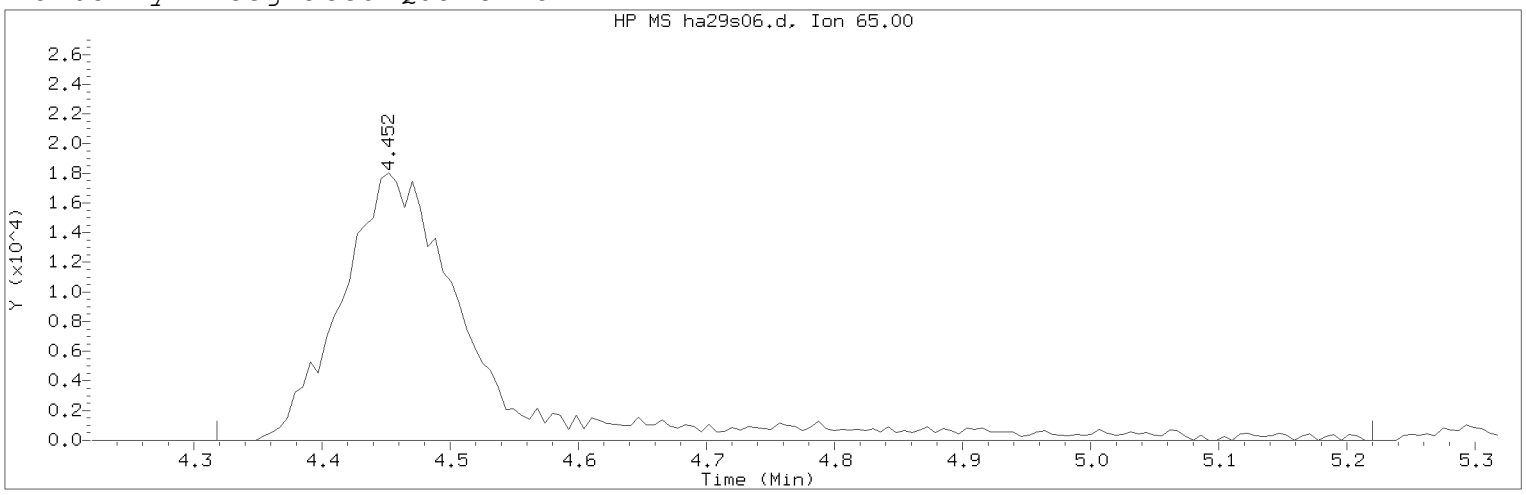
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

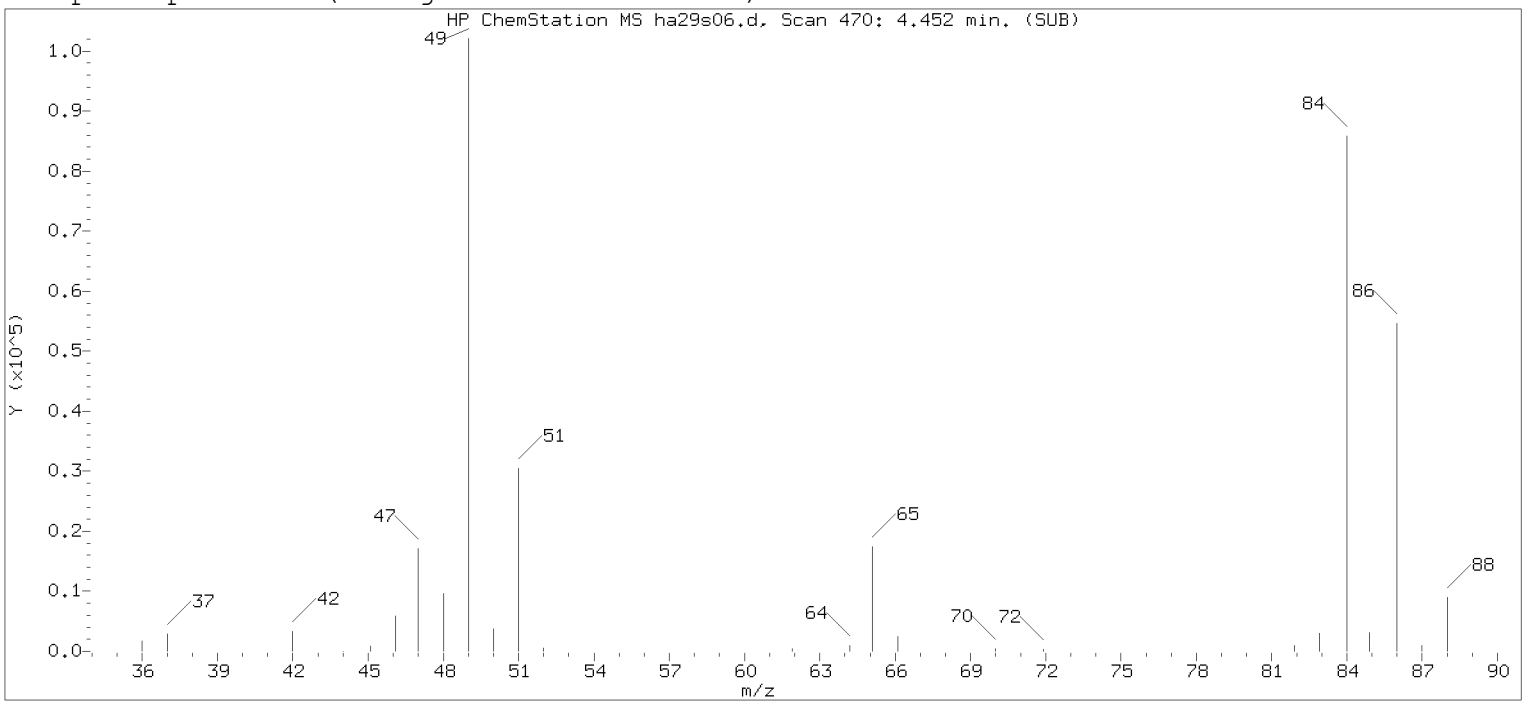
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 470
Retention Time (minutes): 4.452
Quant Ion : 65.00
Area (flag) : 133219M
On-Column Amount (ng) : 50.0000
Integration start scan : 447 Integration stop scan: 595
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

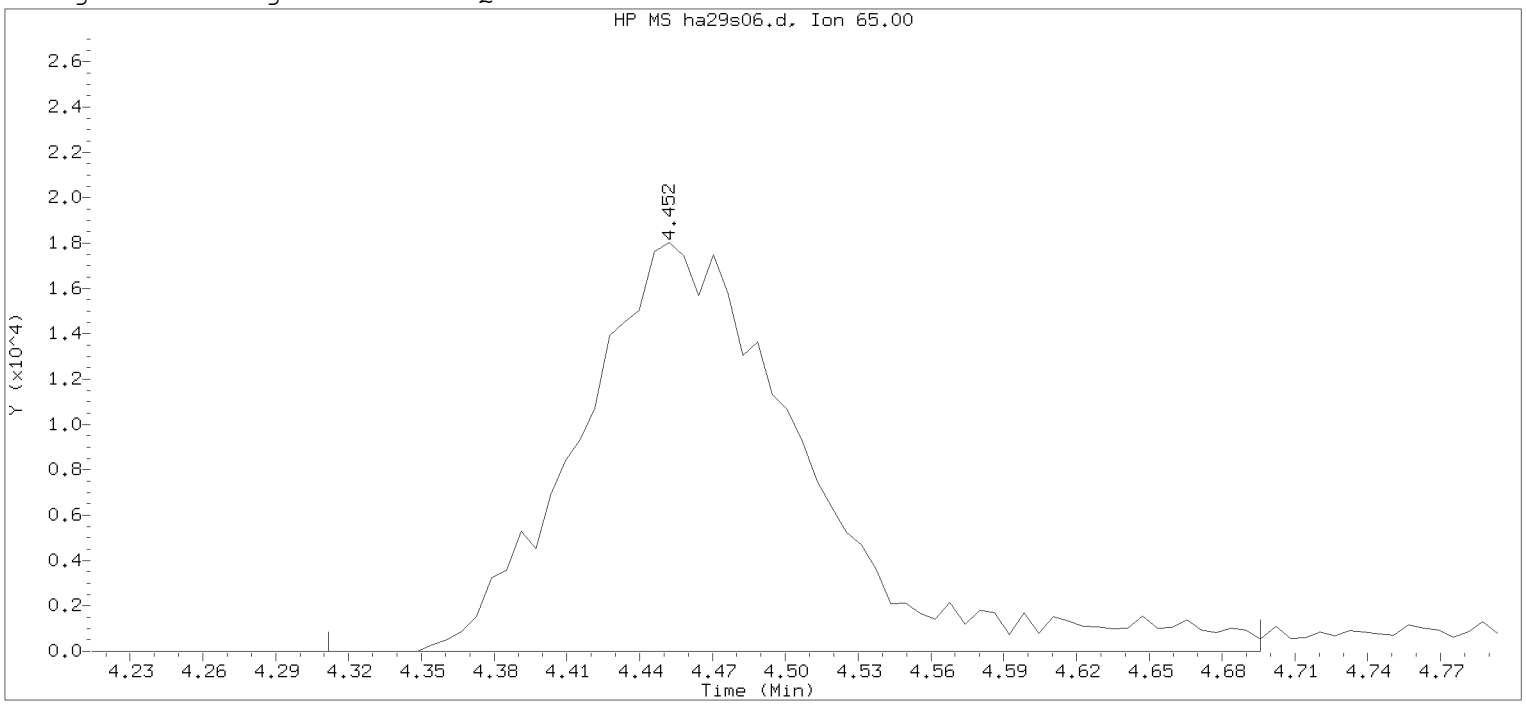
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

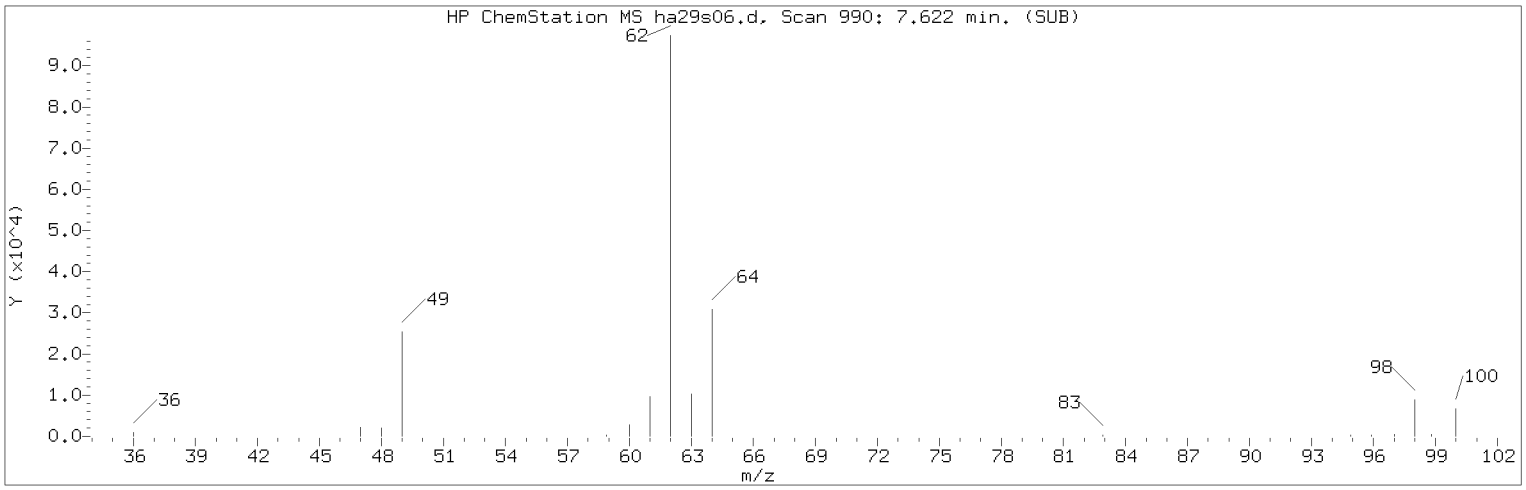
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:02 Automation

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

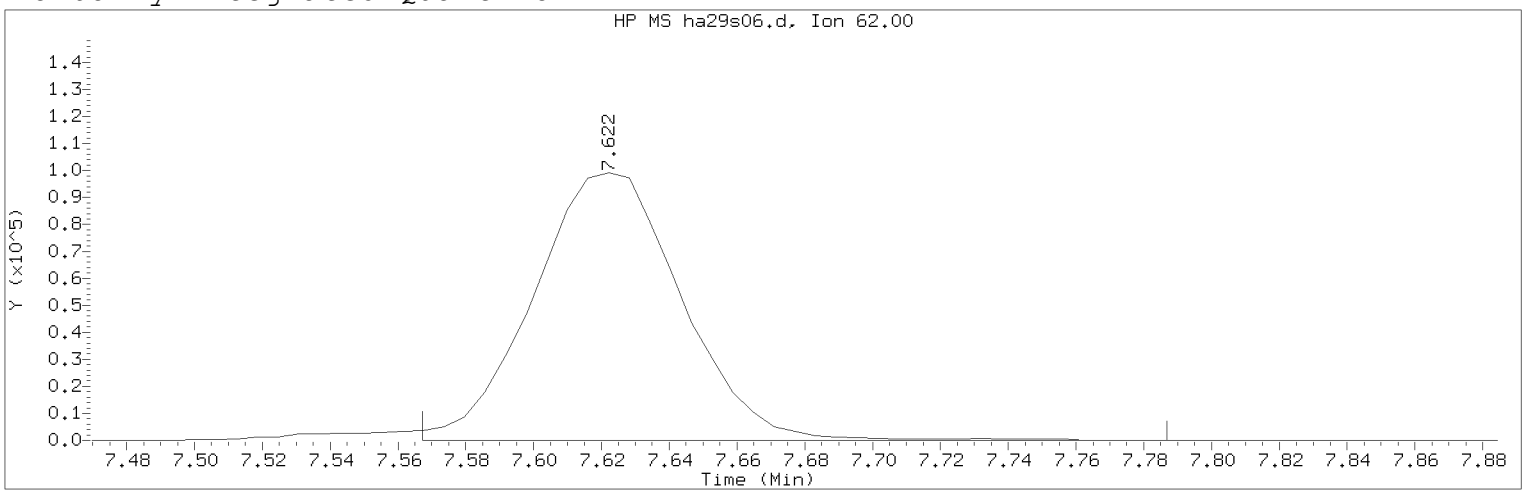
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 470
Retention Time (minutes): 4.452
Quant Ion : 65.00
Area : 116795
On-column Amount (ng) : 50.0000
Integration start scan : 446 Integration stop scan: 509
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:20 jkh09052

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

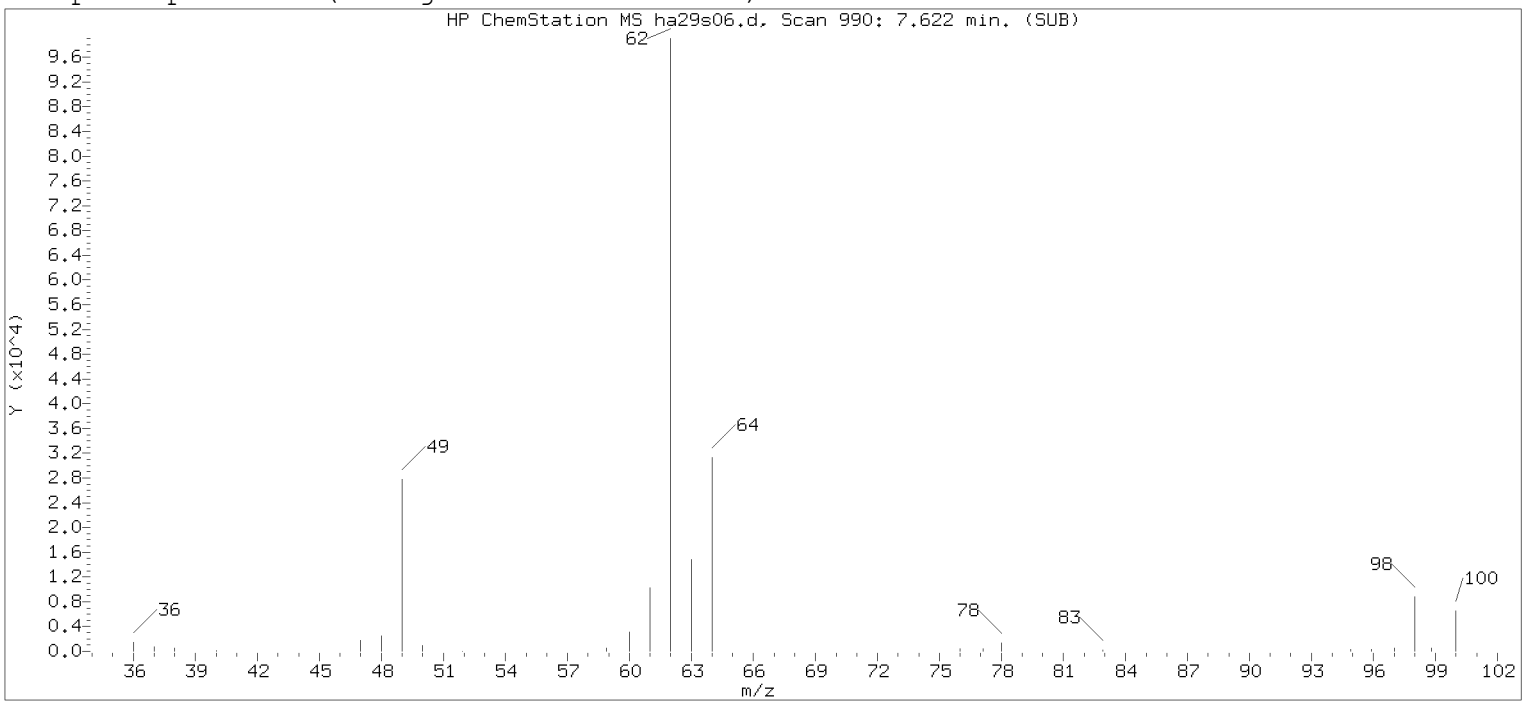
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area (flag) : 300339M
On-Column Amount (ng) : 5.1528
Integration start scan : 980 Integration stop scan: 1016
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

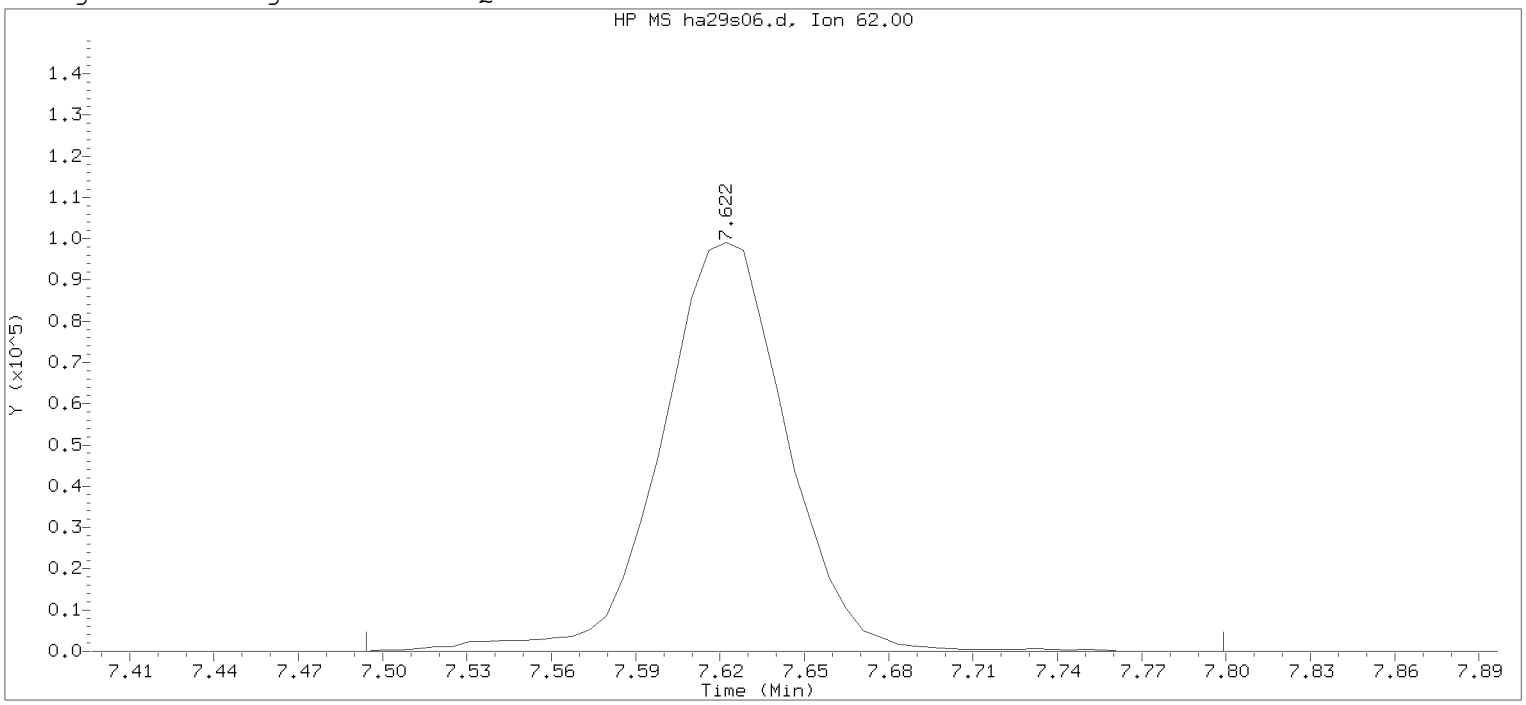
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s06.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 11:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:02 Automation

Sample Name: 5WB03MS Lab Sample ID: 1302096MS

Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area : 307492
On-column Amount (ng) : 5.2756
Integration start scan : 968 Integration stop scan: 1018
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:21.
Target 3.5 esignature user AF60 jkhowe002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/20apr29a.b/ha29s07.d Injection date and time: **29-APR-2020 12:06**
Data file Sample Info. Line: 5WB03MSD;1302097MSD;1;3;MSD;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H20120**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452(0.012)	470	65	133556 (3)	50.00	
64) Fluorobenzene	7.951(0.006)	1044	96	2081190 (-1)	10.00	
98) Chlorobenzene-d5	11.371(0.000)	1605	117	1555529 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	819814 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061(0.000)	113	511244	9.882	99%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519(0.000)	102	106485M	10.620	106%		80 - 120
83) Toluene-d8	(3)	9.939(0.000)	98	2066997	9.974	100%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	729474	9.514	95%		80 - 120

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.062(0.000)	85	375451	4.813	4.81			0.3	1
5) Vinyl Chloride	(2)	2.385(0.002)	62	408451	5.576	5.58			0.1	1
11) Ethyl ether	(2)	3.422(0.000)	59	229575	6.205	6.21		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.751(0.000)	96	268043	5.272	5.27			0.4	1
14) Acetone	(1)	3.781(-0.000)	43	270012	33.273	33.27			3	10
24) Methylene Chloride	(2)	4.452(0.000)	84	288892	5.279	5.28			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.879(0.000)	96	293265	5.247	5.25			0.8	1
40) cis-1,2-Dichloroethene	(2)	6.360(0.000)	96	344964	5.554	5.55			0.1	1
39) 2-Butanone	(1)	6.324(-0.002)	43	500612	39.453	39.45			1	10
50) Chloroform	(2)	6.842(0.000)	83	647594	6.575	6.58			0.1	1
60) 1,2-Dichloroethane	(2)	7.622(-0.000)	62	304852M	5.223	5.22			0.1	1
68) Trichloroethene	(2)	8.427(-0.000)	95	351389	5.919	5.92			0.2	1
84) Toluene	(3)	10.012(0.000)	92	785975	5.399	5.40			0.1	1
102) m+p-Xylene	(3)	11.597(-0.000)	106	1190745	10.871	10.87			0.1	0.5
105) o-Xylene	(3)	11.920(-0.000)	106	559467	5.194	5.19			0.05	0.5
106) Xylene (Total)	(3)		106	1750212	16.065	16.06			0.2	3

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/20apr29a.b/ha29s07.d Injection date and time: **29-APR-2020 12:06**
Data file Sample Info. Line: 5WB03MSD;1302097MSD;1;3;MSD;RAF60;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H2012**
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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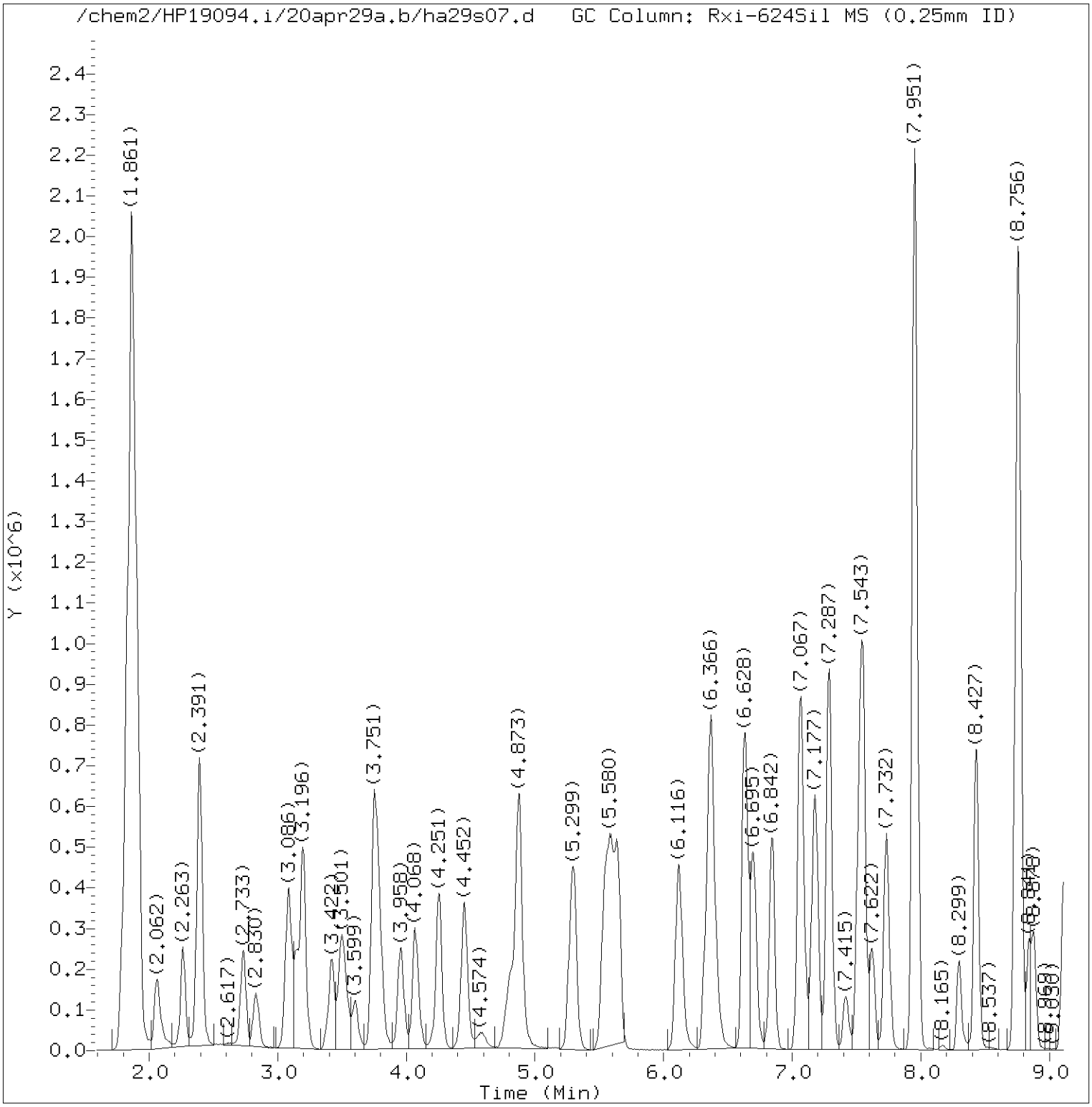
Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

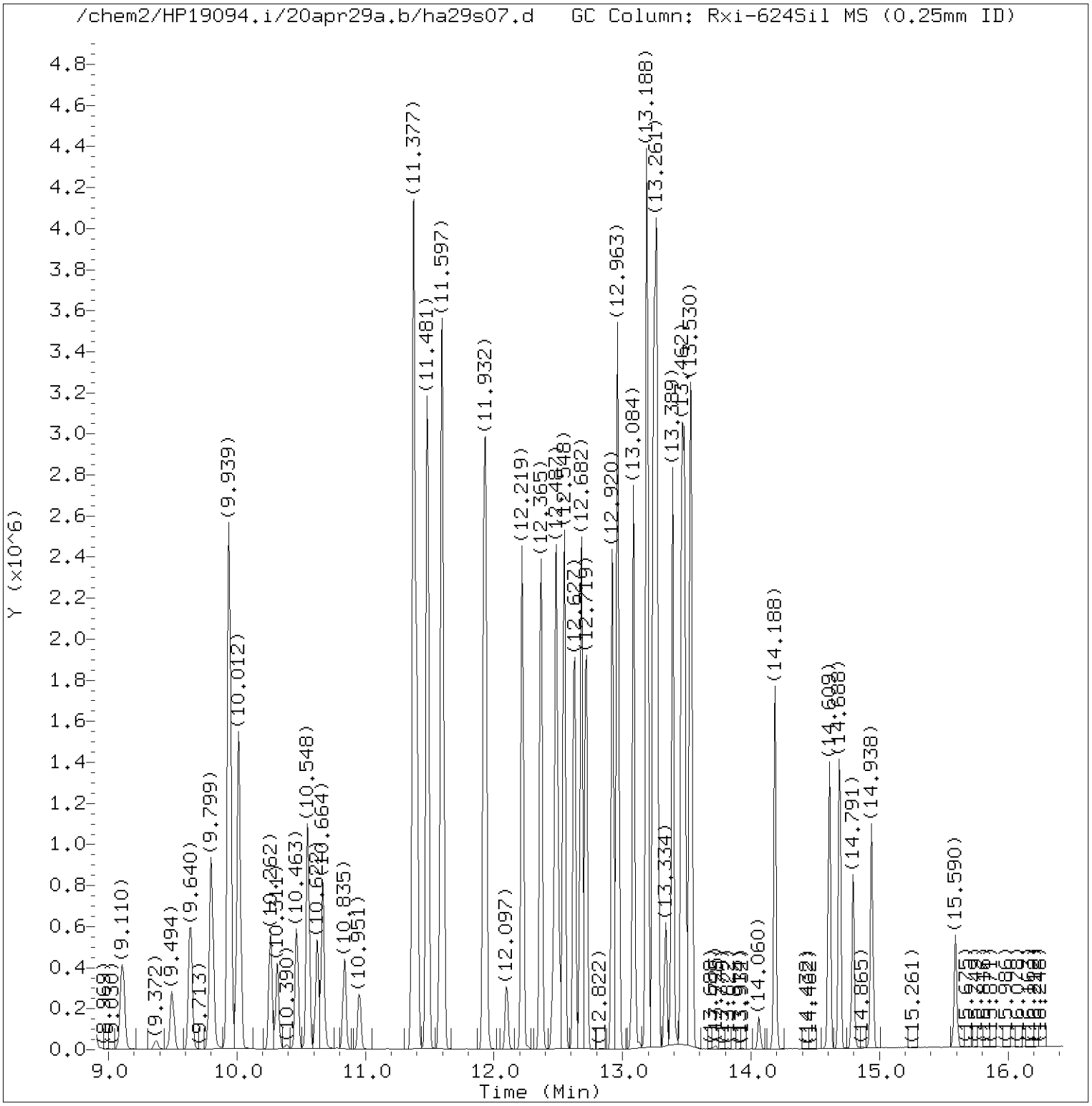
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

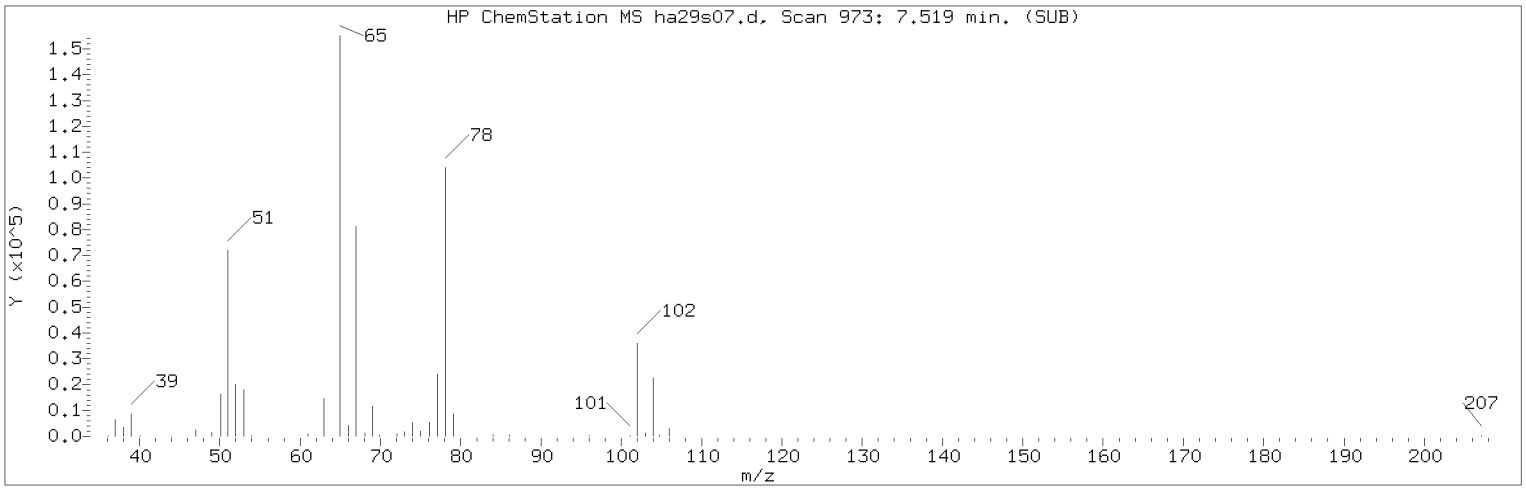
Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	375451	4.813
5) Vinyl Chloride	(2)	2.385	62	408451	5.576
11) Ethyl ether	(2)	3.422	59	229575	6.205
15) 1,1-Dichloroethene	(2)	3.751	96	268043	5.272
14) Acetone	(1)	3.781	43	270012	33.273
24) Methylene Chloride	(2)	4.452	84	288892	5.279
27)*t-Butyl Alcohol-d10	(1)	4.452	65	133556	50.000
32) trans-1,2-Dichloroethene	(2)	4.879	96	293265	5.247
39) 2-Butanone	(1)	6.324	43	500612	39.453
40) cis-1,2-Dichloroethene	(2)	6.360	96	344964	5.554
50) Chloroform	(2)	6.842	83	647594	6.575
51)$Dibromofluoromethane	(2)	7.061	113	511244	9.882
58)$1,2-Dichloroethane-d4	(2)	7.519	102	106485M	10.620
60) 1,2-Dichloroethane	(2)	7.622	62	304852M	5.223
64)*Fluorobenzene	(2)	7.951	96	2081190	10.000
68) Trichloroethene	(2)	8.427	95	351389	5.919
83)$Toluene-d8	(3)	9.939	98	2066997	9.974
84) Toluene	(3)	10.012	92	785975	5.399
98)*Chlorobenzene-d5	(3)	11.371	117	1555529	10.000
102) m+p-Xylene	(3)	11.597	106	1190745	10.871
106) Xylene (Total)	(3)		106	1750212	16.065
105) o-Xylene	(3)	11.920	106	559467	5.194
112)$4-Bromofluorobenzene	(3)	12.365	95	729474	9.514
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	819814	10.000

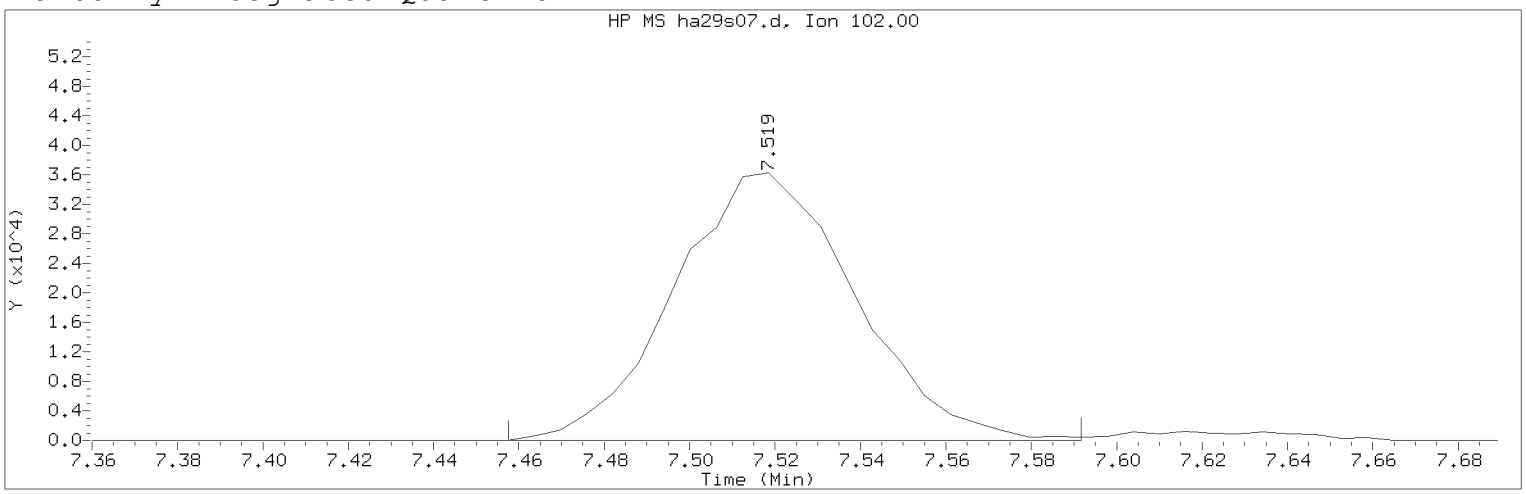
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

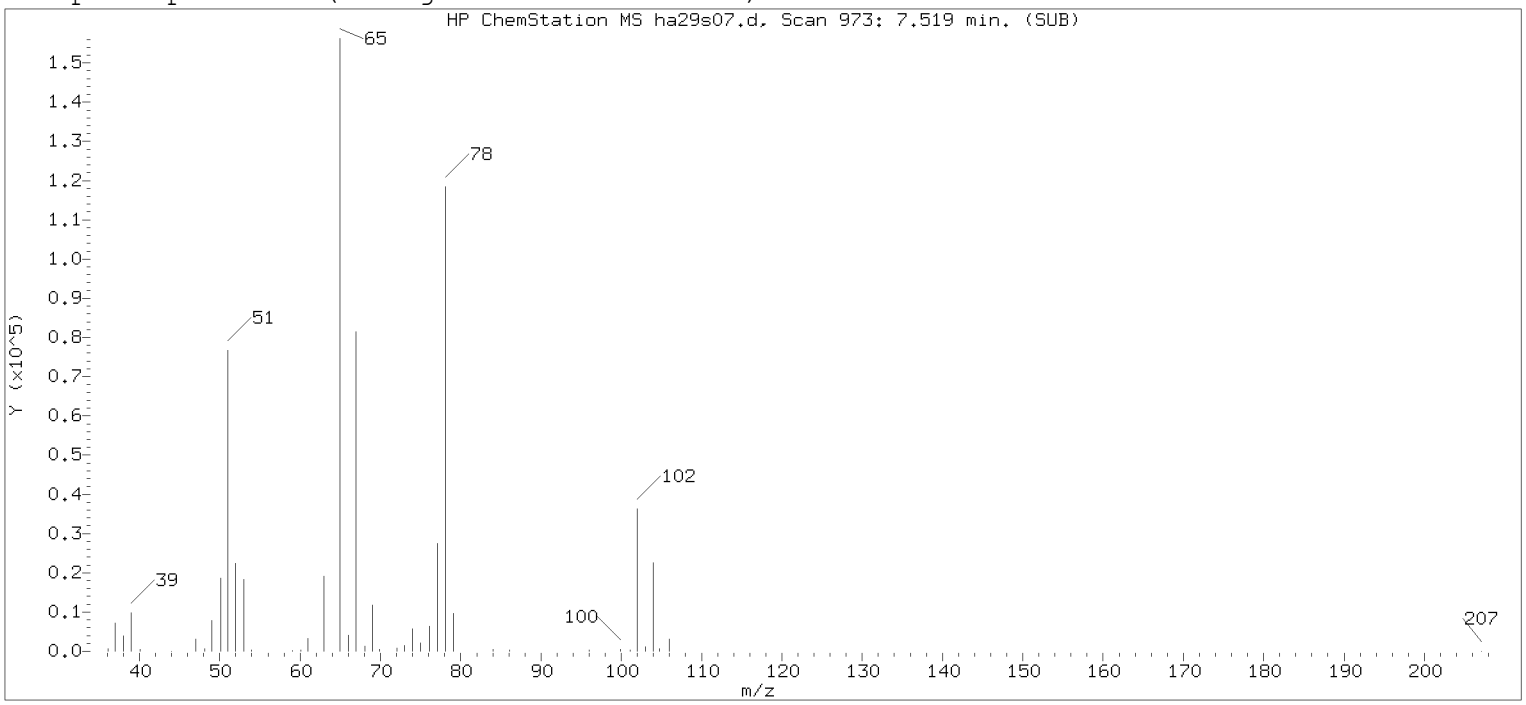
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 973
Retention Time (minutes): 7.519
Quant Ion : 102.00
Area (flag) : 106485M
On-Column Amount (ng) : 10.6202
Integration start scan : 962 Integration stop scan: 984
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

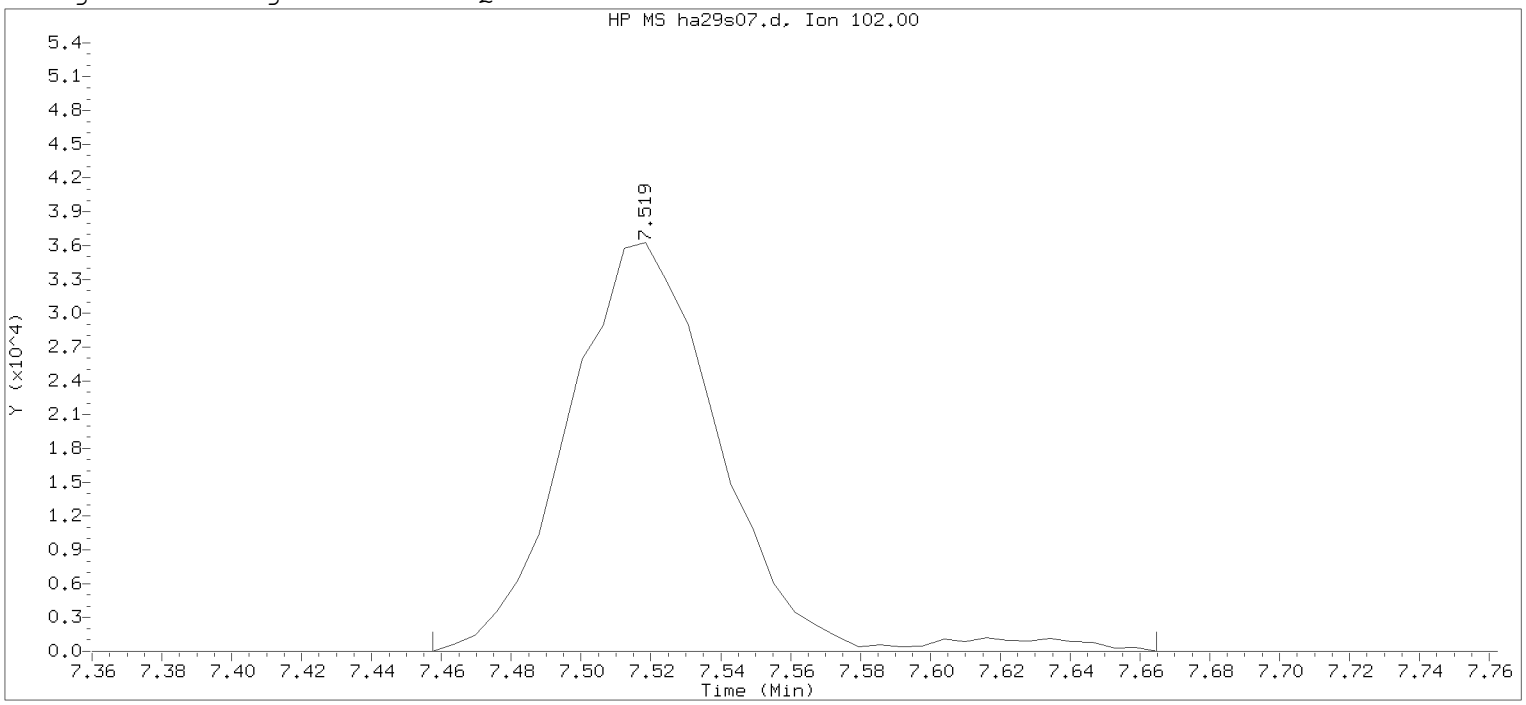
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

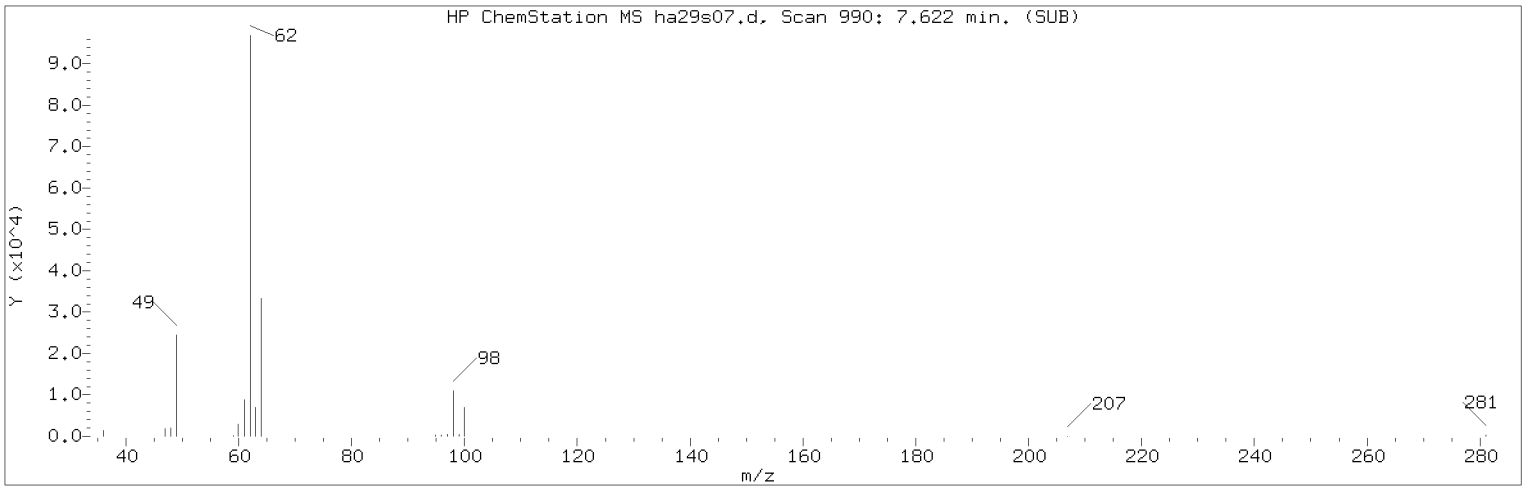
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:24 Automation

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

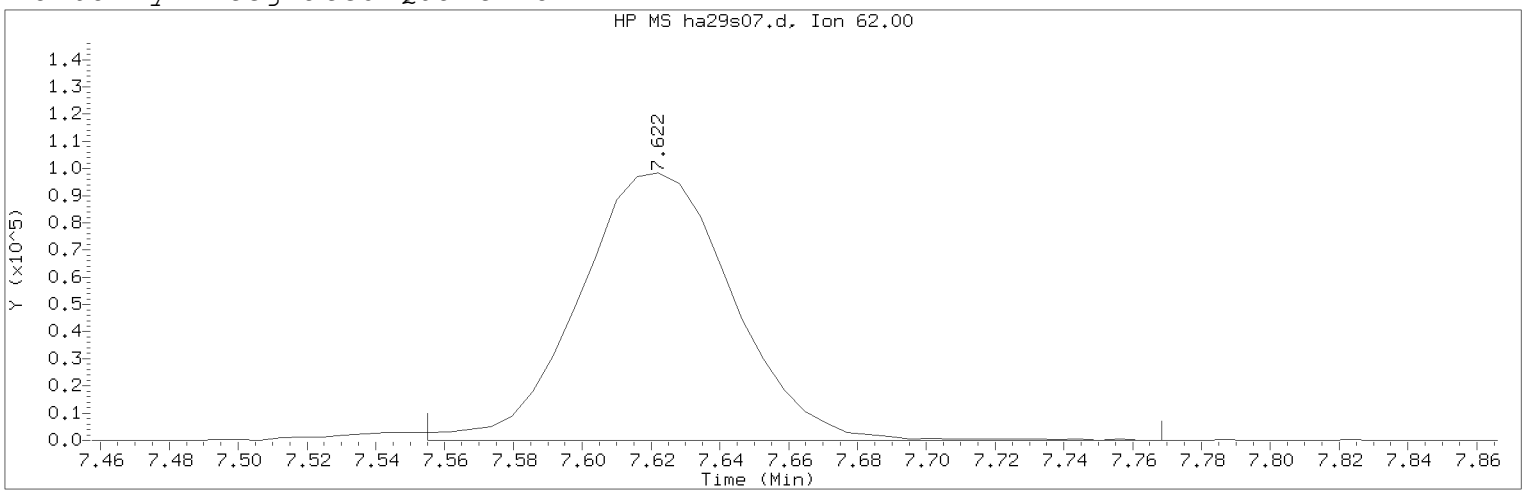
Compound Number : 58
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 973
Retention Time (minutes): 7.519
Quant Ion : 102.00
Area : 109731
On-column Amount (ng) : 10.9439
Integration start scan : 962 Integration stop scan: 996
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 13:21 jkh09052

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

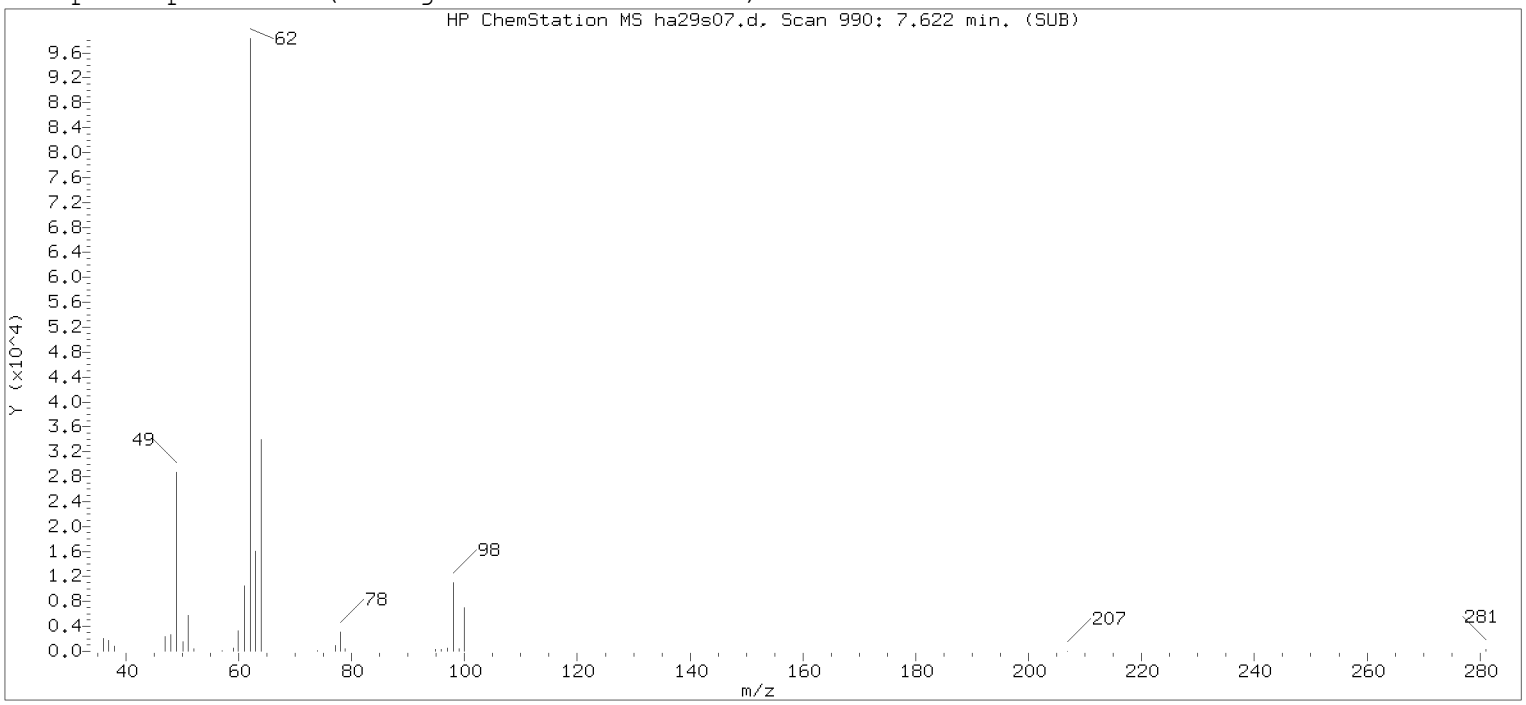
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area (flag) : 304852M
On-Column Amount (ng) : 5.2234
Integration start scan : 978 Integration stop scan: 1013
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

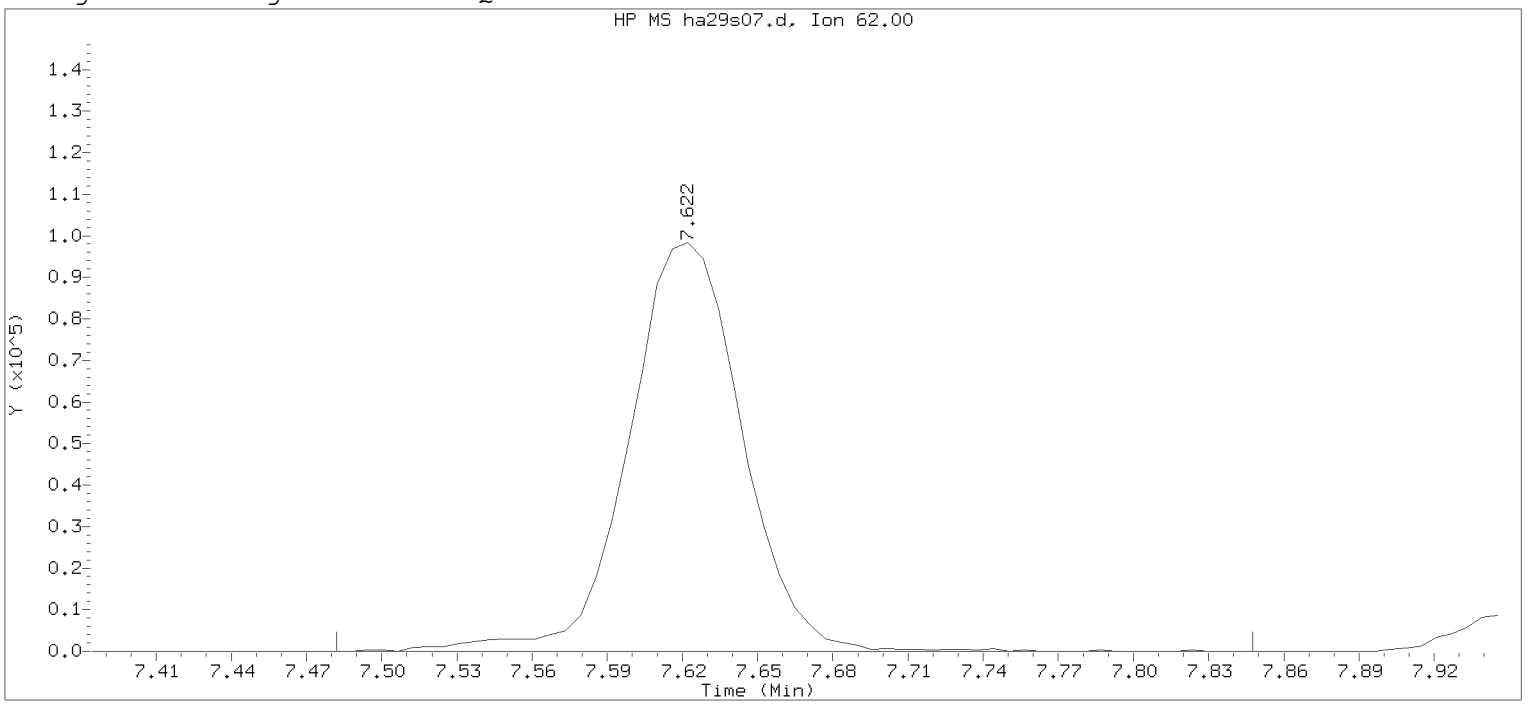
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29s07.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 12:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 12:24 Automation

Sample Name: 5WB03MSD Lab Sample ID: 1302097MSD

Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area : 310019
On-column Amount (ng) : 5.3119
Integration start scan : 966 Integration stop scan: 1026
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 13:22.
Target 3.5 esignature user ID: jkhowe0409

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/20apr29a.b/ha29l01.d Injection date and time: **29-APR-2020 09:11**
Data file Sample Info. Line: LCSH63;LCSH63;1;3;LCS;;DAA3568;;ha29b01; Instrument ID: **HP19094.i** Batch: **H201201AA**
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

Blank Data file reference: **/chem2/HP19094.i/20apr29a.b/ha29b01.d**

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 29-APR-2020 09:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/20apr29a.b/ha29c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464(0.000)	472	65	133897 (3)	50.00	
64) Fluorobenzene	7.957(0.000)	1045	96	2098867 (0)	10.00	
98) Chlorobenzene-d5	11.371(0.000)	1605	117	1572721 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	833506 (2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061(0.001)	113	521332	9.992	100%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519(0.001)	102	105886	10.471	105%		80 - 120
83) Toluene-d8	(3)	9.939(0.000)	98	2079205	9.923	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	734270	9.472	95%		80 - 120

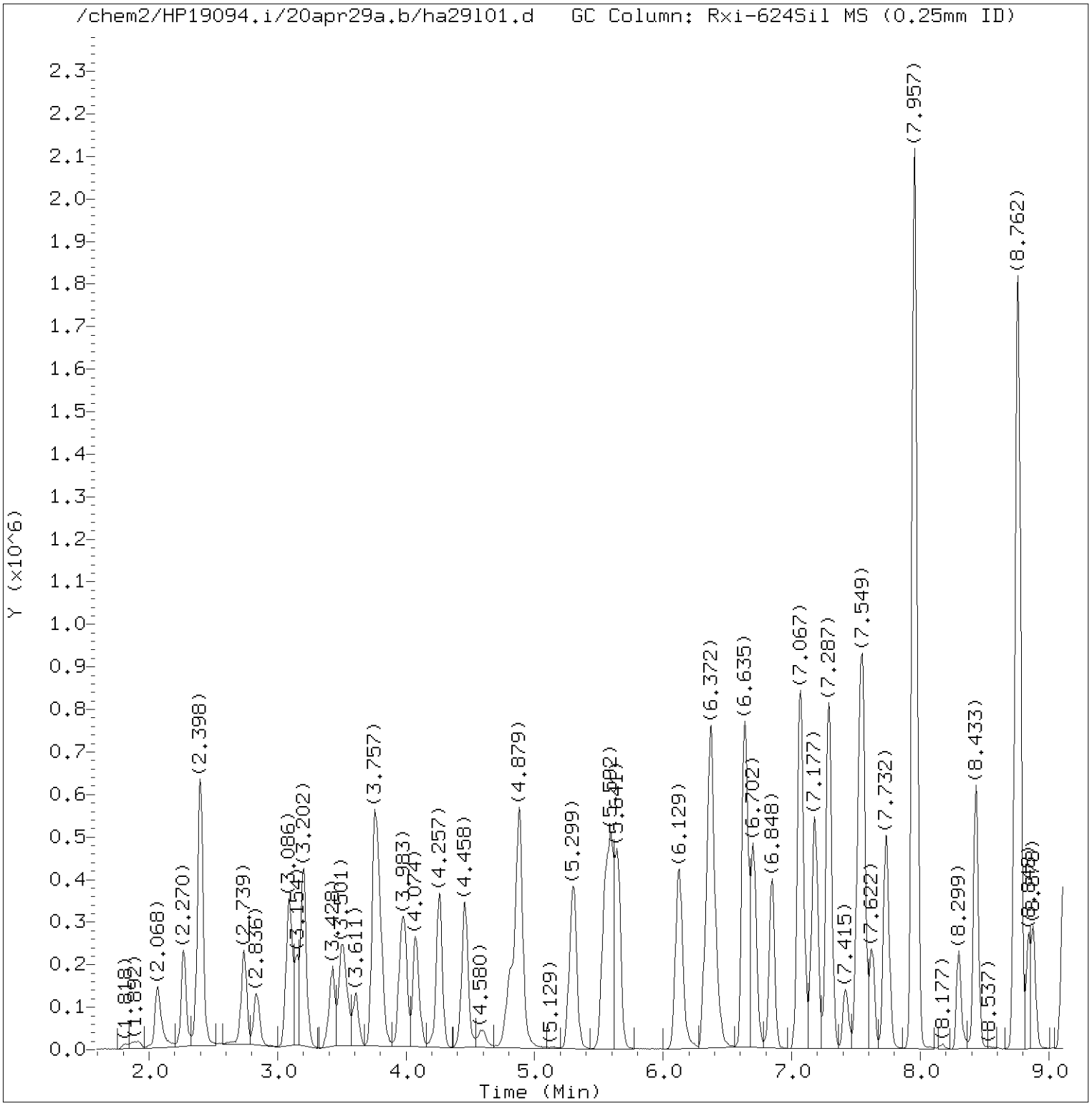
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.062(0.000)	85	329103	4.183	4.18			0.3	1
5) Vinyl Chloride	(2)	2.398(0.000)	62	369986	5.008	5.01			0.1	1
11) Ethyl ether	(2)	3.428(0.000)	59	191986	5.146	5.15		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.751(0.000)	96	233343	4.551	4.55			0.4	1
14) Acetone	(1)	3.788(0.000)	43	287644M	35.355	35.36			3	10
24) Methylene Chloride	(2)	4.458(0.000)	84	268084	4.857	4.86			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.885(0.000)	96	262475	4.656	4.66			0.8	1
40) cis-1,2-Dichloroethene	(2)	6.366(0.000)	96	313984	5.013	5.01			0.1	1
39) 2-Butanone	(1)	6.330(-0.000)	43	498156	39.159	39.16			1	10
50) Chloroform	(2)	6.848(0.000)	83	491097	4.944	4.94			0.1	1
60) 1,2-Dichloroethane	(2)	7.622(-0.000)	62	289441M	4.918	4.92			0.1	1
68) Trichloroethene	(2)	8.433(-0.000)	95	290996	4.861	4.86			0.2	1
84) Toluene	(3)	10.018(0.000)	92	722680	4.910	4.91			0.1	1
102) m+p-Xylene	(3)	11.597(-0.000)	106	1081412	9.765	9.76			0.1	0.5
105) o-Xylene	(3)	11.926(-0.000)	106	513229	4.713	4.71			0.05	0.5
106) Xylene (Total)	(3)		106	1594641	14.477	14.48			0.2	3

M = Compound was manually integrated.

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/29/2020 at 10:21. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

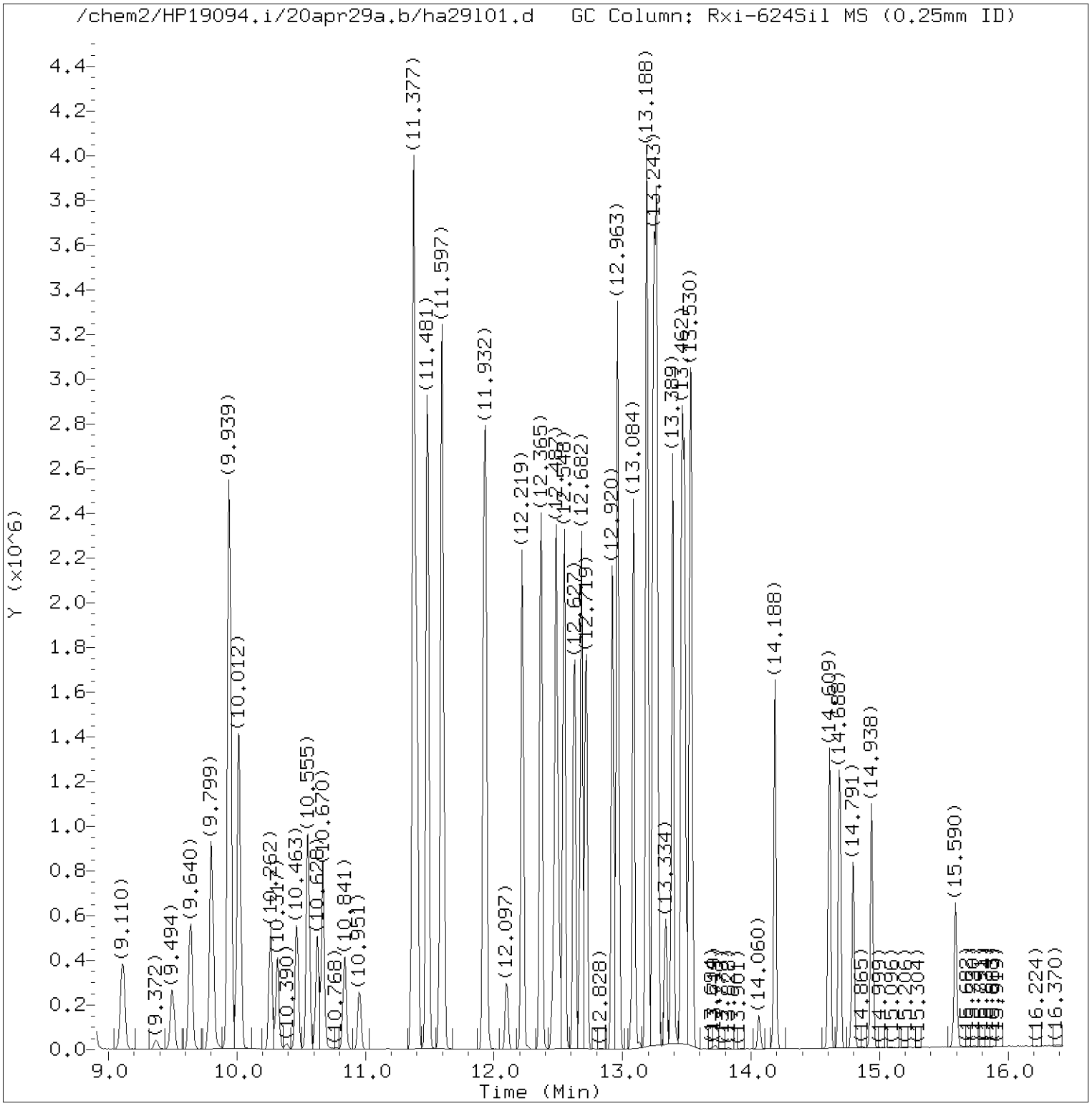
Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

Sample Name: LCSH63 Lab Sample ID: LCSH63

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

Sample Name: LCSH63 Lab Sample ID: LCSH63

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

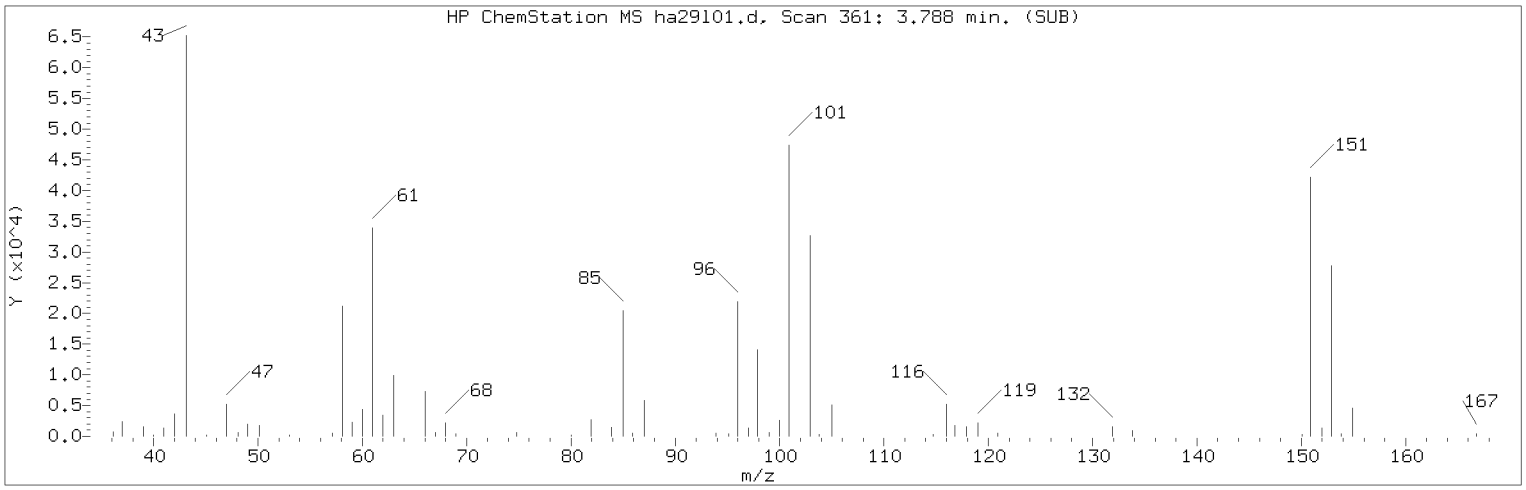
Sample Name: LCSH63 Lab Sample ID: LCSH63

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	329103	4.183
5) Vinyl Chloride	(2)	2.398	62	369986	5.008
11) Ethyl ether	(2)	3.428	59	191986	5.146
15) 1,1-Dichloroethene	(2)	3.751	96	233343	4.551
14) Acetone	(1)	3.788	43	287644M	35.355
24) Methylene Chloride	(2)	4.458	84	268084	4.857
27)*t-Butyl Alcohol-d10	(1)	4.464	65	133897	50.000
32) trans-1,2-Dichloroethene	(2)	4.885	96	262475	4.656
39) 2-Butanone	(1)	6.330	43	498156	39.159
40) cis-1,2-Dichloroethene	(2)	6.366	96	313984	5.013
50) Chloroform	(2)	6.848	83	491097	4.944
51)$Dibromofluoromethane	(2)	7.061	113	521332	9.992
58)$1,2-Dichloroethane-d4	(2)	7.519	102	105886	10.471
60) 1,2-Dichloroethane	(2)	7.622	62	289441M	4.918
64)*Fluorobenzene	(2)	7.957	96	2098867	10.000
68) Trichloroethene	(2)	8.433	95	290996	4.861
83)$Toluene-d8	(3)	9.939	98	2079205	9.923
84) Toluene	(3)	10.018	92	722680	4.910
98)*Chlorobenzene-d5	(3)	11.371	117	1572721	10.000
102) m+p-Xylene	(3)	11.597	106	1081412	9.765
106) Xylene (Total)	(3)		106	1594641	14.477
105) o-Xylene	(3)	11.926	106	513229	4.713
112)$4-Bromofluorobenzene	(3)	12.365	95	734270	9.472
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	833506	10.000

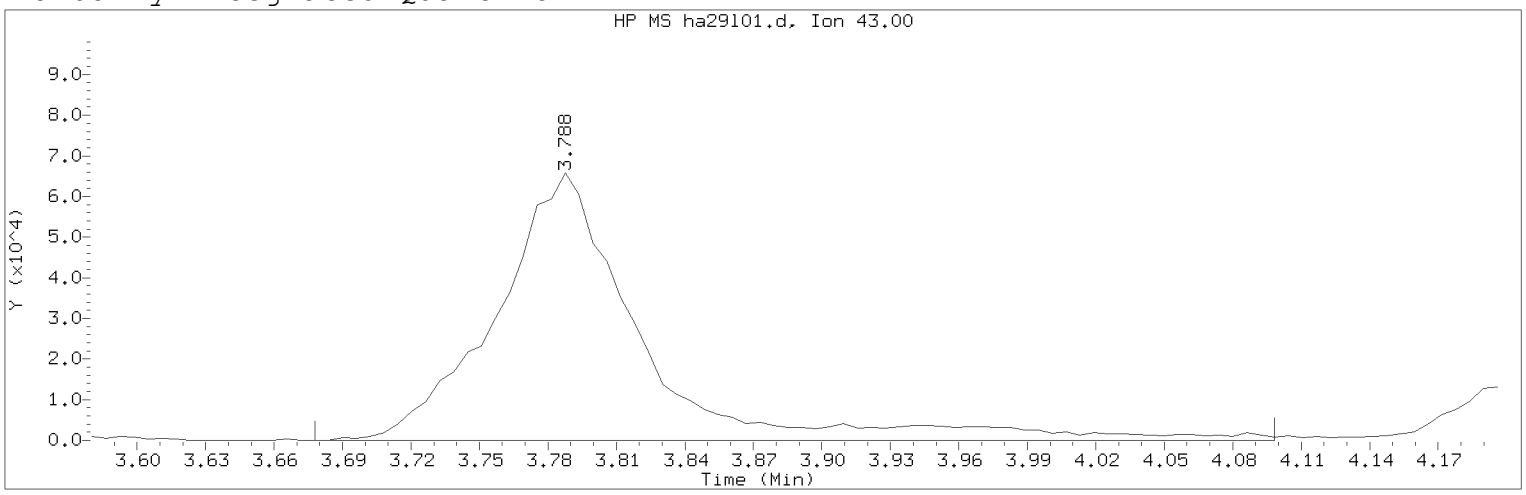
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

Sample Name: LCSH63 Lab Sample ID: LCSH63

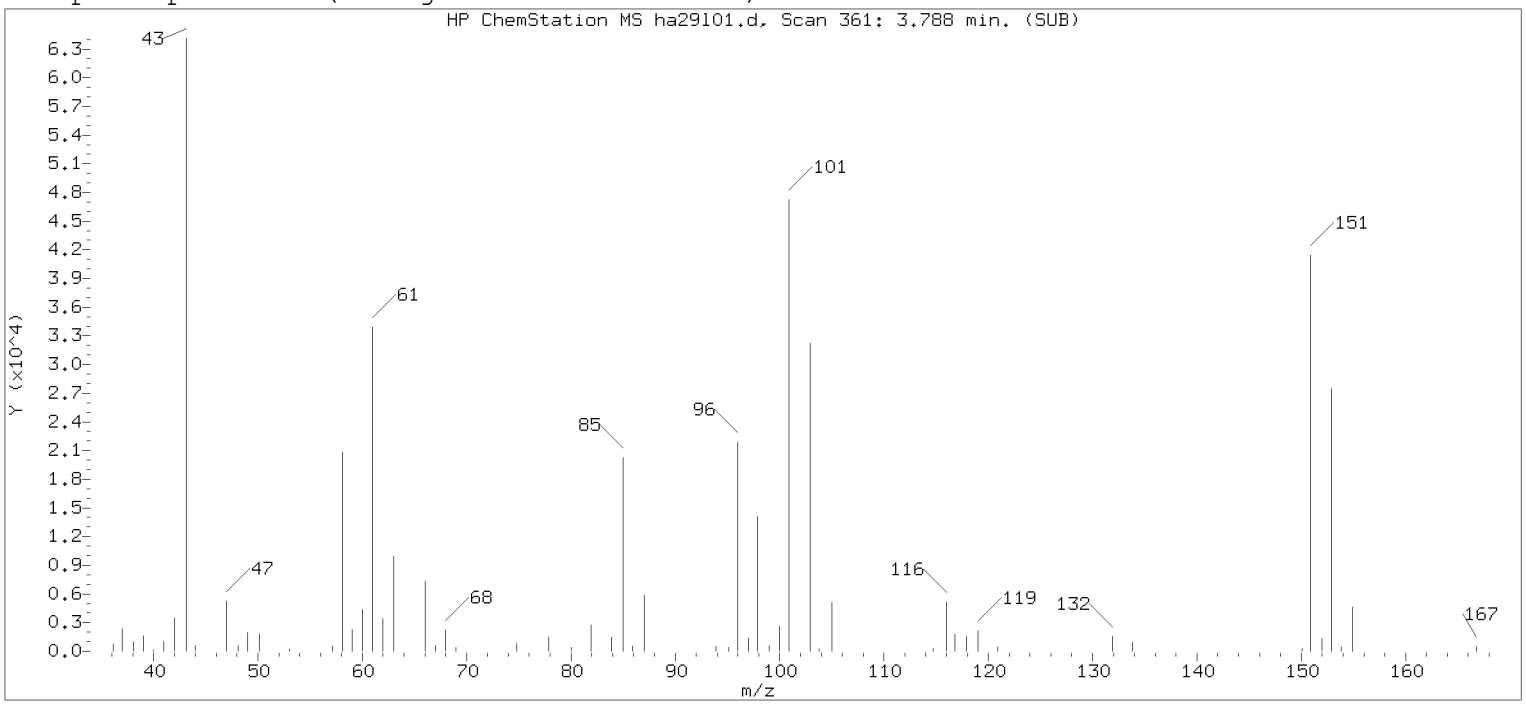
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Quant Ion : 43.00
Area (flag) : 287644M
On-Column Amount (ng) : 35.3551
Integration start scan : 342 Integration stop scan: 411
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

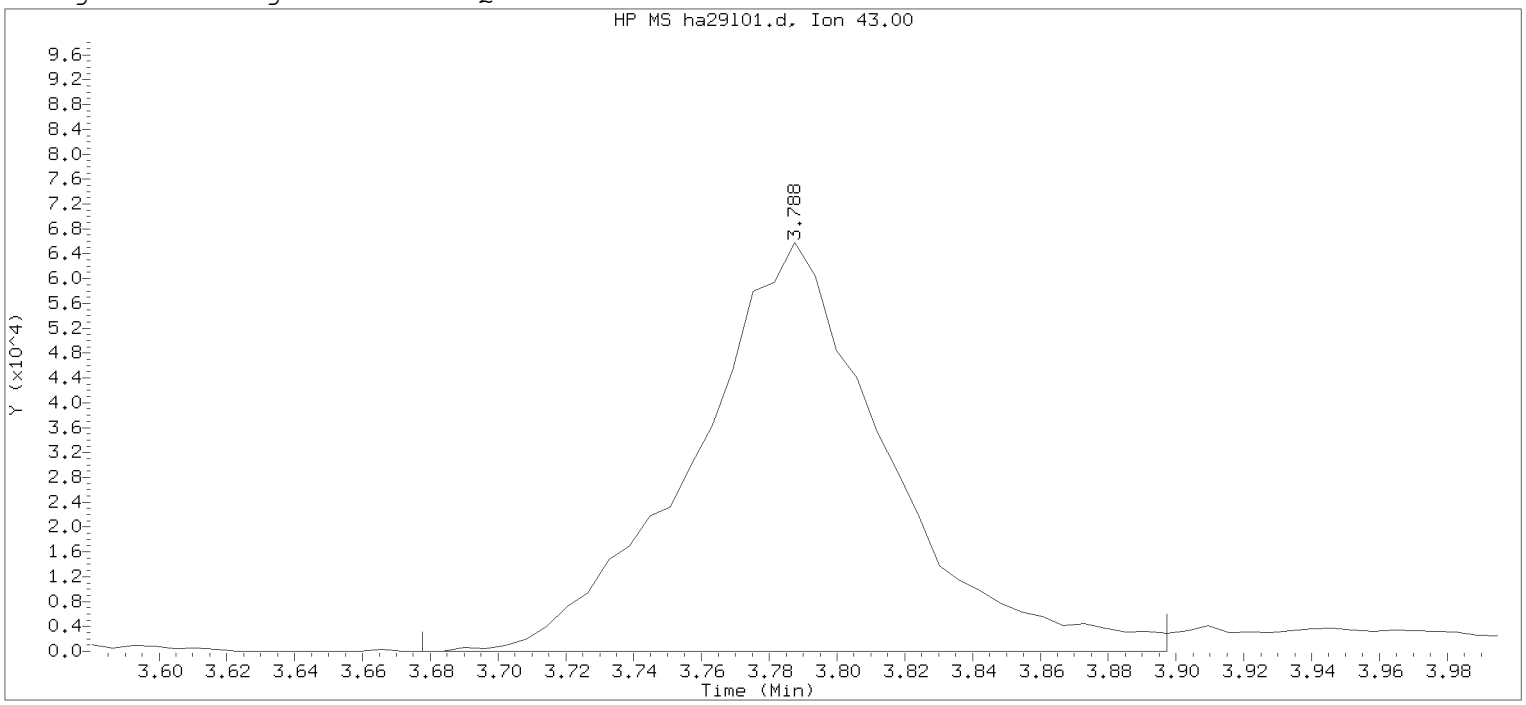
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

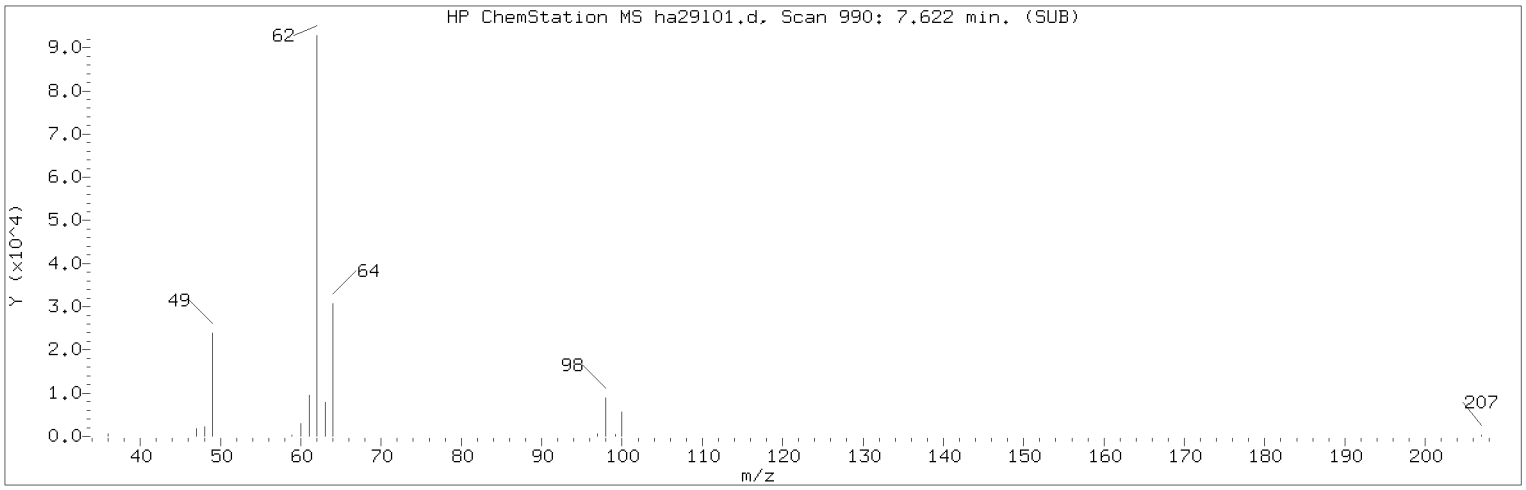
Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 09:29 Automation

Sample Name: LCSH63 Lab Sample ID: LCSH63

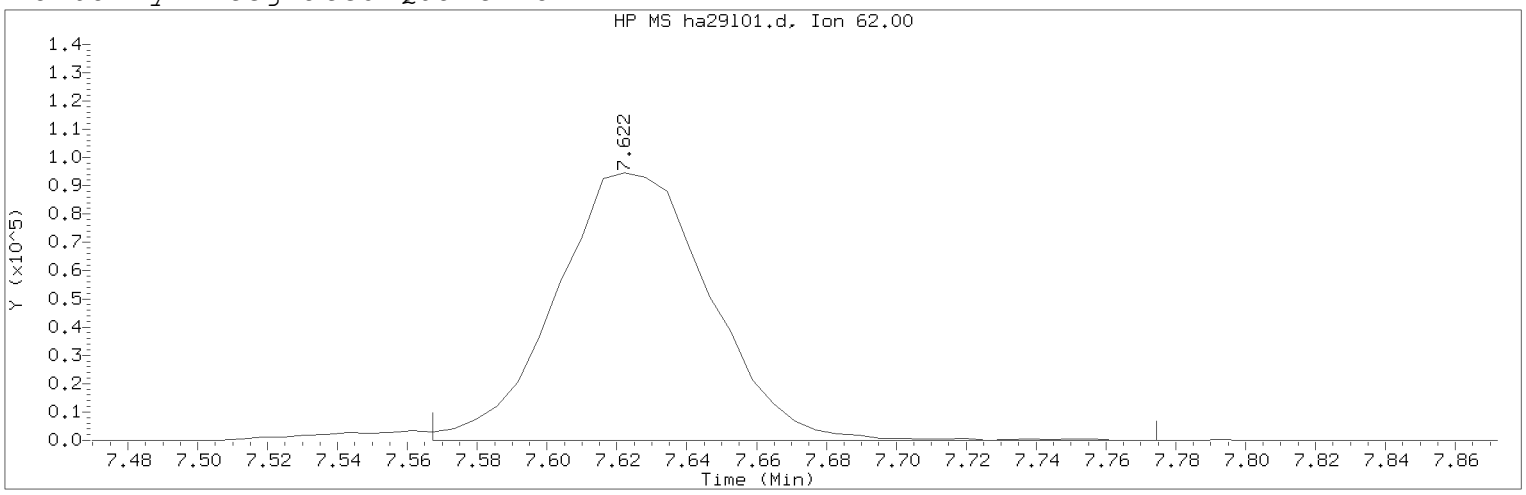
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.788		
Quant Ion	: 43.00		
Area	: 259436		
On-column Amount (ng)	: 31.8880		
Integration start scan	: 342	Integration stop scan:	378
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkhowe0415

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 10:14 jkh09052

Sample Name: LCSH63 Lab Sample ID: LCSH63

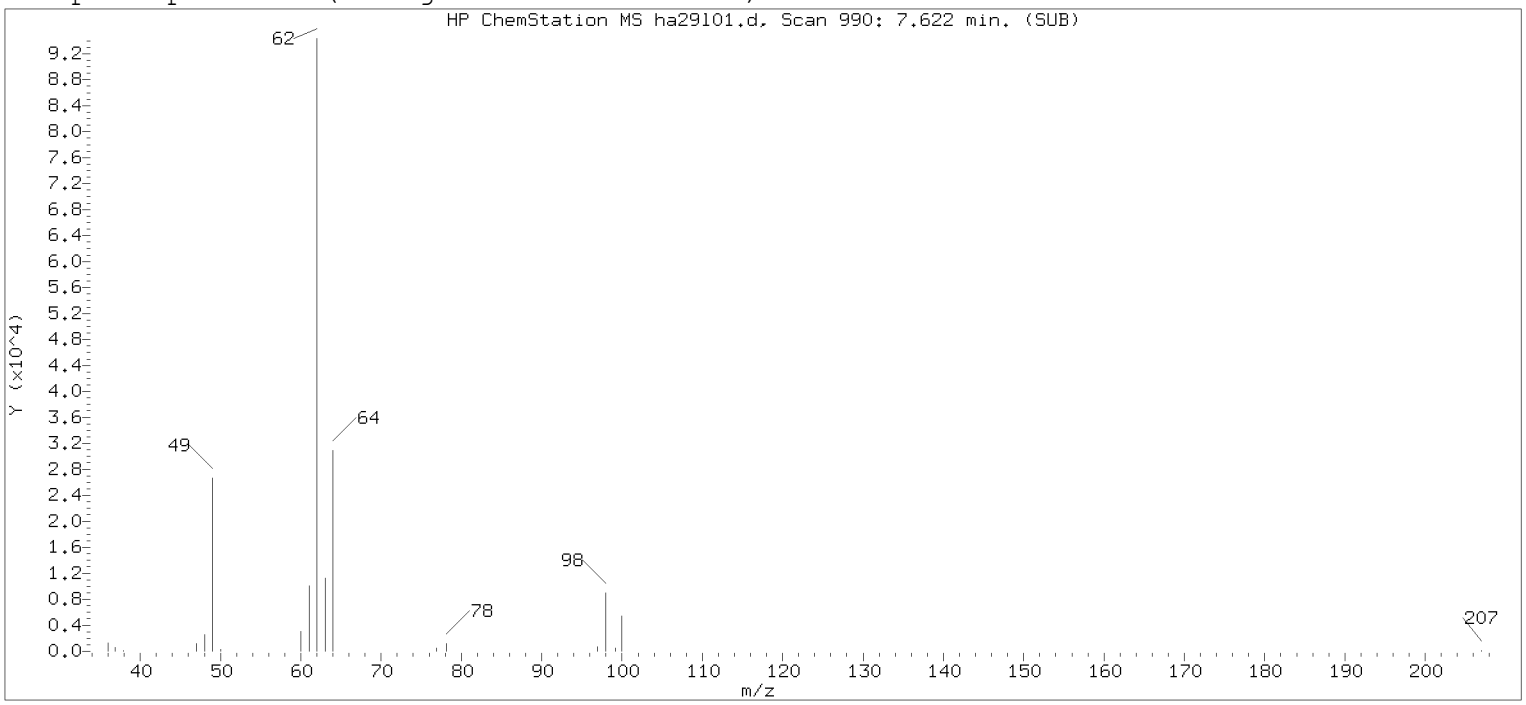
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area (flag) : 289441M
On-Column Amount (ng) : 4.9175
Integration start scan : 980 Integration stop scan: 1014
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

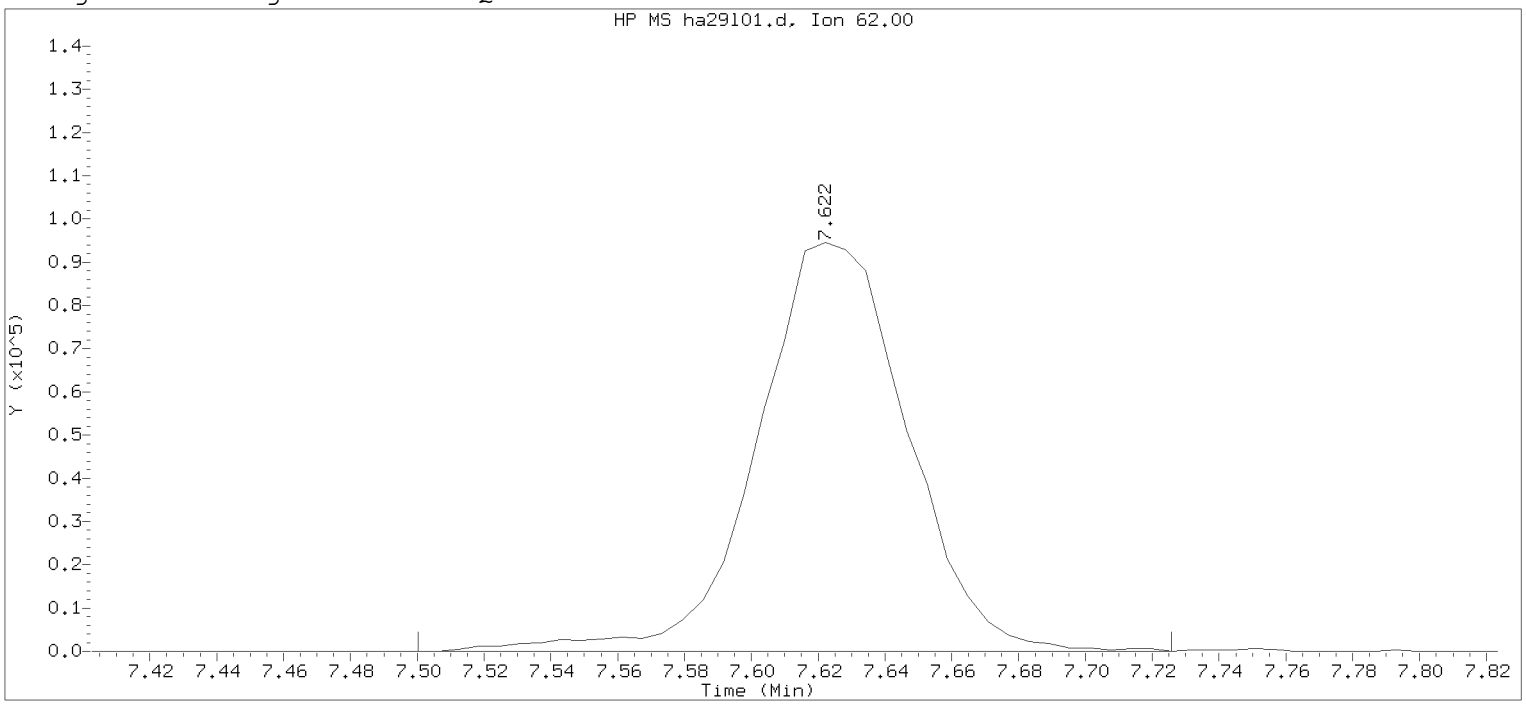
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 18:32.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr29a.b/ha29l01.d Instrument ID: HP19094.i
Injection date and time: 29-APR-2020 09:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20apr29a.b/m8260c25.m Sublist used: 12026
Calibration date and time: 29-APR-2020 09:18
Date, time and analyst ID of latest file update: 29-Apr-2020 09:29 Automation

Sample Name: LCSH63 Lab Sample ID: LCSH63

Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area : 295289
On-column Amount (ng) : 5.0169
Integration start scan : 969 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/29/2020 at 10:21.
Target 3.5 esignature user ID: jkhowe

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
1302094	5W5B	X		1	
1302095	5W7B	X		1	Unspiked
1302096	5W7B Matrix Spike	X		1	Matrix Spike
1302097	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
1302098	5WC21	X		1	
1302099	5WDUP	X		1	Field Duplicate Sample
1302100	5WC22	X		1	
1302101	5WC23	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF60

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOAs 8270D/E MINI	20114WAH026	SBLKWH114	04/27/2020 11:39
		114WHLCS	04/27/2020 12:07
		1302094	04/27/2020 15:24
		1302095 UNSPK	04/27/2020 15:52
		1302096 MS	04/27/2020 16:20
		1302097 MSD	04/27/2020 16:49
		1302098	04/27/2020 17:17
		1302099	04/27/2020 17:45
		1302100	04/27/2020 18:13
		1302101	04/27/2020 18:41

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAF60
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

20114WAH026 / SBLKWH114 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitrobenzene	04/27/20	N.D.	ug/l	0.8	10
2-Nitroaniline	04/27/20	N.D.	ug/l	2	10
2,6-Dinitrotoluene	04/27/20	N.D.	ug/l	0.7	10
2,4-Dinitrotoluene	04/27/20	N.D.	ug/l	1	10
Diethylphthalate	04/27/20	N.D.	ug/l	2	10
4-Nitroaniline	04/27/20	N.D.	ug/l	1	20
bis(2-Ethylhexyl)phthalate	04/27/20	N.D.	ug/l	5	6

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF60
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

20114WAH026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWH114	47	44 - 102	57	38 - 113	71	34 - 128
114WHLCS	68	44 - 102	76	38 - 113	96	34 - 128
1302094	67	44 - 102	71	38 - 113	89	34 - 128
1302095 UNSPK	64	44 - 102	65	38 - 113	82	34 - 128
1302096 MS	74	44 - 102	84	38 - 113	96	34 - 128
1302097 MSD	79	44 - 102	83	38 - 113	95	34 - 128
1302098	72	44 - 102	76	38 - 113	68	34 - 128
1302099	78	44 - 102	85	38 - 113	68	34 - 128
1302100	74	44 - 102	79	38 - 113	68	34 - 128
1302101	73	44 - 102	79	38 - 113	91	34 - 128

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 1302095 MS: 1302096 MSD: 1302097 **Analyte**	Batch: **20114WAH026** (Sample number(s): 1302094-1302101)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	51.02 / 50.4	N.D.	45.55	43.29	89	86	59-109	5	30
2-Nitroaniline	51.02 / 50.4	N.D.	45.13	45.38	88	90	66-126	1	30
2,6-Dinitrotoluene	51.02 / 50.4	N.D.	46.75	45.6	92	90	71-120	3	30
2,4-Dinitrotoluene	51.02 / 50.4	N.D.	46.8	47.07	92	93	66-122	1	30
Diethylphthalate	51.02 / 50.4	N.D.	44.26	43.82	87	87	42-126	1	30
4-Nitroaniline	51.02 / 50.4	N.D.	38.62	38.95	76	77	55-113	1	30
bis(2-Ethylhexyl)phthalate	51.02 / 50.4	N.D.	46.75	44.98	92	89	61-129	4	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF60
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 114WHLCS	Batch: **20114WAH026** (Sample number(s): 1302094-1302101)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	50	38.75	NA	78	NA	59-109	NA	NA
2-Nitroaniline	50	40.5	NA	81	NA	66-126	NA	NA
2,6-Dinitrotoluene	50	41.02	NA	82	NA	71-120	NA	NA
2,4-Dinitrotoluene	50	41.7	NA	83	NA	66-122	NA	NA
Diethylphthalate	50	36.7	NA	73	NA	42-126	NA	NA
4-Nitroaniline	50	37.94	NA	76	NA	55-113	NA	NA
bis(2-Ethylhexyl)phthalate	50	43.19	NA	86	NA	61-129	NA	NA

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D/E MINI Analyte Name	Default MDL	Default LOQ	Units
Nitrobenzene	0.8	10	ug/l
2-Nitroaniline	2	10	ug/l
2,6-Dinitrotoluene	0.7	10	ug/l
2,4-Dinitrotoluene	1	10	ug/l
Diethylphthalate	2	10	ug/l
4-Nitroaniline	1	20	ug/l
bis(2-Ethylhexyl)phthalate	5	6	ug/l

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dd0630.d DFTPP Injection Date: 04/15/20

Instrument ID: HP19760 DFTPP Injection Time: 15:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	46.0
68	Less than 2.0% of mass 69	0.61 (1.24)1
69	Mass 69 relative abundance	49.0
70	Less than 2.0% of mass 69	0.21 (0.44)1
127	10.0 - 80.00% of mass 198	53.1
197	Less than 2.0% of mass 198	0.5
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.82
275	10.0 - 60.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	2.34
441	Present, and less than mass 443	10.3
442	Greater than 50.00% of mass 198	63.8
443	15.00 - 24.00% of mass 442	12.1 (18.9)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvSTD0940 - SSTD7.5	dd0631.d	04/15/20	15:41
02	rvSTD0940 - SSTD.125	dd0632.d	04/15/20	19:18
03	rvSTD0940 - SSTD30	dd0633.d	04/15/20	19:46
04	rvSTD0940 - SSTD20	dd0634.d	04/15/20	20:14
05	rvSTD0940 - SSTD12.5	dd0635.d	04/15/20	20:42
06	rvSTD0940 - SSTD3.75	dd0636.d	04/15/20	21:11
07	rvSTD0940 - SSTD1.25	dd0637.d	04/15/20	21:39
08	rvSTD0940 - SSTD.25	dd0638.d	04/15/20	22:07
09	rvSTD0940 - SSTD0.125	dd0639.d	04/15/20	22:35
10	rvSTD0940 - SSTD0.025	dd0640.d	04/15/20	23:03
11	rvICV1049 - SSTD12.5	dd0641.d	04/15/20	23:31
12	rvBASICV0240 - SSTD12.5	dd0642.d	04/15/20	23:59
13	rvHCCPDCV0350 - SSTD25	dd0643.d	04/16/20	00:28

FORM V SV

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dd1250.d DFTPP Injection Date: 04/27/20

Instrument ID: HP19760 DFTPP Injection Time: 06:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	51.5
68	Less than 2.0% of mass 69	0.72 (1.34)1
69	Mass 69 relative abundance	53.3
70	Less than 2.0% of mass 69	0.24 (0.44)1
127	10.0 - 80.00% of mass 198	55.2
197	Less than 2.0% of mass 198	0.32
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.72
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.4
441	Present, and less than mass 443	9.17
442	Greater than 50.00% of mass 198	57.7
443	15.00 - 24.00% of mass 442	11.1 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvSTD0940 - SSTD7.5	dd1251.d	04/27/20	07:33
02	SBLKWD115	dd1252.d	04/27/20	08:51
03	115WDLCS	dd1253.d	04/27/20	09:19
04	115WDLCSD	dd1254.d	04/27/20	09:47
05	SBLKWI114	dd1255.d	04/27/20	10:15
06	114WILCS	dd1256.d	04/27/20	10:43
07	114WILCSD	dd1257.d	04/27/20	11:11
08	SBLKWH114	dd1258.d	04/27/20	11:39
09	114WHLCS	dd1259.d	04/27/20	12:07
10	1300593	dd1262.d	04/27/20	13:32
11	1300296	dd1263.d	04/27/20	14:00
12	1300163	dd1264.d	04/27/20	14:28
13	rvSTD0920	dd1273.d	04/27/20	14:56
14	1302094	dd1265.d	04/27/20	15:24
15	1302095	dd1266.d	04/27/20	15:52
16	1302096MS	dd1267.d	04/27/20	16:20
17	1302097MSD	dd1268.d	04/27/20	16:49
18	1302098	dd1269.d	04/27/20	17:17

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dd1250.d DFTPP Injection Date: 04/27/20

Instrument ID: HP19760 DFTPP Injection Time: 06:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	51.5
68	Less than 2.0% of mass 69	0.72 (1.34)1
69	Mass 69 relative abundance	53.3
70	Less than 2.0% of mass 69	0.24 (0.44)1
127	10.0 - 80.00% of mass 198	55.2
197	Less than 2.0% of mass 198	0.32
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.72
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.4
441	Present, and less than mass 443	9.17
442	Greater than 50.00% of mass 198	57.7
443	15.00 - 24.00% of mass 442	11.1 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	1302099	dd1270.d	04/27/20	17:45
20	1302100	dd1271.d	04/27/20	18:13
21	1302101	dd1272.d	04/27/20	18:41

FORM V SV

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 04/15/20 04/15/20

Calibration Times: 15:41 22:07

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dd0632.d RRF0.25 = dd0638.d RRF1.25 = dd0637.d RRF3.75 = dd0636.d
RRF7.5 = dd0631.d RRF12.5 = dd0635.d RRF20 = dd0634.d RRF30 = dd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.654	0.691	0.687	0.665	0.692	0.719	0.685	3	AVG
N-Nitrosodimethylamine			1.027	1.057	1.041	1.021	1.089	1.107	1.057	3	AVG
Pyridine			1.784	1.846	1.833	1.748	1.882	1.912	1.834	3	AVG
2-Picoline			1.851	1.881	1.832	1.802	1.919	1.922	1.868	3	AVG
N-Nitrosomethylethylamine			0.784	0.803	0.784	0.768	0.823	0.835	0.799	3	AVG
Methyl methanesulfonate			0.839	0.854	0.856	0.812	0.885	0.890	0.856	3	AVG
N-Nitrosodiethylamine		0.678	0.754	0.770	0.762	0.742	0.796	0.796	0.757	5	AVG
Ethyl methanesulfonate		0.747	0.779	0.808	0.797	0.781	0.841	0.824	0.797	4	AVG
Benzaldehyde			1.150	1.225	1.207	1.309	1.296	1.138	1.221	6	AVG
Phenol		2.022	2.106	2.094	2.043	1.989	2.090	2.024	2.053	2	AVG
Aniline		2.363	2.508	2.632	2.549	2.478	2.648	2.573	2.536	4	AVG
a-methylstyrene			0.556	0.595	0.594	0.592	0.627	0.589	0.592	4	AVG
bis(2-Chloroethyl)ether		1.718	1.758	1.768	1.710	1.658	1.733	1.679	1.718	2	AVG
2-Chlorophenol		1.416	1.496	1.543	1.489	1.452	1.513	1.468	1.483	3	AVG
1,3-Dichlorobenzene		1.511	1.540	1.571	1.525	1.471	1.534	1.498	1.521	2	AVG
1,4-Dichlorobenzene		1.460	1.601	1.601	1.546	1.497	1.554	1.520	1.540	3	AVG
Benzyl alcohol			0.946	1.002	0.957	0.950	1.018	0.959	0.972	3	AVG
1,2-Dichlorobenzene		1.409	1.510	1.539	1.448	1.409	1.485	1.431	1.462	3	AVG
Indene			2.172	2.298	2.257	2.210	2.318	2.129	2.231	3	AVG
2-Methylphenol		1.291	1.401	1.449	1.373	1.349	1.430	1.374	1.381	4	AVG
2,2'-oxybis(1-Chloropropane)		2.279	2.224	2.343	2.213	2.134	2.253	2.181	2.232	3	AVG
bis(2-Chloroisopropyl)ether		2.279	2.224	2.343	2.213	2.134	2.253	2.181	2.232	3	AVG
N-Nitrosopyrrolidine		0.729	0.785	0.802	0.800	0.766	0.818	0.793	0.785	4	AVG
Acetophenone		1.951	2.134	2.097	2.029	2.028	2.023	1.954	2.031	3	AVG
4-Methylphenol		1.411	1.473	1.525	1.451	1.399	1.453	1.383	1.442	3	AVG
Total Cresols		1.351	1.437	1.487	1.412	1.374	1.442	1.379	1.412	3	AVG
N-Nitroso-di-n-propylamine		1.150	1.178	1.214	1.152	1.125	1.173	1.113	1.158	3	AVG
N-Nitrosomorpholine			1.112	1.119	1.073	1.031	1.076	1.032	1.074	4	AVG
o-Toluidine		2.260	2.455	2.475	2.365	2.277	2.371	2.271	2.354	4	AVG
Hexachloroethane			0.677	0.683	0.648	0.634	0.657	0.632	0.655	3	AVG
Nitrobenzene		0.461	0.482	0.481	0.455	0.458	0.450	0.440	0.461	3	AVG
N-Nitrosopiperidine		0.201	0.207	0.212	0.204	0.206	0.205	0.203	0.206	2	AVG
Isophorone		0.775	0.837	0.868	0.842	0.835	0.830	0.820	0.830	3	AVG
2-Nitrophenol			0.191	0.204	0.200	0.203	0.205	0.205	0.201	3	AVG
2,4-Dimethylphenol		0.372	0.403	0.402	0.398	0.394	0.393	0.391	0.393	3	AVG
O,O,O-Triethylphosphorothioat			0.172	0.175	0.170	0.167	0.167	0.165	0.169	2	AVG
bis(2-Chloroethoxy)methane		0.536	0.528	0.555	0.531	0.529	0.515	0.496	0.527	4	AVG
Benzoic acid			0.207	0.252	0.267	0.272	0.285	0.286	0.261	11	AVG
2,4-Dichlorophenol		0.281	0.299	0.313	0.296	0.297	0.294	0.293	0.296	3	AVG
1,2,4-Trichlorobenzene		0.301	0.310	0.318	0.308	0.304	0.305	0.295	0.306	2	AVG
Naphthalene	1.177	1.097	1.176	1.154	1.105	1.097	1.064	1.025	1.112	5	AVG
4-Chloroaniline		0.428	0.462	0.468	0.451	0.453	0.442	0.431	0.448	3	AVG
2,6-Dichlorophenol		0.259	0.286	0.295	0.285	0.282	0.275	0.270	0.279	4	AVG
Hexachloropropene			0.182	0.192	0.194	0.190	0.191	0.191	0.190	2	AVG
Hexachlorobutadiene		0.155	0.169	0.167	0.166	0.163	0.160	0.158	0.162	3	AVG
Quinoline			0.736	0.731	0.704	0.697	0.693	0.671	0.706	3	AVG
Caprolactam			0.127	0.126	0.122	0.131	0.128	0.128	0.127	2	AVG
N-Nitrosodi-n-butylamine			0.285	0.297	0.287	0.288	0.362	0.357	0.313	12	AVG
4-Chloro-3-methylphenol		0.295	0.340	0.346	0.338	0.333	0.330	0.325	0.329	5	AVG
Safrole			0.265	0.275	0.266	0.266	0.266	0.260	0.266	2	AVG
2-Methylnaphthalene	0.710	0.674	0.729	0.735	0.705	0.701	0.691	0.675	0.702	3	AVG
1-Methylnaphthalene	0.705	0.620	0.712	0.688	0.667	0.659	0.652	0.631	0.667	5	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 04/15/20 04/15/20

Calibration Times: 15:41 22:07

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dd0632.d RRF0.25 = dd0638.d RRF1.25 = dd0637.d RRF3.75 = dd0636.d
RRF7.5 = dd0631.d RRF12.5 = dd0635.d RRF20 = dd0634.d RRF30 = dd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.351	0.370	0.388	0.384	0.377	0.382	0.375	4	AVG
1,2,4,5-Tetrachlorobenzene		0.578	0.628	0.628	0.627	0.616	0.596	0.593	0.609	3	AVG
cis-Isosafrole			0.602	0.615	0.615	0.632	0.635	0.628	0.621	2	AVG
2,4,6-Trichlorophenol		0.404	0.396	0.428	0.439	0.437	0.431	0.432	0.424	4	AVG
2,4,5-Trichlorophenol		0.377	0.437	0.456	0.468	0.455	0.455	0.448	0.442	7	AVG
trans-Isosafrole			0.665	0.705	0.703	0.699	0.689	0.687	0.691	2	AVG
Isosafrole			0.654	0.690	0.688	0.688	0.680	0.677	0.679	2	AVG
1,1'-Biphenyl		1.674	1.885	1.876	1.854	1.874	1.745	1.679	1.798	5	AVG
2-Chloronaphthalene		1.409	1.438	1.414	1.391	1.361	1.276	1.279	1.367	5	AVG
1-Chloronaphthalene		1.233	1.310	1.366	1.308	1.265	1.270	1.233	1.284	4	AVG
Diphenyl ether		0.915	0.990	0.989	0.968	0.958	0.922	0.918	0.952	3	AVG
2-Nitroaniline		0.389	0.479	0.495	0.484	0.482	0.475	0.479	0.469	8	AVG
1,4-Naphthoquinone			0.525	0.587	0.585	0.582	0.572	0.577	0.571	4	AVG
1,4-Dinitrobenzene			0.228	0.251	0.249	0.257	0.254	0.263	0.250	5	AVG
Dimethylphthalate			1.486	1.507	1.461	1.452	1.448	1.442	1.466	2	AVG
1,3-Dinitrobenzene			0.261	0.281	0.276	0.276	0.279	0.289	0.277	3	AVG
2,6-Dinitrotoluene		0.287	0.340	0.363	0.356	0.356	0.360	0.367	0.347	8	AVG
Acenaphthylene	1.853	1.904	2.110	2.165	2.127	2.110	2.010	1.969	2.031	6	AVG
3-Nitroaniline		0.312	0.365	0.397	0.394	0.403	0.409	0.417	0.385	9	AVG
Acenaphthene	1.322	1.453	1.458	1.452	1.427	1.405	1.362	1.335	1.402	4	AVG
2,4-Dinitrophenol				0.221	0.236	0.249	0.264	0.274	0.249	9	AVG
4-Nitrophenol				0.228	0.241	0.241	0.274	0.281	0.253	9	AVG
Pentachlorobenzene		0.499	0.500	0.487	0.483	0.477	0.454	0.456	0.480	4	AVG
2,4-Dinitrotoluene			0.450	0.457	0.459	0.470	0.469	0.464	0.461	2	AVG
2,4_2,6-Dinitrotoluenes		0.330	0.395	0.410	0.408	0.413	0.414	0.416	0.398	8	AVG
Dibenzofuran		1.981	1.957	1.972	1.922	1.856	1.770	1.703	1.880	6	AVG
1-Naphthylamine				1.404	1.391	1.416	1.416	1.416	1.409	1	AVG
2,3,4,6-Tetrachlorophenol			0.289	0.321	0.324	0.329	0.328	0.334	0.321	5	AVG
2-Naphthylamine				1.376	1.344	1.376	1.379	1.362	1.368	1	AVG
Diethylphthalate			1.486	1.519	1.516	1.544	1.545	1.559	1.528	2	AVG
Thionazin			0.303	0.276	0.316	0.284	0.282	0.278	0.290	6	AVG
Fluorene	1.428	1.445	1.611	1.575	1.517	1.473	1.424	1.381	1.482	5	AVG
4-Chlorophenyl-phenylether		0.713	0.740	0.719	0.706	0.674	0.667	0.655	0.696	4	AVG
5-Nitro-o-toluidine		0.407	0.466	0.443	0.450	0.455	0.450	0.449	0.446	4	AVG
4-Nitroaniline		0.378	0.408	0.437	0.440	0.423	0.422	0.422	0.419	5	AVG
4,6-Dinitro-2-methylphenol				0.151	0.154	0.153	0.160	0.164	0.156	4	AVG
N-Nitrosodiphenylamine (1)		0.620	0.692	0.707	0.695	0.682	0.674	0.672	0.677	4	AVG
NDPA as diphenylamine		0.620	0.692	0.707	0.695	0.682	0.674	0.672	0.677	4	AVG
1,2-Diphenylhydrazine		0.871	0.984	0.981	0.961	0.931	0.922	0.921	0.939	4	AVG
Tetraethyldithiopyrophosphate			0.152	0.155	0.153	0.154	0.156	0.158	0.155	1	AVG
Diallate (peak 1)			0.416	0.425	0.423	0.417	0.419	0.420	0.420	1	AVG
Phorate		0.506	0.582	0.605	0.595	0.592	0.589	0.584	0.579	6	AVG
Phenacetin			0.413	0.447	0.446	0.444	0.451	0.459	0.443	4	AVG
4-Bromophenyl-phenylether		0.168	0.210	0.193	0.191	0.187	0.185	0.188	0.189	7	AVG
Diallate (peak 2)			0.428	0.426	0.428	0.424	0.427	0.440	0.429	1	AVG
Diallate trans/cis			0.419	0.425	0.424	0.419	0.421	0.425	0.422	1	AVG
Hexachlorobenzene	0.206	0.208	0.200	0.203	0.199	0.190	0.188	0.192	0.198	4	AVG
Dimethoate			0.400	0.431	0.436	0.431	0.424	0.424	0.424	3	AVG
Atrazine			0.219	0.219	0.216	0.216	0.202	0.194	0.211	5	AVG
Pentachlorophenol			0.123	0.144	0.148	0.143	0.143	0.146	0.141	6	AVG
4-Aminobiphenyl		0.668	0.757	0.806	0.775	0.748	0.718	0.683	0.736	7	AVG
Pentachloronitrobenzene			0.086	0.090	0.089	0.088	0.088	0.089	0.088	1	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 04/15/20 04/15/20

Calibration Times: 15:41 22:07

Min $\overline{\text{RRF}}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dd0632.d RRF0.25 = dd0638.d RRF1.25 = dd0637.d RRF3.75 = dd0636.d
RRF7.5 = dd0631.d RRF12.5 = dd0635.d RRF20 = dd0634.d RRF30 = dd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{\text{RRF}}$	% RSD	CAL. METHOD
Pronamide			0.352	0.380	0.376	0.369	0.370	0.373	0.370	3	AVG
Dinoseb				0.192	0.205	0.210	0.220	0.225	0.211	6	AVG
Phenanthrene	1.154	1.142	1.208	1.187	1.152	1.109	1.083	1.062	1.137	4	AVG
Anthracene	1.081	1.080	1.180	1.194	1.195	1.153	1.131	1.100	1.139	4	AVG
Carbazole		1.058	1.139	1.162	1.151	1.114	1.104	1.081	1.116	3	AVG
Methyl parathion			0.298	0.332	0.342	0.342	0.348	0.347	0.335	6	AVG
Di-n-butylphthalate			1.412	1.511	1.489	1.438	1.431	1.370	1.442	4	AVG
Parathion			0.160	0.188	0.196	0.201	0.206	0.209	0.193	9	AVG
4-Nitroquinoline-1-oxide				0.112	0.133	0.139	0.153	0.158	0.139	13	AVG
Octachlorostyrene			0.072	0.074	0.080	0.079	0.080	0.079	0.077	4	AVG
Isodrin		0.131	0.142	0.143	0.142	0.140	0.139	0.142	0.140	3	AVG
Fluoranthene	1.240	1.176	1.303	1.368	1.348	1.302	1.304	1.276	1.290	5	AVG
Benzidine				0.907	0.903	0.849	0.810	0.765	0.847	7	AVG
Pyrene	1.435	1.419	1.438	1.415	1.388	1.352	1.307	1.274	1.379	4	AVG
p-Dimethylaminoazobenzene			0.215	0.227	0.243	0.238	0.241	0.244	0.235	5	AVG
Chlorobenzilate			0.407	0.433	0.440	0.431	0.431	0.431	0.429	3	AVG
3,3'-Dimethylbenzidine			0.720	0.831	0.905	0.897	0.907	0.890	0.858	9	AVG
Butylbenzylphthalate			0.661	0.686	0.685	0.675	0.668	0.669	0.674	1	AVG
2-Acetylaminofluorene				0.481	0.524	0.538	0.552	0.573	0.533	6	AVG
3,3'-Dichlorobenzidine			0.406	0.430	0.439	0.441	0.438	0.435	0.431	3	AVG
4,4'-Methylenebis(2-chloroani				0.228	0.240	0.232	0.230	0.232	0.233	2	AVG
Benzo(a)anthracene	1.041	0.967	1.149	1.137	1.133	1.094	1.057	1.040	1.077	6	AVG
Chrysene		1.125	1.199	1.170	1.145	1.110	1.091	1.080	1.131	4	AVG
bis(2-Ethylhexyl)phthalate			0.888	0.963	0.986	0.973	0.955	0.951	0.953	4	AVG
6-Methylchrysene			0.797	0.807	0.829	0.805	0.814	0.814	0.811	1	AVG
Di-n-octylphthalate			1.541	1.795	1.841	1.865	1.807	1.746	1.766	7	AVG
Benzo(b)fluoranthene	1.076	1.031	1.233	1.231	1.228	1.237	1.209	1.220	1.183	7	AVG
7,12-Dimethylbenz[a]anthracen			0.537	0.562	0.574	0.569	0.560	0.560	0.560	2	AVG
Benzo(k)fluoranthene	1.168	1.049	1.226	1.283	1.273	1.228	1.191	1.159	1.197	6	AVG
Benzo(a)pyrene	0.973	0.961	1.159	1.177	1.212	1.196	1.187	1.178	1.130	9	AVG
3-Methylcholanthrene		0.466	0.557	0.621	0.629	0.630	0.630	0.634	0.595	11	AVG
Dibenz(a,h)acridine			0.760	0.870	0.912	0.914	0.883	0.883	0.870	7	AVG
Dibenz(a,j)acridine			0.849	0.944	0.991	0.981	0.955	0.914	0.939	6	AVG
Indeno(1,2,3-cd)pyrene	0.842	0.749	0.894	1.028	1.060	1.079	1.089	1.020	0.970	13	AVG
Dibenz(a,h)anthracene	0.798	0.835	1.033	1.140	1.145	1.137	1.091	1.037	1.027	13	AVG
Benzo(g,h,i)perylene	0.914	0.916	1.061	1.142	1.147	1.128	1.068	0.991	1.046	9	AVG
Total PAHs	1.097	1.059	1.154	1.188	1.162	1.151	1.108	1.069	1.123	4	AVG
2-Fluorophenol		1.413	1.490	1.532	1.491	1.471	1.534	1.524	1.493	3	AVG
Phenol-d6		1.887	2.049	2.096	1.998	1.943	2.045	1.974	1.999	4	AVG
Nitrobenzene-d5		0.452	0.475	0.470	0.461	0.453	0.449	0.437	0.456	3	AVG
2-Fluorobiphenyl		1.598	1.653	1.644	1.604	1.540	1.475	1.385	1.557	6	AVG
2,4,6-Tribromophenol		0.118	0.152	0.156	0.155	0.157	0.157	0.156	0.150	10	AVG
Terphenyl-d14		0.760	0.812	0.800	0.787	0.753	0.721	0.689	0.760	6	AVG

Average %RSD 4

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/20apr15.b/dd0631.d SSTD7.5
/chem/HP19760.i/20apr15.b/dd0632.d SSTD0.125
/chem/HP19760.i/20apr15.b/dd0633.d SSTD030
/chem/HP19760.i/20apr15.b/dd0634.d SSTD020
/chem/HP19760.i/20apr15.b/dd0635.d SSTD12.5
/chem/HP19760.i/20apr15.b/dd0636.d SSTD3.75
/chem/HP19760.i/20apr15.b/dd0637.d SSTD1.25
/chem/HP19760.i/20apr15.b/dd0638.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	dd0631.d	dd0632.d	dd0633.d	dd0634.d	dd0635.d	dd0636.d	dd0637.d	dd0638.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	277410	232932	266541	257045	283746	277656	280428	280093	269481	6	Yes
Naphthalene-d8	1024096	1075650	998194	984471	1027248	1045096	1039730	1055201	1031211	3	Yes
Acenaphthene-d10	466522	534813	450180	452057	467194	488221	494909	494252	481018	6	Yes
Phenanthrene-d10	870341	971831	856314	862703	890815	900422	911630	918482	897817	4	Yes
Pyrene-d10	867432	965095	854387	855101	873694	902644	908307	907555	891777	4	Yes
Perylene-d12	816156	866761	813551	803277	812330	831675	853173	828680	828200	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	dd0631.d	dd0632.d	dd0633.d	dd0634.d	dd0635.d	dd0636.d	dd0637.d	dd0638.d	Avg. RT
1,4-Dichlorobenzene-d4	7.274	7.274	7.274	7.274	7.268	7.268	7.269	7.269	7.271
Naphthalene-d8	9.215	9.215	9.215	9.215	9.215	9.209	9.210	9.209	9.213
Acenaphthene-d10	11.972	11.972	11.972	11.972	11.972	11.966	11.966	11.966	11.970
Phenanthrene-d10	13.866	13.867	13.872	13.872	13.866	13.866	13.867	13.867	13.868
Pyrene-d10	15.930	15.924	15.930	15.930	15.924	15.924	15.924	15.924	15.926
Perylene-d12	20.505	20.505	20.511	20.505	20.505	20.499	20.500	20.500	20.504

Comments:_____

_____

Report generated on 04/16/2020 at 08:11

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP19760

Method: SW-846 8270D MINI | File ID: dd0641.d

ICV SAMPLE ID: rvICV1049 | BATCH: 20APR15026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	10.24	-18	30	YES
N-Nitrosodimethylamine	12.50	10.92	-13	30	YES
Pyridine	12.50	10.03	-20	30	YES
2-Picoline	12.50	11.37	-9	30	YES
N-Nitrosomethylethylamine	12.50	11.25	-10	30	YES
Methyl methanesulfonate	12.50	13.24	6	30	YES
N-Nitrosodiethylamine	12.50	12.27	-2	30	YES
Ethyl methanesulfonate	12.50	11.88	-5	30	YES
Phenol	12.50	12.28	-2	30	YES
Aniline	12.50	10.59	-15	30	YES
bis(2-Chloroethyl)ether	12.50	11.91	-5	30	YES
2-Chlorophenol	12.50	12.19	-2	30	YES
1,3-Dichlorobenzene	12.50	12.30	-2	30	YES
1,4-Dichlorobenzene	12.50	12.40	-1	30	YES
Benzyl alcohol	12.50	12.68	1	30	YES
1,2-Dichlorobenzene	12.50	12.29	-2	30	YES
Indene	12.50	14.45	16	30	YES
2-Methylphenol	12.50	12.27	-2	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.01	-4	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.01	-4	30	YES
N-Nitrosopyrrolidine	12.50	12.88	3	30	YES
Acetophenone	12.50	12.27	-2	30	YES
4-Methylphenol	12.50	12.28	-2	30	YES
N-Nitroso-di-n-propylamine	12.50	12.46	0	30	YES
N-Nitrosomorpholine	12.50	12.63	1	30	YES
o-Toluidine	12.50	12.02	-4	30	YES
Total Cresols	25.00	24.55	-2	30	YES
Hexachloroethane	12.50	12.23	-2	30	YES
Nitrobenzene	12.50	11.90	-5	30	YES
N-Nitrosopiperidine	12.50	11.97	-4	30	YES
Isophorone	12.50	11.95	-4	30	YES
2-Nitrophenol	12.50	12.30	-2	30	YES
2,4-Dimethylphenol	12.50	9.79	-22	30	YES
bis(2-Chloroethoxy)methane	12.50	12.11	-3	30	YES
Benzoic acid	25.00	26.19	5	30	YES
O,O,O-Triethylphosphorothio	12.50	12.42	-1	30	YES
2,4-Dichlorophenol	12.50	12.19	-3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dd0641.d

ICV SAMPLE ID: rvICV1049 BATCH: 20APR15026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	12.60	1	30	YES
Naphthalene	12.50	11.97	-4	30	YES
4-Chloroaniline	12.50	11.91	-5	30	YES
2,6-Dichlorophenol	12.50	12.45	0	30	YES
Hexachloropropene	12.50	13.46	8	30	YES
Hexachlorobutadiene	12.50	12.80	2	30	YES
Quinoline	12.50	11.98	-4	30	YES
N-Nitrosodi-n-butylamine	12.50	11.73	-6	30	YES
4-Chloro-3-methylphenol	12.50	12.81	2	30	YES
Safrole	12.50	12.57	1	30	YES
2-Methylnaphthalene	12.50	12.52	0	30	YES
1-Methylnaphthalene	12.50	11.88	-5	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.07	-3	30	YES
cis-Isosafrole	1.50	1.53	2	30	YES
2,4,6-Trichlorophenol	12.50	12.41	-1	30	YES
2,4,5-Trichlorophenol	12.50	12.24	-2	30	YES
trans-Isosafrole	11.00	10.60	-4	30	YES
1,1'-Biphenyl	12.50	12.17	-3	30	YES
2-Chloronaphthalene	12.50	12.16	-3	30	YES
Isosafrole	12.50	12.19	-3	30	YES
1-Chloronaphthalene	12.50	11.59	-7	30	YES
Diphenyl ether	12.50	12.06	-4	30	YES
2-Nitroaniline	12.50	12.07	-3	30	YES
1,4-Naphthoquinone	15.63	15.03	-4	30	YES
1,4-Dinitrobenzene	12.50	12.05	-4	30	YES
Dimethylphthalate	12.50	11.79	-6	30	YES
1,3-Dinitrobenzene	12.50	12.31	-1	30	YES
2,6-Dinitrotoluene	12.50	12.10	-3	30	YES
Acenaphthylene	12.50	11.85	-5	30	YES
3-Nitroaniline	12.50	13.04	4	30	YES
Acenaphthene	12.50	12.00	-4	30	YES
2,4-Dinitrophenol	25.00	25.41	2	30	YES
4-Nitrophenol	12.50	12.07	-3	30	YES
Pentachlorobenzene	12.50	12.33	-1	30	YES
2,4-Dinitrotoluene	12.50	12.46	0	30	YES
Dibenzofuran	12.50	12.02	-4	30	YES
2,4_2,6-Dinitrotoluenes	25.00	24.99	0	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dd0641.d

ICV SAMPLE ID: rvICV1049 BATCH: 20APR15026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1-Naphthylamine	25.00	20.54	-18	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.29	6	30	YES
2-Naphthylamine	25.00	20.01	-20	30	YES
Diethylphthalate	12.50	12.15	-3	30	YES
Thionazin	12.50	11.98	-4	30	YES
Fluorene	12.50	12.23	-2	30	YES
4-Chlorophenyl-phenylether	12.50	11.88	-5	30	YES
5-Nitro-o-toluidine	12.50	12.77	2	30	YES
4-Nitroaniline	12.50	11.89	-5	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.39	-1	30	YES
N-Nitrosodiphenylamine	12.50	12.37	-1	30	YES
NDPA as diphenylamine	12.50	12.37	-1	30	YES
1,2-Diphenylhydrazine	12.50	12.35	-1	30	YES
Tetraethyldithiopyrophospha	12.50	12.31	-2	30	YES
Diallate (peak 1)	9.38	9.08	-3	30	YES
Phorate	12.50	12.57	1	30	YES
Phenacetin	12.50	12.58	1	30	YES
4-Bromophenyl-phenylether	12.50	12.16	-3	30	YES
Diallate (peak 2)	3.13	2.98	-5	30	YES
Hexachlorobenzene	12.50	11.55	-8	30	YES
Diallate trans/cis	12.50	12.06	-4	30	YES
Dimethoate	12.50	11.84	-5	30	YES
Pentachlorophenol	12.50	12.81	3	30	YES
4-Aminobiphenyl	12.50	14.68	17	30	YES
Pentachloronitrobenzene	12.50	12.28	-2	30	YES
Pronamide	12.50	12.17	-3	30	YES
Dinoseb	12.50	13.59	9	30	YES
Phenanthrene	12.50	11.83	-5	30	YES
Anthracene	12.50	12.21	-2	30	YES
Carbazole	12.50	12.48	0	30	YES
Methyl parathion	12.50	12.52	0	30	YES
Di-n-butylphthalate	12.50	12.39	-1	30	YES
Parathion	12.50	13.34	7	30	YES
4-Nitroquinoline-1-oxide	150.00	167.03	11	30	YES
Isodrin	12.50	12.35	-1	30	YES
Fluoranthene	12.50	12.33	-1	30	YES
Benzidine	62.50	49.02	-22	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dd0641.d

ICV SAMPLE ID: rvICV1049 BATCH: 20APR15026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Pyrene	12.50	11.39	-9	30	YES
p-Dimethylaminoazobenzene	12.50	13.36	7	30	YES
Chlorobenzilate	12.50	12.50	0	30	YES
3,3'-Dimethylbenzidine	25.00	19.81	-21	30	YES
Butylbenzylphthalate	12.50	12.17	-3	30	YES
2-Acetylaminofluorene	12.50	12.17	-3	30	YES
3,3'-Dichlorobenzidine	12.50	11.87	-5	30	YES
Benzo(a)anthracene	12.50	12.45	0	30	YES
Chrysene	12.50	11.56	-7	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.23	-2	30	YES
bis(2-Ethylhexyl)phthalate	12.50	12.23	-2	30	YES
6-Methylchrysene	12.50	11.78	-6	30	YES
Di-n-octylphthalate	12.50	12.63	1	30	YES
Benzo(b)fluoranthene	12.50	12.88	3	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	12.61	1	30	YES
Benzo(k)fluoranthene	12.50	12.64	1	30	YES
Benzo(a)pyrene	12.50	12.80	2	30	YES
3-Methylcholanthrene	12.50	13.42	7	30	YES
Dibenz(a,h)acridine	12.50	12.92	3	30	YES
Dibenz(a,j)acridine	12.50	11.90	-5	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.03	4	30	YES
Dibenz(a,h)anthracene	12.50	13.36	7	30	YES
Benzo(g,h,i)perylene	12.50	12.54	0	30	YES
Total PAHs	225.00	217.67	-3	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dd0642.d

ICV SAMPLE ID: rvBASICV0240 BATCH: 20APR15026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	14.65	17	30	YES
Caprolactam	12.50	12.11	-3	30	YES
Atrazine	12.50	13.43	7	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dd0643.d

ICV SAMPLE ID: rvHCCPDCV0350 BATCH: 20APR15026 Sample Name: SSTD25

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Hexachlorocyclopentadiene	25.00	26.66	7	30	YES

NC = Could not calculate

Comments: _____

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 04/27/20 Time: 07:33

Lab File ID: dd1251.d Init. Calib. Date(s): 04/15/20 04/15/20

Init. Calib. Times(s): 15:41 22:07

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.685	0.699	7.650	7.5	2
N-Nitrosodimethylamine	1.057	1.068	7.580	7.5	1
Pyridine	1.834	1.808	7.390	7.5	-1
2-Picoline	1.868	1.821	7.310	7.5	-2
N-Nitrosomethylethylamine	0.799	0.775	7.270	7.5	-3
Methyl methanesulfonate	0.856	0.925	8.100	7.5	8
N-Nitrosodiethylamine	0.757	0.744	7.380	7.5	-2
Ethyl methanesulfonate	0.797	0.796	7.490	7.5	0
Benzaldehyde	1.221	1.222	7.510	7.5	0
Phenol	2.053	2.210	8.070	7.5	8
Aniline	2.536	2.527	7.470	7.5	0
a-methylstyrene	0.592	0.578	7.310	7.5	-3
bis(2-Chloroethyl)ether	1.718	1.711	7.470	7.5	0
2-Chlorophenol	1.483	1.494	7.560	7.5	1
1,3-Dichlorobenzene	1.521	1.493	7.360	7.5	-2
1,4-Dichlorobenzene	1.540	1.515	7.380	7.5	-2
Benzyl alcohol	0.972	0.933	7.200	7.5	-4
1,2-Dichlorobenzene	1.462	1.439	7.380	7.5	-2
Indene	2.230	2.272	7.640	7.5	2
2-Methylphenol	1.381	1.383	7.510	7.5	0
2,2'-oxybis(1-Chloropropane)	2.232	2.455	8.250	7.5	10
bis(2-Chloroisopropyl)ether	2.232	2.455	8.250	7.5	10
N-Nitrosopyrrolidine	0.785	0.756	7.220	7.5	-4
Acetophenone	2.031	2.098	7.750	7.5	3
4-Methylphenol	1.442	1.446	7.520	7.5	0
Total Cresols	1.412	1.414	15.030	15.0	0
N-Nitroso-di-n-propylamine	1.158	1.210	7.840	7.5	4
N-Nitrosomorpholine	1.074	1.172	8.180	7.5	9
o-Toluidine	2.353	2.329	7.420	7.5	-1
Hexachloroethane	0.655	0.664	7.600	7.5	1
Nitrobenzene	0.461	0.484	7.870	7.5	5
N-Nitrosopiperidine	0.206	0.199	7.260	7.5	-3
Isophorone	0.830	0.866	7.830	7.5	4
2-Nitrophenol	0.201	0.199	7.420	7.5	-1
2,4-Dimethylphenol	0.393	0.416	7.940	7.5	6
O,O,O-Triethylphosphorothioate	0.169	0.171	7.580	7.5	1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 04/27/20 Time: 07:33

Lab File ID: dd1251.d Init. Calib. Date(s): 04/15/20 04/15/20

Init. Calib. Times(s): 15:41 22:07

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.527	0.538	7.660	7.5	2
Benzoic acid	0.261	0.245	9.380	10.0	-6
2,4-Dichlorophenol	0.296	0.294	7.440	7.5	-1
1,2,4-Trichlorobenzene	0.306	0.312	7.650	7.5	2
Naphthalene	1.112	1.113	7.510	7.5	0
4-Chloroaniline	0.448	0.445	7.460	7.5	0
2,6-Dichlorophenol	0.279	0.286	7.700	7.5	3
Hexachloropropene	0.190	0.203	8.010	7.5	7
Hexachlorobutadiene	0.162	0.172	7.950	7.5	6
Quinoline	0.706	0.715	7.610	7.5	1
Caprolactam	0.127	0.121	7.160	7.5	-4
N-Nitrosodi-n-butylamine	0.313	0.303	7.260	7.5	-3
4-Chloro-3-methylphenol	0.329	0.349	7.940	7.5	6
Safrole	0.266	0.269	7.580	7.5	1
2-Methylnaphthalene	0.702	0.707	7.550	7.5	1
1-Methylnaphthalene	0.667	0.670	7.530	7.5	0
Hexachlorocyclopentadiene	0.375	0.375	7.500	7.5	0
1,2,4,5-Tetrachlorobenzene	0.609	0.631	7.760	7.5	3
cis-Isosafrole	0.621	0.569	1.170	1.3	-8
2,4,6-Trichlorophenol	0.424	0.438	7.750	7.5	3
2,4,5-Trichlorophenol	0.442	0.458	7.770	7.5	4
trans-Isosafrole	0.691	0.695	6.250	6.2	0
Isosafrole	0.679	0.673	7.430	7.5	-1
1,1'-Biphenyl	1.798	1.855	7.740	7.5	3
2-Chloronaphthalene	1.367	1.422	7.810	7.5	4
1-Chloronaphthalene	1.284	1.255	7.340	7.5	-2
Diphenyl ether	0.952	0.970	7.640	7.5	2
2-Nitroaniline	0.469	0.467	7.460	7.5	-1
1,4-Naphthoquinone	0.571	0.576	7.560	7.5	1
1,4-Dinitrobenzene	0.250	0.240	7.180	7.5	-4
Dimethylphthalate	1.466	1.501	7.680	7.5	2
1,3-Dinitrobenzene	0.277	0.270	7.310	7.5	-3
2,6-Dinitrotoluene	0.347	0.357	7.720	7.5	3
Acenaphthylene	2.031	2.122	7.840	7.5	4
3-Nitroaniline	0.385	0.387	7.540	7.5	1
Acenaphthene	1.402	1.437	7.690	7.5	2

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 04/27/20 Time: 07:33

Lab File ID: dd1251.d Init. Calib. Date(s): 04/15/20 04/15/20

Init. Calib. Times(s): 15:41 22:07

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.249	0.224	9.020	10.0	-10
4-Nitrophenol	0.253	0.307	9.090	7.5	21
Pentachlorobenzene	0.480	0.481	7.520	7.5	0
2,4-Dinitrotoluene	0.461	0.464	7.540	7.5	1
2,4_2,6-Dinitrotoluenes	0.398	0.411	15.480	15.0	3
Dibenzofuran	1.880	1.936	7.720	7.5	3
1-Naphthylamine	1.409	1.367	7.280	7.5	-3
2,3,4,6-Tetrachlorophenol	0.321	0.318	7.450	7.5	-1
2-Naphthylamine	1.368	1.344	7.370	7.5	-2
Diethylphthalate	1.528	1.606	7.880	7.5	5
Thionazin	0.290	0.279	7.220	7.5	-4
Fluorene	1.482	1.554	7.870	7.5	5
4-Chlorophenyl-phenylether	0.696	0.713	7.680	7.5	2
5-Nitro-o-toluidine	0.446	0.453	7.620	7.5	2
4-Nitroaniline	0.419	0.424	7.590	7.5	1
4,6-Dinitro-2-methylphenol	0.156	0.150	7.210	7.5	-4
N-Nitrosodiphenylamine (1)	0.677	0.683	7.570	7.5	1
NDPA as diphenylamine	0.677	0.683	7.570	7.5	1
1,2-Diphenylhydrazine	0.939	0.998	7.970	7.5	6
Tetraethyldithiopyrophosphate	0.155	0.165	7.990	7.5	6
Diallate (peak 1)	0.420	0.427	5.640	5.6	2
Phorate	0.579	0.605	7.830	7.5	4
Phenacetin	0.443	0.458	7.740	7.5	3
4-Bromophenyl-phenylether	0.189	0.186	7.410	7.5	-1
Diallate (peak 2)	0.429	0.429	1.950	2.0	0
Diallate trans/cis	0.422	0.427	7.590	7.5	1
Hexachlorobenzene	0.198	0.194	7.350	7.5	-2
Dimethoate	0.424	0.423	7.480	7.5	0
Atrazine	0.211	0.223	7.920	7.5	6
Pentachlorophenol	0.141	0.132	7.040	7.5	-6
4-Aminobiphenyl	0.736	0.773	7.880	7.5	5
Pentachloronitrobenzene	0.088	0.098	8.320	7.5	11
Pronamide	0.370	0.383	7.760	7.5	3
Dinoseb	0.211	0.201	7.150	7.5	-5
Phenanthrene	1.137	1.132	7.470	7.5	0
Anthracene	1.139	1.160	7.640	7.5	2

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 04/27/20 Time: 07:33

Lab File ID: dd1251.d Init. Calib. Date(s): 04/15/20 04/15/20

Init. Calib. Times(s): 15:41 22:07

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Carbazole	1.116	1.142	7.680	7.5	2
Methyl parathion	0.335	0.342	7.670	7.5	2
Di-n-butylphthalate	1.442	1.516	7.880	7.5	5
Parathion	0.193	0.203	7.870	7.5	5
4-Nitroquinoline-1-oxide	0.139	0.099	5.320	7.5	-29
Octachlorostyrene	0.077	0.084	8.130	7.5	8
Isodrin	0.140	0.146	7.810	7.5	4
Fluoranthene	1.289	1.361	7.920	7.5	6
Benzidine	0.847	0.836	22.200	22.5	-1
Pyrene	1.378	1.371	7.460	7.5	-1
p-Dimethylaminoazobenzene	0.235	0.226	7.230	7.5	-4
Chlorobenzilate	0.429	0.449	7.850	7.5	5
3,3'-Dimethylbenzidine	0.858	0.797	6.960	7.5	-7
Butylbenzylphthalate	0.674	0.667	7.430	7.5	-1
2-Acetylaminofluorene	0.533	0.488	6.870	7.5	-8
3,3'-Dichlorobenzidine	0.431	0.414	7.200	7.5	-4
4,4'-Methylenebis(2-chloroanil	0.233	0.222	7.160	7.5	-5
Benzo(a)anthracene	1.077	1.107	7.710	7.5	3
Chrysene	1.131	1.135	7.520	7.5	0
bis(2-Ethylhexyl)phthalate	0.953	0.958	7.540	7.5	1
6-Methylchrysene	0.811	0.806	7.450	7.5	-1
Di-n-octylphthalate	1.766	1.781	7.570	7.5	1
Benzo(b)fluoranthene	1.183	1.226	7.780	7.5	4
7,12-Dimethylbenz[a]anthracene	0.560	0.568	7.600	7.5	1
Benzo(k)fluoranthene	1.197	1.285	8.050	7.5	7
Benzo(a)pyrene	1.130	1.212	8.040	7.5	7
3-Methylcholanthrene	0.595	0.616	7.760	7.5	3
Dibenz(a,h)acridine	0.870	0.794	6.840	7.5	-9
Dibenz(a,j)acridine	0.939	0.921	7.360	7.5	-2
Indeno(1,2,3-cd)pyrene	0.970	0.986	7.350	7.5	-2
Dibenz(a,h)anthracene	1.027	1.062	7.760	7.5	3
Benzo(g,h,i)perylene	1.046	1.053	7.550	7.5	1
Total PAHs	1.123	1.155	138.500	135.0	3
2-Fluorophenol	1.493	1.482	14.880	15.0	-1
Phenol-d6	1.999	2.015	15.120	15.0	1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 04/27/20 Time: 07:33

Lab File ID: dd1251.d Init. Calib. Date(s): 04/15/20 04/15/20

Init. Calib. Times(s): 15:41 22:07

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Nitrobenzene-d5	0.456	0.487	16.000	15.0	7
2-Fluorobiphenyl	1.557	1.601	15.420	15.0	3
2,4,6-Tribromophenol	0.150	0.157	15.660	15.0	4
Terphenyl-d14	0.760	0.771	15.220	15.0	1
			Average %Drift:		3

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/20apr15.b/dd0631.d **
/chem/HP19760.i/20apr15.b/dd0632.d
/chem/HP19760.i/20apr15.b/dd0633.d
/chem/HP19760.i/20apr15.b/dd0634.d
/chem/HP19760.i/20apr15.b/dd0635.d
/chem/HP19760.i/20apr15.b/dd0636.d
/chem/HP19760.i/20apr15.b/dd0637.d
/chem/HP19760.i/20apr15.b/dd0638.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/20apr27.b/dd1251.d

Area Summary

File ID:

Internal Standard Name	dd1251.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	200314	277410	138705	554820	Yes
Naphthalene-d8	733071	1024096	512048	2048192	Yes
Acenaphthene-d10	341683	466522	233261	933044	Yes
Phenanthrene-d10	651512	870341	435170	1740682	Yes
Pyrene-d10	660345	867432	433716	1734864	Yes
Perylene-d12	597514	816156	408078	1632312	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dd1251.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	7.199	7.274	Yes
Naphthalene-d8	9.140	9.215	Yes
Acenaphthene-d10	11.902	11.972	Yes
Phenanthrene-d10	13.797	13.866	Yes
Pyrene-d10	15.843	15.930	Yes
Perylene-d12	20.406	20.505	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: _____

Report generated on 04/27/2020 at 08:22

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dd1251.d Date Analyzed: 04/27/20

Instrument ID: HP19760 Time Analyzed: 07:33

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	200314	7.199	733071	9.140	341683	11.902
UPPER LIMIT	400628	7.699	1466142	9.640	683366	12.402
LOWER LIMIT	100157	6.699	366536	8.640	170842	11.402
LLI SAMPLE NO.						
01 SBLKWD115	190505	7.199	720576	9.140	334608	11.902
02 115WDLCS	176552	7.199	662282	9.134	305094	11.902
03 115WDLCSD	183141	7.199	693006	9.134	327154	11.902
04 SBLKWI114	181219	7.193	699142	9.134	321521	11.897
05 114WILCS	173809	7.199	658970	9.134	309526	11.902
06 114WILCSD	175885	7.199	667348	9.134	310719	11.902
07 SBLKWH114	189683	7.193	720568	9.134	334602	11.896
08 114WHLCS	175262	7.199	664310	9.134	313227	11.902
09 1300593	167580	7.193	640972	9.134	296932	11.896
10 1300296	171248	7.193	659836	9.134	307299	11.896
11 1300163	173621	7.193	656885	9.134	305835	11.896
12 rvSTD0920	206788	7.193	764727	9.139	366542	11.902
13 1302094	183573	7.193	694967	9.134	321648	11.897
14 1302095	176249	7.193	672657	9.134	304652	11.897
15 1302096MS	166362	7.199	625948	9.134	296496	11.902
16 1302097MSD	169514	7.199	631714	9.134	291063	11.902
17 1302098	178887	7.193	686409	9.134	312842	11.897

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dd1251.d Date Analyzed: 04/27/20

Instrument ID: HP19760 Time Analyzed: 07:33

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	651512	13.797	660345	15.843	597514	20.406
UPPER LIMIT	1303024	14.297	1320690	16.343	1195028	20.906
LOWER LIMIT	325756	13.297	330173	15.343	298757	19.906
LLI SAMPLE NO.						
01 SBLKWD115	608846	13.797	595068	15.843	507778	20.406
02 115WDLCS	582356	13.797	599039	15.842	534052	20.406
03 115WDLCSD	608092	13.791	621852	15.837	547109	20.406
04 SBLKWI114	615301	13.791	601519	15.837	518906	20.401
05 114WILCS	589837	13.797	617765	15.842	537176	20.406
06 114WILCSD	589797	13.791	604846	15.843	539206	20.406
07 SBLKWH114	620741	13.791	627048	15.837	541514	20.400
08 114WHLCS	603168	13.791	598517	15.837	531183	20.406
09 1300593	557661	13.791	547136	15.837	423039	20.400
10 1300296	587197	13.791	577670	15.837	471646	20.400
11 1300163	582306	13.791	571375	15.837	466565	20.400
12 rvSTD0920	685820	13.797	690713	15.842	615095	20.406
13 1302094	598036	13.791	589972	15.837	492101	20.400
14 1302095	571535	13.791	560276	15.837	482602	20.400
15 1302096MS	566866	13.791	579153	15.837	508775	20.406
16 1302097MSD	556602	13.791	566008	15.837	492909	20.400
17 1302098	586944	13.791	570798	15.837	465072	20.401

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dd1251.d Date Analyzed: 04/27/20

Instrument ID: HP19760 Time Analyzed: 07:33

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	200314	7.199	733071	9.140	341683	11.902
	UPPER LIMIT	400628	7.699	1466142	9.640	683366	12.402
	LOWER LIMIT	100157	6.699	366536	8.640	170842	11.402
	LLI SAMPLE NO.						
18	1302099	175272	7.193	662872	9.134	307468	11.896
19	1302100	179211	7.193	686324	9.134	309166	11.897
20	1302101	163677	7.193	624495	9.134	280125	11.896

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dd1251.d Date Analyzed: 04/27/20

Instrument ID: HP19760 Time Analyzed: 07:33

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	651512	13.797	660345	15.843	597514	20.406
	UPPER LIMIT	1303024	14.297	1320690	16.343	1195028	20.906
	LOWER LIMIT	325756	13.297	330173	15.343	298757	19.906
	LLI SAMPLE NO.						
18	1302099	572452	13.791	552161	15.837	420330	20.400
19	1302100	575869	13.791	562992	15.837	454594	20.401
20	1302101	527045	13.791	506745	15.837	409154	20.400

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1265.d
Data file Sample Info. Line: 5WB02;1302094;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 15:24**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	183573	(-8)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	694967	(-5)	5.00	
113) Acenaphthene-d10	11.896	(0.006)	1683	164	321648	(-6)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	598036	(-8)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	589972	(-11)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	492101	(-18)	5.00	

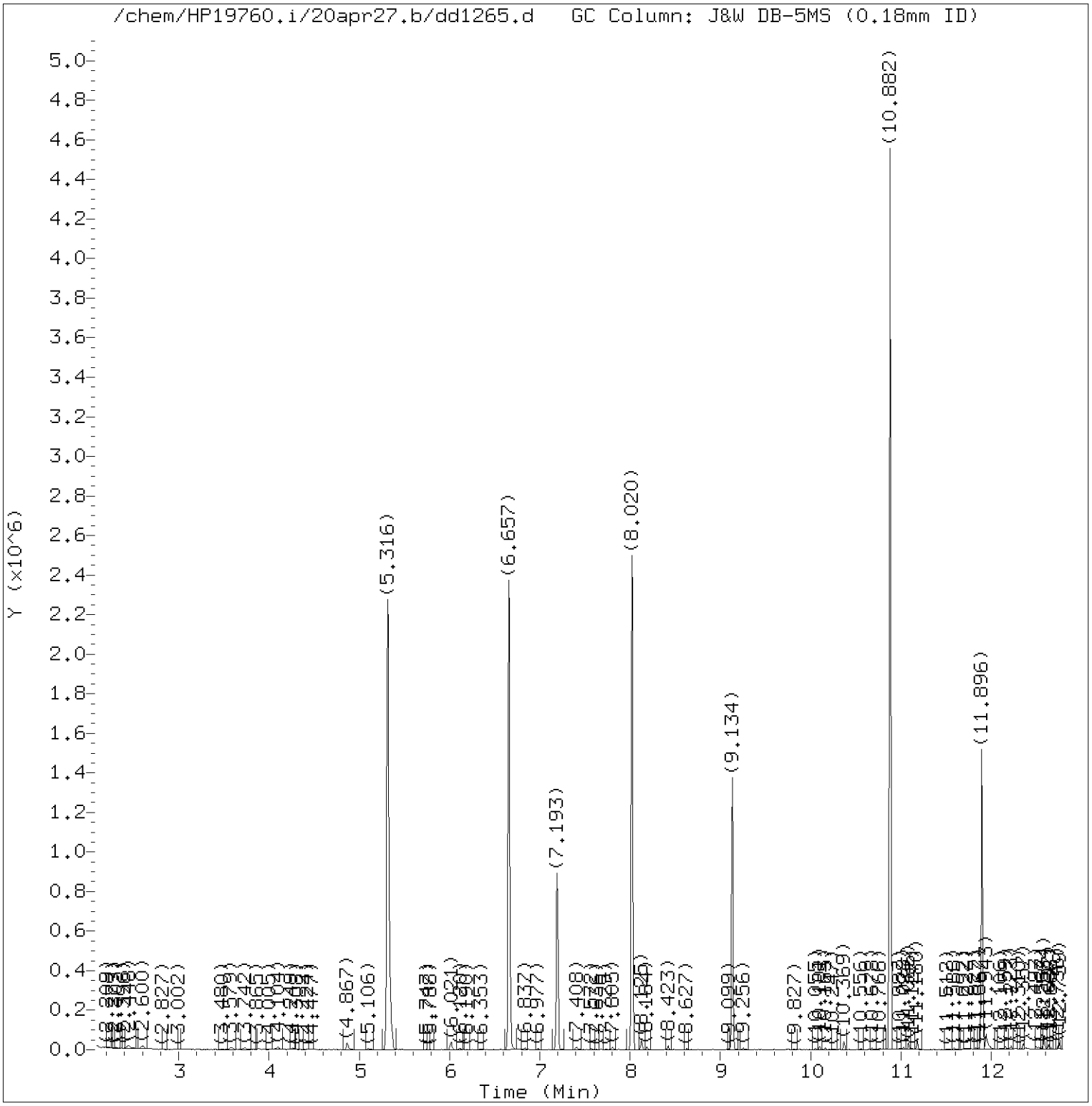
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.020	(0.001)	82	1123450	17.706	71%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1683878	16.812	67%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	2000910	22.308	89%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

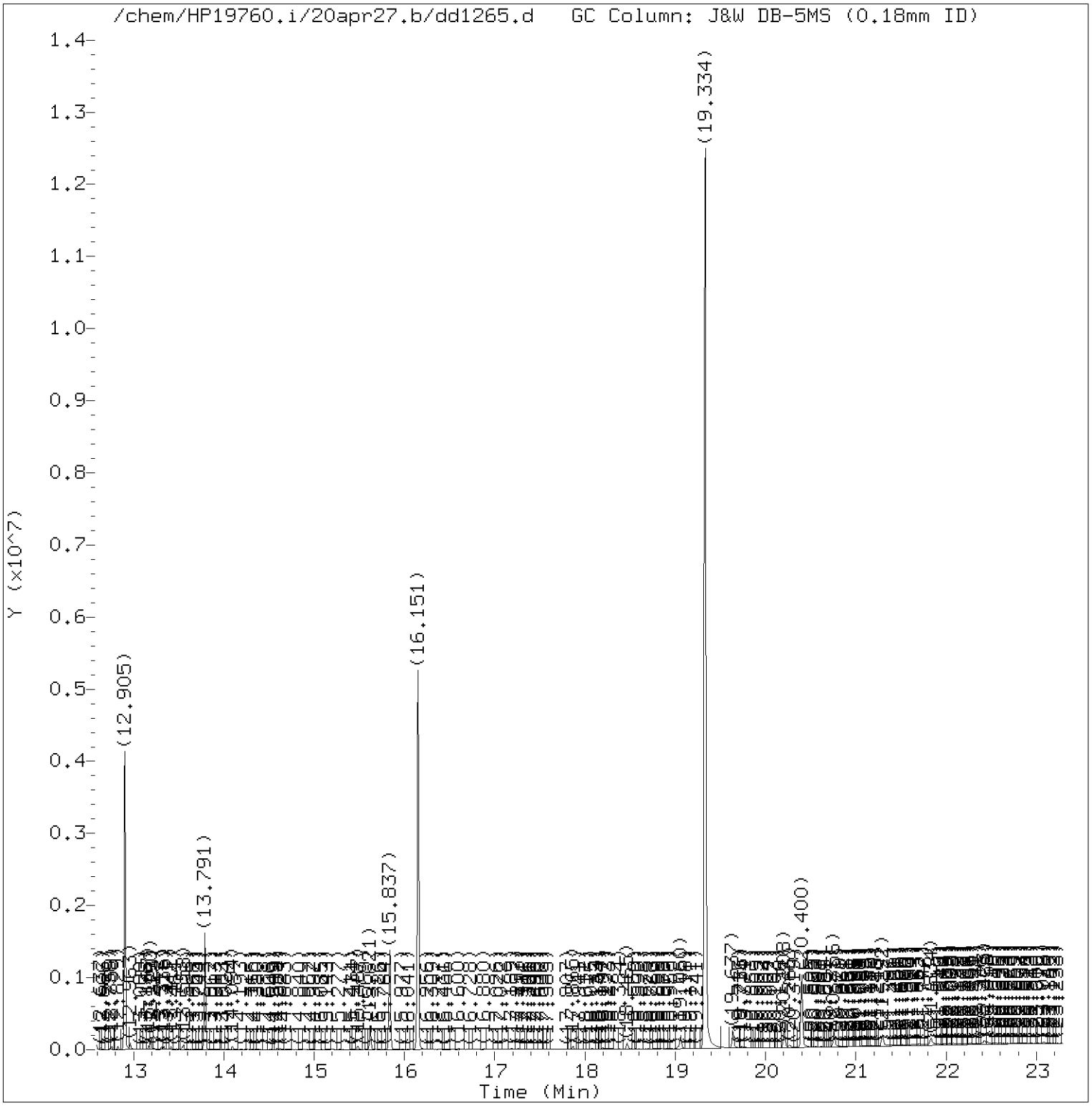
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1265.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:24 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB02 Lab Sample ID: 1302094

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1265.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:24 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB02 Lab Sample ID: 1302094

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1265.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:24 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB02 Lab Sample ID: 1302094

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	183573	5.000
44)$Nitrobenzene-d5	(2)	8.020	82	1123450	17.706
65)*Naphthalene-d8	(2)	9.134	136	694967	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1683878	16.812
113)*Acenaphthene-d10	(3)	11.896	164	321648	5.000
153)*Phenanthrene-d10	(4)	13.791	188	598036	5.000
175)*Pyrene-d10	(5)	15.837	212	589972	5.000
179)$Terphenyl-d14	(5)	16.151	244	2000910	22.308
213)*Perylene-d12	(6)	20.400	264	492101	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1266.d
Data file Sample Info. Line: 5WB03;1302095;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 15:52**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	176249	(-12)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	672657	(-8)	5.00	
113) Acenaphthene-d10	11.896	(0.006)	1683	164	304652	(-11)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	571535	(-12)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	560276	(-15)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	482602	(-19)	5.00	

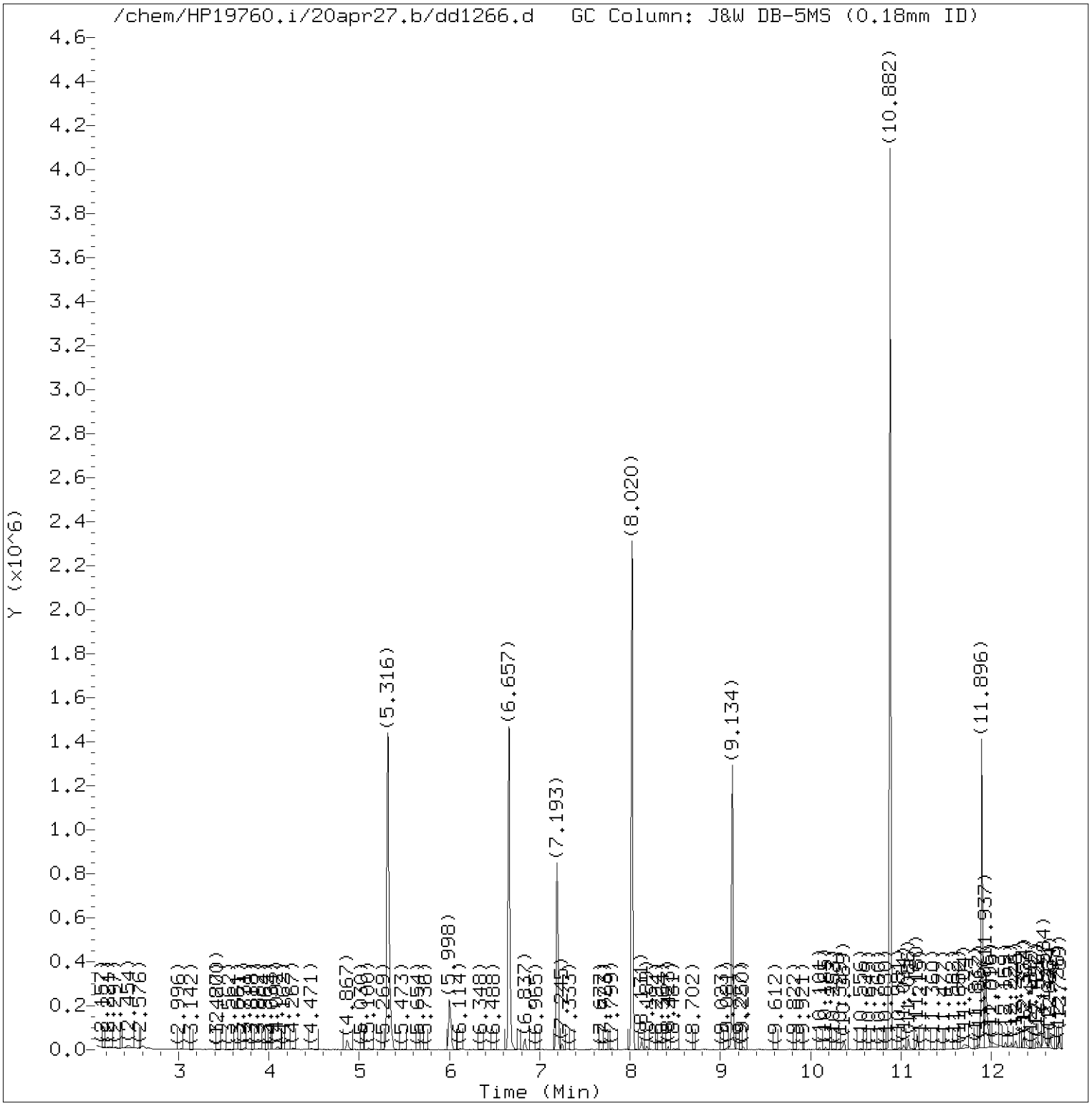
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.020	(0.001)	82	1000927	16.298	65%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1521582	16.039	64%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1745516	20.492	82%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	(-0.000)	149	109573	1.026	4.16		J	0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

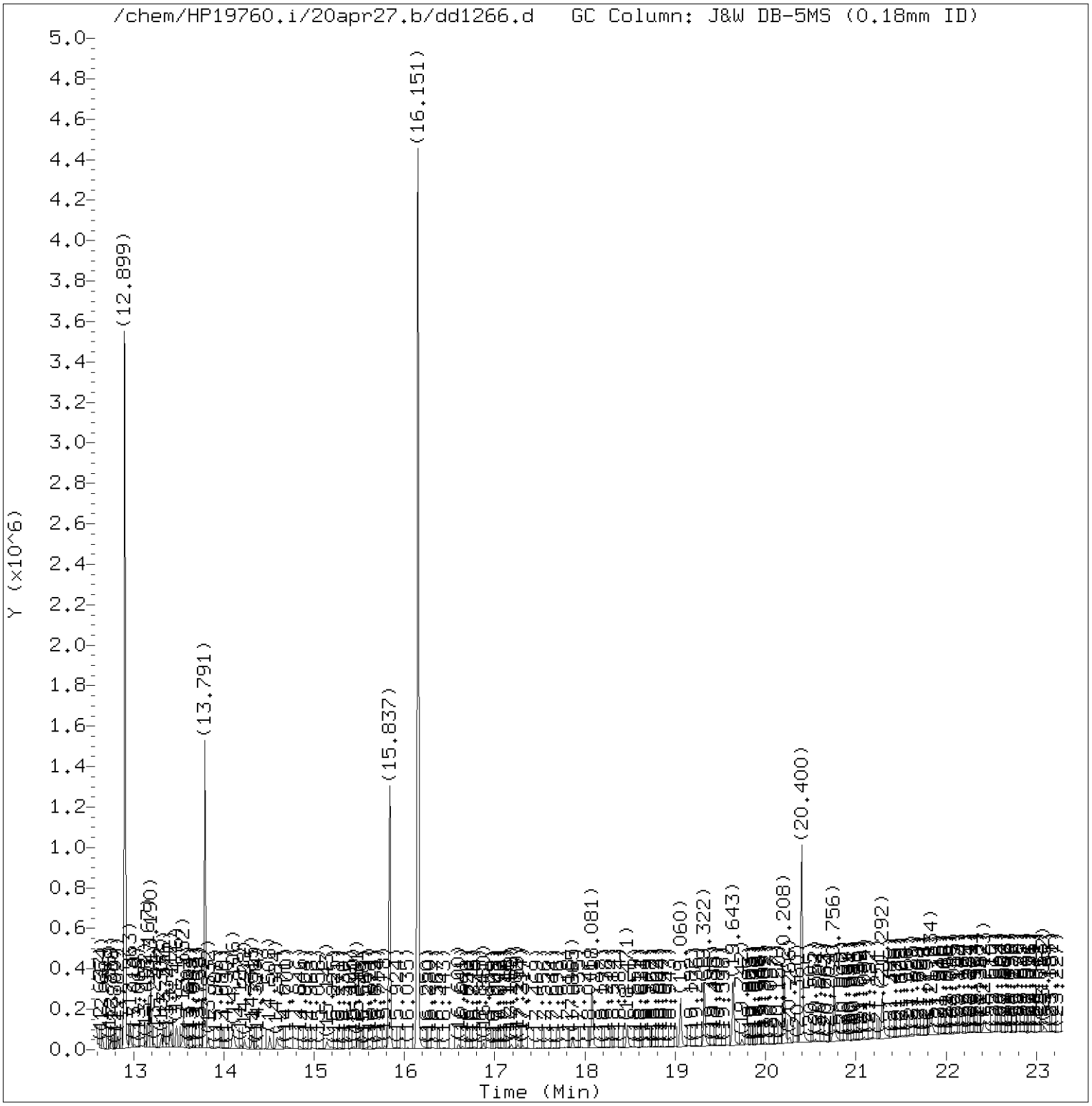
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1266.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:52 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03 Lab Sample ID: 1302095

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1266.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:52 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03 Lab Sample ID: 1302095

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1266.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:52 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

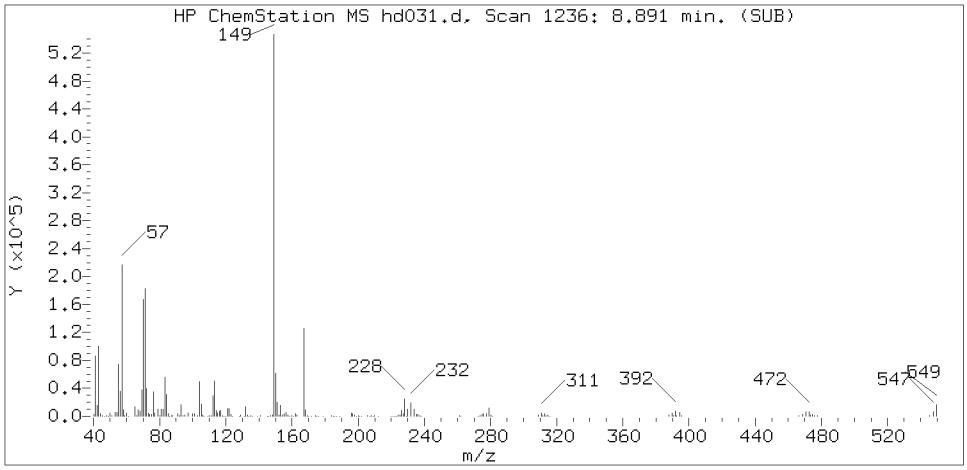
Sample Name: 5WB03 Lab Sample ID: 1302095

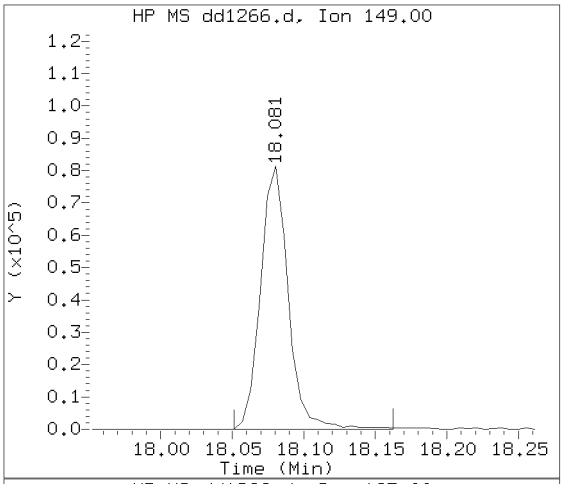
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	176249	5.000
44)$Nitrobenzene-d5	(2)	8.020	82	1000927	16.298
65)*Naphthalene-d8	(2)	9.134	136	672657	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1521582	16.039
113)*Acenaphthene-d10	(3)	11.896	164	304652	5.000
153)*Phenanthrene-d10	(4)	13.791	188	571535	5.000
175)*Pyrene-d10	(5)	15.837	212	560276	5.000
179)$Terphenyl-d14	(5)	16.151	244	1745516	20.492
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	149	109573	1.026
213)*Perylene-d12	(6)	20.400	264	482602	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

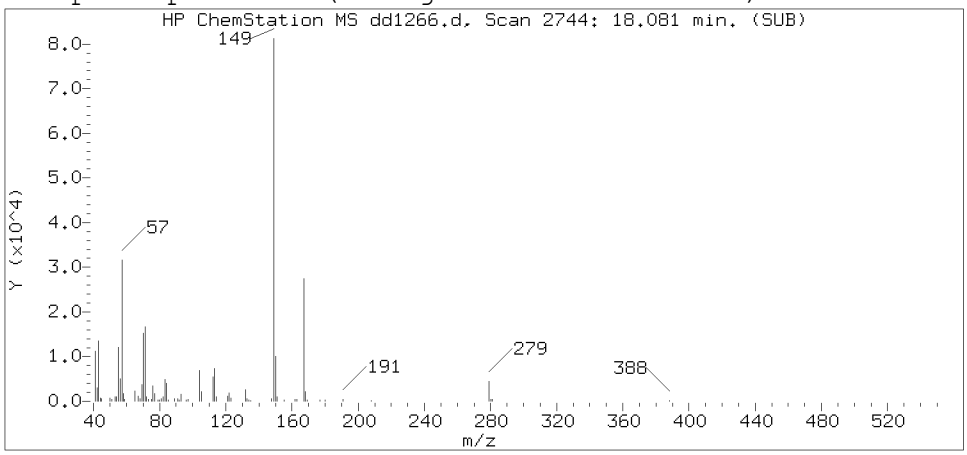
Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

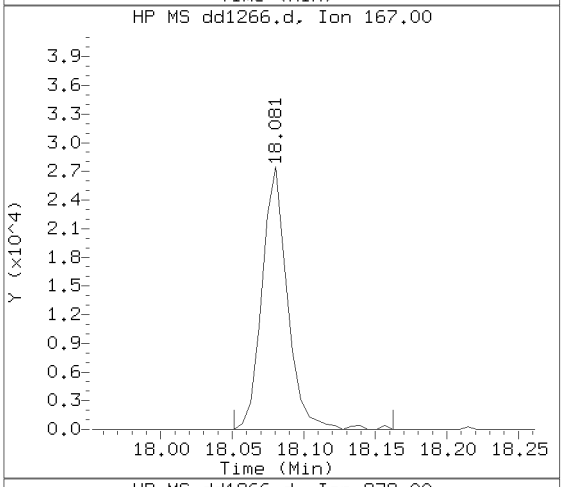
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



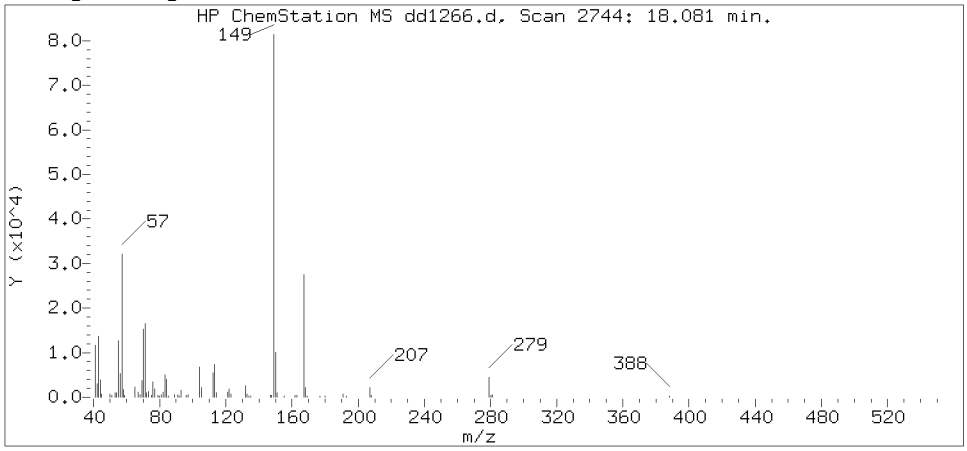


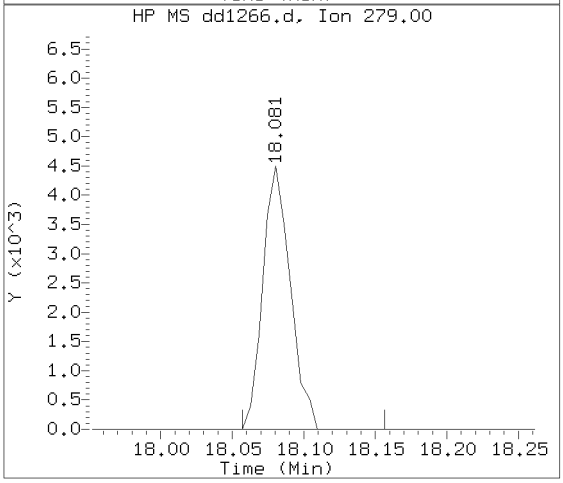
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1266.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 15:52 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03 Lab Sample ID: 1302095

Compound Number : 199
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 2744
Retention Time (minutes) : 18.081
Relative Retention Time :-0.00005
Quant Ion : 149.00
Area (flag) : 109573
On-column Amount (ng/ul) : 1.0264

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Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1269.d
Data file Sample Info. Line: 5WB04;1302098;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 17:17**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	178887	(-11)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	686409	(-6)	5.00	
113) Acenaphthene-d10	11.897	(0.006)	1683	164	312842	(-8)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	586944	(-10)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	570798	(-14)	5.00	
213) Perylene-d12	20.401	(0.006)	3142	264	465072	(-22)	5.00	

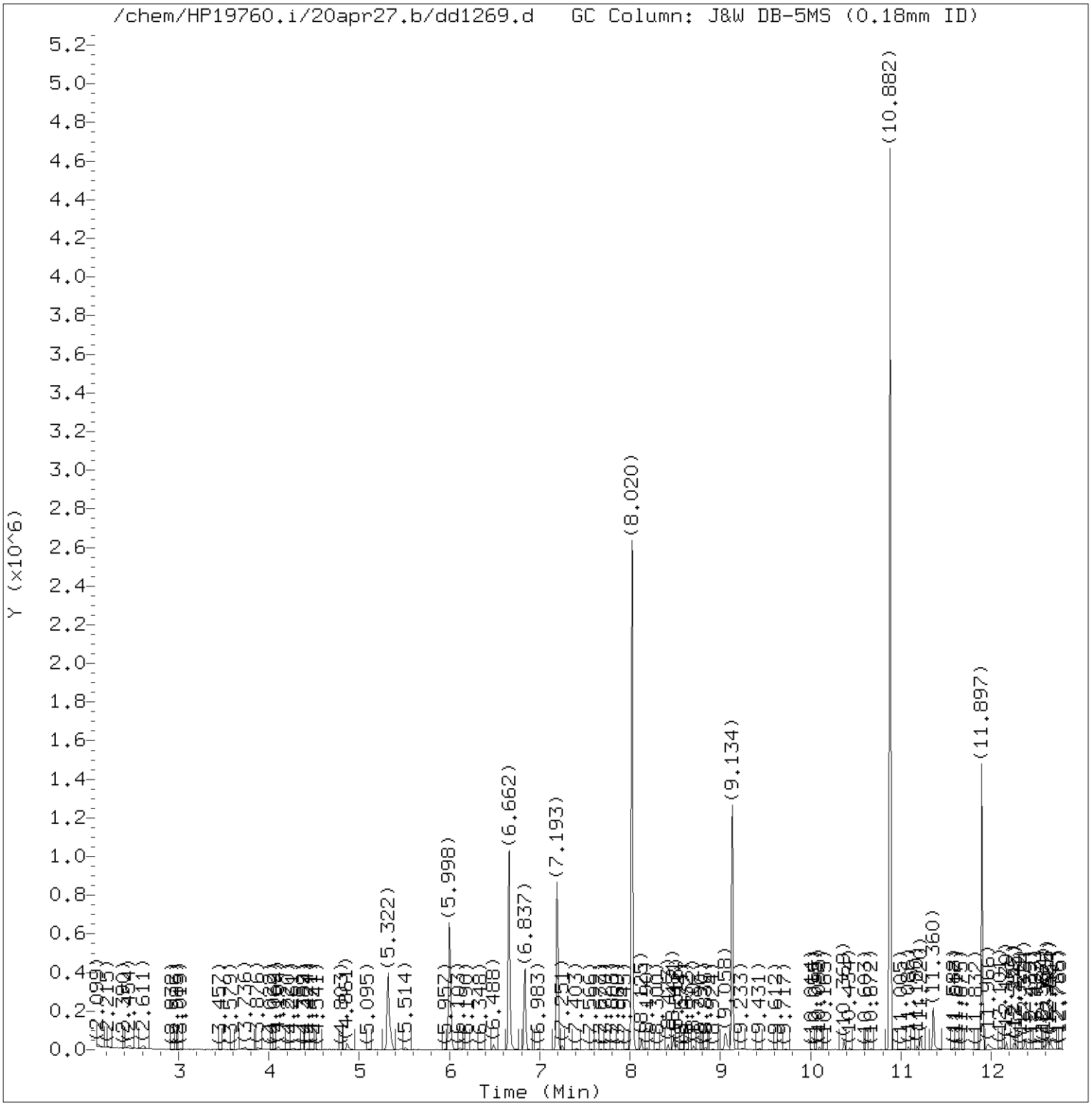
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.020	(0.001)	82	1187751	18.953	76%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1750941	17.973	72%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1485299	17.116	68%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	12.170	(0.000)	165	5752	0.199	0.80		J	0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

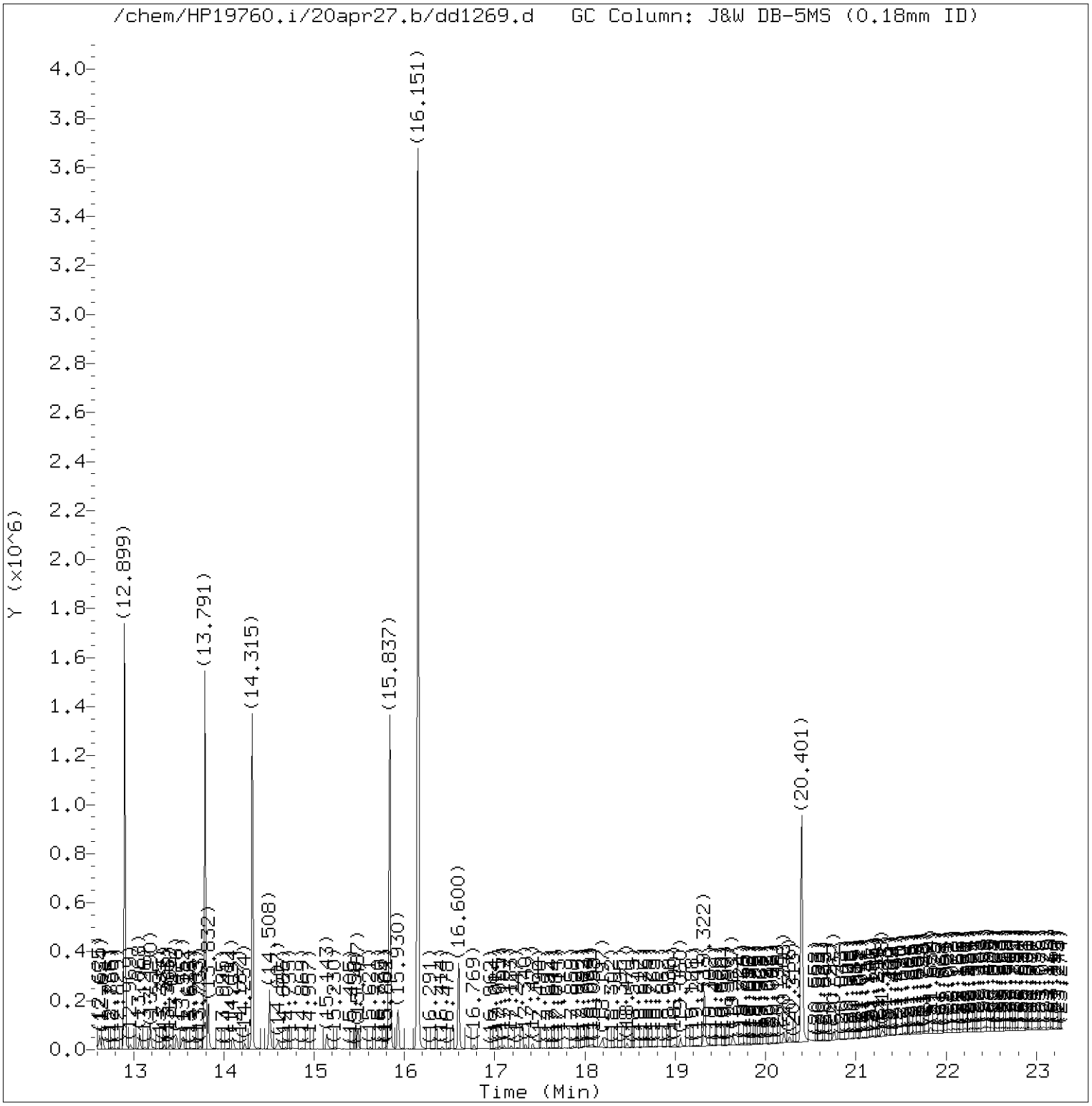
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1269.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:17 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB04 Lab Sample ID: 1302098

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1269.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:17 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB04 Lab Sample ID: 1302098

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1269.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:17 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

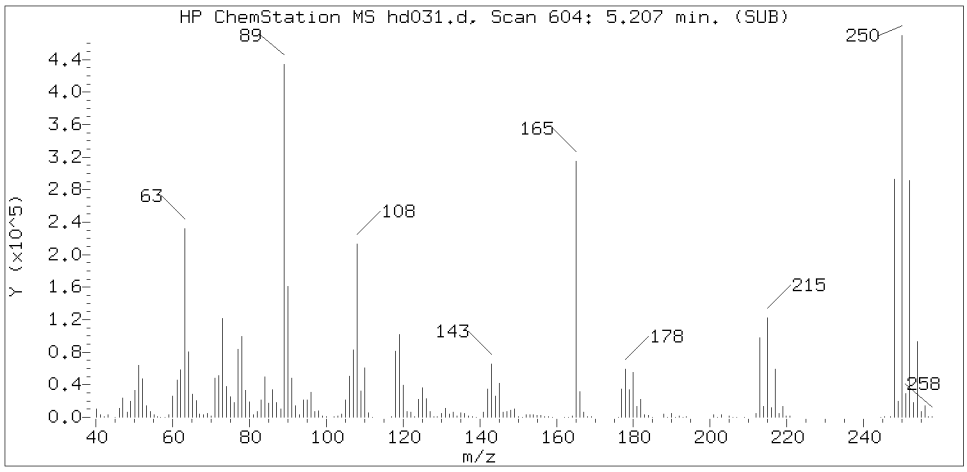
Sample Name: 5WB04 Lab Sample ID: 1302098

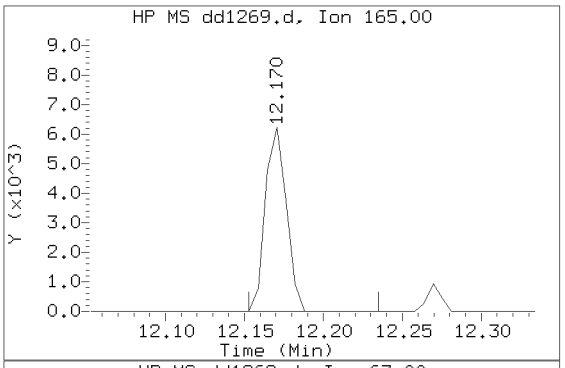
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	178887	5.000
44)$Nitrobenzene-d5	(2)	8.020	82	1187751	18.953
65)*Naphthalene-d8	(2)	9.134	136	686409	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1750941	17.973
113)*Acenaphthene-d10	(3)	11.897	164	312842	5.000
118) 2,4-Dinitrotoluene	(3)	12.170	165	5752	0.199
153)*Phenanthrene-d10	(4)	13.791	188	586944	5.000
175)*Pyrene-d10	(5)	15.837	212	570798	5.000
179)$Terphenyl-d14	(5)	16.151	244	1485299	17.116
213)*Perylene-d12	(6)	20.401	264	465072	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

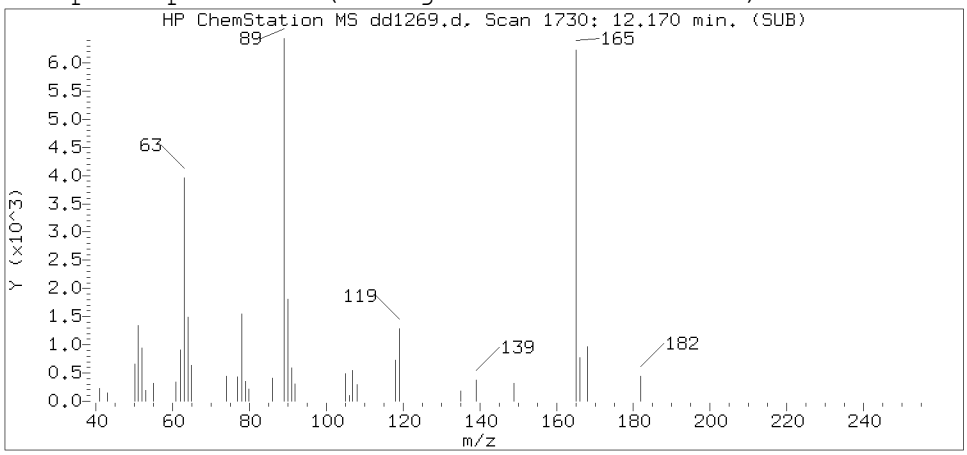
Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

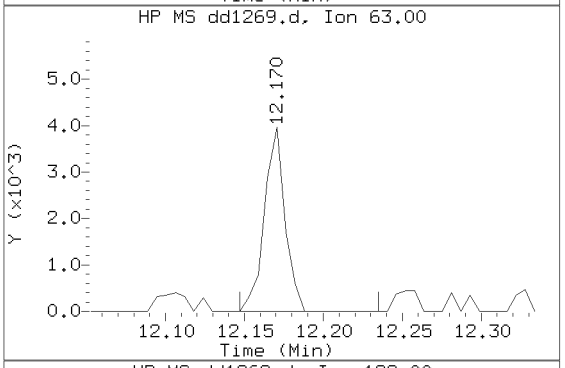
Reference Standard Spectrum for 2,4-Dinitrotoluene

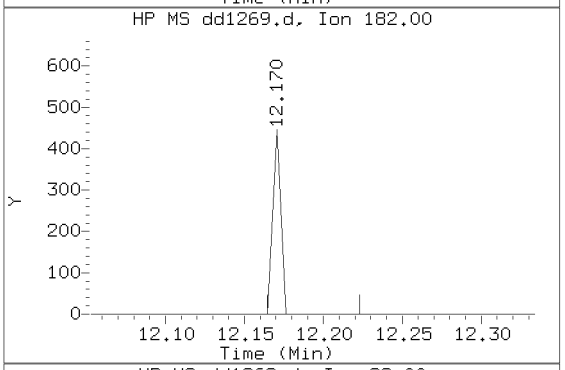




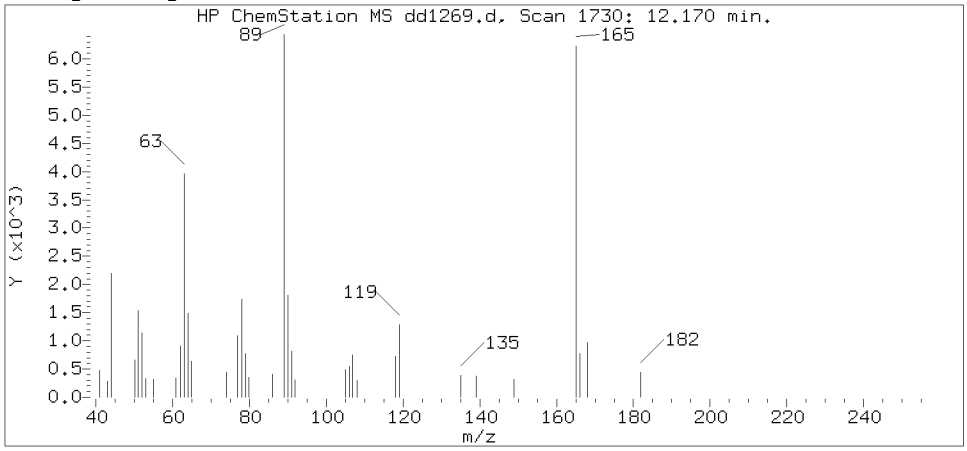
Sample Spectrum (Background Subtracted)

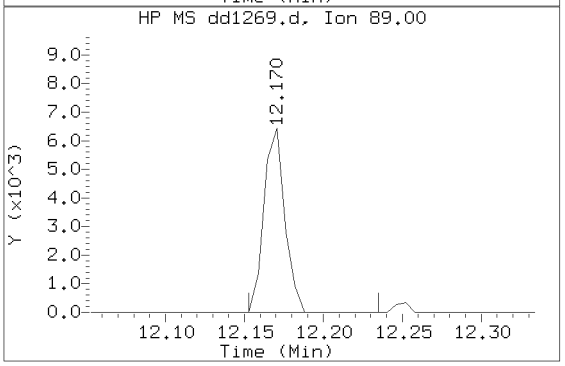






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1269.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:17 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB04 Lab Sample ID: 1302098

Compound Number : 118
Compound Name : 2,4-Dinitrotoluene
Scan Number : 1730
Retention Time (minutes) : 12.170
Relative Retention Time : 0.00048
Quant Ion : 165.00
Area (flag) : 5752
On-column Amount (ng/ul) : 0.1992

Digitally signed by Edward Monborne on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1270.d
Data file Sample Info. Line: 5WB05;1302099;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 17:45**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	175272	(-13)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	662872	(-10)	5.00	
113) Acenaphthene-d10	11.896	(0.006)	1683	164	307468	(-10)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	572452	(-12)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	552161	(-16)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	420330	(-30)	5.00	

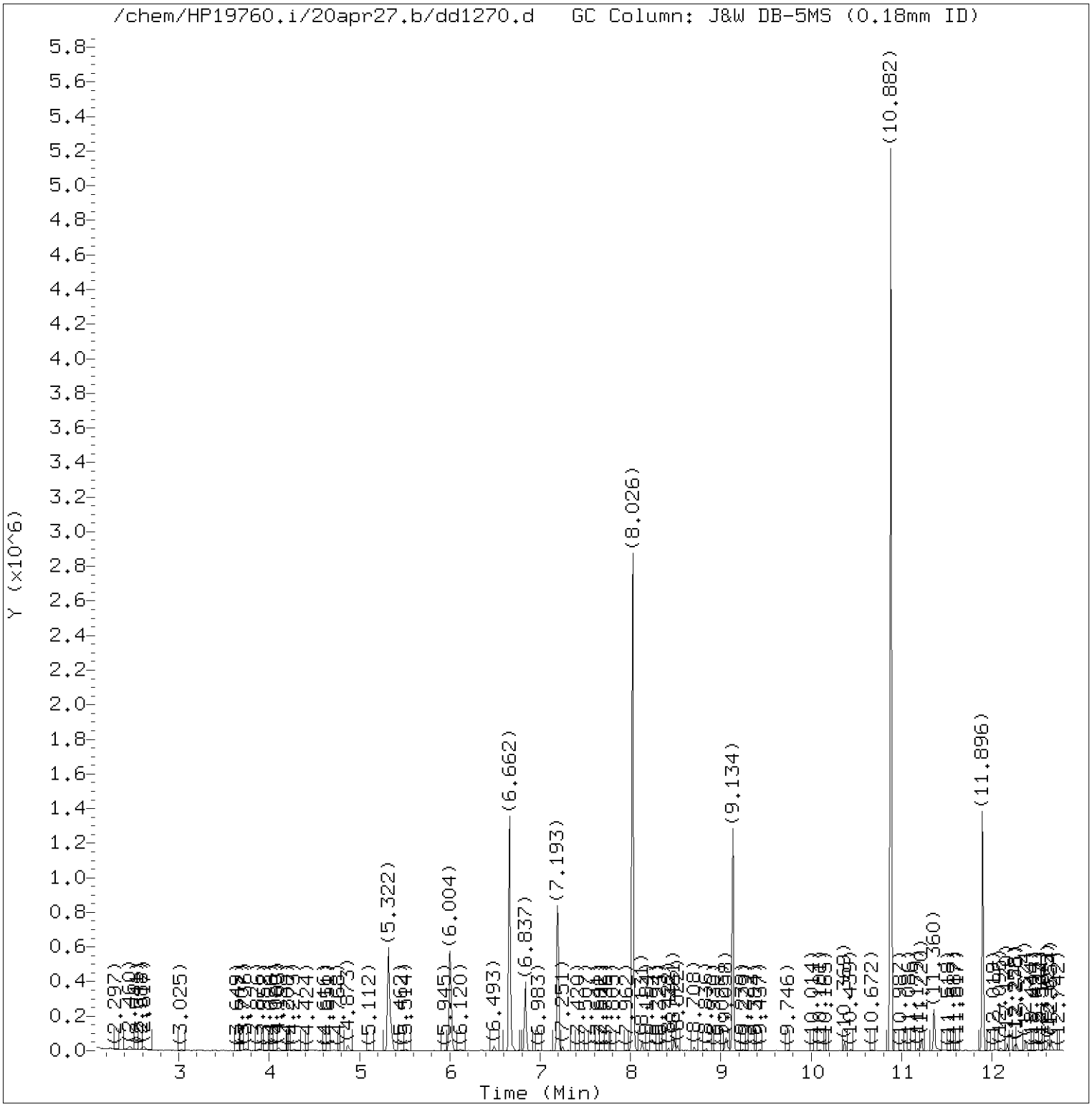
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.026	(0.000)	82	1286404	21.256	85%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1876059	19.594	78%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1428558	17.017	68%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	8.049	(0.000)	77	12609	0.206	0.83		J	0.2
100) 2-Nitroaniline	(3)	11.220	(0.000)	138	14949	0.518	2.08		J	0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	12.170	(0.000)	165	5879	0.207	0.83		J	0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

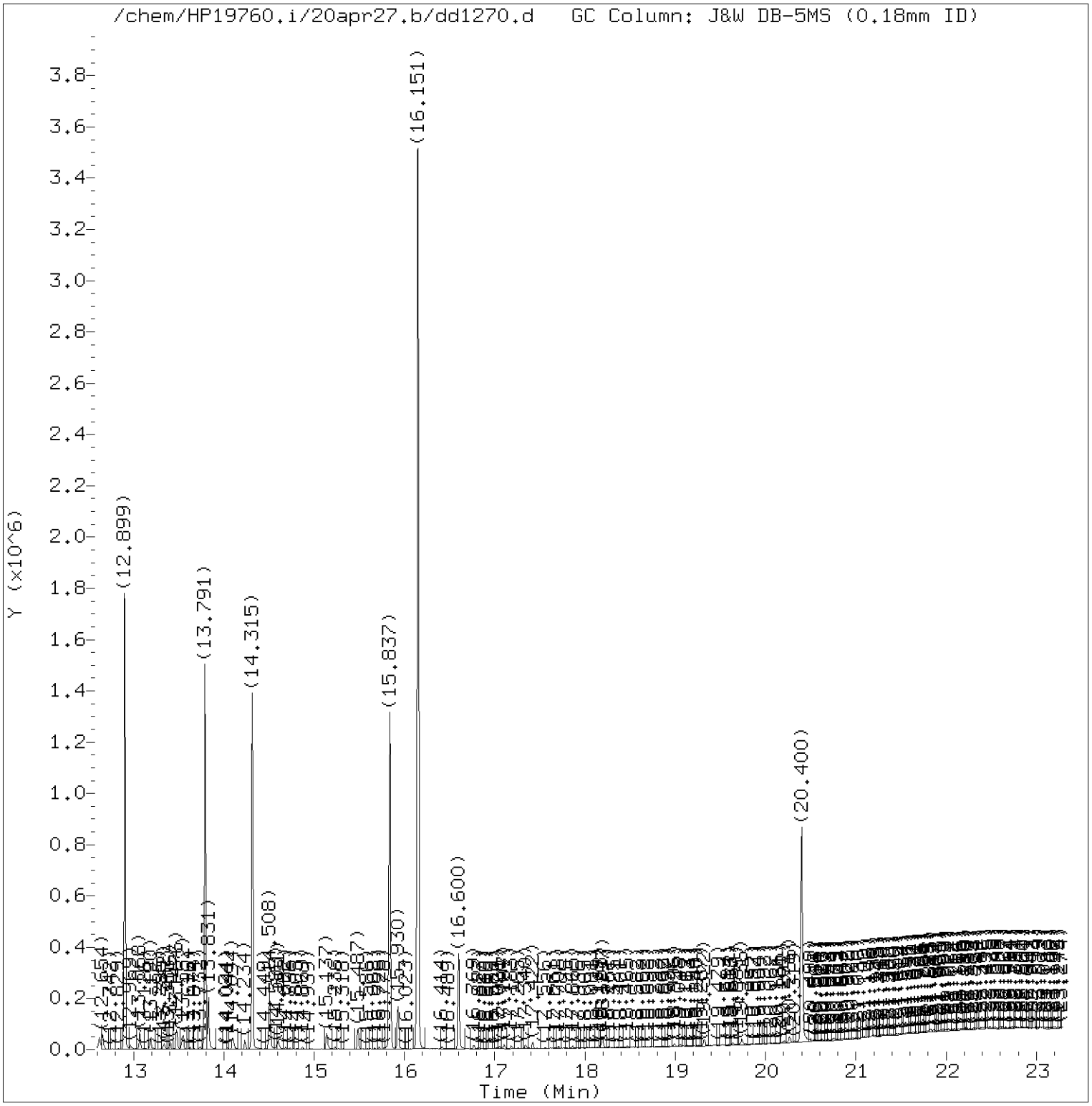
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB05 Lab Sample ID: 1302099

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB05 Lab Sample ID: 1302099

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

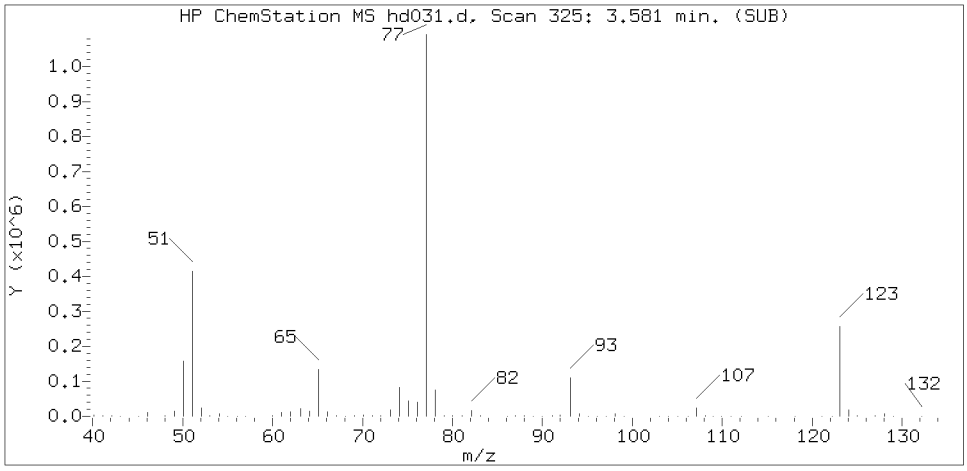
Sample Name: 5WB05 Lab Sample ID: 1302099

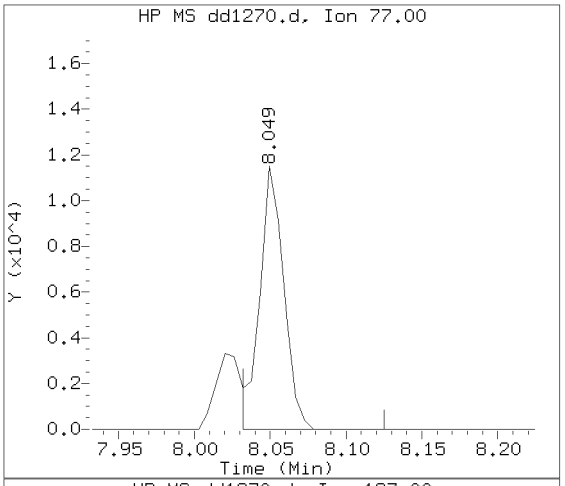
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	175272	5.000
44)$Nitrobenzene-d5	(2)	8.026	82	1286404	21.256
45) Nitrobenzene	(2)	8.049	77	12609	0.206
65)*Naphthalene-d8	(2)	9.134	136	662872	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1876059	19.594
100) 2-Nitroaniline	(3)	11.220	138	14949	0.518
113)*Acenaphthene-d10	(3)	11.896	164	307468	5.000
118) 2,4-Dinitrotoluene	(3)	12.170	165	5879	0.207
153)*Phenanthrene-d10	(4)	13.791	188	572452	5.000
175)*Pyrene-d10	(5)	15.837	212	552161	5.000
179)$Terphenyl-d14	(5)	16.151	244	1428558	17.017
213)*Perylene-d12	(6)	20.400	264	420330	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

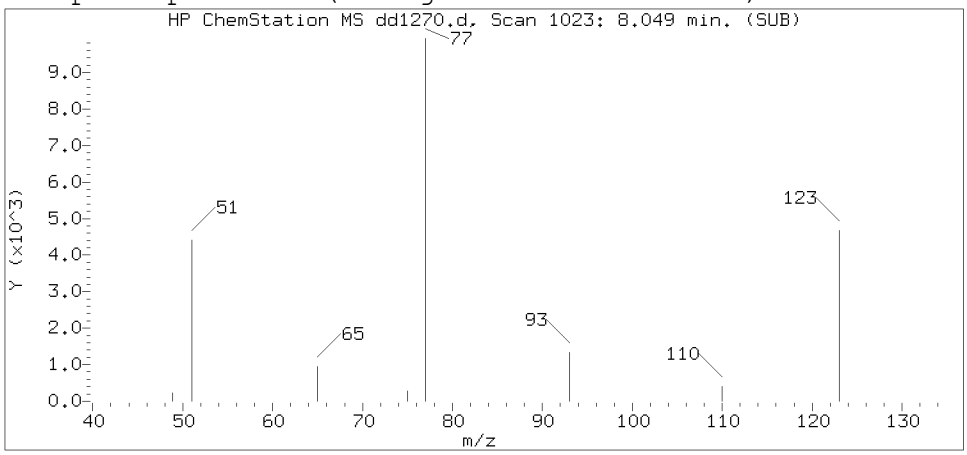
Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

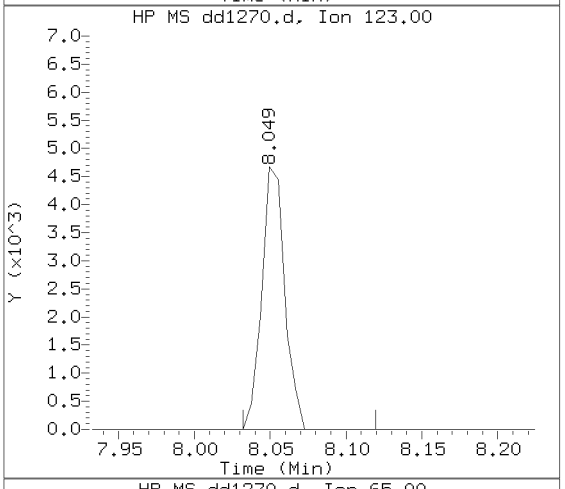
Reference Standard Spectrum for Nitrobenzene



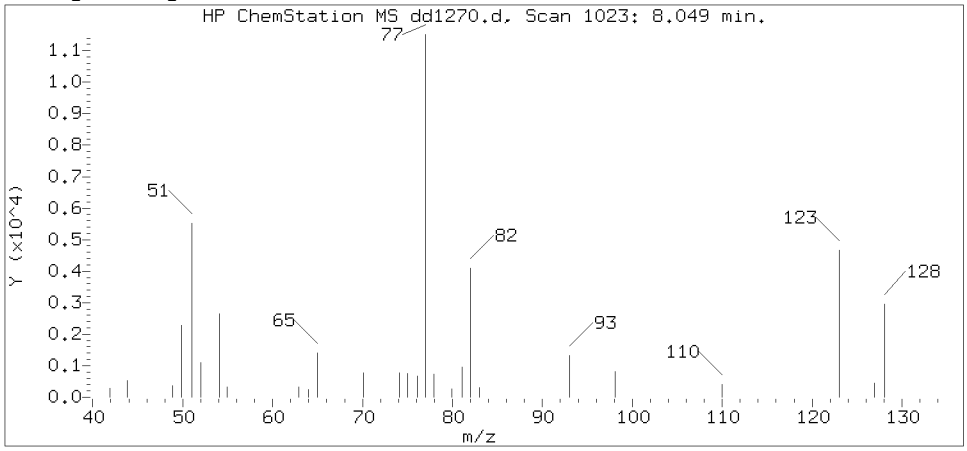


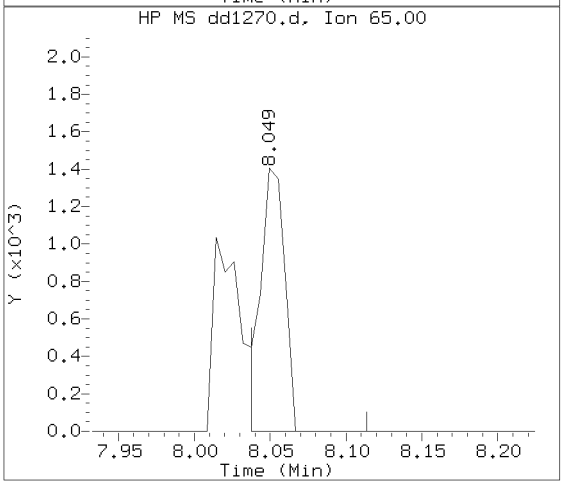
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

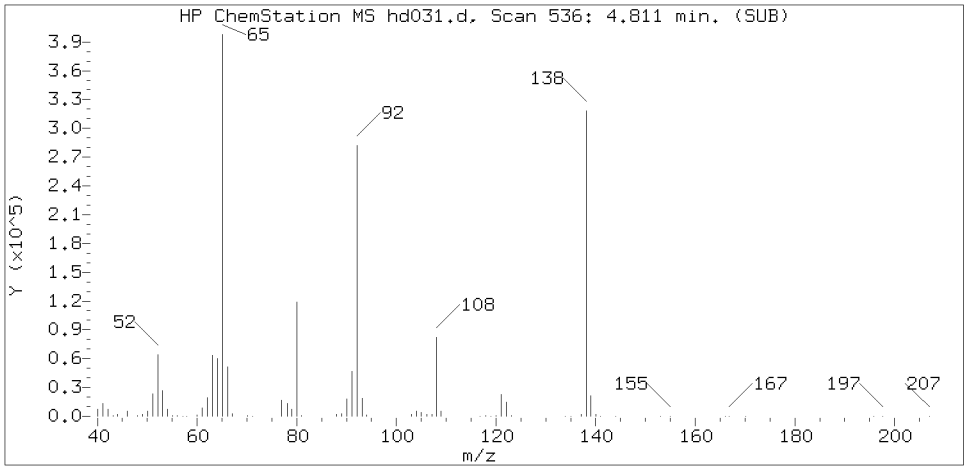
Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

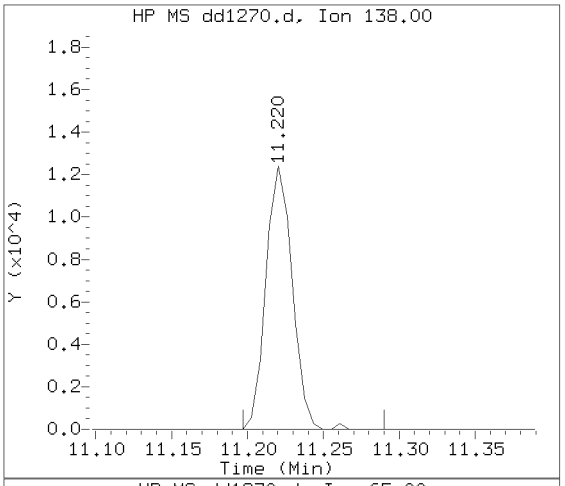
Sample Name: 5WB05 Lab Sample ID: 1302099

Compound Number	: 45
Compound Name	: Nitrobenzene
Scan Number	: 1023
Retention Time (minutes)	: 8.049
Relative Retention Time	: 0.00072
Quant Ion	: 77.00
Area (flag)	: 12609
On-column Amount (ng/ul)	: 0.2063

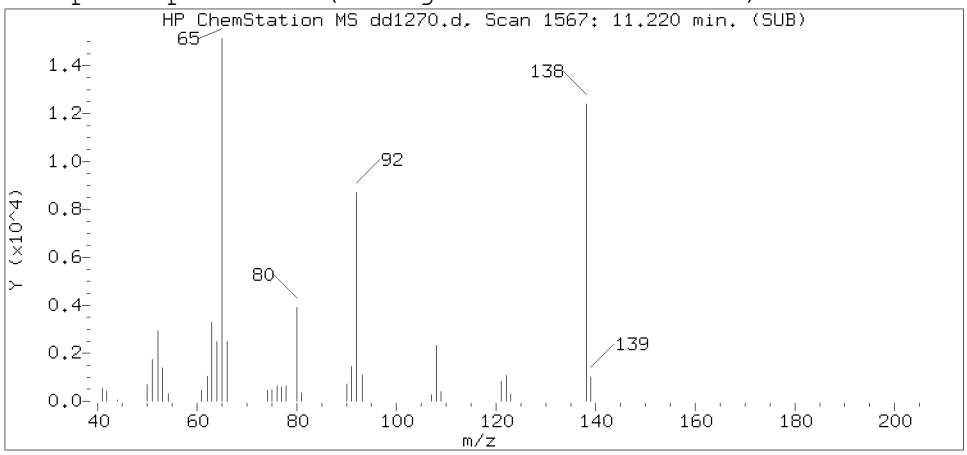
Digitally signed by Edward Monborne on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

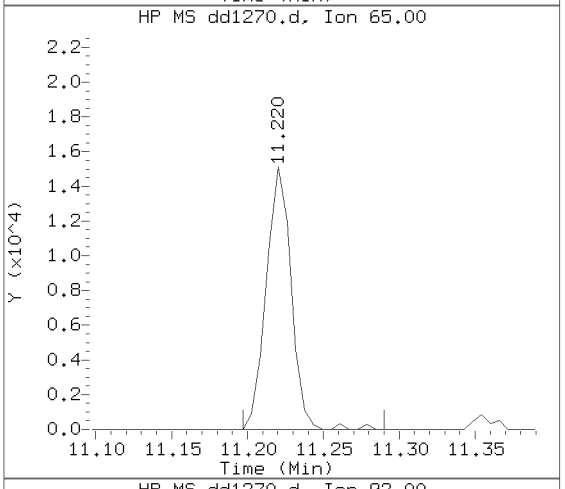
Reference Standard Spectrum for 2-Nitroaniline



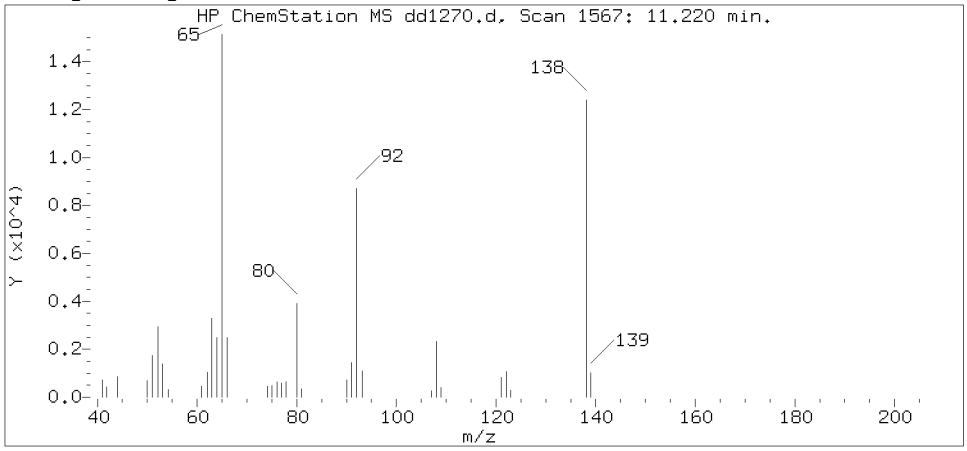


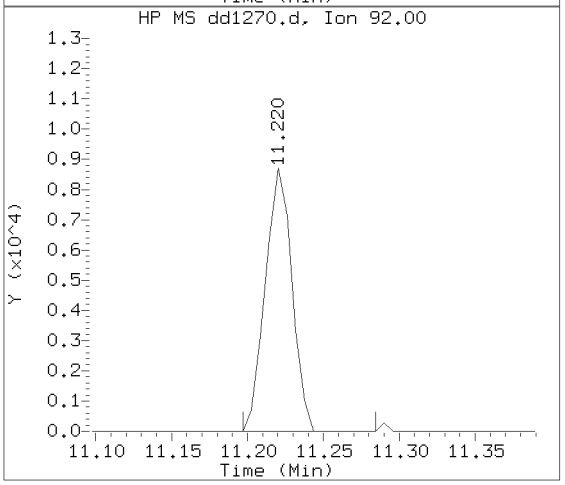
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB05 Lab Sample ID: 1302099

Compound Number	: 100
Compound Name	: 2-Nitroaniline
Scan Number	: 1567
Retention Time (minutes)	: 11.220
Relative Retention Time	: 0.00052
Quant Ion	: 138.00
Area (flag)	: 14949
On-column Amount (ng/ul)	: 0.5183

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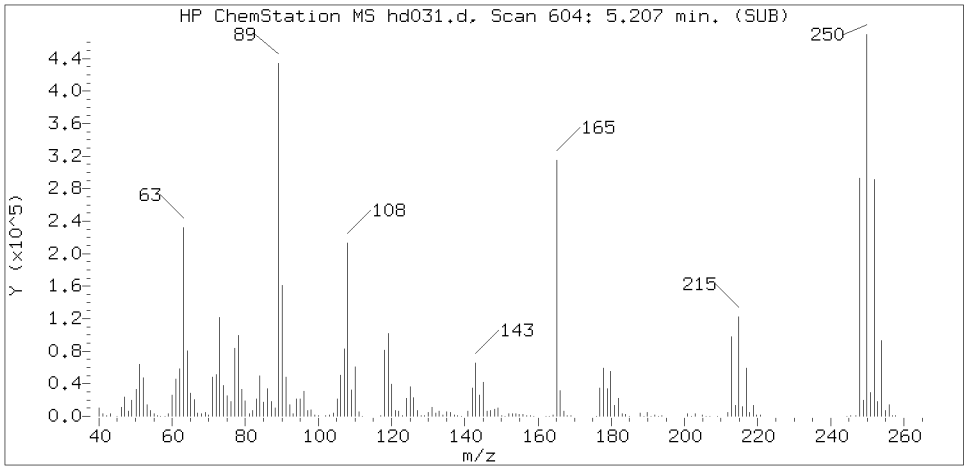
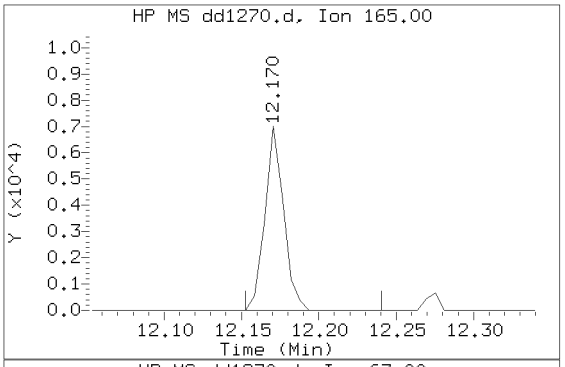
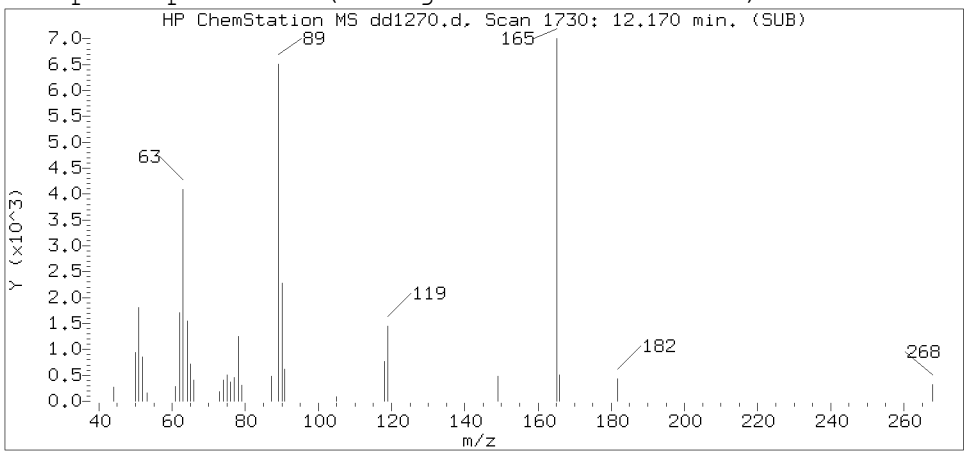
Target 3.5 esignature user ID: em10340

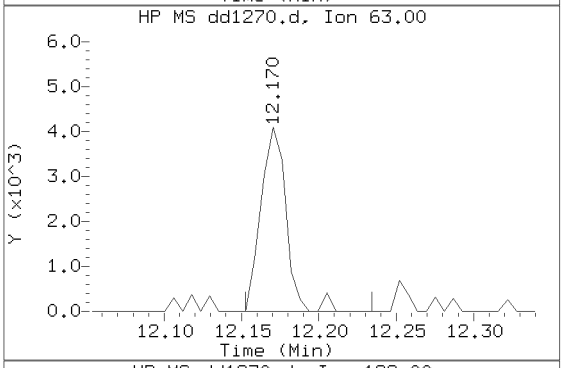
Reference Standard Spectrum for 2,4-Dinitrotoluene

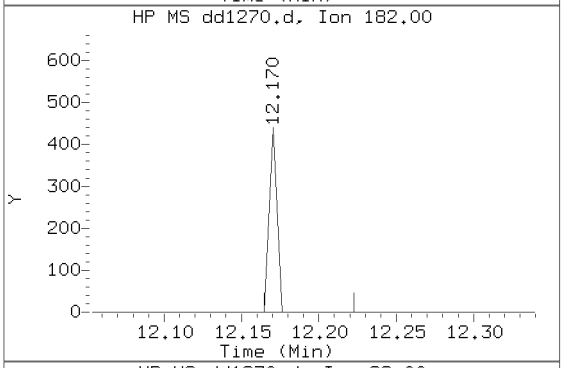




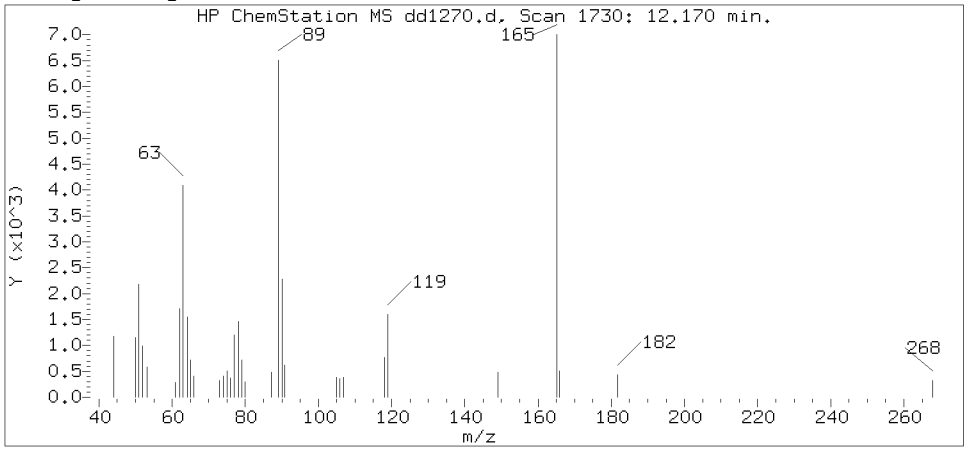
Sample Spectrum (Background Subtracted)

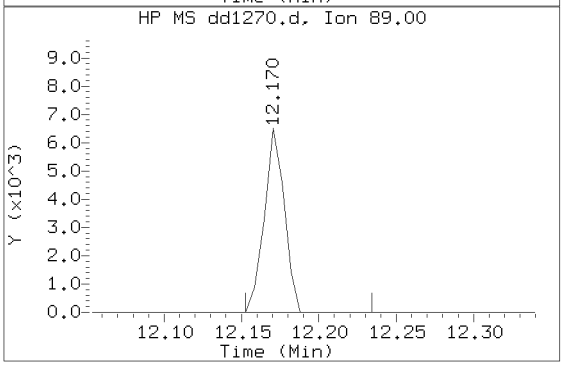






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1270.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 17:45 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB05 Lab Sample ID: 1302099

Compound Number : 118
Compound Name : 2,4-Dinitrotoluene
Scan Number : 1730
Retention Time (minutes) : 12.170
Relative Retention Time : 0.00048
Quant Ion : 165.00
Area (flag) : 5879
On-column Amount (ng/ul) : 0.2071

Digitally signed by Edward Monborne on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Data file: /chem/HP19760.i/20apr27.b/dd1271.d Injection date and time: **27-APR-2020 18:13**
Data file Sample Info. Line: 5WB06;1302100;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **20114WAH**
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	179211	(-11)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	686324	(-6)	5.00	
113) Acenaphthene-d10	11.897	(0.006)	1683	164	309166	(-10)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	575869	(-12)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	562992	(-15)	5.00	
213) Perylene-d12	20.401	(0.006)	3142	264	454594	(-24)	5.00	

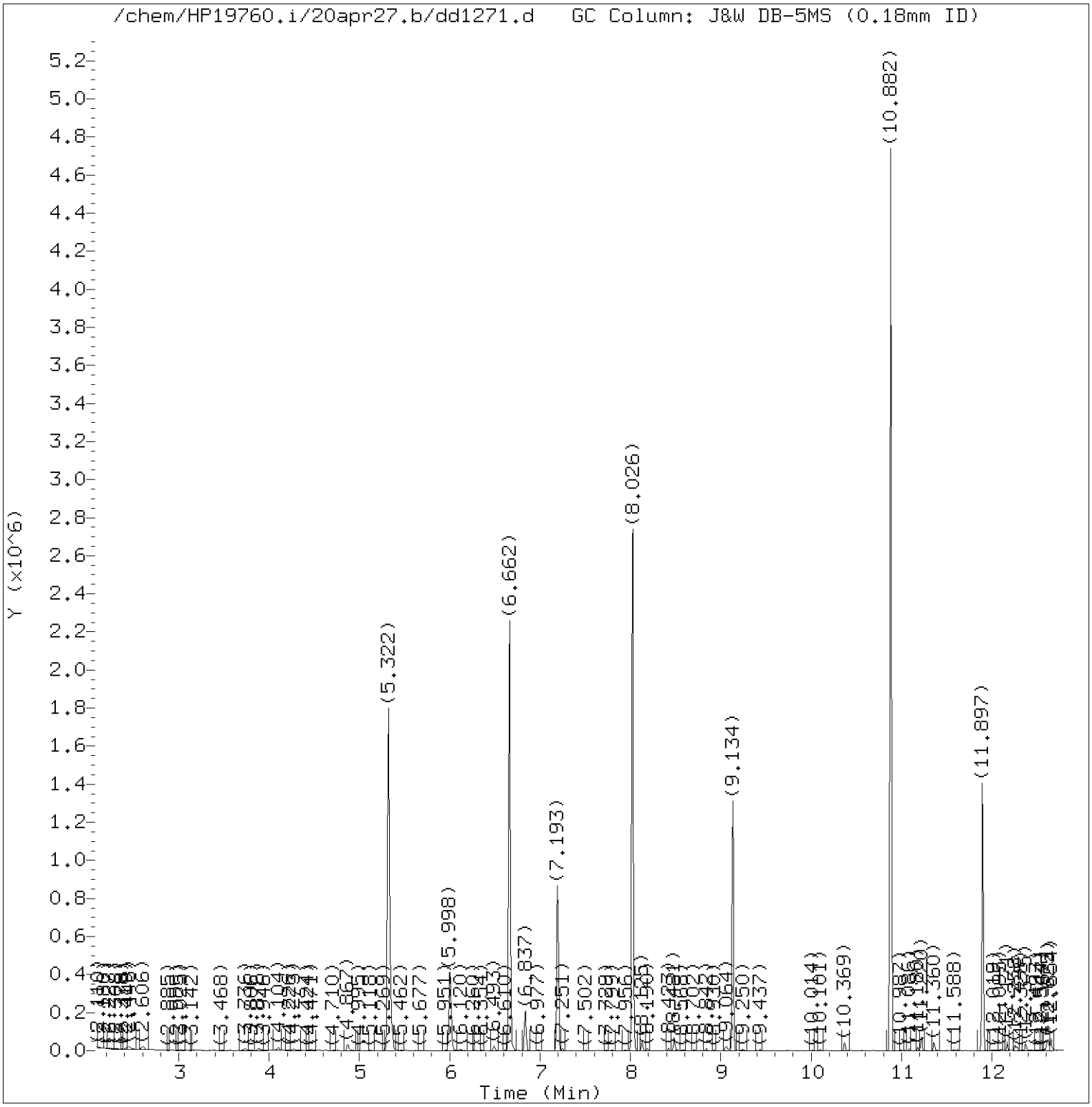
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.026	(0.000)	82	1235023	19.710	79%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1781101	18.500	74%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1451708	16.960	68%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	12.170	(0.000)	165	6318	0.221	0.90		J	0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

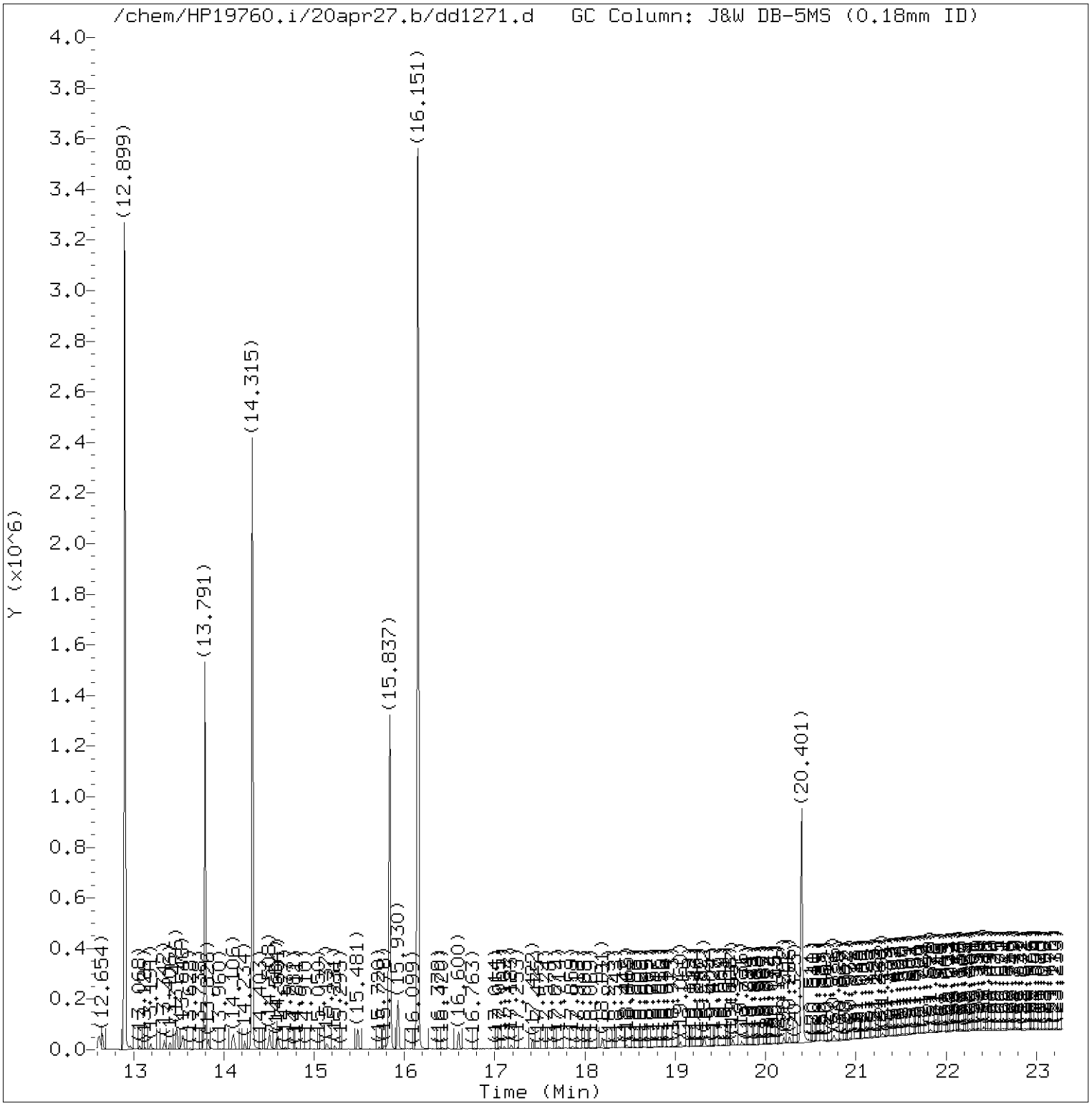
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1271.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:13 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB06 Lab Sample ID: 1302100

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1271.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:13 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB06 Lab Sample ID: 1302100

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1271.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:13 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

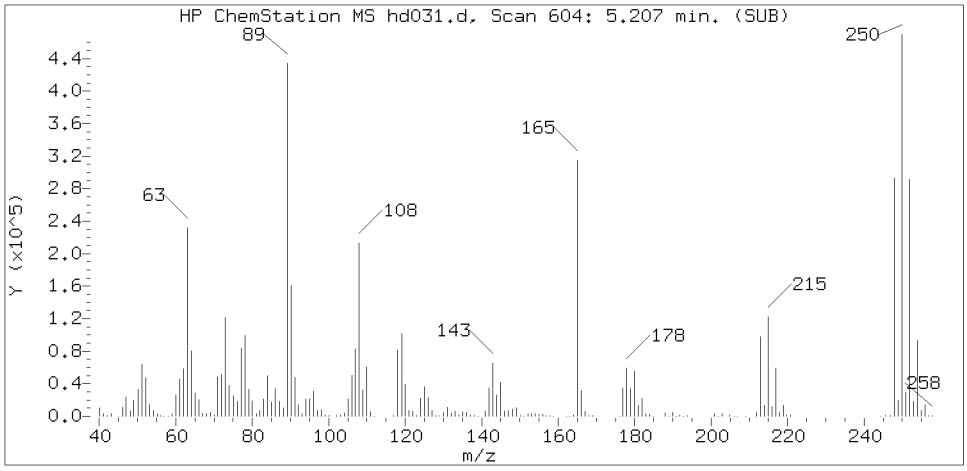
Sample Name: 5WB06 Lab Sample ID: 1302100

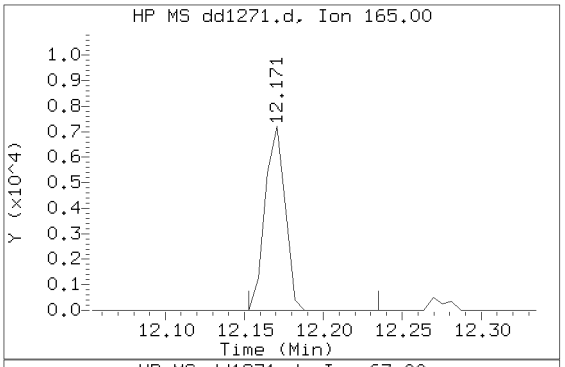
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	179211	5.000
44)$Nitrobenzene-d5	(2)	8.026	82	1235023	19.710
65)*Naphthalene-d8	(2)	9.134	136	686324	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1781101	18.500
113)*Acenaphthene-d10	(3)	11.897	164	309166	5.000
118) 2,4-Dinitrotoluene	(3)	12.171	165	6318	0.221
153)*Phenanthrene-d10	(4)	13.791	188	575869	5.000
175)*Pyrene-d10	(5)	15.837	212	562992	5.000
179)$Terphenyl-d14	(5)	16.151	244	1451708	16.960
213)*Perylene-d12	(6)	20.401	264	454594	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

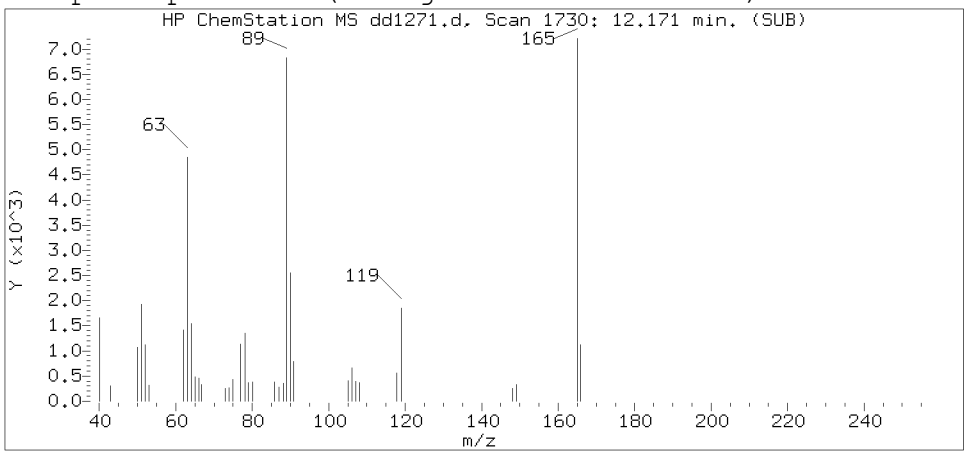
Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

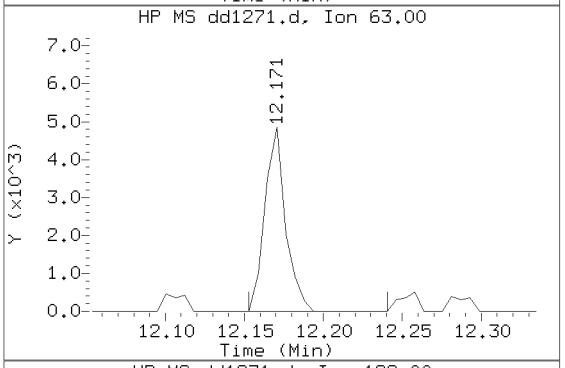
Reference Standard Spectrum for 2,4-Dinitrotoluene

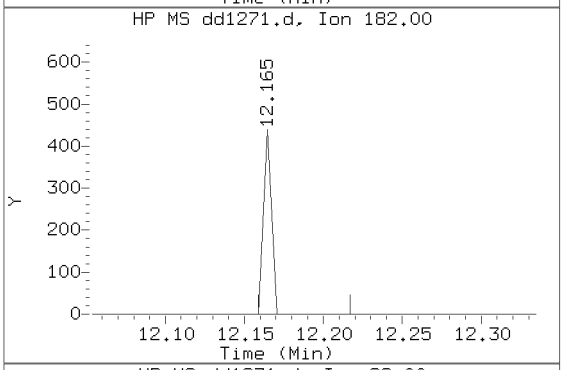




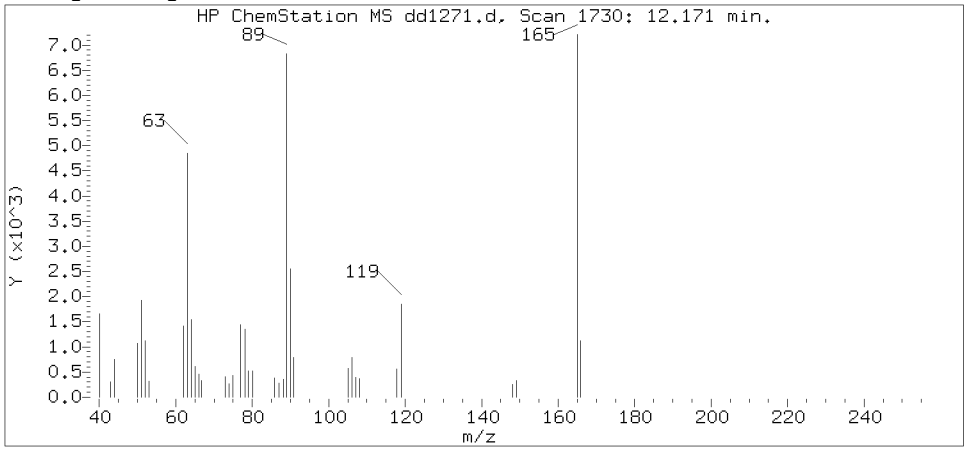
Sample Spectrum (Background Subtracted)

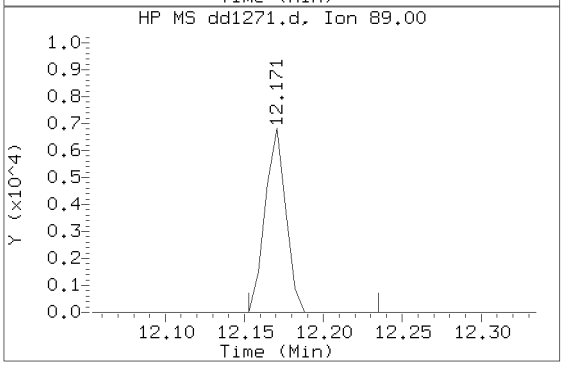






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1271.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:13 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB06 Lab Sample ID: 1302100

Compound Number	: 118
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1730
Retention Time (minutes)	: 12.171
Relative Retention Time	: 0.00048
Quant Ion	: 165.00
Area (flag)	: 6318
On-column Amount (ng/ul)	: 0.2214

Digitally signed by Edward Monborne on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1272.d
Data file Sample Info. Line: 5WB07;1302101;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Injection date and time: **27-APR-2020 18:41**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 243 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	163677	(-18)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	624495	(-15)	5.00	
113) Acenaphthene-d10	11.896	(0.006)	1683	164	280125	(-18)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	527045	(-19)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	506745	(-23)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	409154	(-32)	5.00	

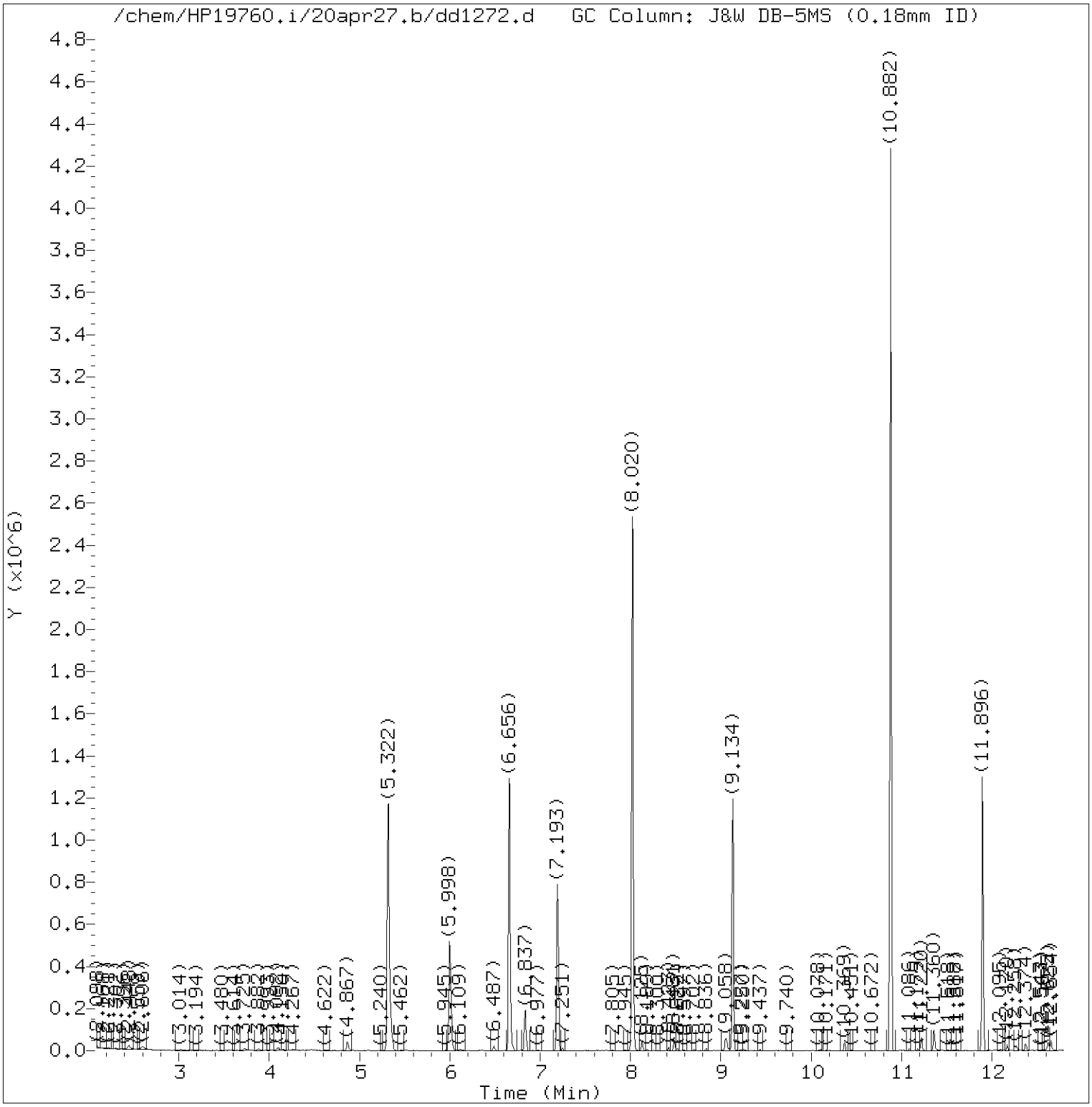
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.020	(0.001)	82	1122530	19.688	79%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1583089	18.148	73%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1747391	22.681	91%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	12.170	(0.000)	165	4597	0.178	0.73		J	0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

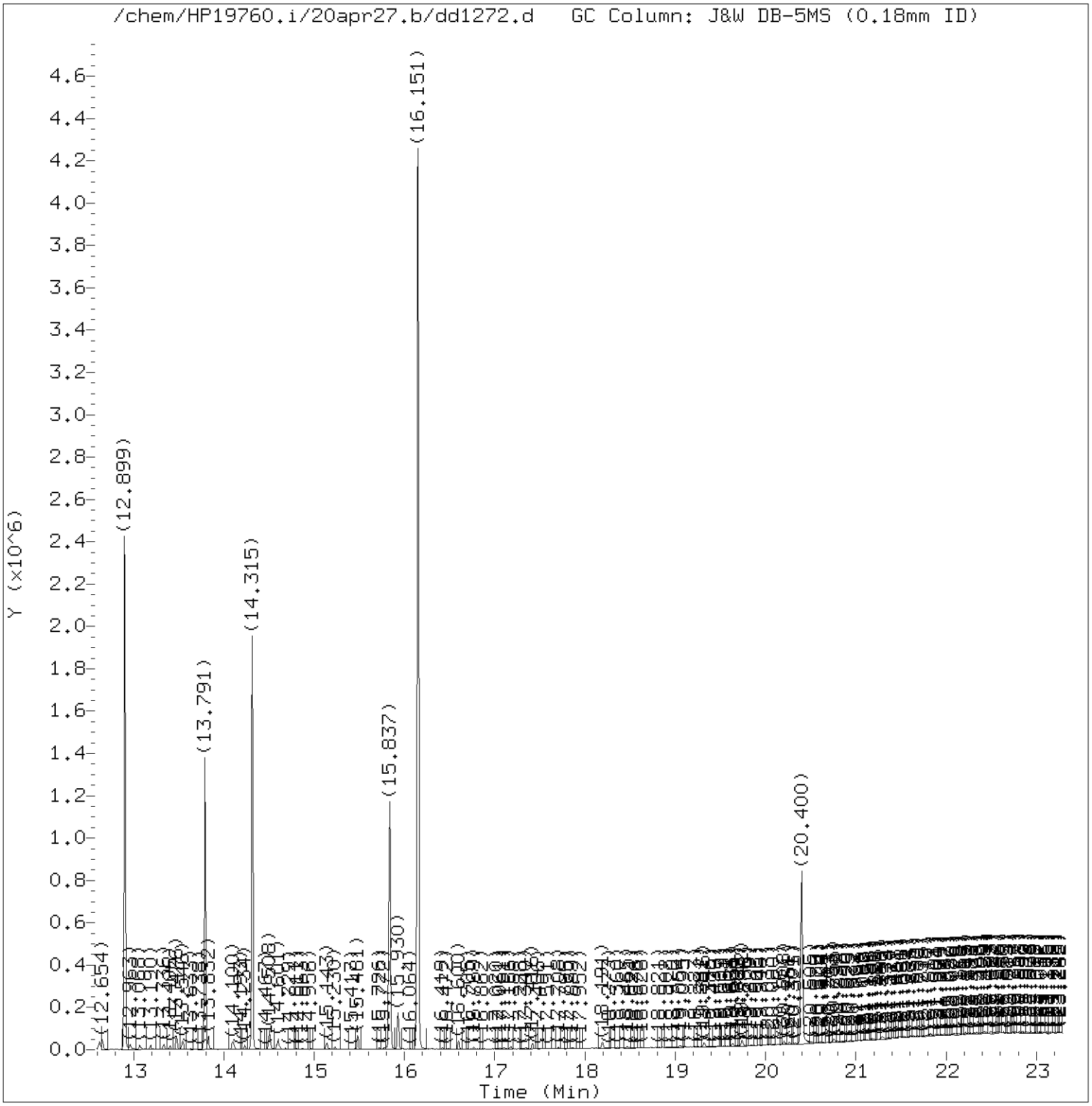
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1272.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB07 Lab Sample ID: 1302101

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1272.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB07 Lab Sample ID: 1302101

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1272.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

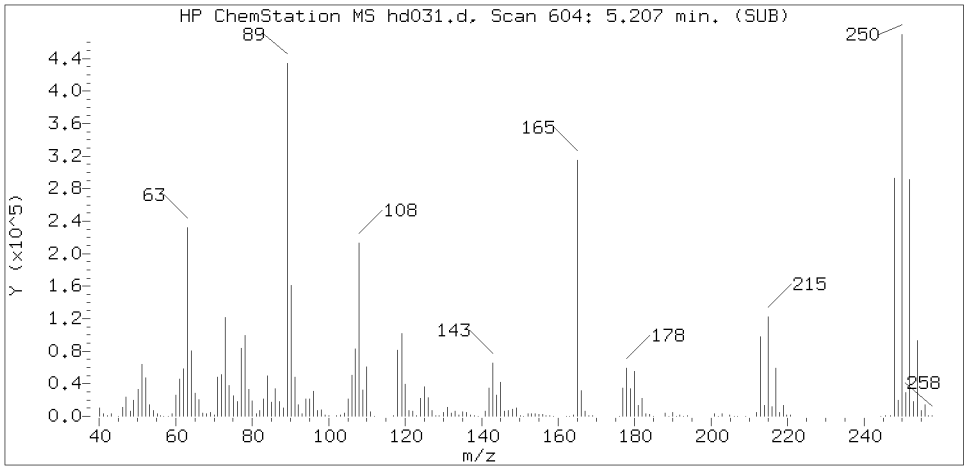
Sample Name: 5WB07 Lab Sample ID: 1302101

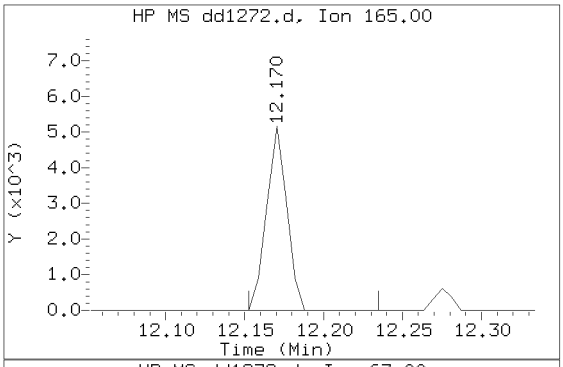
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	163677	5.000
44)$Nitrobenzene-d5	(2)	8.020	82	1122530	19.688
65)*Naphthalene-d8	(2)	9.134	136	624495	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1583089	18.148
113)*Acenaphthene-d10	(3)	11.896	164	280125	5.000
118) 2,4-Dinitrotoluene	(3)	12.170	165	4597	0.178
153)*Phenanthrene-d10	(4)	13.791	188	527045	5.000
175)*Pyrene-d10	(5)	15.837	212	506745	5.000
179)$Terphenyl-d14	(5)	16.151	244	1747391	22.681
213)*Perylene-d12	(6)	20.400	264	409154	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

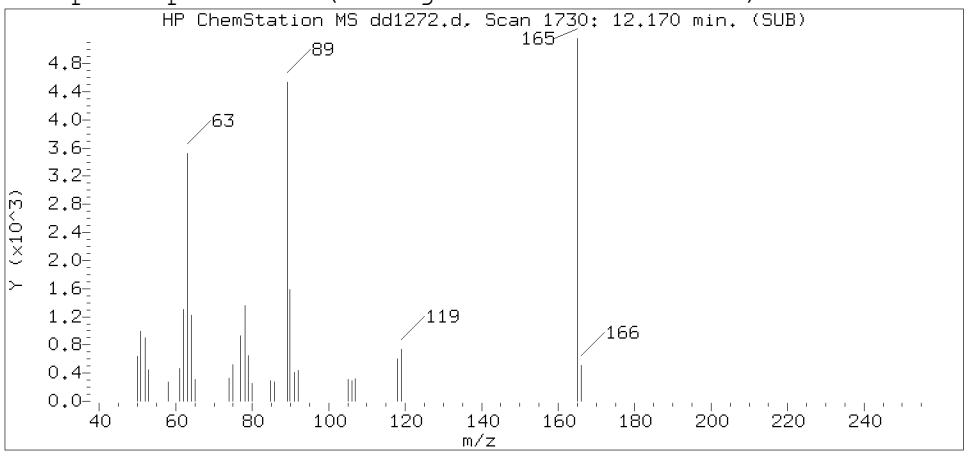
Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

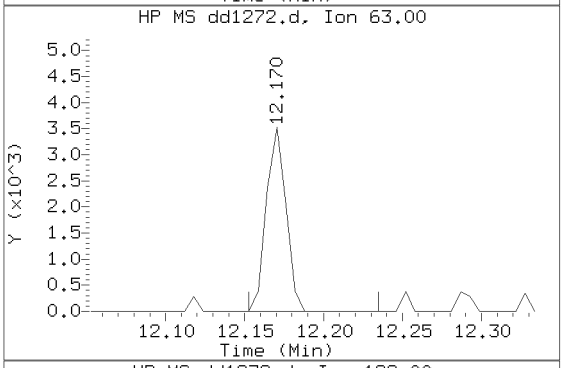
Reference Standard Spectrum for 2,4-Dinitrotoluene

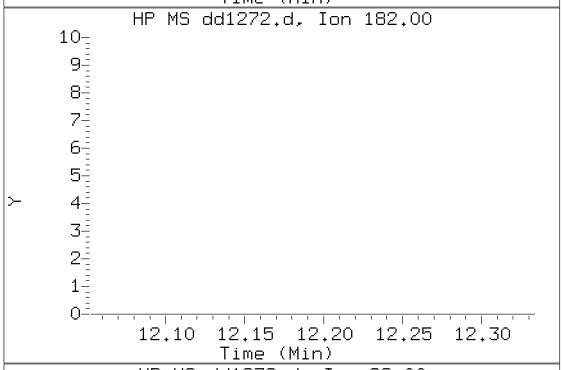




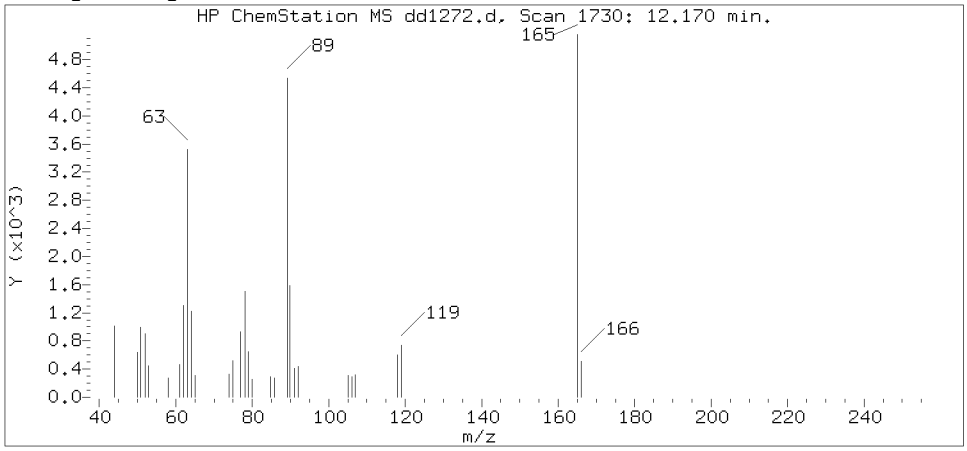
Sample Spectrum (Background Subtracted)

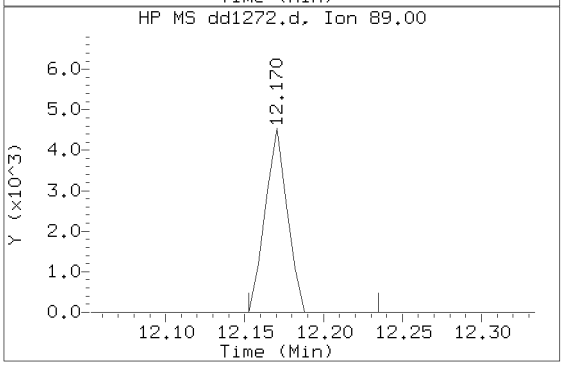






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/20apr27.b/dd1272.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 18:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 5WB07 Lab Sample ID: 1302101

Compound Number	: 118
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1730
Retention Time (minutes)	: 12.170
Relative Retention Time	: 0.00048
Quant Ion	: 165.00
Area (flag)	: 4597
On-column Amount (ng/ul)	: 0.1778

Digitally signed by Edward Monborne on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\20apr15\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
em10340	DD0610.D	rvDFTPP0430	04/15/2020	12:57		
em10340	DD0611.D	rvSTD0940	04/15/2020	13:40		
em10340	DD0620.D	rvDFTPP0430	04/15/2020	14:29		
em10340	DD0621.D	rvSTD0940	04/15/2020	14:45		
em10340	DD0630.D	rvDFTPP0430	04/15/2020	15:22		
em10340	DD0631.D	rvSTD0940	04/15/2020	15:41		
em10340	DD0632.D	RVSTD0940	04/15/2020	19:18		
em10340	DD0633.D	RVSTD0940	04/15/2020	19:46		
em10340	DD0634.D	RVSTD0940	04/15/2020	20:14		
em10340	DD0635.D	RVSTD0940	04/15/2020	20:42		
em10340	DD0636.D	RVSTD0940	04/15/2020	21:11		
em10340	DD0637.D	RVSTD0940	04/15/2020	21:39		
em10340	DD0638.D	RVSTD0940	04/15/2020	22:07		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\DATA\20apr27\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
em10340	DD1250.D	rvDFTPP0430	04/27/2020	06:41		
em10340	DD1251.D	rvSTD0940	04/27/2020	07:33		
em10340	DD1252.D	SBLKWD115	04/27/2020	08:51	20115WAD	
em10340	DD1253.D	115WDLCS	04/27/2020	09:19	20115WAD	
em10340	DD1254.D	115WDLCSD	04/27/2020	09:47	20115WAD	
em10340	DD1255.D	SBLKWI114	04/27/2020	10:15	20114WAI	
em10340	DD1256.D	114WILCS	04/27/2020	10:43	20114WAI	
em10340	DD1257.D	114WILCSD	04/27/2020	11:11	20114WAI	
em10340	DD1258.D	SBLKWH114	04/27/2020	11:39	20114WAH	
em10340	DD1259.D	114WHLCS	04/27/2020	12:07	20114WAH	
em10340	DD1260.D	114WHLCS2	04/27/2020	12:36	20114WAH	
em10340	DD1261.D	114WHLCSD2	04/27/2020	13:04	20114WAH	
em10340	DD1262.D	1300593	04/27/2020	13:32	20115WAD	
em10340	DD1263.D	1300296	04/27/2020	14:00	20114WAI	
em10340	DD1264.D	1300163	04/27/2020	14:28	20114WAI	
em10340	DD1273.D	rvSTD0920	04/27/2020	14:56		
em10340	DD1265.D	1302094	04/27/2020	15:24	20114WAH	
em10340	DD1266.D	1302095	04/27/2020	15:52	20114WAH	
em10340	DD1267.D	1302096	04/27/2020	16:20	20114WAH	
em10340	DD1268.D	1302097	04/27/2020	16:49	20114WAH	
em10340	DD1269.D	1302098	04/27/2020	17:17	20114WAH	
em10340	DD1270.D	1302099	04/27/2020	17:45	20114WAH	
em10340	DD1271.D	1302100	04/27/2020	18:13	20114WAH	
em10340	DD1272.D	1302101	04/27/2020	18:41	20114WAH	

Data File: /chem/HP19760.i/20apr15.b/dd0630.d

Date : 15-APR-2020 15:22

Client ID: DFTPP12.5

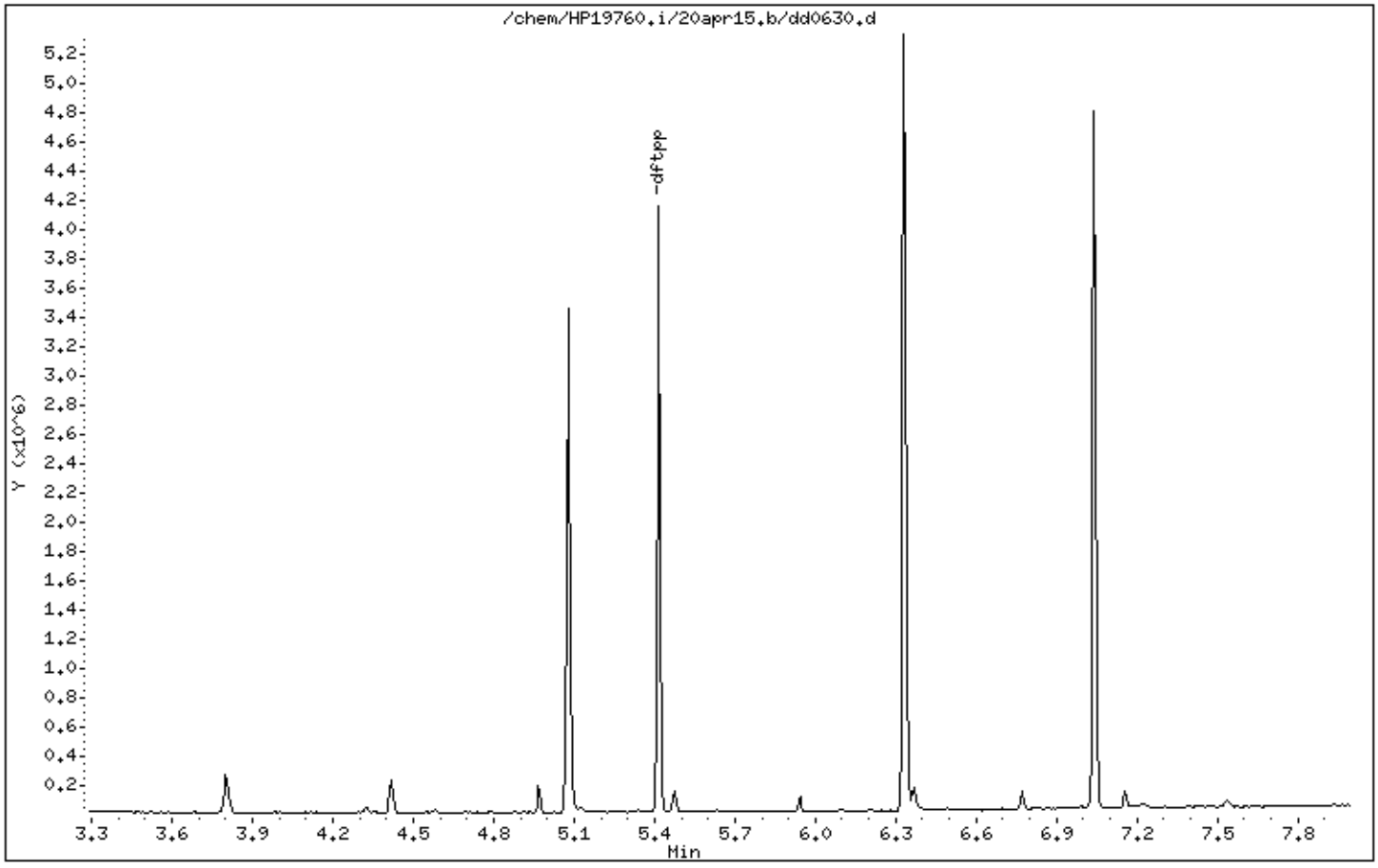
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/20apr15.b/dd0630.d

Date : 15-APR-2020 15:22

Client ID: DFTPP12.5

Instrument: HP19760.i

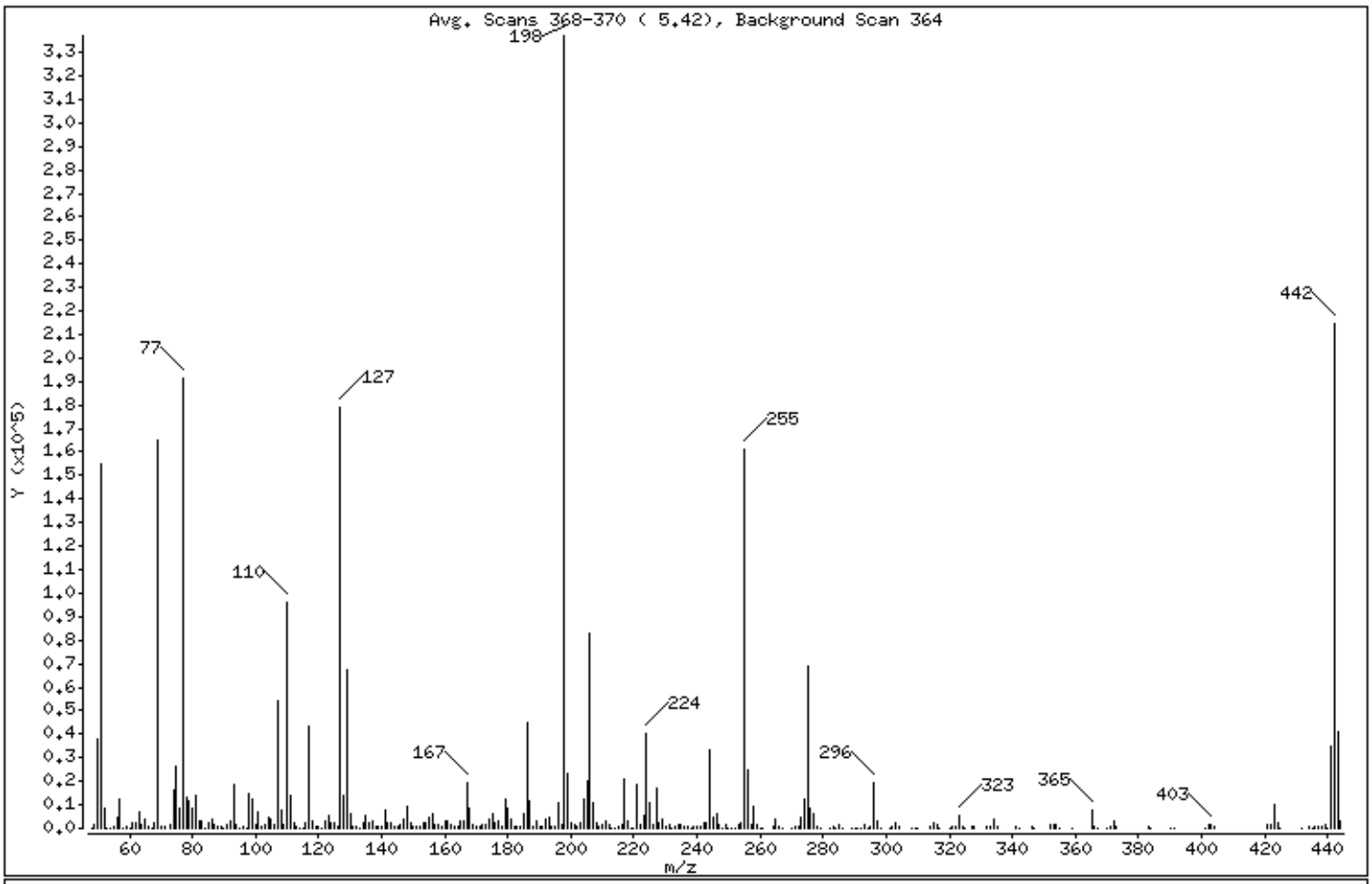
Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.99
68	Less than 2.00% of mass 69	0.61 (1.24)
69	Mass 69 relative abundance	48.98
70	Less than 2.00% of mass 69	0.21 (0.44)
127	10.00 - 80.00% of mass 198	53.14
197	Less than 2.00% of mass 198	0.50
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 60.00% of mass 198	20.51
365	Greater than 1.00% of mass 198	2.34
441	0.01 - 24.00% of mass 442	10.27 (16.10)
442	50.00 - 99.99% of mass 198	63.77
443	15.00 - 24.00% of mass 442	12.07 (18.93)

Date : 15-APR-2020 15:22

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dd0630.d
Spectrum: Avg. Scans 368-370 (5.42), Background Scan 364
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
48.00	113	126.00	841	203.00	2302	286.00	188
49.00	1213	127.00	179072	204.00	12286	289.00	113
50.00	37664	128.00	14232	205.00	20128	290.00	168
51.00	155008	129.00	67656	206.00	82848	291.00	227
52.00	8136	130.00	6140	207.00	10773	292.00	103
53.00	194	131.00	1097	208.00	2539	293.00	1334
54.00	20	132.00	779	209.00	702	294.00	338
55.00	864	133.00	270	210.00	1538	295.00	520
56.00	4486	134.00	1982	211.00	2759	296.00	19560
57.00	12331	135.00	5070	212.00	1180	297.00	3067
58.00	282	136.00	2033	213.00	342	298.00	108
59.00	428	137.00	3001	214.00	102	301.00	281
60.00	224	138.00	834	215.00	929	302.00	453
61.00	2192	139.00	560	216.00	1650	303.00	2141
62.00	2188	140.00	796	217.00	20592	304.00	670
63.00	6637	141.00	7448	218.00	2747	308.00	133
64.00	1334	142.00	2707	219.00	323	309.00	86
65.00	3629	143.00	1965	220.00	138	310.00	269
66.00	500	144.00	514	221.00	18320	314.00	763
67.00	345	145.00	469	222.00	1602	315.00	2474
68.00	2044	146.00	1429	223.00	5369	316.00	1360
69.00	165056	147.00	4218	224.00	40544	317.00	154
70.00	723	148.00	9587	225.00	11040	320.00	303
71.00	609	149.00	2191	226.00	1279	321.00	507
73.00	1472	150.00	725	227.00	16776	322.00	457
74.00	16472	151.00	1148	228.00	2375	323.00	5492
75.00	26096	152.00	987	229.00	3903	324.00	991
76.00	8861	153.00	2269	230.00	680	325.00	87
77.00	191232	154.00	2113	231.00	1638	327.00	966
78.00	12819	155.00	4382	232.00	106	328.00	430
79.00	11685	156.00	6363	233.00	521	332.00	479
80.00	8571	157.00	1401	234.00	1320	333.00	676
81.00	13618	158.00	1336	235.00	1357	334.00	3879
82.00	3099	159.00	1054	236.00	808	335.00	814
83.00	2765	160.00	2798	237.00	1075	341.00	883

Date : 15-APR-2020 15:22

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dd0630.d
Spectrum: Avg. Scans 368-370 (5.42), Background Scan 364
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	57	161.00	3455	238.00	90	342.00	86
85.00	2194	162.00	1234	239.00	667	346.00	946
86.00	3546	163.00	430	240.00	650	347.00	170
87.00	1759	164.00	522	241.00	999	352.00	1683
88.00	634	165.00	3219	242.00	2301	353.00	1168
89.00	466	166.00	2919	243.00	2275	354.00	1536
90.00	110	167.00	19752	244.00	33272	355.00	259
91.00	1841	168.00	8443	245.00	4417	359.00	139
92.00	2983	169.00	1754	246.00	6170	365.00	7901
93.00	18480	170.00	940	247.00	1305	366.00	1154
94.00	1415	171.00	669	248.00	220	367.00	85
95.00	86	172.00	1400	249.00	1280	370.00	98
96.00	1078	173.00	1668	250.00	264	371.00	626
97.00	102	174.00	3731	251.00	264	372.00	3065
98.00	14821	175.00	6363	252.00	382	373.00	691
99.00	12444	176.00	2140	253.00	1199	383.00	782
100.00	1171	177.00	2897	254.00	2059	384.00	281
101.00	6914	178.00	1074	255.00	161472	390.00	307
102.00	484	179.00	12246	256.00	24624	391.00	175
103.00	1919	180.00	8385	257.00	1828	401.00	325
104.00	4334	181.00	3661	258.00	8921	402.00	1384
105.00	4068	182.00	624	259.00	1452	403.00	1853
106.00	1571	183.00	442	260.00	241	404.00	541
107.00	54584	184.00	1148	261.00	283	421.00	1199
108.00	7444	185.00	6273	264.00	437	422.00	1361
109.00	1776	186.00	44624	265.00	3815	423.00	9786
110.00	96064	187.00	11798	266.00	818	424.00	2034
111.00	13934	188.00	1110	267.00	87	425.00	312
112.00	1987	189.00	2913	270.00	162	432.00	128
113.00	625	190.00	533	271.00	474	434.00	397
114.00	211	191.00	1048	272.00	808	435.00	197
115.00	216	192.00	3964	273.00	4679	436.00	628
116.00	2584	193.00	4591	274.00	12166	437.00	660
117.00	43056	194.00	1067	275.00	69120	438.00	614
118.00	3194	195.00	858	276.00	8823	439.00	1325

Date : 15-APR-2020 15:22

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

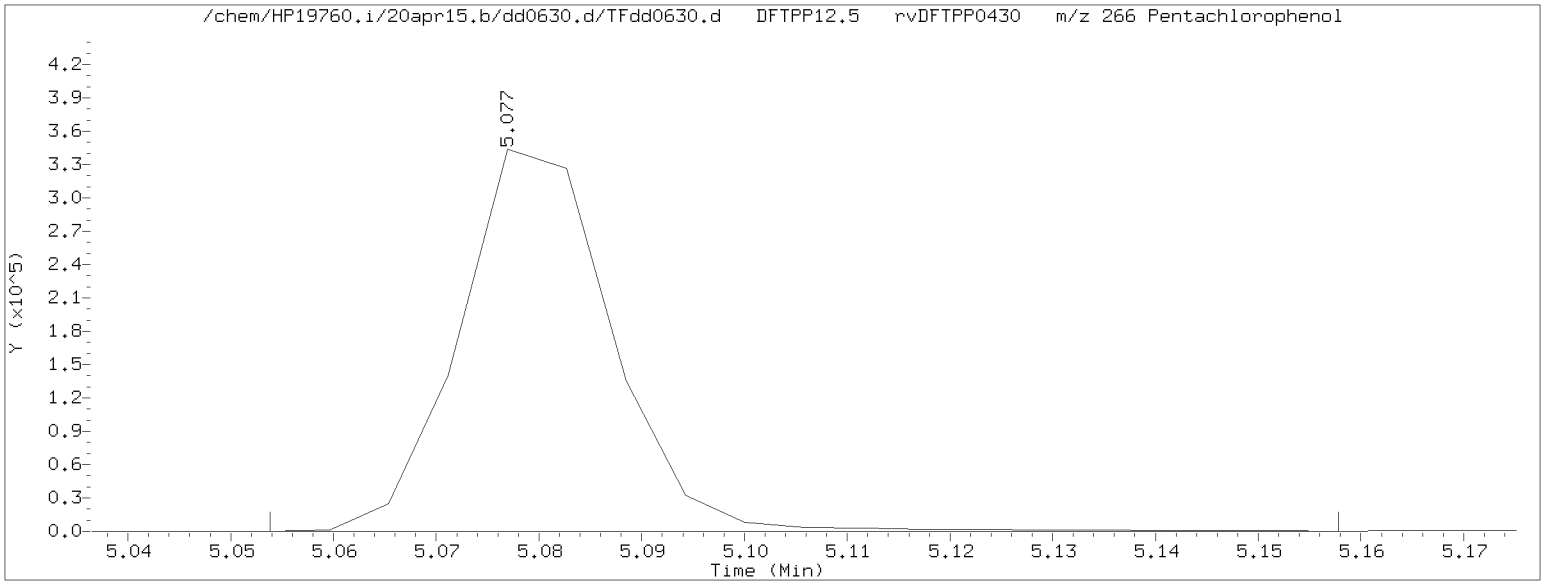
Column phase: DB-5MS Column diameter: 0.18

Data File: dd0630.d
Spectrum: Avg. Scans 368-370 (5.42), Background Scan 364
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	579	196.00	10980	277.00	5976	440.00	252
120.00	756	197.00	1687	278.00	1068	441.00	34600
121.00	108	198.00	337024	279.00	250	442.00	214912
122.00	3434	199.00	22976	282.00	205	443.00	40688
123.00	5390	200.00	2244	283.00	623	444.00	3366
124.00	2046	201.00	1841	284.00	377		
125.00	1993	202.00	609	285.00	1266		

Assessment of GC Column Performance and Injection Port Inertness for

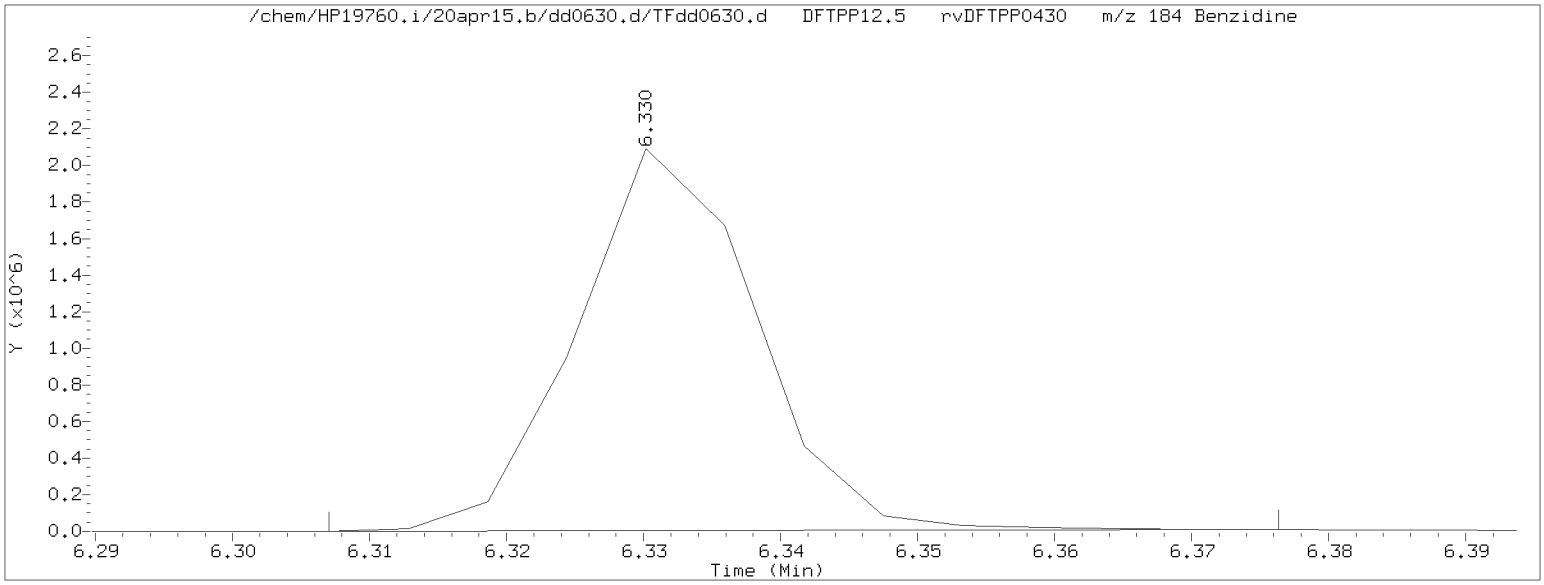
Instrument ID: HP19760.i Injection Date: 15-APR-2020 15:22 Operator: em10340



Pentachlorophenol EICP peak height = 343872 EICP peak height at 10% = 34387 Pentachlorophenol EICP area = 355685

Pentachlorophenol EICP peak apex (min.) = 5.077
RT at 10% of front half of EICP (min.) = 5.066 'Front' peak width (min.) = 0.0110500000
RT at 10% of back half of EICP (min.) = 5.094 'Tailing' peak width (min.) = 0.0171833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0171833333}{0.0110500000} = 1.555$$



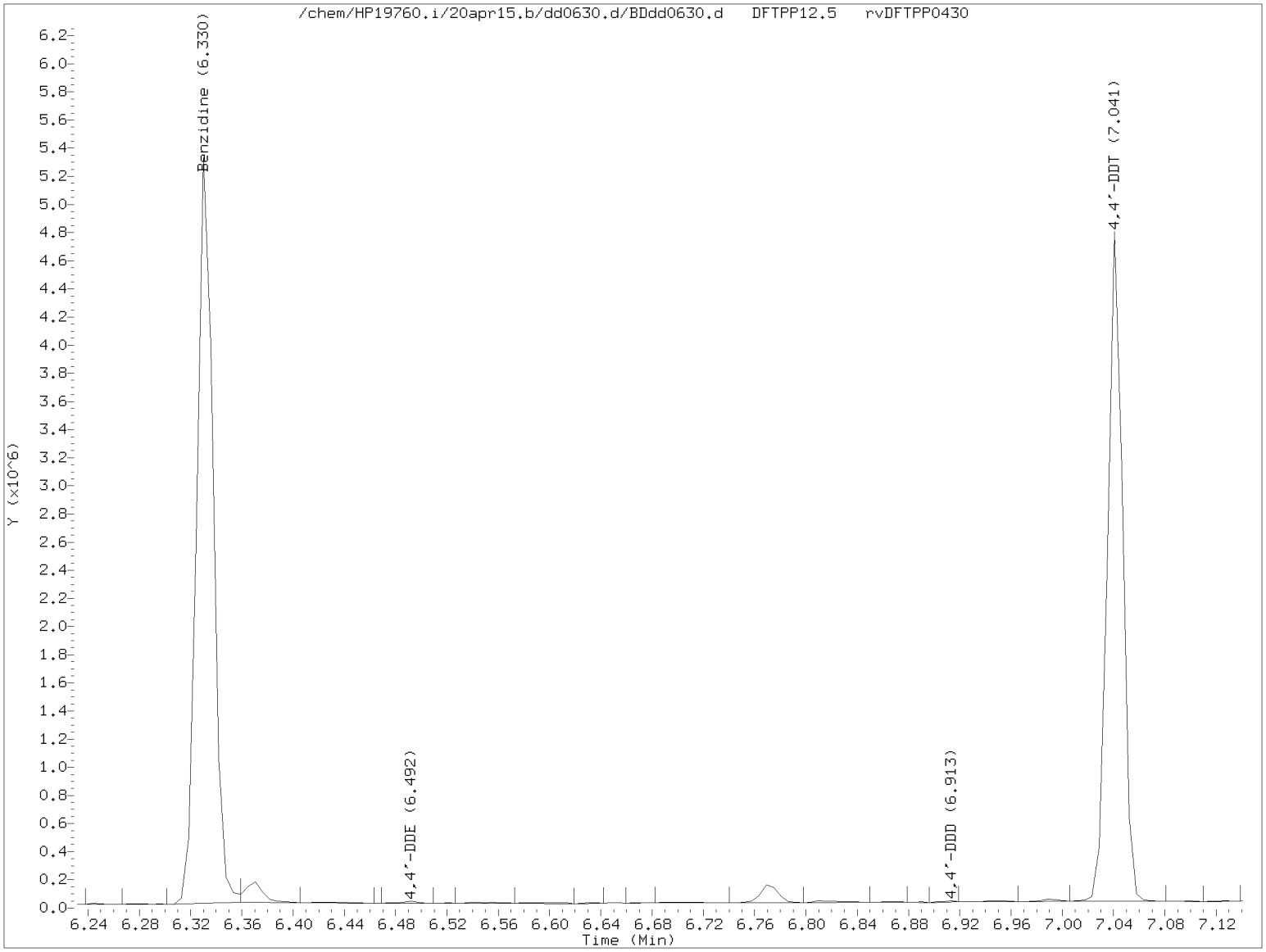
Benzidine EICP peak height = 2089523 EICP peak height at 10% = 208952 Benzidine EICP area = 1895822

Benzidine EICP peak apex (min.) = 6.330
RT at 10% of front half of EICP (min.) = 6.319 'Front' peak width (min.) = 0.0111666667
RT at 10% of back half of EICP (min.) = 6.346 'Tailing' peak width (min.) = 0.0153833333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0153833333}{0.0111666667} = 1.378$$

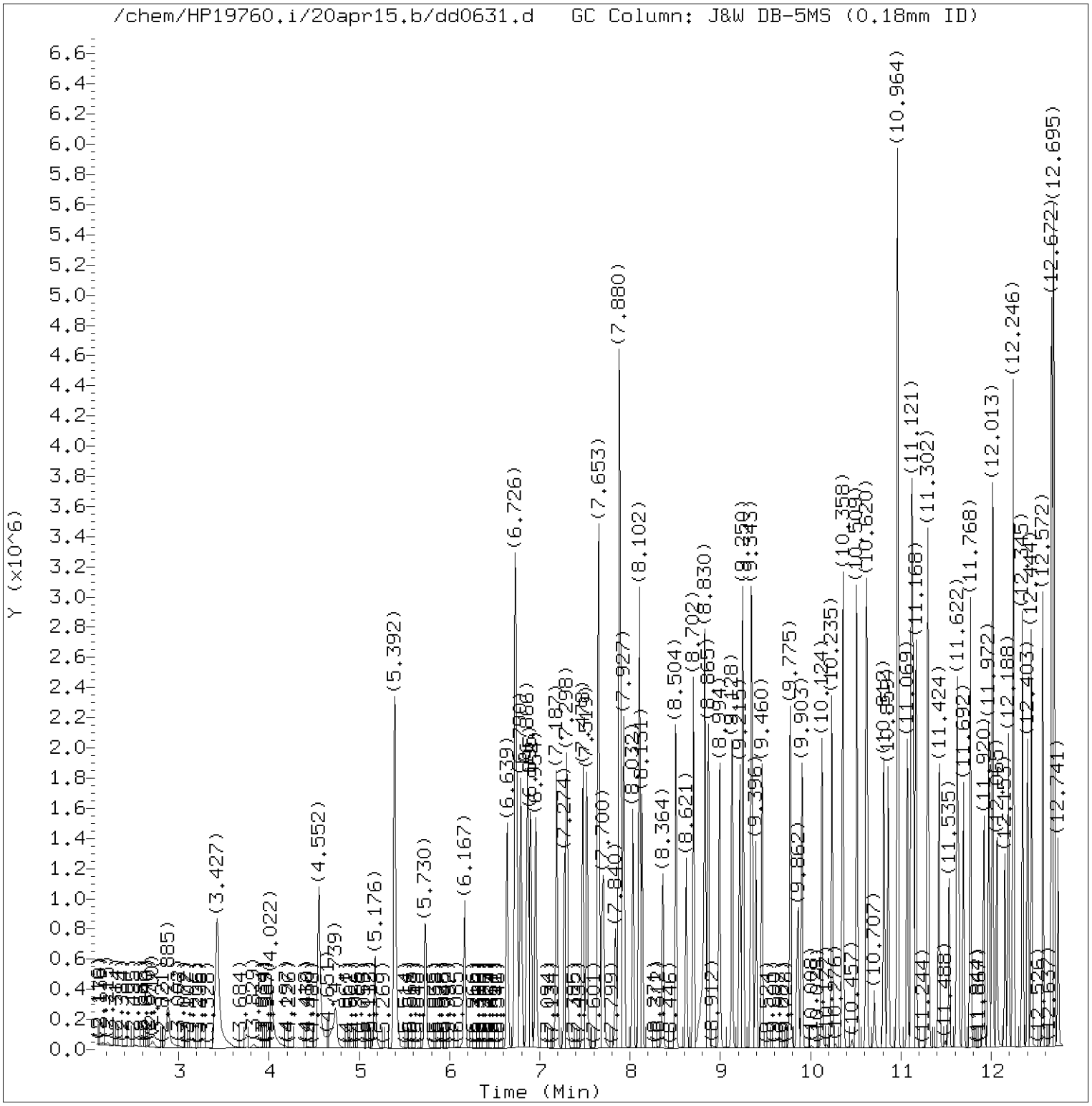
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 15-APR-2020 15:22 Operator: em10340



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{11574 + 7206}{11574 + 7206 + 3907474} \times 100 = 0.5$$



Total Ion Chromatogram (TIC)

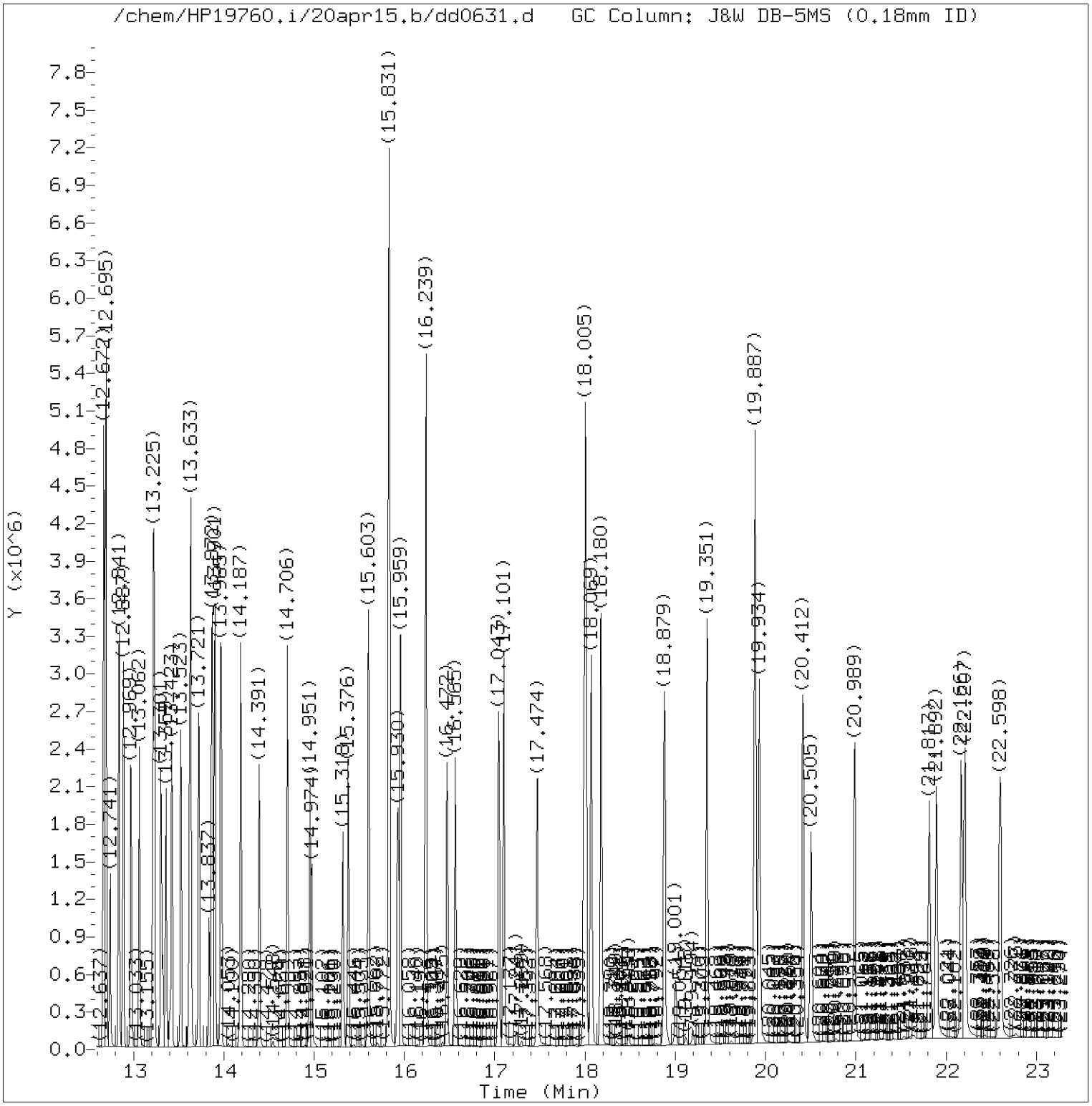
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.885	88	285671	7.521
4) N-Nitrosodimethylamine	(1)	3.404	74	432993	7.383
5) Pyridine	(1)	3.427	79	762626	7.494
7) 2-Picoline	(1)	4.552	93	762232	7.355
8) N-Nitrosomethylethylamine	(1)	4.739	88	326320	7.357
9) Methyl methanesulfonate	(1)	5.176	80	356400	7.504
11)$2-Fluorophenol	(1)	5.392	112	1240481	14.970
42) Total Cresols	(1)			1174999	15.003
13) N-Nitrosodiethylamine	(1)	5.735	102	317059	7.552
15) Ethyl methanesulfonate	(1)	6.167	109	331824	7.505
16) Benzaldehyde	(1)	6.639	77	502369	7.417
17)$Phenol-d6	(1)	6.726	99	1662560	14.992
18) Phenol	(1)	6.744	94	850320	7.466
19) Aniline	(1)	6.790	93	1060707	7.539
20) a-methylstyrene	(1)	6.872	118	247347	7.525
22) bis(2-Chloroethyl)ether	(1)	6.895	93	711353	7.465
23) 2-Chlorophenol	(1)	6.954	128	619540	7.532
24) 1,3-Dichlorobenzene	(1)	7.187	146	634437	7.516
25)*1,4-Dichlorobenzene-d4	(1)	7.274	152	277410	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	643247	7.529
97) Isosafrole	(3)			481566	7.596
27) Benzyl alcohol	(1)	7.478	108	398415	7.387
28) 1,2-Dichlorobenzene	(1)	7.519	146	602647	7.431
31) 2-Methylphenol	(1)	7.647	108	571337	7.457
30) Indene	(1)	7.653	115	939030	7.588
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.700	45	920881	7.435
34) bis(2-Chloroisopropyl)ether	(1)	7.700	45	920881	7.435
35) N-Nitrosopyrrolidine	(1)	7.840	100	333052	7.651
36) Acetophenone	(1)	7.880	105	844096	7.491
37) 4-Methylphenol	(1)	7.880	108	603662	7.544
38) N-Nitroso-di-n-propylamine	(1)	7.892	70	479536	7.463
39) N-Nitrosomorpholine	(1)	7.910	56	446427	7.494
40) o-Toluidine	(1)	7.933	106	984182	7.537
43) Hexachloroethane	(1)	8.032	117	269464	7.414
120) 2,4_2,6-Dinitrotoluenes	(3)			570962	15.375
44)$Nitrobenzene-d5	(2)	8.102	82	1415344	15.138
45) Nitrobenzene	(2)	8.131	77	699704	7.410
48) N-Nitrosopiperidine	(2)	8.364	114	313862	7.455
50) Isophorone	(2)	8.504	82	1292926	7.609
51) 2-Nitrophenol	(2)	8.621	139	306689	7.440

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.702	107	611971	7.595
146) Diallate trans/cis	(4)			553406	7.528
56) Benzoic acid	(2)	8.825	105	546551	10.208
57) O,O,O-Triethylphosphorothioate	(2)	8.830	198	260670	7.521
55) bis(2-Chloroethoxy)methane	(2)	8.865	93	815645	7.554
60) 2,4-Dichlorophenol	(2)	8.994	162	455358	7.503
62) 1,2,4-Trichlorobenzene	(2)	9.134	180	473146	7.551
65)*Naphthalene-d8	(2)	9.215	136	1024096	5.000
66) Naphthalene	(2)	9.250	128	1697321	7.452
67) 4-Chloroaniline	(2)	9.343	127	693485	7.564
68) 2,6-Dichlorophenol	(2)	9.349	162	437359	7.661
69) Hexachloropropene	(2)	9.396	213	297845	7.664
71) Hexachlorobutadiene	(2)	9.460	225	254925	7.659
75) Quinoline	(2)	9.775	129	1082182	7.489
76) Caprolactam	(2)	9.862	113	186972	7.192
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	441215	6.884
80) 4-Chloro-3-methylphenol	(2)	10.124	107	518545	7.684
82) Safrole	(2)	10.235	162	409058	7.494
83) 2-Methylnaphthalene	(2)	10.358	142	1082503	7.526
84) 1-Methylnaphthalene	(2)	10.509	142	1024707	7.502
85) Hexachlorocyclopentadiene	(3)	10.614	237	271682	7.755
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	438845	7.719
88) cis-Isosafrole	(3)	10.707	162	73129	1.262
90) 2,4,6-Trichlorophenol	(3)	10.812	196	307241	7.769
92) 2,4,5-Trichlorophenol	(3)	10.859	196	327523	7.933
93)$2-Fluorobiphenyl	(3)	10.964	172	2245462	15.457
94) trans-Isosafrole	(3)	11.069	162	408437	6.331
95) 1,1'-Biphenyl	(3)	11.115	154	1297673	7.734
96) 2-Chloronaphthalene	(3)	11.133	162	973672	7.635
98) 1-Chloronaphthalene	(3)	11.168	162	914976	7.640
99) Diphenyl ether	(3)	11.296	170	677653	7.631
100) 2-Nitroaniline	(3)	11.308	138	338962	7.746
104) 1,4-Naphthoquinone	(3)	11.424	158	409400	7.682
105) 1,4-Dinitrobenzene	(3)	11.535	168	174358	7.462
106) Dimethylphthalate	(3)	11.622	163	1022038	7.471
107) 1,3-Dinitrobenzene	(3)	11.640	168	193409	7.485
108) 2,6-Dinitrotoluene	(3)	11.692	165	249433	7.701
109) Acenaphthylene	(3)	11.768	152	1488395	7.854
112) 3-Nitroaniline	(3)	11.920	138	275739	7.671
113)*Acenaphthene-d10	(3)	11.972	164	466522	5.000

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$ = Compound is a surrogate standard.

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on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	998321	7.633
115) 2,4-Dinitrophenol	(3)	12.065	184	220170	9.491
116) 4-Nitrophenol	(3)	12.153	109	168470	7.132
117) Pentachlorobenzene	(3)	12.194	250	338005	7.554
118) 2,4-Dinitrotoluene	(3)	12.240	165	321529	7.467
119) Dibenzofuran	(3)	12.246	168	1344739	7.666
121) 1-Naphthylamine	(3)	12.345	143	973329	7.406
122) 2,3,4,6-Tetrachlorophenol	(3)	12.403	232	226456	7.569
123) 2-Naphthylamine	(3)	12.444	143	940593	7.371
124) Diethylphthalate	(3)	12.572	149	1060812	7.440
125) Thionazin	(3)	12.666	107	221323	8.183
126) Fluorene	(3)	12.672	166	1061244	7.677
128) 5-Nitro-o-toluidine	(3)	12.695	152	314918	7.574
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	493829	7.602
129) 4-Nitroaniline	(3)	12.701	138	308104	7.887
130) 4,6-Dinitro-2-methylphenol	(4)	12.741	198	201013	7.390
132) NDPA as diphenylamine	(4)	12.841	169	907215	7.694
131) N-Nitrosodiphenylamine	(4)	12.841	169	907215	7.694
134) 1,2-Diphenylhydrazine	(4)	12.887	77	1254643	7.678
135)$2,4,6-Tribromophenol	(3)	12.975	330	216402	15.464
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	199946	7.419
140) Diallate (peak 1)	(4)	13.214	86	408213	5.582
141) Phorate	(4)	13.219	75	777143	7.710
142) Phenacetin	(4)	13.231	108	582047	7.542
143) 4-Bromophenyl-phenylether	(4)	13.301	248	249807	7.604
144) Diallate (peak 2)	(4)	13.324	86	145193	1.946
145) Hexachlorobenzene	(4)	13.359	284	260142	7.538
147) Dimethoate	(4)	13.423	87	568995	7.706
148) Atrazine	(4)	13.523	200	281804	7.679
149) Pentachlorophenol	(4)	13.616	266	192997	7.859
150) 4-Aminobiphenyl	(4)	13.633	169	1011804	7.893
151) Pentachloronitrobenzene	(4)	13.633	237	116155	7.547
152) Pronamide	(4)	13.721	173	491341	7.628
153)*Phenanthrene-d10	(4)	13.866	188	870341	5.000
154) Dinoseb	(4)	13.872	211	268275	7.322
155) Phenanthrene	(4)	13.901	178	1503327	7.595
157) Anthracene	(4)	13.971	178	1559493	7.865
163) Carbazole	(4)	14.187	167	1503185	7.741
164) Methyl parathion	(4)	14.391	109	446247	7.657
165) Di-n-butylphthalate	(4)	14.706	149	1944437	7.747

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Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

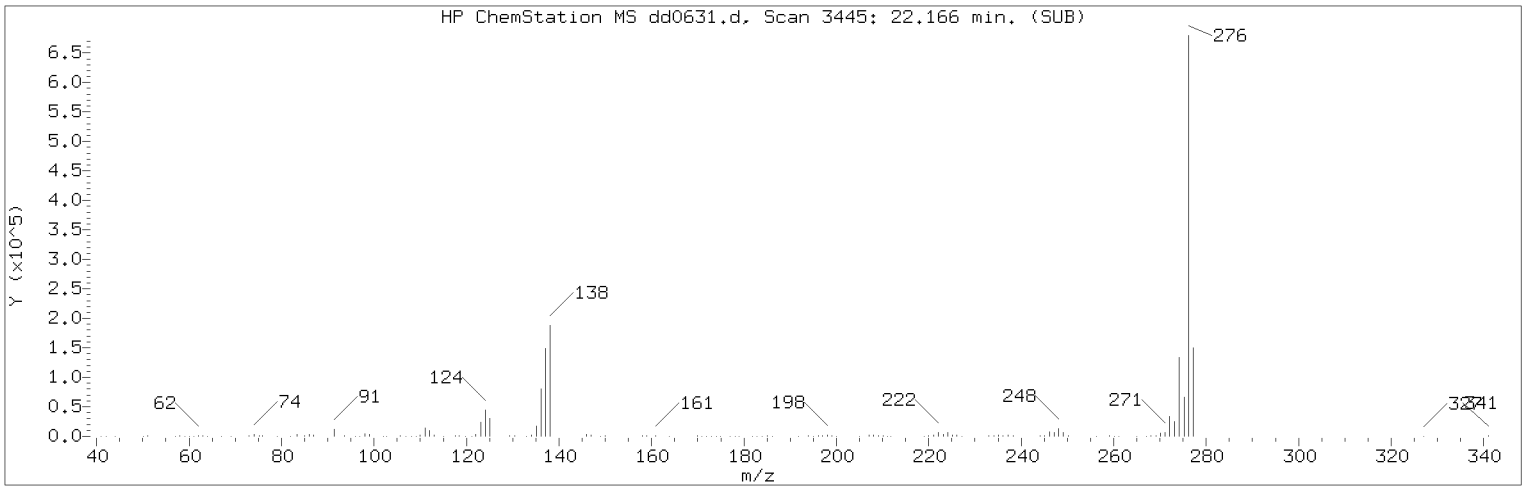
Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.951	109	255748	7.601
168) 4-Nitroquinoline-1-oxide	(4)	14.974	190	173000	7.151
222) Total PAHs	(6)			25595748	139.584
169) Octachlorostyrene	(4)	15.318	308	104056	7.721
171) Isodrin	(4)	15.376	193	184782	7.595
173) Fluoranthene	(4)	15.603	202	1759467	7.838
174) Benzidine	(5)	15.831	184	3525512	23.994
175)*Pyrene-d10	(5)	15.930	212	867432	5.000
177) Pyrene	(5)	15.959	202	1806033	7.552
179)$Terphenyl-d14	(5)	16.239	244	2048622	15.534
182) p-Dimethylaminoazobenzene	(5)	16.472	225	316308	7.768
185) Chlorobenzilate	(5)	16.565	139	572569	7.698
187) 3,3'-Dimethylbenzidine	(5)	17.043	212	1177858	7.910
188) Butylbenzylphthalate	(5)	17.101	149	890833	7.620
191) 2-Acetylaminofluorene	(5)	17.474	181	681346	7.362
193) 3,3'-Dichlorobenzidine	(5)	17.987	252	571034	7.629
195) Benzo(a)anthracene	(5)	18.005	228	1474674	7.891
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.011	231	312681	7.753
196) Chrysene	(5)	18.069	228	1489752	7.590
199) bis(2-Ethylhexyl)phthalate	(5)	18.180	149	1282873	7.761
203) 6-Methylchrysene	(5)	18.879	242	1079174	7.670
205) Di-n-octylphthalate	(6)	19.351	149	2253528	7.819
206) Benzo(b)fluoranthene	(6)	19.882	252	1503542	7.786
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.887	256	702921	7.686
208) Benzo(k)fluoranthene	(6)	19.934	252	1558763	7.976
211) Benzo(a)pyrene	(6)	20.412	252	1484228	8.044
213)*Perylene-d12	(6)	20.505	264	816156	5.000
215) 3-Methylcholanthrene	(6)	20.989	268	769878	7.923
217) Dibenz(a,h)acridine	(6)	21.817	279	1115898	7.855
218) Dibenz(a,j)acridine	(6)	21.892	279	1212737	7.913
219) Indeno(1,2,3-cd)pyrene	(6)	22.166	276	1297366M	8.193
220) Dibenz(a,h)anthracene	(6)	22.207	278	1402357	8.366
221) Benzo(g,h,i)perylene	(6)	22.598	276	1404255	8.224

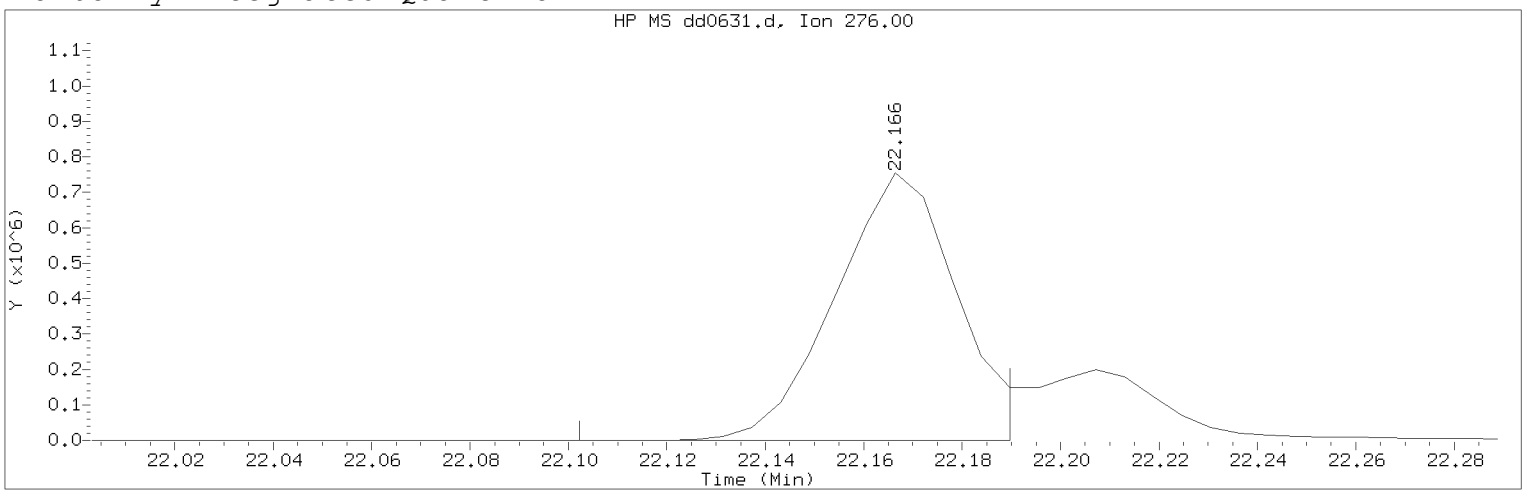
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

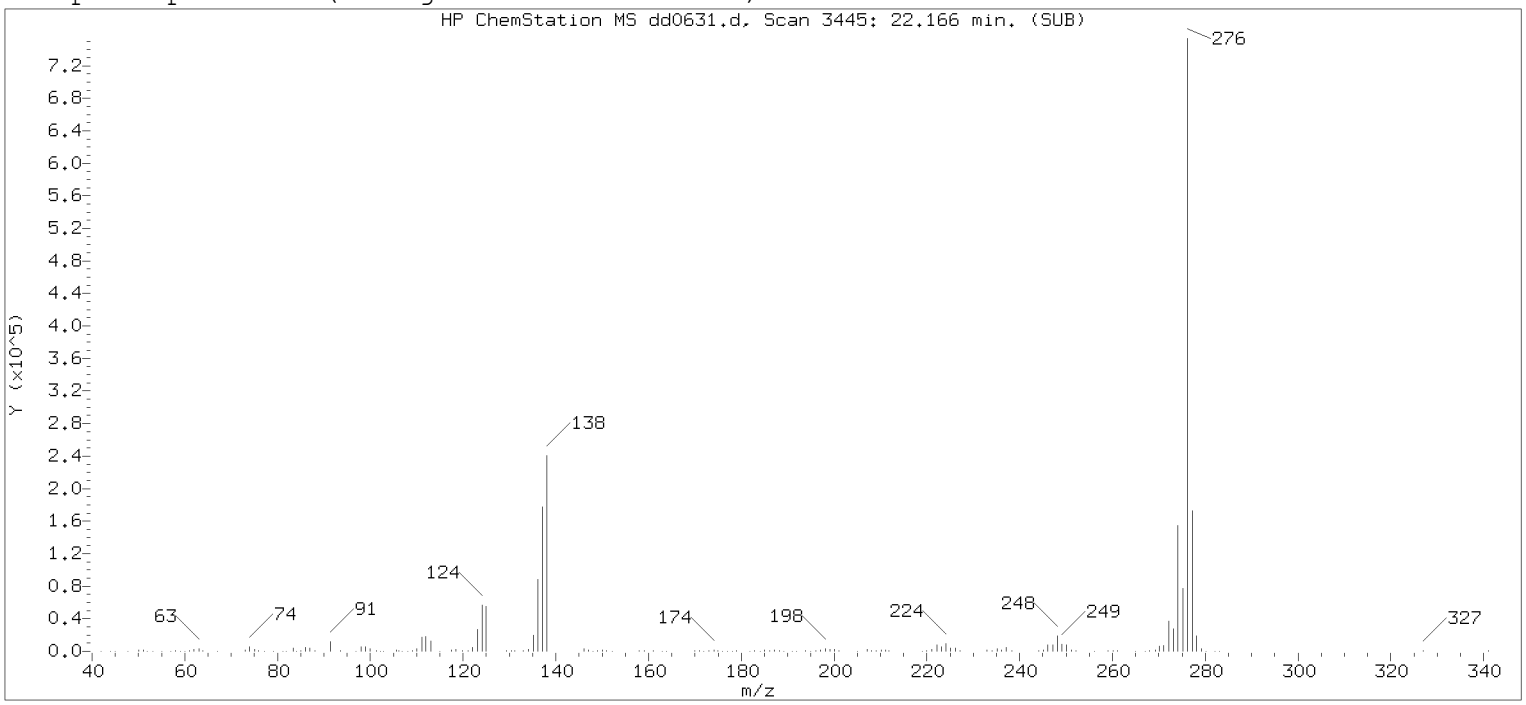
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3445
Retention Time (minutes) : 22.166
Quant Ion : 276.00
Area (flag) : 1297366M
On-Column Amount (ng/ul) : 8.1933
Integration start scan : 3433 Integration stop scan: 3448
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

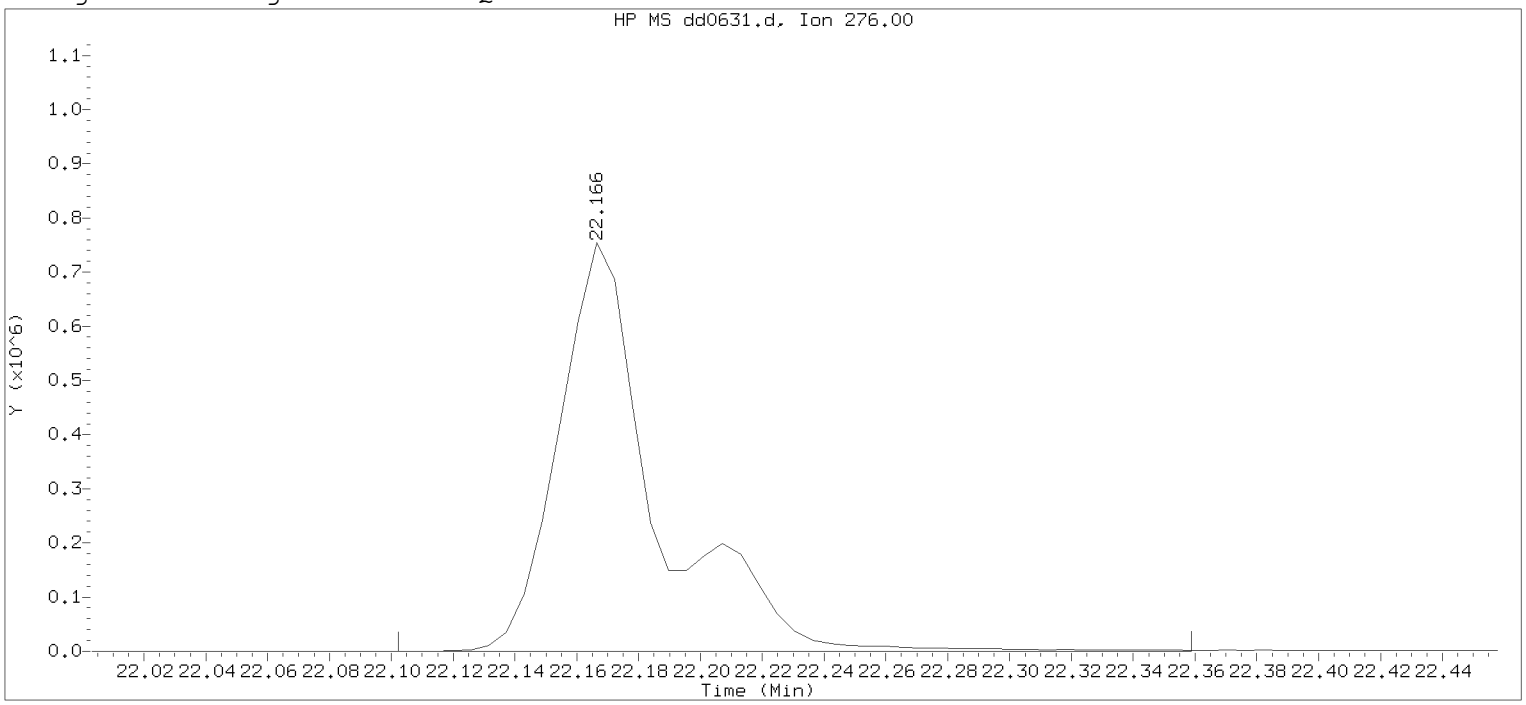
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



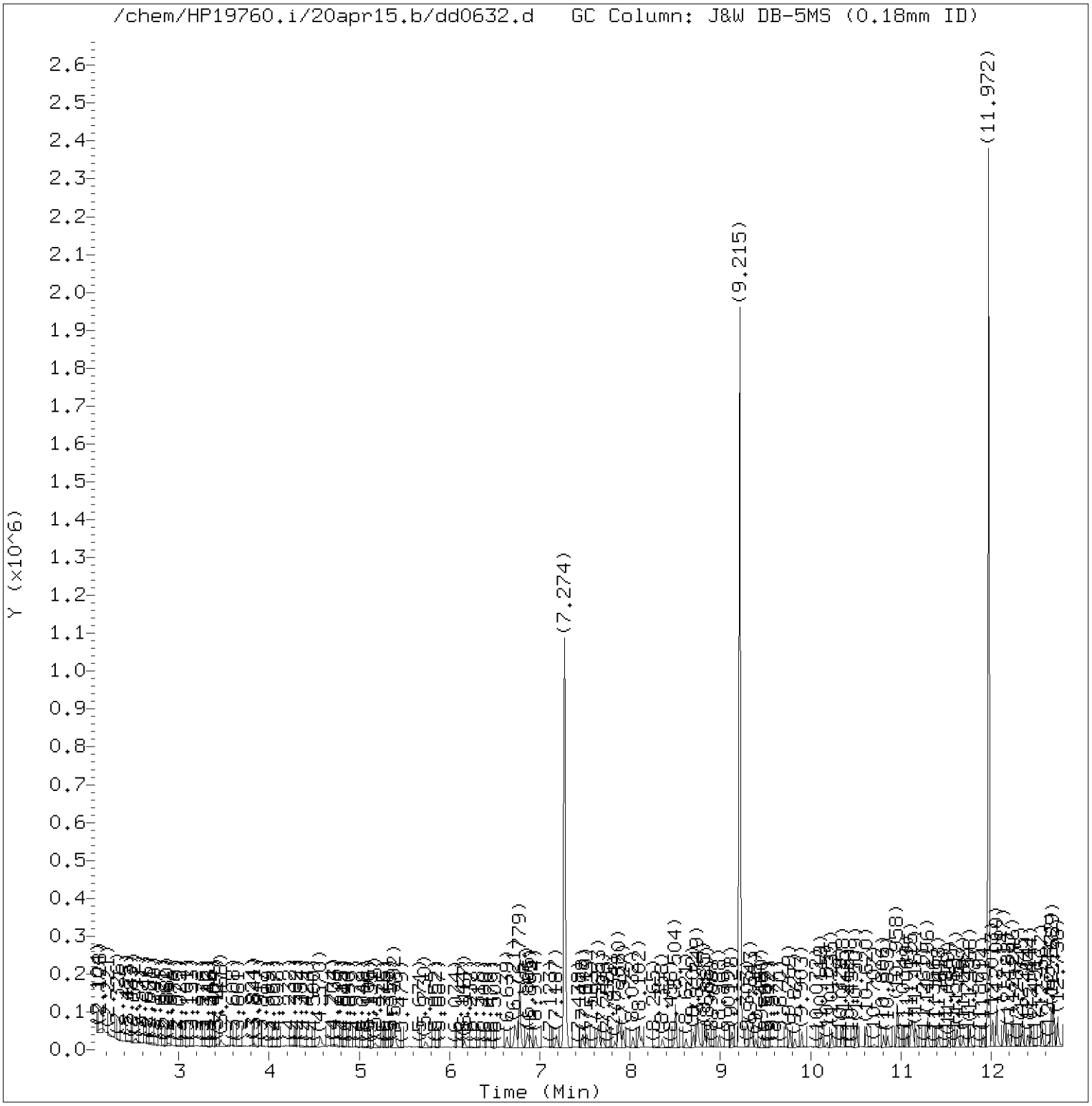
Data File: /chem/HP19760.i/20apr15.b/dd0631.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 15:41 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 16:17
Date, time and analyst ID of latest file update: 15-Apr-2020 16:17 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3445		
Retention Time (minutes)	: 22.166		
Quant Ion	: 276.00		
Area	: 1666131		
On-column Amount (ng/ul)	: 10.1488		
Integration start scan	: 3433	Integration stop scan:	3477
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

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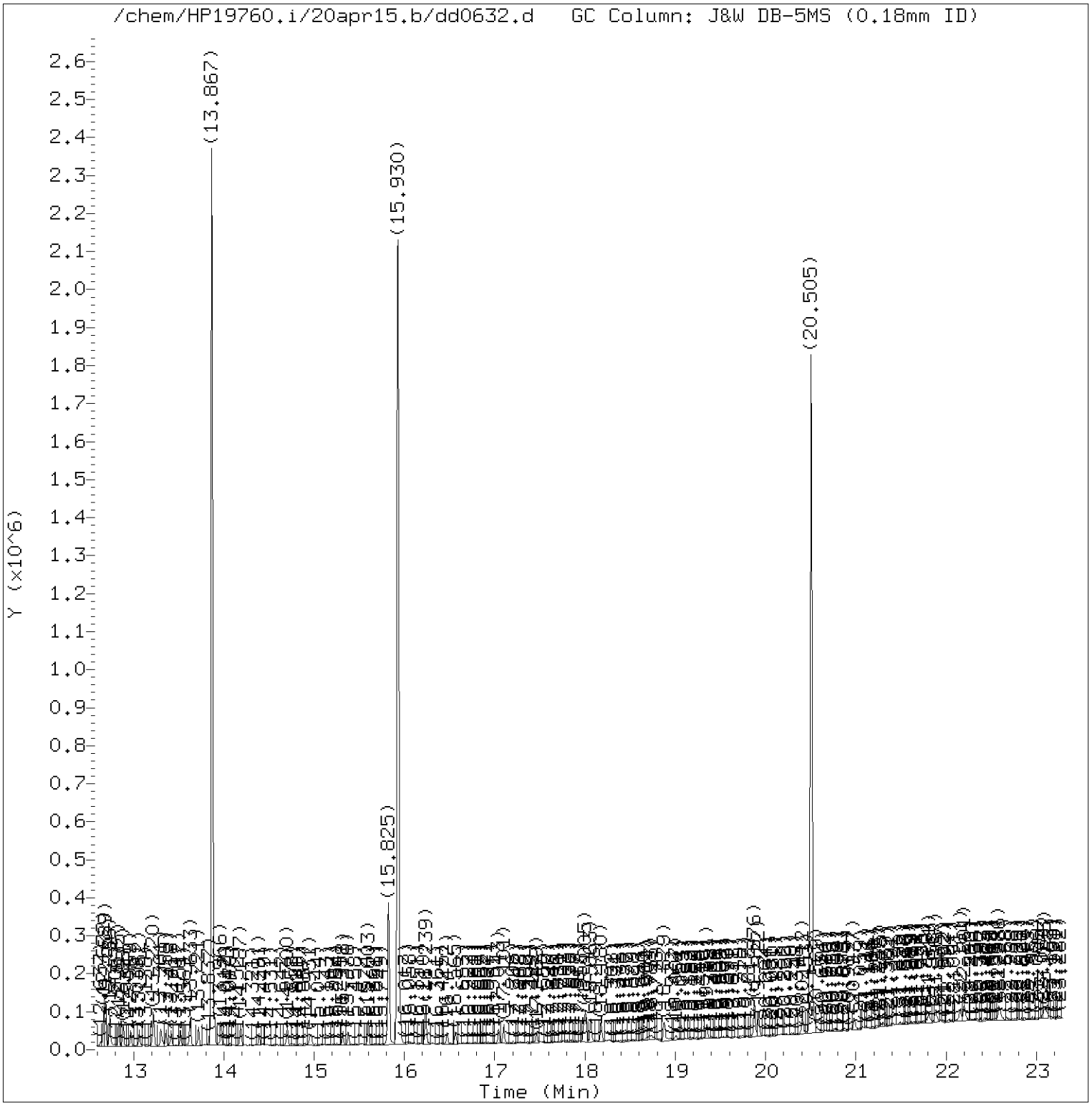
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.891	88	5335	0.167
4) N-Nitrosodimethylamine	(1)	3.427	74	7279	0.148
5) Pyridine	(1)	3.468	79	16001	0.187
7) 2-Picoline	(1)	4.564	93	12626	0.145
8) N-Nitrosomethylethylamine	(1)	4.727	88	6192M	0.166
9) Methyl methanesulfonate	(1)	5.176	80	6369	0.160
11)$2-Fluorophenol	(1)	5.392	112	21936	0.315
42) Total Cresols	(1)			20701	0.315
13) N-Nitrosodiethylamine	(1)	5.736	102	4640	0.132
15) Ethyl methanesulfonate	(1)	6.161	109	5426	0.146
16) Benzaldehyde	(1)	6.633	77	8656	0.152
17)$Phenol-d6	(1)	6.721	99	30368	0.326
18) Phenol	(1)	6.738	94	16416	0.172
19) Aniline	(1)	6.791	93	17915	0.152
20) a-methylstyrene	(1)	6.872	118	4991	0.181
22) bis(2-Chloroethyl)ether	(1)	6.895	93	13620	0.170
23) 2-Chlorophenol	(1)	6.954	128	10644	0.154
24) 1,3-Dichlorobenzene	(1)	7.187	146	11416	0.161
25)*1,4-Dichlorobenzene-d4	(1)	7.274	152	232932	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	11875	0.166
97) Isosafrole	(3)			7974	0.110
27) Benzyl alcohol	(1)	7.478	108	8042	0.178
28) 1,2-Dichlorobenzene	(1)	7.519	146	11180	0.164
31) 2-Methylphenol	(1)	7.642	108	10665	0.166
30) Indene	(1)	7.653	115	17354	0.167
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.700	45	18634	0.179
34) bis(2-Chloroisopropyl)ether	(1)	7.700	45	18634	0.179
35) N-Nitrosopyrrolidine	(1)	7.828	100	4948	0.135
36) Acetophenone	(1)	7.875	105	13960	0.148
37) 4-Methylphenol	(1)	7.880	108	10036	0.149
38) N-Nitroso-di-n-propylamine	(1)	7.886	70	9216	0.171
39) N-Nitrosomorpholine	(1)	7.904	56	8426	0.168
40) o-Toluidine	(1)	7.927	106	17537	0.160
43) Hexachloroethane	(1)	8.032	117	5337	0.175
120) 2,4_2,6-Dinitrotoluenes	(3)			9355	0.220
44)$Nitrobenzene-d5	(2)	8.102	82	25320	0.258
45) Nitrobenzene	(2)	8.131	77	13884	0.140
48) N-Nitrosopiperidine	(2)	8.358	114	5589	0.126
50) Isophorone	(2)	8.504	82	21893	0.123
51) 2-Nitrophenol	(2)	8.621	139	4864	0.112

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.697	107	10619	0.125
56) Benzoic acid	(2)	8.749	105	37621	0.669
146) Diallate trans/cis	(4)			10091	0.123
57) O,O,O-Triethylphosphorothioate	(2)	8.831	198	4402	0.121
55) bis(2-Chloroethoxy)methane	(2)	8.866	93	14514	0.128
60) 2,4-Dichlorophenol	(2)	8.988	162	7812	0.123
62) 1,2,4-Trichlorobenzene	(2)	9.134	180	8713	0.132
65)*Naphthalene-d8	(2)	9.215	136	1075650	5.000
66) Naphthalene	(2)	9.250	128	31652	0.132
67) 4-Chloroaniline	(2)	9.338	127	12501	0.130
68) 2,6-Dichlorophenol	(2)	9.349	162	7899	0.132
69) Hexachloropropene	(2)	9.396	213	5159	0.126
71) Hexachlorobutadiene	(2)	9.460	225	4819	0.138
75) Quinoline	(2)	9.769	129	20569	0.136
76) Caprolactam	(2)	9.827	113	2919	0.107
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	8011	0.119
80) 4-Chloro-3-methylphenol	(2)	10.119	107	8535	0.120
82) Safrole	(2)	10.235	162	7246	0.126
83) 2-Methylnaphthalene	(2)	10.358	142	19082	0.126
84) 1-Methylnaphthalene	(2)	10.509	142	18965	0.132
85) Hexachlorocyclopentadiene	(3)	10.614	237	4252	0.106
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	7959	0.122
88) cis-Isosafrole	(3)	10.702	162	1447	0.022
90) 2,4,6-Trichlorophenol	(3)	10.806	196	4557	0.101
92) 2,4,5-Trichlorophenol	(3)	10.853	196	5281	0.112
93)$2-Fluorobiphenyl	(3)	10.964	172	42070	0.253
94) trans-Isosafrole	(3)	11.069	162	6527	0.088
95) 1,1'-Biphenyl	(3)	11.115	154	23170	0.120
96) 2-Chloronaphthalene	(3)	11.133	162	19427	0.133
98) 1-Chloronaphthalene	(3)	11.162	162	16430	0.120
99) Diphenyl ether	(3)	11.296	170	12578	0.124
100) 2-Nitroaniline	(3)	11.302	138	5478	0.109
104) 1,4-Naphthoquinone	(3)	11.418	158	5857	0.096
105) 1,4-Dinitrobenzene	(3)	11.529	168	2426	0.091
106) Dimethylphthalate	(3)	11.617	163	19610	0.125
107) 1,3-Dinitrobenzene	(3)	11.640	168	2996	0.101
108) 2,6-Dinitrotoluene	(3)	11.692	165	3788	0.102
109) Acenaphthylene	(3)	11.768	152	24781	0.114
112) 3-Nitroaniline	(3)	11.914	138	4654	0.113
113)*Acenaphthene-d10	(3)	11.972	164	534813	5.000

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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	17671	0.118
115) 2,4-Dinitrophenol	(3)	12.060	184	15711	0.591
116) 4-Nitrophenol	(3)	12.147	109	13075	0.483
117) Pentachlorobenzene	(3)	12.188	250	6741	0.131
118) 2,4-Dinitrotoluene	(3)	12.240	165	5567	0.113
119) Dibenzofuran	(3)	12.246	168	25739	0.128
121) 1-Naphthylamine	(3)	12.345	143	17568	0.117
122) 2,3,4,6-Tetrachlorophenol	(3)	12.404	232	3949	0.115
123) 2-Naphthylamine	(3)	12.444	143	17591	0.120
124) Diethylphthalate	(3)	12.567	149	18527	0.113
125) Thionazin	(3)	12.666	107	3818	0.123
126) Fluorene	(3)	12.672	166	19087	0.120
128) 5-Nitro-o-toluidine	(3)	12.689	152	5652	0.119
129) 4-Nitroaniline	(3)	12.689	138	5130	0.115
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	9107	0.122
130) 4,6-Dinitro-2-methylphenol	(4)	12.742	198	10857	0.357
132) NDPA as diphenylamine	(4)	12.835	169	15655	0.119
131) N-Nitrosodiphenylamine	(4)	12.835	169	15655	0.119
134) 1,2-Diphenylhydrazine	(4)	12.887	77	21147	0.116
135)$2,4,6-Tribromophenol	(3)	12.969	330	3617	0.225
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	3815	0.127
140) Diallate (peak 1)	(4)	13.214	86	7763	0.095
141) Phorate	(4)	13.220	75	12278	0.109
142) Phenacetin	(4)	13.225	108	8550	0.099
143) 4-Bromophenyl-phenylether	(4)	13.301	248	4689	0.128
144) Diallate (peak 2)	(4)	13.324	86	2328	0.028
145) Hexachlorobenzene	(4)	13.359	284	5006	0.130
147) Dimethoate	(4)	13.418	87	8469	0.103
148) Atrazine	(4)	13.523	200	4727	0.115
149) Pentachlorophenol	(4)	13.616	266	3046	0.111
150) 4-Aminobiphenyl	(4)	13.628	169	17465	0.122
151) Pentachloronitrobenzene	(4)	13.633	237	1478	0.086
152) Pronamide	(4)	13.721	173	7185	0.100
153)*Phenanthrene-d10	(4)	13.867	188	971831	5.000
154) Dinoseb	(4)	13.872	211	2630	0.064
155) Phenanthrene	(4)	13.896	178	28047	0.127
157) Anthracene	(4)	13.966	178	26257	0.119
163) Carbazole	(4)	14.187	167	25542	0.118
164) Methyl parathion	(4)	14.391	109	5802	0.089
165) Di-n-butylphthalate	(4)	14.706	149	31324	0.112

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.951	109	3257	0.087
168) 4-Nitroquinoline-1-oxide	(4)	14.968	190	1567	0.058
222) Total PAHs	(6)			427874	2.197
169) Octachlorostyrene	(4)	15.318	308	2199	0.146
171) Isodrin	(4)	15.376	193	4026	0.148
173) Fluoranthene	(4)	15.603	202	30135	0.120
174) Benzidine	(5)	15.825	184	181935	1.113
175)*Pyrene-d10	(5)	15.924	212	965095	5.000
177) Pyrene	(5)	15.953	202	34630	0.130
179)$Terphenyl-d14	(5)	16.239	244	36850	0.251
182) p-Dimethylaminoazobenzene	(5)	16.472	225	4032	0.089
185) Chlorobenzilate	(5)	16.565	139	8238	0.100
187) 3,3'-Dimethylbenzidine	(5)	17.043	212	16469	0.099
188) Butylbenzylphthalate	(5)	17.101	149	12652	0.097
191) 2-Acetylaminofluorene	(5)	17.463	181	5507	0.053
193) 3,3'-Dichlorobenzidine	(5)	17.987	252	8034	0.096
195) Benzo(a)anthracene	(5)	17.999	228	25108	0.121
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.011	231	4550	0.101
196) Chrysene	(5)	18.063	228	27420	0.126
199) bis(2-Ethylhexyl)phthalate	(5)	18.180	149	17182	0.093
203) 6-Methylchrysene	(5)	18.879	242	16529	0.106
205) Di-n-octylphthalate	(6)	19.351	149	24393	0.080
206) Benzo(b)fluoranthene	(6)	19.876	252	23312	0.114
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.876	256	9701	0.100
208) Benzo(k)fluoranthene	(6)	19.922	252	25308M	0.122
211) Benzo(a)pyrene	(6)	20.406	252	21075	0.108
213)*Perylene-d12	(6)	20.505	264	866761	5.000
215) 3-Methylcholanthrene	(6)	20.977	268	10804	0.105
217) Dibenz(a,h)acridine	(6)	21.811	279	12876	0.085
218) Dibenz(a,j)acridine	(6)	21.887	279	14165	0.087
219) Indeno(1,2,3-cd)pyrene	(6)	22.161	276	18251M	0.109
220) Dibenz(a,h)anthracene	(6)	22.201	278	17289M	0.097
221) Benzo(g,h,i)perylene	(6)	22.586	276	19804M	0.109

M = Compound was manually integrated.
* = Compound is an internal standard.
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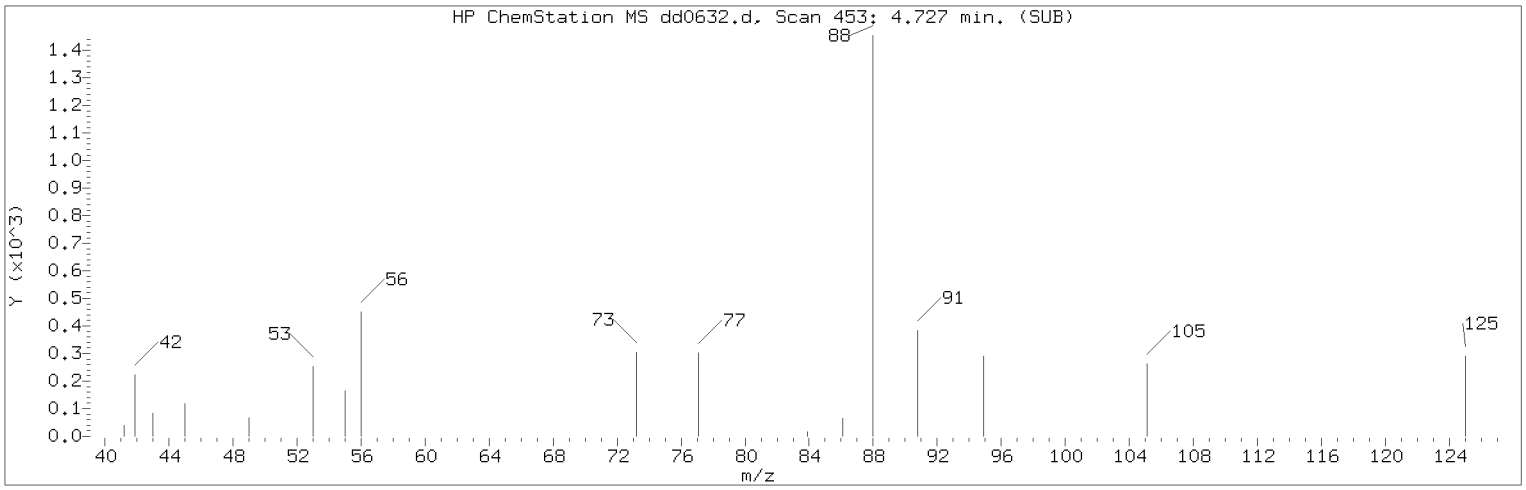
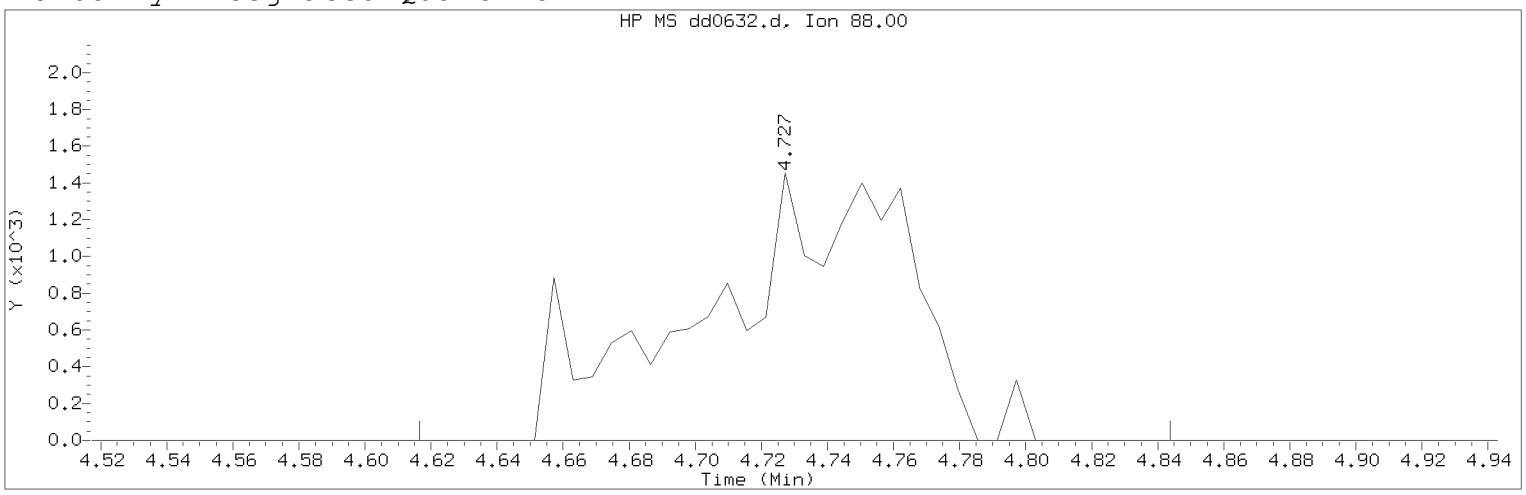
Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

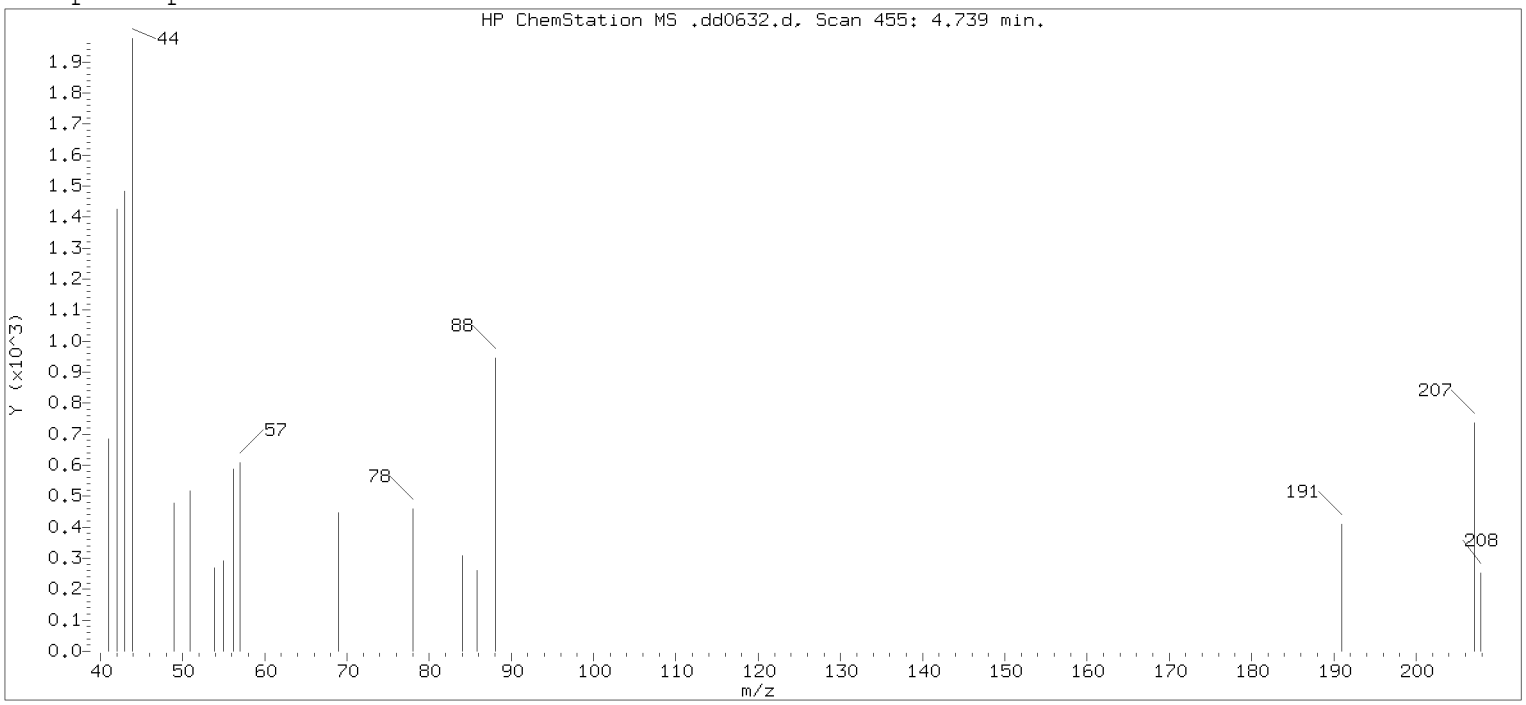
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 453
Retention Time (minutes) : 4.727
Quant Ion : 88.00
Area (flag) : 6192M
On-Column Amount (ng/ul) : 0.1662
Integration start scan : 433 Integration stop scan: 472
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

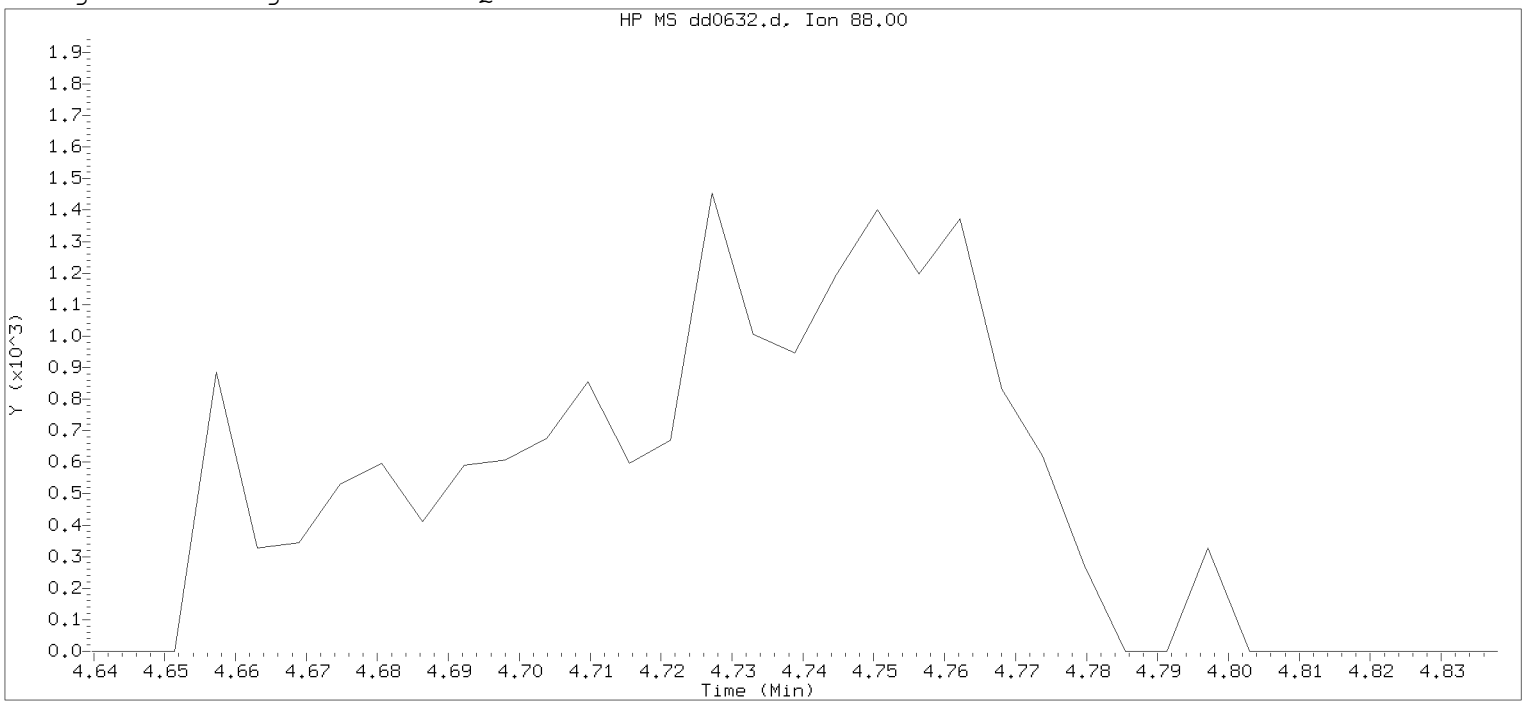
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

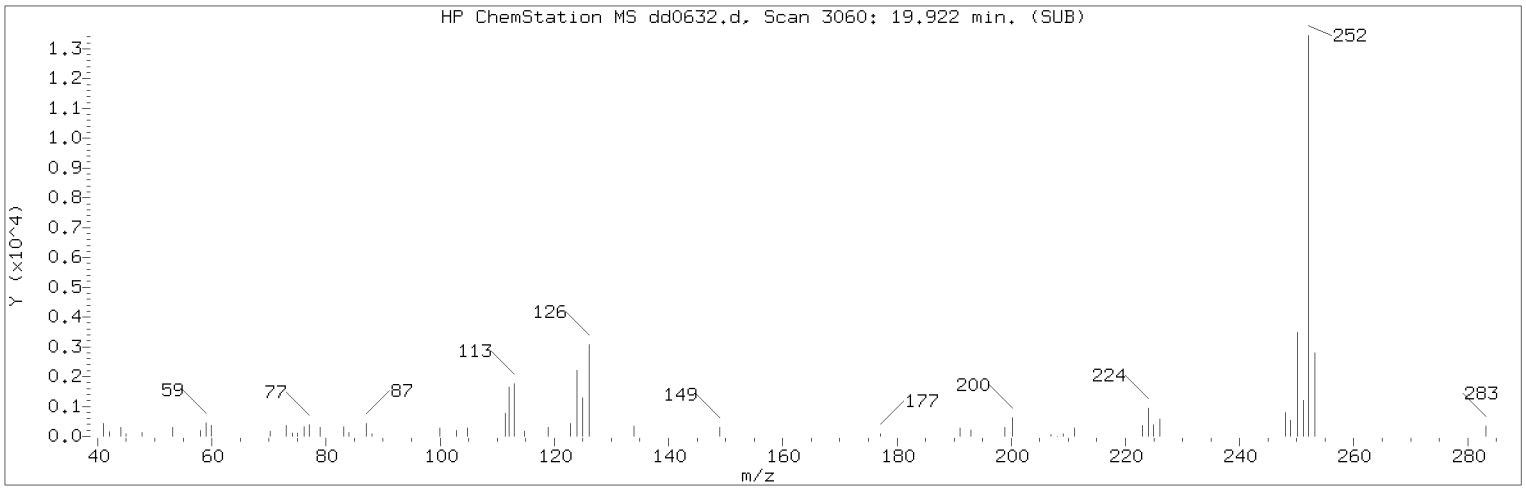
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 19:52
Date, time and analyst ID of latest file update: 15-Apr-2020 19:52 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

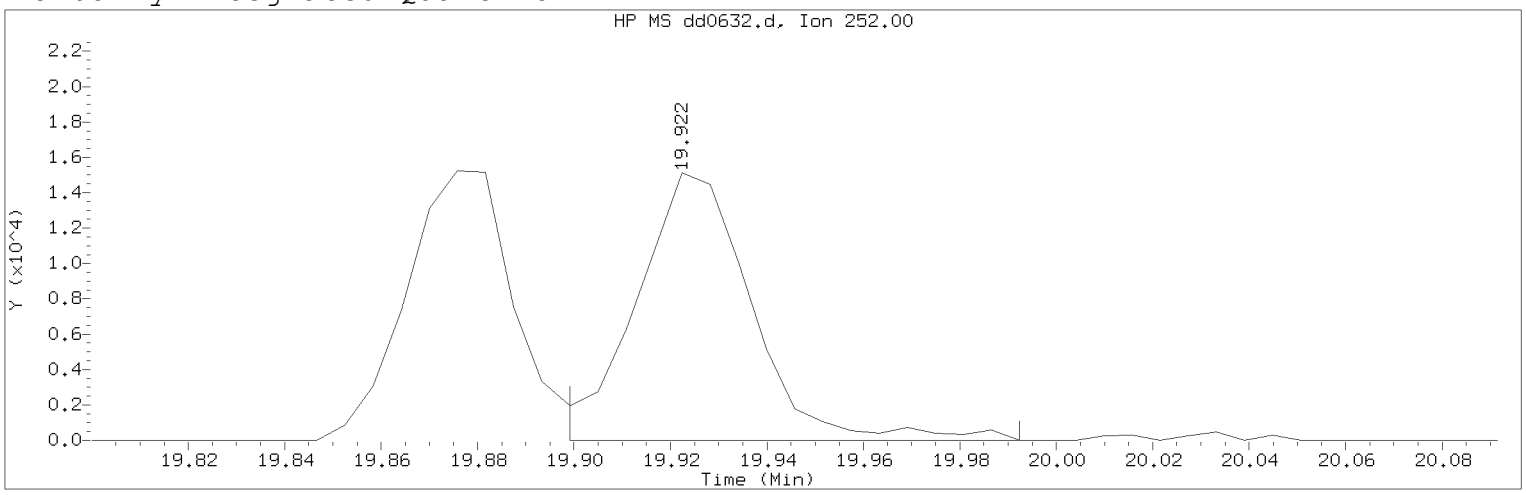
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.739
Quant Ion : 88.00

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

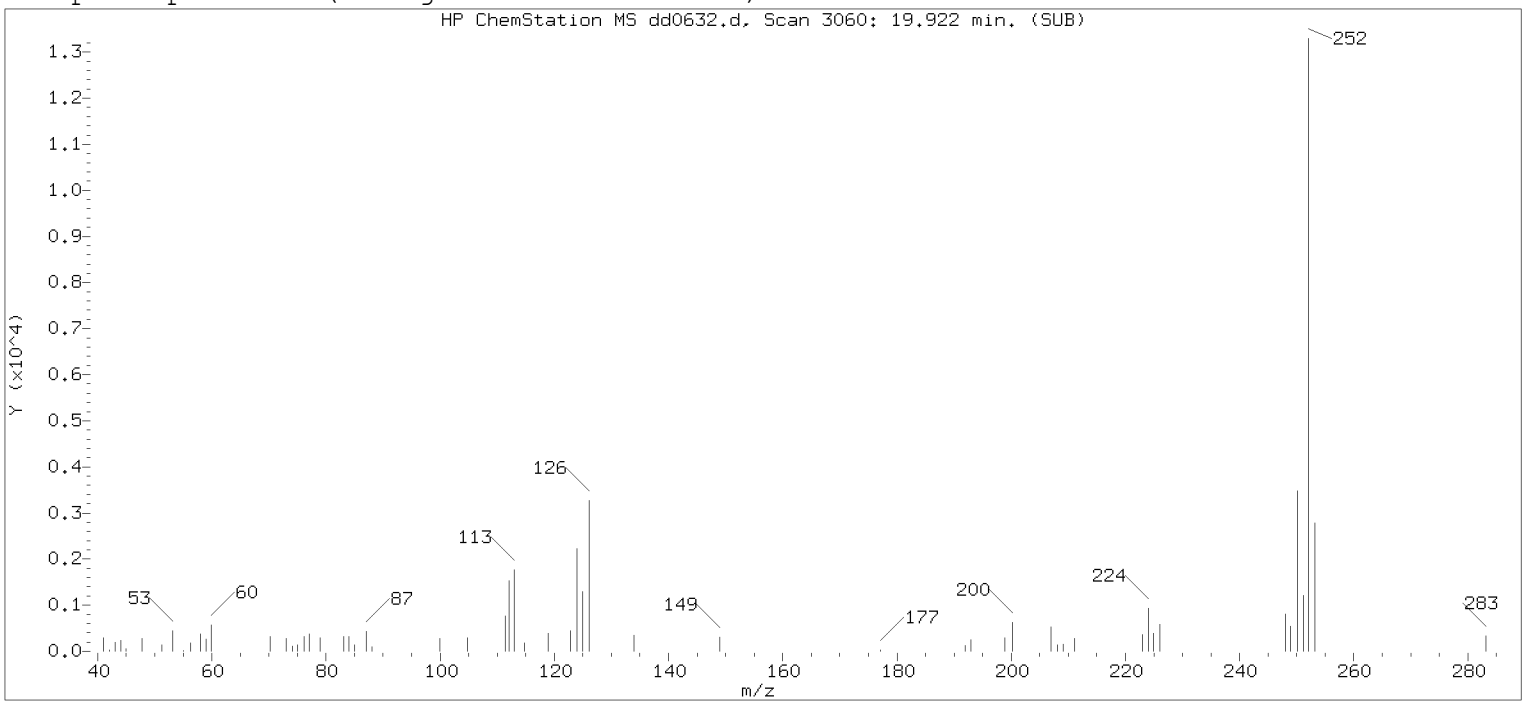
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 3060
Retention Time (minutes) : 19.922
Quant Ion : 252.00
Area (flag) : 25308M
On-Column Amount (ng/ul) : 0.1219
Integration start scan : 3055 Integration stop scan: 3071
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

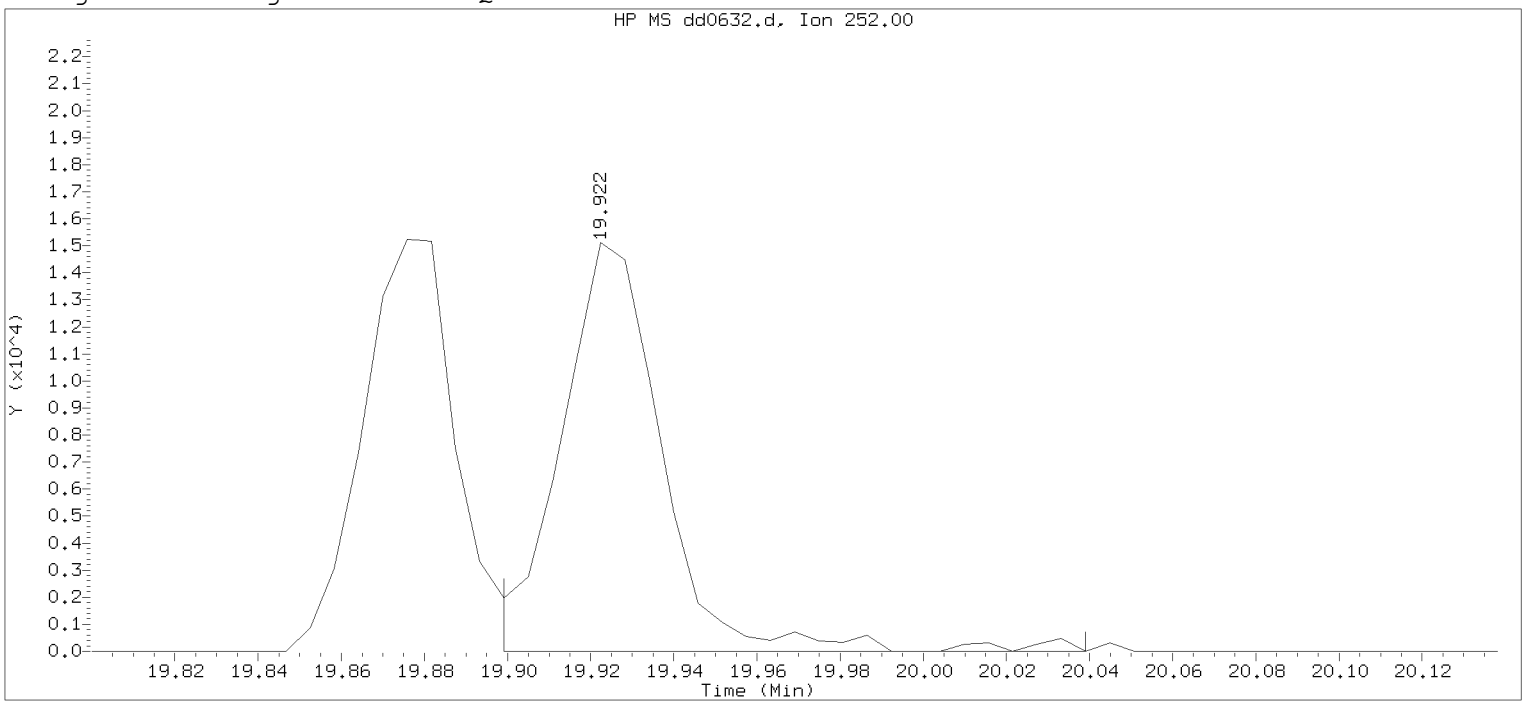
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

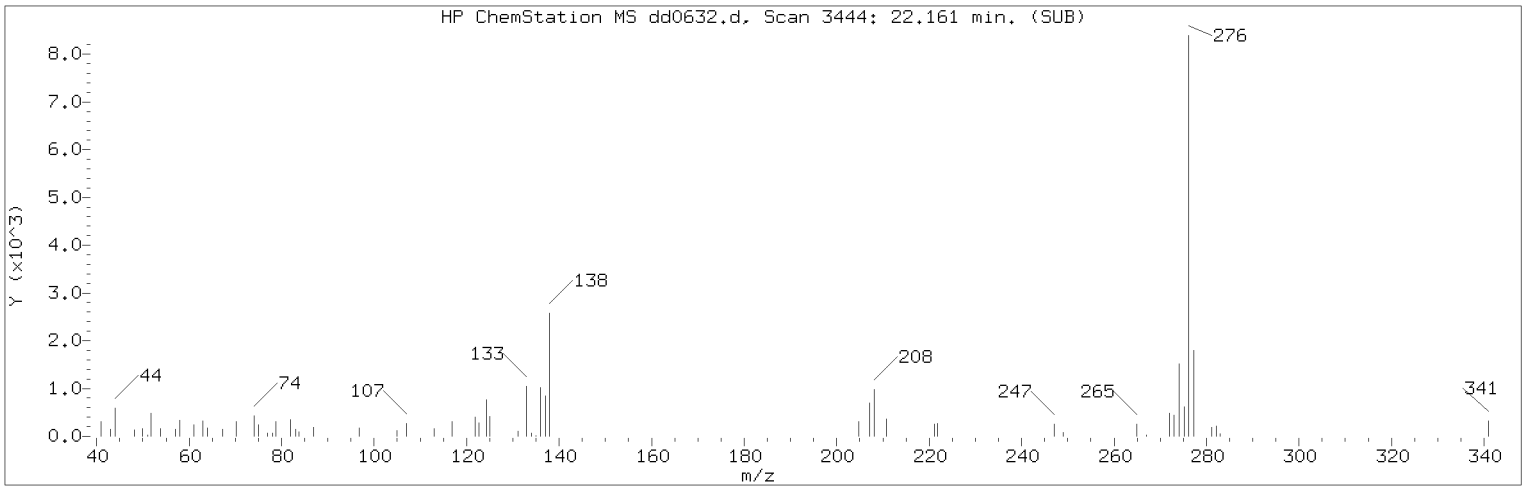
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 19:52
Date, time and analyst ID of latest file update: 15-Apr-2020 19:52 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

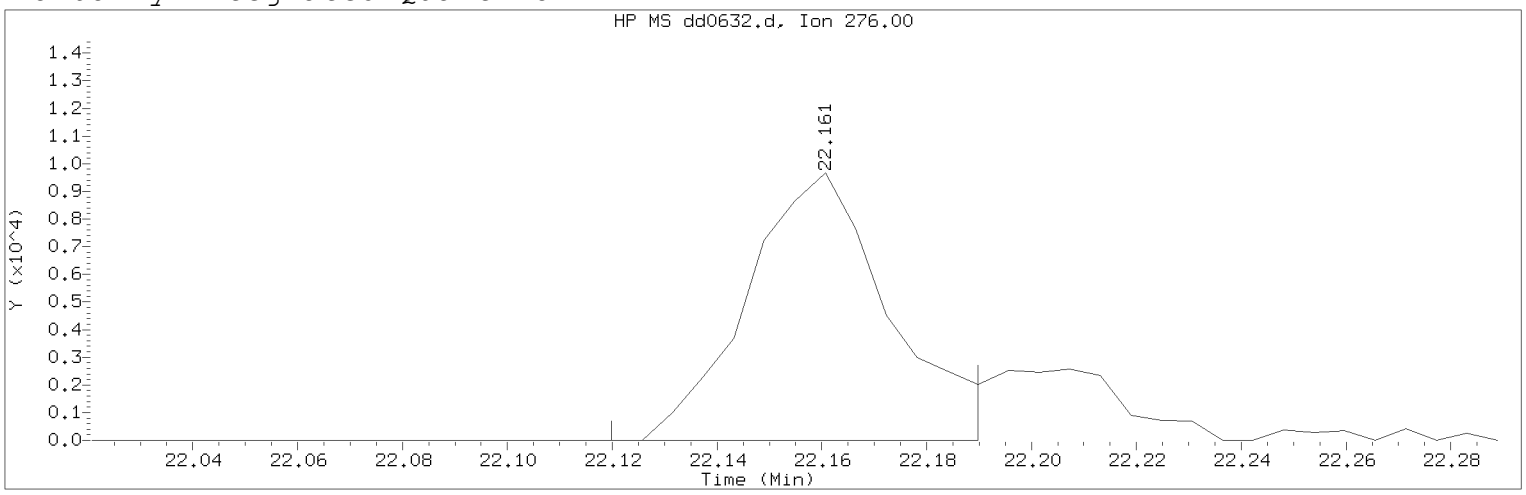
Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3060		
Retention Time (minutes)	: 19.922		
Quant Ion	: 252.00		
Area	: 25415		
On-column Amount (ng/ul)	: 0.1168		
Integration start scan	: 3055	Integration stop scan:	3079
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

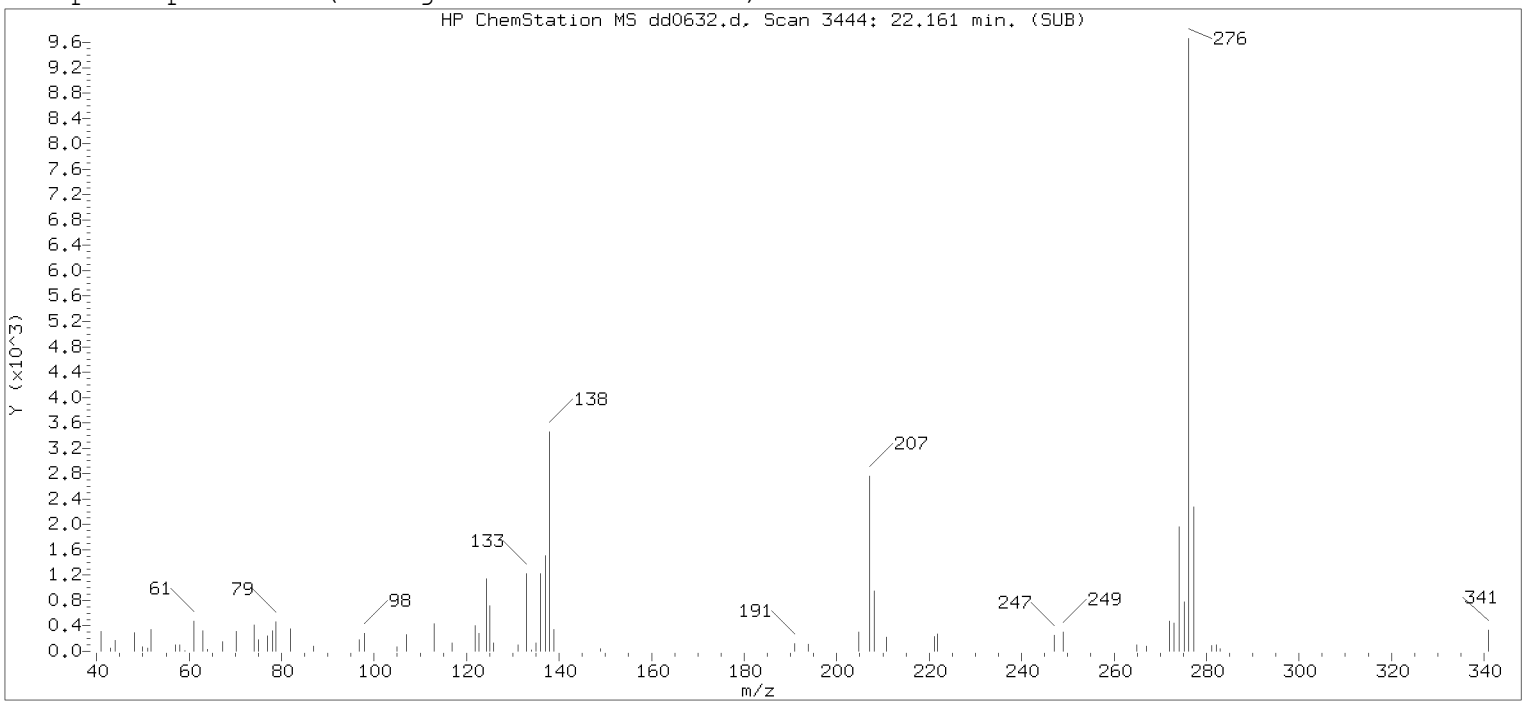
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3444
Retention Time (minutes) : 22.161
Quant Ion : 276.00
Area (flag) : 18251M
On-Column Amount (ng/ul) : 0.1085
Integration start scan : 3436 Integration stop scan: 3448
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

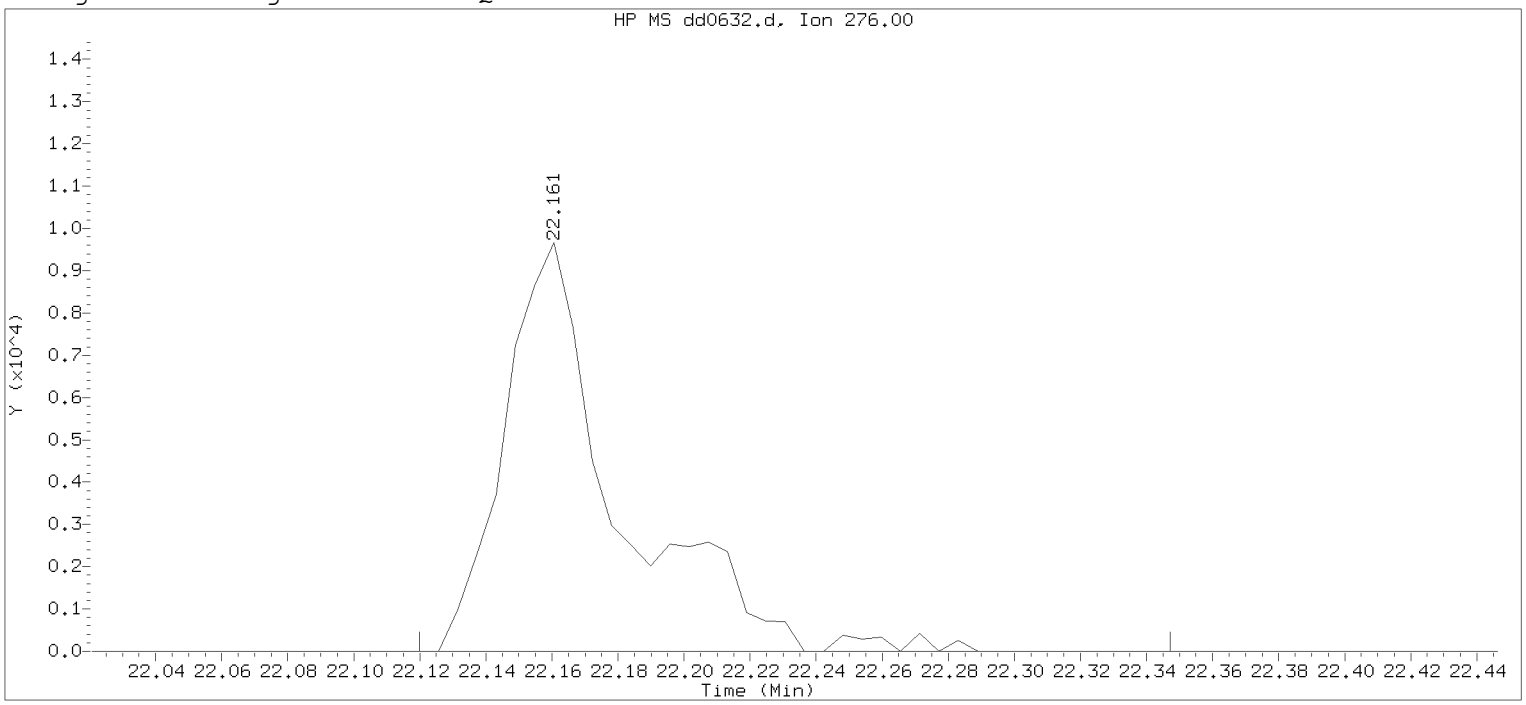
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

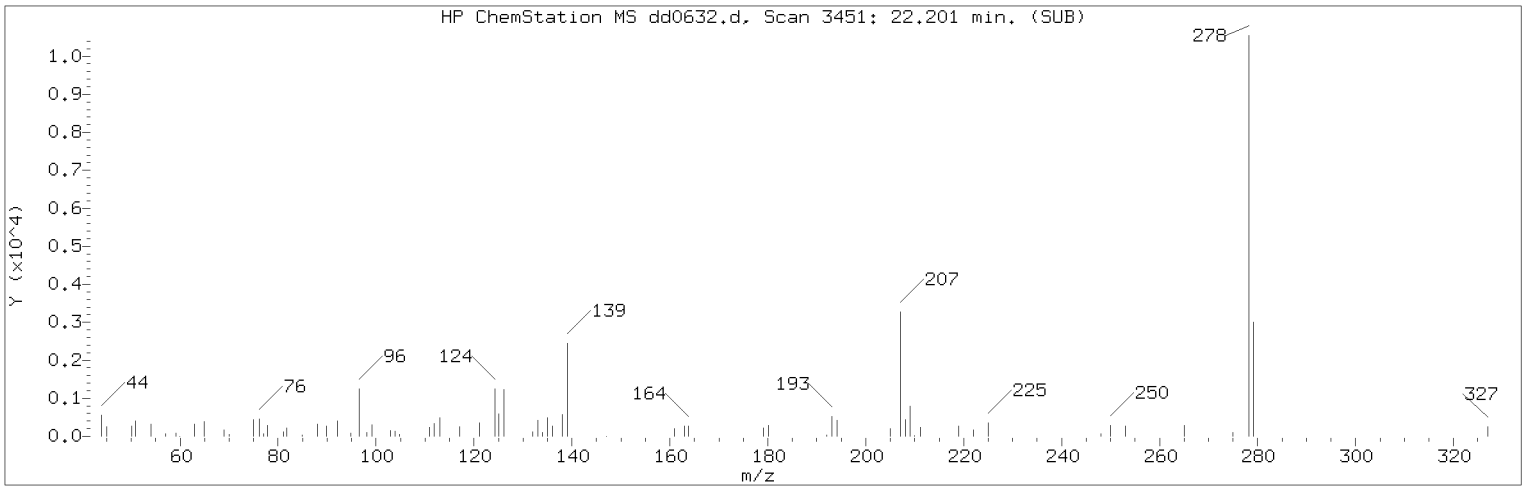
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 19:52
Date, time and analyst ID of latest file update: 15-Apr-2020 19:52 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

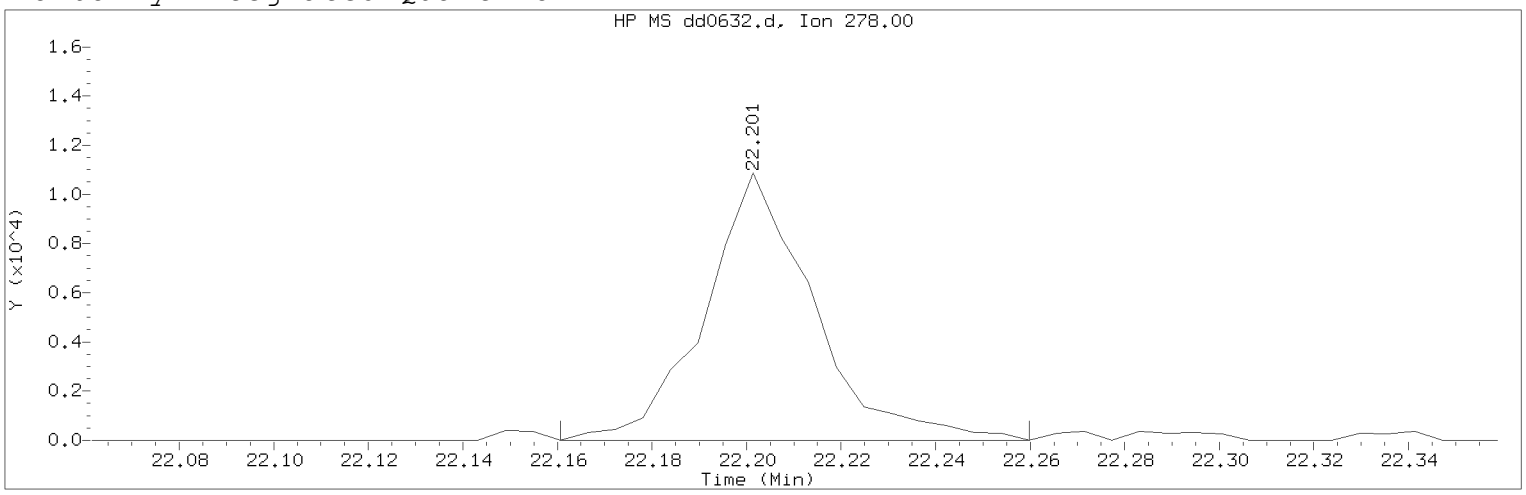
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3444		
Retention Time (minutes)	: 22.161		
Quant Ion	: 276.00		
Area	: 23125		
On-column Amount (ng/ul)	: 0.1282		
Integration start scan	: 3436	Integration stop scan:	3475
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

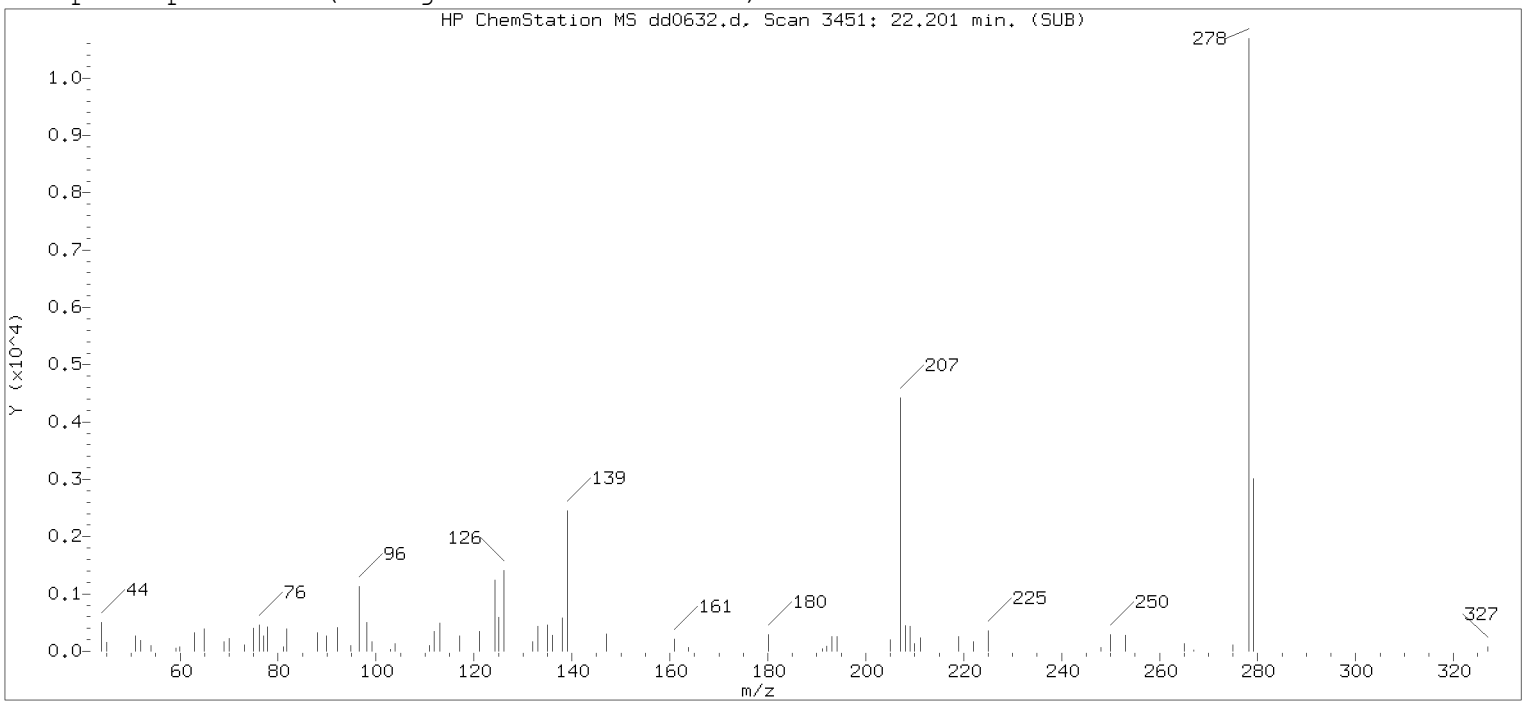
Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 3451
Retention Time (minutes) : 22.201
Quant Ion : 278.00
Area (flag) : 17289M
On-Column Amount (ng/ul) : 0.0971
Integration start scan : 3443 Integration stop scan: 3460
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

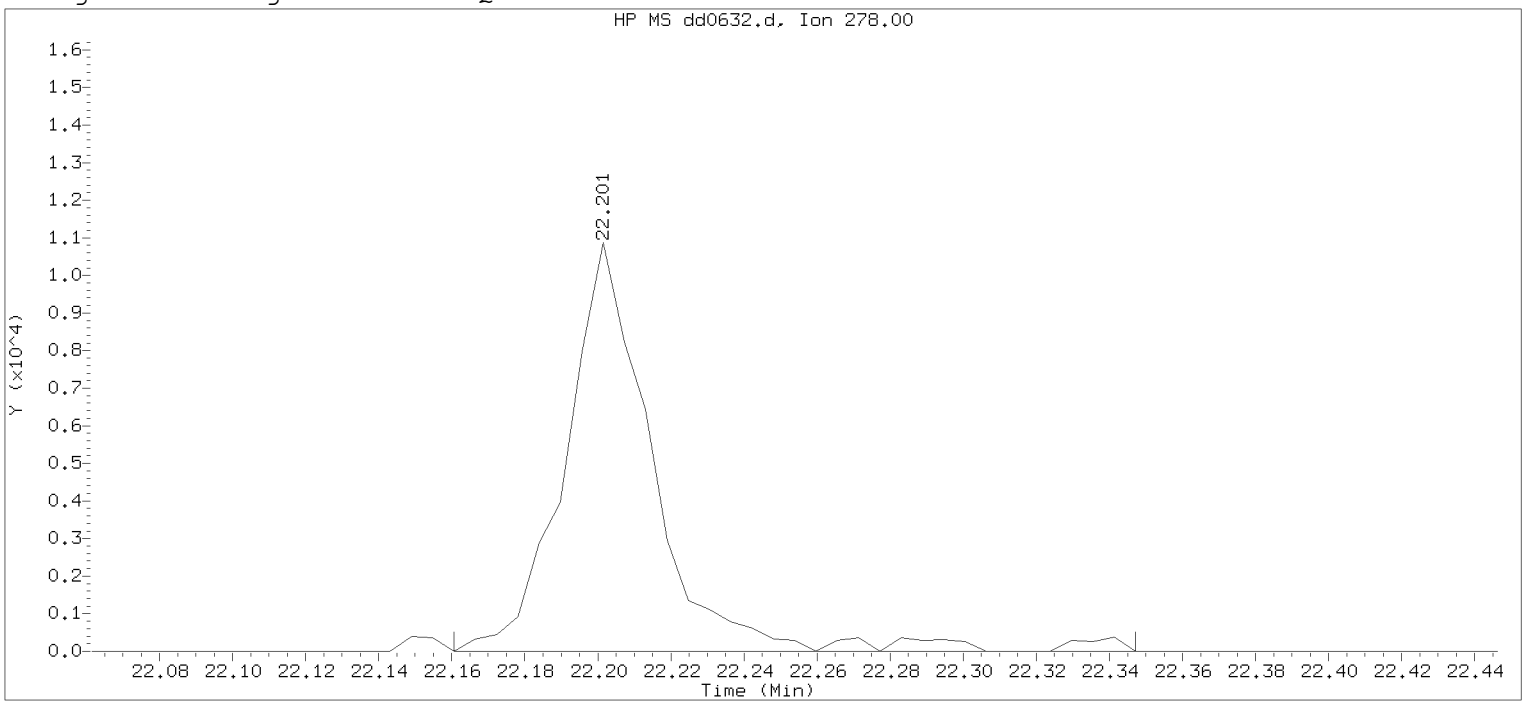
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

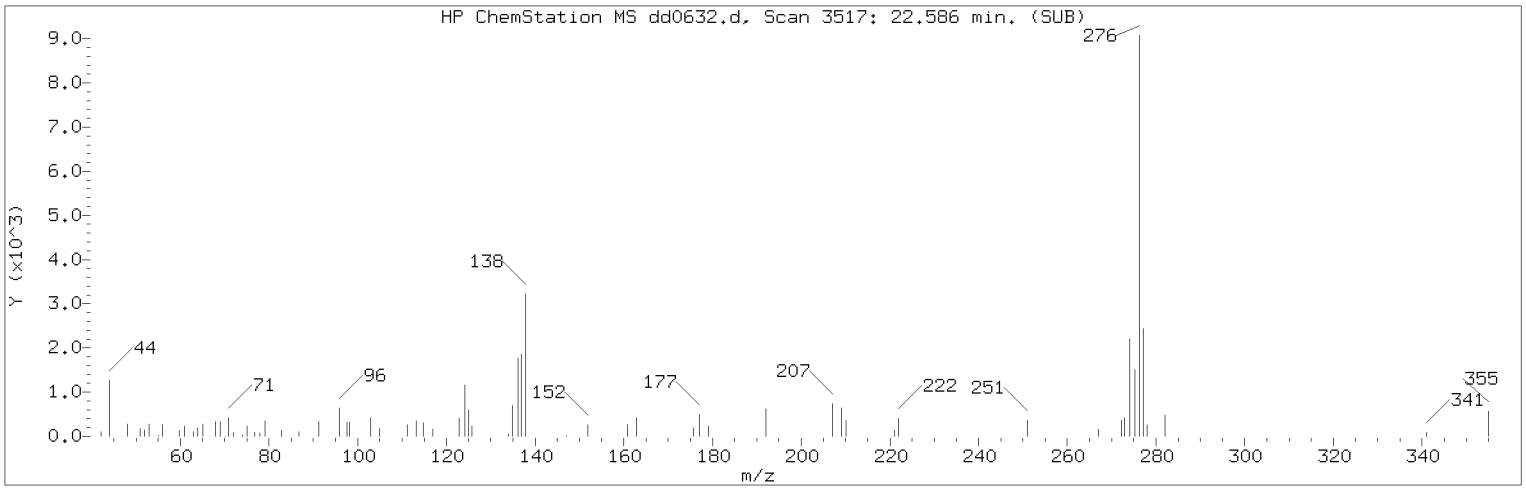
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 19:52
Date, time and analyst ID of latest file update: 15-Apr-2020 19:52 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

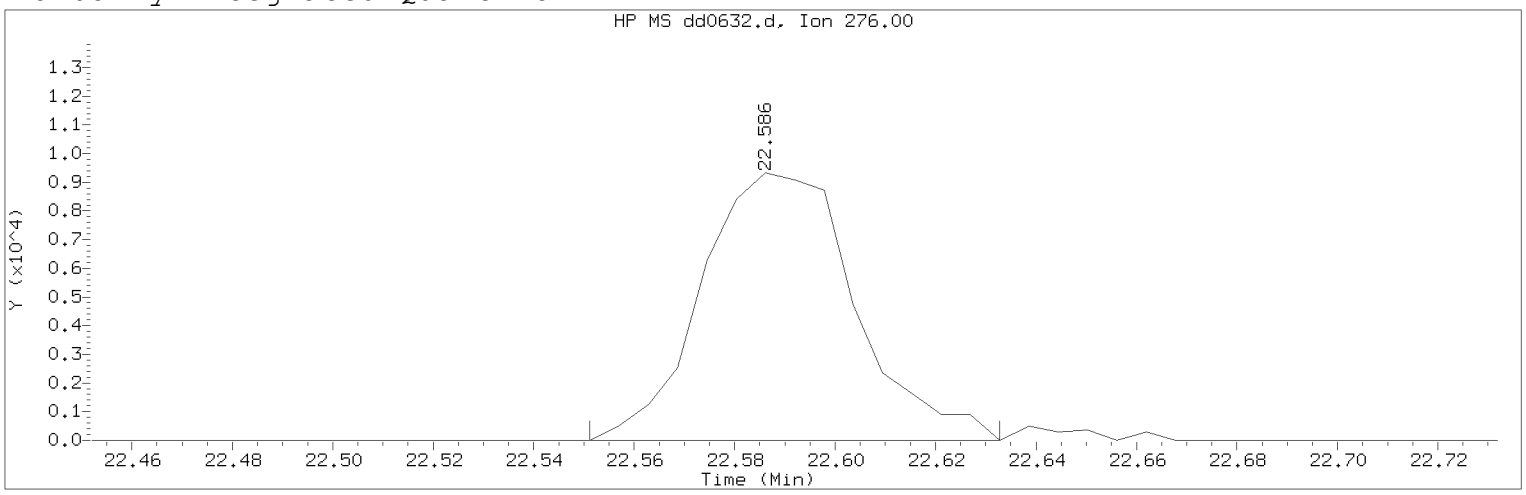
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3451		
Retention Time (minutes)	: 22.201		
Quant Ion	: 278.00		
Area	: 18262		
On-column Amount (ng/ul)	: 0.1026		
Integration start scan	: 3443	Integration stop scan:	3475
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

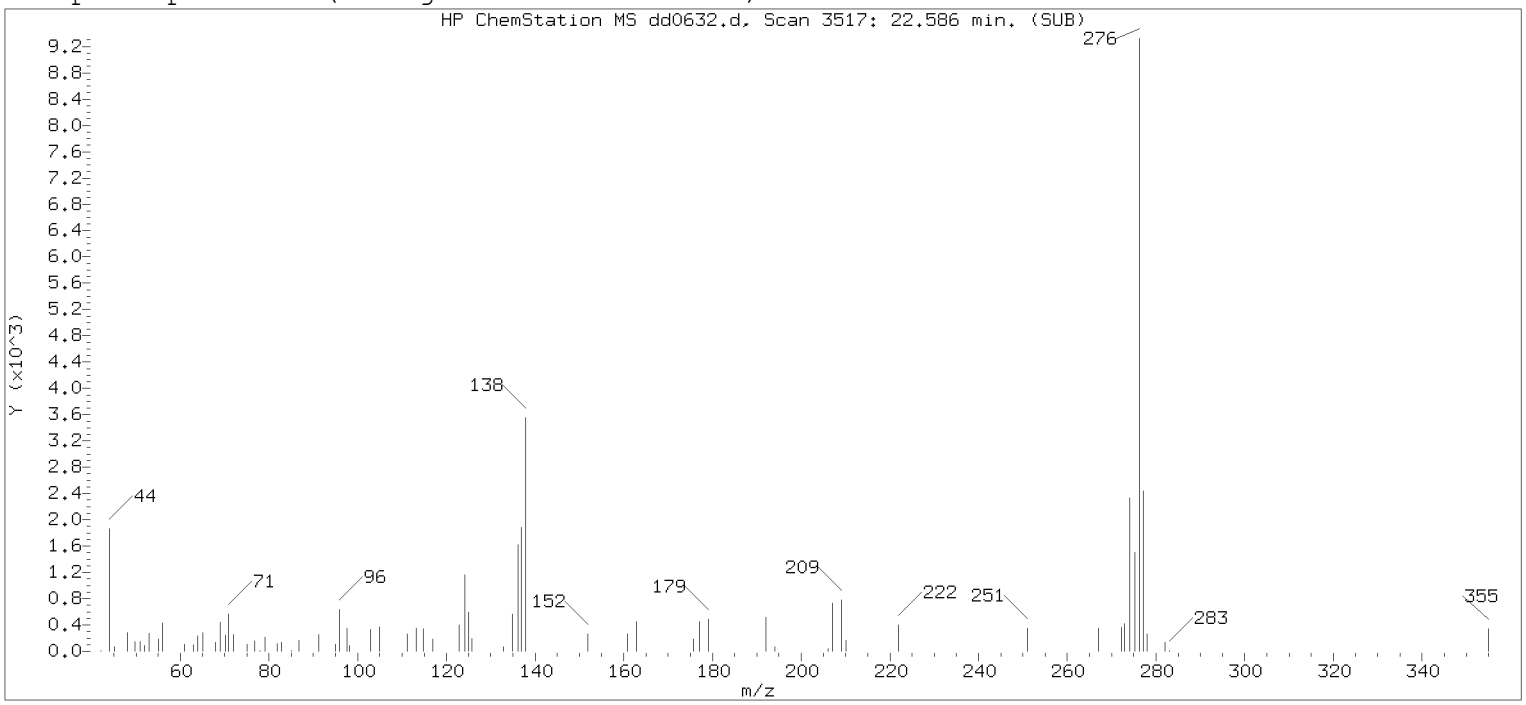
Compound Number : 221
Compound Name : Benzo(g,h,i)perylene
Scan Number : 3517
Retention Time (minutes) : 22.586
Quant Ion : 276.00
Area (flag) : 19804M
On-Column Amount (ng/ul) : 0.1092
Integration start scan : 3510 Integration stop scan: 3524
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

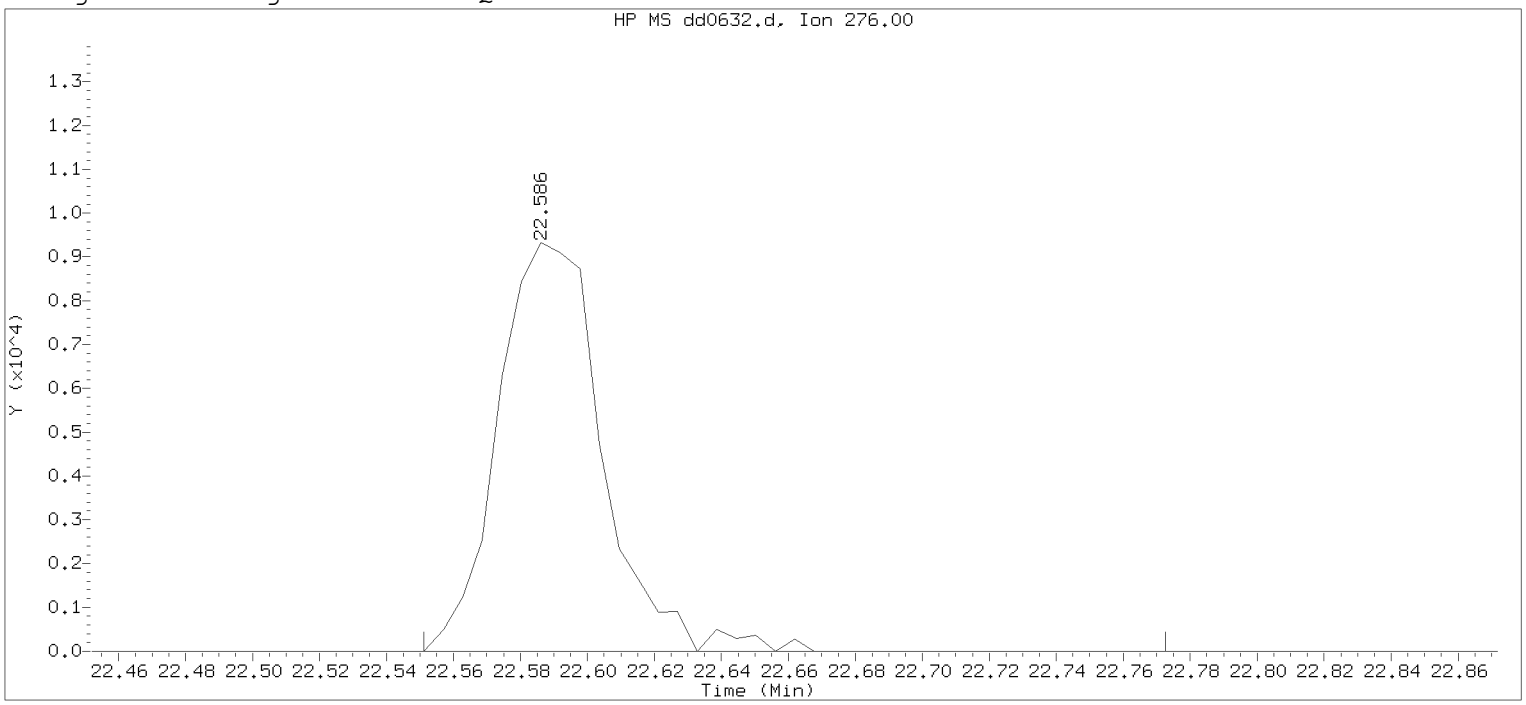
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



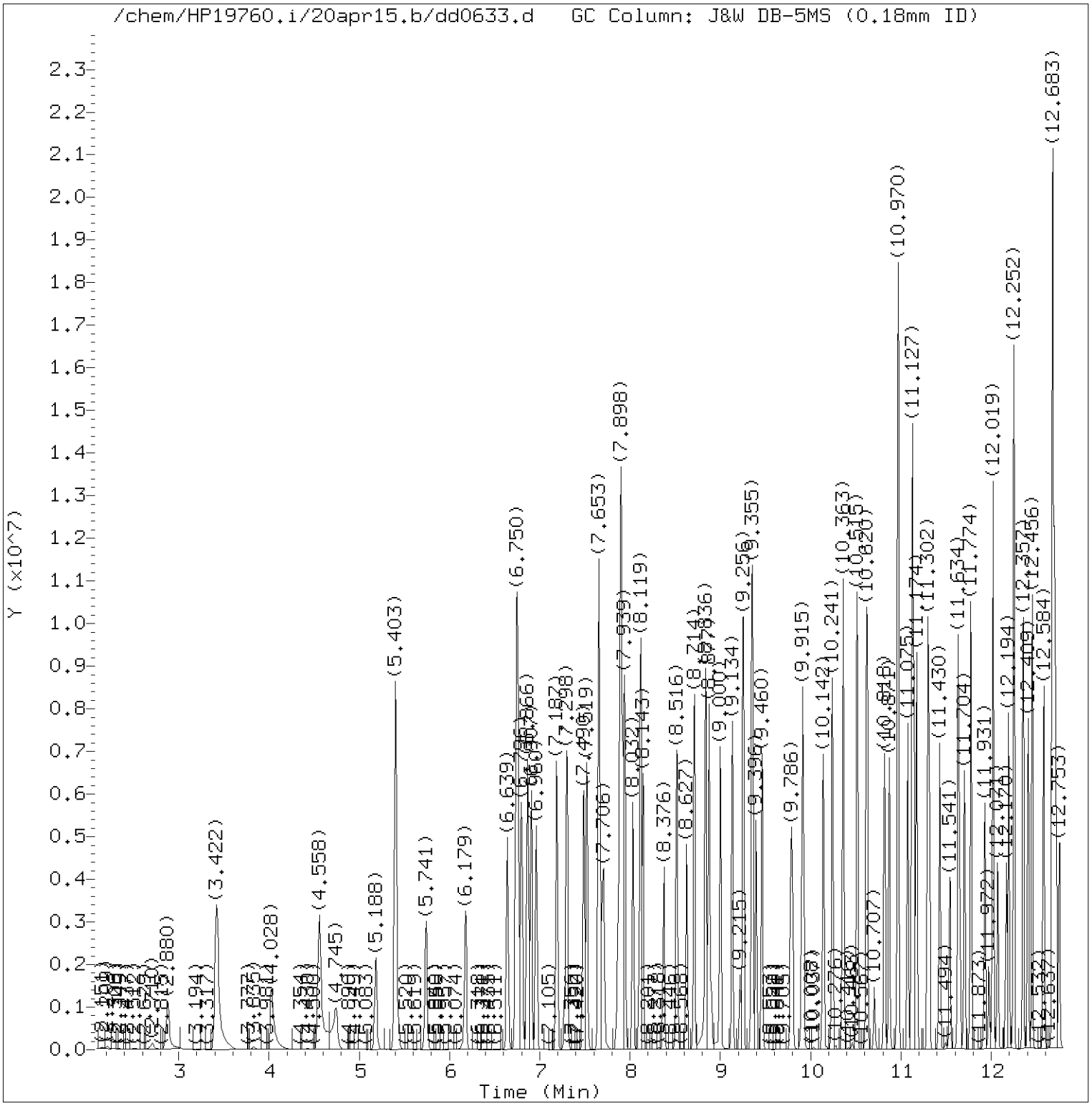
Data File: /chem/HP19760.i/20apr15.b/dd0632.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:18 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 19:52
Date, time and analyst ID of latest file update: 15-Apr-2020 19:52 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 3517		
Retention Time (minutes)	: 22.586		
Quant Ion	: 276.00		
Area	: 20306		
On-column Amount (ng/ul)	: 0.1095		
Integration start scan	: 3510	Integration stop scan:	3548
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name em10340



Total Ion Chromatogram (TIC)

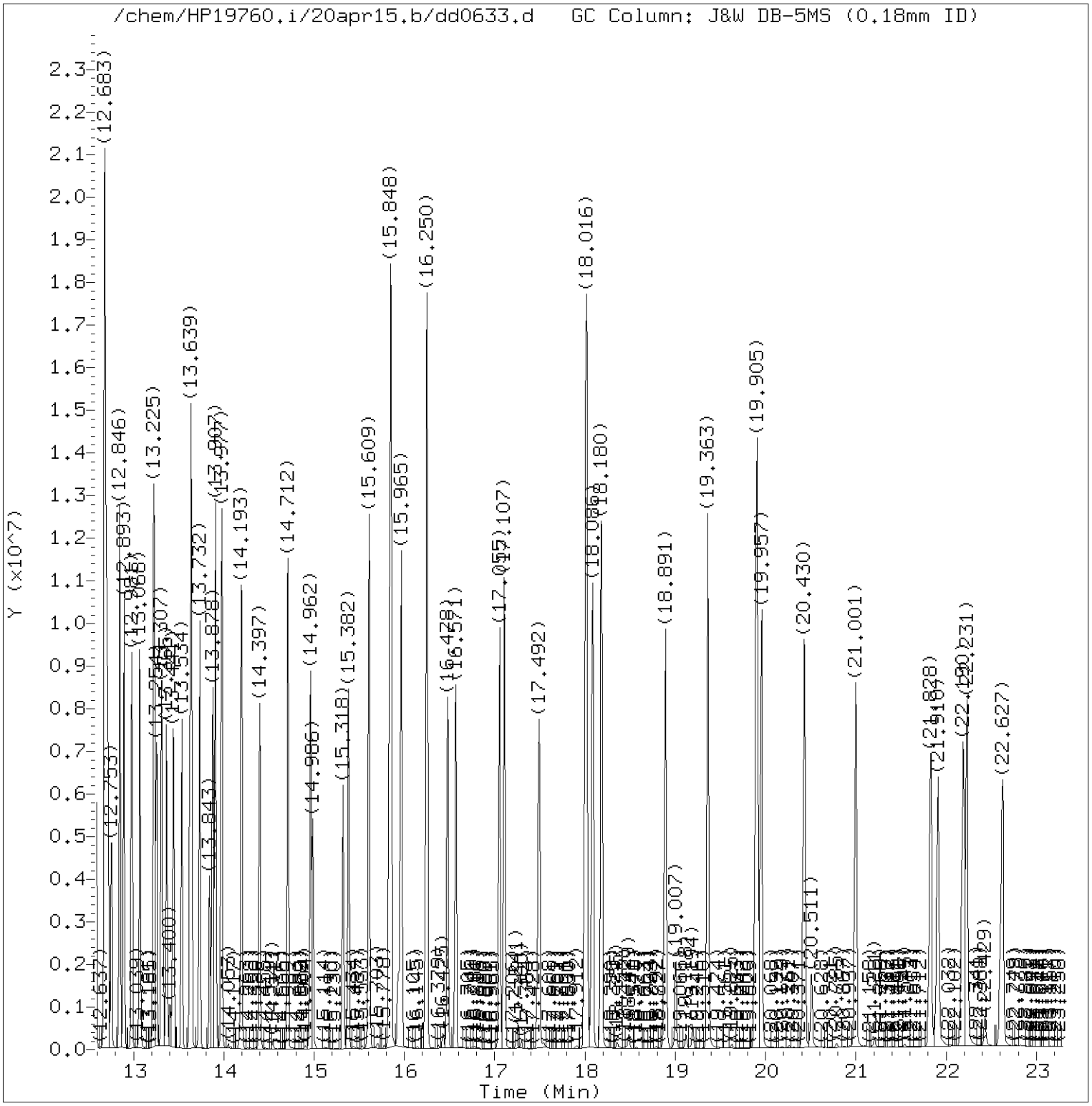
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.880	88	1149177	31.491
4) N-Nitrosodimethylamine	(1)	3.410	74	1770007	31.411
5) Pyridine	(1)	3.427	79	3057446	31.270
7) 2-Picoline	(1)	4.558	93	3074401	30.877
8) N-Nitrosomethylethylamine	(1)	4.745	88	1334592	31.314
9) Methyl methanesulfonate	(1)	5.188	80	1424072	31.206
11)$2-Fluorophenol	(1)	5.403	112	4873454	61.212
42) Total Cresols	(1)			4409189	58.596
13) N-Nitrosodiethylamine	(1)	5.741	102	1273175	31.564
15) Ethyl methanesulfonate	(1)	6.179	109	1316983	31.002
16) Benzaldehyde	(1)	6.639	77	1819694	27.963
17)$Phenol-d6	(1)	6.744	99	6314845	59.267
18) Phenol	(1)	6.761	94	3236472	29.578
19) Aniline	(1)	6.796	93	4114270	30.434
20) a-methylstyrene	(1)	6.872	118	942188	29.835
22) bis(2-Chloroethyl)ether	(1)	6.907	93	2685572	29.330
23) 2-Chlorophenol	(1)	6.960	128	2348162	29.710
24) 1,3-Dichlorobenzene	(1)	7.187	146	2396047	29.544
25)*1,4-Dichlorobenzene-d4	(1)	7.274	152	266541	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	2430375	29.608
97) Isosafrole	(3)			1828955	29.897
27) Benzyl alcohol	(1)	7.490	108	1534140	29.605
28) 1,2-Dichlorobenzene	(1)	7.519	146	2288379	29.369
31) 2-Methylphenol	(1)	7.653	108	2196761	29.841
30) Indene	(1)	7.659	115	3404549	28.632
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.706	45	3487647	29.307
34) bis(2-Chloroisopropyl)ether	(1)	7.706	45	3487647	29.307
35) N-Nitrosopyrrolidine	(1)	7.869	100	1267435	30.303
36) Acetophenone	(1)	7.892	105	3125722	28.872
37) 4-Methylphenol	(1)	7.898	108	2212428	28.778
38) N-Nitroso-di-n-propylamine	(1)	7.915	70	1780553	28.842
39) N-Nitrosomorpholine	(1)	7.933	56	1649869	28.825
40) o-Toluidine	(1)	7.945	106	3631808	28.947
43) Hexachloroethane	(1)	8.032	117	1010586	28.938
120) 2,4_2,6-Dinitrotoluenes	(3)			2245050	62.648
44)$Nitrobenzene-d5	(2)	8.119	82	5233151	57.423
45) Nitrobenzene	(2)	8.143	77	2633383	28.610
48) N-Nitrosopiperidine	(2)	8.376	114	1217432	29.668
50) Isophorone	(2)	8.516	82	4913315	29.665
51) 2-Nitrophenol	(2)	8.627	139	1227182	30.542

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.714	107	2343768	29.841
146) Diallate trans/cis	(4)			2185198	30.210
57) O,O,O-Triethylphosphorothioate	(2)	8.836	198	986174	29.191
55) bis(2-Chloroethoxy)methane	(2)	8.877	93	2968367	28.205
56) Benzoic acid	(2)	8.900	105	1715227	32.866
60) 2,4-Dichlorophenol	(2)	9.000	162	1753886	29.649
62) 1,2,4-Trichlorobenzene	(2)	9.134	180	1769494	28.971
65)*Naphthalene-d8	(2)	9.215	136	998194	5.000
66) Naphthalene	(2)	9.256	128	6141065	27.662
67) 4-Chloroaniline	(2)	9.349	127	2578652	28.855
68) 2,6-Dichlorophenol	(2)	9.361	162	1617200	29.061
69) Hexachloropropene	(2)	9.396	213	1143242	30.180
71) Hexachlorobutadiene	(2)	9.460	225	948650	29.241
75) Quinoline	(2)	9.786	129	4021008	28.550
77) N-Nitrosodi-n-butylamine	(2)	9.915	84	2140895	34.270
76) Caprolactam	(2)	9.926	113	765841A	30.225
80) 4-Chloro-3-methylphenol	(2)	10.142	107	1945474	29.577
82) Safrole	(2)	10.241	162	1558988	29.303
83) 2-Methylnaphthalene	(2)	10.363	142	4039909	28.816
84) 1-Methylnaphthalene	(2)	10.515	142	3776815	28.368
85) Hexachlorocyclopentadiene	(3)	10.620	237	1032323	30.536
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	1601561	29.193
88) cis-Isosafrole	(3)	10.707	162	288260	5.155
90) 2,4,6-Trichlorophenol	(3)	10.818	196	1165729	30.549
92) 2,4,5-Trichlorophenol	(3)	10.871	196	1211369	30.407
93)$2-Fluorobiphenyl	(3)	10.970	172	7479519	53.355
94) trans-Isosafrole	(3)	11.075	162	1540695	24.749
95) 1,1'-Biphenyl	(3)	11.127	154	4534534	28.008
96) 2-Chloronaphthalene	(3)	11.145	162	3455633	28.082
98) 1-Chloronaphthalene	(3)	11.174	162	3330651	28.820
99) Diphenyl ether	(3)	11.302	170	2480494	28.948
100) 2-Nitroaniline	(3)	11.314	138	1294334	30.650
104) 1,4-Naphthoquinone	(3)	11.430	158	1557503	30.285
105) 1,4-Dinitrobenzene	(3)	11.547	168	709750	31.476
106) Dimethylphthalate	(3)	11.634	163	3894233	29.501
107) 1,3-Dinitrobenzene	(3)	11.652	168	780069	31.284
108) 2,6-Dinitrotoluene	(3)	11.704	165	991977	31.738
109) Acenaphthylene	(3)	11.774	152	5318049	29.081
112) 3-Nitroaniline	(3)	11.931	138	1127245	32.500
113)*Acenaphthene-d10	(3)	11.972	164	450180	5.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.019	153	3606274	28.573
115) 2,4-Dinitrophenol	(3)	12.077	184	738933	33.009
116) 4-Nitrophenol	(3)	12.170	109	758931	33.295
117) Pentachlorobenzene	(3)	12.194	250	1232818	28.551
119) Dibenzofuran	(3)	12.252	168	4599197	27.171
118) 2,4-Dinitrotoluene	(3)	12.252	165	1253073	30.155
121) 1-Naphthylamine	(3)	12.357	143	3825889	30.166
122) 2,3,4,6-Tetrachlorophenol	(3)	12.409	232	900983	31.208
123) 2-Naphthylamine	(3)	12.456	143	3679138	29.879
124) Diethylphthalate	(3)	12.584	149	4209846	30.599
126) Fluorene	(3)	12.677	166	3730932	27.968
125) Thionazin	(3)	12.683	107	750060	28.739
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	1768441	28.213
128) 5-Nitro-o-toluidine	(3)	12.707	152	1213187	30.237
129) 4-Nitroaniline	(3)	12.718	138	1139796	30.236
130) 4,6-Dinitro-2-methylphenol	(4)	12.759	198	841049	31.425
132) NDPA as diphenylamine	(4)	12.846	169	3450983	29.748
131) N-Nitrosodiphenylamine	(4)	12.846	169	3450983	29.748
134) 1,2-Diphenylhydrazine	(4)	12.893	77	4733011	29.441
135)$2,4,6-Tribromophenol	(3)	12.981	330	843334	62.450
137) Tetraethyldithiopyrophosphate	(4)	13.068	97	812816	30.654
140) Diallate (peak 1)	(4)	13.220	86	1597711	22.205
141) Phorate	(4)	13.231	75	2998606	30.235
142) Phenacetin	(4)	13.254	108	2358096	31.057
143) 4-Bromophenyl-phenylether	(4)	13.307	248	968018	29.947
144) Diallate (peak 2)	(4)	13.324	86	587487	8.002
145) Hexachlorobenzene	(4)	13.365	284	987028	29.071
147) Dimethoate	(4)	13.441	87	2177936	29.981
148) Atrazine	(4)	13.534	200	995866	27.582
149) Pentachlorophenol	(4)	13.628	266	748482	30.977
150) 4-Aminobiphenyl	(4)	13.639	169	3508468	27.818
151) Pentachloronitrobenzene	(4)	13.645	237	458221	30.261
152) Pronamide	(4)	13.732	173	1918667	30.275
153)*Phenanthrene-d10	(4)	13.872	188	856314	5.000
154) Dinoseb	(4)	13.878	211	1157232	32.099
155) Phenanthrene	(4)	13.907	178	5457830	28.025
157) Anthracene	(4)	13.977	178	5650817	28.966
163) Carbazole	(4)	14.193	167	5553217	29.066
164) Methyl parathion	(4)	14.397	109	1780336	31.050
165) Di-n-butylphthalate	(4)	14.712	149	7037911	28.498

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

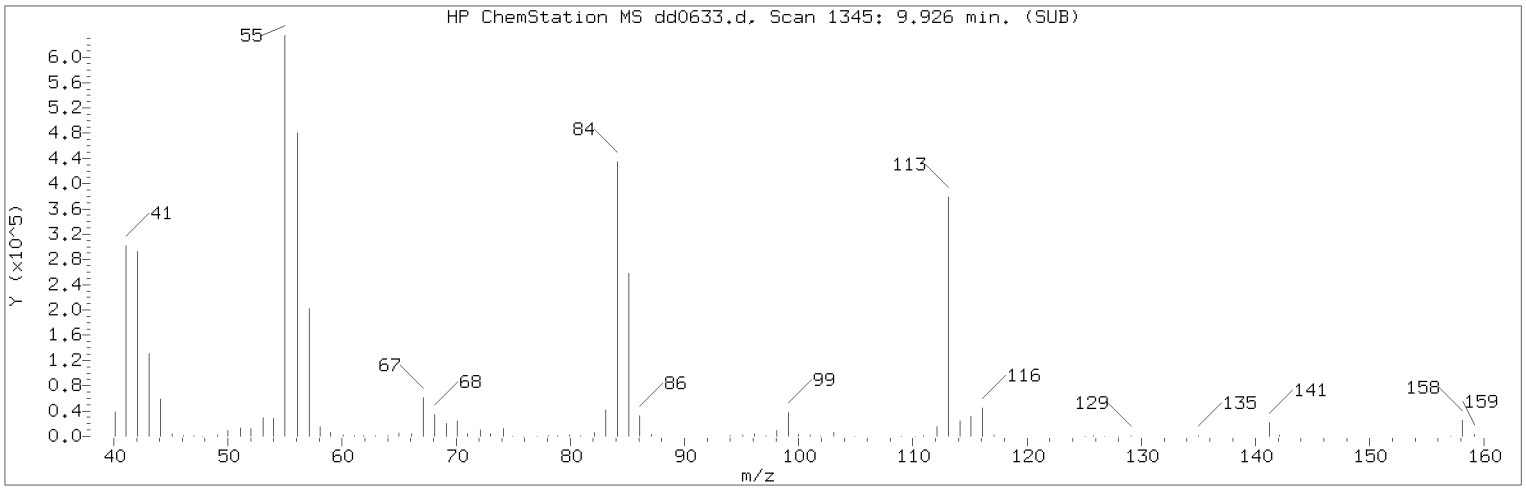
Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.962	109	1073473	32.426
168) 4-Nitroquinoline-1-oxide	(4)	14.986	190	813029	34.157
222) Total PAHs	(6)			93914286	513.792
169) Octachlorostyrene	(4)	15.324	308	405099	30.550
171) Isodrin	(4)	15.382	193	727969	30.410
173) Fluoranthene	(4)	15.609	202	6556956	29.689
174) Benzidine	(5)	15.848	184	11768999	81.321
175)*Pyrene-d10	(5)	15.930	212	854387	5.000
177) Pyrene	(5)	15.965	202	6533429	27.736
179)$Terphenyl-d14	(5)	16.250	244	7066377	54.400
182) p-Dimethylaminoazobenzene	(5)	16.478	225	1252021	31.218
185) Chlorobenzilate	(5)	16.571	139	2209302	30.159
187) 3,3'-Dimethylbenzidine	(5)	17.055	212	4561165	31.098
188) Butylbenzylphthalate	(5)	17.107	149	3430574	29.791
191) 2-Acetylaminofluorene	(5)	17.492	181	2936454	32.215
193) 3,3'-Dichlorobenzidine	(5)	18.005	252	2232081	30.277
195) Benzo(a)anthracene	(5)	18.016	228	5332125	28.968
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.022	231	1190992	29.980
196) Chrysene	(5)	18.086	228	5536034	28.637
199) bis(2-Ethylhexyl)phthalate	(5)	18.186	149	4874207	29.940
203) 6-Methylchrysene	(5)	18.891	242	4172945	30.109
205) Di-n-octylphthalate	(6)	19.363	149	8521324	29.662
206) Benzo(b)fluoranthene	(6)	19.905	252	5954672	30.936
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.905	256	2731918	29.969
208) Benzo(k)fluoranthene	(6)	19.957	252	5656555	29.038
211) Benzo(a)pyrene	(6)	20.435	252	5749931	31.262
213)*Perylene-d12	(6)	20.511	264	813551	5.000
215) 3-Methylcholanthrene	(6)	21.001	268	3096869	31.972
217) Dibenz(a,h)acridine	(6)	21.828	279	4310806	30.443
218) Dibenz(a,j)acridine	(6)	21.916	279	4460809	29.199
219) Indeno(1,2,3-cd)pyrene	(6)	22.190	276	4977180M	31.533
220) Dibenz(a,h)anthracene	(6)	22.231	278	5060091	30.283
221) Benzo(g,h,i)perylene	(6)	22.627	276	4835622	28.411

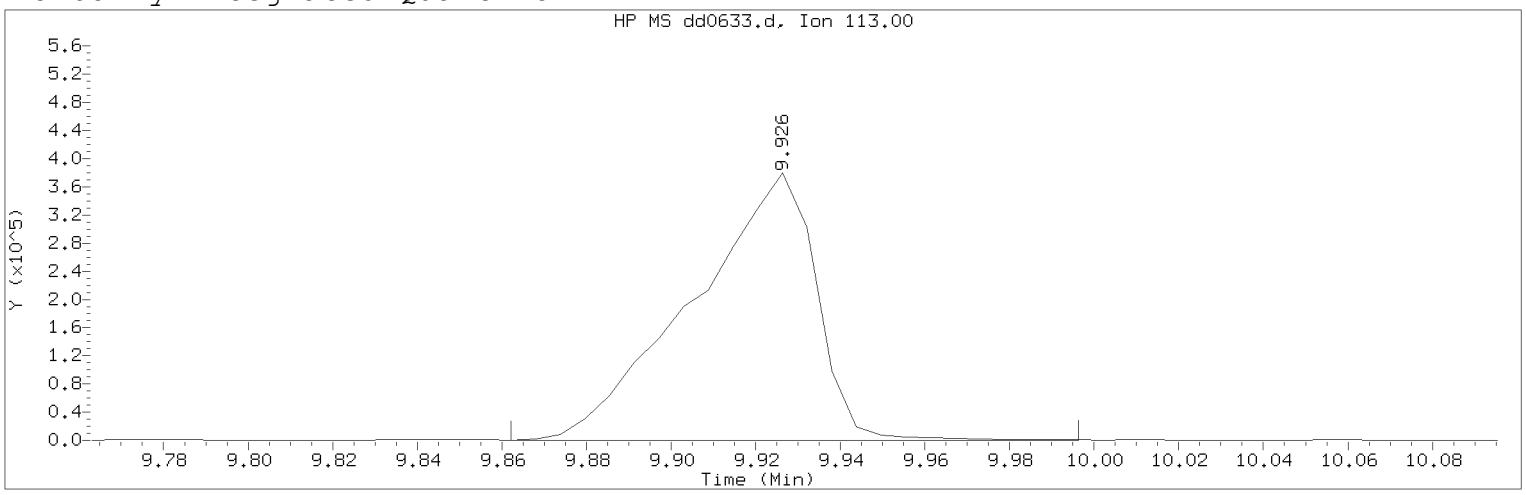
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

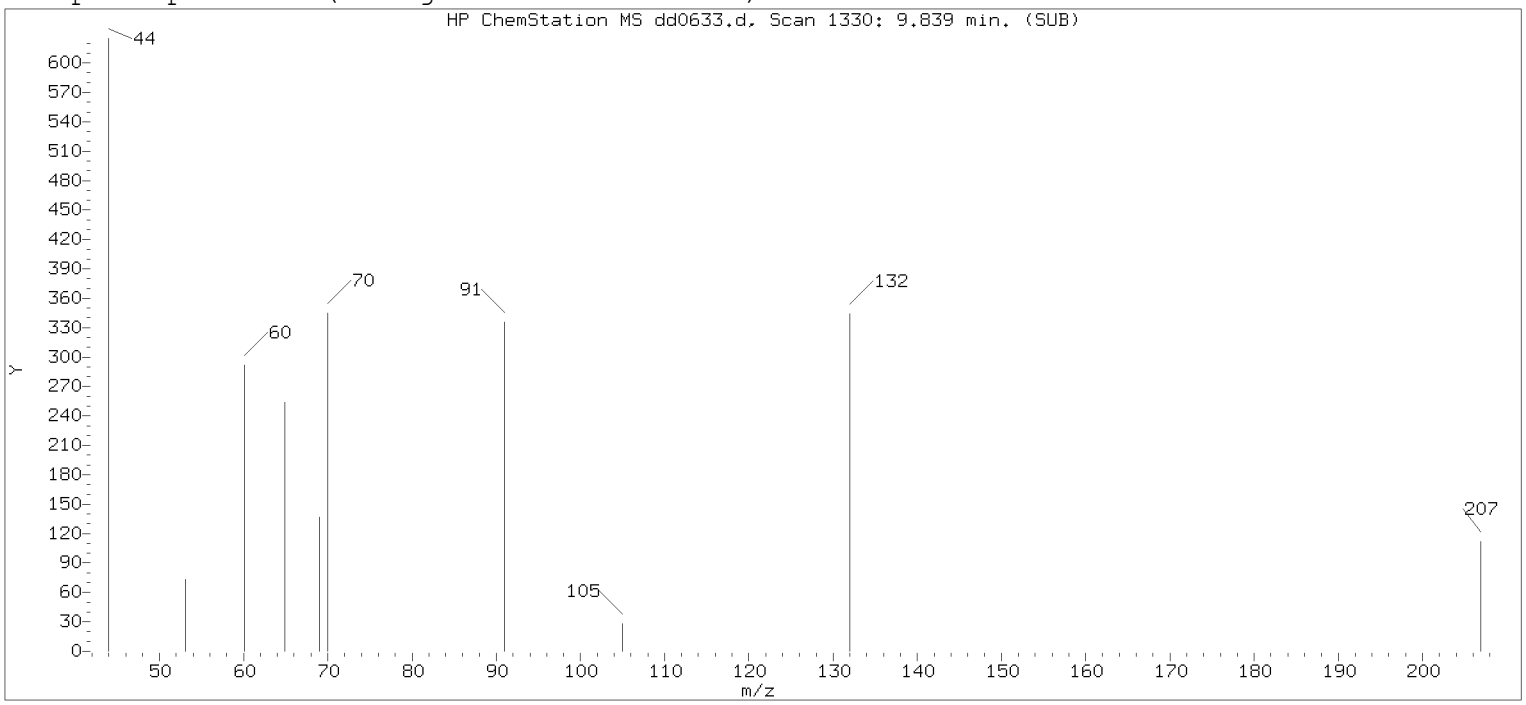
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1345
Retention Time (minutes) : 9.926
Quant Ion : 113.00
Area (flag) : 765841A
On-Column Amount (ng/ul) : 30.2249
Integration start scan : 1333 Integration stop scan: 1356
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

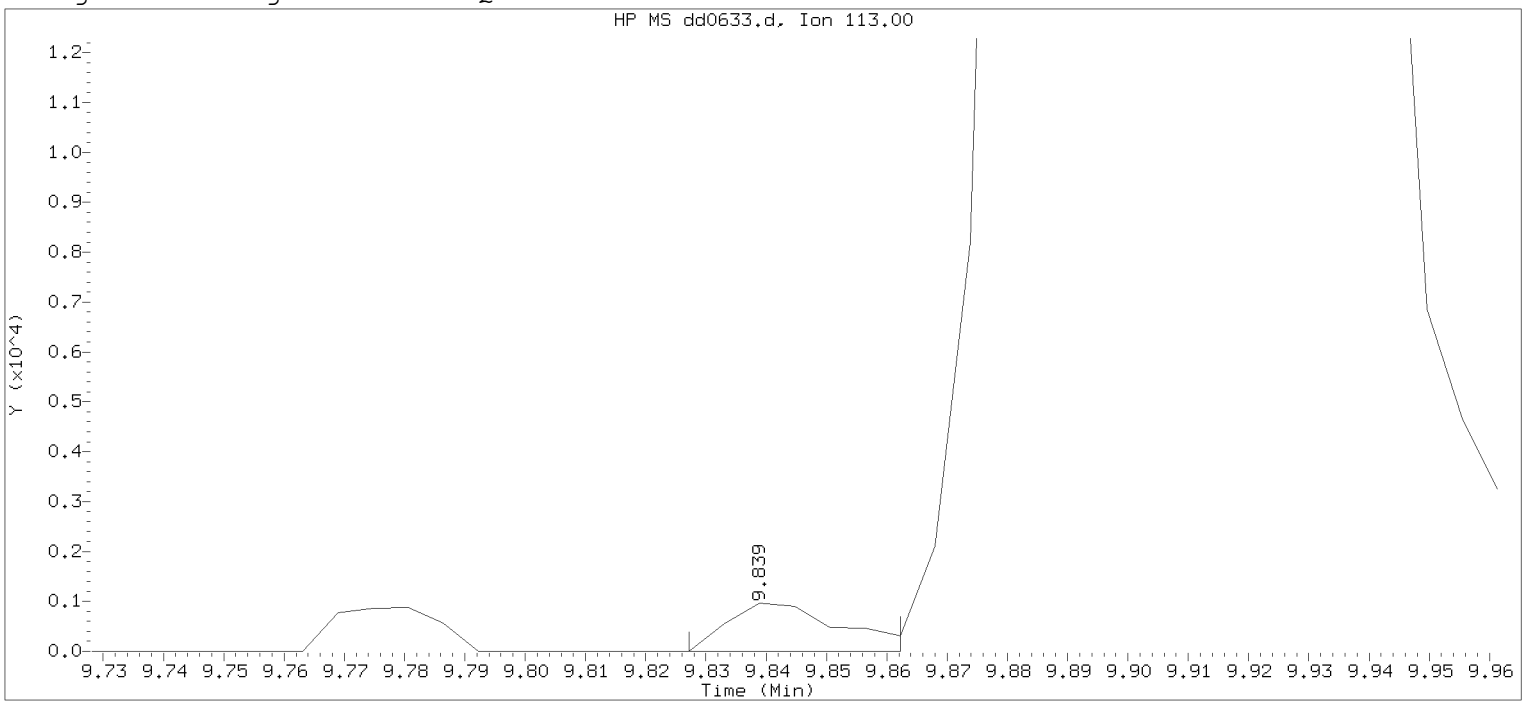
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

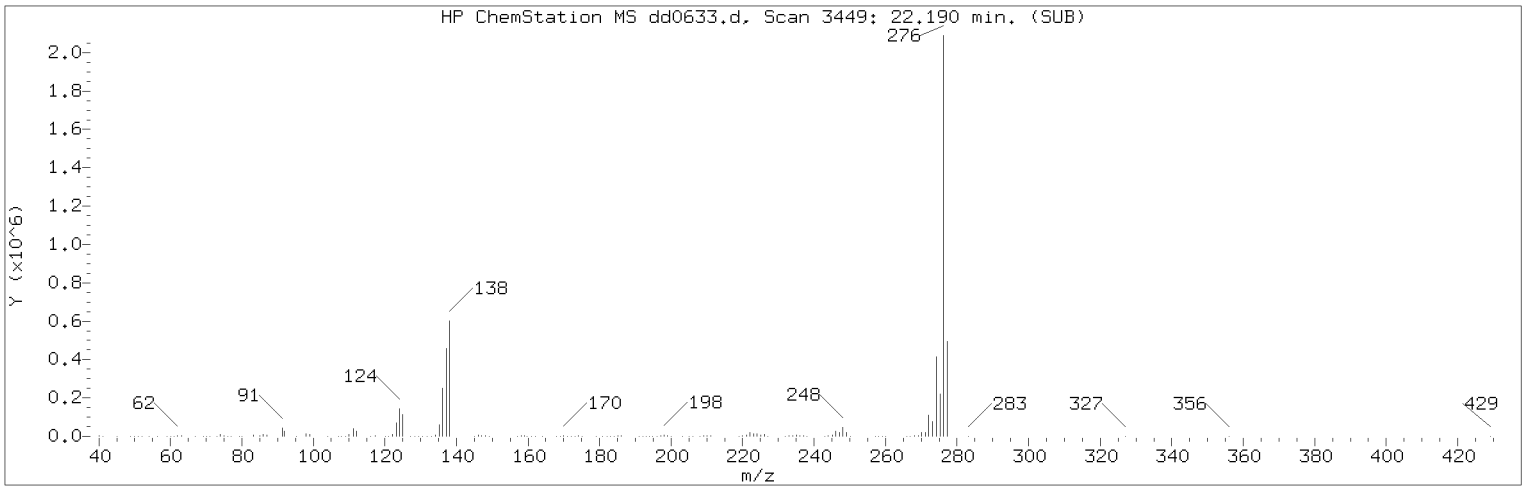
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 20:21
Date, time and analyst ID of latest file update: 15-Apr-2020 20:21 Automation

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

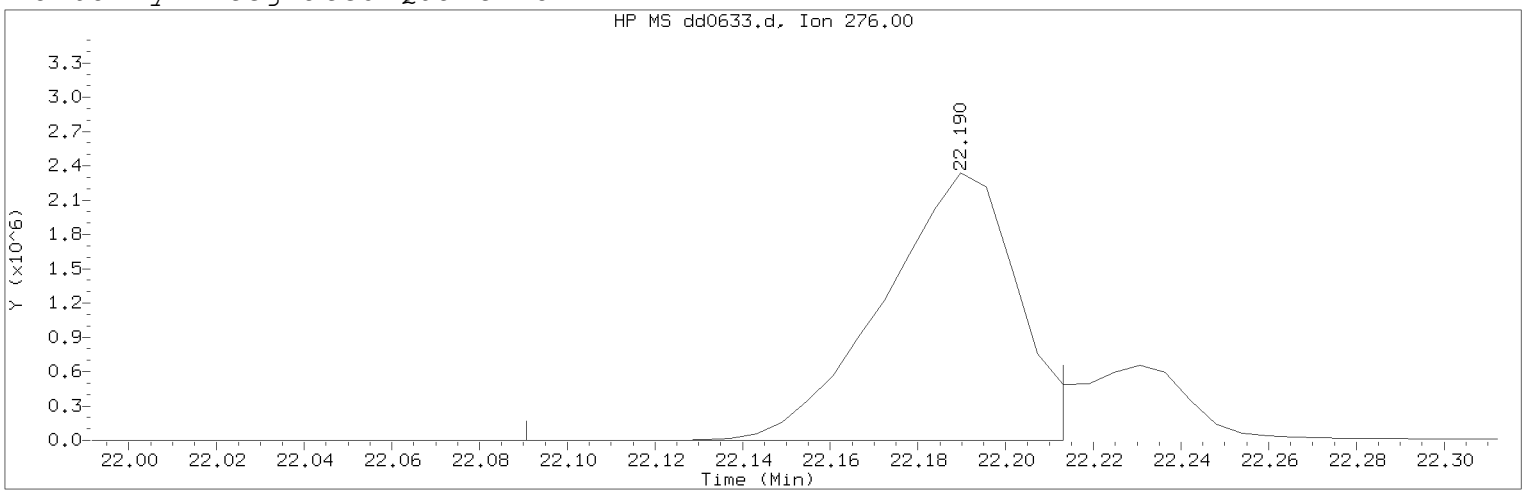
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1330		
Retention Time (minutes)	: 9.839		
Quant Ion	: 113.00		
Area	: 1228		
On-column Amount (ng/ul)	: 0.0603		
Integration start scan	: 1327	Integration stop scan:	1333
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: emonborne

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

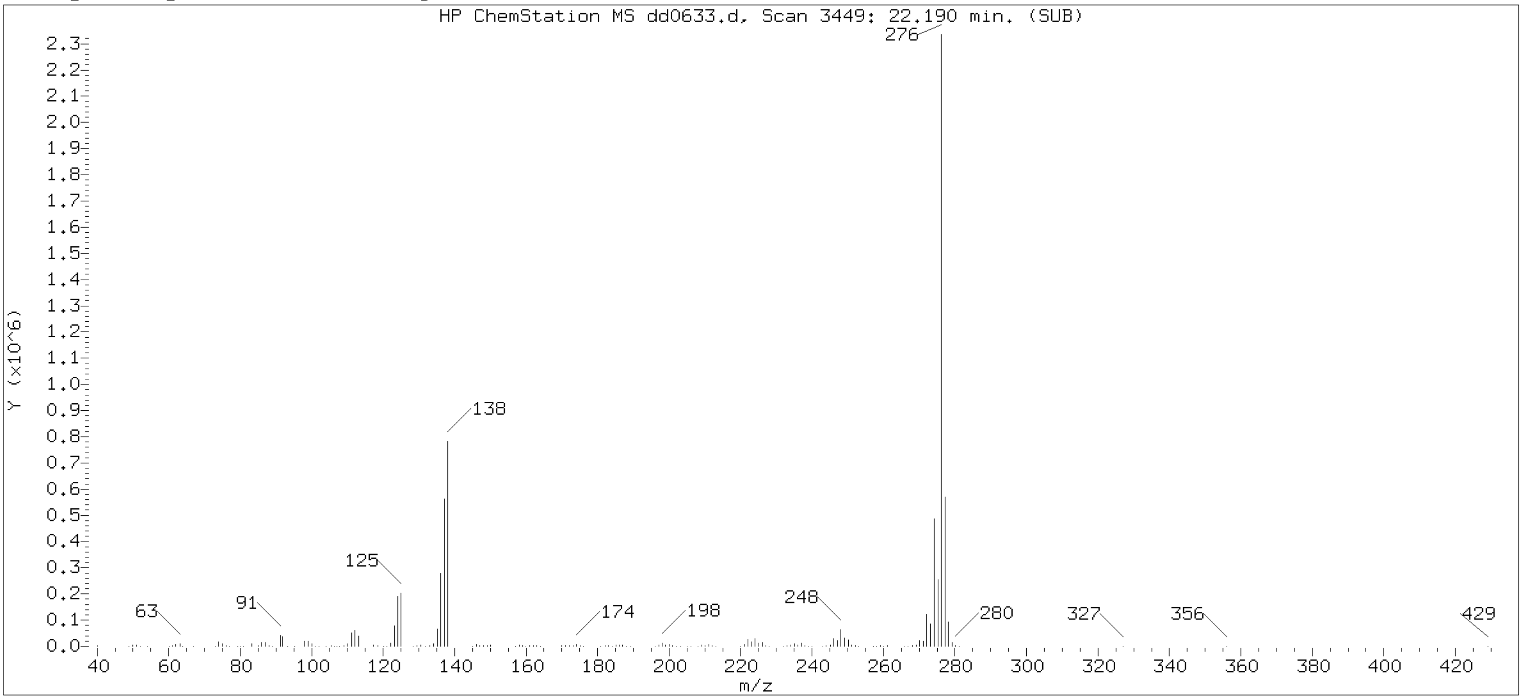
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3449
Retention Time (minutes) : 22.190
Quant Ion : 276.00
Area (flag) : 4977180M
On-Column Amount (ng/ul) : 31.5330
Integration start scan : 3431 Integration stop scan: 3452
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

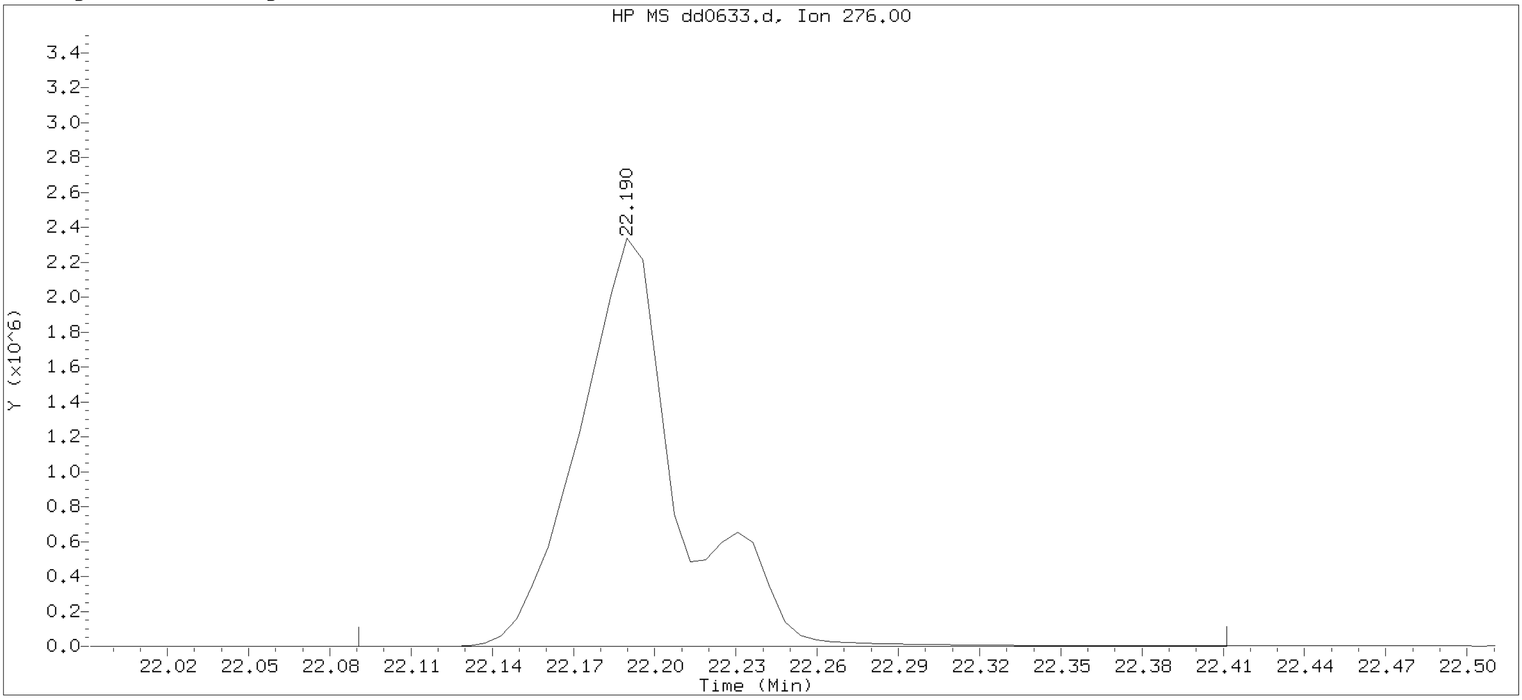
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



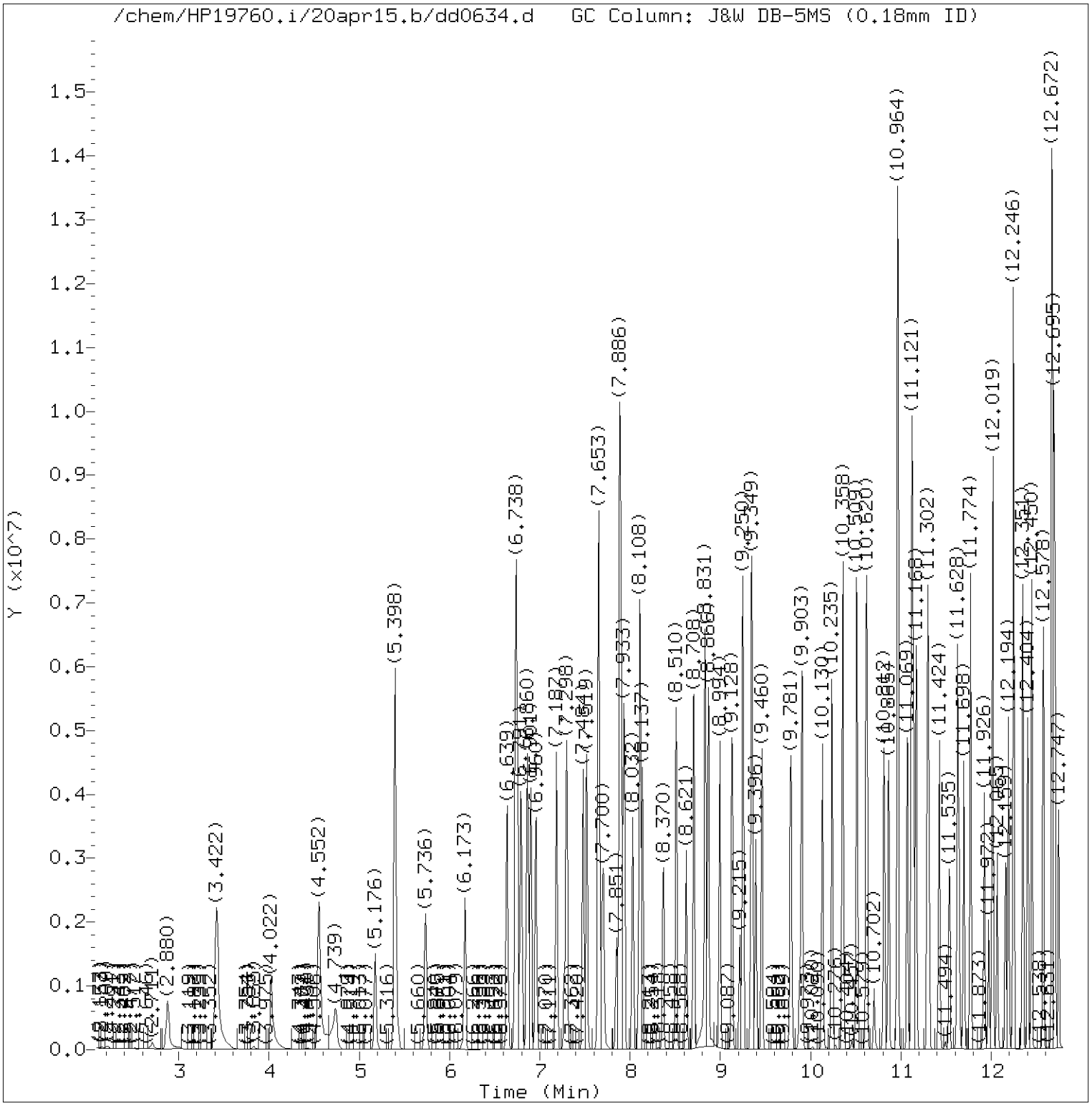
Data File: /chem/HP19760.i/20apr15.b/dd0633.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 19:46 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 20:21
Date, time and analyst ID of latest file update: 15-Apr-2020 20:21 Automation

Sample Name: SSTD030 Lab Sample ID: rvSTD0940

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3449
Retention Time (minutes) : 22.190
Quant Ion : 276.00
Area : 6077915
On-column Amount (ng/ul) : 35.2037
Integration start scan : 3431 Integration stop scan: 3486
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

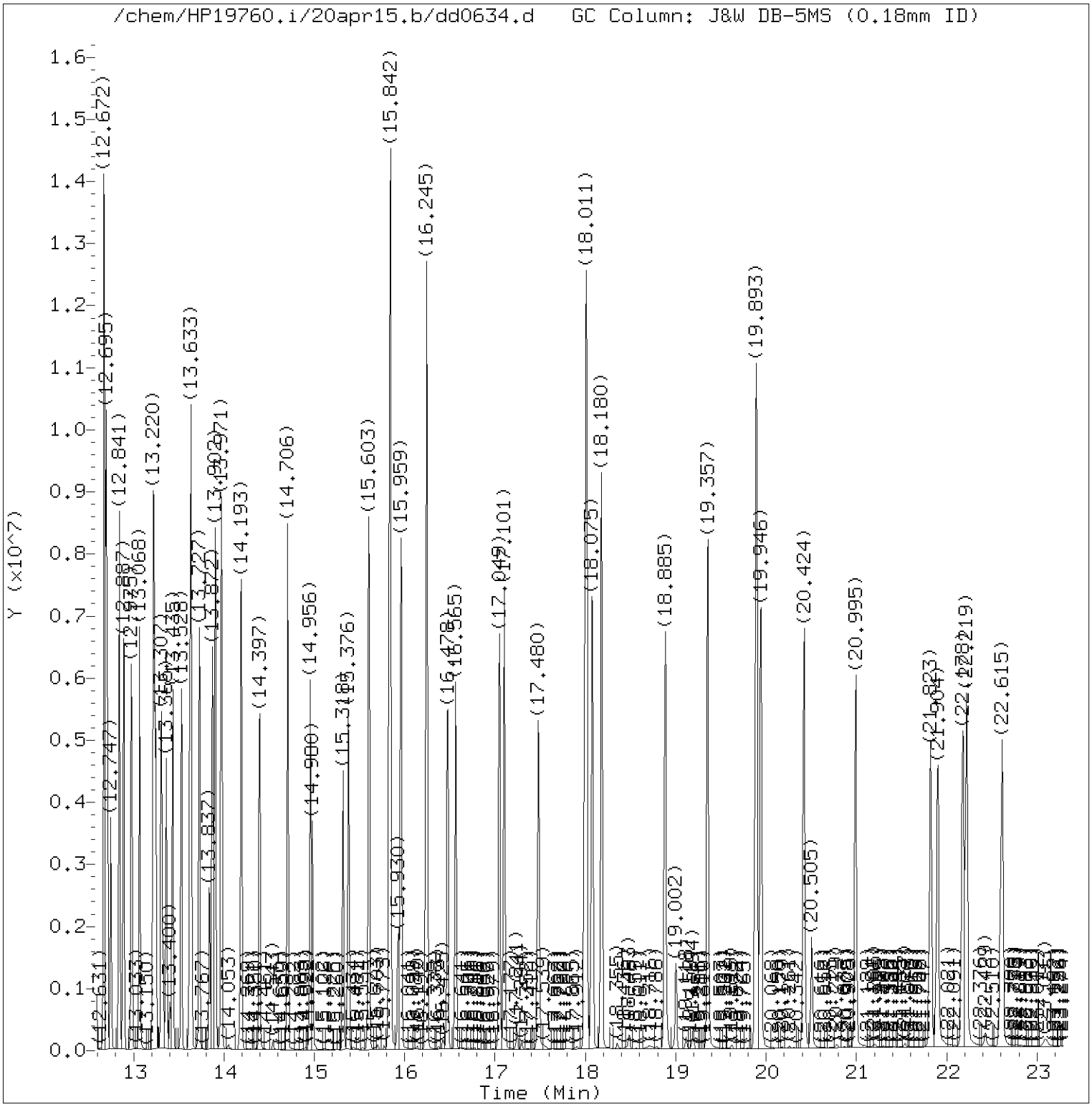
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.880	88	711145	20.207
4) N-Nitrosodimethylamine	(1)	3.404	74	1120010	20.610
5) Pyridine	(1)	3.427	79	1935343	20.525
7) 2-Picoline	(1)	4.552	93	1973317	20.550
8) N-Nitrosomethylethylamine	(1)	4.739	88	845968	20.583
9) Methyl methanesulfonate	(1)	5.176	80	909905	20.676
11)$2-Fluorophenol	(1)	5.398	112	3154731	41.088
42) Total Cresols	(1)			2965087	40.860
13) N-Nitrosodiethylamine	(1)	5.736	102	818080	21.031
15) Ethyl methanesulfonate	(1)	6.173	109	864952	21.113
16) Benzaldehyde	(1)	6.639	77	1332252	21.229
17)$Phenol-d6	(1)	6.732	99	4204583	40.919
18) Phenol	(1)	6.756	94	2148813	20.363
19) Aniline	(1)	6.791	93	2722184	20.880
20) a-methylstyrene	(1)	6.866	118	644944	21.177
22) bis(2-Chloroethyl)ether	(1)	6.901	93	1782204	20.183
23) 2-Chlorophenol	(1)	6.960	128	1555988	20.414
24) 1,3-Dichlorobenzene	(1)	7.187	146	1577684	20.172
25)*1,4-Dichlorobenzene-d4	(1)	7.274	152	257045	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	1597736	20.184
97) Isosafrole	(3)			1228811	20.003
27) Benzyl alcohol	(1)	7.484	108	1046635	20.944
28) 1,2-Dichlorobenzene	(1)	7.519	146	1527063	20.322
31) 2-Methylphenol	(1)	7.647	108	1470749	20.717
30) Indene	(1)	7.653	115	2383553	20.786
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.700	45	2316314	20.183
34) bis(2-Chloroisopropyl)ether	(1)	7.700	45	2316314	20.183
35) N-Nitrosopyrrolidine	(1)	7.851	100	840694	20.843
36) Acetophenone	(1)	7.886	105	2079938	19.922
37) 4-Methylphenol	(1)	7.892	108	1494338	20.155
38) N-Nitroso-di-n-propylamine	(1)	7.904	70	1205843	20.254
39) N-Nitrosomorpholine	(1)	7.921	56	1106446	20.045
40) o-Toluidine	(1)	7.933	106	2438303	20.152
43) Hexachloroethane	(1)	8.032	117	675441	20.055
120) 2,4_2,6-Dinitrotoluenes	(3)			1499014	41.656
44)$Nitrobenzene-d5	(2)	8.108	82	3532596	39.303
45) Nitrobenzene	(2)	8.137	77	1770399	19.502
48) N-Nitrosopiperidine	(2)	8.370	114	806195	19.920
50) Isophorone	(2)	8.510	82	3269622	20.016
51) 2-Nitrophenol	(2)	8.621	139	805382	20.324

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.708	107	1547688	19.980
146) Diallate trans/cis	(4)			1454125	19.954
57) O,O,O-Triethylphosphorothioate	(2)	8.831	198	658219	19.755
56) Benzoic acid	(2)	8.860	105	1122599	21.810
55) bis(2-Chloroethoxy)methane	(2)	8.871	93	2027463	19.533
60) 2,4-Dichlorophenol	(2)	8.994	162	1159673	19.877
62) 1,2,4-Trichlorobenzene	(2)	9.134	180	1199473	19.912
65)*Naphthalene-d8	(2)	9.215	136	984471	5.000
66) Naphthalene	(2)	9.250	128	4191003	19.141
67) 4-Chloroaniline	(2)	9.344	127	1739550	19.737
68) 2,6-Dichlorophenol	(2)	9.355	162	1082150	19.717
69) Hexachloropropene	(2)	9.396	213	750492	20.088
71) Hexachlorobutadiene	(2)	9.460	225	629495	19.674
75) Quinoline	(2)	9.781	129	2728701	19.644
76) Caprolactam	(2)	9.897	113	505694	20.236
77) N-Nitrosodi-n-butylamine	(2)	9.909	84	1426879	23.159
80) 4-Chloro-3-methylphenol	(2)	10.130	107	1301243	20.058
82) Safrole	(2)	10.235	162	1047227	19.958
83) 2-Methylnaphthalene	(2)	10.358	142	2719341	19.667
84) 1-Methylnaphthalene	(2)	10.509	142	2565605	19.539
85) Hexachlorocyclopentadiene	(3)	10.614	237	681804	20.084
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	1076908	19.548
88) cis-Isosafrole	(3)	10.702	162	195097	3.474
90) 2,4,6-Trichlorophenol	(3)	10.812	196	779670	20.347
92) 2,4,5-Trichlorophenol	(3)	10.865	196	822745	20.566
93)$2-Fluorobiphenyl	(3)	10.964	172	5333413	37.888
94) trans-Isosafrole	(3)	11.075	162	1033714	16.536
95) 1,1'-Biphenyl	(3)	11.121	154	3155579	19.410
96) 2-Chloronaphthalene	(3)	11.139	162	2306588	18.667
98) 1-Chloronaphthalene	(3)	11.168	162	2296930	19.793
99) Diphenyl ether	(3)	11.296	170	1667939	19.385
100) 2-Nitroaniline	(3)	11.308	138	858749	20.251
104) 1,4-Naphthoquinone	(3)	11.424	158	1034048	20.023
105) 1,4-Dinitrobenzene	(3)	11.541	168	459953	20.313
106) Dimethylphthalate	(3)	11.628	163	2618732	19.756
107) 1,3-Dinitrobenzene	(3)	11.646	168	504025	20.129
108) 2,6-Dinitrotoluene	(3)	11.698	165	651029	20.743
109) Acenaphthylene	(3)	11.774	152	3634794	19.794
112) 3-Nitroaniline	(3)	11.926	138	739144	21.222
113)*Acenaphthene-d10	(3)	11.972	164	452057	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.019	153	2463196	19.435
115) 2,4-Dinitrophenol	(3)	12.065	184	477868	21.259
116) 4-Nitrophenol	(3)	12.159	109	496033	21.671
117) Pentachlorobenzene	(3)	12.194	250	820953	18.934
119) Dibenzofuran	(3)	12.246	168	3199788	18.825
118) 2,4-Dinitrotoluene	(3)	12.246	165	847985	20.322
121) 1-Naphthylamine	(3)	12.351	143	2560772	20.107
122) 2,3,4,6-Tetrachlorophenol	(3)	12.404	232	592350	20.433
123) 2-Naphthylamine	(3)	12.450	143	2494440	20.174
124) Diethylphthalate	(3)	12.578	149	2793181	20.217
125) Thionazin	(3)	12.672	107	510181	19.466
126) Fluorene	(3)	12.677	166	2574521	19.219
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	1205747	19.156
128) 5-Nitro-o-toluidine	(3)	12.701	152	813075	20.181
129) 4-Nitroaniline	(3)	12.712	138	762946	20.155
130) 4,6-Dinitro-2-methylphenol	(4)	12.747	198	553461	20.526
132) NDPA as diphenylamine	(4)	12.841	169	2326522	19.906
131) N-Nitrosodiphenylamine	(4)	12.841	169	2326522	19.906
134) 1,2-Diphenylhydrazine	(4)	12.887	77	3179993	19.634
135)$2,4,6-Tribromophenol	(3)	12.981	330	567489	41.849
137) Tetraethyldithiopyrophosphate	(4)	13.068	97	538946	20.175
140) Diallate (peak 1)	(4)	13.214	86	1071121	14.777
141) Phorate	(4)	13.225	75	2033476	20.352
142) Phenacetin	(4)	13.243	108	1557239	20.358
143) 4-Bromophenyl-phenylether	(4)	13.307	248	637453	19.575
144) Diallate (peak 2)	(4)	13.324	86	383004	5.178
145) Hexachlorobenzene	(4)	13.365	284	648805	18.968
147) Dimethoate	(4)	13.435	87	1461773	19.973
148) Atrazine	(4)	13.528	200	696654	19.152
149) Pentachlorophenol	(4)	13.622	266	492699	20.240
150) 4-Aminobiphenyl	(4)	13.633	169	2478515	19.506
151) Pentachloronitrobenzene	(4)	13.639	237	305101	20.000
152) Pronamide	(4)	13.727	173	1275691	19.980
153)*Phenanthrene-d10	(4)	13.872	188	862703	5.000
154) Dinoseb	(4)	13.872	211	758363	20.880
155) Phenanthrene	(4)	13.902	178	3738614	19.055
157) Anthracene	(4)	13.971	178	3901518	19.851
163) Carbazole	(4)	14.193	167	3811166	19.800
164) Methyl parathion	(4)	14.397	109	1202452	20.816
165) Di-n-butylphthalate	(4)	14.706	149	4939751	19.854

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$ = Compound is a surrogate standard.

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on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.956	109	711119	21.321
168) 4-Nitroquinoline-1-oxide	(4)	14.980	190	528980	22.059
222) Total PAHs	(6)			64068593	354.993
169) Octachlorostyrene	(4)	15.318	308	276360	20.687
171) Isodrin	(4)	15.376	193	479523	19.883
173) Fluoranthene	(4)	15.603	202	4499774	20.224
174) Benzidine	(5)	15.842	184	8314051	57.400
175)*Pyrene-d10	(5)	15.930	212	855101	5.000
177) Pyrene	(5)	15.959	202	4470250	18.962
179)$Terphenyl-d14	(5)	16.245	244	4929440	37.917
182) p-Dimethylaminoazobenzene	(5)	16.478	225	825451	20.565
185) Chlorobenzilate	(5)	16.565	139	1474035	20.105
187) 3,3'-Dimethylbenzidine	(5)	17.049	212	3103728	21.143
188) Butylbenzylphthalate	(5)	17.101	149	2283968	19.817
191) 2-Acetylaminofluorene	(5)	17.480	181	1887950	20.695
193) 3,3'-Dichlorobenzidine	(5)	17.993	252	1497443	20.295
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.011	231	785092	19.746
195) Benzo(a)anthracene	(5)	18.011	228	3616466	19.631
196) Chrysene	(5)	18.081	228	3730065	19.279
199) bis(2-Ethylhexyl)phthalate	(5)	18.180	149	3268153	20.058
203) 6-Methylchrysene	(5)	18.885	242	2784289	20.073
205) Di-n-octylphthalate	(6)	19.357	149	5804936	20.465
206) Benzo(b)fluoranthene	(6)	19.893	252	3884229	20.438
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.893	256	1797752	19.974
208) Benzo(k)fluoranthene	(6)	19.946	252	3827682	19.901
211) Benzo(a)pyrene	(6)	20.424	252	3813040	20.996
213)*Perylene-d12	(6)	20.505	264	803277	5.000
215) 3-Methylcholanthrene	(6)	20.995	268	2024235	21.166
217) Dibenz(a,h)acridine	(6)	21.823	279	2837827	20.297
218) Dibenz(a,j)acridine	(6)	21.904	279	3067803	20.338
219) Indeno(1,2,3-cd)pyrene	(6)	22.184	276	3499974M	22.458
220) Dibenz(a,h)anthracene	(6)	22.219	278	3505354	21.247
221) Benzo(g,h,i)perylene	(6)	22.615	276	3433167	20.429

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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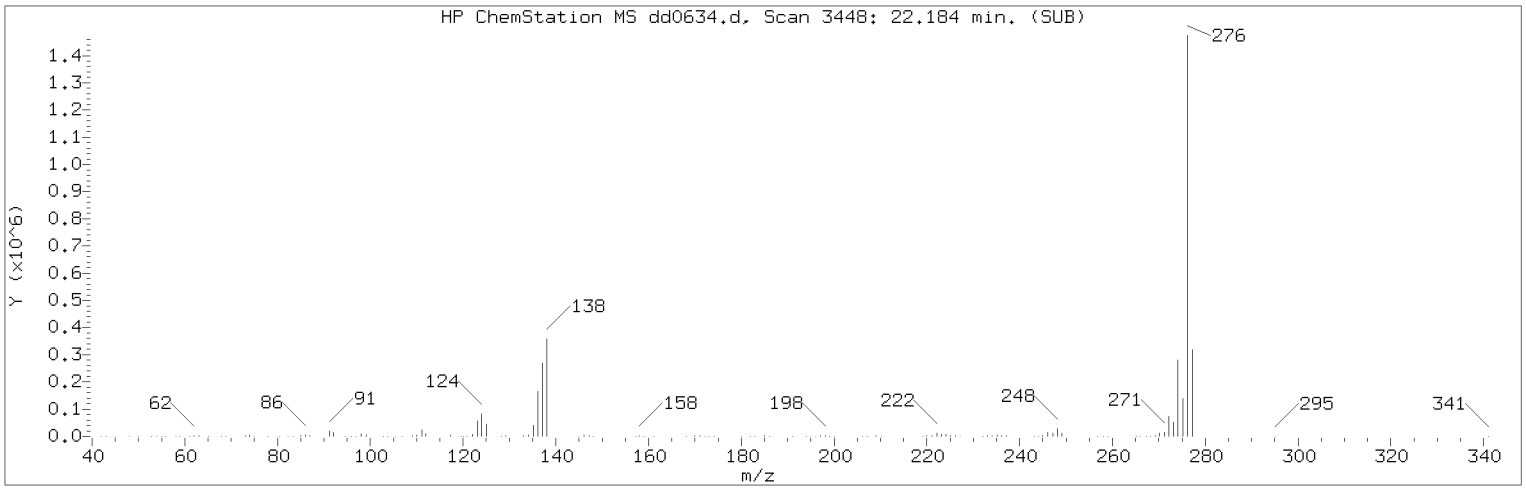
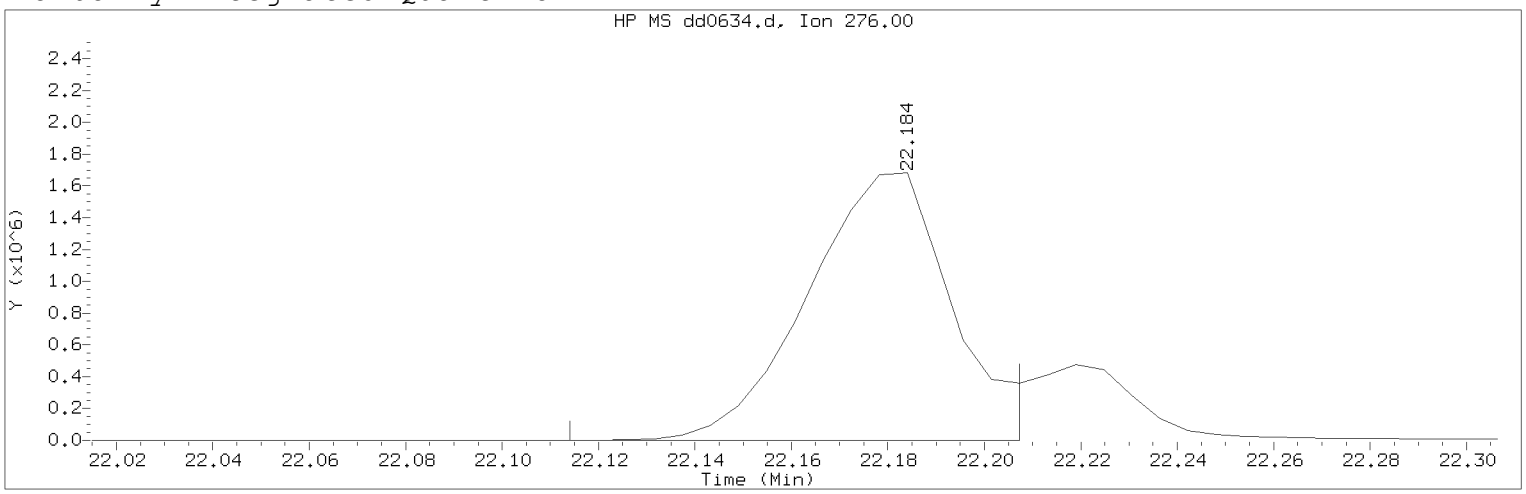
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

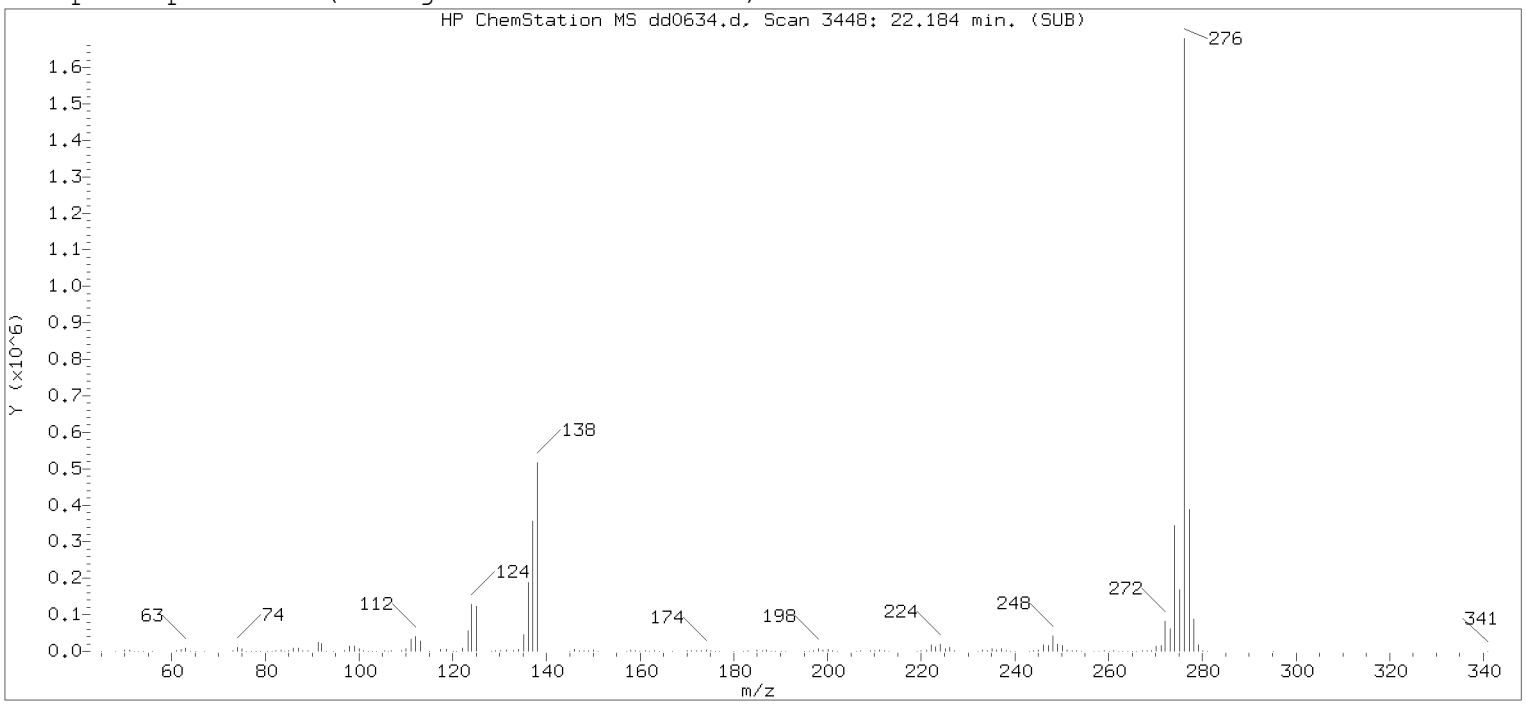
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3448
Retention Time (minutes) : 22.184
Quant Ion : 276.00
Area (flag) : 3499974M
On-Column Amount (ng/ul) : 22.4578
Integration start scan : 3435 Integration stop scan: 3451
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

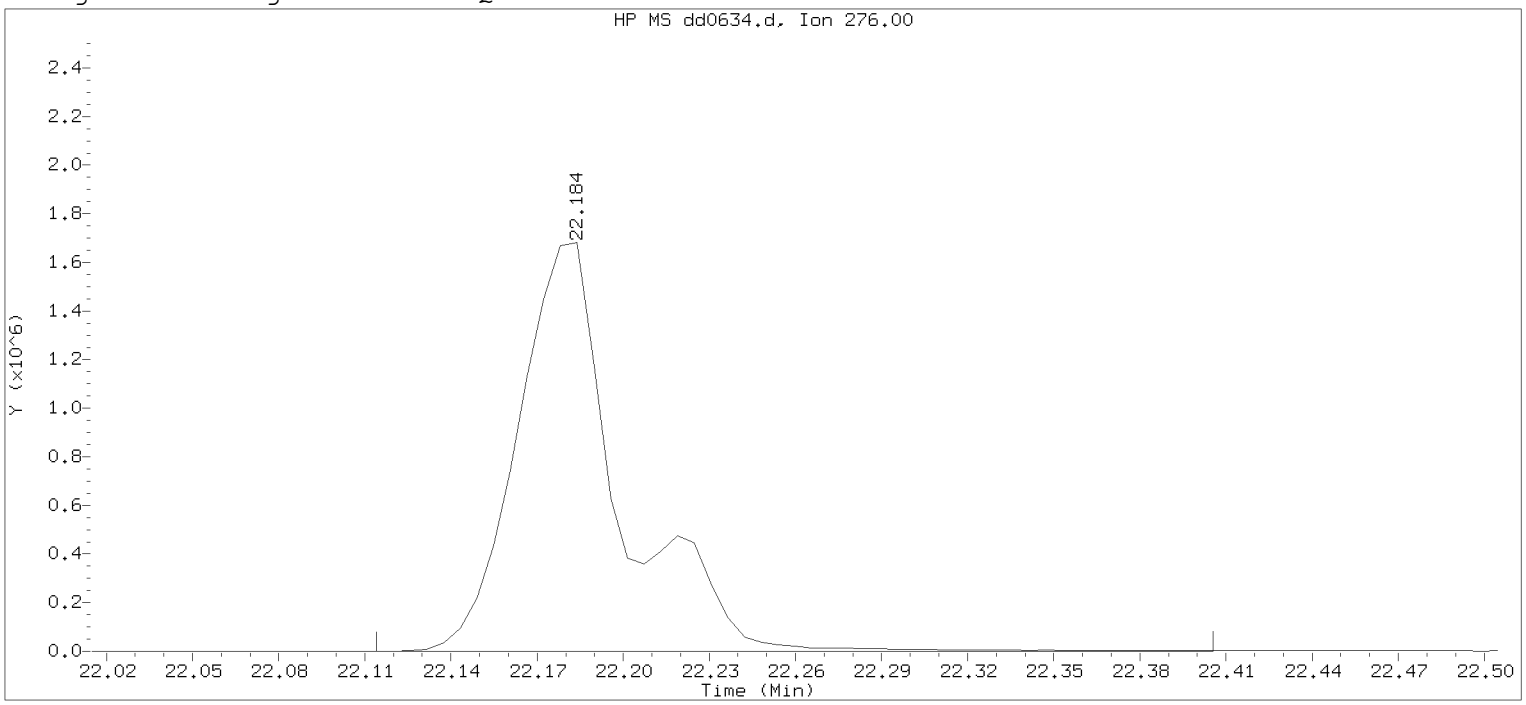
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



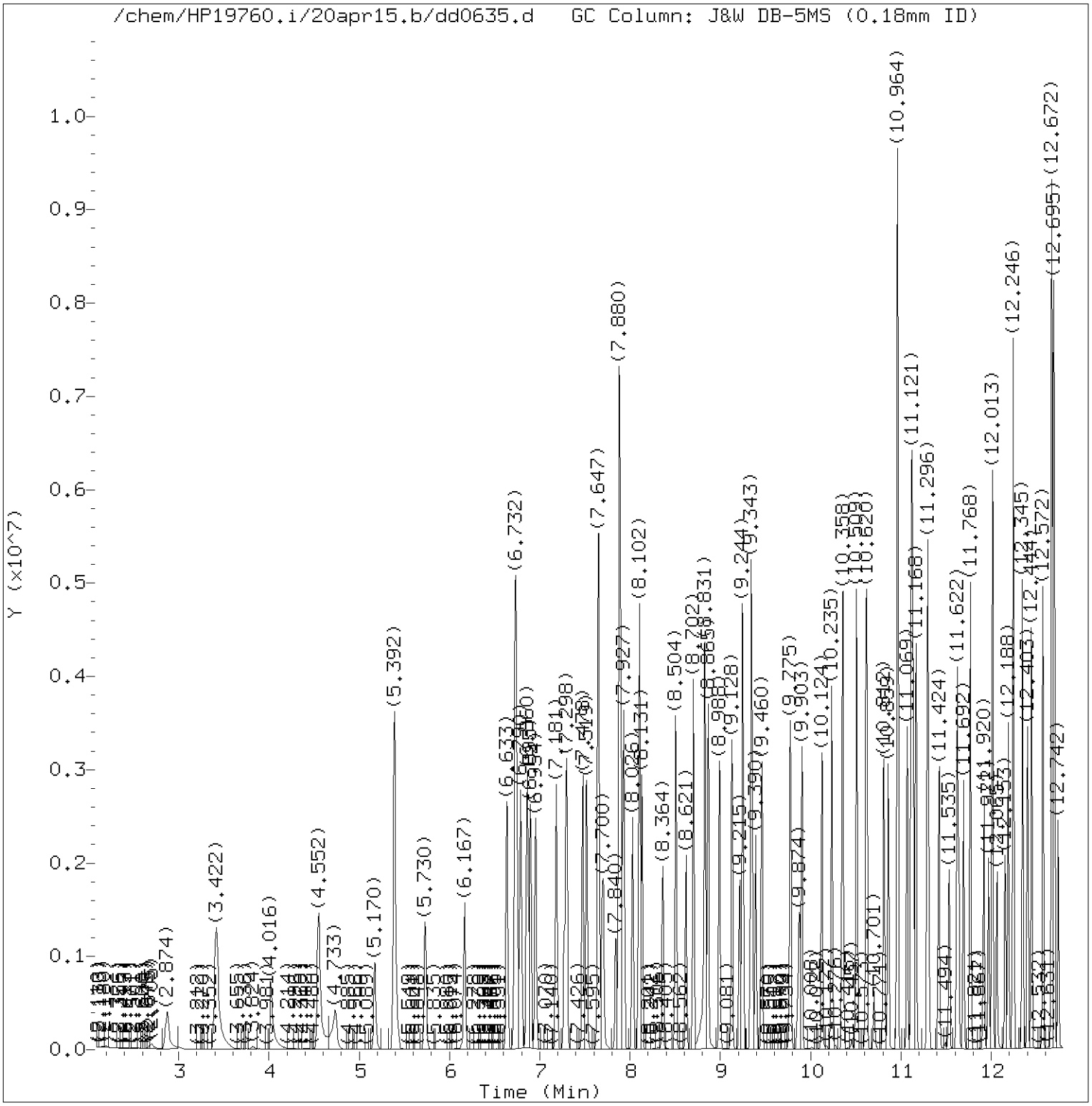
Data File: /chem/HP19760.i/20apr15.b/dd0634.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:14 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 20:48
Date, time and analyst ID of latest file update: 15-Apr-2020 20:48 Automation

Sample Name: SSTD020 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3448		
Retention Time (minutes)	: 22.184		
Quant Ion	: 276.00		
Area	: 4213548		
On-column Amount (ng/ul)	: 24.1857		
Integration start scan	: 3435	Integration stop scan:	3485
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

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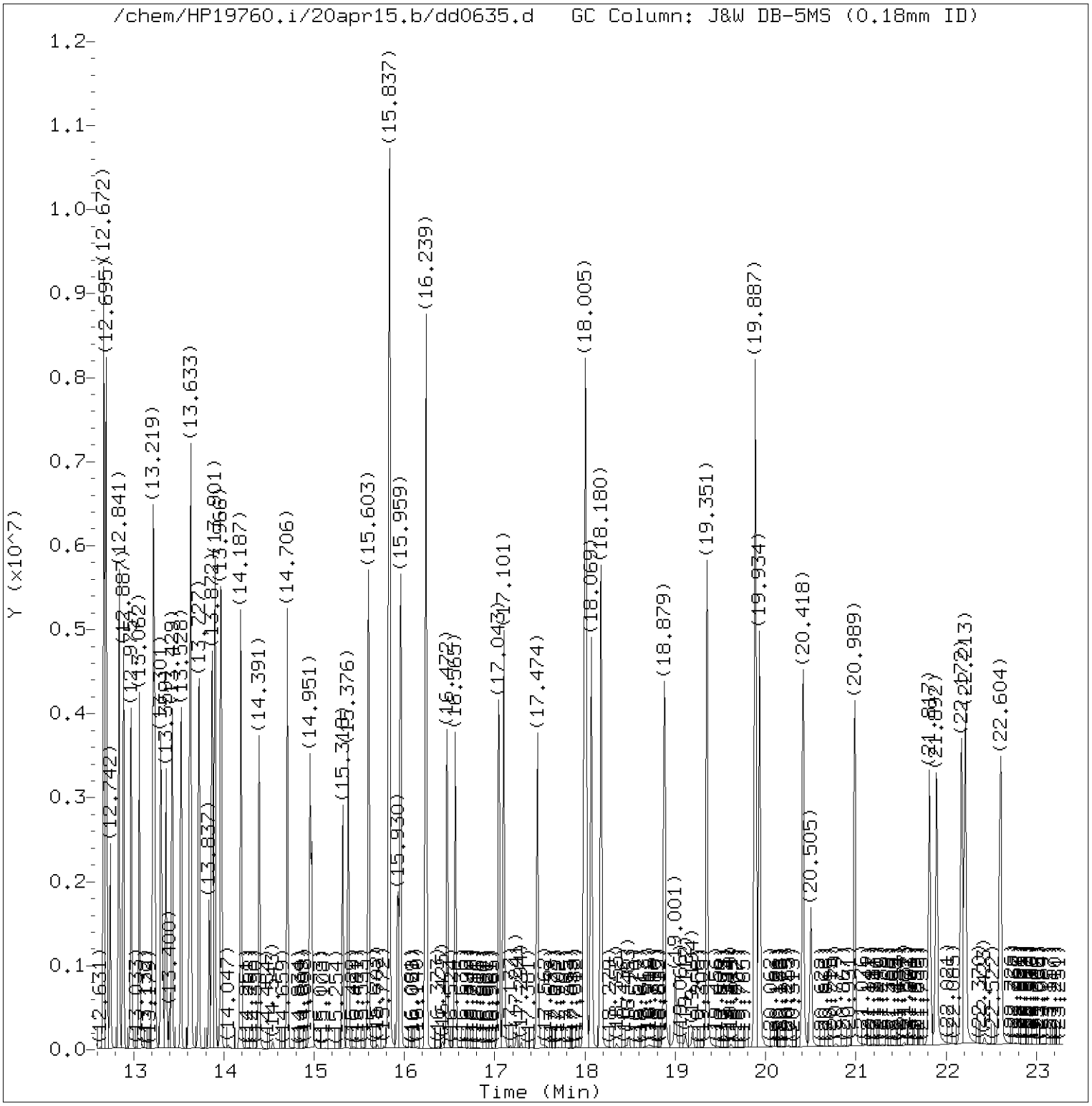
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

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on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.874	88	471899	12.147
4) N-Nitrosodimethylamine	(1)	3.398	74	724457	12.077
5) Pyridine	(1)	3.422	79	1239810	11.911
7) 2-Picoline	(1)	4.552	93	1277936	12.056
8) N-Nitrosomethylethylamine	(1)	4.733	88	544714	12.006
9) Methyl methanesulfonate	(1)	5.170	80	576002	11.857
11)$2-Fluorophenol	(1)	5.392	112	2087540	24.630
42) Total Cresols	(1)			1949423	24.336
13) N-Nitrosodiethylamine	(1)	5.730	102	526091	12.252
15) Ethyl methanesulfonate	(1)	6.167	109	554369	12.259
16) Benzaldehyde	(1)	6.633	77	928411	13.402
17)$Phenol-d6	(1)	6.726	99	2756474	24.302
18) Phenol	(1)	6.750	94	1410915	12.112
19) Aniline	(1)	6.790	93	1758087	12.216
20) a-methylstyrene	(1)	6.866	118	420265	12.501
22) bis(2-Chloroethyl)ether	(1)	6.895	93	1175976	12.065
23) 2-Chlorophenol	(1)	6.954	128	1030273	12.245
24) 1,3-Dichlorobenzene	(1)	7.187	146	1043176	12.083
25)*1,4-Dichlorobenzene-d4	(1)	7.268	152	283746	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	1062219	12.156
97) Isosafrole	(3)			803319	12.653
27) Benzyl alcohol	(1)	7.478	108	673709	12.213
28) 1,2-Dichlorobenzene	(1)	7.519	146	999692	12.052
31) 2-Methylphenol	(1)	7.641	108	956802	12.209
30) Indene	(1)	7.653	115	1567413	12.383
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.700	45	1513487	11.947
34) bis(2-Chloroisopropyl)ether	(1)	7.700	45	1513487	11.947
35) N-Nitrosopyrrolidine	(1)	7.845	100	543485	12.206
36) Acetophenone	(1)	7.880	105	1438272	12.480
37) 4-Methylphenol	(1)	7.886	108	992621	12.129
38) N-Nitroso-di-n-propylamine	(1)	7.898	70	798246	12.146
39) N-Nitrosomorpholine	(1)	7.910	56	731145	11.999
40) o-Toluidine	(1)	7.933	106	1615013	12.092
43) Hexachloroethane	(1)	8.026	117	449836	12.100
120) 2,4_2,6-Dinitrotoluenes	(3)			964750	25.941
44)$Nitrobenzene-d5	(2)	8.102	82	2325457	24.795
45) Nitrobenzene	(2)	8.131	77	1177434	12.430
48) N-Nitrosopiperidine	(2)	8.364	114	528134	12.506
50) Isophorone	(2)	8.504	82	2144181	12.580
51) 2-Nitrophenol	(2)	8.621	139	521846	12.620

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$ = Compound is a surrogate standard.

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on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.702	107	1012592	12.528
146) Diallate trans/cis	(4)			933792	12.410
57) O,O,O-Triethylphosphorothioate	(2)	8.831	198	427841	12.306
56) Benzoic acid	(2)	8.831	105	697414	12.985
55) bis(2-Chloroethoxy)methane	(2)	8.865	93	1358412	12.542
60) 2,4-Dichlorophenol	(2)	8.994	162	763000	12.533
62) 1,2,4-Trichlorobenzene	(2)	9.128	180	781877	12.439
65)*Naphthalene-d8	(2)	9.215	136	1027248	5.000
66) Naphthalene	(2)	9.244	128	2816810	12.329
67) 4-Chloroaniline	(2)	9.343	127	1162138	12.637
68) 2,6-Dichlorophenol	(2)	9.349	162	723032	12.625
69) Hexachloropropene	(2)	9.390	213	486684	12.484
71) Hexachlorobutadiene	(2)	9.460	225	417550	12.506
75) Quinoline	(2)	9.775	129	1790722	12.355
76) Caprolactam	(2)	9.874	113	335150	12.853
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	740444	11.517
80) 4-Chloro-3-methylphenol	(2)	10.124	107	855330	12.636
82) Safrole	(2)	10.235	162	684170	12.496
83) 2-Methylnaphthalene	(2)	10.358	142	1800295	12.478
84) 1-Methylnaphthalene	(2)	10.509	142	1693641	12.361
85) Hexachlorocyclopentadiene	(3)	10.614	237	448875	12.794
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	719225	12.633
88) cis-Isosafrole	(3)	10.701	162	125556	2.164
90) 2,4,6-Trichlorophenol	(3)	10.812	196	509944	12.877
92) 2,4,5-Trichlorophenol	(3)	10.859	196	531427	12.854
93)$2-Fluorobiphenyl	(3)	10.964	172	3597302	24.727
94) trans-Isosafrole	(3)	11.069	162	677763	10.491
95) 1,1'-Biphenyl	(3)	11.115	154	2189308	13.030
96) 2-Chloronaphthalene	(3)	11.133	162	1589302	12.445
98) 1-Chloronaphthalene	(3)	11.168	162	1477620	12.320
99) Diphenyl ether	(3)	11.296	170	1119499	12.589
100) 2-Nitroaniline	(3)	11.308	138	563453	12.857
104) 1,4-Naphthoquinone	(3)	11.424	158	679218	12.726
105) 1,4-Dinitrobenzene	(3)	11.535	168	300676	12.849
106) Dimethylphthalate	(3)	11.622	163	1696391	12.383
107) 1,3-Dinitrobenzene	(3)	11.640	168	322602	12.466
108) 2,6-Dinitrotoluene	(3)	11.692	165	415468	12.809
109) Acenaphthylene	(3)	11.768	152	2464493	12.986
112) 3-Nitroaniline	(3)	11.920	138	470728	13.078
113)*Acenaphthene-d10	(3)	11.972	164	467194	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	1641323	12.531
115) 2,4-Dinitrophenol	(3)	12.065	184	290607	12.509
116) 4-Nitrophenol	(3)	12.153	109	281967	11.920
117) Pentachlorobenzene	(3)	12.188	250	557457	12.440
118) 2,4-Dinitrotoluene	(3)	12.240	165	549282	12.737
119) Dibenzofuran	(3)	12.246	168	2168260	12.343
121) 1-Naphthylamine	(3)	12.345	143	1653551	12.563
122) 2,3,4,6-Tetrachlorophenol	(3)	12.403	232	383739	12.808
123) 2-Naphthylamine	(3)	12.444	143	1607408	12.579
124) Diethylphthalate	(3)	12.572	149	1803440	12.631
125) Thionazin	(3)	12.666	107	332061	12.260
126) Fluorene	(3)	12.672	166	1720448	12.427
128) 5-Nitro-o-toluidine	(3)	12.695	152	531195	12.757
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	787491	12.106
129) 4-Nitroaniline	(3)	12.701	138	494639	12.644
130) 4,6-Dinitro-2-methylphenol	(4)	12.742	198	339703	12.201
132) NDPA as diphenylamine	(4)	12.841	169	1518091	12.579
131) N-Nitrosodiphenylamine	(4)	12.841	169	1518091	12.579
134) 1,2-Diphenylhydrazine	(4)	12.887	77	2072449	12.392
135)$2,4,6-Tribromophenol	(3)	12.975	330	366900	26.180
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	342600	12.420
140) Diallate (peak 1)	(4)	13.214	86	687995	9.192
141) Phorate	(4)	13.219	75	1319343	12.788
142) Phenacetin	(4)	13.237	108	989857	12.532
143) 4-Bromophenyl-phenylether	(4)	13.301	248	415762	12.364
144) Diallate (peak 2)	(4)	13.324	86	245797	3.218
145) Hexachlorobenzene	(4)	13.359	284	423509	11.990
147) Dimethoate	(4)	13.429	87	959871	12.701
148) Atrazine	(4)	13.528	200	480776	12.800
149) Pentachlorophenol	(4)	13.616	266	317765	12.642
150) 4-Aminobiphenyl	(4)	13.633	169	1665513	12.694
151) Pentachloronitrobenzene	(4)	13.633	237	195264	12.396
152) Pronamide	(4)	13.727	173	821571	12.462
153)*Phenanthrene-d10	(4)	13.866	188	890815	5.000
154) Dinoseb	(4)	13.872	211	467642	12.469
155) Phenanthrene	(4)	13.901	178	2470842	12.196
157) Anthracene	(4)	13.971	178	2568782	12.657
163) Carbazole	(4)	14.187	167	2480008	12.478
164) Methyl parathion	(4)	14.391	109	762606	12.785
165) Di-n-butylphthalate	(4)	14.706	149	3201999	12.464

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

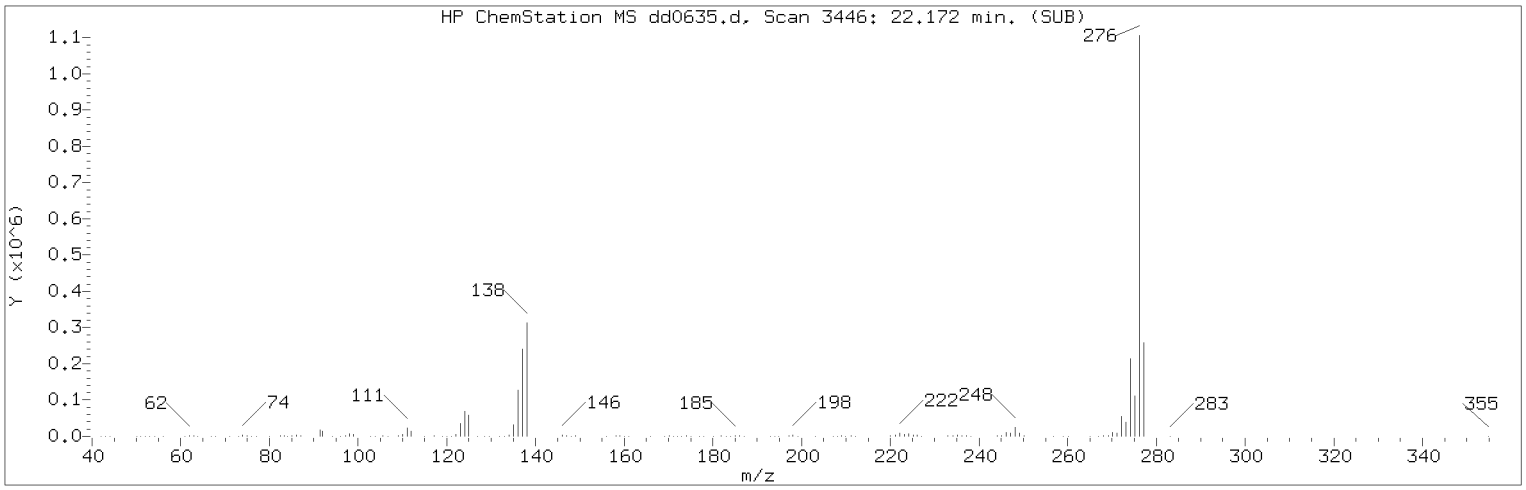
Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.951	109	446690	12.970
168) 4-Nitroquinoline-1-oxide	(4)	14.974	190	309449	12.497
222) Total PAHs	(6)			42067819	230.493
169) Octachlorostyrene	(4)	15.318	308	176668	12.807
171) Isodrin	(4)	15.376	193	311637	12.514
173) Fluoranthene	(4)	15.603	202	2899059	12.618
174) Benzidine	(5)	15.837	184	5564064	37.597
175)*Pyrene-d10	(5)	15.924	212	873694	5.000
177) Pyrene	(5)	15.959	202	2952252	12.256
179)$Terphenyl-d14	(5)	16.239	244	3287854	24.752
182) p-Dimethylaminoazobenzene	(5)	16.472	225	518858	12.651
185) Chlorobenzilate	(5)	16.565	139	941218	12.564
187) 3,3'-Dimethylbenzidine	(5)	17.043	212	1958439	13.057
188) Butylbenzylphthalate	(5)	17.101	149	1473941	12.517
191) 2-Acetylaminofluorene	(5)	17.474	181	1174883	12.604
193) 3,3'-Dichlorobenzidine	(5)	17.993	252	963248	12.777
195) Benzo(a)anthracene	(5)	18.005	228	2389063	12.692
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.011	231	506684	12.473
196) Chrysene	(5)	18.075	228	2424504	12.264
199) bis(2-Ethylhexyl)phthalate	(5)	18.180	149	2126199	12.771
203) 6-Methylchrysene	(5)	18.879	242	1757804	12.403
205) Di-n-octylphthalate	(6)	19.351	149	3786870	13.202
206) Benzo(b)fluoranthene	(6)	19.887	252	2511207	13.066
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.887	256	1155456	12.694
208) Benzo(k)fluoranthene	(6)	19.934	252	2494603	12.825
211) Benzo(a)pyrene	(6)	20.418	252	2429374	13.228
213)*Perylene-d12	(6)	20.505	264	812330	5.000
215) 3-Methylcholanthrene	(6)	20.989	268	1279238	13.227
217) Dibenz(a,h)acridine	(6)	21.817	279	1856871	13.133
218) Dibenz(a,j)acridine	(6)	21.892	279	1992521	13.062
219) Indeno(1,2,3-cd)pyrene	(6)	22.172	276	2191272M	13.904
220) Dibenz(a,h)anthracene	(6)	22.213	278	2308458	13.836
221) Benzo(g,h,i)perylene	(6)	22.604	276	2291393	13.483

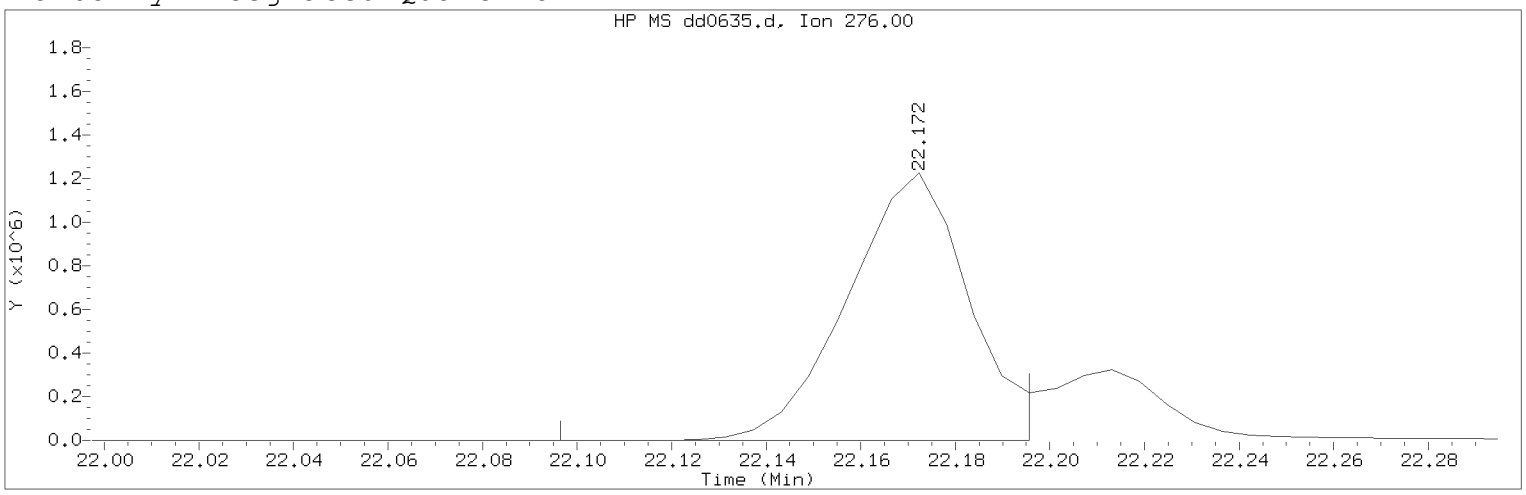
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

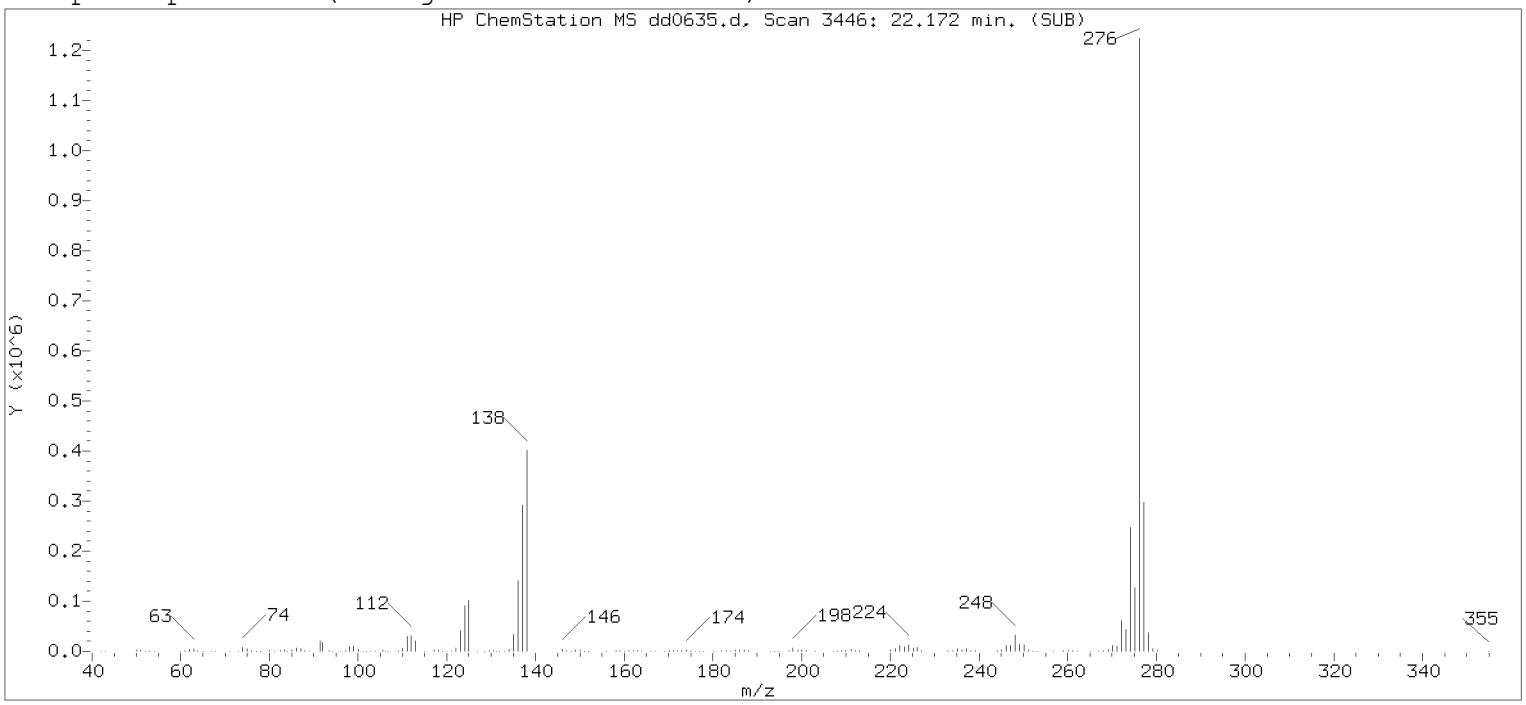
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3446
Retention Time (minutes) : 22.172
Quant Ion : 276.00
Area (flag) : 2191272M
On-Column Amount (ng/ul) : 13.9037
Integration start scan : 3432 Integration stop scan: 3449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

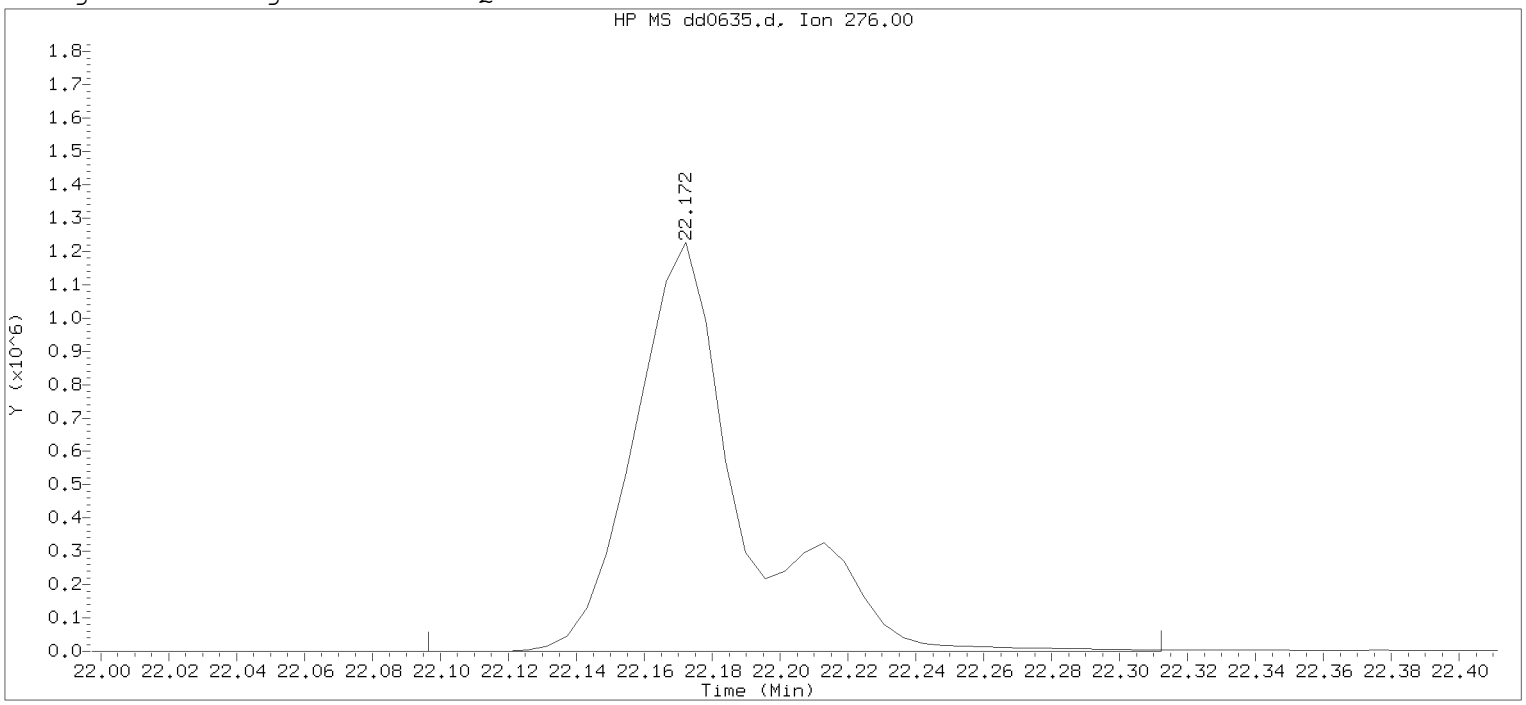
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:53.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



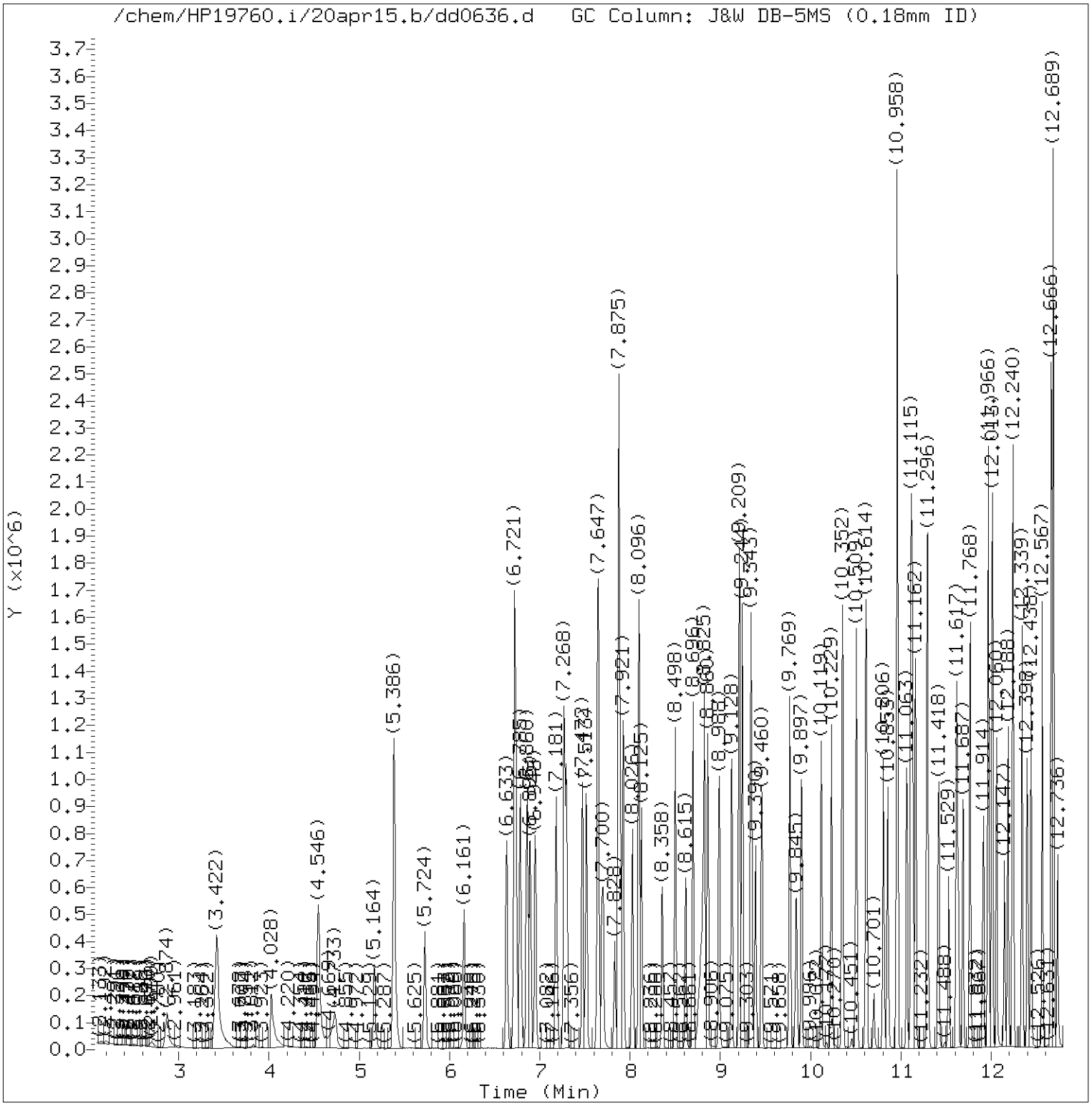
Data File: /chem/HP19760.i/20apr15.b/dd0635.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 20:42 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 21:18
Date, time and analyst ID of latest file update: 15-Apr-2020 21:18 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3446		
Retention Time (minutes)	: 22.172		
Quant Ion	: 276.00		
Area	: 2733778		
On-column Amount (ng/ul)	: 15.1425		
Integration start scan	: 3432	Integration stop scan:	3469
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:53.
Target 3.5 esignature user name: em10340



Total Ion Chromatogram (TIC)

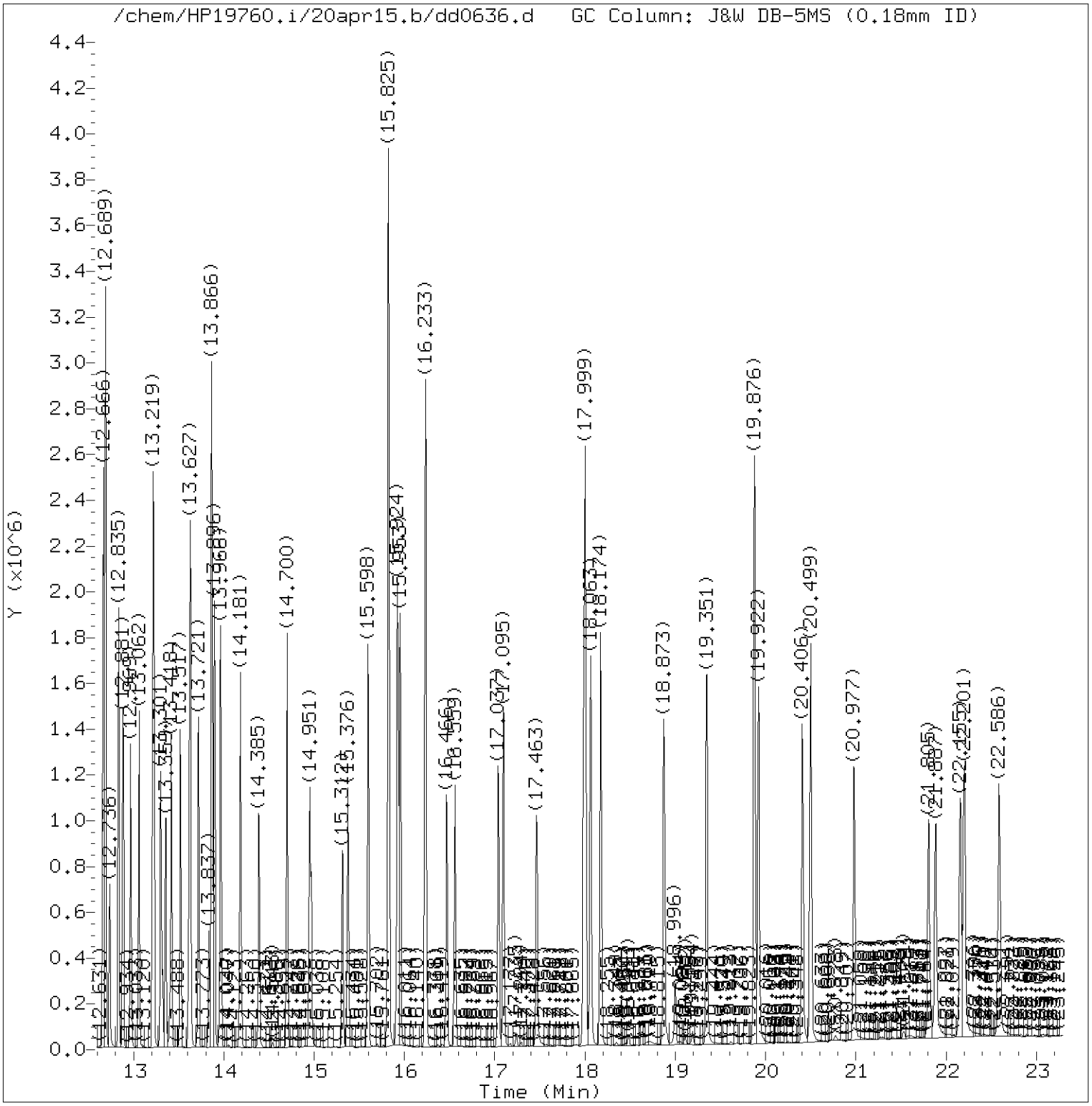
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.874	88	143870	3.785
4) N-Nitrosodimethylamine	(1)	3.398	74	220129	3.750
5) Pyridine	(1)	3.427	79	384400	3.774
7) 2-Picoline	(1)	4.546	93	391702	3.776
8) N-Nitrosomethylethylamine	(1)	4.733	88	167280	3.768
9) Methyl methanesulfonate	(1)	5.164	80	177776	3.740
11)$2-Fluorophenol	(1)	5.386	112	638099	7.694
42) Total Cresols	(1)			619173	7.899
13) N-Nitrosodiethylamine	(1)	5.724	102	160349	3.816
15) Ethyl methanesulfonate	(1)	6.161	109	168195	3.801
16) Benzaldehyde	(1)	6.633	77	255065	3.763
17)$Phenol-d6	(1)	6.721	99	872773	7.863
18) Phenol	(1)	6.738	94	436117	3.826
19) Aniline	(1)	6.785	93	548172	3.893
20) a-methylstyrene	(1)	6.866	118	123864	3.765
22) bis(2-Chloroethyl)ether	(1)	6.895	93	368163	3.860
23) 2-Chlorophenol	(1)	6.948	128	321359	3.903
24) 1,3-Dichlorobenzene	(1)	7.181	146	327123	3.872
25)*1,4-Dichlorobenzene-d4	(1)	7.268	152	277656	5.000
26) 1,4-Dichlorobenzene	(1)	7.292	146	333425	3.899
97) Isosafrole	(3)			252569	3.807
27) Benzyl alcohol	(1)	7.472	108	208683	3.866
28) 1,2-Dichlorobenzene	(1)	7.513	146	320435	3.948
31) 2-Methylphenol	(1)	7.641	108	301696	3.934
30) Indene	(1)	7.653	115	478585	3.864
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.694	45	488004	3.937
34) bis(2-Chloroisopropyl)ether	(1)	7.694	45	488004	3.937
35) N-Nitrosopyrrolidine	(1)	7.834	100	166922	3.831
36) Acetophenone	(1)	7.875	105	436600	3.871
37) 4-Methylphenol	(1)	7.875	108	317477	3.964
38) N-Nitroso-di-n-propylamine	(1)	7.886	70	252907	3.933
39) N-Nitrosomorpholine	(1)	7.898	56	232925	3.906
40) o-Toluidine	(1)	7.921	106	515449	3.944
43) Hexachloroethane	(1)	8.026	117	142223	3.909
120) 2,4_2,6-Dinitrotoluenes	(3)			300089	7.721
44)$Nitrobenzene-d5	(2)	8.096	82	736258	7.716
45) Nitrobenzene	(2)	8.125	77	377353	3.916
48) N-Nitrosopiperidine	(2)	8.358	114	166414	3.873
50) Isophorone	(2)	8.498	82	680671	3.925
51) 2-Nitrophenol	(2)	8.615	139	159751	3.797

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.696	107	315168	3.833
146) Diallate trans/cis	(4)			287168	3.776
56) Benzoic acid	(2)	8.807	105	394887	7.227
57) O,O,O-Triethylphosphorothioate	(2)	8.825	198	137140	3.877
55) bis(2-Chloroethoxy)methane	(2)	8.860	93	435304	3.951
60) 2,4-Dichlorophenol	(2)	8.988	162	245065	3.957
62) 1,2,4-Trichlorobenzene	(2)	9.128	180	249307	3.899
65)*Naphthalene-d8	(2)	9.209	136	1045096	5.000
66) Naphthalene	(2)	9.244	128	904908	3.893
67) 4-Chloroaniline	(2)	9.338	127	366469	3.917
68) 2,6-Dichlorophenol	(2)	9.349	162	231332	3.970
69) Hexachloropropene	(2)	9.390	213	150401	3.792
71) Hexachlorobutadiene	(2)	9.460	225	130842	3.852
75) Quinoline	(2)	9.769	129	572890	3.885
76) Caprolactam	(2)	9.845	113	98982	3.731
77) N-Nitrosodi-n-butylamine	(2)	9.897	84	232961	3.562
80) 4-Chloro-3-methylphenol	(2)	10.119	107	270914	3.934
82) Safrole	(2)	10.229	162	215441	3.868
83) 2-Methylnaphthalene	(2)	10.352	142	576241	3.926
84) 1-Methylnaphthalene	(2)	10.509	142	539551	3.871
85) Hexachlorocyclopentadiene	(3)	10.614	237	135355	3.692
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	229896	3.864
88) cis-Isosafrole	(3)	10.701	162	38267	0.631
90) 2,4,6-Trichlorophenol	(3)	10.806	196	156805	3.789
92) 2,4,5-Trichlorophenol	(3)	10.853	196	167045	3.866
93)$2-Fluorobiphenyl	(3)	10.958	172	1204316	7.922
94) trans-Isosafrole	(3)	11.063	162	214302	3.174
95) 1,1'-Biphenyl	(3)	11.115	154	686748	3.911
96) 2-Chloronaphthalene	(3)	11.127	162	517652	3.879
98) 1-Chloronaphthalene	(3)	11.162	162	500227	3.991
99) Diphenyl ether	(3)	11.290	170	362295	3.899
100) 2-Nitroaniline	(3)	11.296	138	181106	3.954
104) 1,4-Naphthoquinone	(3)	11.418	158	214847	3.852
105) 1,4-Dinitrobenzene	(3)	11.529	168	91924	3.759
106) Dimethylphthalate	(3)	11.617	163	551975	3.856
107) 1,3-Dinitrobenzene	(3)	11.634	168	102749	3.800
108) 2,6-Dinitrotoluene	(3)	11.692	165	132841	3.919
109) Acenaphthylene	(3)	11.768	152	792720	3.997
112) 3-Nitroaniline	(3)	11.914	138	145222	3.861
113)*Acenaphthene-d10	(3)	11.966	164	488221	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	531848	3.886
115) 2,4-Dinitrophenol	(3)	12.060	184	161492	6.652
116) 4-Nitrophenol	(3)	12.147	109	83630	3.383
117) Pentachlorobenzene	(3)	12.188	250	178399	3.810
118) 2,4-Dinitrotoluene	(3)	12.234	165	167248	3.711
119) Dibenzofuran	(3)	12.246	168	721897	3.932
121) 1-Naphthylamine	(3)	12.339	143	514039	3.737
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	117600	3.756
123) 2-Naphthylamine	(3)	12.444	143	503898	3.773
124) Diethylphthalate	(3)	12.567	149	556187	3.728
125) Thionazin	(3)	12.660	107	101186	3.575
126) Fluorene	(3)	12.672	166	576786	3.987
129) 4-Nitroaniline	(3)	12.689	138	160158	3.918
128) 5-Nitro-o-toluidine	(3)	12.689	152	162316	3.730
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	263264	3.873
130) 4,6-Dinitro-2-methylphenol	(4)	12.736	198	101824	3.618
132) NDPA as diphenylamine	(4)	12.835	169	477700	3.916
131) N-Nitrosodiphenylamine	(4)	12.835	169	477700	3.916
134) 1,2-Diphenylhydrazine	(4)	12.881	77	662787	3.921
135)$2,4,6-Tribromophenol	(3)	12.969	330	114221	7.799
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	104928	3.763
140) Diallate (peak 1)	(4)	13.208	86	212420	2.808
141) Phorate	(4)	13.219	75	408620	3.918
142) Phenacetin	(4)	13.225	108	301786	3.780
143) 4-Bromophenyl-phenylether	(4)	13.301	248	130032	3.826
144) Diallate (peak 2)	(4)	13.319	86	74748	0.968
145) Hexachlorobenzene	(4)	13.359	284	136838	3.833
147) Dimethoate	(4)	13.418	87	290871	3.808
148) Atrazine	(4)	13.517	200	147677	3.890
149) Pentachlorophenol	(4)	13.616	266	97460	3.836
150) 4-Aminobiphenyl	(4)	13.627	169	544053	4.102
151) Pentachloronitrobenzene	(4)	13.633	237	60614	3.807
152) Pronamide	(4)	13.721	173	256544	3.850
153)*Phenanthrene-d10	(4)	13.866	188	900422	5.000
154) Dinoseb	(4)	13.866	211	129690	3.421
155) Phenanthrene	(4)	13.896	178	801266	3.913
157) Anthracene	(4)	13.966	178	806278	3.930
163) Carbazole	(4)	14.181	167	784613	3.906
164) Methyl parathion	(4)	14.385	109	224030	3.716
165) Di-n-butylphthalate	(4)	14.700	149	1020493	3.930

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.951	109	127287	3.657
168) 4-Nitroquinoline-1-oxide	(4)	14.968	190	75581	3.020
222) Total PAHs	(6)			13339599	71.389
169) Octachlorostyrene	(4)	15.318	308	50045	3.589
171) Isodrin	(4)	15.376	193	96521	3.835
173) Fluoranthene	(4)	15.598	202	923778	3.978
174) Benzidine	(5)	15.825	184	1841806	12.046
175)*Pyrene-d10	(5)	15.924	212	902644	5.000
177) Pyrene	(5)	15.953	202	957723	3.848
179)$Terphenyl-d14	(5)	16.233	244	1083554	7.896
182) p-Dimethylaminoazobenzene	(5)	16.472	225	153552	3.624
185) Chlorobenzilate	(5)	16.559	139	292800	3.783
187) 3,3'-Dimethylbenzidine	(5)	17.043	212	562403	3.629
188) Butylbenzylphthalate	(5)	17.095	149	464518	3.818
191) 2-Acetylaminofluorene	(5)	17.463	181	325536	3.380
193) 3,3'-Dichlorobenzidine	(5)	17.981	252	291050	3.737
195) Benzo(a)anthracene	(5)	17.999	228	769415	3.956
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.005	231	154524	3.682
196) Chrysene	(5)	18.063	228	791968	3.878
199) bis(2-Ethylhexyl)phthalate	(5)	18.174	149	651752	3.789
203) 6-Methylchrysene	(5)	18.873	242	546379	3.732
205) Di-n-octylphthalate	(6)	19.351	149	1119808	3.813
206) Benzo(b)fluoranthene	(6)	19.876	252	767818	3.902
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.876	256	350379	3.760
208) Benzo(k)fluoranthene	(6)	19.922	252	800323	4.019
211) Benzo(a)pyrene	(6)	20.406	252	734380	3.906
213)*Perylene-d12	(6)	20.499	264	831675	5.000
215) 3-Methylcholanthrene	(6)	20.983	268	387252	3.911
217) Dibenz(a,h)acridine	(6)	21.811	279	542638	3.749
218) Dibenz(a,j)acridine	(6)	21.887	279	588771	3.770
219) Indeno(1,2,3-cd)pyrene	(6)	22.155	276	641059M	3.973
220) Dibenz(a,h)anthracene	(6)	22.201	278	711284	4.164
221) Benzo(g,h,i)perylene	(6)	22.586	276	712253	4.094

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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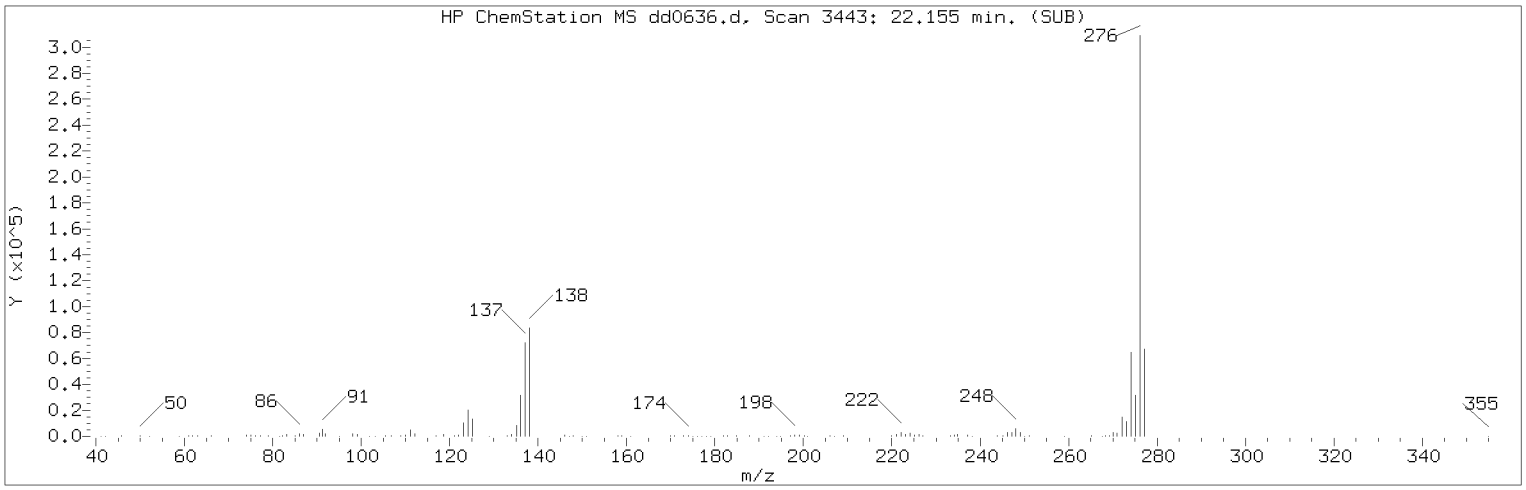
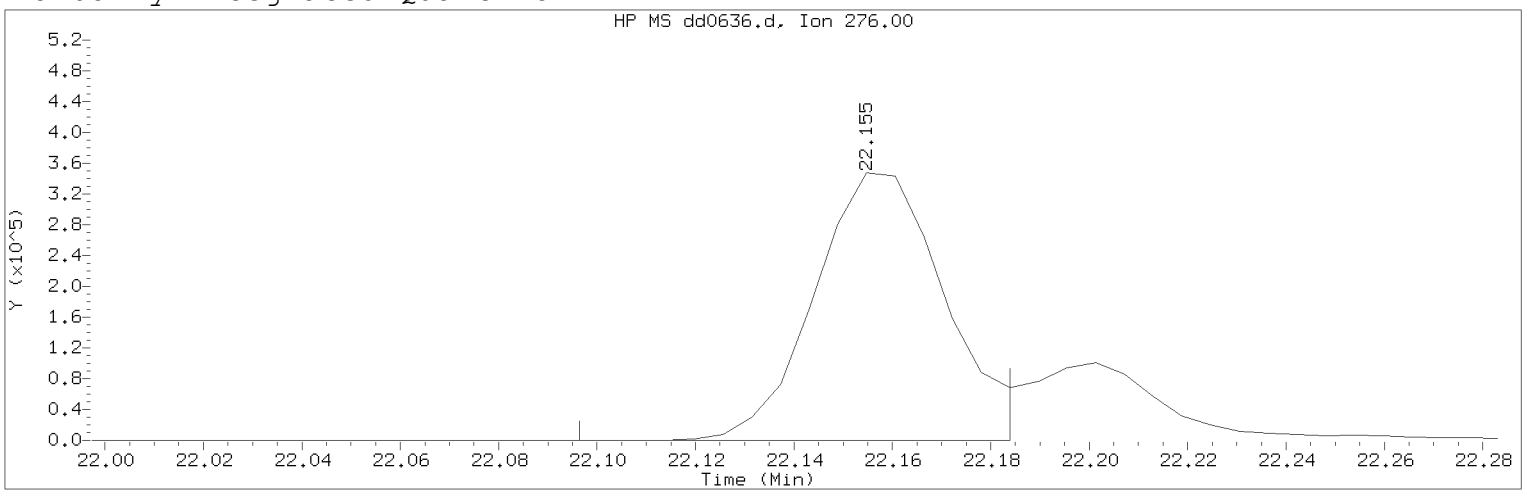
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

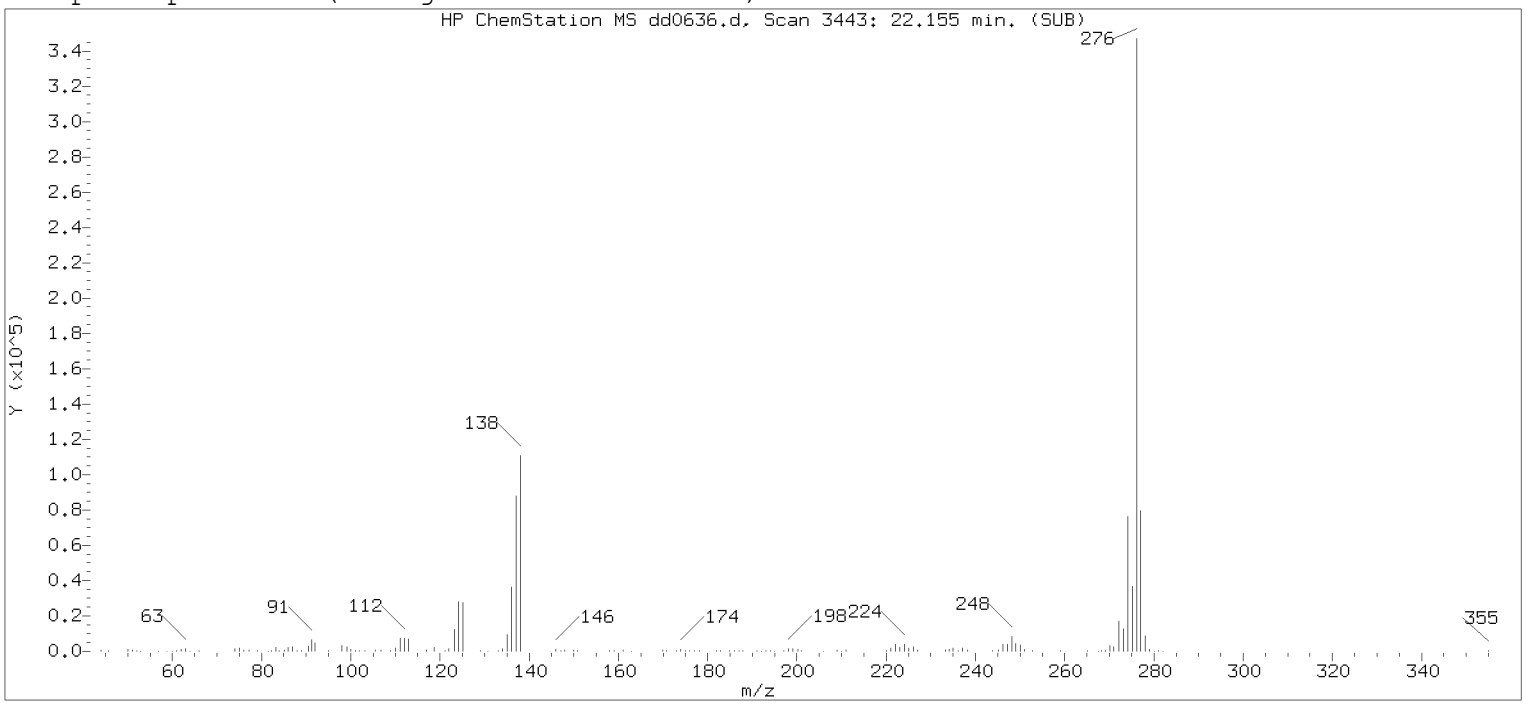
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3443
Retention Time (minutes) : 22.155
Quant Ion : 276.00
Area (flag) : 641059M
On-Column Amount (ng/ul) : 3.9729
Integration start scan : 3432 Integration stop scan: 3447
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

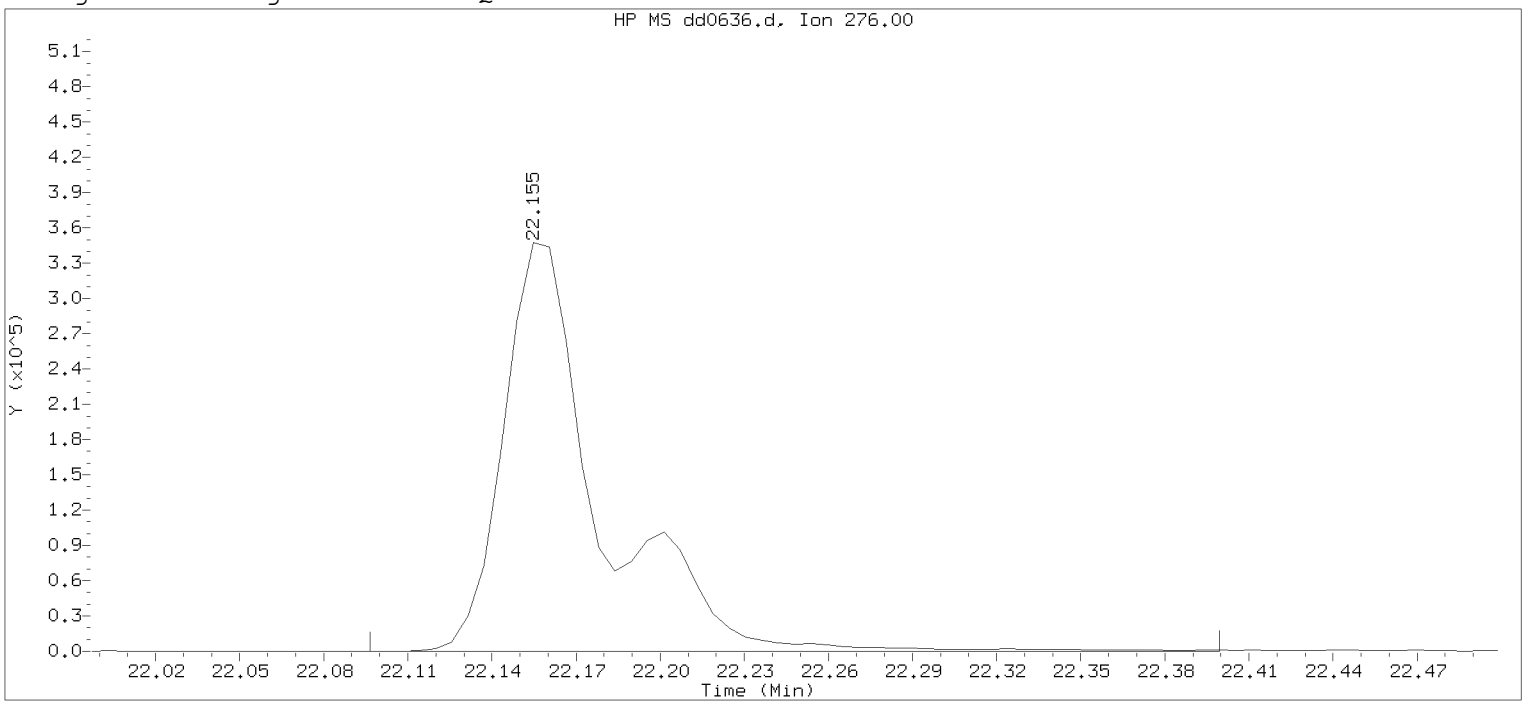
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



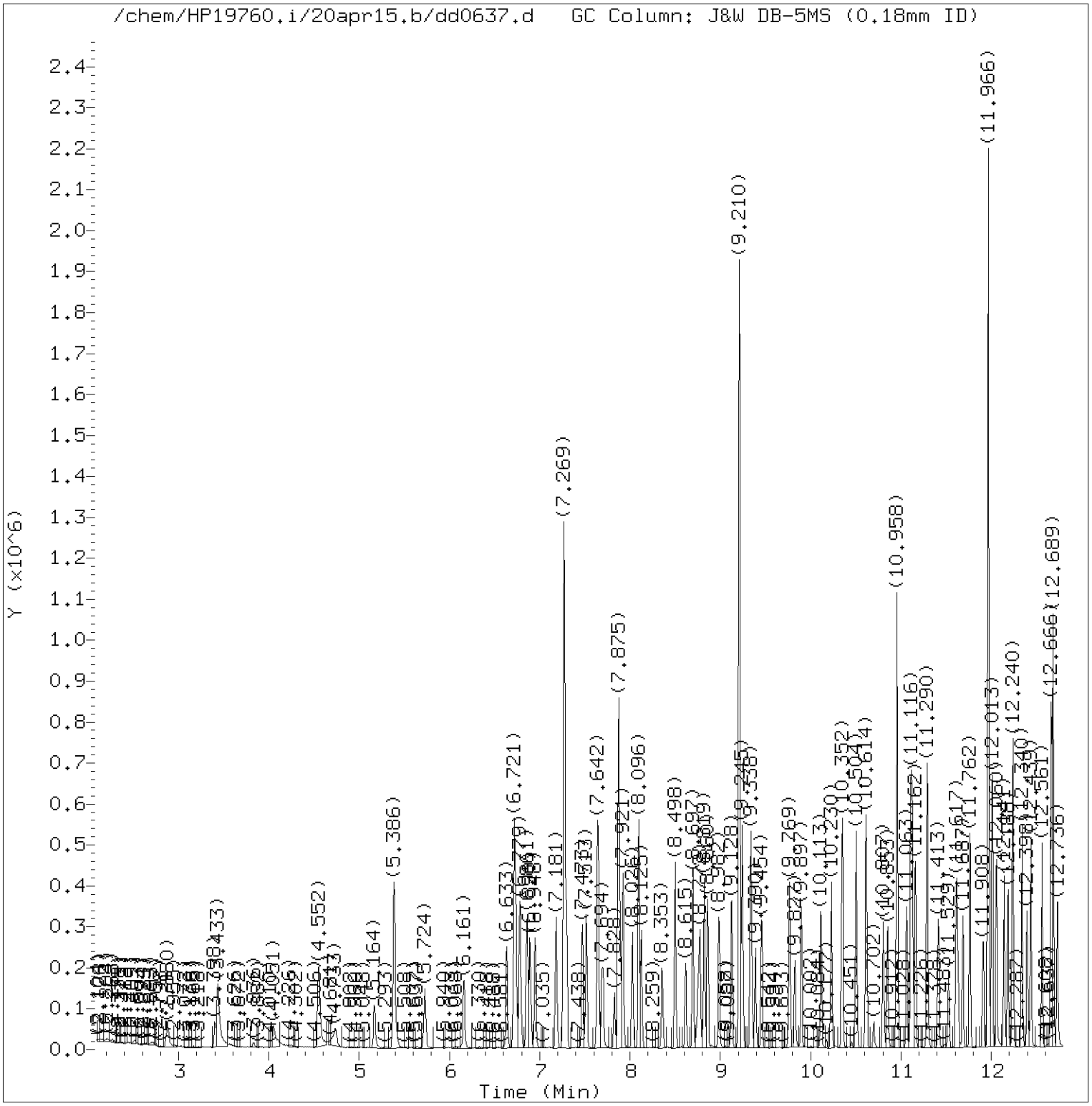
Data File: /chem/HP19760.i/20apr15.b/dd0636.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:11 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 21:44
Date, time and analyst ID of latest file update: 15-Apr-2020 21:45 Automation

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3443		
Retention Time (minutes)	: 22.155		
Quant Ion	: 276.00		
Area	: 835285		
On-column Amount (ng/ul)	: 4.3739		
Integration start scan	: 3432	Integration stop scan:	3484
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

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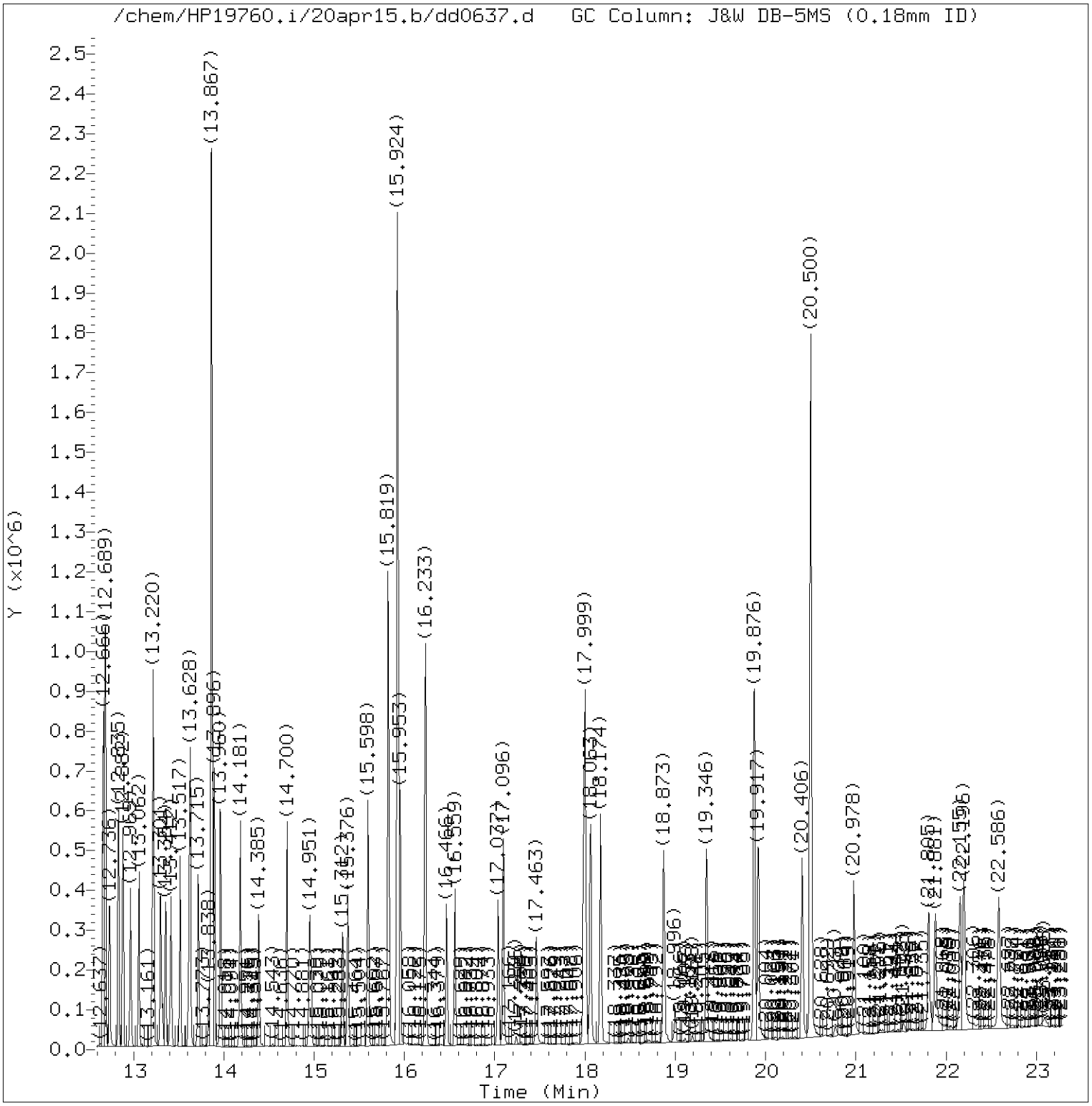
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.880	88	45884	1.195
4) N-Nitrosodimethylamine	(1)	3.398	74	72021	1.215
5) Pyridine	(1)	3.433	79	125093	1.216
7) 2-Picoline	(1)	4.552	93	129770	1.239
8) N-Nitrosomethylethylamine	(1)	4.733	88	54983	1.226
9) Methyl methanesulfonate	(1)	5.164	80	58795	1.225
11)$2-Fluorophenol	(1)	5.386	112	208861	2.493
42) Total Cresols	(1)			201478	2.545
13) N-Nitrosodiethylamine	(1)	5.724	102	52833	1.245
15) Ethyl methanesulfonate	(1)	6.155	109	54648	1.223
16) Benzaldehyde	(1)	6.633	77	80607	1.177
17)$Phenol-d6	(1)	6.721	99	287247	2.562
18) Phenol	(1)	6.738	94	147645	1.282
19) Aniline	(1)	6.785	93	175854	1.236
20) a-methylstyrene	(1)	6.866	118	39006	1.174
22) bis(2-Chloroethyl)ether	(1)	6.890	93	123232	1.279
23) 2-Chlorophenol	(1)	6.948	128	104900	1.262
24) 1,3-Dichlorobenzene	(1)	7.181	146	107958	1.265
25)*1,4-Dichlorobenzene-d4	(1)	7.269	152	280428	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	112220	1.299
97) Isosafrole	(3)			80964	1.204
27) Benzyl alcohol	(1)	7.473	108	66314	1.216
28) 1,2-Dichlorobenzene	(1)	7.513	146	105890	1.292
31) 2-Methylphenol	(1)	7.642	108	98216	1.268
30) Indene	(1)	7.647	115	152252	1.217
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.688	45	155933	1.245
34) bis(2-Chloroisopropyl)ether	(1)	7.688	45	155933	1.245
35) N-Nitrosopyrrolidine	(1)	7.828	100	55044	1.251
36) Acetophenone	(1)	7.869	105	149642	1.314
37) 4-Methylphenol	(1)	7.875	108	103262	1.277
38) N-Nitroso-di-n-propylamine	(1)	7.881	70	82600	1.272
39) N-Nitrosomorpholine	(1)	7.898	56	77993	1.295
40) o-Toluidine	(1)	7.921	106	172137	1.304
43) Hexachloroethane	(1)	8.026	117	47474	1.292
120) 2,4_2,6-Dinitrotoluenes	(3)			97756	2.481
44)$Nitrobenzene-d5	(2)	8.096	82	246824	2.600
45) Nitrobenzene	(2)	8.125	77	125336	1.307
48) N-Nitrosopiperidine	(2)	8.353	114	53829	1.259
50) Isophorone	(2)	8.498	82	217542	1.261
51) 2-Nitrophenol	(2)	8.615	139	49774	1.189

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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.697	107	104654	1.279
56) Benzoic acid	(2)	8.772	105	161203	2.965
146) Diallate trans/cis	(4)			95488	1.240
57) O,O,O-Triethylphosphorothioate	(2)	8.825	198	44784	1.273
55) bis(2-Chloroethoxy)methane	(2)	8.860	93	137270	1.252
60) 2,4-Dichlorophenol	(2)	8.982	162	77781	1.262
62) 1,2,4-Trichlorobenzene	(2)	9.128	180	80541	1.266
65)*Naphthalene-d8	(2)	9.210	136	1039730	5.000
66) Naphthalene	(2)	9.245	128	305737	1.322
67) 4-Chloroaniline	(2)	9.338	127	119977	1.289
68) 2,6-Dichlorophenol	(2)	9.344	162	74303	1.282
69) Hexachloropropene	(2)	9.390	213	47239	1.197
71) Hexachlorobutadiene	(2)	9.460	225	43817	1.297
75) Quinoline	(2)	9.769	129	191284	1.304
76) Caprolactam	(2)	9.827	113	32941	1.248
77) N-Nitrosodi-n-butylamine	(2)	9.897	84	74079	1.138
80) 4-Chloro-3-methylphenol	(2)	10.113	107	88405	1.290
82) Safrole	(2)	10.230	162	68922	1.244
83) 2-Methylnaphthalene	(2)	10.352	142	189432	1.297
84) 1-Methylnaphthalene	(2)	10.504	142	185156	1.335
85) Hexachlorocyclopentadiene	(3)	10.608	237	43478	1.170
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	77737	1.289
88) cis-Isosafrole	(3)	10.702	162	12668	0.206
90) 2,4,6-Trichlorophenol	(3)	10.807	196	48951	1.167
92) 2,4,5-Trichlorophenol	(3)	10.853	196	54100	1.235
93)$2-Fluorobiphenyl	(3)	10.958	172	408958	2.654
94) trans-Isosafrole	(3)	11.063	162	68296	0.998
95) 1,1'-Biphenyl	(3)	11.110	154	233262	1.311
96) 2-Chloronaphthalene	(3)	11.127	162	177886	1.315
98) 1-Chloronaphthalene	(3)	11.162	162	162036	1.275
99) Diphenyl ether	(3)	11.290	170	122493	1.300
100) 2-Nitroaniline	(3)	11.296	138	59213	1.275
104) 1,4-Naphthoquinone	(3)	11.413	158	65006	1.150
105) 1,4-Dinitrobenzene	(3)	11.529	168	28196	1.137
106) Dimethylphthalate	(3)	11.617	163	183889	1.267
107) 1,3-Dinitrobenzene	(3)	11.634	168	32288	1.178
108) 2,6-Dinitrotoluene	(3)	11.687	165	42103	1.225
109) Acenaphthylene	(3)	11.762	152	261027	1.298
112) 3-Nitroaniline	(3)	11.914	138	45131	1.184
113)*Acenaphthene-d10	(3)	11.966	164	494909	5.000

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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	180422	1.300
115) 2,4-Dinitrophenol	(3)	12.060	184	70652	2.871
116) 4-Nitrophenol	(3)	12.141	109	49485	1.975
117) Pentachlorobenzene	(3)	12.188	250	61855	1.303
118) 2,4-Dinitrotoluene	(3)	12.235	165	55653	1.218
119) Dibenzofuran	(3)	12.240	168	242159	1.301
121) 1-Naphthylamine	(3)	12.340	143	170608	1.224
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	35809	1.128
123) 2-Naphthylamine	(3)	12.439	143	169476	1.252
124) Diethylphthalate	(3)	12.561	149	183901	1.216
125) Thionazin	(3)	12.660	107	37429	1.304
126) Fluorene	(3)	12.672	166	199276	1.359
128) 5-Nitro-o-toluidine	(3)	12.683	152	57647	1.307
129) 4-Nitroaniline	(3)	12.689	138	50505	1.219
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	91586	1.329
130) 4,6-Dinitro-2-methylphenol	(4)	12.736	198	54892	1.927
132) NDPA as diphenylamine	(4)	12.835	169	157714	1.277
131) N-Nitrosodiphenylamine	(4)	12.835	169	157714	1.277
134) 1,2-Diphenylhydrazine	(4)	12.882	77	224355	1.311
135)$2,4,6-Tribromophenol	(3)	12.969	330	37490	2.525
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	34691	1.229
140) Diallate (peak 1)	(4)	13.208	86	70153	0.916
141) Phorate	(4)	13.220	75	132749	1.257
142) Phenacetin	(4)	13.220	108	94040	1.163
143) 4-Bromophenyl-phenylether	(4)	13.301	248	47750	1.388
144) Diallate (peak 2)	(4)	13.319	86	25335	0.324
145) Hexachlorobenzene	(4)	13.354	284	45599	1.262
147) Dimethoate	(4)	13.418	87	91155	1.179
148) Atrazine	(4)	13.517	200	49866	1.297
149) Pentachlorophenol	(4)	13.616	266	28080	1.092
150) 4-Aminobiphenyl	(4)	13.628	169	172550	1.285
151) Pentachloronitrobenzene	(4)	13.628	237	19710	1.223
152) Pronamide	(4)	13.715	173	80224	1.189
153)*Phenanthrene-d10	(4)	13.867	188	911630	5.000
154) Dinoseb	(4)	13.867	211	35903	0.935
155) Phenanthrene	(4)	13.896	178	275224	1.327
157) Anthracene	(4)	13.966	178	268936	1.295
163) Carbazole	(4)	14.181	167	259526	1.276
164) Methyl parathion	(4)	14.385	109	67873	1.112
165) Di-n-butylphthalate	(4)	14.700	149	321880	1.224

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

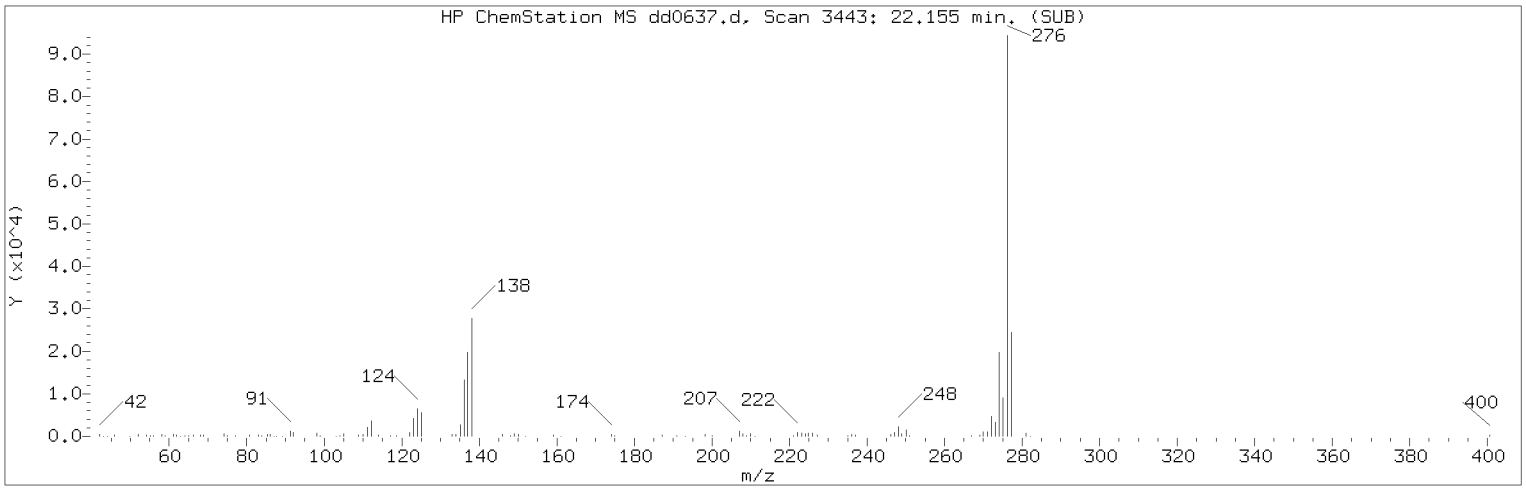
Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.951	109	36431	1.034
168) 4-Nitroquinoline-1-oxide	(4)	14.968	190	18117	0.715
222) Total PAHs	(6)			4431069	23.116
169) Octachlorostyrene	(4)	15.318	308	16521	1.170
171) Isodrin	(4)	15.376	193	32470	1.274
173) Fluoranthene	(4)	15.598	202	296881	1.263
174) Benzidine	(5)	15.819	184	580126	3.771
175)*Pyrene-d10	(5)	15.924	212	908307	5.000
177) Pyrene	(5)	15.953	202	326641	1.304
179)$Terphenyl-d14	(5)	16.233	244	368604	2.669
182) p-Dimethylaminoazobenzene	(5)	16.466	225	48865	1.146
185) Chlorobenzilate	(5)	16.559	139	92382	1.186
187) 3,3'-Dimethylbenzidine	(5)	17.037	212	163569	1.049
188) Butylbenzylphthalate	(5)	17.096	149	150059	1.226
191) 2-Acetylaminofluorene	(5)	17.463	181	85655	0.884
193) 3,3'-Dichlorobenzidine	(5)	17.982	252	92094	1.175
195) Benzo(a)anthracene	(5)	17.999	228	260852	1.333
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.005	231	50338	1.192
196) Chrysene	(5)	18.063	228	272321	1.325
199) bis(2-Ethylhexyl)phthalate	(5)	18.174	149	201644	1.165
203) 6-Methylchrysene	(5)	18.873	242	180999	1.228
205) Di-n-octylphthalate	(6)	19.346	149	328595	1.091
206) Benzo(b)fluoranthene	(6)	19.870	252	262947	1.303
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.876	256	114636	1.199
208) Benzo(k)fluoranthene	(6)	19.923	252	261572	1.280
211) Benzo(a)pyrene	(6)	20.406	252	247278	1.282
213)*Perylene-d12	(6)	20.500	264	853173	5.000
215) 3-Methylcholanthrene	(6)	20.978	268	118743	1.169
217) Dibenz(a,h)acridine	(6)	21.805	279	162005	1.091
218) Dibenz(a,j)acridine	(6)	21.881	279	181144	1.131
219) Indeno(1,2,3-cd)pyrene	(6)	22.155	276	190656M	1.152
220) Dibenz(a,h)anthracene	(6)	22.196	278	220308	1.257
221) Benzo(g,h,i)perylene	(6)	22.586	276	226403	1.268

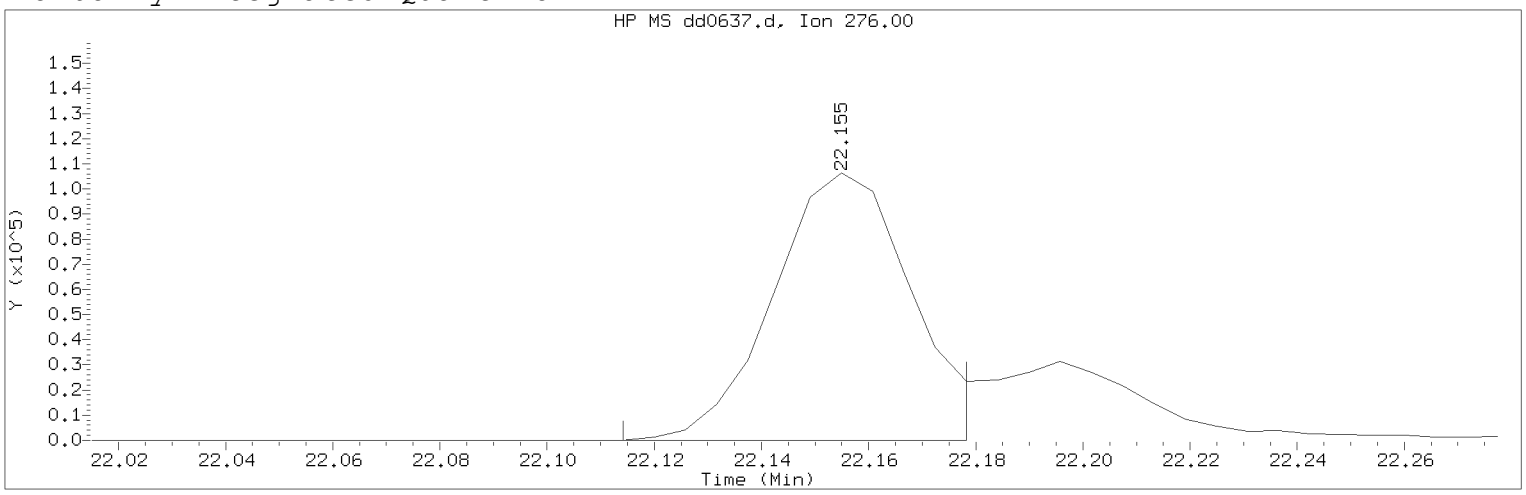
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:50
Date, time and analyst ID of latest file update: 16-Apr-2020 09:50 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

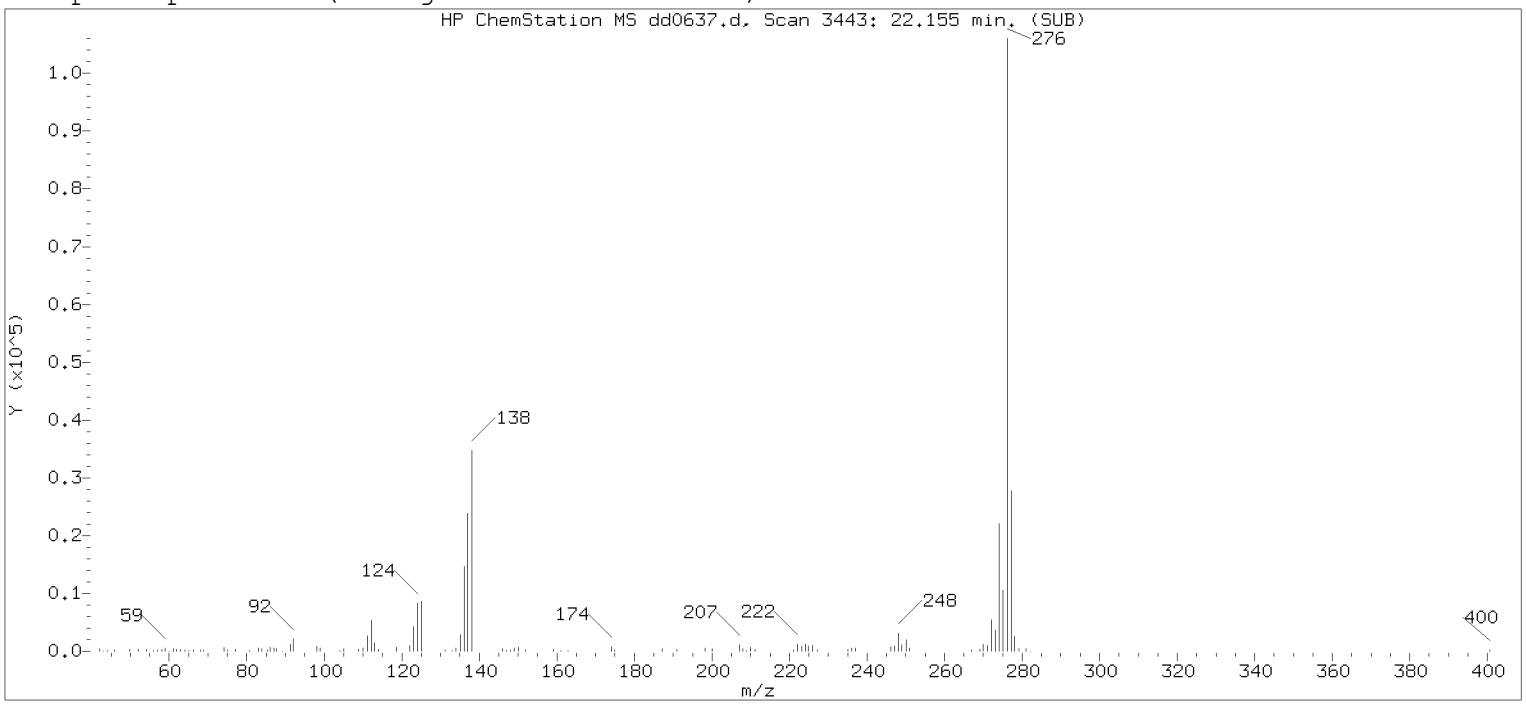
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3443
Retention Time (minutes) : 22.155
Quant Ion : 276.00
Area (flag) : 190656M
On-Column Amount (ng/ul) : 1.1518
Integration start scan : 3435 Integration stop scan: 3446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

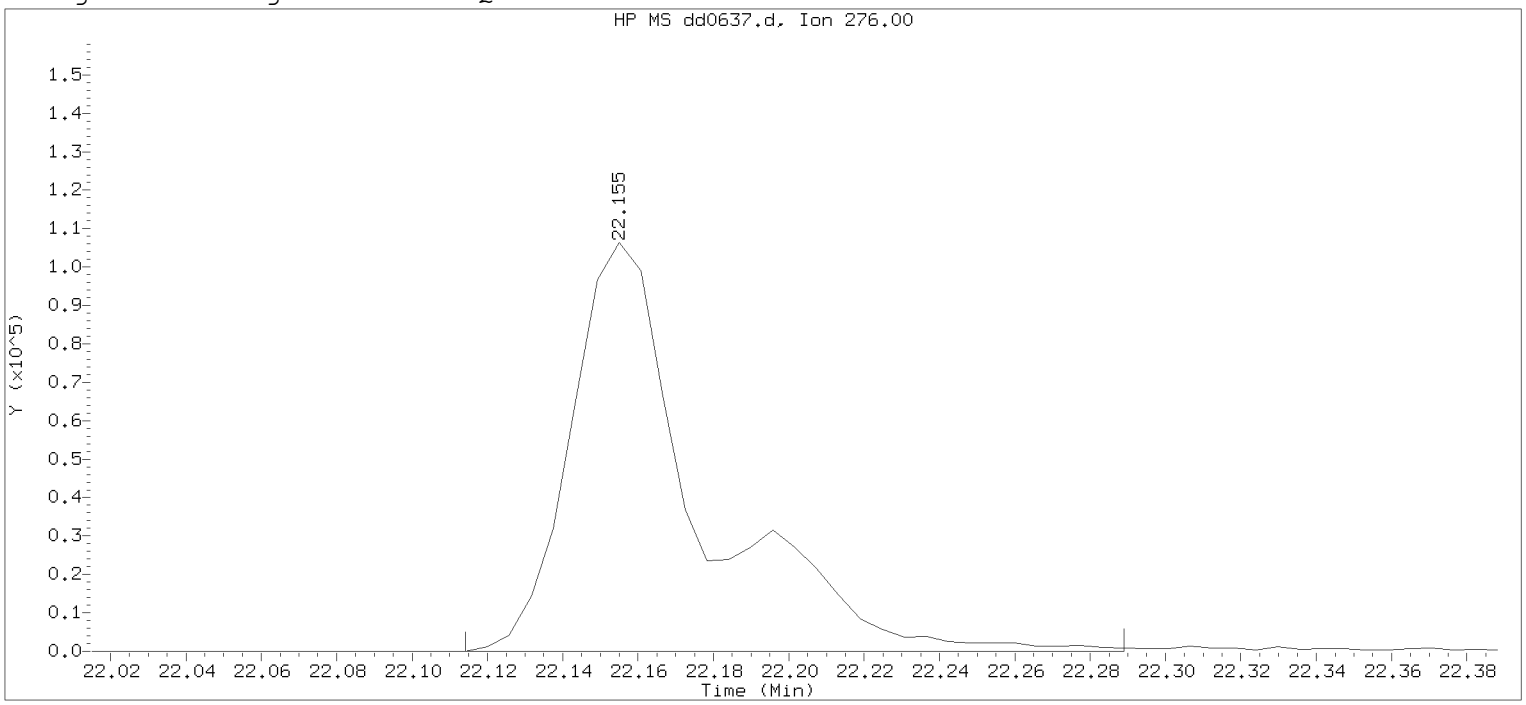
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



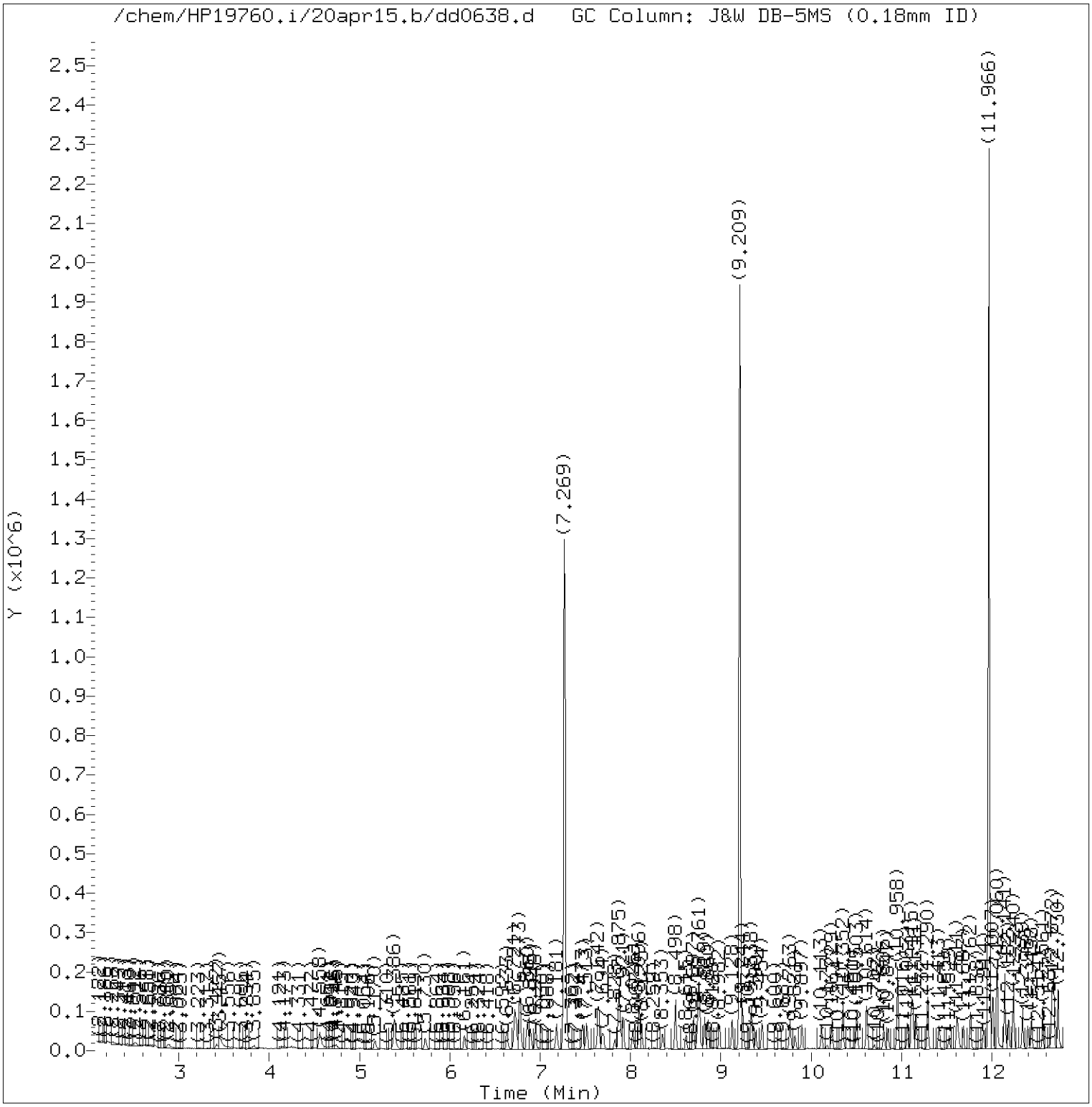
Data File: /chem/HP19760.i/20apr15.b/dd0637.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 21:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 22:14
Date, time and analyst ID of latest file update: 15-Apr-2020 22:14 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3443		
Retention Time (minutes)	: 22.155		
Quant Ion	: 276.00		
Area	: 254231		
On-column Amount (ng/ul)	: 1.2636		
Integration start scan	: 3435	Integration stop scan:	3465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name: emonborne



Total Ion Chromatogram (TIC)

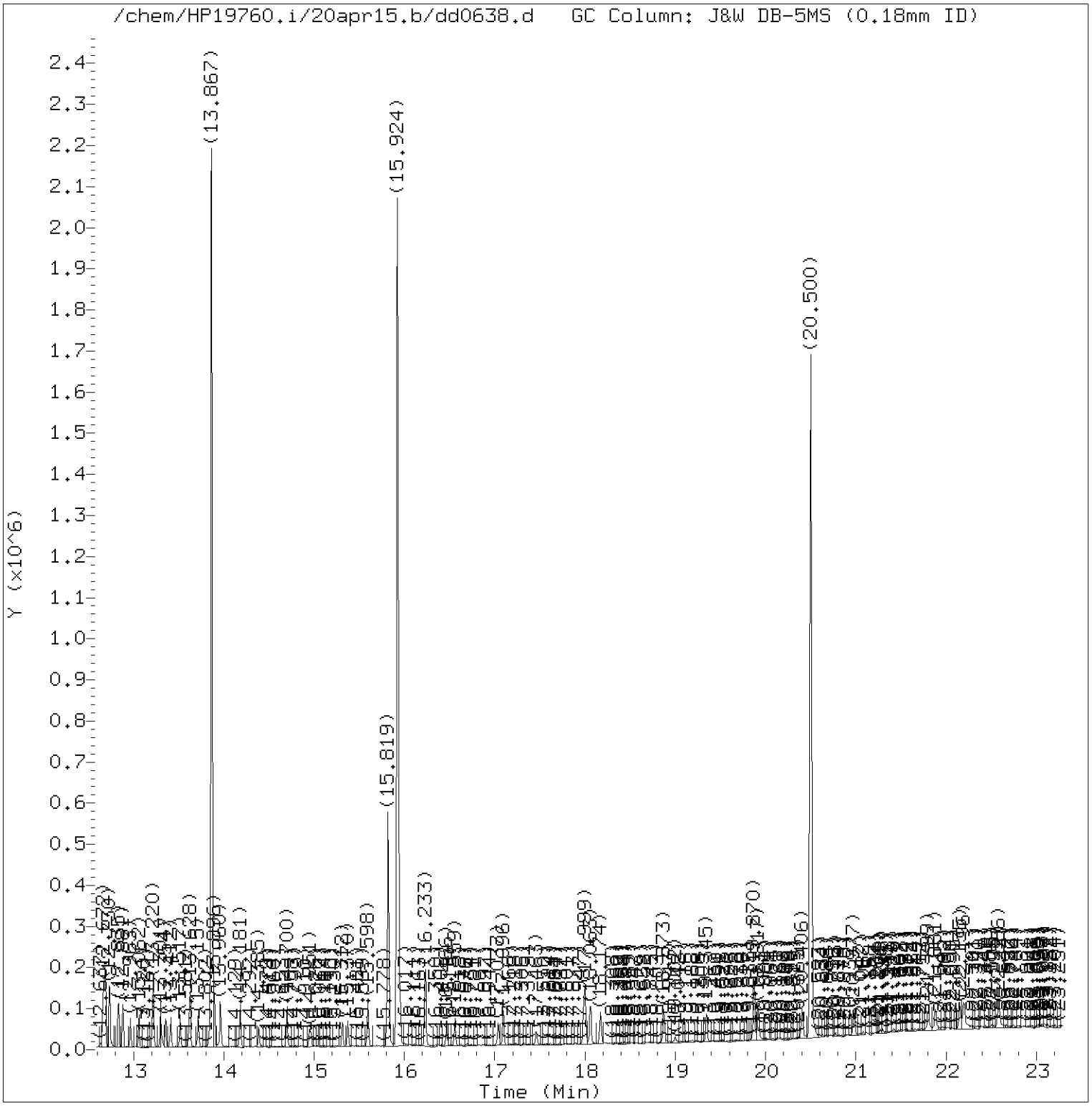
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.897	88	8014	0.209
4) N-Nitrosodimethylamine	(1)	3.427	74	14902	0.252
5) Pyridine	(1)	3.457	79	24945	0.243
7) 2-Picoline	(1)	4.558	93	24179	0.231
8) N-Nitrosomethylethylamine	(1)	4.739	88	11434M	0.255
9) Methyl methanesulfonate	(1)	5.164	80	10635	0.222
11)$2-Fluorophenol	(1)	5.392	112	39577	0.473
42) Total Cresols	(1)			37838	0.479
13) N-Nitrosodiethylamine	(1)	5.730	102	9490	0.224
15) Ethyl methanesulfonate	(1)	6.161	109	10466	0.234
16) Benzaldehyde	(1)	6.633	77	16297	0.238
17)$Phenol-d6	(1)	6.721	99	52861	0.472
18) Phenol	(1)	6.738	94	28320	0.246
19) Aniline	(1)	6.779	93	33096	0.233
20) a-methylstyrene	(1)	6.866	118	8417	0.254
22) bis(2-Chloroethyl)ether	(1)	6.895	93	24055	0.250
23) 2-Chlorophenol	(1)	6.954	128	19832	0.239
24) 1,3-Dichlorobenzene	(1)	7.181	146	21157	0.248
25)*1,4-Dichlorobenzene-d4	(1)	7.269	152	280093	5.000
26) 1,4-Dichlorobenzene	(1)	7.292	146	20445	0.237
97) Isosafrole	(3)			15786	0.235
27) Benzyl alcohol	(1)	7.473	108	12601	0.231
28) 1,2-Dichlorobenzene	(1)	7.513	146	19728	0.241
31) 2-Methylphenol	(1)	7.636	108	18079	0.234
30) Indene	(1)	7.653	115	32899	0.263
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.688	45	31914	0.255
34) bis(2-Chloroisopropyl)ether	(1)	7.688	45	31914	0.255
35) N-Nitrosopyrrolidine	(1)	7.828	100	10206	0.232
36) Acetophenone	(1)	7.869	105	27328	0.240
37) 4-Methylphenol	(1)	7.869	108	19759	0.245
38) N-Nitroso-di-n-propylamine	(1)	7.880	70	16106	0.248
39) N-Nitrosomorpholine	(1)	7.892	56	15209	0.253
40) o-Toluidine	(1)	7.921	106	31649	0.240
43) Hexachloroethane	(1)	8.026	117	8592	0.234
120) 2,4_2,6-Dinitrotoluenes	(3)			16324	0.415
44)$Nitrobenzene-d5	(2)	8.096	82	47712	0.495
45) Nitrobenzene	(2)	8.125	77	24296	0.250
48) N-Nitrosopiperidine	(2)	8.353	114	10629	0.245
50) Isophorone	(2)	8.498	82	40885	0.234
51) 2-Nitrophenol	(2)	8.615	139	9652	0.227

M = Compound was manually integrated.
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Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.697	107	19635	0.236
56) Benzoic acid	(2)	8.761	105	78815	1.429
146) Diallate trans/cis	(4)			17405	0.224
57) O,O,O-Triethylphosphorothioate	(2)	8.819	198	8116	0.227
55) bis(2-Chloroethoxy)methane	(2)	8.860	93	28294	0.254
60) 2,4-Dichlorophenol	(2)	8.982	162	14849	0.237
62) 1,2,4-Trichlorobenzene	(2)	9.128	180	15888	0.246
65)*Naphthalene-d8	(2)	9.209	136	1055201	5.000
66) Naphthalene	(2)	9.244	128	57886	0.247
67) 4-Chloroaniline	(2)	9.338	127	22584	0.239
68) 2,6-Dichlorophenol	(2)	9.343	162	13673	0.232
69) Hexachloropropene	(2)	9.390	213	8429	0.210
71) Hexachlorobutadiene	(2)	9.454	225	8192	0.239
75) Quinoline	(2)	9.769	129	36183	0.243
76) Caprolactam	(2)	9.821	113	5509	0.206
77) N-Nitrosodi-n-butylamine	(2)	9.897	84	12950	0.196
80) 4-Chloro-3-methylphenol	(2)	10.113	107	15551	0.224
82) Safrole	(2)	10.229	162	13420	0.239
83) 2-Methylnaphthalene	(2)	10.352	142	35543	0.240
84) 1-Methylnaphthalene	(2)	10.503	142	32736	0.233
85) Hexachlorocyclopentadiene	(3)	10.608	237	8022	0.216
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.614	216	14276	0.237
88) cis-Isosafrole	(3)	10.702	162	2329	0.038
90) 2,4,6-Trichlorophenol	(3)	10.801	196	9996	0.239
92) 2,4,5-Trichlorophenol	(3)	10.853	196	9326	0.213
93)$2-Fluorobiphenyl	(3)	10.958	172	78986	0.513
94) trans-Isosafrole	(3)	11.069	162	13457	0.197
95) 1,1'-Biphenyl	(3)	11.110	154	41364	0.233
96) 2-Chloronaphthalene	(3)	11.127	162	34808	0.258
98) 1-Chloronaphthalene	(3)	11.156	162	30475	0.240
99) Diphenyl ether	(3)	11.290	170	22608	0.240
100) 2-Nitroaniline	(3)	11.296	138	9616	0.207
104) 1,4-Naphthoquinone	(3)	11.413	158	11183	0.198
105) 1,4-Dinitrobenzene	(3)	11.529	168	4903	0.198
106) Dimethylphthalate	(3)	11.611	163	35466	0.245
107) 1,3-Dinitrobenzene	(3)	11.634	168	5713	0.209
108) 2,6-Dinitrotoluene	(3)	11.687	165	7104	0.207
109) Acenaphthylene	(3)	11.762	152	47063	0.234
112) 3-Nitroaniline	(3)	11.914	138	7712	0.203
113)*Acenaphthene-d10	(3)	11.966	164	494252	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	12.013	153	35908	0.259
115) 2,4-Dinitrophenol	(3)	12.060	184	32646	1.328
116) 4-Nitrophenol	(3)	12.141	109	23597	0.943
117) Pentachlorobenzene	(3)	12.188	250	12337	0.260
118) 2,4-Dinitrotoluene	(3)	12.235	165	9220	0.202
119) Dibenzofuran	(3)	12.240	168	48961	0.263
121) 1-Naphthylamine	(3)	12.339	143	31119	0.223
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	6703	0.211
123) 2-Naphthylamine	(3)	12.438	143	29892	0.221
124) Diethylphthalate	(3)	12.561	149	33597	0.222
125) Thionazin	(3)	12.660	107	5998	0.209
126) Fluorene	(3)	12.672	166	35708	0.244
128) 5-Nitro-o-toluidine	(3)	12.683	152	10047	0.228
129) 4-Nitroaniline	(3)	12.689	138	9330	0.225
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	17610	0.256
130) 4,6-Dinitro-2-methylphenol	(4)	12.736	198	20929	0.729
132) NDPA as diphenylamine	(4)	12.835	169	28460	0.229
131) N-Nitrosodiphenylamine	(4)	12.835	169	28460	0.229
134) 1,2-Diphenylhydrazine	(4)	12.881	77	39987	0.232
135)$2,4,6-Tribromophenol	(3)	12.969	330	5818	0.392
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	6740	0.237
140) Diallate (peak 1)	(4)	13.208	86	12673	0.164
141) Phorate	(4)	13.220	75	23216	0.218
142) Phenacetin	(4)	13.220	108	15535	0.191
143) 4-Bromophenyl-phenylether	(4)	13.301	248	7713	0.222
144) Diallate (peak 2)	(4)	13.319	86	4732	0.060
145) Hexachlorobenzene	(4)	13.359	284	9538	0.262
147) Dimethoate	(4)	13.412	87	14773	0.190
148) Atrazine	(4)	13.517	200	7998	0.207
149) Pentachlorophenol	(4)	13.610	266	4181	0.161
150) 4-Aminobiphenyl	(4)	13.628	169	30686	0.227
151) Pentachloronitrobenzene	(4)	13.628	237	3810	0.235
152) Pronamide	(4)	13.715	173	12844	0.189
153)*Phenanthrene-d10	(4)	13.867	188	918482	5.000
154) Dinoseb	(4)	13.872	211	5669	0.147
155) Phenanthrene	(4)	13.896	178	52447	0.251
157) Anthracene	(4)	13.960	178	49584	0.237
163) Carbazole	(4)	14.181	167	48595	0.237
164) Methyl parathion	(4)	14.385	109	10161	0.165
165) Di-n-butylphthalate	(4)	14.700	149	53713	0.203

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

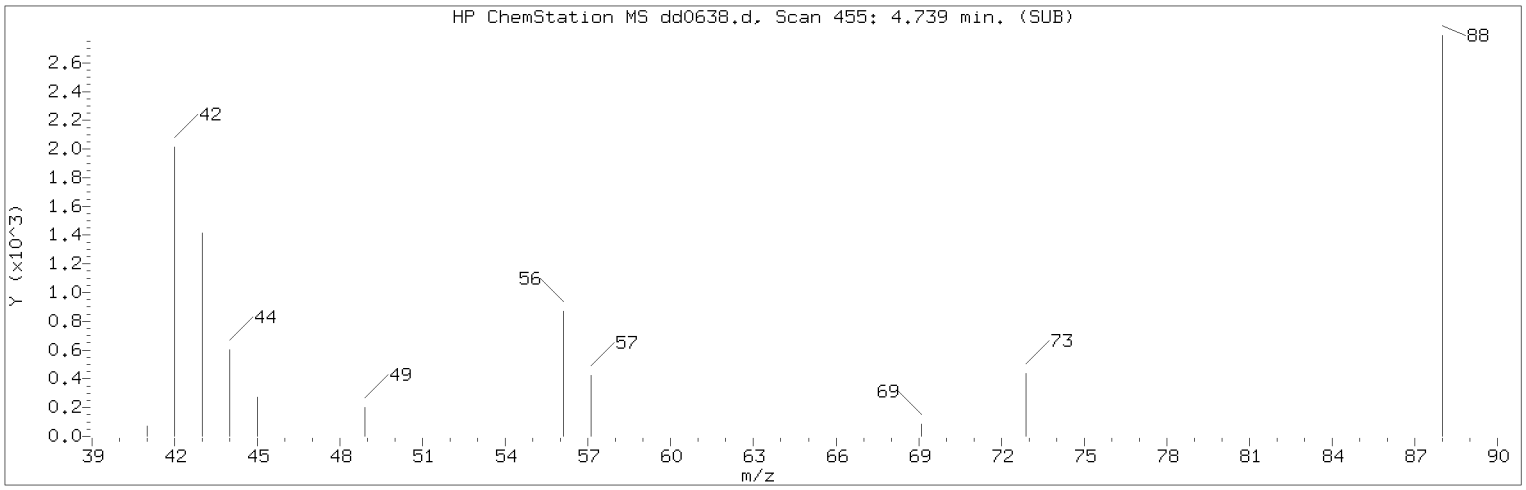
Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.945	109	5222	0.147
168) 4-Nitroquinoline-1-oxide	(4)	14.968	190	2946	0.115
222) Total PAHs	(6)			789728	4.242
169) Octachlorostyrene	(4)	15.312	308	4170	0.293
171) Isodrin	(4)	15.370	193	6012	0.234
173) Fluoranthene	(4)	15.598	202	53999	0.228
174) Benzidine	(5)	15.819	184	271804	1.768
175)*Pyrene-d10	(5)	15.924	212	907555	5.000
177) Pyrene	(5)	15.953	202	64372	0.257
179)$Terphenyl-d14	(5)	16.233	244	68938	0.500
182) p-Dimethylaminoazobenzene	(5)	16.466	225	7123	0.167
185) Chlorobenzilate	(5)	16.559	139	14794	0.190
187) 3,3'-Dimethylbenzidine	(5)	17.043	212	23499	0.151
188) Butylbenzylphthalate	(5)	17.096	149	23818	0.195
191) 2-Acetylaminofluorene	(5)	17.463	181	10830	0.112
193) 3,3'-Dichlorobenzidine	(5)	17.982	252	14092	0.180
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.999	231	7337	0.174
195) Benzo(a)anthracene	(5)	17.999	228	43890	0.224
196) Chrysene	(5)	18.063	228	51045	0.249
199) bis(2-Ethylhexyl)phthalate	(5)	18.174	149	29604	0.171
203) 6-Methylchrysene	(5)	18.873	242	30742	0.209
205) Di-n-octylphthalate	(6)	19.351	149	42306	0.145
206) Benzo(b)fluoranthene	(6)	19.870	252	42707	0.218
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.876	256	18017	0.194
208) Benzo(k)fluoranthene	(6)	19.917	252	43444	0.219
211) Benzo(a)pyrene	(6)	20.400	252	39801	0.212
213)*Perylene-d12	(6)	20.500	264	828680	5.000
215) 3-Methylcholanthrene	(6)	20.977	268	19322	0.196
217) Dibenz(a,h)acridine	(6)	21.805	279	24845	0.172
218) Dibenz(a,j)acridine	(6)	21.881	279	26241	0.169
219) Indeno(1,2,3-cd)pyrene	(6)	22.149	276	31035M	0.193
220) Dibenz(a,h)anthracene	(6)	22.201	278	34586	0.203
221) Benzo(g,h,i)perylene	(6)	22.580	276	37974	0.219

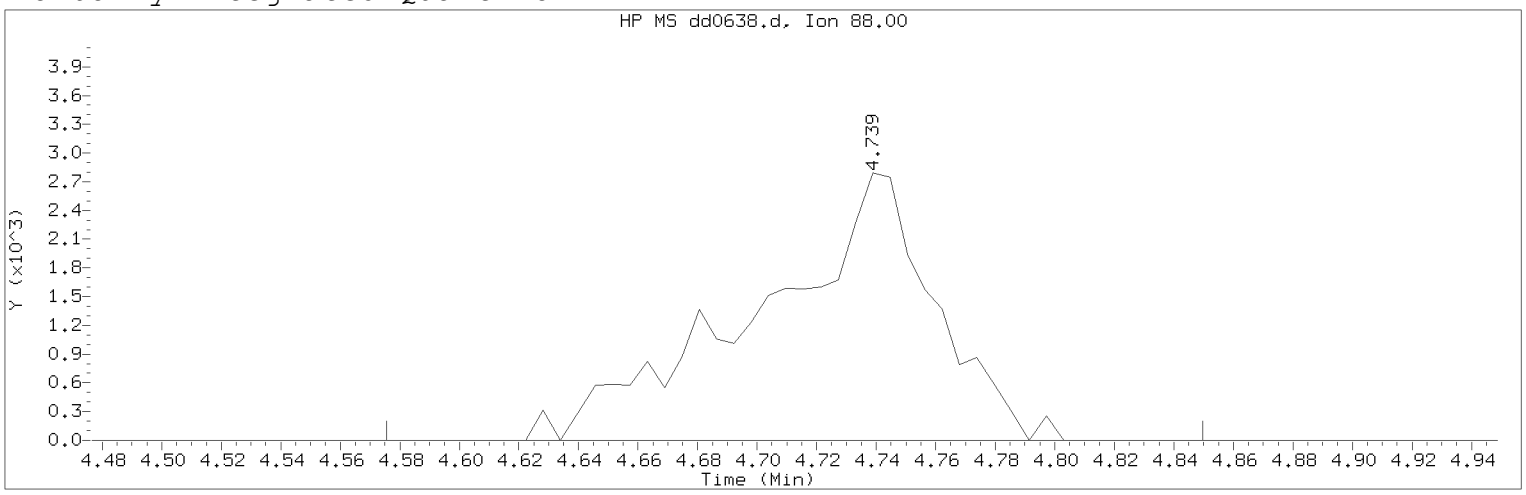
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

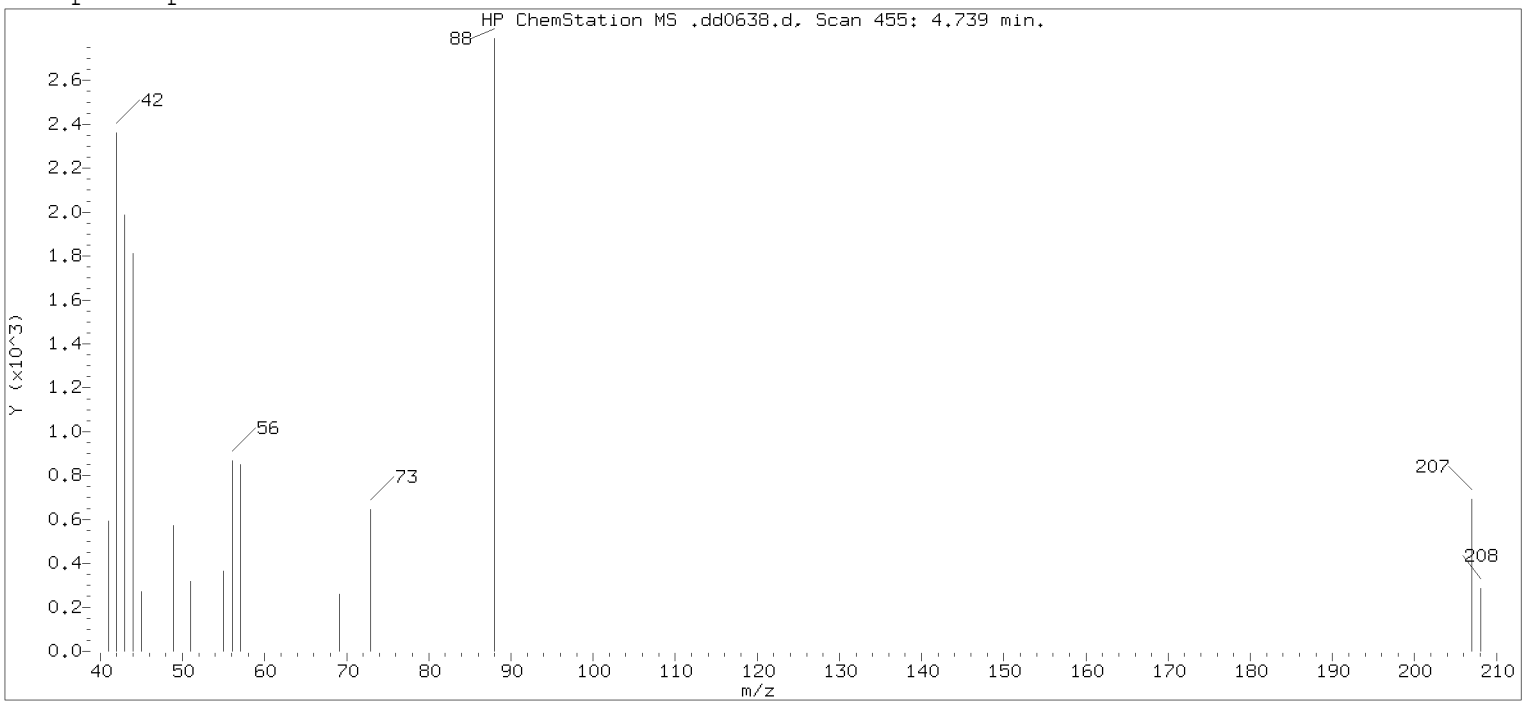
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 455
Retention Time (minutes) : 4.739
Quant Ion : 88.00
Area (flag) : 11434M
On-Column Amount (ng/ul) : 0.2553
Integration start scan : 426 Integration stop scan: 473
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

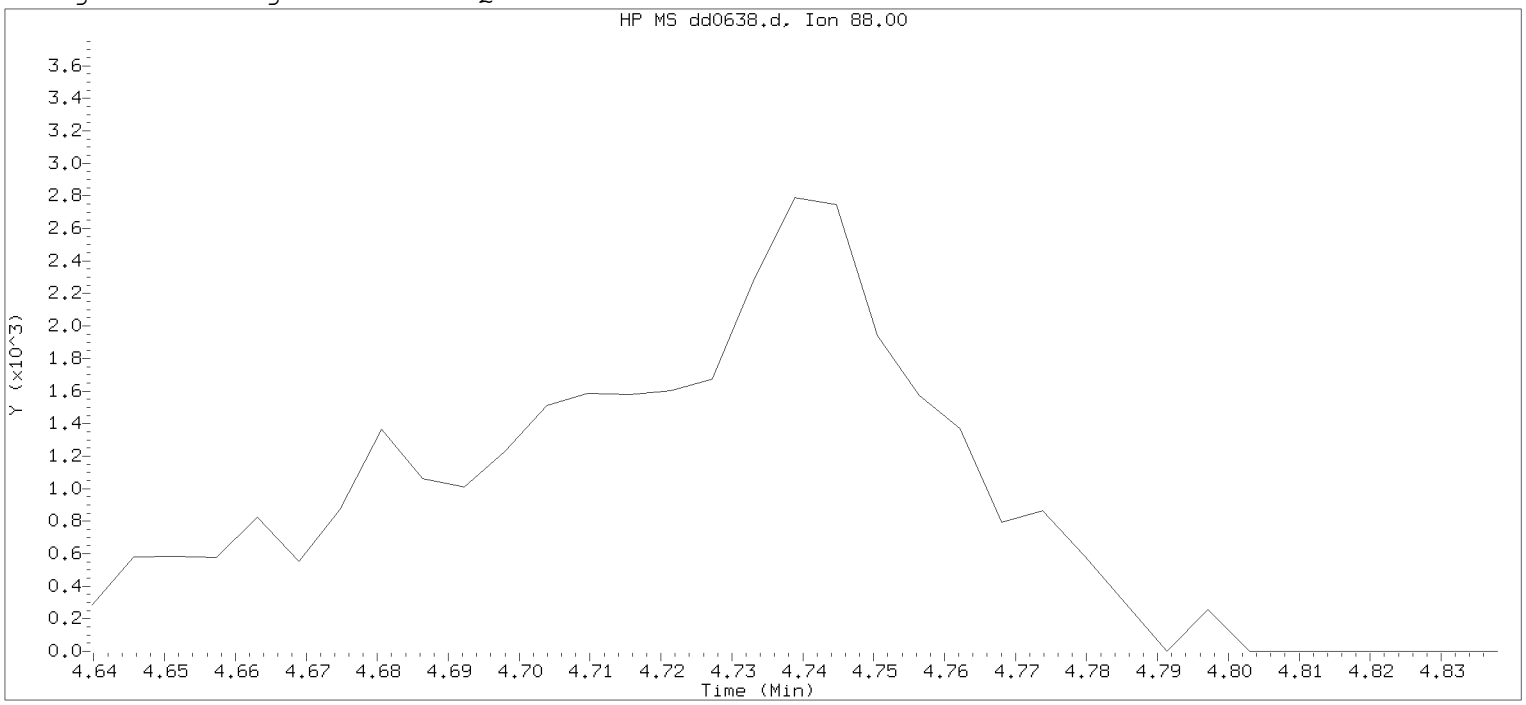
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

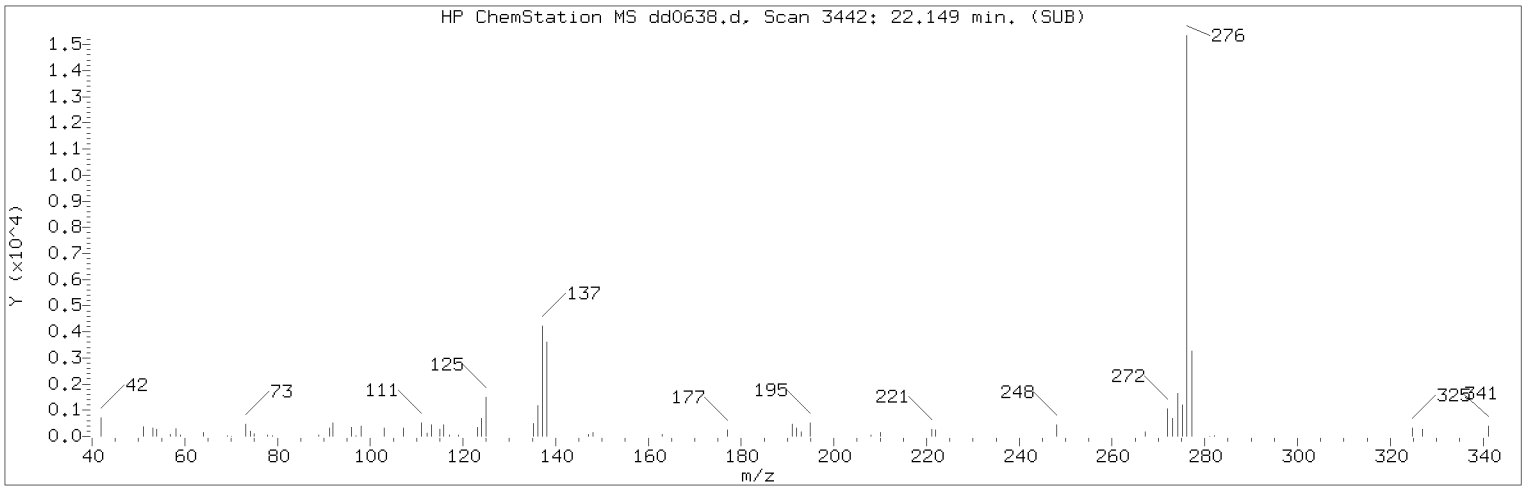
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 22:41 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

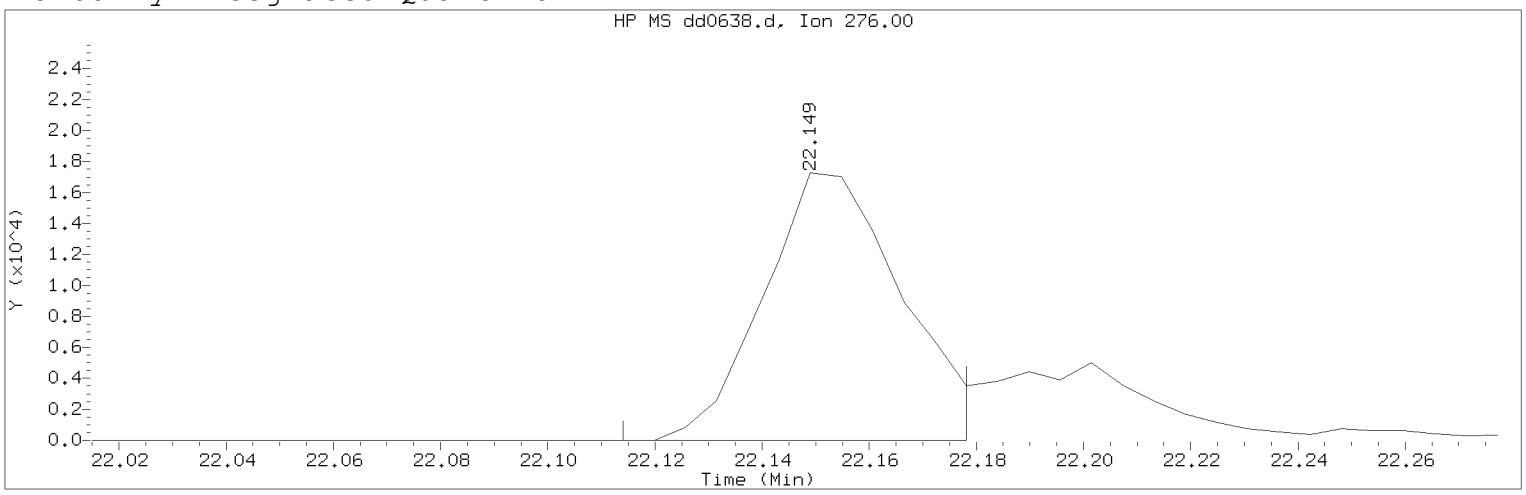
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.739
Quant Ion : 88.00

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

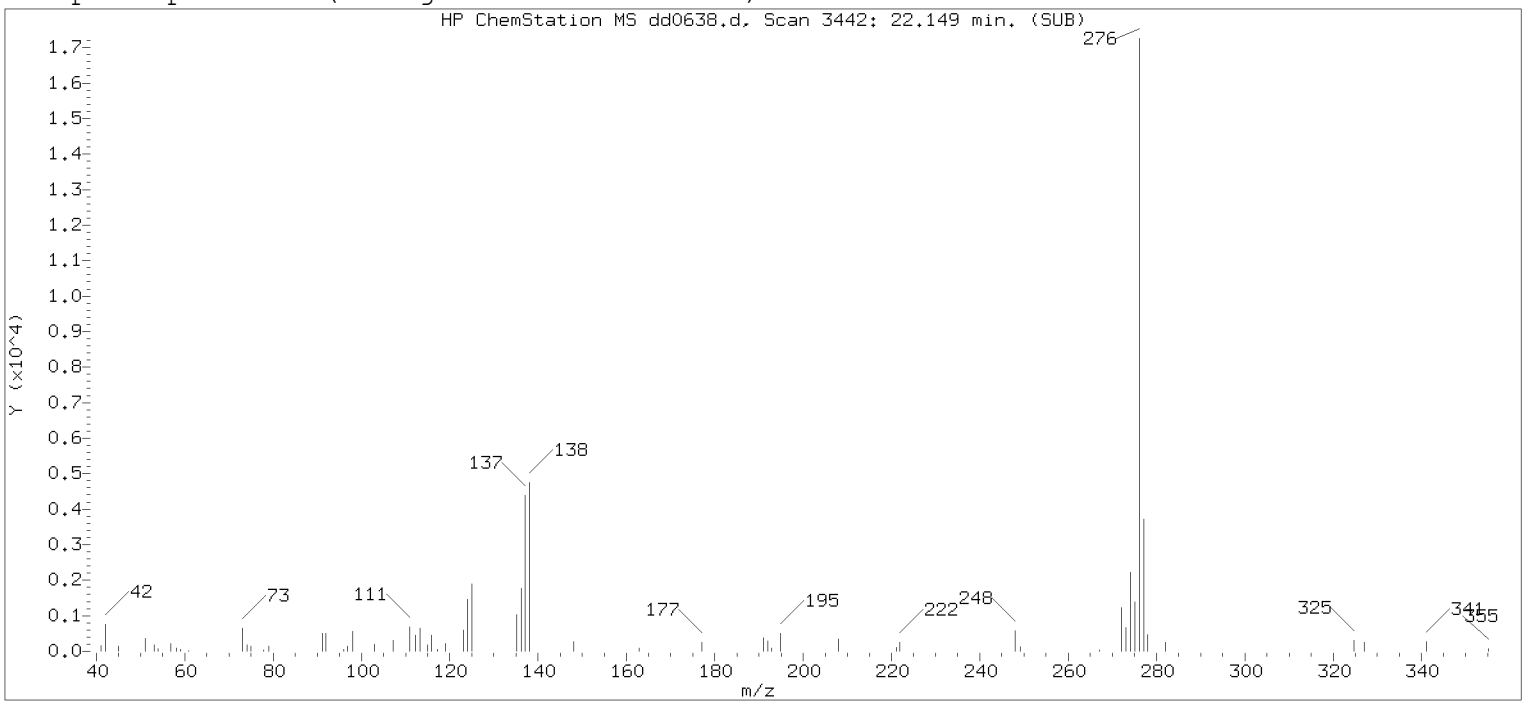
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3442
Retention Time (minutes) : 22.149
Quant Ion : 276.00
Area (flag) : 31035M
On-Column Amount (ng/ul) : 0.1930
Integration start scan : 3435 Integration stop scan: 3446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

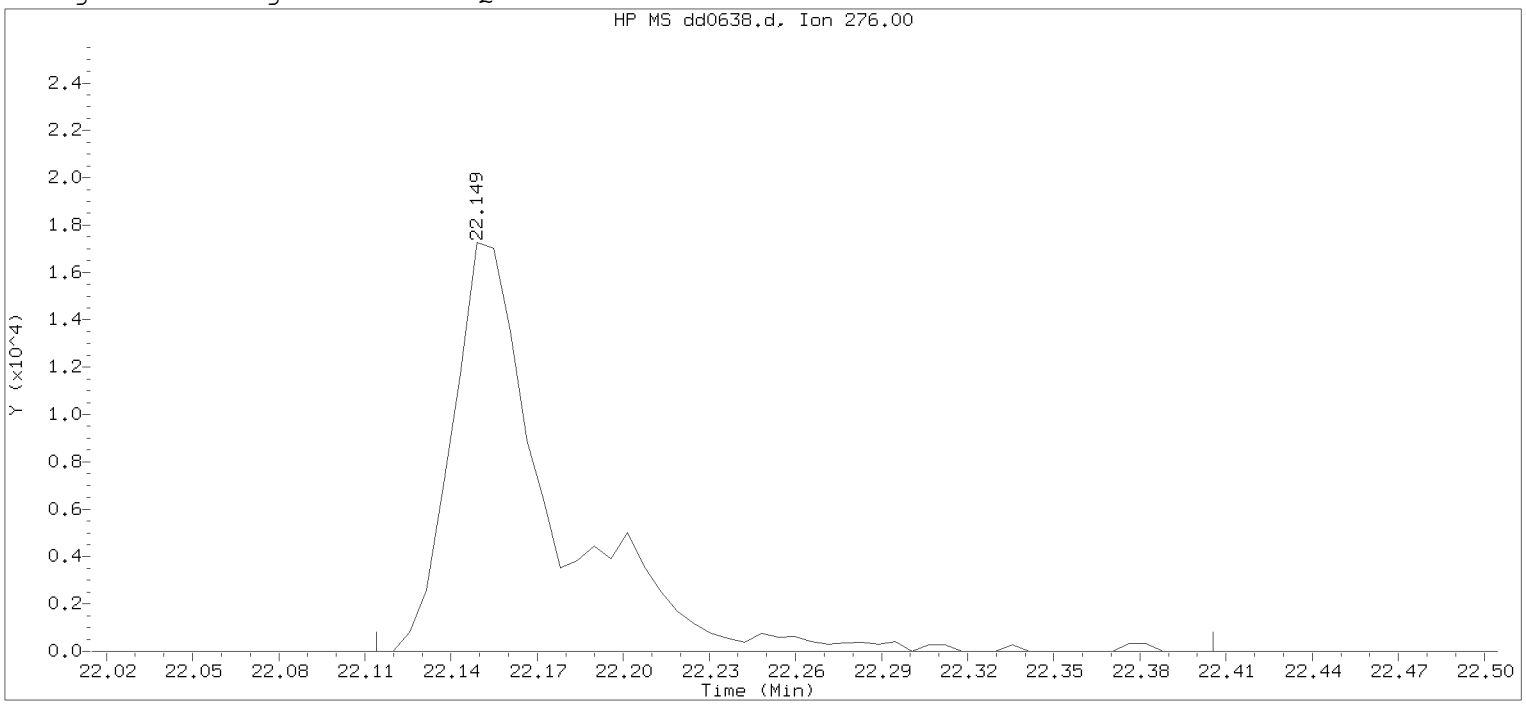
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



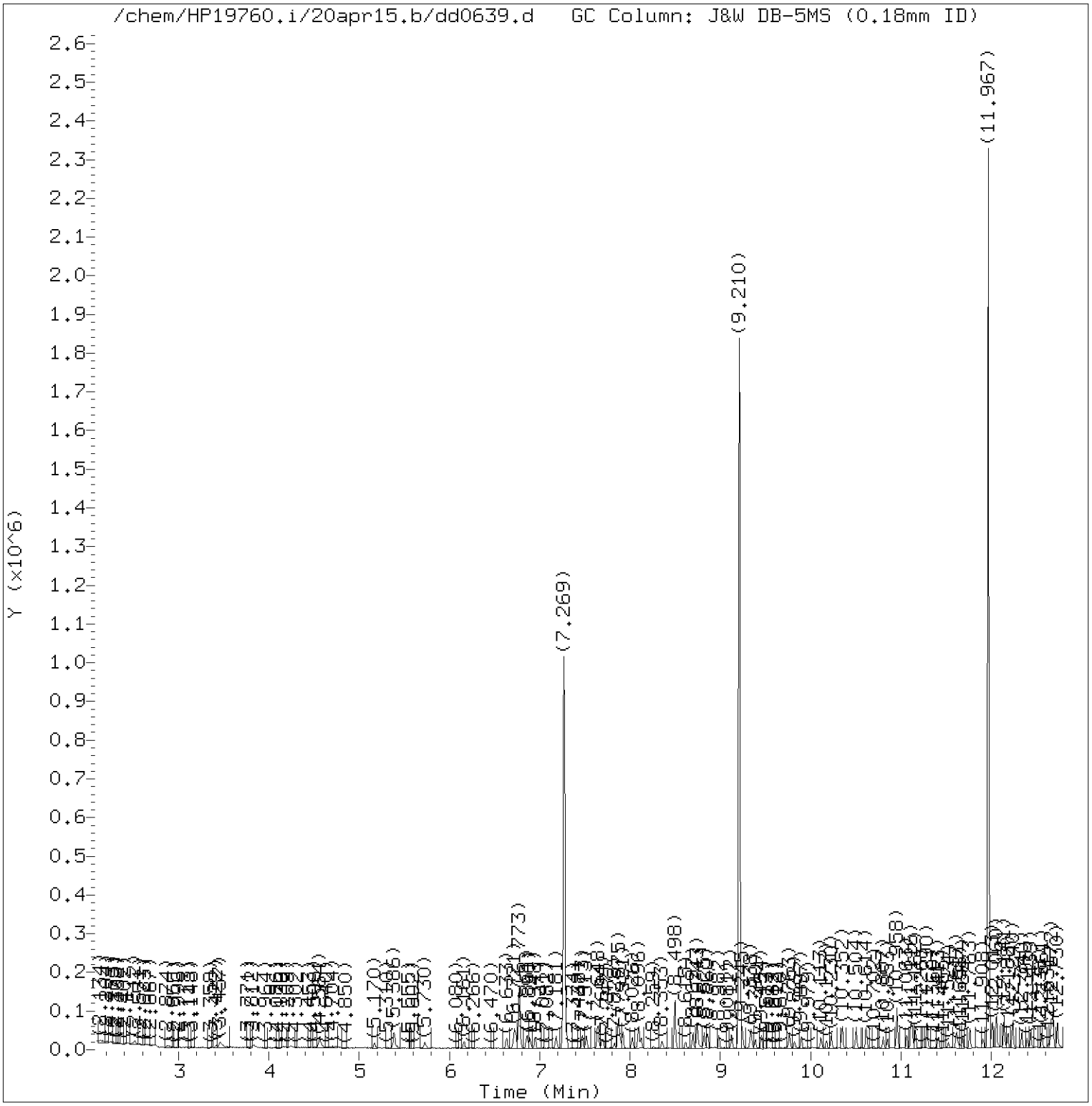
Data File: /chem/HP19760.i/20apr15.b/dd0638.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 22:41 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3442		
Retention Time (minutes)	: 22.149		
Quant Ion	: 276.00		
Area	: 42699		
On-column Amount (ng/ul)	: 0.2143		
Integration start scan	: 3435	Integration stop scan:	3485
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name: em10340



Total Ion Chromatogram (TIC)

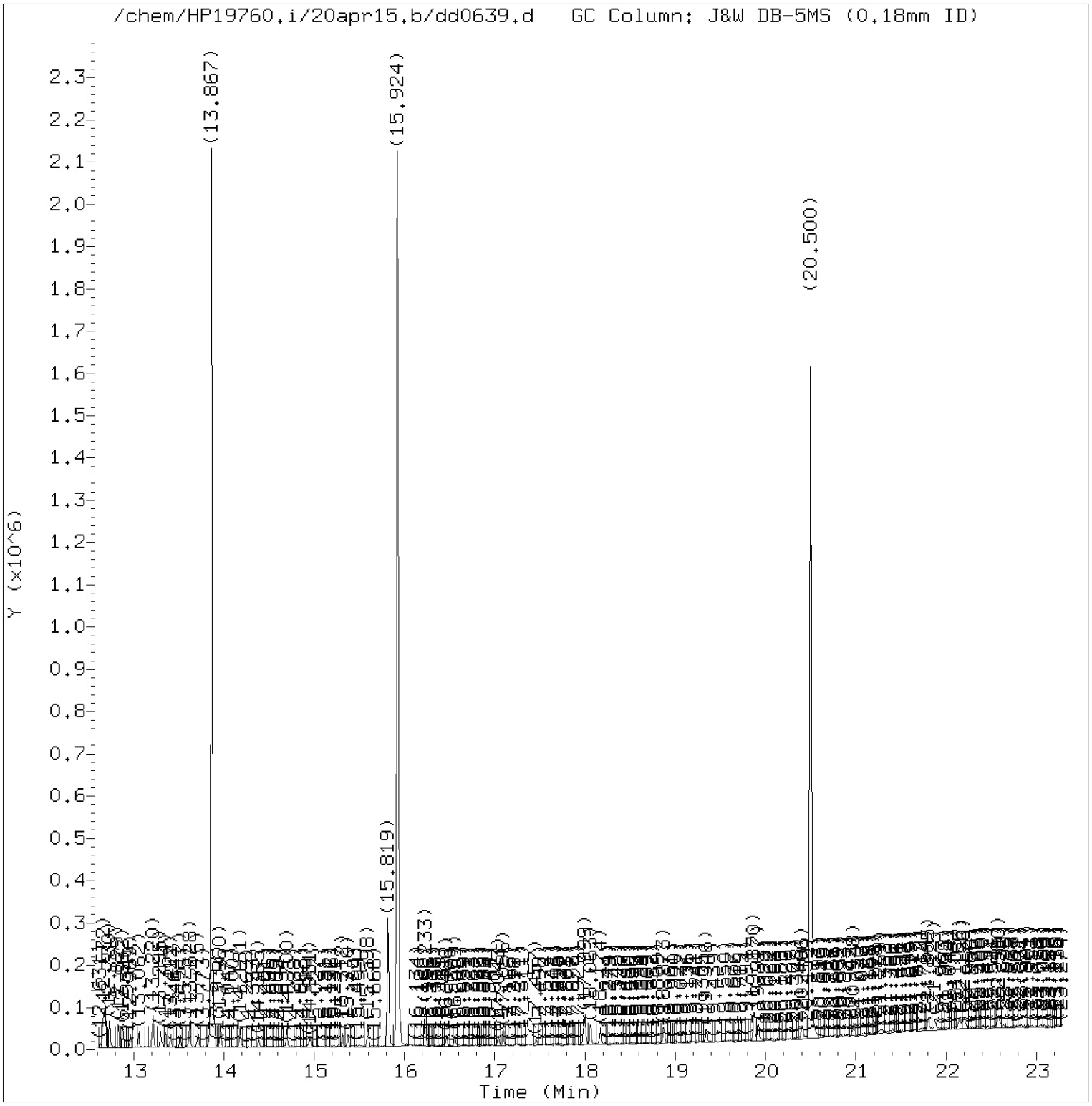
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.880	88	5240	0.172
4) N-Nitrosodimethylamine	(1)	3.416	74	7300	0.155
5) Pyridine	(1)	3.457	79	13016	0.159
7) 2-Picoline	(1)	4.570	93	12871	0.155
8) N-Nitrosomethylethylamine	(1)	4.739	88	5341M	0.150
9) Methyl methanesulfonate	(1)	5.165	80	6319	0.166
11)$2-Fluorophenol	(1)	5.386	112	19520	0.294
42) Total Cresols	(1)			18812	0.299
13) N-Nitrosodiethylamine	(1)	5.724	102	5170	0.154
15) Ethyl methanesulfonate	(1)	6.161	109	5179	0.146
16) Benzaldehyde	(1)	6.633	77	7734	0.142
17)$Phenol-d6	(1)	6.721	99	26470	0.298
18) Phenol	(1)	6.738	94	14525	0.159
19) Aniline	(1)	6.779	93	17329	0.154
20) a-methylstyrene	(1)	6.866	118	3949	0.150
22) bis(2-Chloroethyl)ether	(1)	6.890	93	12936	0.169
23) 2-Chlorophenol	(1)	6.948	128	9800	0.149
24) 1,3-Dichlorobenzene	(1)	7.181	146	11059	0.163
25)*1,4-Dichlorobenzene-d4	(1)	7.269	152	222466	5.000
26) 1,4-Dichlorobenzene	(1)	7.298	146	11325	0.165
97) Isosafrole	(3)			6895	0.102
27) Benzyl alcohol	(1)	7.473	108	7049	0.163
28) 1,2-Dichlorobenzene	(1)	7.519	146	9408	0.145
31) 2-Methylphenol	(1)	7.636	108	8734	0.142
30) Indene	(1)	7.648	115	15433	0.156
34) bis(2-Chloroisopropyl)ether	(1)	7.694	45	16285	0.164
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.694	45	16285	0.164
35) N-Nitrosopyrrolidine	(1)	7.822	100	5250	0.150
37) 4-Methylphenol	(1)	7.875	108	10078	0.157
36) Acetophenone	(1)	7.875	105	13815	0.153
38) N-Nitroso-di-n-propylamine	(1)	7.881	70	8327	0.162
39) N-Nitrosomorpholine	(1)	7.892	56	7785	0.163
40) o-Toluidine	(1)	7.921	106	15718	0.150
43) Hexachloroethane	(1)	8.021	117	4636	0.159
120) 2,4_2,6-Dinitrotoluenes	(3)			7326	0.180
44)$Nitrobenzene-d5	(2)	8.096	82	23987	0.258
45) Nitrobenzene	(2)	8.125	77	11880	0.126
48) N-Nitrosopiperidine	(2)	8.359	114	5355	0.128
50) Isophorone	(2)	8.498	82	20640	0.122
51) 2-Nitrophenol	(2)	8.615	139	4488	0.109

M = Compound was manually integrated.
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Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.697	107	9851	0.123
56) Benzoic acid	(2)	8.743	105	28130	0.528
146) Diallate trans/cis	(4)			9299	0.115
57) O,O,O-Triethylphosphorothioate	(2)	8.825	198	4531	0.131
55) bis(2-Chloroethoxy)methane	(2)	8.860	93	14575	0.136
60) 2,4-Dichlorophenol	(2)	8.982	162	6678	0.111
62) 1,2,4-Trichlorobenzene	(2)	9.122	180	8442	0.135
65)*Naphthalene-d8	(2)	9.210	136	1019586	5.000
67) 4-Chloroaniline	(2)	9.338	127	11339	0.124
68) 2,6-Dichlorophenol	(2)	9.344	162	6460	0.114
69) Hexachloropropene	(2)	9.390	213	4569	0.118
71) Hexachlorobutadiene	(2)	9.454	225	4115	0.124
75) Quinoline	(2)	9.763	129	17685	0.123
76) Caprolactam	(2)	9.827	113	2515	0.097
77) N-Nitrosodi-n-butylamine	(2)	9.897	84	6753	0.106
80) 4-Chloro-3-methylphenol	(2)	10.113	107	7603	0.113
82) Safrole	(2)	10.230	162	6616	0.122
85) Hexachlorocyclopentadiene	(3)	10.614	237	3620	0.096
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	7648	0.125
88) cis-Isosafrole	(3)	10.696	162	1314	0.021
90) 2,4,6-Trichlorophenol	(3)	10.807	196	4400	0.104
92) 2,4,5-Trichlorophenol	(3)	10.847	196	4134	0.093
93)$2-Fluorobiphenyl	(3)	10.958	172	41050	0.263
94) trans-Isosafrole	(3)	11.063	162	5581	0.081
95) 1,1'-Biphenyl	(3)	11.110	154	20268	0.113
98) 1-Chloronaphthalene	(3)	11.162	162	15526	0.121
99) Diphenyl ether	(3)	11.290	170	12265	0.129
100) 2-Nitroaniline	(3)	11.296	138	4396	0.094
104) 1,4-Naphthoquinone	(3)	11.419	158	5234	0.092
105) 1,4-Dinitrobenzene	(3)	11.529	168	2326	0.093
106) Dimethylphthalate	(3)	11.617	163	17855	0.122
107) 1,3-Dinitrobenzene	(3)	11.628	168	2836M	0.102
108) 2,6-Dinitrotoluene	(3)	11.693	165	3017	0.087
112) 3-Nitroaniline	(3)	11.908	138	4418	0.115
113)*Acenaphthene-d10	(3)	11.967	164	500665	5.000
115) 2,4-Dinitrophenol	(3)	12.060	184	11782	0.473
116) 4-Nitrophenol	(3)	12.141	109	10468	0.413
117) Pentachlorobenzene	(3)	12.188	250	6228	0.130
118) 2,4-Dinitrotoluene	(3)	12.235	165	4309	0.093
119) Dibenzofuran	(3)	12.240	168	23655	0.126

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Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
121) 1-Naphthylamine	(3)	12.340	143	15004	0.106
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	2910	0.091
123) 2-Naphthylamine	(3)	12.439	143	14313	0.105
124) Diethylphthalate	(3)	12.561	149	17137	0.112
125) Thionazin	(3)	12.660	107	3119	0.107
129) 4-Nitroaniline	(3)	12.683	138	4352	0.104
128) 5-Nitro-o-toluidine	(3)	12.683	152	4922	0.110
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	9246	0.133
130) 4,6-Dinitro-2-methylphenol	(4)	12.730	198	9217	0.309
131) N-Nitrosodiphenylamine	(4)	12.835	169	14953	0.116
132) NDPA as diphenylamine	(4)	12.835	169	14953	0.116
134) 1,2-Diphenylhydrazine	(4)	12.882	77	19546	0.109
135)$2,4,6-Tribromophenol	(3)	12.969	330	3000	0.200
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	3396	0.115
140) Diallate (peak 1)	(4)	13.208	86	6666	0.083
141) Phorate	(4)	13.220	75	10639	0.096
142) Phenacetin	(4)	13.220	108	6760	0.080
143) 4-Bromophenyl-phenylether	(4)	13.301	248	4193	0.117
144) Diallate (peak 2)	(4)	13.319	86	2633	0.032
147) Dimethoate	(4)	13.412	87	7366	0.091
148) Atrazine	(4)	13.517	200	4223	0.105
149) Pentachlorophenol	(4)	13.616	266	1740	0.065
150) 4-Aminobiphenyl	(4)	13.628	169	14403	0.103
151) Pentachloronitrobenzene	(4)	13.634	237	1663M	0.099
152) Pronamide	(4)	13.715	173	6120	0.087
153)*Phenanthrene-d10	(4)	13.867	188	953308	5.000
154) Dinoseb	(4)	13.872	211	1827	0.046
163) Carbazole	(4)	14.181	167	24329	0.114
164) Methyl parathion	(4)	14.385	109	4378	0.069
165) Di-n-butylphthalate	(4)	14.700	149	25985	0.095
167) Parathion	(4)	14.951	109	2578	0.070
168) 4-Nitroquinoline-1-oxide	(4)	14.968	190	952	0.036
169) Octachlorostyrene	(4)	15.312	308	2090	0.142
171) Isodrin	(4)	15.376	193	3731	0.140
174) Benzidine	(5)	15.819	184	146669	0.918
175)*Pyrene-d10	(5)	15.924	212	943600	5.000
179)$Terphenyl-d14	(5)	16.233	244	35437	0.247
182) p-Dimethylaminoazobenzene	(5)	16.466	225	3261	0.074
185) Chlorobenzilate	(5)	16.559	139	7448	0.092
187) 3,3'-Dimethylbenzidine	(5)	17.037	212	12361	0.076

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Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

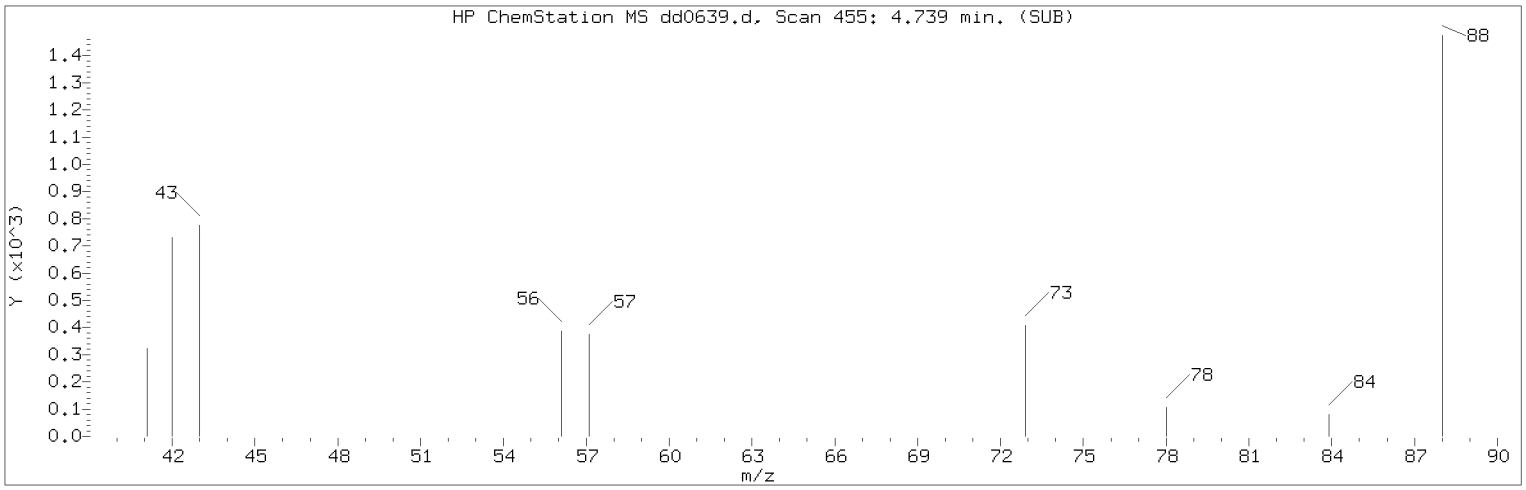
Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
188) Butylbenzylphthalate	(5)	17.096	149	11499	0.090
191) 2-Acetylaminofluorene	(5)	17.457	181	3703	0.037
193) 3,3'-Dichlorobenzidine	(5)	17.982	252	6228	0.076
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.005	231	3613	0.082
199) bis(2-Ethylhexyl)phthalate	(5)	18.174	149	13118	0.073
203) 6-Methylchrysene	(5)	18.873	242	14852	0.097
205) Di-n-octylphthalate	(6)	19.340	149	19178	0.065
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.876	256	8496	0.090
213)*Perylene-d12	(6)	20.500	264	840424	5.000
215) 3-Methylcholanthrene	(6)	20.978	268	8917	0.089
217) Dibenz(a,h)acridine	(6)	21.805	279	12336	0.084
218) Dibenz(a,j)acridine	(6)	21.881	279	11320	0.072

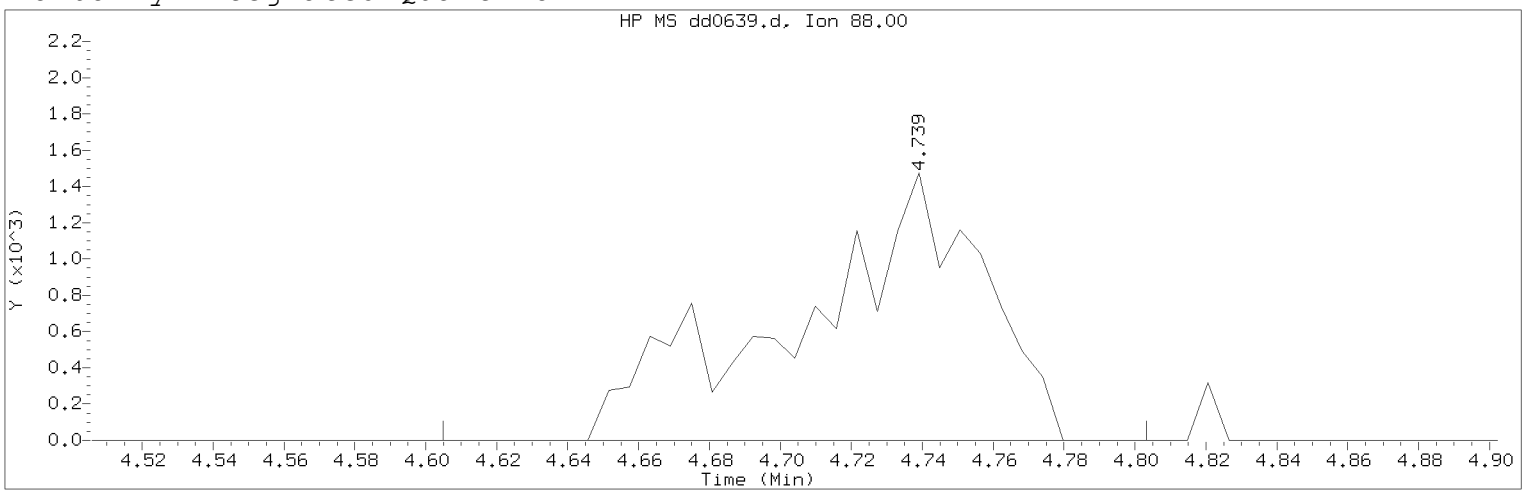
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

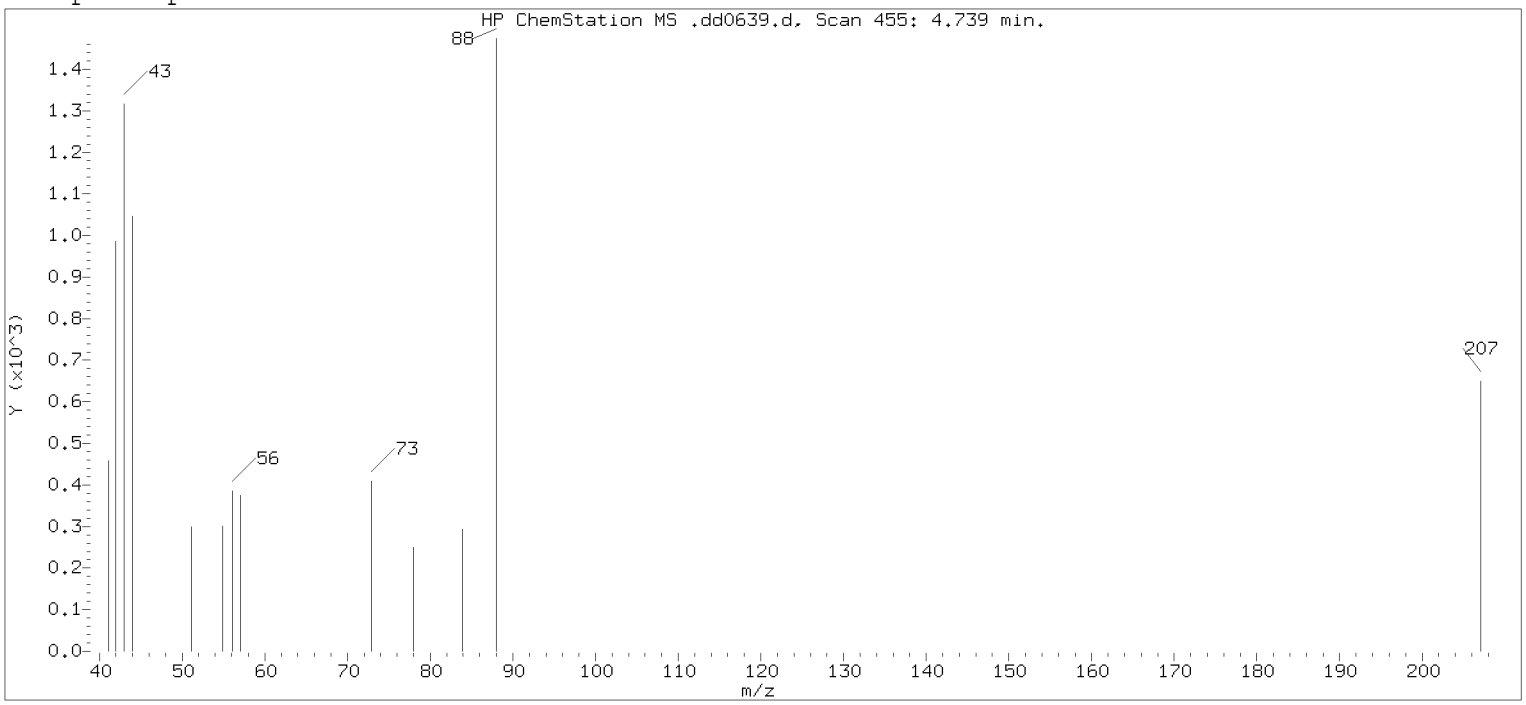
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 455
Retention Time (minutes) : 4.739
Quant Ion : 88.00
Area (flag) : 5341M
On-Column Amount (ng/ul) : 0.1501
Integration start scan : 431 Integration stop scan: 465
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

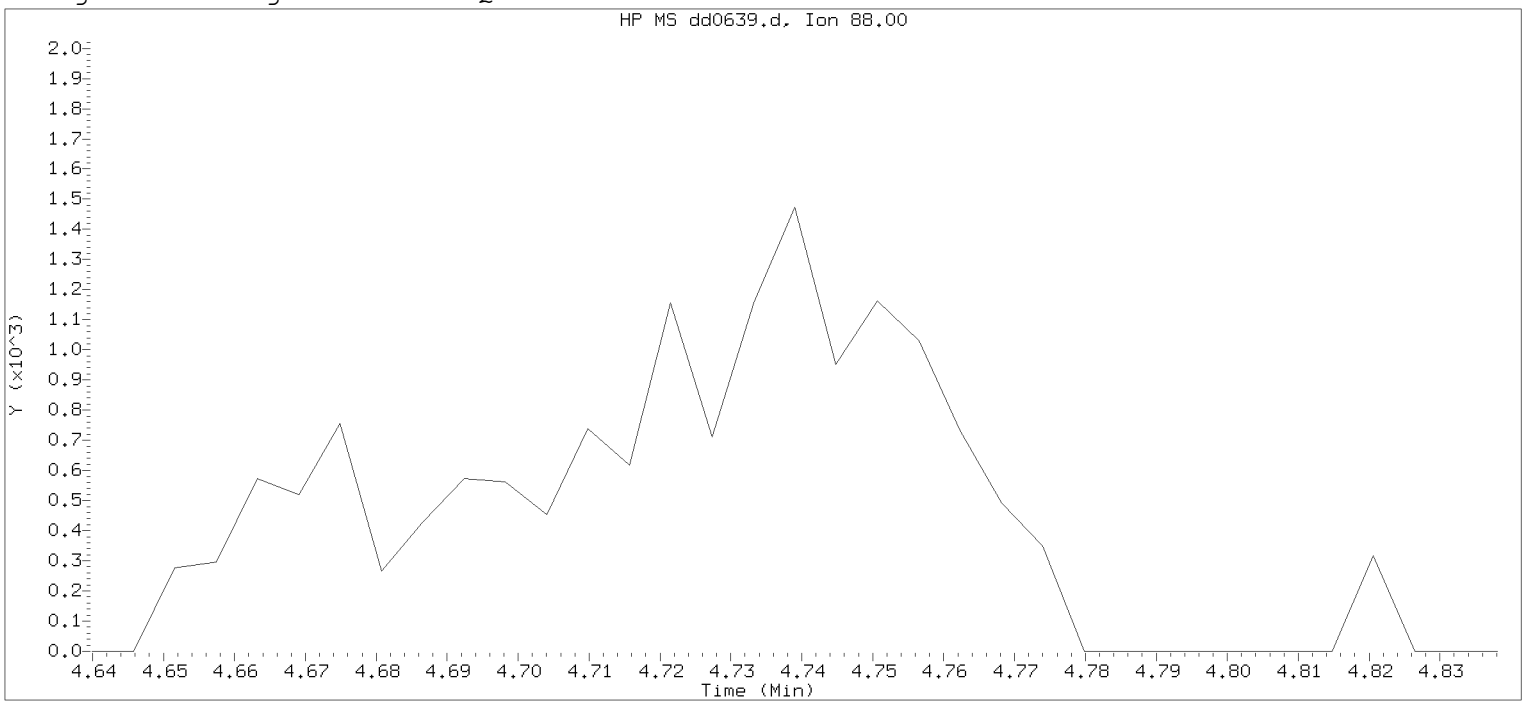
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

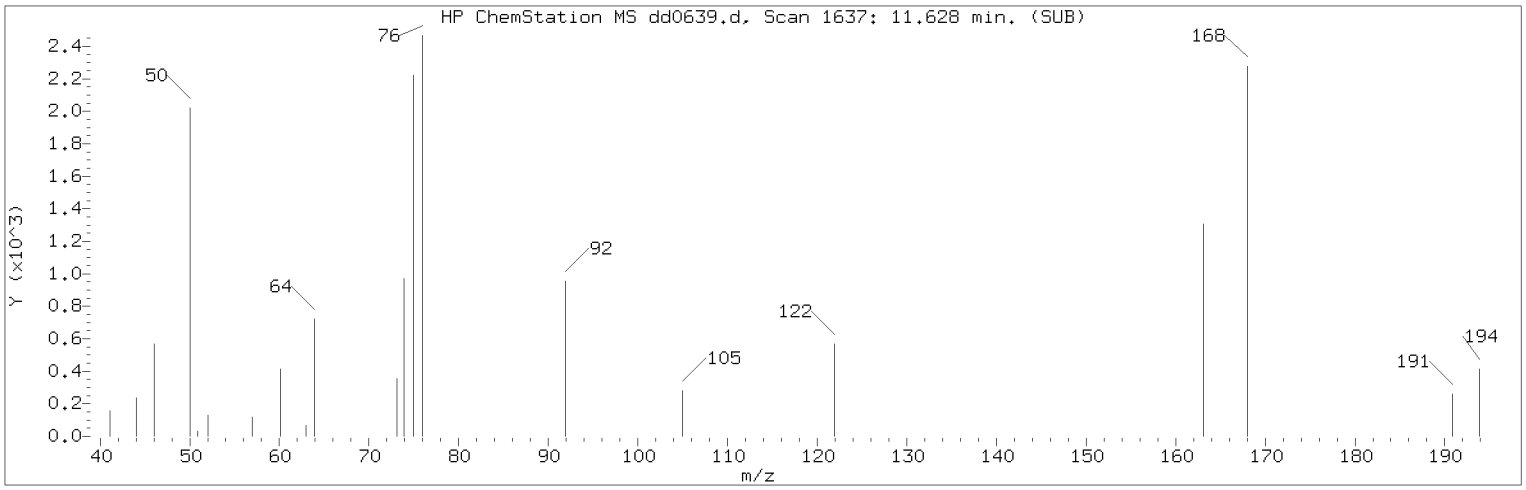
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 23:09 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

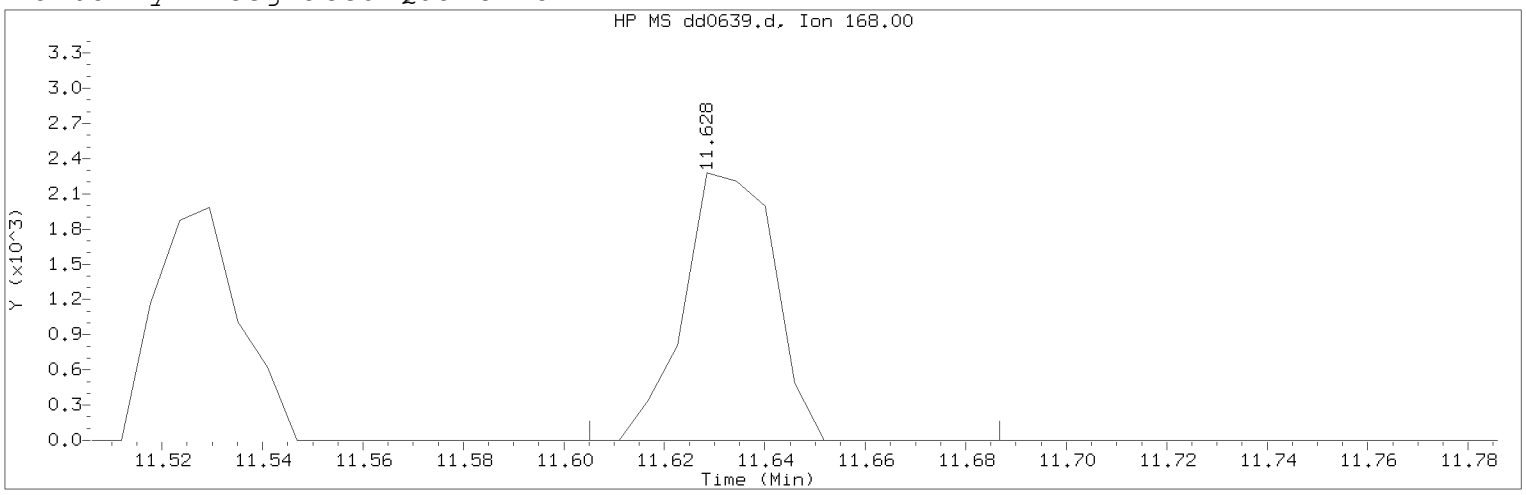
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.739
Quant Ion : 88.00

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

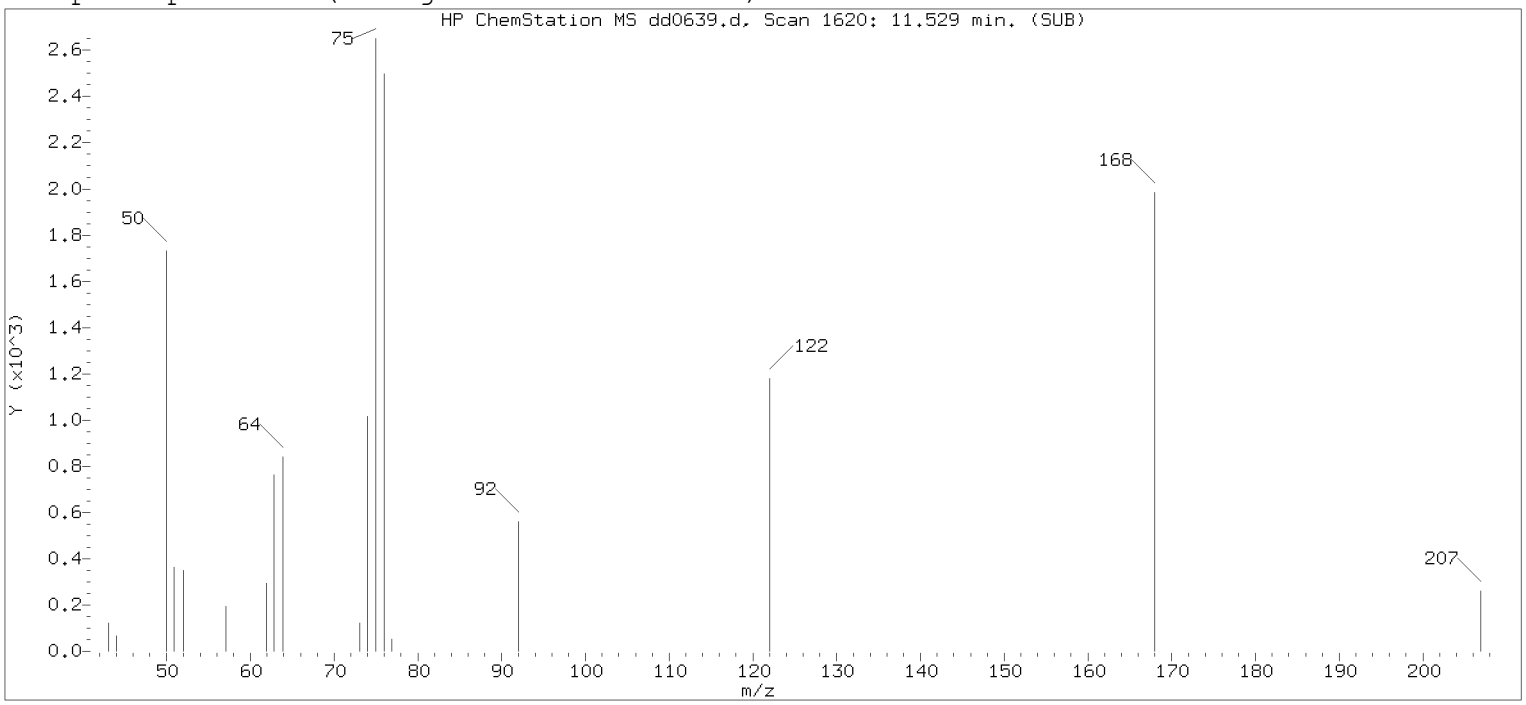
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1637
Retention Time (minutes) : 11.628
Quant Ion : 168.00
Area (flag) : 2836M
On-Column Amount (ng/ul) : 0.1023
Integration start scan : 1632 Integration stop scan: 1646
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

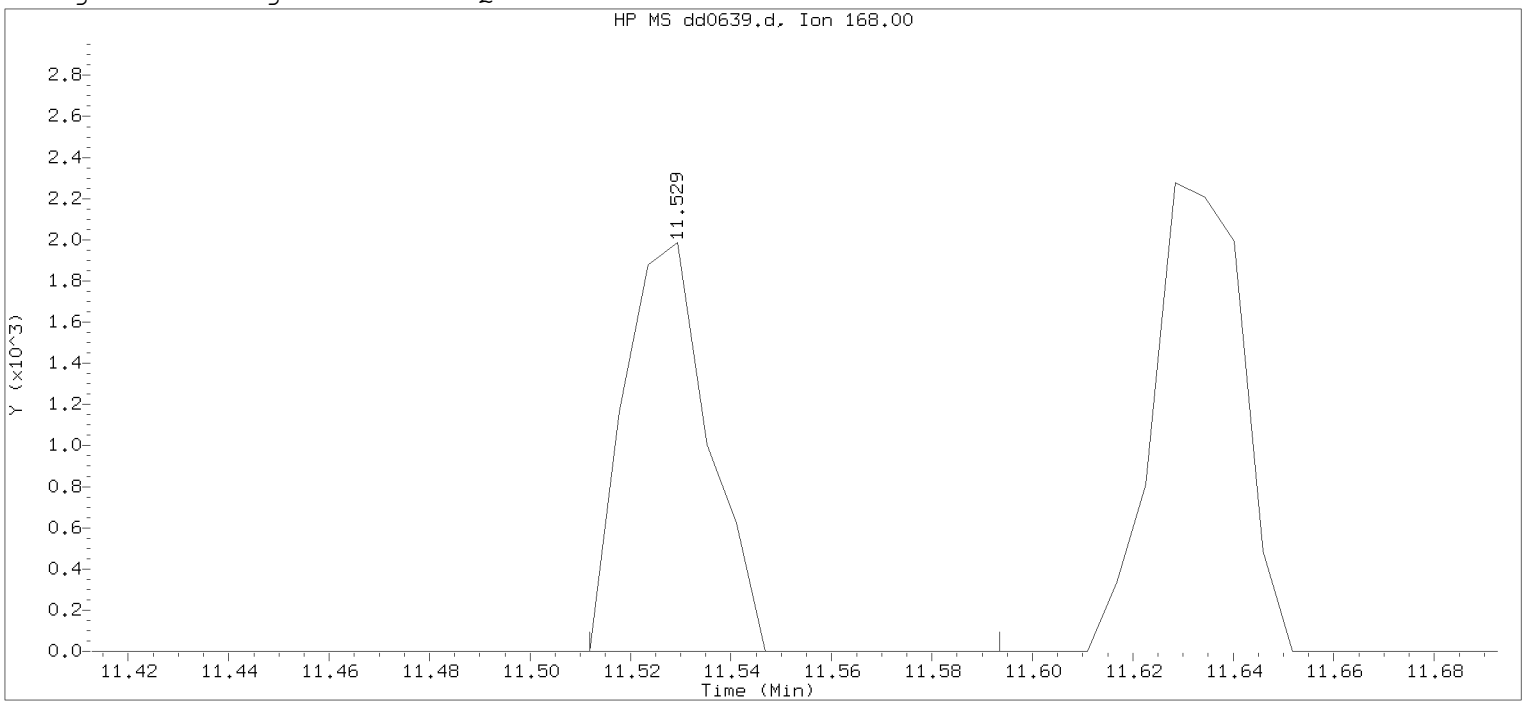
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

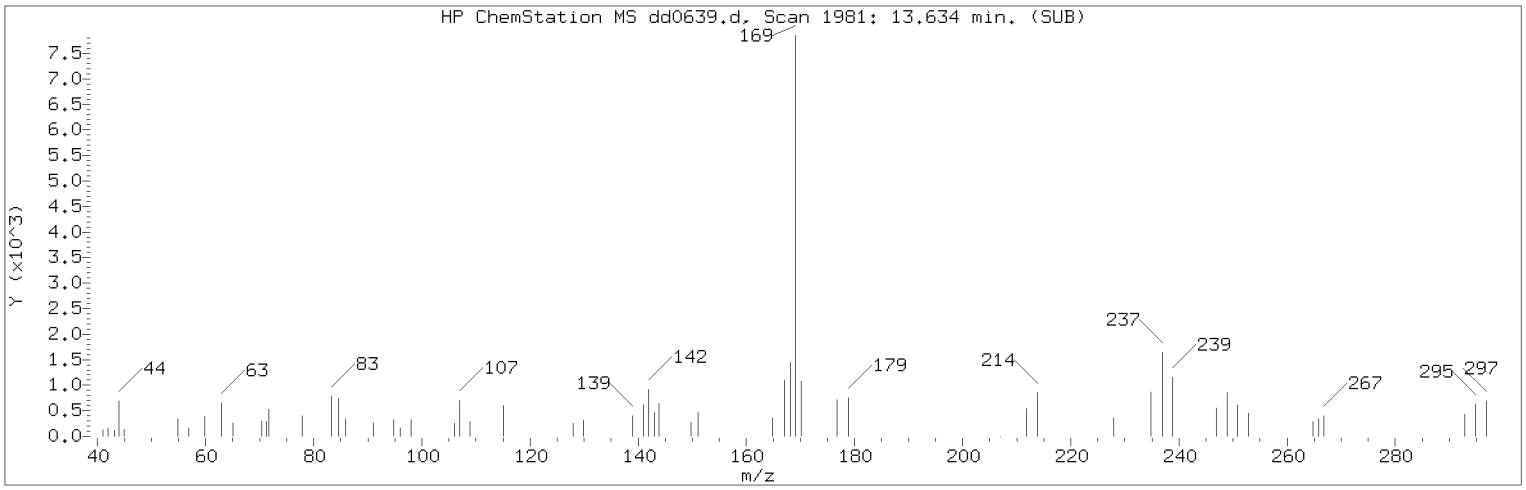
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 23:09 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

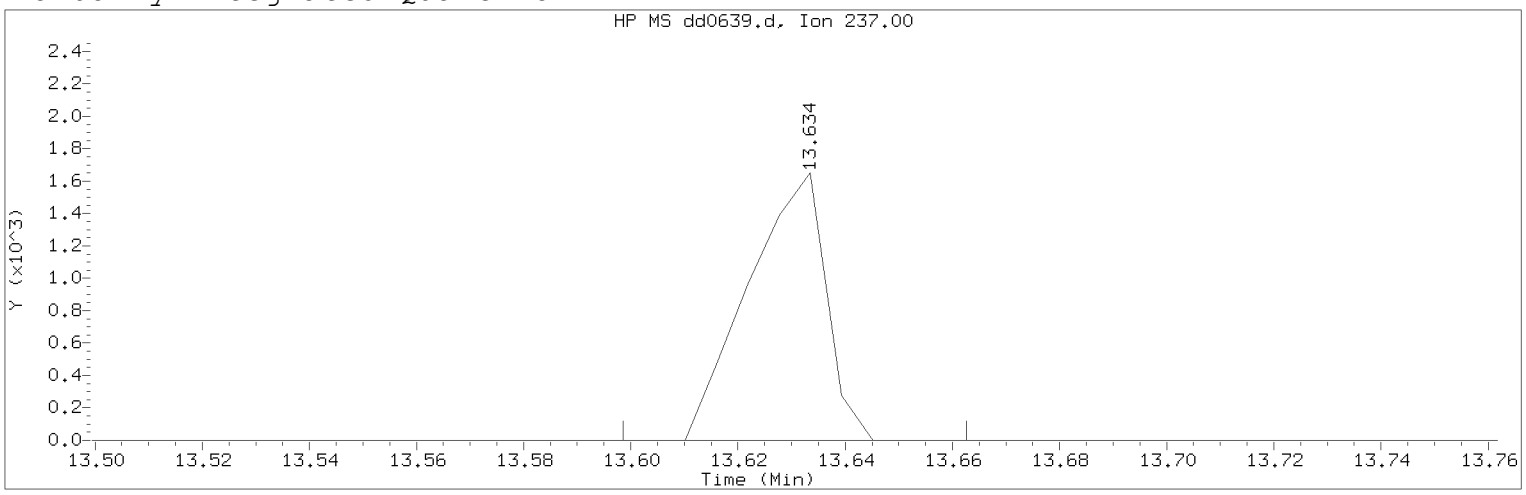
Compound Number	: 107		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1620		
Retention Time (minutes)	: 11.529		
Quant Ion	: 168.00		
Area	: 2326		
On-column Amount (ng/ul)	: 0.0840		
Integration start scan	: 1616	Integration stop scan:	1630
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name: emonborne

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

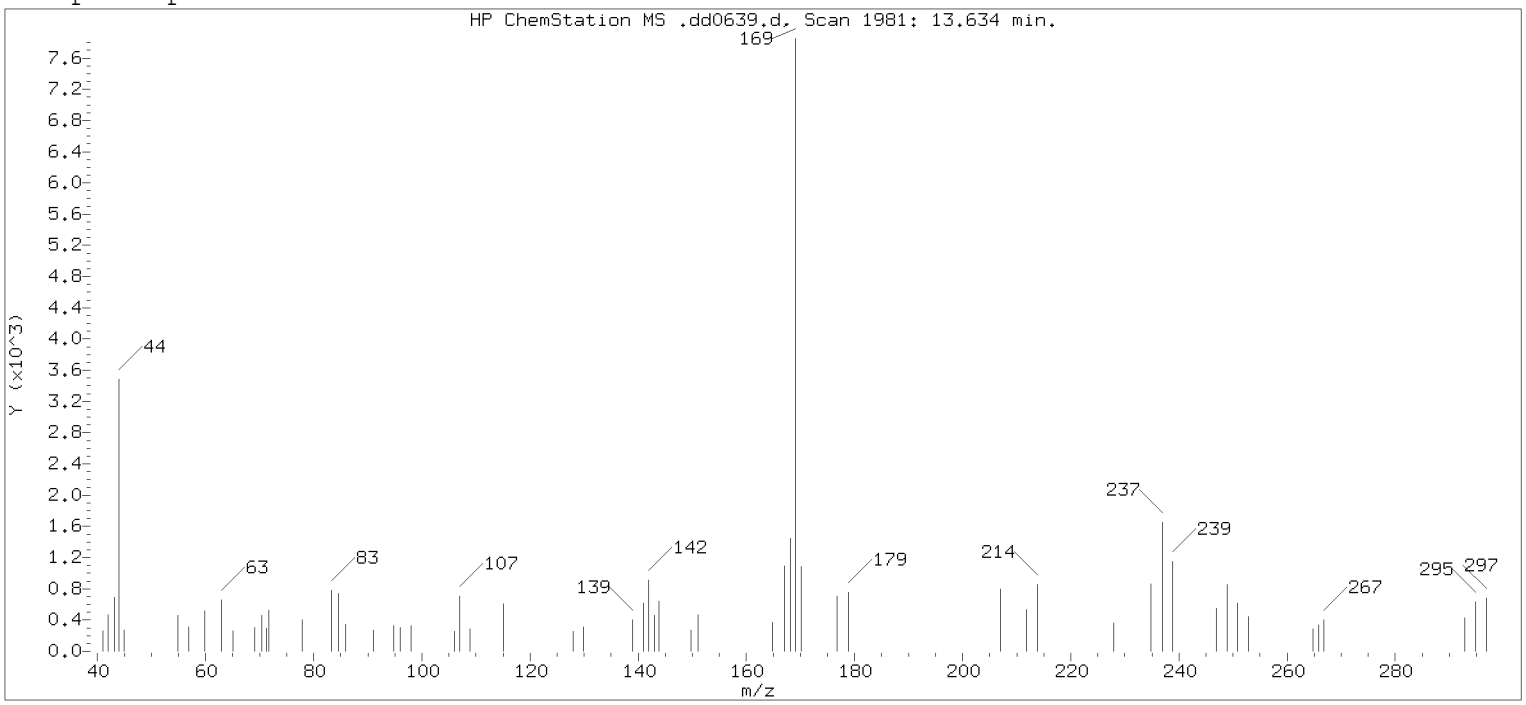
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Scan Number : 1981
Retention Time (minutes) : 13.634
Quant Ion : 237.00
Area (flag) : 1663M
On-Column Amount (ng/ul) : 0.0987
Integration start scan : 1974 Integration stop scan: 1985
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

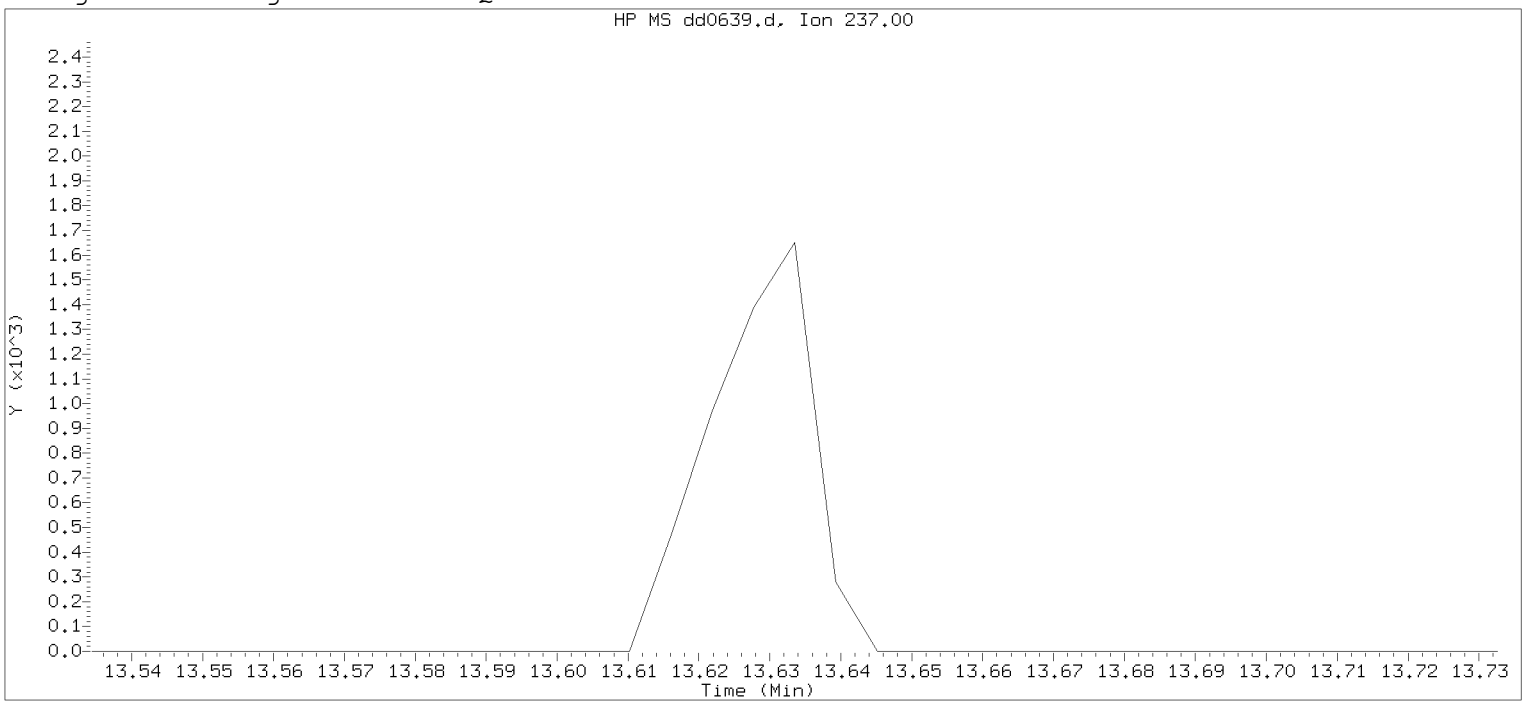
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



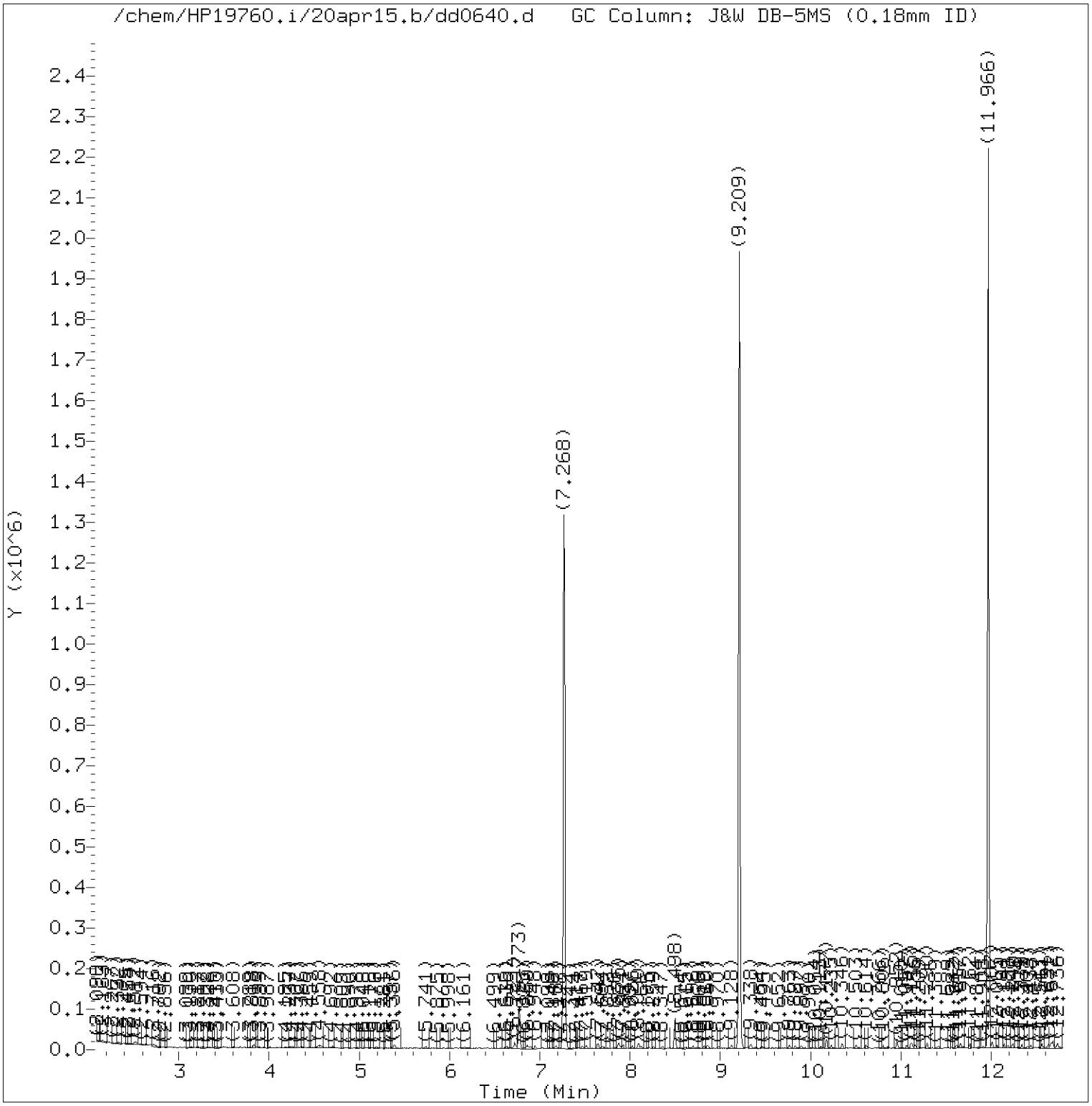
Data File: /chem/HP19760.i/20apr15.b/dd0639.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 22:35 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: mdlall1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 23:09 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0940

Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.633
Quant Ion : 237.00

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name: em10340



Total Ion Chromatogram (TIC)

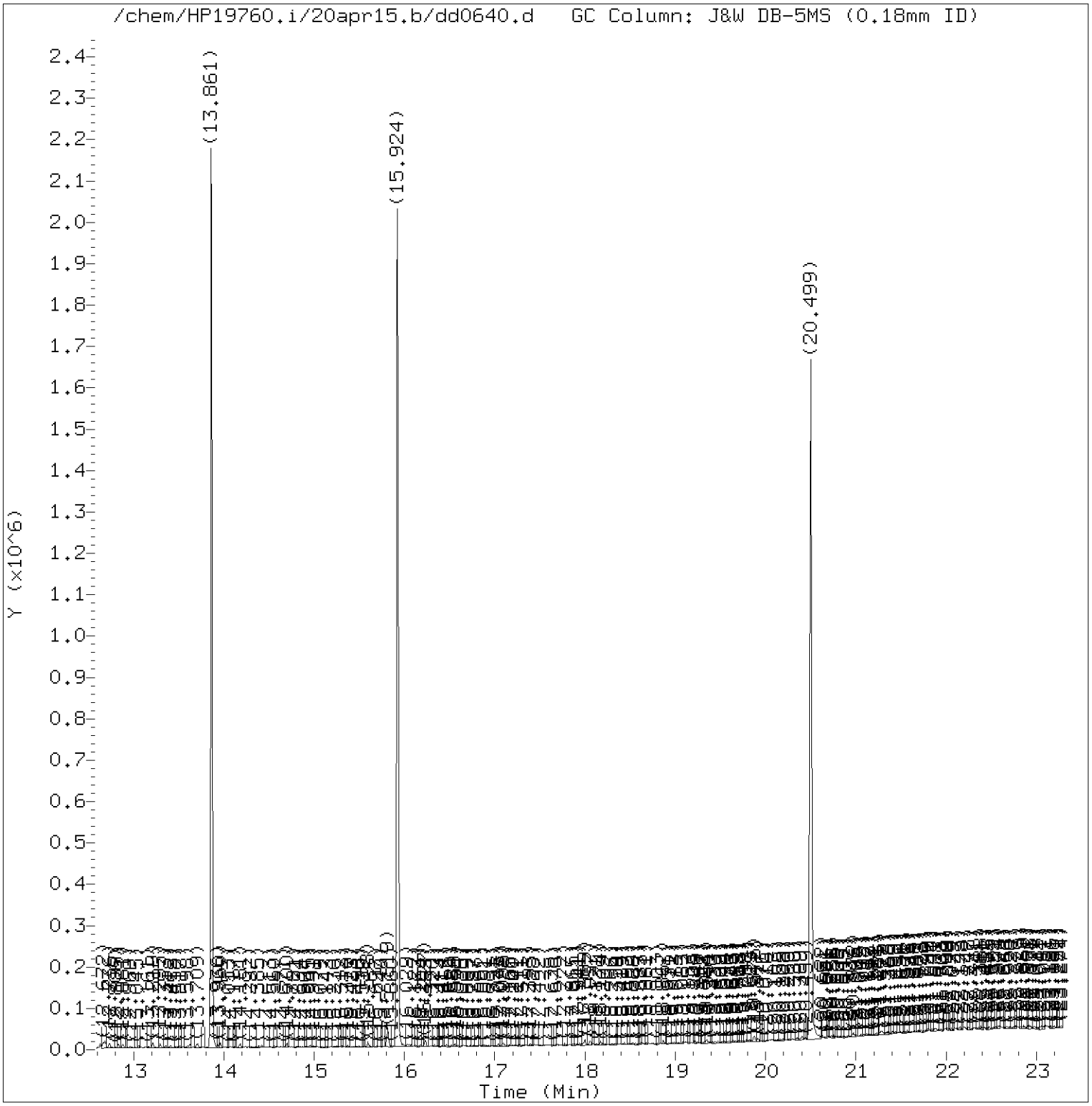
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

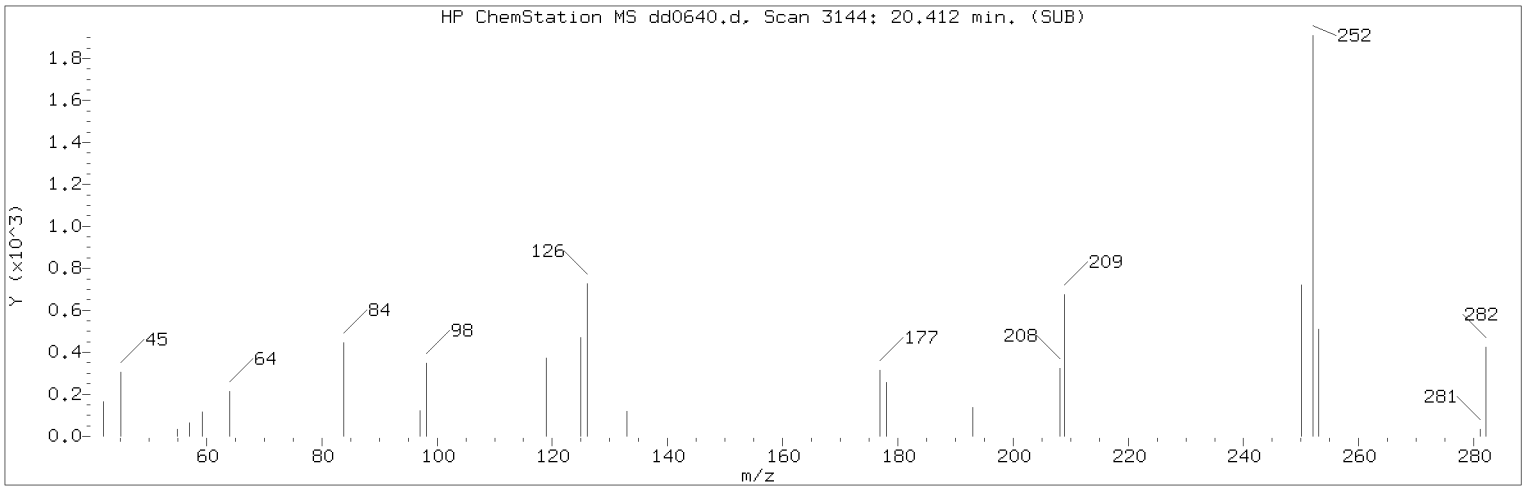
Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.268	152	282594	5.000
44)$Nitrobenzene-d5	(2)	8.096	82	5215	0.054
65)*Naphthalene-d8	(2)	9.209	136	1063871	5.000
66) Naphthalene	(2)	9.244	128	5840	0.025
83) 2-Methylnaphthalene	(2)	10.352	142	3905	0.026
84) 1-Methylnaphthalene	(2)	10.509	142	3044	0.021
93)$2-Fluorobiphenyl	(3)	10.952	172	7682	0.050
96) 2-Chloronaphthalene	(3)	11.127	162	2953	0.022
109) Acenaphthylene	(3)	11.762	152	5151	0.026
113)*Acenaphthene-d10	(3)	11.966	164	495964	5.000
114) Acenaphthene	(3)	12.013	153	3509	0.025
126) Fluorene	(3)	12.672	166	3215	0.022
145) Hexachlorobenzene	(4)	13.342	284	858	0.024
153)*Phenanthrene-d10	(4)	13.861	188	903740	5.000
155) Phenanthrene	(4)	13.896	178	5267	0.026
157) Anthracene	(4)	13.966	178	5028	0.024
222) Total PAHs	(6)			73282	0.388
173) Fluoranthene	(4)	15.598	202	4726	0.020
175)*Pyrene-d10	(5)	15.924	212	908847	5.000
177) Pyrene	(5)	15.953	202	5716	0.023
179)$Terphenyl-d14	(5)	16.233	244	6927	0.050
195) Benzo(a)anthracene	(5)	17.999	228	3951	0.020
196) Chrysene	(5)	18.051	228	4448	0.022
206) Benzo(b)fluoranthene	(6)	19.870	252	4131	0.021
208) Benzo(k)fluoranthene	(6)	19.917	252	3906	0.020
211) Benzo(a)pyrene	(6)	20.412	252	3264M	0.018
213)*Perylene-d12	(6)	20.499	264	818799	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	22.149	276	2278M	0.014
220) Dibenz(a,h)anthracene	(6)	22.201	278	2531	0.015
221) Benzo(g,h,i)perylene	(6)	22.586	276	3372	0.020

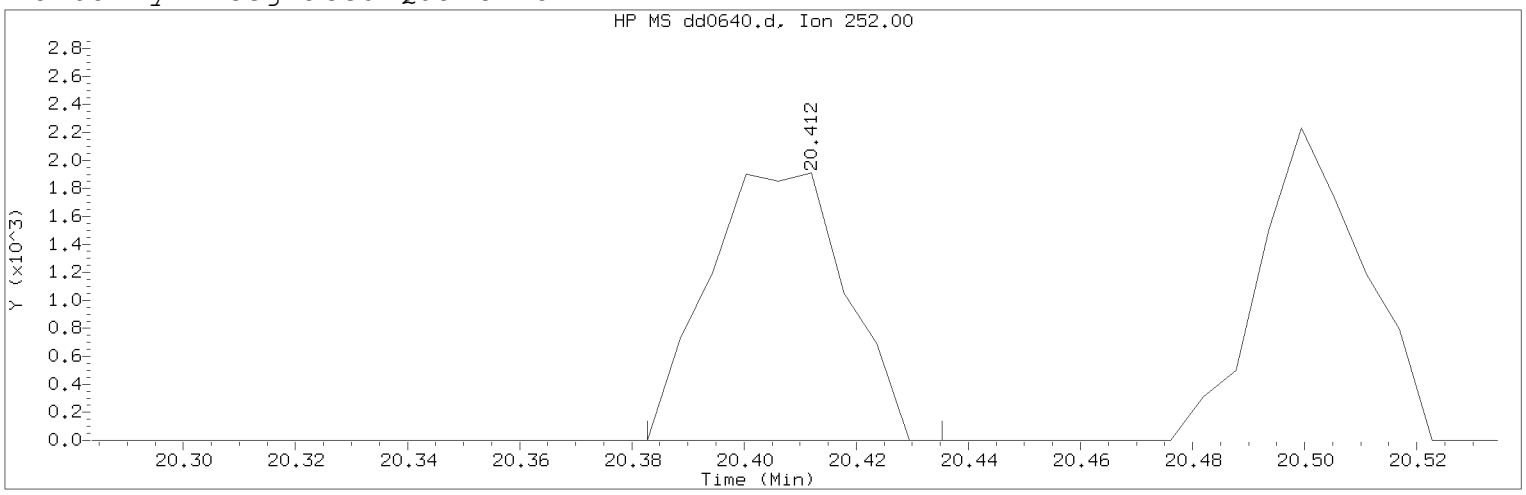
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

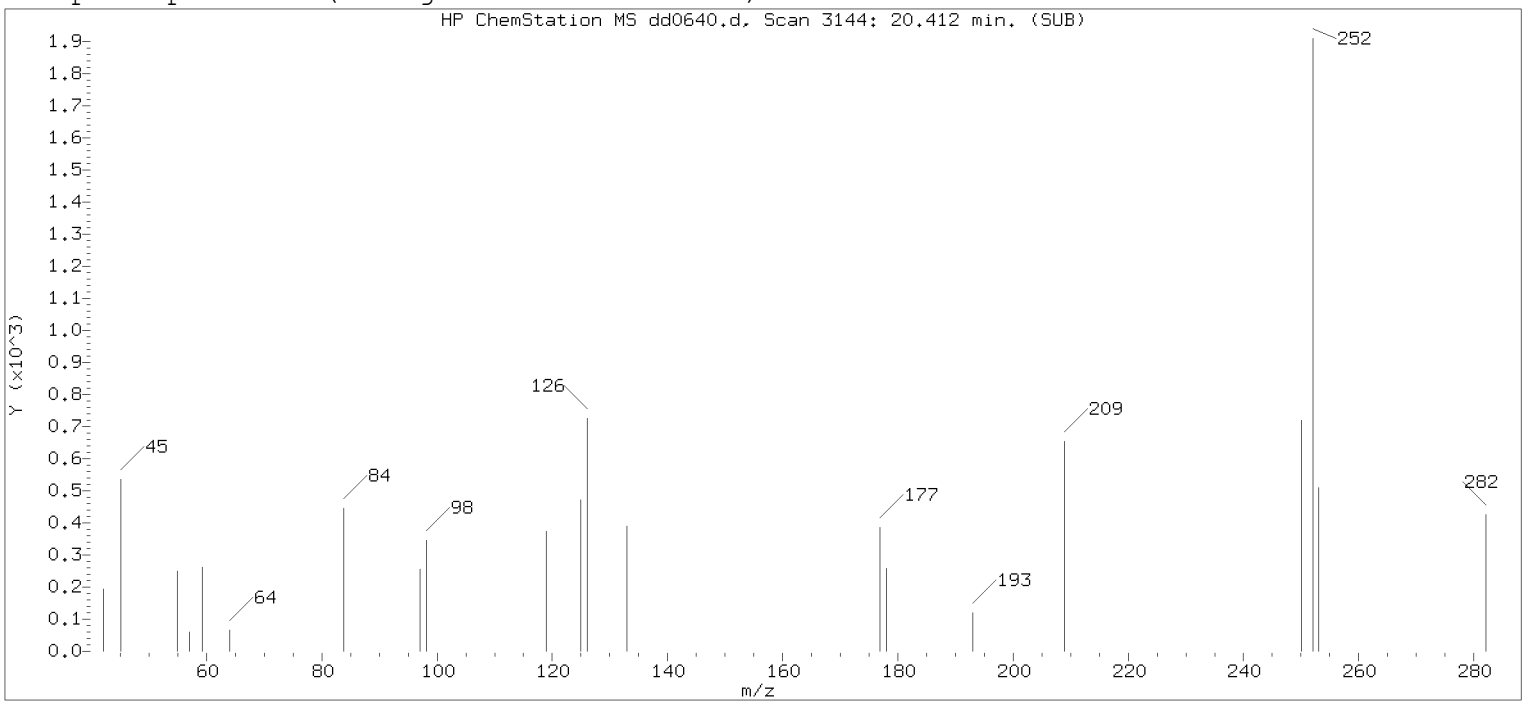
Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 3144
Retention Time (minutes) : 20.412
Quant Ion : 252.00
Area (flag) : 3264M
On-Column Amount (ng/ul) : 0.0176
Integration start scan : 3138 Integration stop scan: 3147
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

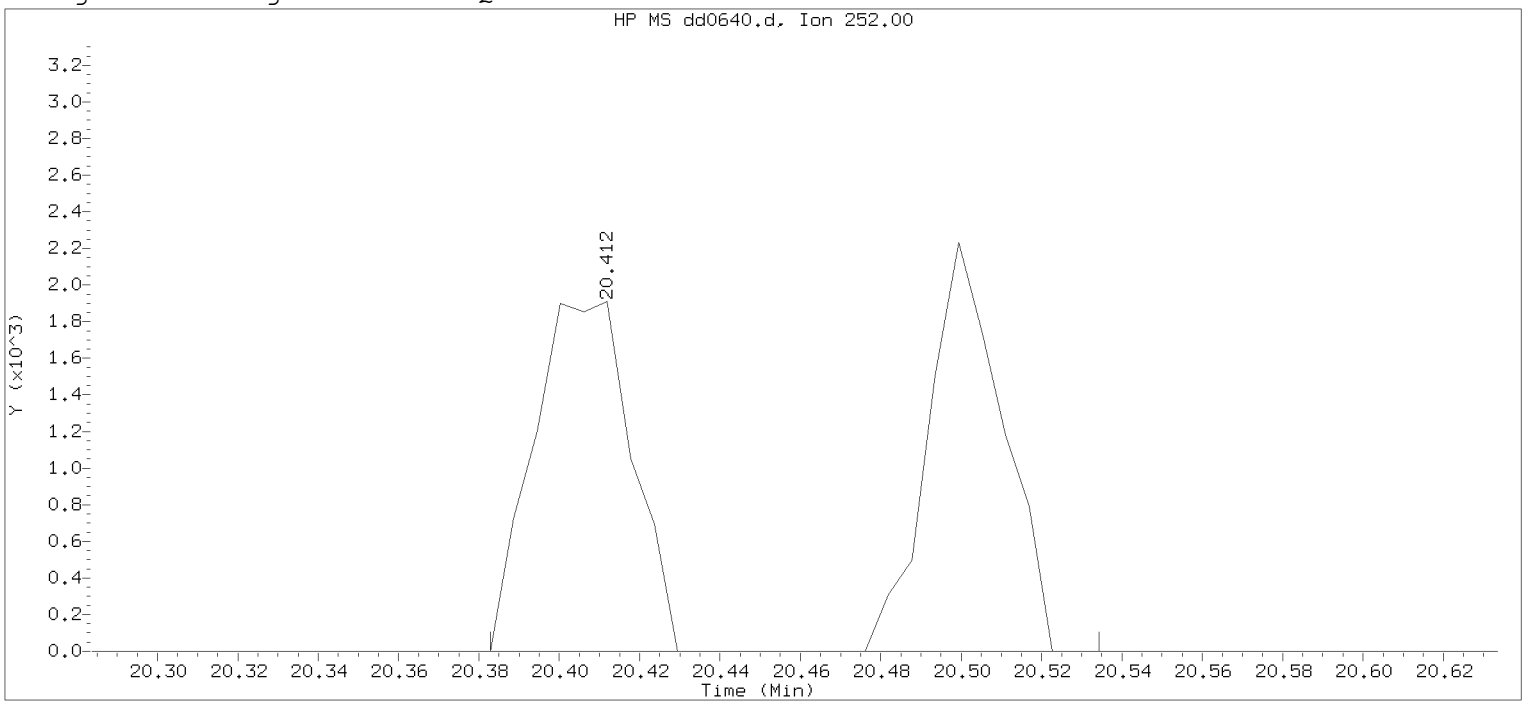
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

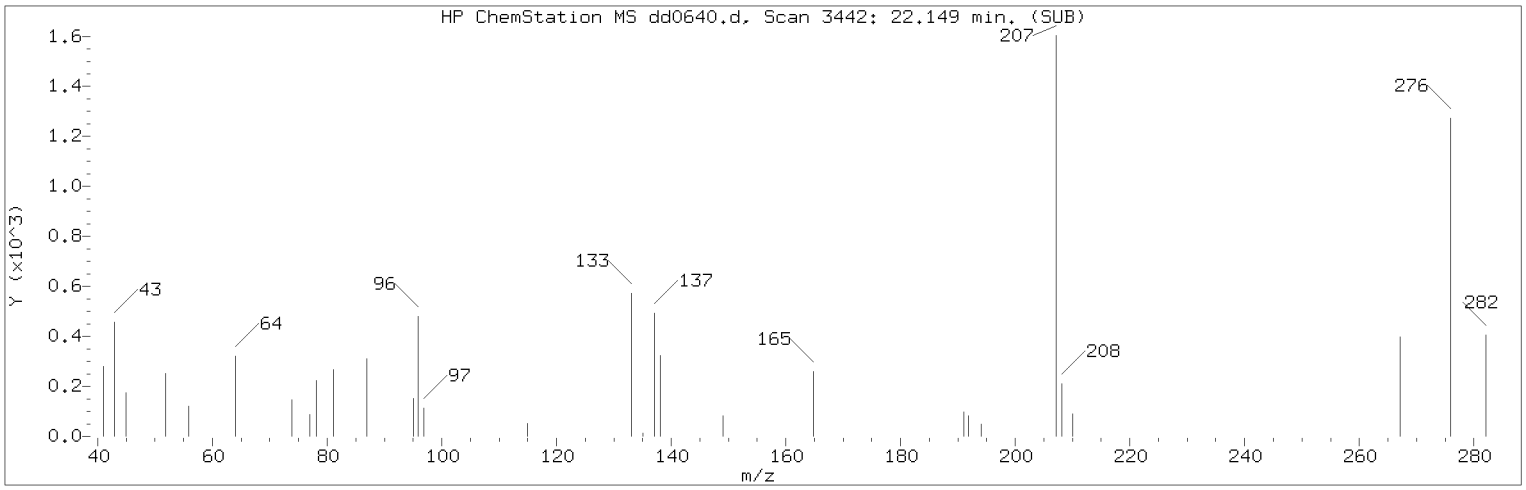
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 23:37 Automation

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

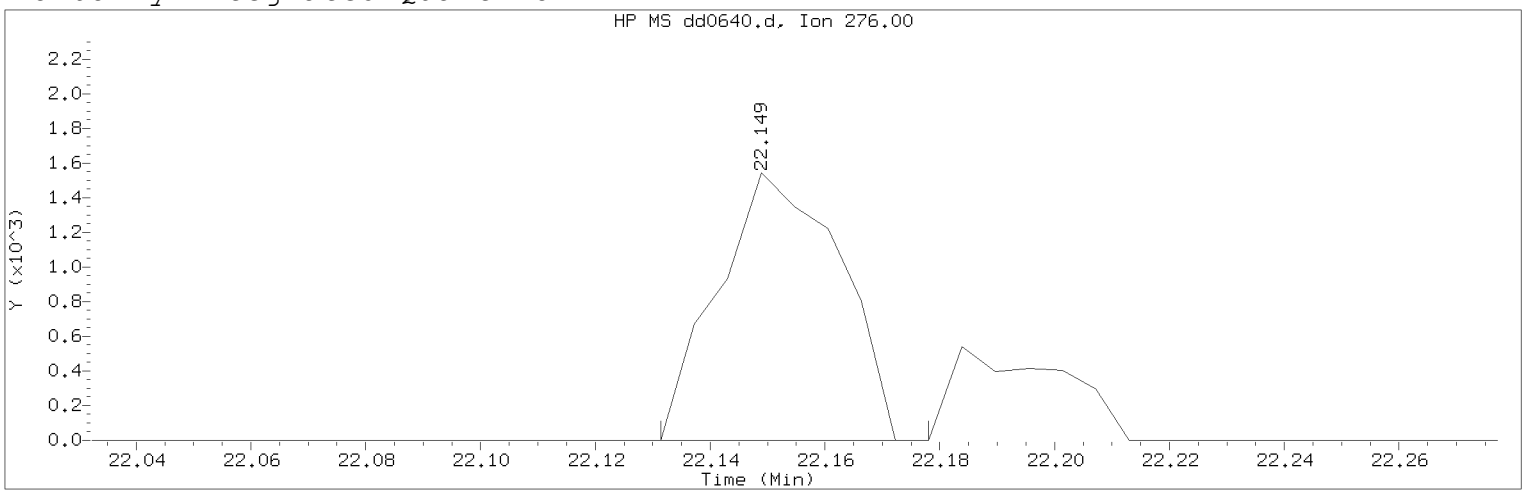
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3144		
Retention Time (minutes)	: 20.412		
Quant Ion	: 252.00		
Area	: 6150		
On-column Amount (ng/ul)	: 0.0332		
Integration start scan	: 3138	Integration stop scan:	3164
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

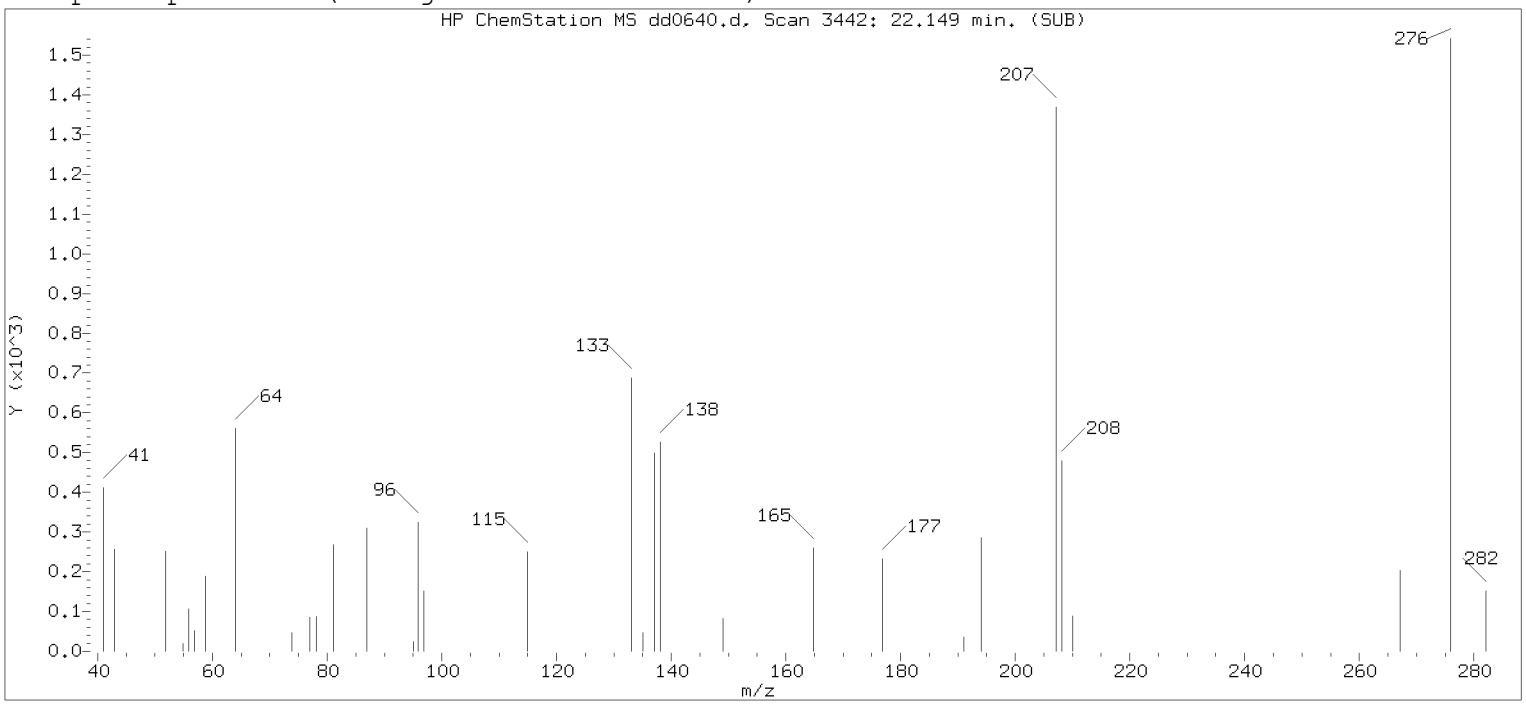
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3442
Retention Time (minutes) : 22.149
Quant Ion : 276.00
Area (flag) : 2278M
On-Column Amount (ng/ul) : 0.0143
Integration start scan : 3438 Integration stop scan: 3446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

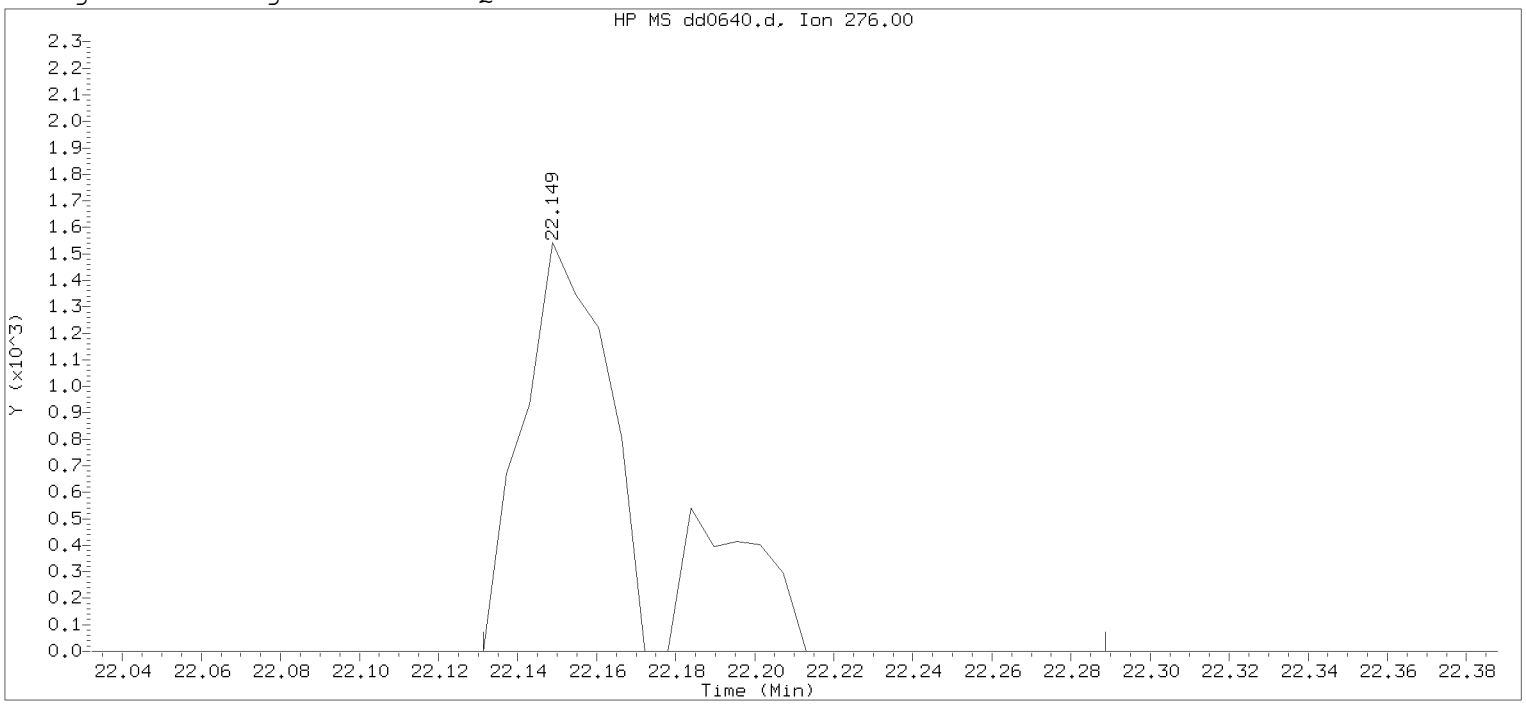
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



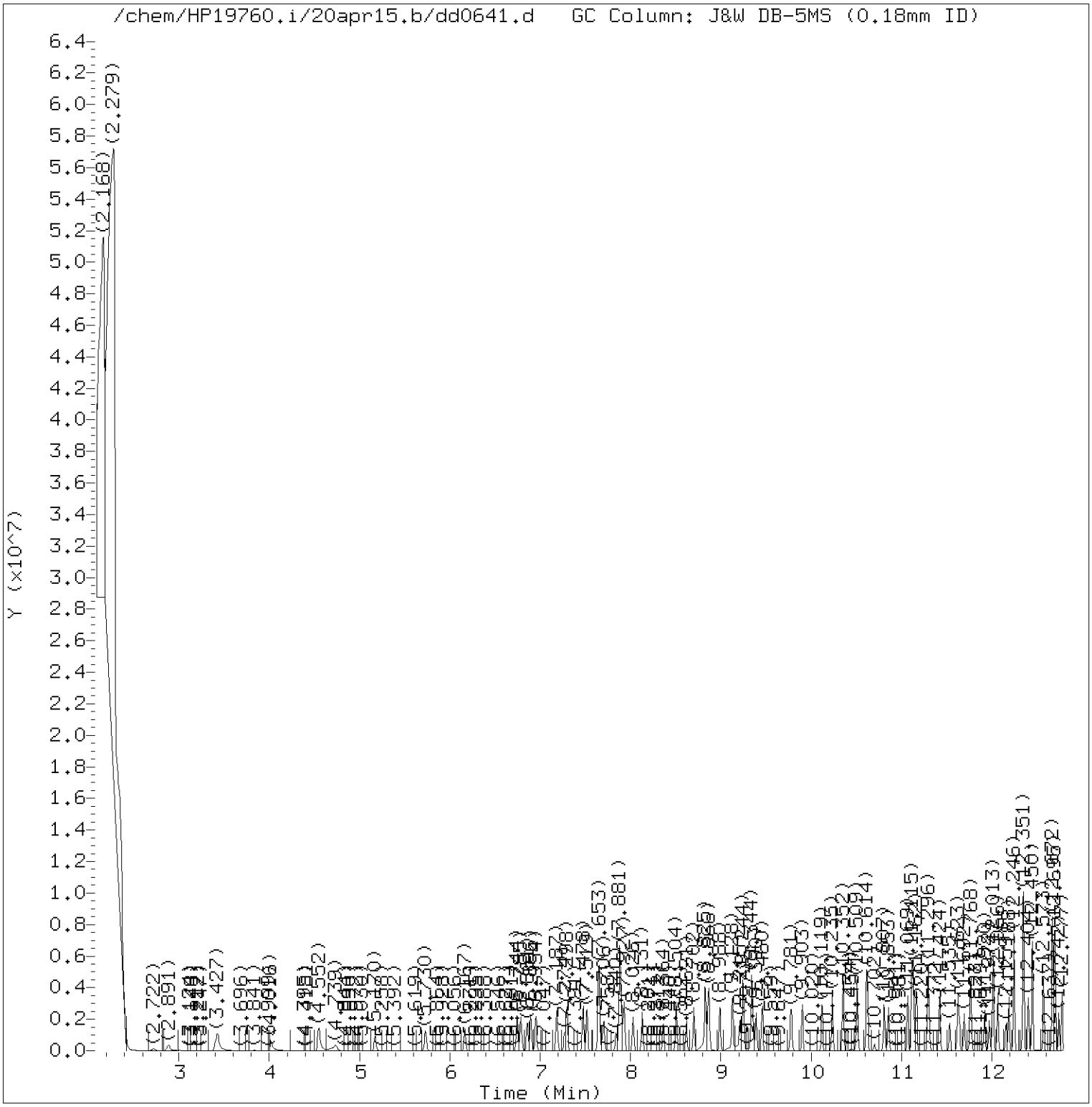
Data File: /chem/HP19760.i/20apr15.b/dd0640.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:03 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 15-Apr-2020 23:37 Automation

Sample Name: SSTD0.025 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3442		
Retention Time (minutes)	: 22.149		
Quant Ion	: 276.00		
Area	: 2994		
On-column Amount (ng/ul)	: 0.0152		
Integration start scan	: 3438	Integration stop scan:	3465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name: em10340



Total Ion Chromatogram (TIC)

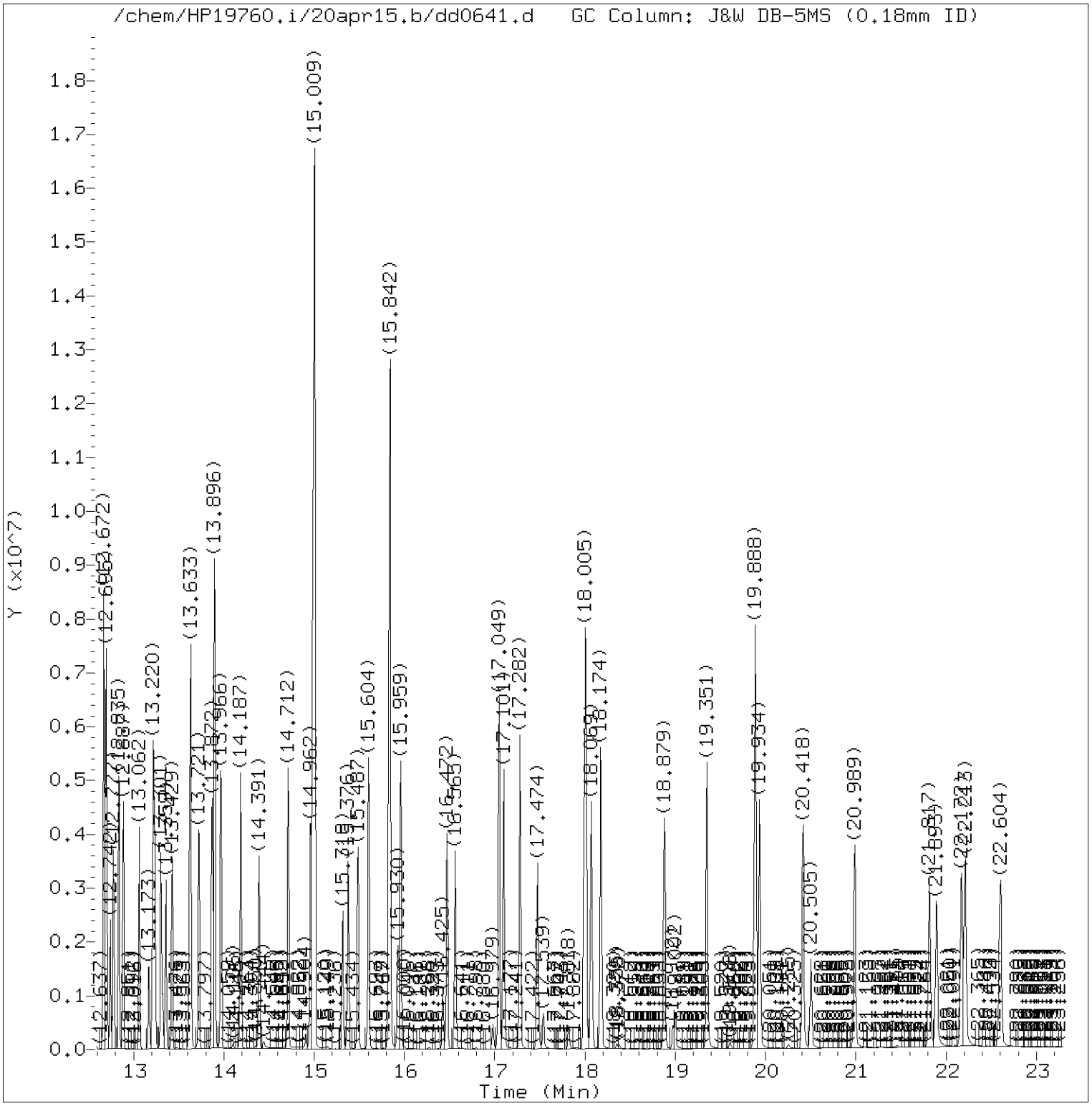
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1)	1,4-Dioxane	(1)	2.891	88	339823	10.238
4)	N-Nitrosodimethylamine	(1)	3.404	74	559861	10.923
5)	Pyridine	(1)	3.433	79	892342	10.034
7)	2-Picoline	(1)	4.552	93	1030030	11.373
8)	N-Nitrosomethylethylamine	(1)	4.739	88	436258	11.254
9)	Methyl methanesulfonate	(1)	5.170	80	549609	13.241
42)	Total Cresols	(1)	5.660	100	1680203	24.549
13)	N-Nitrosodiethylamine	(1)	5.730	102	450256	12.272
15)	Ethyl methanesulfonate	(1)	6.167	109	459057	11.881
18)	Phenol	(1)	6.744	94	1222535	12.283
19)	Aniline	(1)	6.791	93	1301563	10.585
22)	bis(2-Chloroethyl)ether	(1)	6.896	93	991566	11.906
23)	2-Chlorophenol	(1)	6.954	128	876305	12.190
24)	1,3-Dichlorobenzene	(1)	7.187	146	907405	12.301
25)*	1,4-Dichlorobenzene-d4	(1)	7.269	152	242436	5.000
26)	1,4-Dichlorobenzene	(1)	7.298	146	925605	12.397
97)	Isosafrole	(3)	7.383	162	735488	12.187
27)	Benzyl alcohol	(1)	7.478	108	597536	12.678
28)	1,2-Dichlorobenzene	(1)	7.519	146	870849	12.288
31)	2-Methylphenol	(1)	7.647	108	821703	12.272
30)	Indene	(1)	7.653	115	1562395	14.446
34)	bis(2-Chloroisopropyl)ether	(1)	7.706	45	1300418	12.014
33)	2,2'-oxybis(1-Chloropropane)	(1)	7.706	45	1300418	12.014
35)	N-Nitrosopyrrolidine	(1)	7.840	100	490033	12.881
36)	Acetophenone	(1)	7.881	105	1207954	12.267
37)	4-Methylphenol	(1)	7.881	108	858500	12.277
38)	N-Nitroso-di-n-propylamine	(1)	7.892	70	699613	12.459
39)	N-Nitrosomorpholine	(1)	7.910	56	657482	12.629
40)	o-Toluidine	(1)	7.927	106	1371385	12.017
43)	Hexachloroethane	(1)	8.026	117	388568	12.233
120)	2,4_2,6-Dinitrotoluenes	(3)	8.050	165	883564	24.994
45)	Nitrobenzene	(2)	8.131	77	1009055	11.901
48)	N-Nitrosopiperidine	(2)	8.364	114	452504	11.971
50)	Isophorone	(2)	8.504	82	1822784	11.947
51)	2-Nitrophenol	(2)	8.621	139	455256	12.300
53)	2,4-Dimethylphenol	(2)	8.702	107	708401	9.791
146)	Diallate trans/cis	(4)	8.775	86	862940	12.059
57)	O,O,O-Triethylphosphorothioate	(2)	8.831	198	386485	12.419
55)	bis(2-Chloroethoxy)methane	(2)	8.866	93	1174067	12.110
56)	Benzoic acid	(2)	8.877	105	1259132	26.191

* = Compound is an internal standard.

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on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	8.988	162	664020	12.185
62) 1,2,4-Trichlorobenzene	(2)	9.128	180	709189	12.605
65)*Naphthalene-d8	(2)	9.215	136	919520	5.000
66) Naphthalene	(2)	9.244	128	2448498	11.973
67) 4-Chloroaniline	(2)	9.338	127	980542	11.911
68) 2,6-Dichlorophenol	(2)	9.349	162	638350	12.453
69) Hexachloropropene	(2)	9.390	213	469615	13.458
71) Hexachlorobutadiene	(2)	9.460	225	382495	12.798
75) Quinoline	(2)	9.775	129	1553994	11.978
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	674797	11.726
80) 4-Chloro-3-methylphenol	(2)	10.119	107	775905	12.805
82) Safrole	(2)	10.235	162	616111	12.571
83) 2-Methylnaphthalene	(2)	10.352	142	1617319	12.523
84) 1-Methylnaphthalene	(2)	10.509	142	1456477	11.876
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	653338	12.072
88) cis-Isosafrole	(3)	10.702	162	84329	1.529
90) 2,4,6-Trichlorophenol	(3)	10.807	196	466984	12.405
92) 2,4,5-Trichlorophenol	(3)	10.853	196	481038	12.240
94) trans-Isosafrole	(3)	11.069	162	651159	10.603
95) 1,1'-Biphenyl	(3)	11.115	154	1943797	12.171
96) 2-Chloronaphthalene	(3)	11.133	162	1475634	12.156
98) 1-Chloronaphthalene	(3)	11.168	162	1321203	11.589
99) Diphenyl ether	(3)	11.296	170	1019269	12.058
100) 2-Nitroaniline	(3)	11.308	138	502924	12.073
104) 1,4-Naphthoquinone	(3)	11.424	158	762604	15.032
105) 1,4-Dinitrobenzene	(3)	11.535	168	268121	12.054
106) Dimethylphthalate	(3)	11.623	163	1534677	11.786
107) 1,3-Dinitrobenzene	(3)	11.640	168	302926	12.315
108) 2,6-Dinitrotoluene	(3)	11.698	165	372962	12.096
109) Acenaphthylene	(3)	11.768	152	2137068	11.847
112) 3-Nitroaniline	(3)	11.920	138	446116	13.039
113)*Acenaphthene-d10	(3)	11.972	164	444091	5.000
114) Acenaphthene	(3)	12.013	153	1493751	11.997
115) 2,4-Dinitrophenol	(3)	12.066	184	561191	25.413
116) 4-Nitrophenol	(3)	12.159	109	271298	12.065
117) Pentachlorobenzene	(3)	12.188	250	525279	12.332
119) Dibenzofuran	(3)	12.246	168	2007255	12.021
118) 2,4-Dinitrotoluene	(3)	12.246	165	510602	12.456
121) 1-Naphthylamine	(3)	12.351	143	2570018	20.542
122) 2,3,4,6-Tetrachlorophenol	(3)	12.404	232	378381	13.286

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
123) 2-Naphthylamine	(3)	12.450	143	2430937	20.013
124) Diethylphthalate	(3)	12.573	149	1648385	12.145
125) Thionazin	(3)	12.666	107	308367	11.977
126) Fluorene	(3)	12.672	166	1609434	12.230
127) 4-Chlorophenyl-phenylether	(3)	12.695	204	734611	11.881
128) 5-Nitro-o-toluidine	(3)	12.695	152	505609	12.774
129) 4-Nitroaniline	(3)	12.707	138	442190	11.891
130) 4,6-Dinitro-2-methylphenol	(4)	12.742	198	328138	12.393
132) NDPA as diphenylamine	(4)	12.841	169	1419668	12.370
131) N-Nitrosodiphenylamine	(4)	12.841	169	1419668	12.370
134) 1,2-Diphenylhydrazine	(4)	12.887	77	1963679	12.347
137) Tetraethyldithiopyrophosphate	(4)	13.062	97	322988	12.313
140) Diallate (peak 1)	(4)	13.214	86	646169	9.078
141) Phorate	(4)	13.225	75	1233377	12.571
142) Phenacetin	(4)	13.237	108	945133	12.583
143) 4-Bromophenyl-phenylether	(4)	13.301	248	389006	12.165
144) Diallate (peak 2)	(4)	13.325	86	216771	2.984
145) Hexachlorobenzene	(4)	13.359	284	387834	11.547
147) Dimethoate	(4)	13.429	87	850602	11.836
149) Pentachlorophenol	(4)	13.616	266	306303	12.814
150) 4-Aminobiphenyl	(4)	13.633	169	1831416	14.679
151) Pentachloronitrobenzene	(4)	13.633	237	183922	12.278
152) Pronamide	(4)	13.721	173	763270	12.174
153)*Phenanthrene-d10	(4)	13.867	188	847132	5.000
154) Dinoseb	(4)	13.872	211	484808	13.593
155) Phenanthrene	(4)	13.902	178	2279916	11.834
157) Anthracene	(4)	13.966	178	2356876	12.212
163) Carbazole	(4)	14.187	167	2357881	12.475
164) Methyl parathion	(4)	14.391	109	709902	12.515
165) Di-n-butylphthalate	(4)	14.712	149	3026344	12.387
167) Parathion	(4)	14.957	109	436744	13.335
222) Total PAHs	(6)	15.000	100	38809656	217.672
168) 4-Nitroquinoline-1-oxide	(4)	15.009	190	3933135	167.030
169) Octachlorostyrene	(4)	15.318	308	154350	11.766
171) Isodrin	(4)	15.376	193	292585	12.355
173) Fluoranthene	(4)	15.604	202	2694082	12.331
174) Benzidine	(5)	15.842	184	7217471	49.023
175)*Pyrene-d10	(5)	15.930	212	869178	5.000
177) Pyrene	(5)	15.959	202	2728319	11.385
182) p-Dimethylaminoazobenzene	(5)	16.472	225	544975	13.357

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

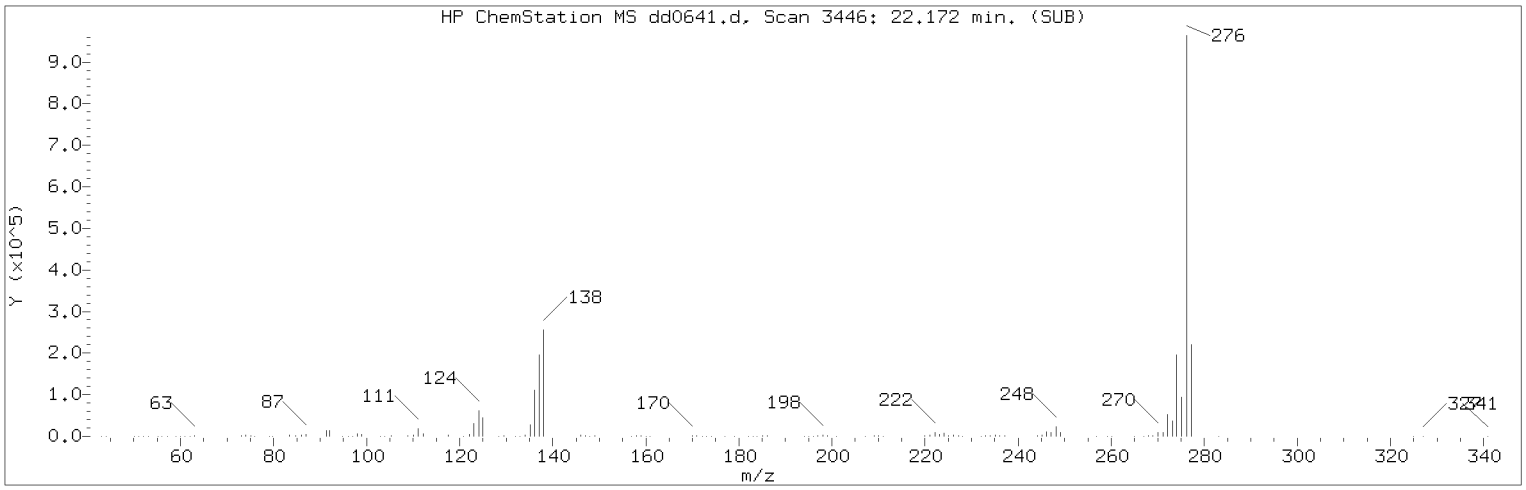
Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
185) Chlorobenzilate	(5)	16.565	139	931295	12.497
187) 3,3'-Dimethylbenzidine	(5)	17.049	212	2955364	19.806
188) Butylbenzylphthalate	(5)	17.101	149	1425977	12.172
191) 2-Acetylaminofluorene	(5)	17.474	181	1128899	12.174
193) 3,3'-Dichlorobenzidine	(5)	17.993	252	890107	11.868
195) Benzo(a)anthracene	(5)	18.005	228	2330487	12.445
198) 4,4'-Methylenebis(2-chloroanil	(5)	18.011	231	494330	12.232
196) Chrysene	(5)	18.069	228	2274216	11.564
199) bis(2-Ethylhexyl)phthalate	(5)	18.174	149	2025832	12.232
203) 6-Methylchrysene	(5)	18.879	242	1660183	11.775
205) Di-n-octylphthalate	(6)	19.351	149	3538167	12.626
206) Benzo(b)fluoranthene	(6)	19.888	252	2417490	12.876
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.888	256	1121004	12.607
208) Benzo(k)fluoranthene	(6)	19.934	252	2401397	12.638
211) Benzo(a)pyrene	(6)	20.418	252	2296858	12.803
213)*Perylene-d12	(6)	20.505	264	793558	5.000
215) 3-Methylcholanthrene	(6)	20.989	268	1268216	13.423
217) Dibenz(a,h)acridine	(6)	21.817	279	1784319	12.918
218) Dibenz(a,j)acridine	(6)	21.893	279	1773411	11.901
219) Indeno(1,2,3-cd)pyrene	(6)	22.172	276	2006715M	13.034
220) Dibenz(a,h)anthracene	(6)	22.213	278	2178084	13.363
221) Benzo(g,h,i)perylene	(6)	22.604	276	2082669	12.545

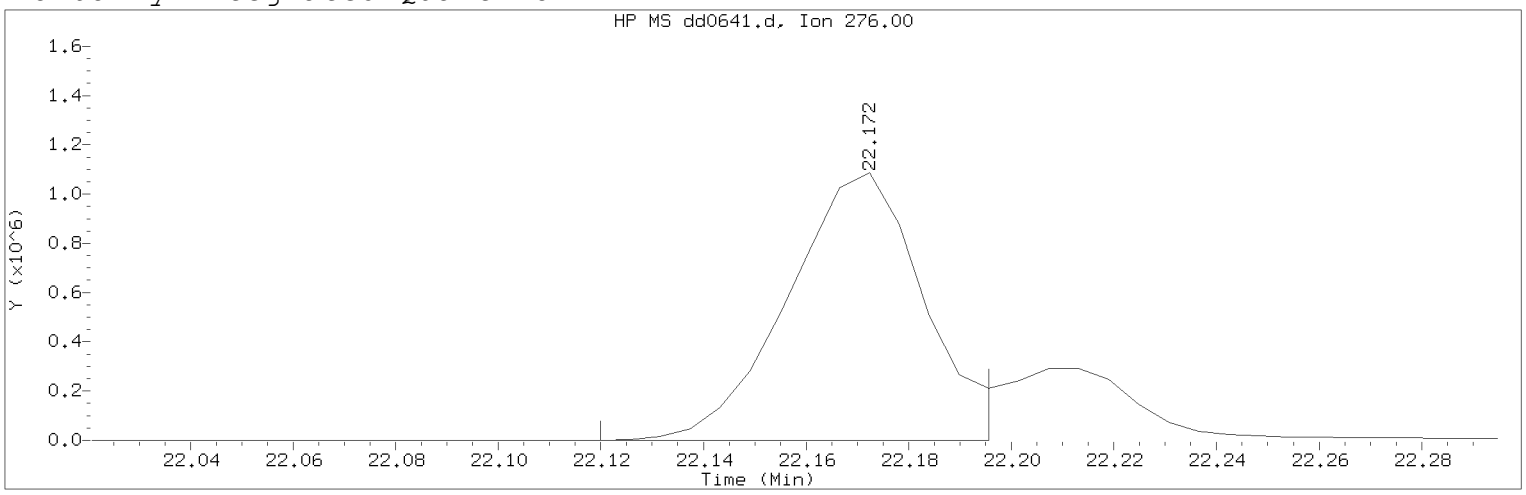
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

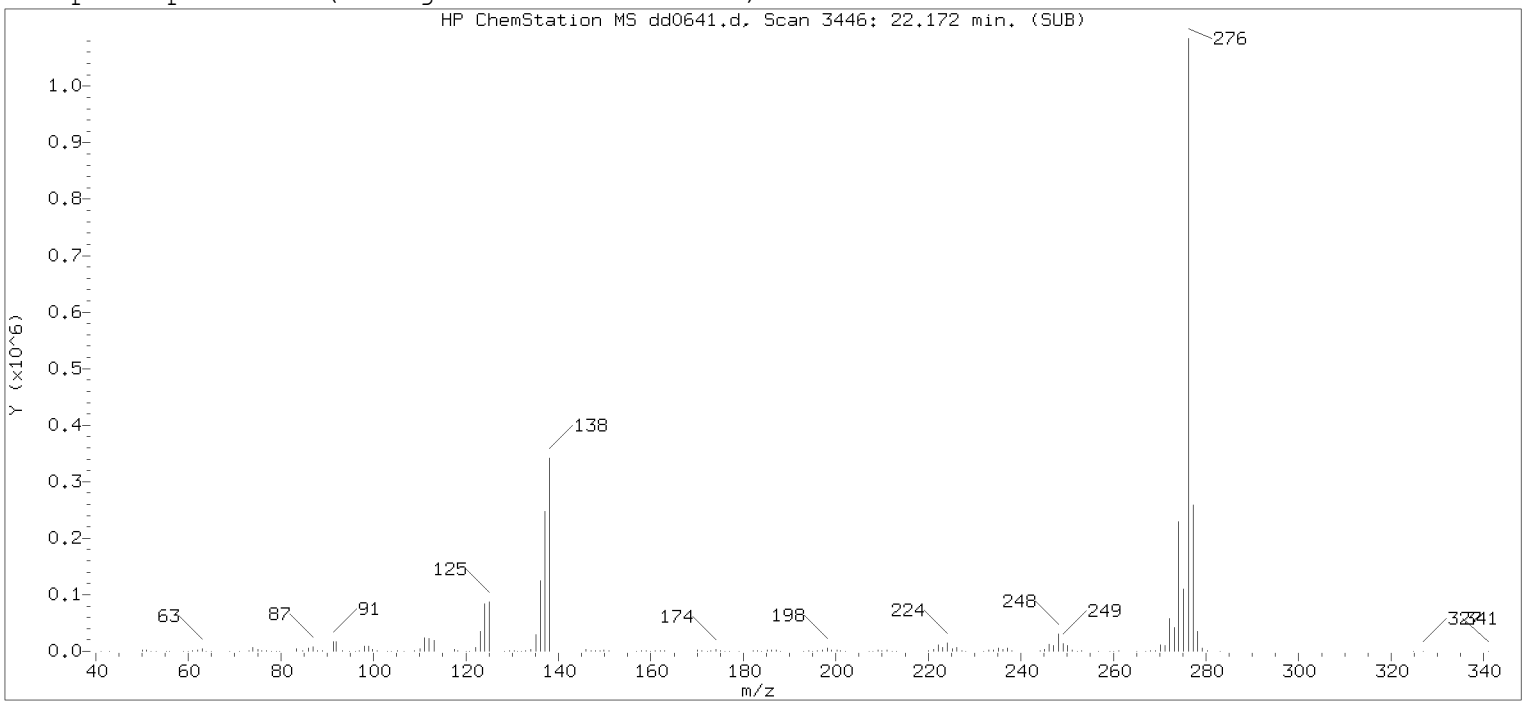
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3446
Retention Time (minutes) : 22.172
Quant Ion : 276.00
Area (flag) : 2006715M
On-Column Amount (ng/ul) : 13.0339
Integration start scan : 3436 Integration stop scan: 3449
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

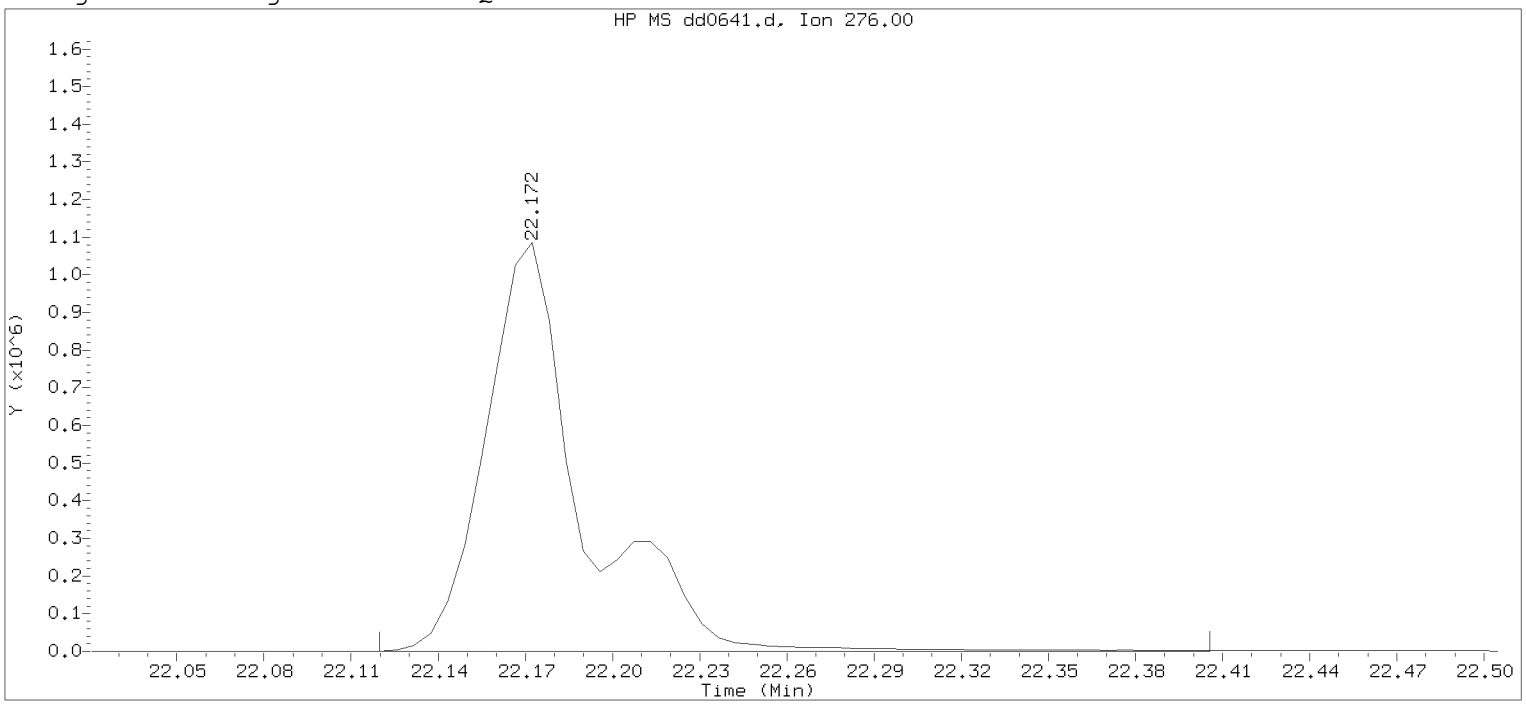
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 04/17/2020 at 08:38.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



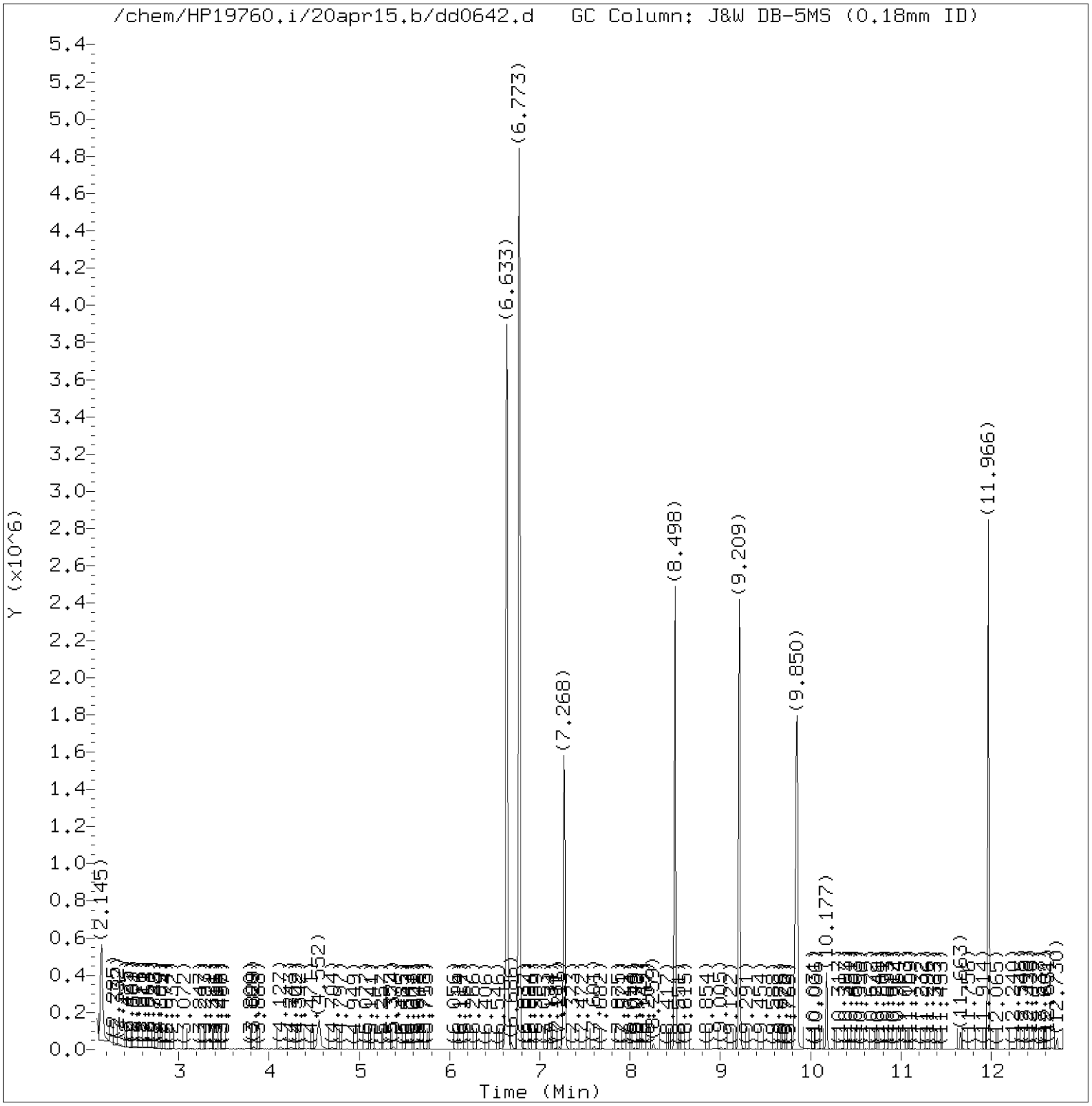
Data File: /chem/HP19760.i/20apr15.b/dd0641.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:31 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: icvall1-1
Calibration date and time: 15-APR-2020 22:41
Date, time and analyst ID of latest file update: 16-Apr-2020 00:05 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvICV1049

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3446		
Retention Time (minutes)	: 22.172		
Quant Ion	: 276.00		
Area	: 2535197		
On-column Amount (ng/ul)	: 13.2880		
Integration start scan	: 3436	Integration stop scan:	3485
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/16/2020 at 09:54.
Target 3.5 esignature user name em10340



Total Ion Chromatogram (TIC)

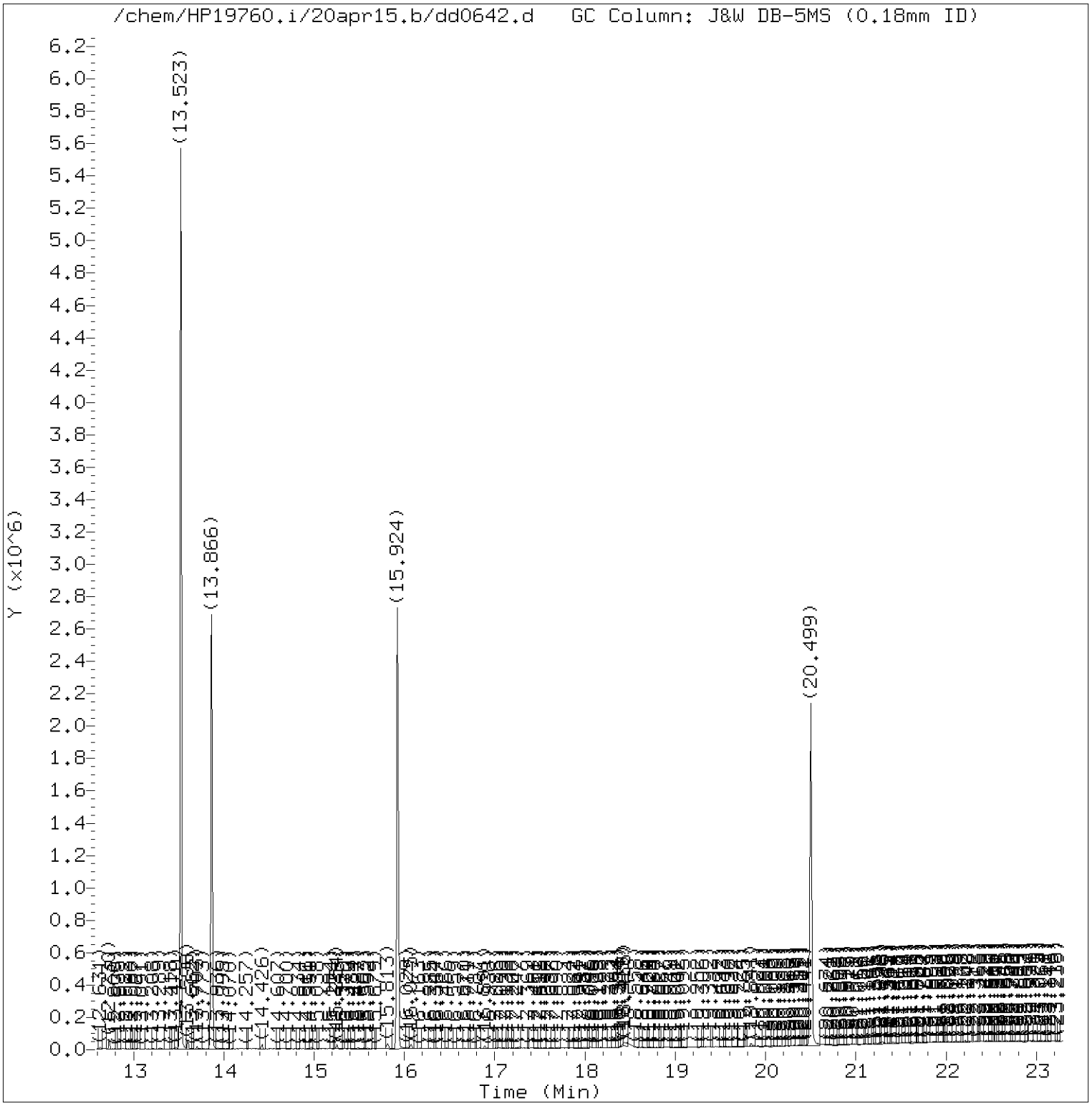
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0642.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:59 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0240

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0642.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:59 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0240

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0642.d Instrument ID: HP19760.i
Injection date and time: 15-APR-2020 23:59 Analyst ID: em10340

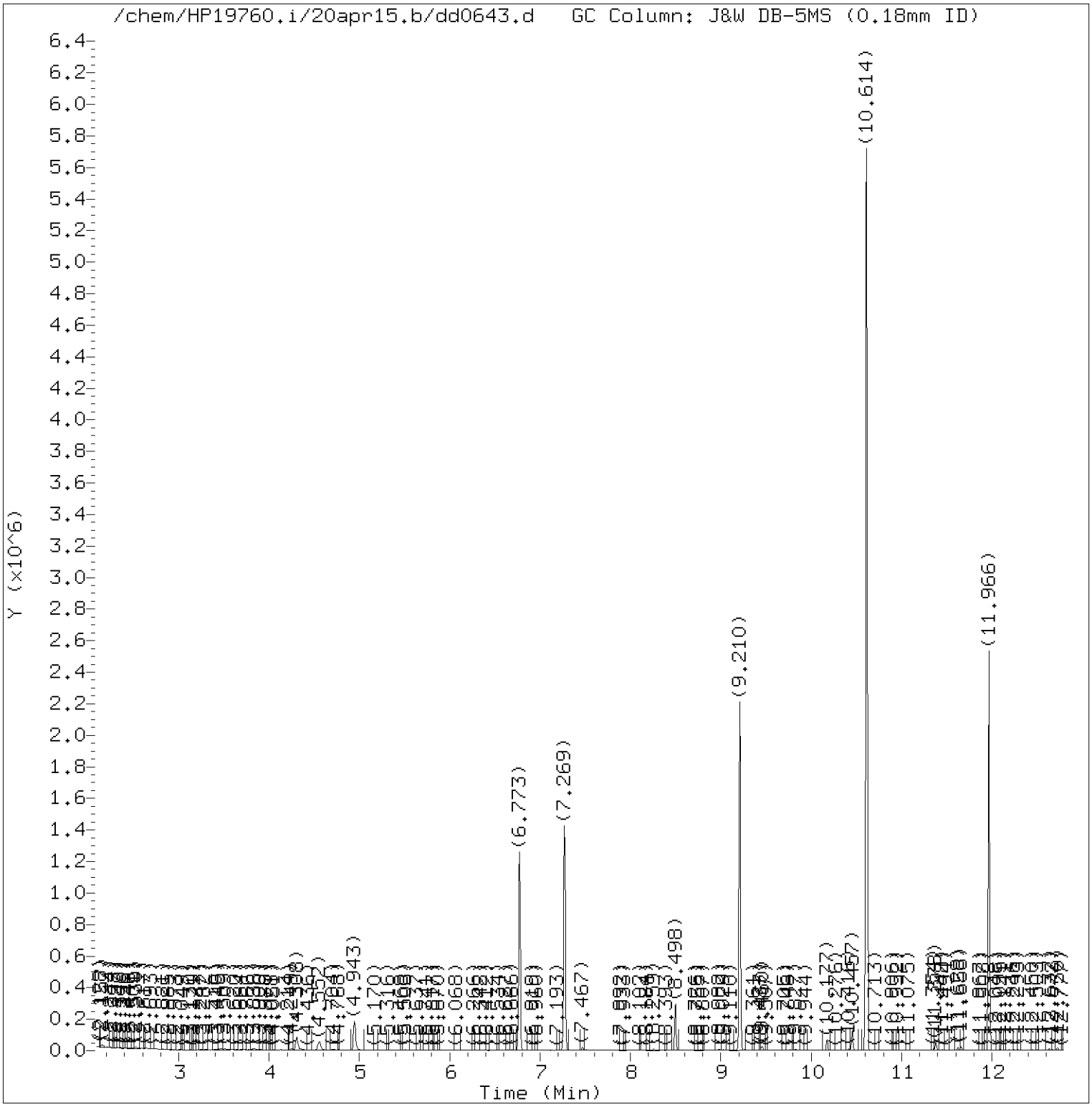
Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0240

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.633	77	1259106	14.647
25)*1,4-Dichlorobenzene-d4	(1)	7.268	152	352099	5.000
65)*Naphthalene-d8	(2)	9.209	136	1335656	5.000
76) Caprolactam	(2)	9.850	113	410619	12.111
113)*Acenaphthene-d10	(3)	11.966	164	610328	5.000
148) Atrazine	(4)	13.523	200	652202	13.427
153)*Phenanthrene-d10	(4)	13.866	188	1151977	5.000
175)*Pyrene-d10	(5)	15.924	212	1138251	5.000
213)*Perylene-d12	(6)	20.499	264	1045433	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

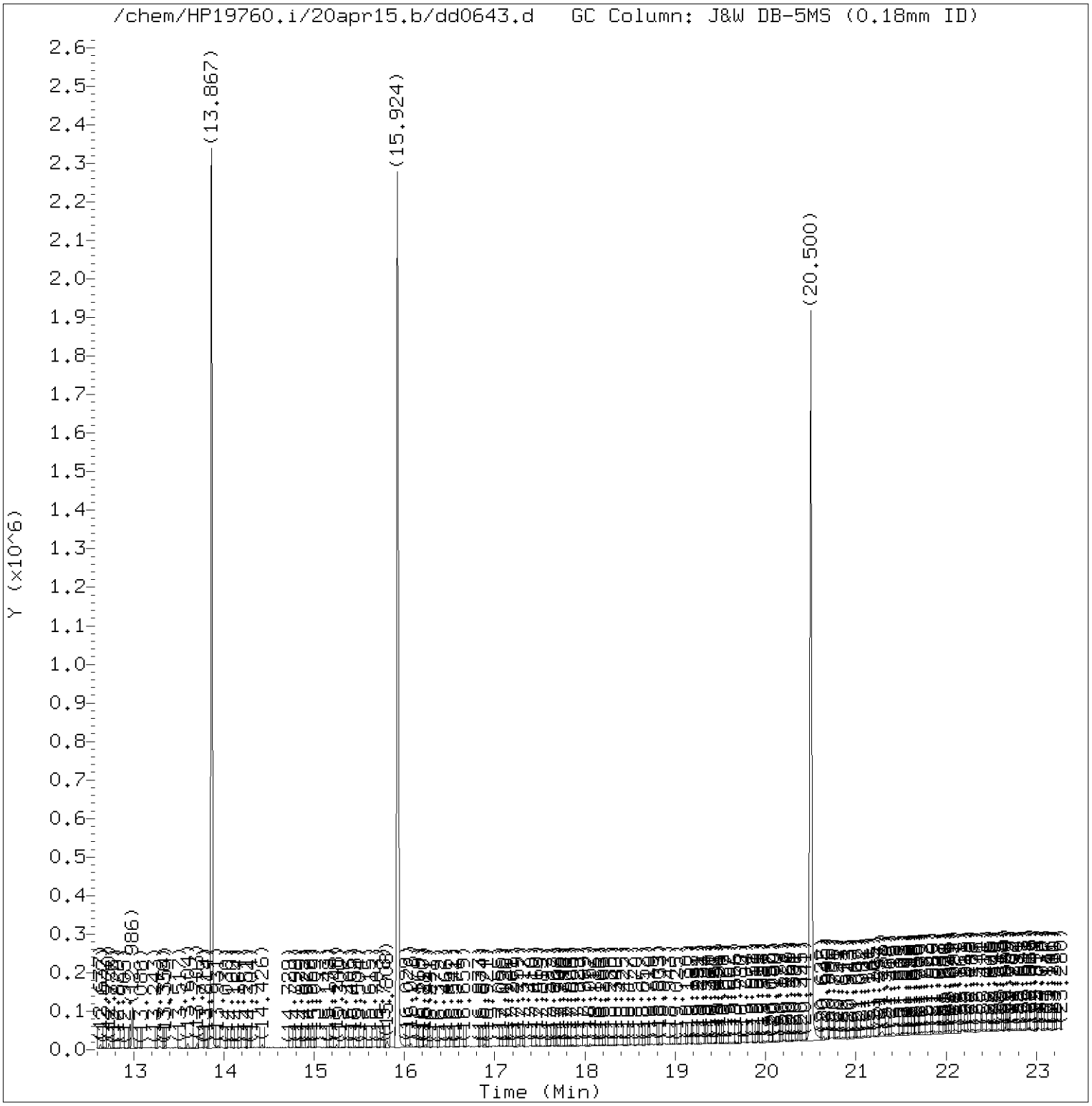
Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0643.d Instrument ID: HP19760.i
Injection date and time: 16-APR-2020 00:28 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: hccpd
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD25 Lab Sample ID: rvHCCPDCV0350

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0643.d Instrument ID: HP19760.i
Injection date and time: 16-APR-2020 00:28 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: hccpd
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD25 Lab Sample ID: rvHCCPDCV0350

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr15.b/dd0643.d Instrument ID: HP19760.i
Injection date and time: 16-APR-2020 00:28 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr15.b/rv8270d.m Sublist used: hccpd
Calibration date and time: 16-APR-2020 09:51
Date, time and analyst ID of latest file update: 16-Apr-2020 09:51 em10340

Sample Name: SSTD25 Lab Sample ID: rvHCCPDCV0350

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.269	152	315367	5.000
65)*Naphthalene-d8	(2)	9.210	136	1171759	5.000
85) Hexachlorocyclopentadiene	(3)	10.614	237	1082526	26.656
113)*Acenaphthene-d10	(3)	11.966	164	540797	5.000
153)*Phenanthrene-d10	(4)	13.867	188	1005652	5.000
175)*Pyrene-d10	(5)	15.924	212	991641	5.000
213)*Perylene-d12	(6)	20.500	264	910262	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 04/16/2020 at 09:54.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP19760.i/20apr27.b/dd1250.d

Page 1

Date : 27-APR-2020 06:41

Client ID: DFTPP12.5

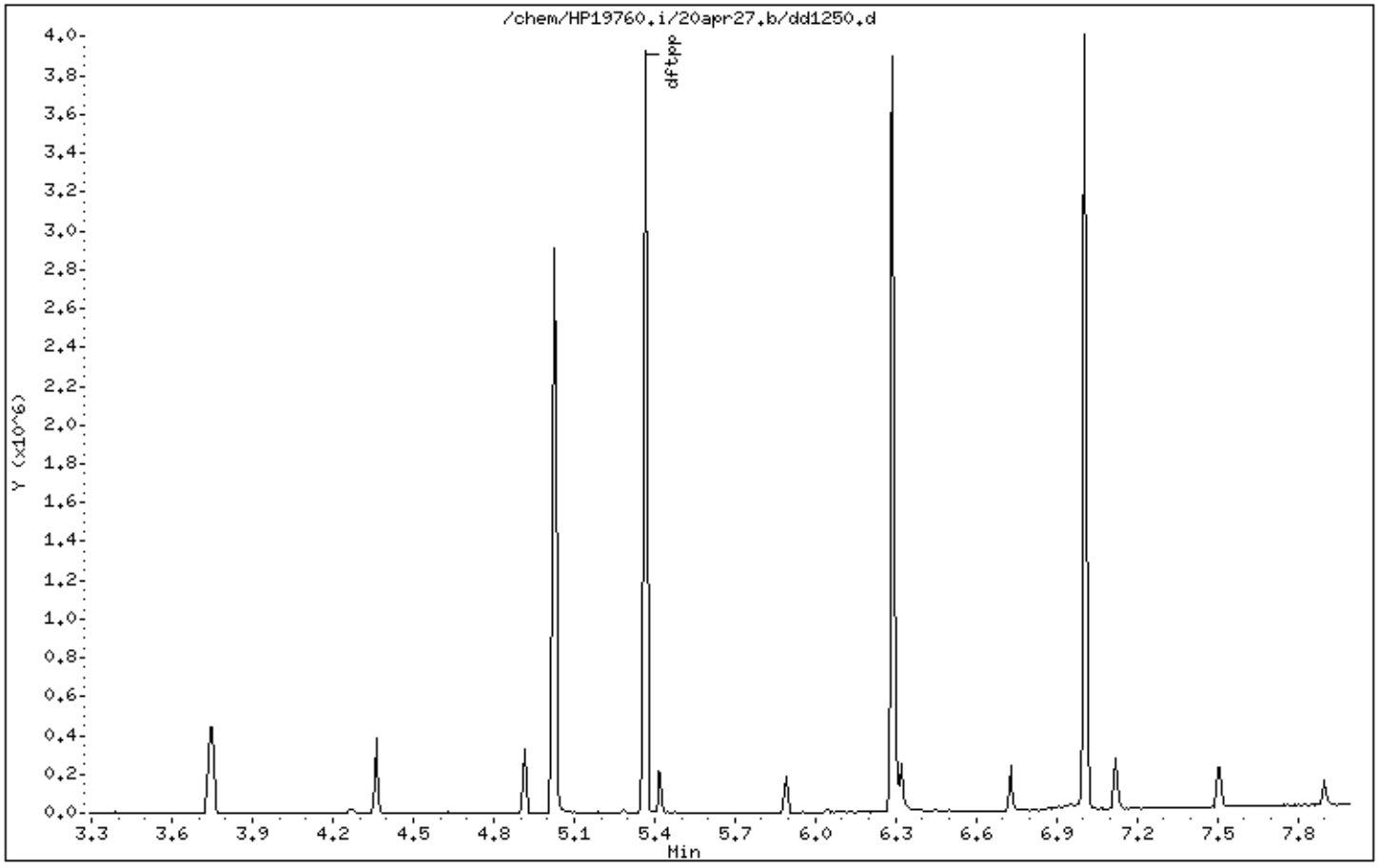
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/20apr27.b/dd1250.d

Date : 27-APR-2020 06:41

Client ID: DFTPP12.5

Instrument: HP19760.i

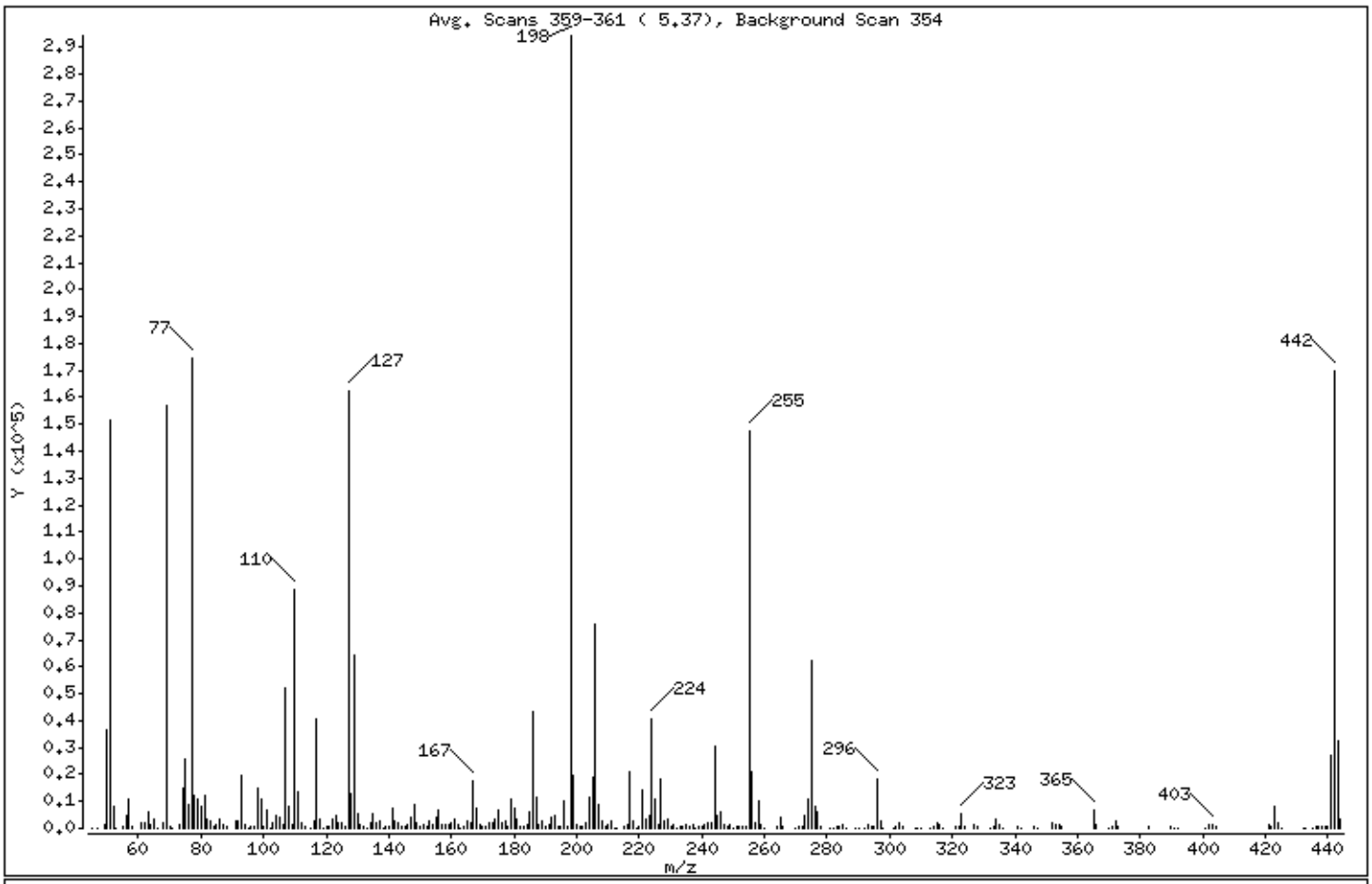
Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	51.49
68	Less than 2.00% of mass 69	0.72 (1.34)
69	Mass 69 relative abundance	53.34
70	Less than 2.00% of mass 69	0.24 (0.44)
127	10.00 - 80.00% of mass 198	55.15
197	Less than 2.00% of mass 198	0.32
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	21.10
365	Greater than 1.00% of mass 198	2.40
441	0.01 - 24.00% of mass 442	9.17 (15.88)
442	50.00 - 99.99% of mass 198	57.74
443	15.00 - 24.00% of mass 442	11.08 (19.18)

Date : 27-APR-2020 06:41

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dd1250.d
Spectrum: Avg. Scans 359-361 (5.37), Background Scan 354
Location of Maximum: 198.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	115	129.00	64216	203.00	2327	286.00	211
47.00	117	130.00	5103	204.00	11583	289.00	94
49.00	1032	131.00	1085	205.00	19128	290.00	127
50.00	36480	132.00	563	206.00	75664	292.00	201
51.00	151488	133.00	248	207.00	9049	293.00	1182
52.00	7813	134.00	1888	208.00	2710	294.00	438
53.00	147	135.00	5656	209.00	861	295.00	621
55.00	424	136.00	1739	210.00	1586	296.00	18056
56.00	4760	137.00	2598	211.00	2735	297.00	2711
57.00	10658	138.00	274	212.00	119	298.00	183
58.00	427	139.00	409	213.00	85	301.00	323
61.00	1962	140.00	927	215.00	941	302.00	339
62.00	2115	141.00	7777	216.00	1491	303.00	2033
63.00	6060	142.00	2540	217.00	20640	304.00	499
64.00	1105	143.00	1994	218.00	2642	308.00	155
65.00	3076	144.00	677	219.00	115	309.00	121
66.00	249	145.00	494	220.00	752	310.00	313
68.00	2105	146.00	1302	221.00	14291	313.00	236
69.00	156928	147.00	4135	222.00	3098	314.00	967
70.00	692	148.00	8478	223.00	4867	315.00	1961
71.00	105	149.00	2210	224.00	40744	316.00	1044
73.00	1057	150.00	551	225.00	10674	317.00	287
74.00	15164	151.00	1149	226.00	1302	321.00	543
75.00	25520	152.00	691	227.00	17936	322.00	355
76.00	8612	153.00	2698	228.00	2512	323.00	5434
77.00	174400	154.00	1665	229.00	3249	324.00	703
78.00	11886	155.00	3941	230.00	502	327.00	1051
79.00	10657	156.00	6638	231.00	1217	328.00	520
80.00	8357	157.00	1503	232.00	277	332.00	280
81.00	12007	158.00	1452	233.00	502	333.00	573
82.00	3168	159.00	1485	234.00	991	334.00	3285
83.00	2849	160.00	2358	235.00	1254	335.00	1054
84.00	502	161.00	3692	236.00	786	336.00	126
85.00	1618	162.00	1197	237.00	1431	341.00	563
86.00	3411	163.00	268	238.00	112	342.00	186

Date : 27-APR-2020 06:41

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dd1250.d
Spectrum: Avg. Scans 359-361 (5.37), Background Scan 354
Location of Maximum: 198.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	1158	164.00	527	239.00	640	346.00	948
88.00	565	165.00	3013	240.00	633	347.00	252
91.00	2818	166.00	2305	241.00	1312	352.00	1732
92.00	2926	167.00	17512	242.00	1815	353.00	1382
93.00	19480	168.00	7728	243.00	2307	354.00	1636
94.00	1159	169.00	1649	244.00	30560	355.00	540
95.00	104	170.00	729	245.00	4640	365.00	7065
96.00	956	171.00	790	246.00	6242	366.00	1055
97.00	531	172.00	1705	247.00	1396	370.00	108
98.00	14570	173.00	1727	248.00	404	371.00	345
99.00	11017	174.00	3088	249.00	1073	372.00	2540
100.00	1006	175.00	6939	250.00	283	373.00	796
101.00	6561	176.00	1857	251.00	452	383.00	678
102.00	130	177.00	2797	252.00	752	390.00	375
103.00	2221	178.00	947	253.00	453	391.00	232
104.00	4417	179.00	10799	254.00	956	392.00	129
105.00	4357	180.00	7232	255.00	147584	401.00	102
106.00	1259	181.00	3582	256.00	21072	402.00	1116
107.00	52296	182.00	475	257.00	1887	403.00	1373
108.00	8118	183.00	394	258.00	9915	404.00	504
109.00	1392	184.00	1235	259.00	1665	421.00	1254
110.00	88624	185.00	5821	260.00	159	422.00	621
111.00	13549	186.00	43240	264.00	341	423.00	8172
112.00	1745	187.00	11794	265.00	3776	424.00	1713
113.00	609	188.00	1237	266.00	807	425.00	96
115.00	141	189.00	2853	270.00	202	432.00	115
116.00	2577	190.00	377	271.00	461	433.00	114
117.00	40568	191.00	1278	272.00	677	435.00	167
118.00	3189	192.00	3788	273.00	5009	436.00	628
119.00	329	193.00	4470	274.00	11051	437.00	821
120.00	497	194.00	909	275.00	62096	438.00	950
121.00	359	195.00	782	276.00	8019	439.00	597
122.00	3531	196.00	10310	277.00	6079	440.00	469
123.00	4566	197.00	953	278.00	800	441.00	26976
124.00	2195	198.00	294272	281.00	84	442.00	169920

Date : 27-APR-2020 06:41

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP0430;1;3;DFTPP;

Operator: em10340

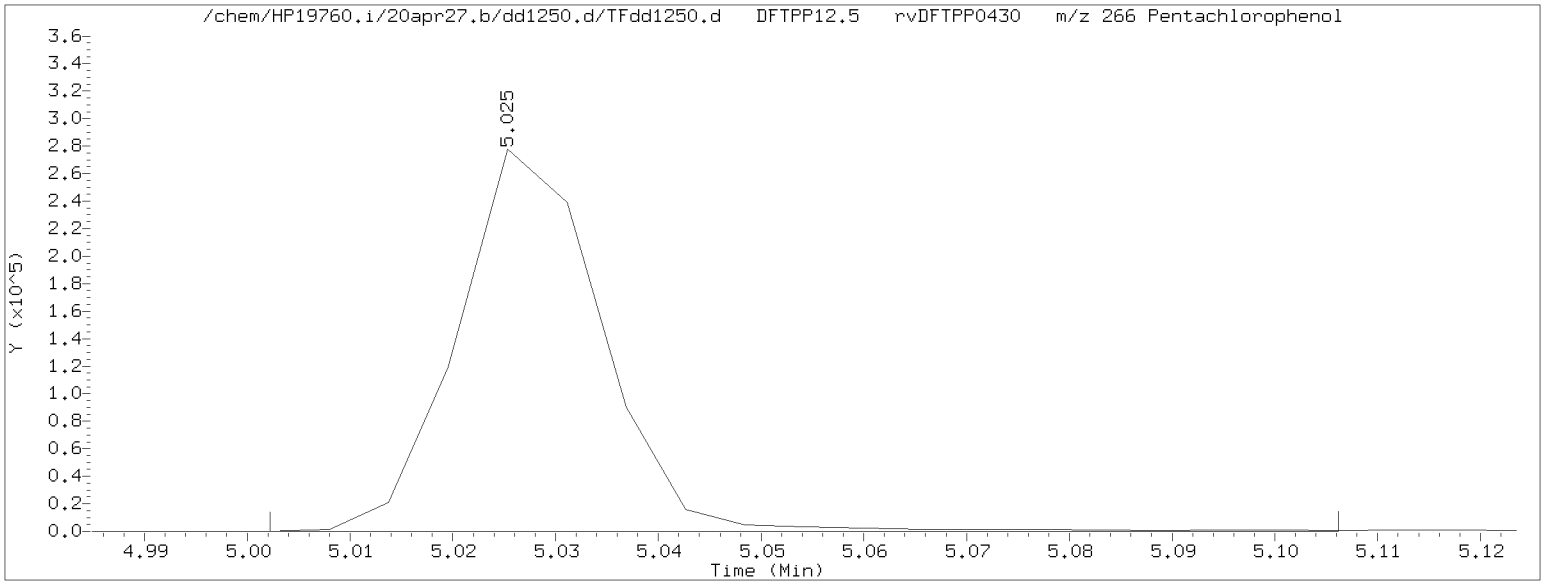
Column phase: DB-5MS Column diameter: 0.18

Data File: dd1250.d
Spectrum: Avg. Scans 359-361 (5.37), Background Scan 354
Location of Maximum: 198.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	2244	199.00	19776	282.00	208	443.00	32600
126.00	1013	200.00	1513	283.00	647	444.00	3402
127.00	162240	201.00	860	284.00	511		
128.00	12827	202.00	892	285.00	1075		

Assessment of GC Column Performance and Injection Port Inertness for

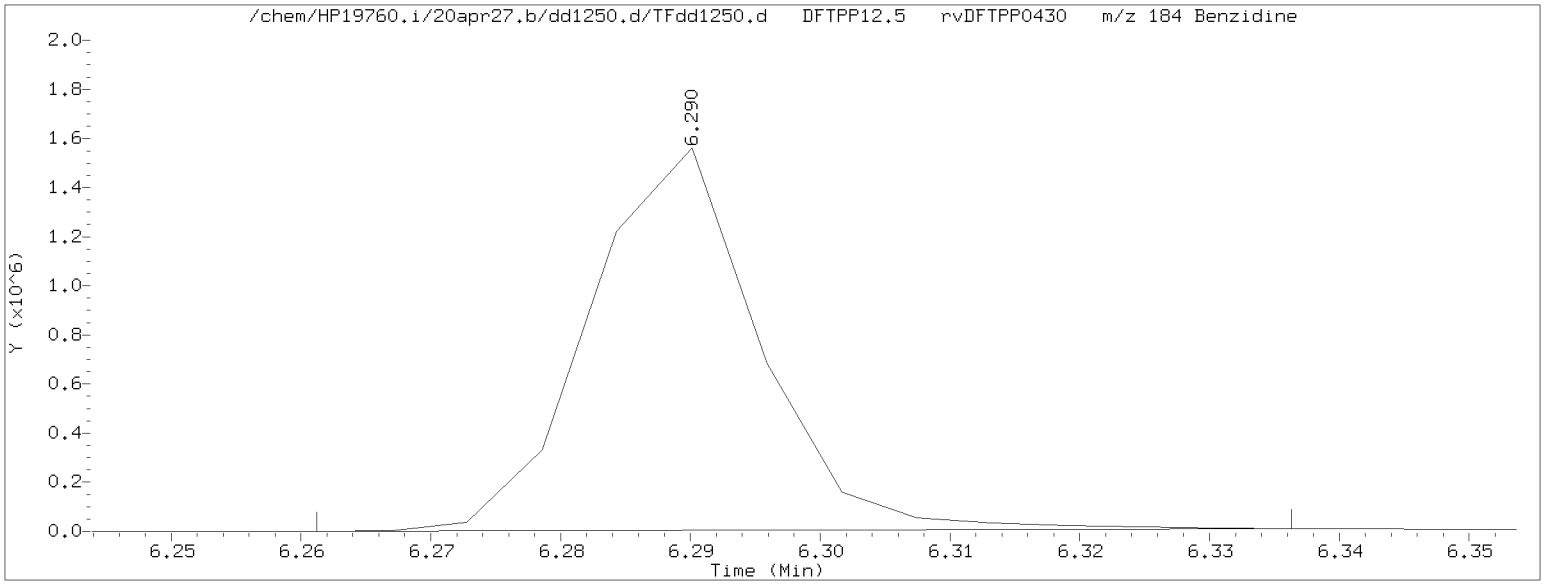
Instrument ID: HP19760.i Injection Date: 27-APR-2020 06:41 Operator: em10340



Pentachlorophenol EICP peak height = 277824 EICP peak height at 10% = 27782 Pentachlorophenol EICP area = 271132

Pentachlorophenol EICP peak apex (min.) = 5.025
RT at 10% of front half of EICP (min.) = 5.014 'Front' peak width (min.) = 0.0111333333
RT at 10% of back half of EICP (min.) = 5.042 'Tailing' peak width (min.) = 0.0163833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0163833333}{0.0111333333} = 1.472$$



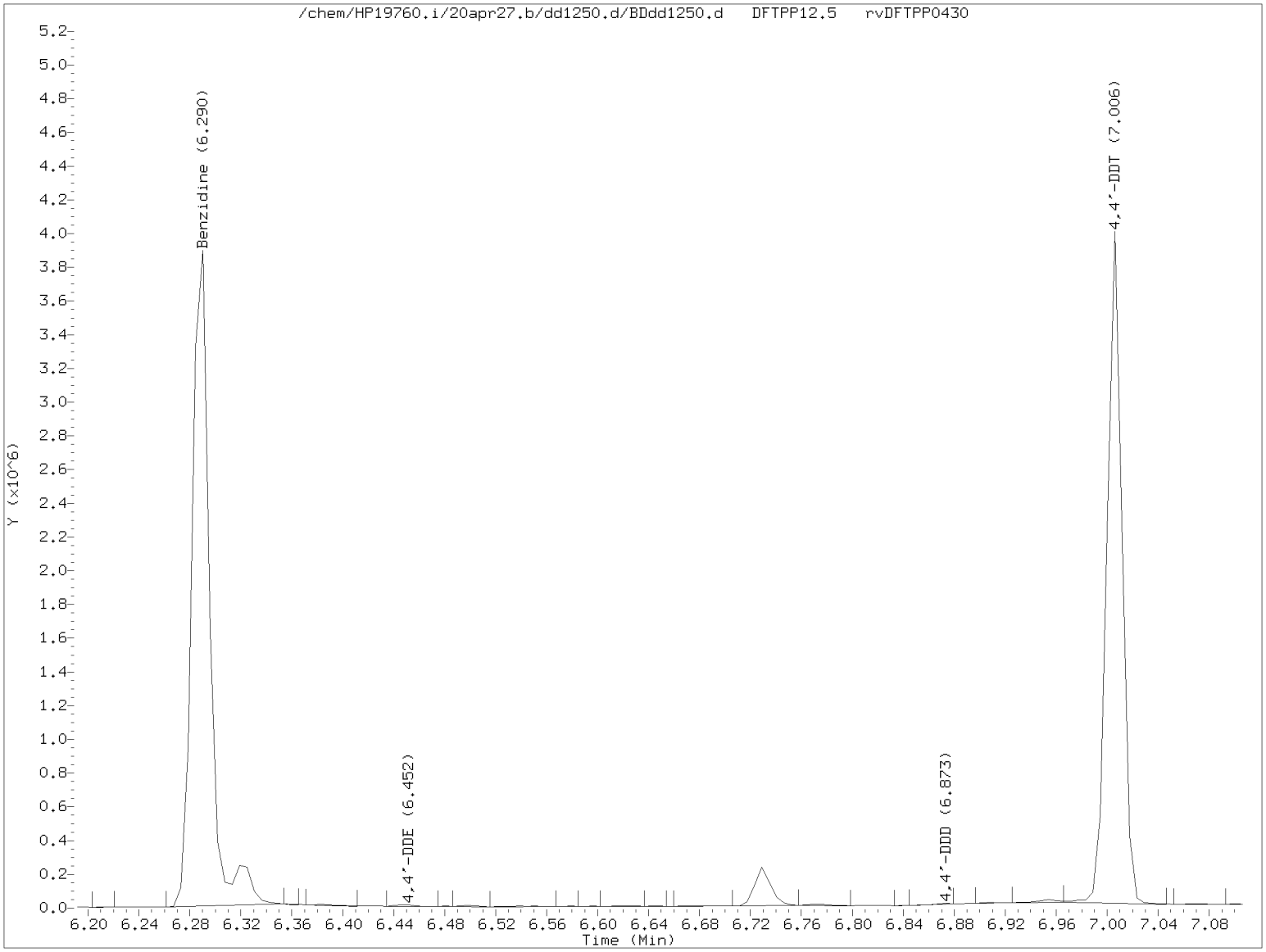
Benzidine EICP peak height = 1556950 EICP peak height at 10% = 155695 Benzidine EICP area = 1411598

Benzidine EICP peak apex (min.) = 6.290
RT at 10% of front half of EICP (min.) = 6.275 'Front' peak width (min.) = 0.0149000000
RT at 10% of back half of EICP (min.) = 6.302 'Tailing' peak width (min.) = 0.0115333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0115333333}{0.0149000000} = 0.774$$

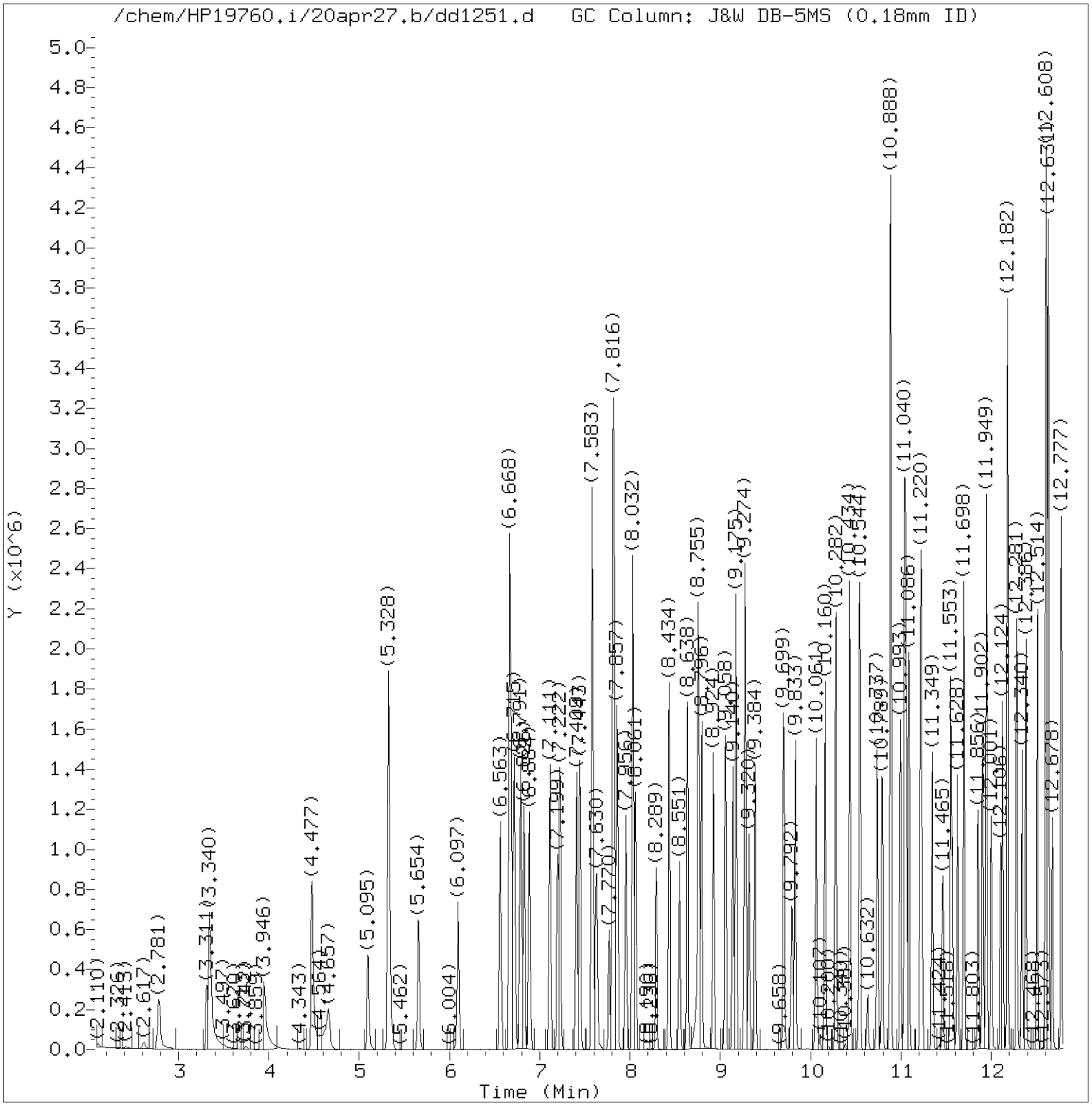
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 27-APR-2020 06:41 Operator: em10340



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{9406 + 4212}{9406 + 4212 + 3299302} \times 100 = 0.4$$



Total Ion Chromatogram (TIC)

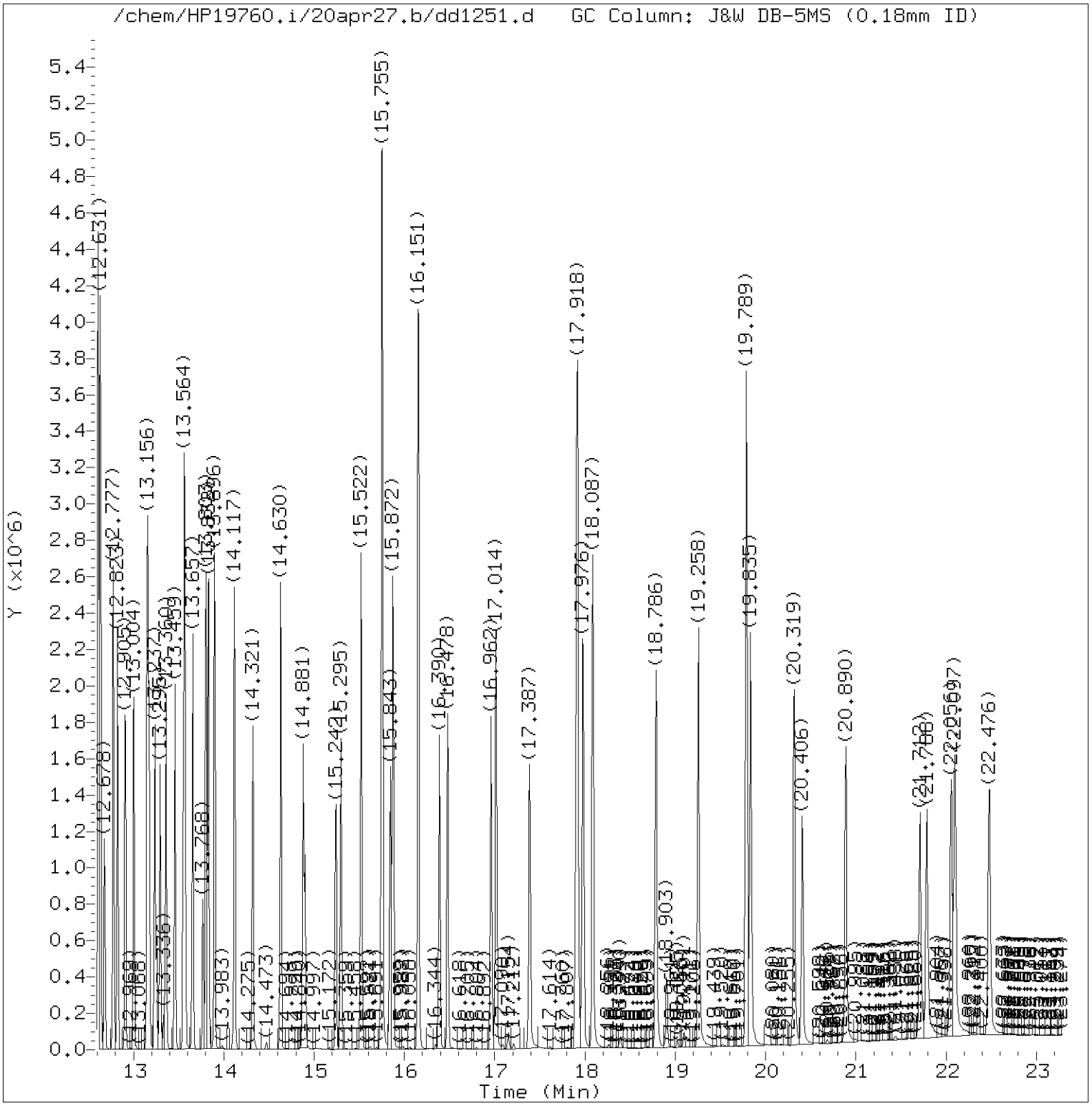
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.781	88	209929	7.655
4) N-Nitrosodimethylamine	(1)	3.311	74	320885	7.577
5) Pyridine	(1)	3.340	79	543108	7.391
7) 2-Picoline	(1)	4.477	93	547274	7.314
8) N-Nitrosomethylethylamine	(1)	4.657	88	232860	7.270
9) Methyl methanesulfonate	(1)	5.095	80	277930	8.104
11)$2-Fluorophenol	(1)	5.328	112	890461	14.882
13) N-Nitrosodiethylamine	(1)	5.660	102	223606	7.376
42) Total Cresols	(1)			849997	15.031
15) Ethyl methanesulfonate	(1)	6.097	109	239139	7.491
16) Benzaldehyde	(1)	6.563	77	367183	7.508
17)$Phenol-d6	(1)	6.668	99	1210926	15.122
18) Phenol	(1)	6.686	94	663974	8.074
19) Aniline	(1)	6.715	93	759240	7.473
20) a-methylstyrene	(1)	6.796	118	173537	7.312
22) bis(2-Chloroethyl)ether	(1)	6.826	93	514045	7.470
23) 2-Chlorophenol	(1)	6.884	128	448853	7.557
24) 1,3-Dichlorobenzene	(1)	7.111	146	448732	7.362
25)*1,4-Dichlorobenzene-d4	(1)	7.199	152	200314	5.000
26) 1,4-Dichlorobenzene	(1)	7.228	146	455143	7.378
97) Isosafrole	(3)			345011	7.430
27) Benzyl alcohol	(1)	7.409	108	280440	7.201
28) 1,2-Dichlorobenzene	(1)	7.443	146	432231	7.381
30) Indene	(1)	7.578	115	682532	7.638
31) 2-Methylphenol	(1)	7.583	108	415482	7.510
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.630	45	737589	8.247
34) bis(2-Chloroisopropyl)ether	(1)	7.630	45	737589	8.247
35) N-Nitrosopyrrolidine	(1)	7.770	100	227029	7.223
36) Acetophenone	(1)	7.805	105	630238	7.746
37) 4-Methylphenol	(1)	7.816	108	434515	7.521
38) N-Nitroso-di-n-propylamine	(1)	7.822	70	363558	7.836
39) N-Nitrosomorpholine	(1)	7.840	56	352076	8.185
40) o-Toluidine	(1)	7.857	106	699905	7.423
43) Hexachloroethane	(1)	7.956	117	199589	7.605
44)$Nitrobenzene-d5	(2)	8.032	82	1070674	15.997
120) 2,4_2,6-Dinitrotoluenes	(3)			421091	15.482
45) Nitrobenzene	(2)	8.061	77	532026	7.871
48) N-Nitrosopiperidine	(2)	8.289	114	218794	7.260
50) Isophorone	(2)	8.434	82	952210	7.828
51) 2-Nitrophenol	(2)	8.551	139	219062	7.424

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.638	107	457964	7.940
57) O,O,O-Triethylphosphorothioate	(2)	8.755	198	187958	7.576
56) Benzoic acid	(2)	8.772	105	359458	9.379
146) Diallate trans/cis	(4)			417674	7.589
55) bis(2-Chloroethoxy)methane	(2)	8.796	93	591680	7.655
60) 2,4-Dichlorophenol	(2)	8.924	162	323381	7.444
62) 1,2,4-Trichlorobenzene	(2)	9.058	180	342947	7.646
65)*Naphthalene-d8	(2)	9.140	136	733071	5.000
66) Naphthalene	(2)	9.175	128	1224128	7.508
67) 4-Chloroaniline	(2)	9.268	127	489823	7.463
68) 2,6-Dichlorophenol	(2)	9.279	162	314830	7.704
69) Hexachloropropene	(2)	9.320	213	222948	8.014
71) Hexachlorobutadiene	(2)	9.384	225	189322	7.946
75) Quinoline	(2)	9.699	129	786754	7.606
76) Caprolactam	(2)	9.798	113	133328	7.165
77) N-Nitrosodi-n-butylamine	(2)	9.833	84	332906	7.256
80) 4-Chloro-3-methylphenol	(2)	10.061	107	383606	7.941
82) Safrole	(2)	10.160	162	296150	7.580
83) 2-Methylnaphthalene	(2)	10.282	142	777261	7.549
84) 1-Methylnaphthalene	(2)	10.434	142	736717	7.535
85) Hexachlorocyclopentadiene	(3)	10.538	237	192412	7.499
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.544	216	323150	7.761
88) cis-Isosafrole	(3)	10.632	162	49553	1.168
90) 2,4,6-Trichlorophenol	(3)	10.737	196	224514	7.752
92) 2,4,5-Trichlorophenol	(3)	10.795	196	234948	7.770
93)$2-Fluorobiphenyl	(3)	10.888	172	1641187	15.425
94) trans-Isosafrole	(3)	10.993	162	295458	6.253
95) 1,1'-Biphenyl	(3)	11.040	154	950543	7.735
96) 2-Chloronaphthalene	(3)	11.057	162	729062	7.806
98) 1-Chloronaphthalene	(3)	11.092	162	643459	7.336
99) Diphenyl ether	(3)	11.220	170	497060	7.643
100) 2-Nitroaniline	(3)	11.232	138	239152	7.461
104) 1,4-Naphthoquinone	(3)	11.349	158	295230	7.563
105) 1,4-Dinitrobenzene	(3)	11.465	168	122917	7.182
106) Dimethylphthalate	(3)	11.553	163	769353	7.679
107) 1,3-Dinitrobenzene	(3)	11.570	168	138366	7.311
108) 2,6-Dinitrotoluene	(3)	11.628	165	183139	7.720
109) Acenaphthylene	(3)	11.698	152	1087591	7.836
112) 3-Nitroaniline	(3)	11.856	138	198517	7.541
113)*Acenaphthene-d10	(3)	11.902	164	341683	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.949	153	736355	7.687
115) 2,4-Dinitrophenol	(3)	12.001	184	153263	9.021
116) 4-Nitrophenol	(3)	12.106	109	157190	9.086
117) Pentachlorobenzene	(3)	12.124	250	246532	7.522
118) 2,4-Dinitrotoluene	(3)	12.182	165	237952	7.545
119) Dibenzofuran	(3)	12.182	168	992176	7.723
121) 1-Naphthylamine	(3)	12.281	143	700485	7.277
122) 2,3,4,6-Tetrachlorophenol	(3)	12.345	232	163174	7.447
123) 2-Naphthylamine	(3)	12.386	143	688710	7.369
124) Diethylphthalate	(3)	12.514	149	823214	7.883
126) Fluorene	(3)	12.608	166	796438	7.866
125) Thionazin	(3)	12.608	107	143063	7.222
128) 5-Nitro-o-toluidine	(3)	12.631	152	232047	7.620
127) 4-Chlorophenyl-phenylether	(3)	12.631	204	365353	7.680
129) 4-Nitroaniline	(3)	12.637	138	217058	7.586
130) 4,6-Dinitro-2-methylphenol	(4)	12.678	198	146852	7.212
132) NDPA as diphenylamine	(4)	12.777	169	667943	7.568
131) N-Nitrosodiphenylamine	(4)	12.777	169	667943	7.568
134) 1,2-Diphenylhydrazine	(4)	12.823	77	975095	7.972
135)$2,4,6-Tribromophenol	(3)	12.911	330	160485	15.658
137) Tetraethyldithiopyrophosphate	(4)	12.998	97	161131	7.987
140) Diallate (peak 1)	(4)	13.150	86	308668	5.639
141) Phorate	(4)	13.156	75	590821	7.830
142) Phenacetin	(4)	13.173	108	447306	7.743
143) 4-Bromophenyl-phenylether	(4)	13.237	248	182240	7.410
144) Diallate (peak 2)	(4)	13.255	86	109006	1.951
145) Hexachlorobenzene	(4)	13.295	284	189909	7.352
147) Dimethoate	(4)	13.360	87	413448	7.480
148) Atrazine	(4)	13.459	200	217501	7.918
149) Pentachlorophenol	(4)	13.552	266	129479	7.043
150) 4-Aminobiphenyl	(4)	13.569	169	755737	7.876
151) Pentachloronitrobenzene	(4)	13.569	237	95854	8.320
152) Pronamide	(4)	13.657	173	374205	7.761
153)*Phenanthrene-d10	(4)	13.797	188	651512	5.000
154) Dinoseb	(4)	13.808	211	196179	7.152
155) Phenanthrene	(4)	13.832	178	1106696	7.469
157) Anthracene	(4)	13.896	178	1133865	7.639
163) Carbazole	(4)	14.117	167	1115783	7.676
164) Methyl parathion	(4)	14.321	109	334507	7.668
165) Di-n-butylphthalate	(4)	14.630	149	1481075	7.882

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

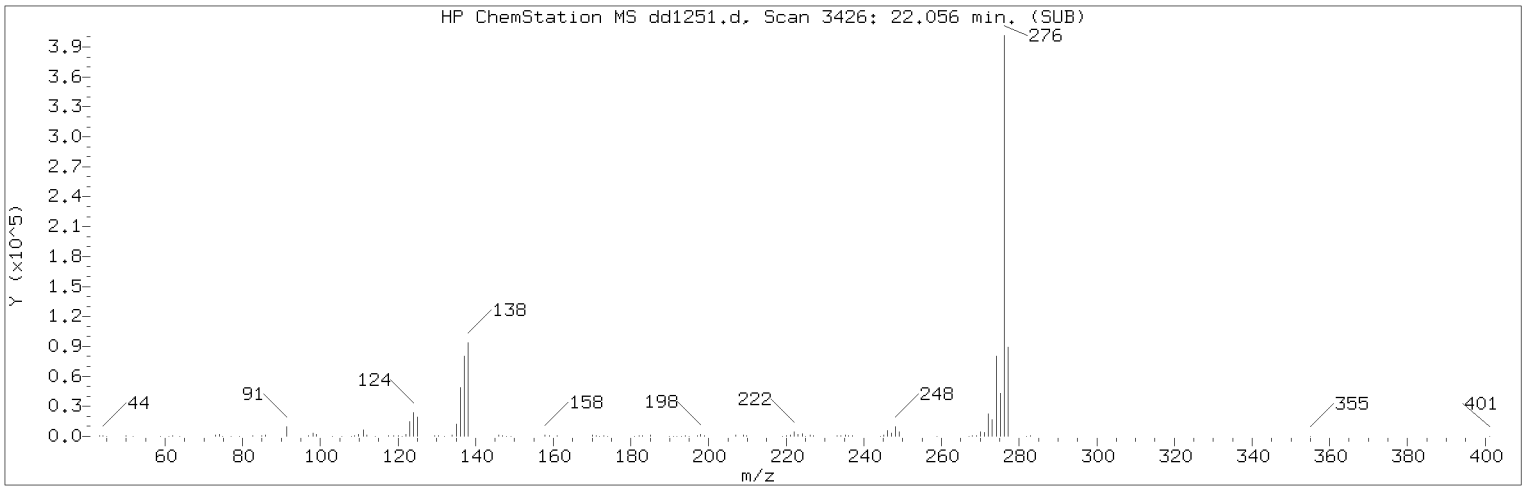
Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Parathion	(4)	14.881	109	198130	7.866
168) 4-Nitroquinoline-1-oxide	(4)	14.898	190	96343	5.320
222) Total PAHs	(6)			18625818	138.499
169) Octachlorostyrene	(4)	15.242	308	82044	8.132
171) Isodrin	(4)	15.295	193	142328	7.815
173) Fluoranthene	(4)	15.522	202	1330394	7.918
174) Benzidine	(5)	15.755	184	2483116	22.200
175)*Pyrene-d10	(5)	15.843	212	660345	5.000
177) Pyrene	(5)	15.872	202	1358422	7.461
179)$Terphenyl-d14	(5)	16.151	244	1527583	15.216
182) p-Dimethylaminoazobenzene	(5)	16.390	225	224243	7.234
185) Chlorobenzilate	(5)	16.478	139	444626	7.853
187) 3,3'-Dimethylbenzidine	(5)	16.962	212	789070	6.961
188) Butylbenzylphthalate	(5)	17.014	149	661030	7.427
191) 2-Acetylaminofluorene	(5)	17.387	181	483715	6.866
193) 3,3'-Dichlorobenzidine	(5)	17.900	252	410489	7.204
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.918	231	219856	7.161
195) Benzo(a)anthracene	(5)	17.918	228	1096807	7.709
196) Chrysene	(5)	17.976	228	1124279	7.525
199) bis(2-Ethylhexyl)phthalate	(5)	18.087	149	948623	7.539
203) 6-Methylchrysene	(5)	18.786	242	798416	7.454
205) Di-n-octylphthalate	(6)	19.258	149	1596651	7.567
206) Benzo(b)fluoranthene	(6)	19.789	252	1099267	7.776
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.789	256	508668	7.598
208) Benzo(k)fluoranthene	(6)	19.835	252	1151635	8.050
211) Benzo(a)pyrene	(6)	20.319	252	1086371	8.042
213)*Perylene-d12	(6)	20.406	264	597514	5.000
215) 3-Methylcholanthrene	(6)	20.890	268	551943	7.759
217) Dibenz(a,h)acridine	(6)	21.712	279	711576	6.842
218) Dibenz(a,j)acridine	(6)	21.788	279	825783	7.360
219) Indeno(1,2,3-cd)pyrene	(6)	22.056	276	883493M	7.353
220) Dibenz(a,h)anthracene	(6)	22.097	278	952054	7.758
221) Benzo(g,h,i)perylene	(6)	22.481	276	944045	7.552

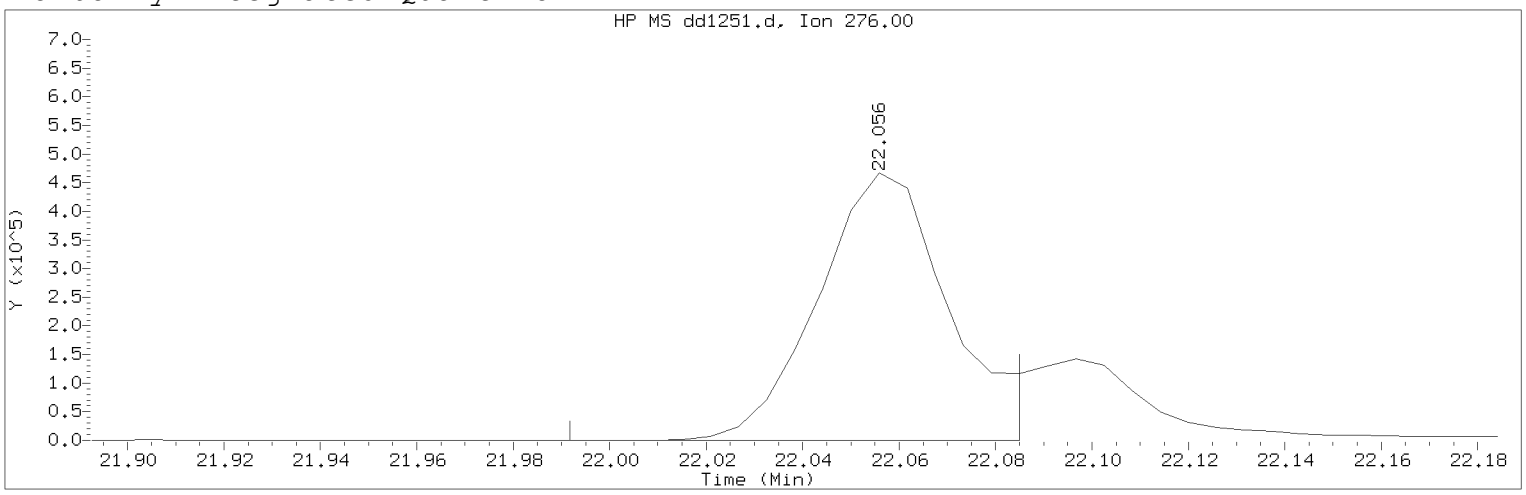
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:22
Date, time and analyst ID of latest file update: 27-Apr-2020 08:22 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

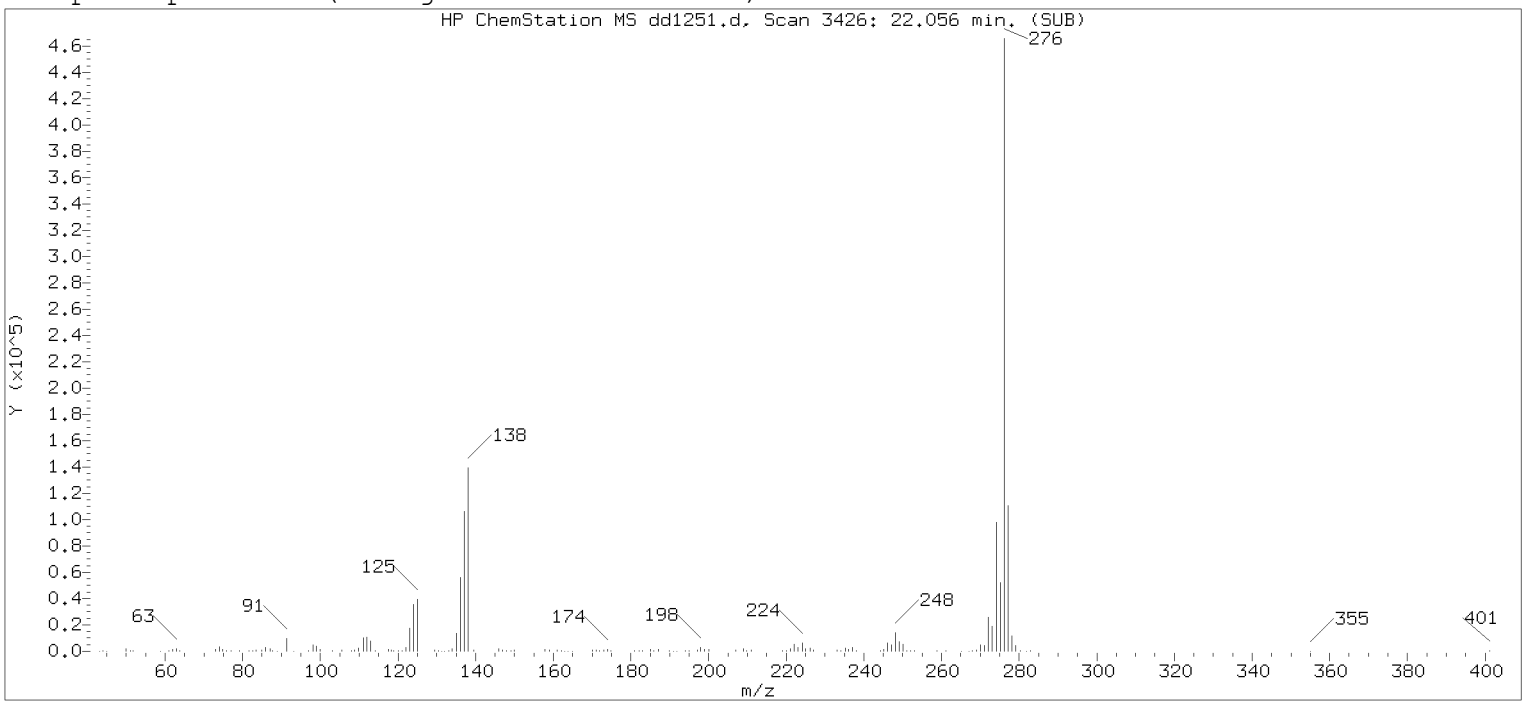
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3426
Retention Time (minutes) : 22.056
Quant Ion : 276.00
Area (flag) : 883493M
On-Column Amount (ng/ul) : 7.3527
Integration start scan : 3414 Integration stop scan: 3430
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

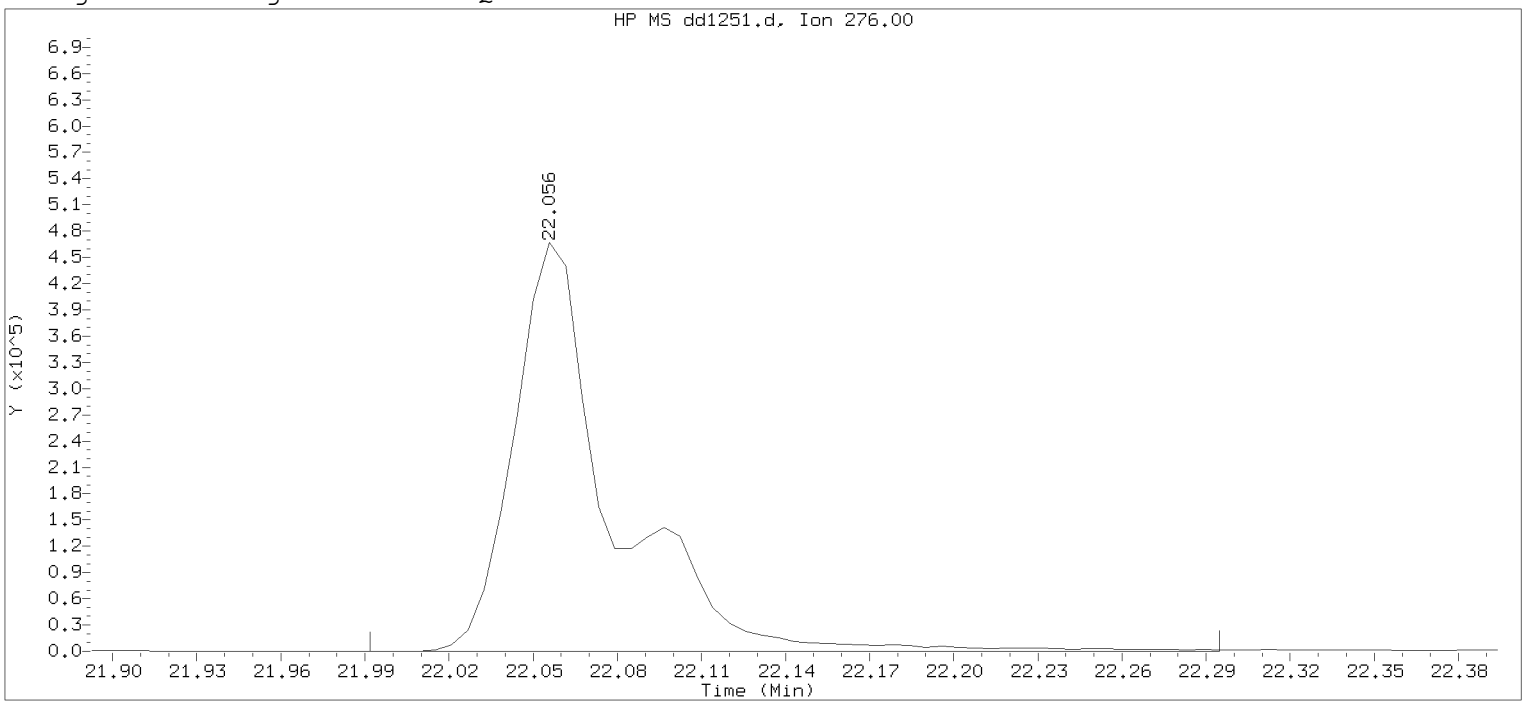
Analyst responsible for change: Digitally signed by Edward Monborne
on 04/27/2020 at 13:27.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Anthony P. Bauer on 04/28/2020 at 14:51.
PARALLAX ID: apb10206

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/20apr27.b/dd1251.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 07:33 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: all1-1
Calibration date and time: 27-APR-2020 08:17
Date, time and analyst ID of latest file update: 27-Apr-2020 08:17 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD0940

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3426		
Retention Time (minutes)	: 22.056		
Quant Ion	: 276.00		
Area	: 1145642		
On-column Amount (ng/ul)	: 9.5344		
Integration start scan	: 3414	Integration stop scan:	3466
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 04/27/2020 at 13:27.
Target 3.5 esignature user em10340

Raw QC Data

Semivolatiles by GC/MS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1258.d Injection date and time: **27-APR-2020 11:39**
Data file Sample Info. Line: SBLKWH114;SBLKWH114;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **20114WAH**
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.193	(0.006)	876	152	189683	(-5)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	720568	(-2)	5.00	
113) Acenaphthene-d10	11.896	(0.006)	1683	164	334602	(-2)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	620741	(-5)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	627048	(-5)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	541514	(-9)	5.00	

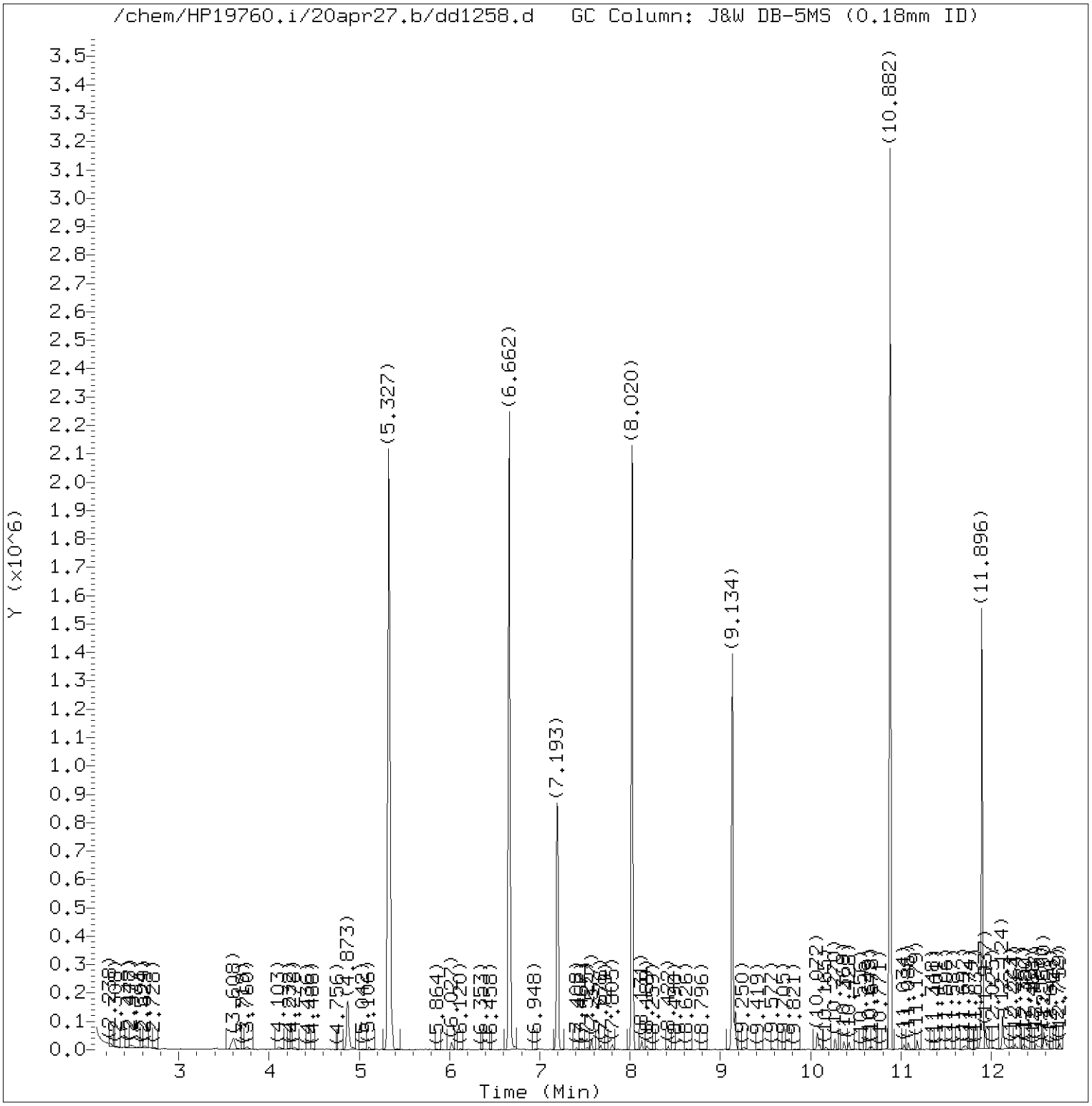
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
44) Nitrobenzene-d5	(2)	8.020	(0.001)	82	935400	14.219	57%
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1216241	11.673	47%
179) Terphenyl-d14	(5)	16.151	(0.000)	244	1688658	17.713	71%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:25. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

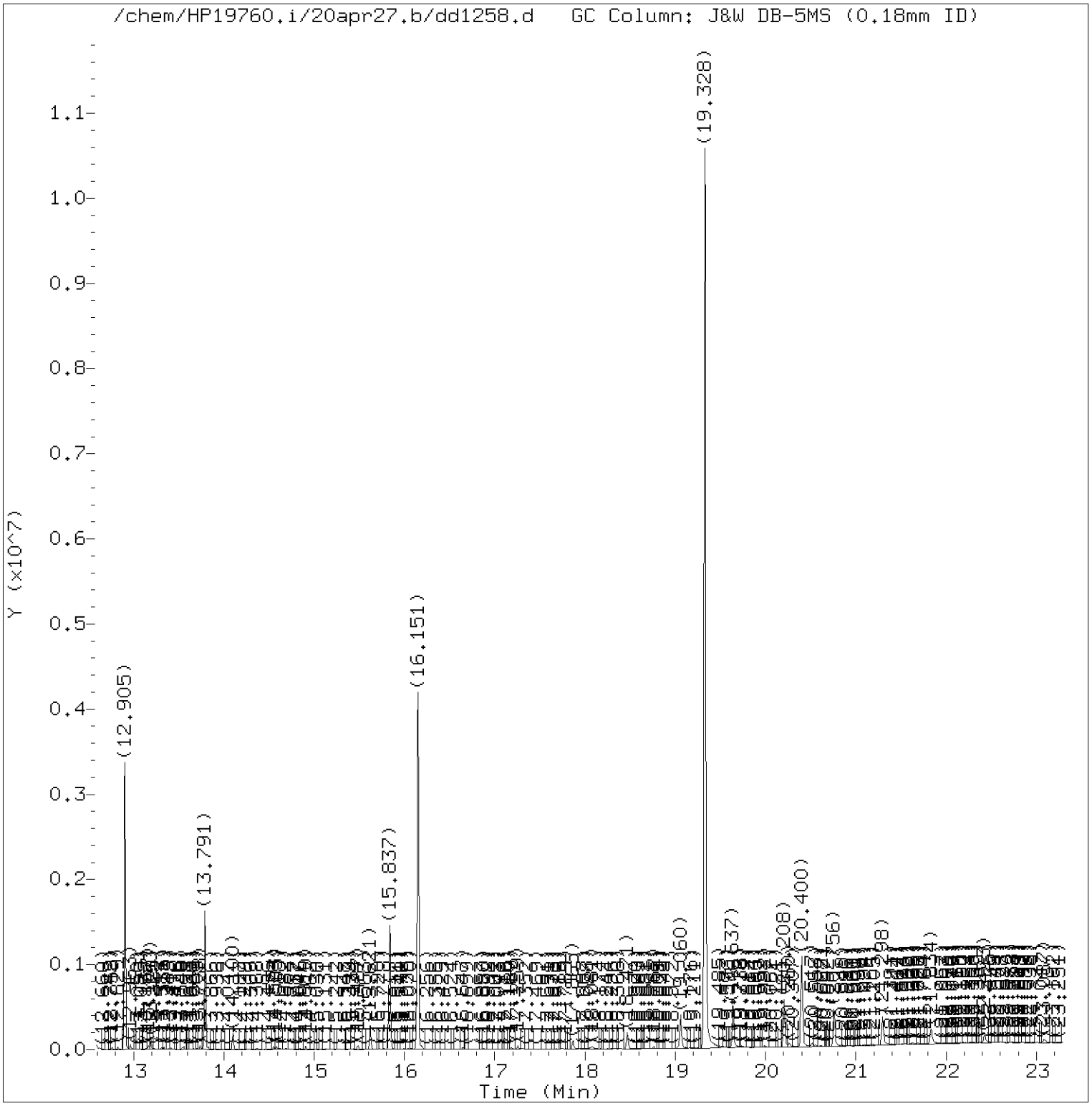
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1258.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 11:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: SBLKWH114 Lab Sample ID: SBLKWH114

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1258.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 11:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: SBLKWH114 Lab Sample ID: SBLKWH114

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1258.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 11:39 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: SBLKWH114 Lab Sample ID: SBLKWH114

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.193	152	189683	5.000
44)$Nitrobenzene-d5	(2)	8.020	82	935400	14.219
65)*Naphthalene-d8	(2)	9.134	136	720568	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1216241	11.673
113)*Acenaphthene-d10	(3)	11.896	164	334602	5.000
153)*Phenanthrene-d10	(4)	13.791	188	620741	5.000
175)*Pyrene-d10	(5)	15.837	212	627048	5.000
179)$Terphenyl-d14	(5)	16.151	244	1688658	17.713
213)*Perylene-d12	(6)	20.400	264	541514	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1267.d
Data file Sample Info. Line: 5WB03MS;1302096;1;3;MS;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 16:20**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.199(0.000)	877	152	166362 (-17)	5.00	
65) Naphthalene-d8	9.134(0.006)	1209	136	625948 (-15)	5.00	
113) Acenaphthene-d10	11.902(0.000)	1684	164	296496 (-13)	5.00	
153) Phenanthrene-d10	13.791(0.006)	2008	188	566866 (-13)	5.00	
175) Pyrene-d10	15.837(0.006)	2359	212	579153 (-12)	5.00	
213) Perylene-d12	20.406(0.000)	3143	264	508775 (-15)	5.00	

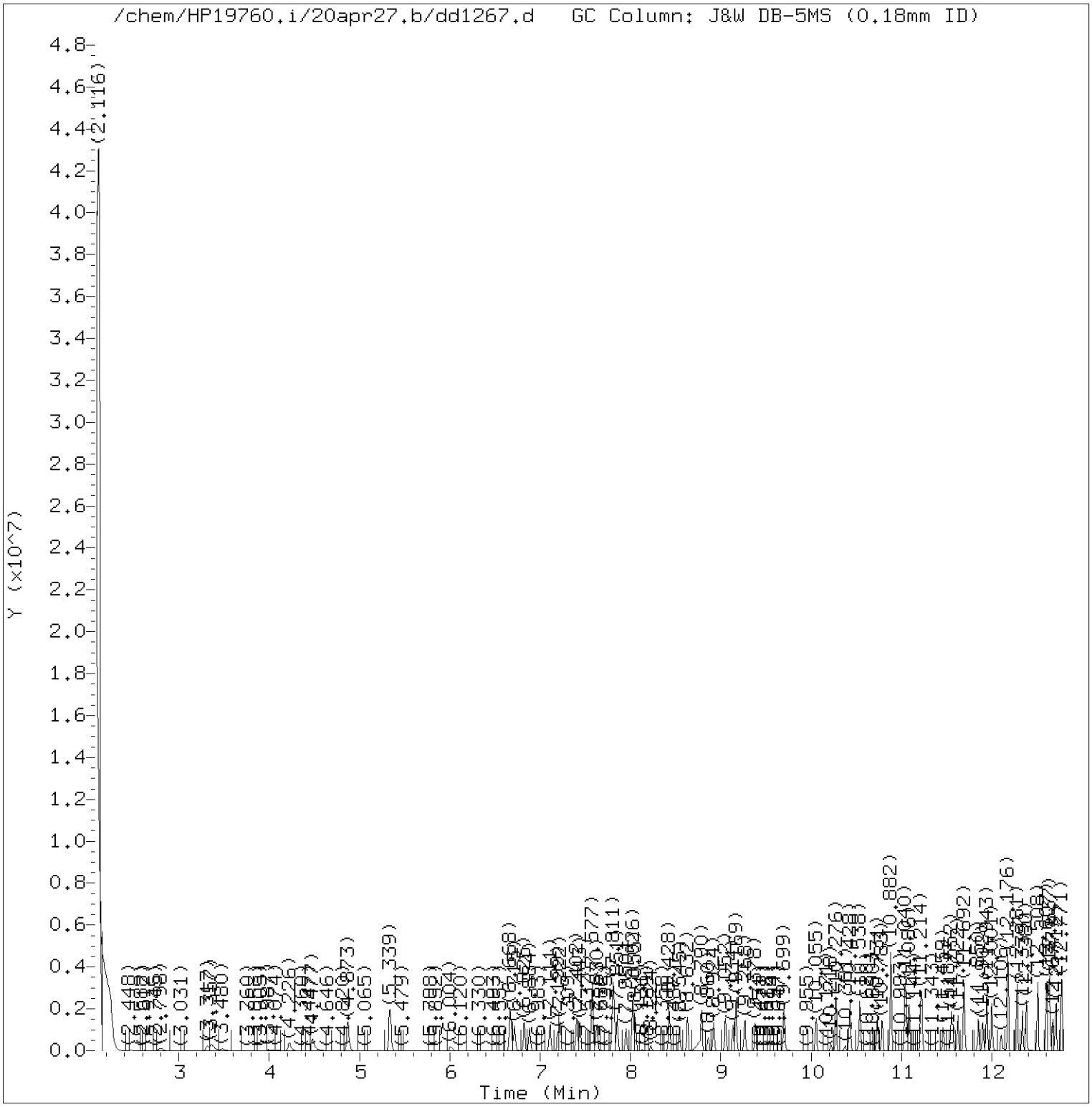
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.026(0.000)	82	1199296	20.986	84%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882(0.000)	172	1706489	18.483	74%		44 - 102
179) Terphenyl-d14	(5)	16.151(0.000)	244	2107114	23.931	96%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	8.055(0.000)	77	644127	11.160	45.55			0.2
100) 2-Nitroaniline	(3)	11.226(0.000)	138	307499	11.056	45.13			0.5
108) 2,6-Dinitrotoluene	(3)	11.622(0.000)	165	235793	11.454	46.75			0.2
118) 2,4-Dinitrotoluene	(3)	12.176(0.000)	165	313806	11.466	46.80			0.2
124) Diethylphthalate	(3)	12.508(0.000)	149	982560	10.843	44.26			0.1
129) 4-Nitroaniline	(3)	12.637(-0.000)	138	234905	9.461	38.62			0.3
199) bis(2-Ethylhexyl)phthalate	(5)	18.080(-0.000)	149	1264014	11.454	46.75			0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

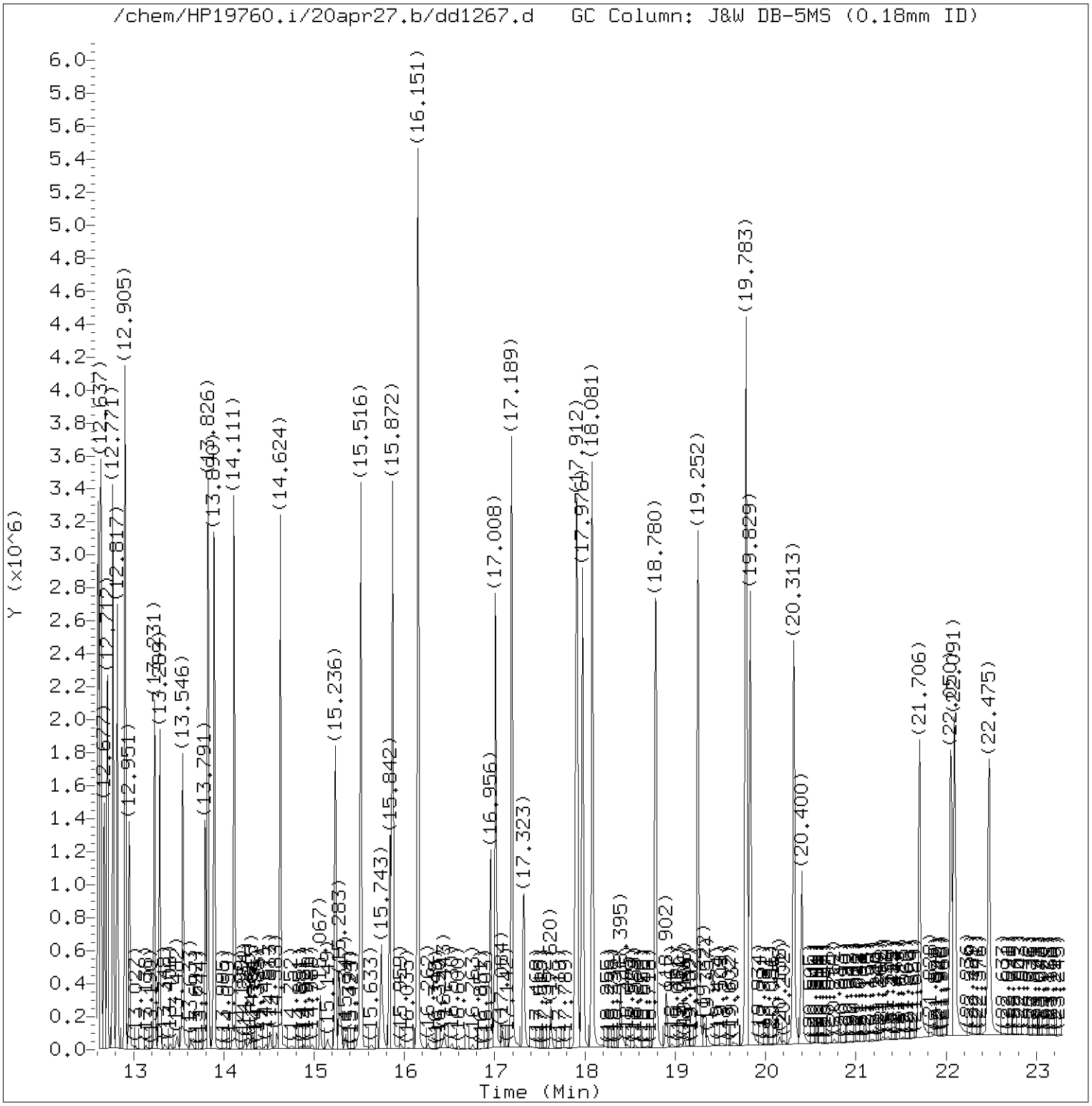
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1267.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:20 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MS Lab Sample ID: 1302096

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1267.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:20 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MS Lab Sample ID: 1302096

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1267.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:20 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MS Lab Sample ID: 1302096

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.199	152	166362	5.000
44)$Nitrobenzene-d5	(2)	8.026	82	1199296	20.986
45) Nitrobenzene	(2)	8.055	77	644127	11.160
65)*Naphthalene-d8	(2)	9.134	136	625948	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1706489	18.483
100) 2-Nitroaniline	(3)	11.226	138	307499	11.056
108) 2,6-Dinitrotoluene	(3)	11.622	165	235793	11.454
113)*Acenaphthene-d10	(3)	11.902	164	296496	5.000
118) 2,4-Dinitrotoluene	(3)	12.176	165	313806	11.466
124) Diethylphthalate	(3)	12.508	149	982560	10.843
129) 4-Nitroaniline	(3)	12.637	138	234905	9.461
153)*Phenanthrene-d10	(4)	13.791	188	566866	5.000
175)*Pyrene-d10	(5)	15.837	212	579153	5.000
179)$Terphenyl-d14	(5)	16.151	244	2107114	23.931
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	149	1264014	11.454
213)*Perylene-d12	(6)	20.406	264	508775	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/20apr27.b/dd1268.d
Data file Sample Info. Line: 5WB03MSD;1302097;1;3;MSD;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Injection date and time: **27-APR-2020 16:49**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.199	(0.000)	877	152	169514	(-15)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	631714	(-14)	5.00	
113) Acenaphthene-d10	11.902	(0.000)	1684	164	291063	(-15)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	556602	(-15)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	566008	(-14)	5.00	
213) Perylene-d12	20.400	(0.006)	3142	264	492909	(-18)	5.00	

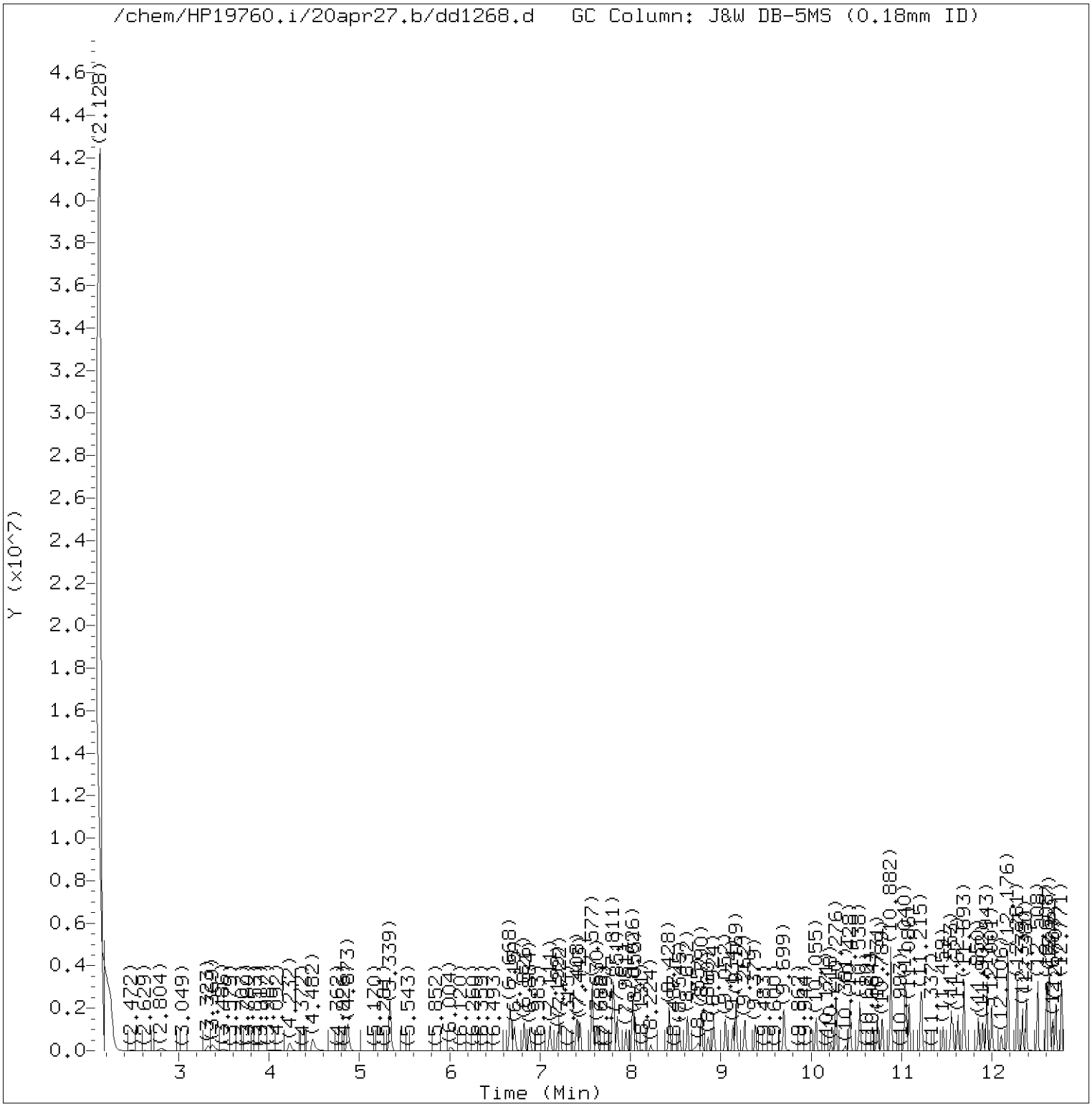
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	8.026	(0.000)	82	1199608	20.800	83%		38 - 113
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1779553	19.634	79%		44 - 102
179) Terphenyl-d14	(5)	16.151	(0.000)	244	2036124	23.661	95%		34 - 128

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	8.055	(0.000)	77	625441	10.737	43.29			0.2
100) 2-Nitroaniline	(3)	11.226	(0.000)	138	307283	11.254	45.38			0.5
108) 2,6-Dinitrotoluene	(3)	11.622	(0.000)	165	228507	11.308	45.60			0.2
118) 2,4-Dinitrotoluene	(3)	12.176	(0.000)	165	313641	11.674	47.07			0.2
124) Diethylphthalate	(3)	12.508	(0.000)	149	966642	10.867	43.82			0.1
129) 4-Nitroaniline	(3)	12.637	(0.000)	138	235412	9.659	38.95			0.3
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	(-0.000)	149	1203014	11.154	44.98			0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:26. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

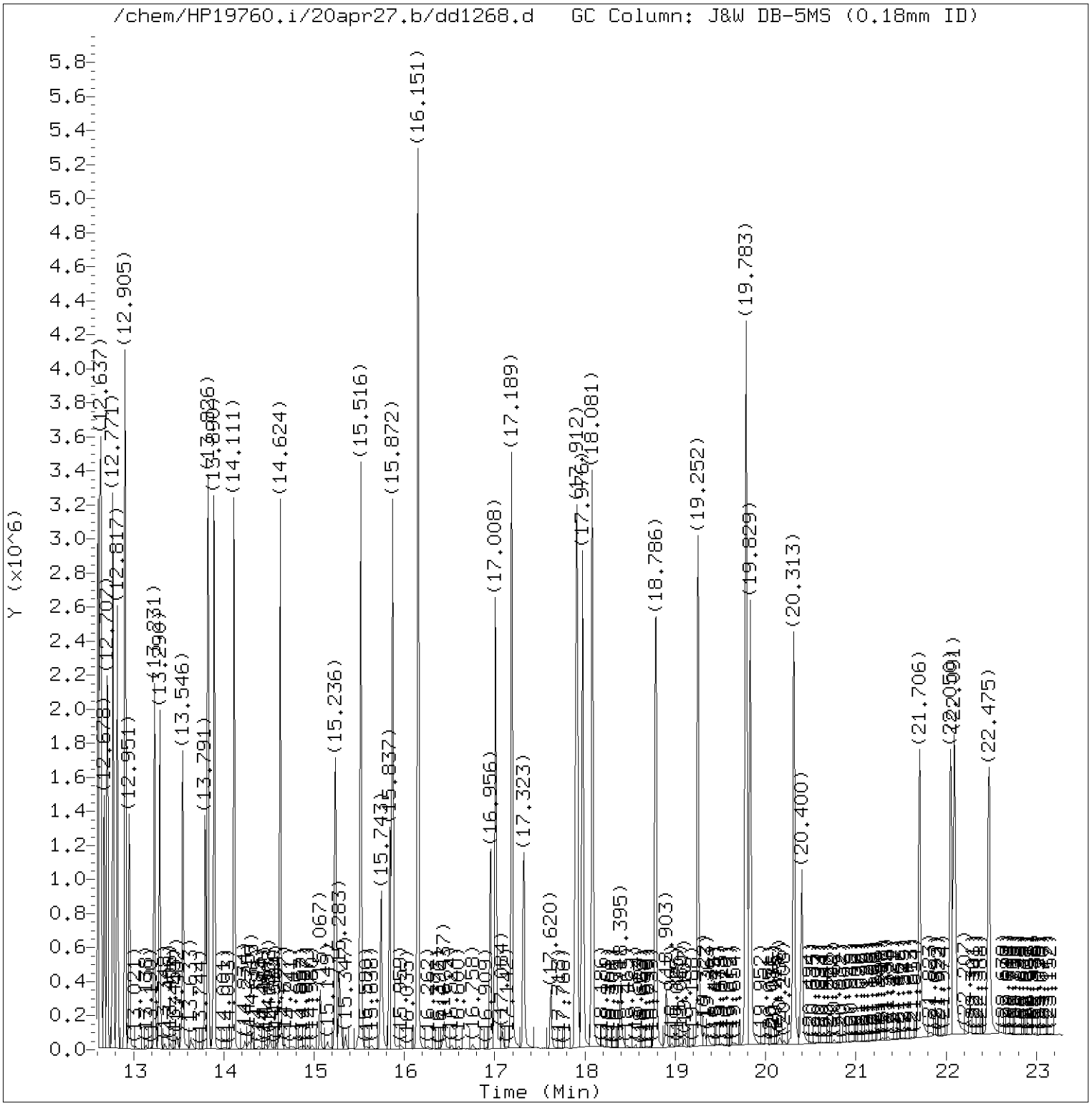
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1268.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:49 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MSD Lab Sample ID: 1302097

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1268.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:49 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MSD Lab Sample ID: 1302097

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1268.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 16:49 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:21 em10340

Sample Name: 5WB03MSD Lab Sample ID: 1302097

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.199	152	169514	5.000
44)$Nitrobenzene-d5	(2)	8.026	82	1199608	20.800
45) Nitrobenzene	(2)	8.055	77	625441	10.737
65)*Naphthalene-d8	(2)	9.134	136	631714	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1779553	19.634
100) 2-Nitroaniline	(3)	11.226	138	307283	11.254
108) 2,6-Dinitrotoluene	(3)	11.623	165	228507	11.308
113)*Acenaphthene-d10	(3)	11.902	164	291063	5.000
118) 2,4-Dinitrotoluene	(3)	12.176	165	313641	11.674
124) Diethylphthalate	(3)	12.508	149	966642	10.867
129) 4-Nitroaniline	(3)	12.637	138	235412	9.659
153)*Phenanthrene-d10	(4)	13.791	188	556602	5.000
175)*Pyrene-d10	(5)	15.837	212	566008	5.000
179)$Terphenyl-d14	(5)	16.151	244	2036124	23.661
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	149	1203014	11.154
213)*Perylene-d12	(6)	20.400	264	492909	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/28/2020 at 13:26.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

114WHLCS

Data file: /chem/HP19760.i/20apr27.b/dd1259.d
Data file Sample Info. Line: 114WHLCS;114WHLCS;1;3;LCS;;;
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Injection date and time: **27-APR-2020 12:07**
Instrument ID: **HP19760.i** Batch: **20114WAH**

Blank Data file reference: **/chem/HP19760.i/20apr27.b/dd1258.d**

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 28-APR-2020 13:20
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/20apr27.b/dd1251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	7.199	(0.000)	877	152	175262	(-13)	5.00	
65) Naphthalene-d8	9.134	(0.006)	1209	136	664310	(-9)	5.00	
113) Acenaphthene-d10	11.902	(0.000)	1684	164	313227	(-8)	5.00	
153) Phenanthrene-d10	13.791	(0.006)	2008	188	603168	(-7)	5.00	
175) Pyrene-d10	15.837	(0.006)	2359	212	598517	(-9)	5.00	
213) Perylene-d12	20.406	(0.000)	3143	264	531183	(-11)	5.00	

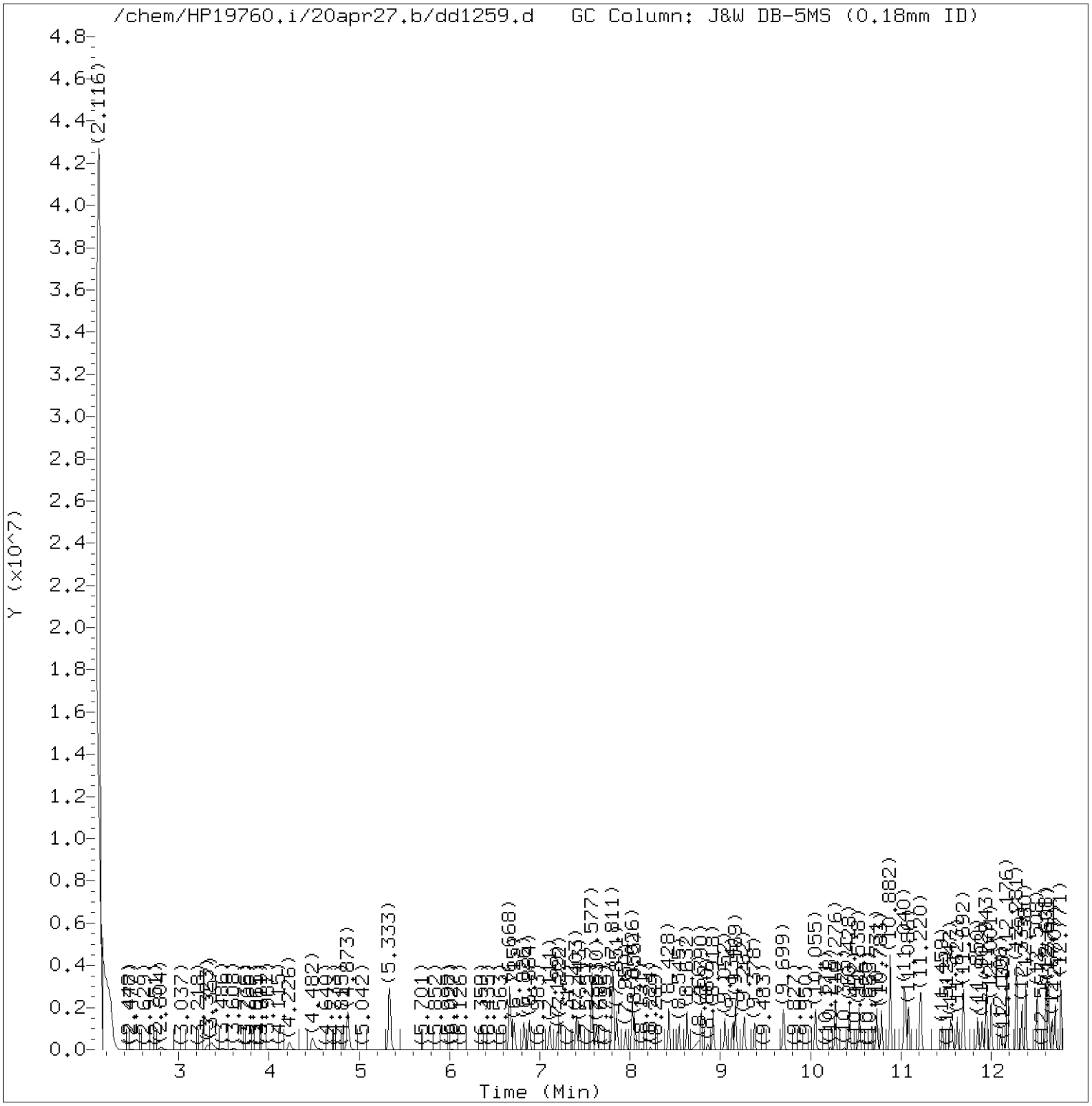
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
44) Nitrobenzene-d5	(2)	8.026	(0.000)	82	1147912	18.927	76%
93) 2-Fluorobiphenyl	(3)	10.882	(0.000)	172	1648999	16.906	68%
179) Terphenyl-d14	(5)	16.151	(0.000)	244	2176878	23.923	96%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	8.055	(0.000)	77	593494	9.689	38.75			0.2
100) 2-Nitroaniline	(3)	11.226	(0.000)	138	297524	10.126	40.50			0.5
108) 2,6-Dinitrotoluene	(3)	11.622	(0.000)	165	222989	10.254	41.02			0.2
118) 2,4-Dinitrotoluene	(3)	12.176	(0.000)	165	301419	10.425	41.70			0.2
124) Diethylphthalate	(3)	12.508	(0.000)	149	878289	9.175	36.70			0.1
129) 4-Nitroaniline	(3)	12.637	(0.000)	138	248807	9.486	37.94			0.3
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	(-0.000)	149	1231429	10.798	43.19			0.4

Total number of targets = 7

Digitally signed by Edward Monborne on 04/28/2020 at 13:25. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Chad A. Moline on 04/30/2020 at 09:28. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

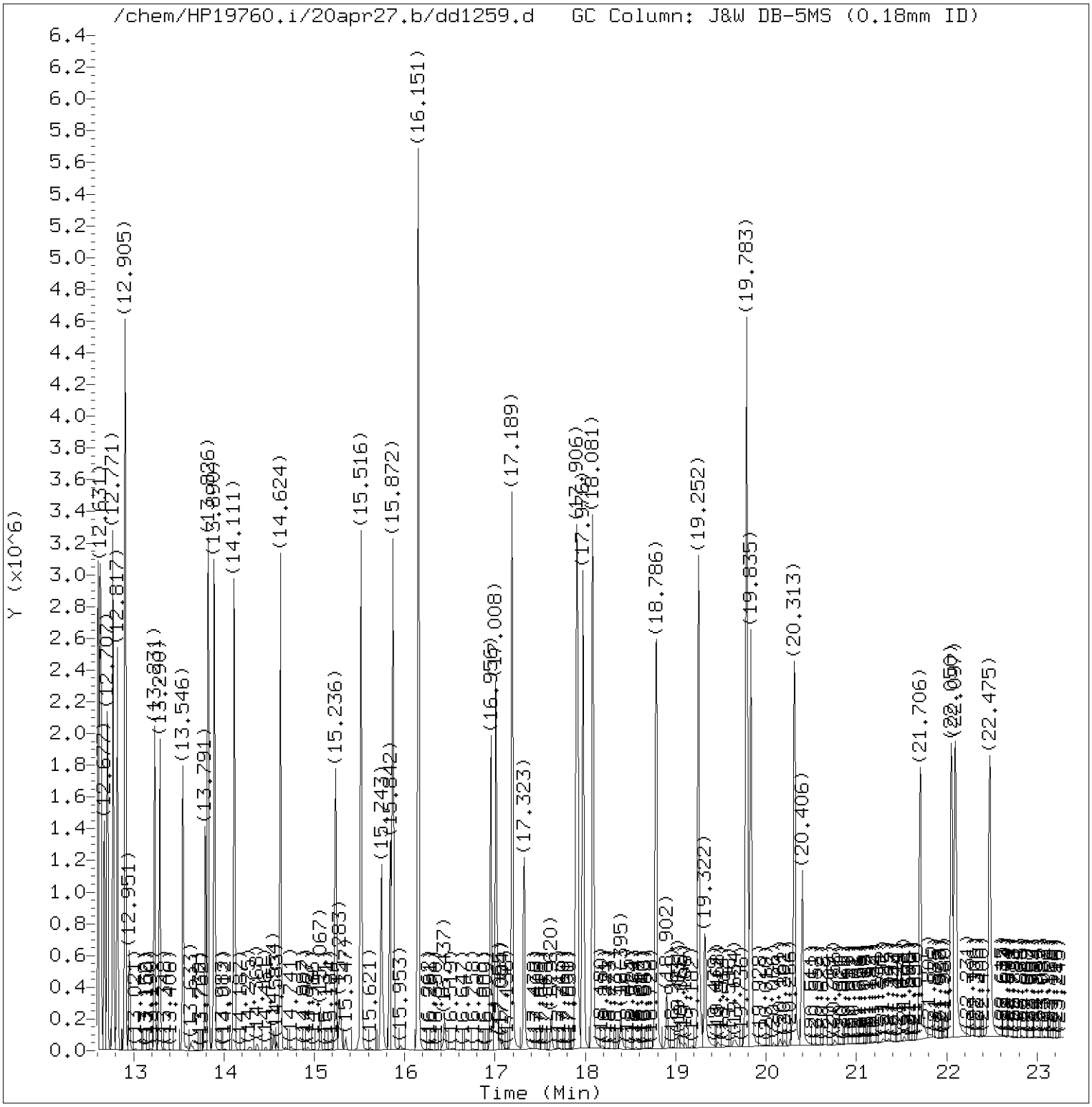
Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1259.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 12:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 114WHLCS Lab Sample ID: 114WHLCS

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1259.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 12:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 114WHLCS Lab Sample ID: 114WHLCS

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/20apr27.b/dd1259.d Instrument ID: HP19760.i
Injection date and time: 27-APR-2020 12:07 Analyst ID: em10340

Method used: /chem/HP19760.i/20apr27.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 28-APR-2020 13:20
Date, time and analyst ID of latest file update: 28-Apr-2020 13:22 em10340

Sample Name: 114WHLCS Lab Sample ID: 114WHLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.199	152	175262	5.000
44)$Nitrobenzene-d5	(2)	8.026	82	1147912	18.927
45) Nitrobenzene	(2)	8.055	77	593494	9.689
65)*Naphthalene-d8	(2)	9.134	136	664310	5.000
93)$2-Fluorobiphenyl	(3)	10.882	172	1648999	16.906
100) 2-Nitroaniline	(3)	11.226	138	297524	10.126
108) 2,6-Dinitrotoluene	(3)	11.623	165	222989	10.254
113)*Acenaphthene-d10	(3)	11.902	164	313227	5.000
118) 2,4-Dinitrotoluene	(3)	12.176	165	301419	10.425
124) Diethylphthalate	(3)	12.508	149	878289	9.175
129) 4-Nitroaniline	(3)	12.637	138	248807	9.486
153)*Phenanthrene-d10	(4)	13.791	188	603168	5.000
175)*Pyrene-d10	(5)	15.837	212	598517	5.000
179)$Terphenyl-d14	(5)	16.151	244	2176878	23.923
199) bis(2-Ethylhexyl)phthalate	(5)	18.081	149	1231429	10.798
213)*Perylene-d12	(6)	20.406	264	531183	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 04/28/2020 at 13:25.
Target 3.5 esignature user ID: em10340

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 12385 Christine Gleim Reviewed by: CCH10748 Start Date: 4-24-20 Start time: 9:19

20114WAH026

Tech1: CG12385 Tech2: —

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D/E MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
1302096MS	5WB03	245	SS2010126A	1.0	MS2010726A	1.0	1	✓	✓	153A	clear
1302097MSD	5WB03	248	SS2010126A	↓	MS2010726A	1.0	1	✓	✓	153A	clear
BLANKA	SBLKWH114	250	SS2010126A	↓	—		1	✓	✓	↓	tapwater
LCSA	114WHLCS	250	SS2010126A	↓	MS2010726A	1.0	1	✓	✓	↓	↓
LCSAP1	114WHLCS	250	SS2010126A	↓	~~MS2011326C~~ (8)	1.0	1	✓	✓	↓	↓
LCSDAP1	114WHLCSD	250	SS2010126A	↓	~~MS2011326C~~ (8)	1.0	1	✓	✓	↓	↓

(8) MS2009926B CG12385 4-24-20

Solvent Used	Lot No.
10N NaOH	4908648
Methylene Chloride	200508
Sodium Sulfate	20111A
Sulfuric Acid	194547
—	—

Spike Solutions: Witness: —

(8) ~~MS2011326C~~	APPIX #1 MINI SPIKE
MS2010726A	MINI SEP. LCS SPIKE #1
SS2010126A	MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio	H	A
1 1302094	5WB02	245	SS2010126A	1.0	1	✓	✓	153A	Clear	14241	22228	04/30/2020	N	N	[illegible]
2 1302095BKG	5WB03	247	SS2010126A	↓	1	✓	✓	153A	clear	14241	22228	04/30/2020	N	N	N
3 1302098	5WB04	248	SS2010126A	↓	1	✓	✓	153A	clear	14241	22228	04/30/2020	N	N	N
4 1302099	5WB05	249	SS2010126A	↓	1	✓	✓	153A	clear	14241	22228	04/30/2020	N	N	N
5 1302100	5WB06	247	SS2010126A	↓	1	✓	✓	153A	clear	14241	22228	04/30/2020	N	N	N
6 1302101	5WB07	243	SS2010126A	↓	1	✓	✓	153A	clear	14241	22228	04/30/2020	N	N	N

NA CG12385 4-24-20

Bench# 6	Bench# 5	~~Bench#~~
Rack ID:		Work Station: tumble
Internal Standard: CVISTD1120	Balance #: 25996	Micro Temp 100? ✓

R-VAP ID 1	90° C	R-VAP ID 2	90° C	~~R-VAP ID~~	— C		
S-bath ID	— C	~~S-bath ID~~	— C	~~N-Evap~~	— C	~~M-vap~~	— C

20114WAH026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

ANALYTICAL REPORT

Job Number: 240-129236-2

Job Description: Radford VA - HWMU5

For:
Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
5/7/2020 3:32 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9279
opal.johnson@testamericainc.com
05/07/2020

Table of Contents

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
240-129236-2

Receipt
The samples were received on 4/21/2020 10:15 AM; the samples arrived in good condition, properly preserved, and where required, on ice. The temperatures of the 2 coolers at receipt time were 4.1°C and 5.0°C

Except
The COC listed the analysis as p-nitroaniline; however, the client requested Nitrobenzene only on 05/06/20 and to remove the sample from hold.

Department GC/MS Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: Radford VA - HWMU5

Job ID: 240-129236-2

Client Sample ID: 5WC21

Lab Sample ID: 240-129236-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 5WC21
Date Collected: 04/20/20 13:10
Date Received: 04/21/20 10:15

Lab Sample ID: 240-129236-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	9.6	U	9.6	0.77	ug/L		04/23/20 06:49	04/28/20 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*75*		*36 - 122*	*04/23/20 06:49*	*04/28/20 17:17*	*1*
Phenol-d5 (Surr)	*17*		*10 - 120*	*04/23/20 06:49*	*04/28/20 17:17*	*1*
Nitrobenzene-d5 (Surr)	*61*		*33 - 120*	*04/23/20 06:49*	*04/28/20 17:17*	*1*
2-Fluorophenol (Surr)	*32*		*10 - 120*	*04/23/20 06:49*	*04/28/20 17:17*	*1*
2-Fluorobiphenyl (Surr)	*74*		*39 - 120*	*04/23/20 06:49*	*04/28/20 17:17*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*33 - 120*	*04/23/20 06:49*	*04/28/20 17:17*	*1*

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: Radford VA - HWMU5

Job ID: 240-129236-2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	RL	MDL	Units
Nitrobenzene	10	0.80	ug/L

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: Radford VA - HWMU5

Job ID: 240-129236-2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		TPHL	PHL	NBZ	2FP	FBP	TBP		
Lab Sample ID	Client Sample ID	(36-122)	(10-120)	(33-120)	(10-120)	(39-120)	(33-120)		
240-129236-3	5WC21	75	17	61	32	74	76		
LCS 240-431869/14-A	Lab Control Sample	98	32	74	48	76	84		
MB 240-431869/13-A	Method Blank	99	34	63	54	76	75		

Surrogate Legend

TPHL = Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)
NBZ = Nitrobenzene-d5 (Surr)
2FP = 2-Fluorophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-431869/13-A
Matrix: Water
Analysis Batch: 432443

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	10	U	10	0.80	ug/L		04/23/20 06:49	04/28/20 15:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*99*		*36 - 122*	*04/23/20 06:49*	*04/28/20 15:44*	*1*
Phenol-d5 (Surr)	*34*		*10 - 120*	*04/23/20 06:49*	*04/28/20 15:44*	*1*
Nitrobenzene-d5 (Surr)	*63*		*33 - 120*	*04/23/20 06:49*	*04/28/20 15:44*	*1*
2-Fluorophenol (Surr)	*54*		*10 - 120*	*04/23/20 06:49*	*04/28/20 15:44*	*1*
2-Fluorobiphenyl (Surr)	*76*		*39 - 120*	*04/23/20 06:49*	*04/28/20 15:44*	*1*
2,4,6-Tribromophenol (Surr)	*75*		*33 - 120*	*04/23/20 06:49*	*04/28/20 15:44*	*1*

Lab Sample ID: LCS 240-431869/14-A
Matrix: Water
Analysis Batch: 432443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431869

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrobenzene			20.0	14.4		ug/L		72	56 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*98*		*36 - 122*
Phenol-d5 (Surr)	*32*		*10 - 120*
Nitrobenzene-d5 (Surr)	*74*		*33 - 120*
2-Fluorophenol (Surr)	*48*		*10 - 120*
2-Fluorobiphenyl (Surr)	*76*		*39 - 120*
2,4,6-Tribromophenol (Surr)	*84*		*33 - 120*

QC Association Summary

Client: Draper Aden Associates, Inc.
Project/Site: Radford VA - HWMU5

Job ID: 240-129236-2

GC/MS Semi VOA

Prep Batch: 431869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129236-3	5WC21	Total/NA	Water	3510C	
MB 240-431869/13-A	Method Blank	Total/NA	Water	3510C	
LCS 240-431869/14-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 432443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-129236-3	5WC21	Total/NA	Water	8270D	431869
MB 240-431869/13-A	Method Blank	Total/NA	Water	8270D	431869
LCS 240-431869/14-A	Lab Control Sample	Total/NA	Water	8270D	431869

Lab Chronicle

Client: Draper Aden Associates, Inc.
Job ID: 240-129236-2
Project/Site: Radford VA - HWMU5

Client Sample ID: 5WC21
Date Collected: 04/20/20 13:10
Date Received: 04/21/20 10:15

Lab Sample ID: 240-129236-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431869	04/23/20 06:49	SDE	TAL CAN
Total/NA	Analysis	8270D		1	432443	04/28/20 17:17	MRU	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Draper Aden Associates, Inc. Job ID: 240-129236-2
Project/Site: Radford VA - HWMU5

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	010101	09-14-20

Method Summary

Client: Draper Aden Associates, Inc. Job ID: 240-129236-2
Project/Site: Radford VA - HWMU5

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: Radford VA - HWMU5

Job ID: 240-129236-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-129236-3	5WC21	Water	04/20/20 13:10	04/21/20 10:15	

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Analysis Batch Number: 431934

Lab Sample ID: STD5 240-431934/2 IC Client Sample ID:

Date Analyzed: 04/23/20 15:38 Lab File ID: 00423002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.70	Poor chromatography	ulmanm	04/23/20 16:06
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/23/20 16:07
4-Nitroaniline	9.66	Poor chromatography	ulmanm	04/23/20 16:08

Lab Sample ID: STD4 240-431934/3 IC Client Sample ID:

Date Analyzed: 04/23/20 16:01 Lab File ID: 00423003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.71	Poor chromatography	ulmanm	04/23/20 16:26
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/23/20 16:27
4-Nitroaniline	9.65	Poor chromatography	ulmanm	04/23/20 16:28

Lab Sample ID: STD3 240-431934/4 IC Client Sample ID:

Date Analyzed: 04/23/20 16:25 Lab File ID: 00423004.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Nitrosodimethylamine	4.07	Poor chromatography	ulmanm	04/23/20 17:12
4-Chloroaniline	7.72	Poor chromatography	ulmanm	04/24/20 11:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Analysis Batch Number: 431934

Lab Sample ID: STD1 240-431934/6 IC Client Sample ID:

Date Analyzed: 04/23/20 17:11 Lab File ID: 00423006.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pyridine	4.11	Poor chromatography	ulmanm	04/23/20 17:34
Caprolactam	8.02	Peak assignment corrected	ulmanm	04/24/20 11:13
Terphenyl-d14 (Surr)	11.93	Peak assignment corrected	ulmanm	04/23/20 17:34
Benzo[a]anthracene	13.34	Poor chromatography	ulmanm	04/23/20 17:35
Benzo[b]fluoranthene	15.03	Poor chromatography	ulmanm	04/23/20 17:35
Benzo[a]pyrene	15.59	Poor chromatography	ulmanm	04/23/20 17:36
Dibenz(a,h)anthracene	17.73	Poor chromatography	ulmanm	04/23/20 17:36
Indeno[1,2,3-cd]pyrene	17.73	Poor chromatography	ulmanm	04/23/20 17:36

Lab Sample ID: STD2 240-431934/5 IC Client Sample ID:

Date Analyzed: 04/23/20 17:38 Lab File ID: 00423005.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.71	Peak assignment corrected	ulmanm	04/23/20 18:00
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/23/20 18:01
4,6-Dinitro-2-methylphenol		Invalid Compound ID	ulmanm	04/23/20 18:02
4-Nitrophenol		Invalid Compound ID	ulmanm	04/23/20 18:01
Pentachlorophenol		Invalid Compound ID	ulmanm	04/23/20 18:02
n-Octadecane	10.27	Invalid Compound ID	ulmanm	04/24/20 11:25
Di-n-octyl phthalate	14.22	Poor chromatography	ulmanm	04/23/20 18:02

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Analysis Batch Number: 431934

Lab Sample ID: STD6 240-431934/7 ICIS Client Sample ID:

Date Analyzed: 04/23/20 18:01 Lab File ID: 00423007.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.71	Poor chromatography	ulmanm	04/23/20 18:28
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/23/20 18:29
Caprolactam	8.01	Poor chromatography	ulmanm	04/23/20 18:29
4-Nitroaniline	9.65	Poor chromatography	ulmanm	04/23/20 18:30

Lab Sample ID: STD7 240-431934/8 IC Client Sample ID:

Date Analyzed: 04/23/20 18:25 Lab File ID: 00423008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/24/20 10:54
Caprolactam	8.02	Poor chromatography	ulmanm	04/24/20 10:55
4-Nitroaniline	9.65	Poor chromatography	ulmanm	04/24/20 10:55

Lab Sample ID: STD8 240-431934/9 IC Client Sample ID:

Date Analyzed: 04/23/20 18:48 Lab File ID: 00423009.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/24/20 10:57
Caprolactam	8.02	Poor chromatography	ulmanm	04/24/20 10:57
4-Nitroaniline	9.65	Poor chromatography	ulmanm	04/24/20 10:58

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Analysis Batch Number: 431934

Lab Sample ID: STD9 240-431934/10 IC Client Sample ID:

Date Analyzed: 04/23/20 19:12 Lab File ID: 00423010.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.70	Poor chromatography	ulmanm	04/24/20 10:59
Pyridine	4.11	Poor chromatography	ulmanm	04/24/20 11:00
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/24/20 11:00
Caprolactam	8.02	Poor chromatography	ulmanm	04/24/20 11:01
4-Nitrophenol		Invalid Compound ID	ulmanm	04/24/20 11:16
Azobenzene		Invalid Compound ID	ulmanm	04/24/20 11:20

Lab Sample ID: ICV 240-431934/11 Client Sample ID:

Date Analyzed: 04/23/20 19:35 Lab File ID: 00423011.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.69	Poor chromatography	ulmanm	04/24/20 11:36
4-Chloroaniline	7.73	Poor chromatography	ulmanm	04/24/20 11:36
Caprolactam	8.00	Poor chromatography	ulmanm	04/24/20 11:37
3,3'-Dichlorobenzidine	13.25	Poor chromatography	ulmanm	04/24/20 11:37

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Analysis Batch Number: 432443

Lab Sample ID: CCV 240-432443/2 CCVIS Client Sample ID:

Date Analyzed: 04/28/20 15:17 Lab File ID: 00428002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.63	Poor chromatography	ulmanm	04/28/20 15:39
Caprolactam	7.99	Poor chromatography	ulmanm	04/28/20 15:40

Lab Sample ID: 240-129236-3 Client Sample ID: 5WC21

Date Analyzed: 04/28/20 17:17 Lab File ID: 00428008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	7.05	Poor chromatography	ulmanm	05/06/20 16:38

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
exBENZALDEHYD_00071	08/28/20	02/28/20	MEOH, Lot 0000230446	500 mL	exLIST1_S11_00012	10 mL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
.exLIST1_S11_00012	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
exBNASPIKE_00109	07/31/20	02/10/20	ACETONE, Lot 0000225409	500 mL	exLIST1_S1_00020	10 mL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Methylphenol	10 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Methylphenol	10 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.1 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					EXLIST1_S10_00013	10 mL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					exLIST1_S9_00018	10 mL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
.exLIST1_S1_00020	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	500 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	500 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	855 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.EXLIST1_S10_00013	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.exLIST1_S9_00018	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
exBNASURR W_00084	09/04/20	03/04/20	MEOH, Lot 0000230446	2000 mL	exLIST1_SURR_00004	8 mL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.exLIST1_SURR_00004	10/31/24		Restek, Lot A0153515		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMDFTPPW_00018							4,4'-DDD	
							4,4'-DDE	
							4-Methyl-1-cyclohexanemethanol	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	
							Tentatively Identified Compound	
					SMDFTPPR_00012	1 mL	4,4'-DDT	25 ug/mL
							Benzidine	25 ug/mL
							DFTPP	25 ug/mL
							Pentachlorophenol	25 ug/mL
.SMDFTPPR_00012	08/31/22		Restek, Lot A0151587		(Purchased Reagent)		4,4'-DDT	1000 ug/mL
							Benzidine	1000 ug/mL
							DFTPP	1000 ug/mL
							Pentachlorophenol	1000 ug/mL
SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
.SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 L1+ W_00008	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1PAH+ST_00008	2 uL	1,1'-Biphenyl	0.1 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							2-Chloronaphthalene	0.1 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Dibenzofuran	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Hexachlorobenzene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							Pyridine	0.2 ug/mL
							Atrazine	0.2 ug/mL
							Benzaldehyde	0.2 ug/mL
							Caprolactam	0.2 ug/mL
							2-Fluorobiphenyl (Surr)	0.1 ug/mL
							Nitrobenzene-d5 (Surr)	0.1 ug/mL
							Terphenyl-d14 (Surr)	0.1 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1PAH+ST_00008	09/11/20	09/11/19	MECL2, Lot 0000225101	10 mL	SMLIST1 PAH_00010	1 mL	1,1'-Biphenyl	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Chrysene	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Naphthalene	100 ug/mL
							Phenanthrene	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2-Fluorobiphenyl (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 PAH_00010	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L2 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	10 uL	1,1'-Biphenyl	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4,5-Tetrachlorobenzene	0.5 ug/mL
							1,2,4-Trichlorobenzene	0.5 ug/mL
							1,2-Dichlorobenzene	0.5 ug/mL
							1,3-Dichlorobenzene	0.5 ug/mL
							1,3-Dinitrobenzene	0.5 ug/mL
							1,4-Dichlorobenzene	0.5 ug/mL
							1,4-Dioxane	0.5 ug/mL
							1-Methylnaphthalene	0.5 ug/mL
							2,2'-oxybis[1-chloropropane]	0.5 ug/mL
							2,3,4,6-Tetrachlorophenol	0.5 ug/mL
							2,4,5-Trichlorophenol	0.5 ug/mL
							2,4,6-Trichlorophenol	0.5 ug/mL
							2,4-Dichlorophenol	0.5 ug/mL
							2,4-Dimethylphenol	0.5 ug/mL
							2,4-Dinitrophenol	1 ug/mL
							2,4-Dinitrotoluene	0.5 ug/mL
							2,6-Dichlorophenol	0.5 ug/mL
							2,6-Dinitrotoluene	0.5 ug/mL
							2-Chloronaphthalene	0.5 ug/mL
							2-Chlorophenol	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							2-Methylphenol	0.5 ug/mL
							2-Nitroaniline	0.5 ug/mL
							2-Nitrophenol	0.5 ug/mL
							3 & 4 Methylphenol	0.5 ug/mL
							3-Nitroaniline	0.5 ug/mL
							4,6-Dinitro-2-methylphenol	1 ug/mL
							4-Bromophenyl phenyl ether	0.5 ug/mL
							4-Chloro-3-methylphenol	0.5 ug/mL
							4-Chloroaniline	0.5 ug/mL
							4-Chlorophenyl phenyl ether	0.5 ug/mL
							4-Nitroaniline	0.5 ug/mL
							4-Nitrophenol	1 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Acetophenone	0.5 ug/mL
							Aniline	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Azobenzene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Benzyl alcohol	0.5 ug/mL
							Bis(2-chloroethoxy)methane	0.5 ug/mL
							Bis(2-chloroethyl)ether	0.5 ug/mL
							Bis(2-ethylhexyl) phthalate	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butyl benzyl phthalate	0.5 ug/mL
							Carbazole	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Di-n-butyl phthalate	0.5 ug/mL
							Di-n-octyl phthalate	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Dibenzofuran	0.5 ug/mL
							Diethyl phthalate	0.5 ug/mL
							Dimethyl phthalate	0.5 ug/mL
							Diphenylamine	0.425 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Hexachlorobenzene	0.5 ug/mL
							Hexachlorobutadiene	0.5 ug/mL
							Hexachlorocyclopentadiene	0.5 ug/mL
							Hexachloroethane	0.5 ug/mL
							Hexadecane	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Isophorone	0.5 ug/mL
							n-Decane	0.5 ug/mL
							N-Nitrosodi-n-propylamine	0.5 ug/mL
							N-Nitrosodimethylamine	0.5 ug/mL
							N-Nitrosodiphenylamine	0.5 ug/mL
							n-Octadecane	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Nitrobenzene	0.5 ug/mL
							Pentachlorophenol	1 ug/mL
							Phenanthrene	0.5 ug/mL
							Phenol	0.5 ug/mL
							Pyrene	0.5 ug/mL
							Pyridine	1 ug/mL
							Benzoic acid	1 ug/mL
							Indene	1 ug/mL
							Atrazine	1 ug/mL
							Benzaldehyde	1 ug/mL
							Caprolactam	1 ug/mL
							3,3'-Dichlorobenzidine	1 ug/mL
							Benzidine	1 ug/mL
							2,4,6-Tribromophenol (Surr)	0.5 ug/mL
							2-Fluorobiphenyl (Surr)	0.5 ug/mL
							2-Fluorophenol (Surr)	0.5 ug/mL
							Nitrobenzene-d5 (Surr)	0.5 ug/mL
							Phenol-d5 (Surr)	0.5 ug/mL
							Terphenyl-d14 (Surr)	0.5 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L3 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	20 uL	1,1'-Biphenyl	1 ug/mL
							1,2,4,5-Tetrachlorobenzene	1 ug/mL
							1,2,4-Trichlorobenzene	1 ug/mL
							1,2-Dichlorobenzene	1 ug/mL
							1,3-Dichlorobenzene	1 ug/mL
							1,3-Dinitrobenzene	1 ug/mL
							1,4-Dichlorobenzene	1 ug/mL
							1,4-Dioxane	1 ug/mL
							1-Methylnaphthalene	1 ug/mL
							2,2'-oxybis[1-chloropropane]	1 ug/mL
							2,3,4,6-Tetrachlorophenol	1 ug/mL
							2,4,5-Trichlorophenol	1 ug/mL
							2,4,6-Trichlorophenol	1 ug/mL
							2,4-Dichlorophenol	1 ug/mL
							2,4-Dimethylphenol	1 ug/mL
							2,4-Dinitrophenol	2 ug/mL
							2,4-Dinitrotoluene	1 ug/mL
							2,6-Dichlorophenol	1 ug/mL
							2,6-Dinitrotoluene	1 ug/mL
							2-Chloronaphthalene	1 ug/mL
							2-Chlorophenol	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							2-Methylphenol	1 ug/mL
							2-Nitroaniline	1 ug/mL
							2-Nitrophenol	1 ug/mL
							3 & 4 Methylphenol	1 ug/mL
							3-Nitroaniline	1 ug/mL
							4,6-Dinitro-2-methylphenol	2 ug/mL
							4-Bromophenyl phenyl ether	1 ug/mL
							4-Chloro-3-methylphenol	1 ug/mL
							4-Chloroaniline	1 ug/mL
							4-Chlorophenyl phenyl ether	1 ug/mL
							4-Nitroaniline	1 ug/mL
							4-Nitrophenol	2 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Acetophenone	1 ug/mL
							Aniline	1 ug/mL
							Anthracene	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Benzyl alcohol	1 ug/mL
							Bis(2-chloroethoxy)methane	1 ug/mL
							Bis(2-chloroethyl)ether	1 ug/mL
							Bis(2-ethylhexyl) phthalate	1 ug/mL
							Butyl benzyl phthalate	1 ug/mL
							Carbazole	1 ug/mL
							Chrysene	1 ug/mL
							Di-n-butyl phthalate	1 ug/mL
							Di-n-octyl phthalate	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Dibenzofuran	1 ug/mL
							Diethyl phthalate	1 ug/mL
							Dimethyl phthalate	1 ug/mL
							Diphenylamine	0.85 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Hexachlorobenzene	1 ug/mL
							Hexachlorobutadiene	1 ug/mL
							Hexachlorocyclopentadiene	1 ug/mL
							Hexachloroethane	1 ug/mL
							Hexadecane	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Isophorone	1 ug/mL
							n-Decane	1 ug/mL
							N-Nitrosodi-n-propylamine	1 ug/mL
							N-Nitrosodimethylamine	1 ug/mL
							N-Nitrosodiphenylamine	1 ug/mL
							n-Octadecane	1 ug/mL
							Naphthalene	1 ug/mL
							Nitrobenzene	1 ug/mL
							Pentachlorophenol	2 ug/mL
							Phenanthrene	1 ug/mL
							Phenol	1 ug/mL
							Pyrene	1 ug/mL
							Pyridine	2 ug/mL
							Benzoic acid	2 ug/mL
							Indene	2 ug/mL
							Atrazine	2 ug/mL
							Benzaldehyde	2 ug/mL
							Caprolactam	2 ug/mL
							3,3'-Dichlorobenzidine	2 ug/mL
							Benzidine	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Tribromophenol (Surr)	1 ug/mL
							2-Fluorobiphenyl (Surr)	1 ug/mL
							2-Fluorophenol (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	1 ug/mL
							Phenol-d5 (Surr)	1 ug/mL
							Terphenyl-d14 (Surr)	1 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L4 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	40 uL	1,1'-Biphenyl	2 ug/mL
							1,2,4,5-Tetrachlorobenzene	2 ug/mL
							1,2,4-Trichlorobenzene	2 ug/mL
							1,2-Dichlorobenzene	2 ug/mL
							1,3-Dichlorobenzene	2 ug/mL
							1,3-Dinitrobenzene	2 ug/mL
							1,4-Dichlorobenzene	2 ug/mL
							1,4-Dioxane	2 ug/mL
							1-Methylnaphthalene	2 ug/mL
							2,2'-oxybis[1-chloropropane]	2 ug/mL
							2,3,4,6-Tetrachlorophenol	2 ug/mL
							2,4,5-Trichlorophenol	2 ug/mL
							2,4,6-Trichlorophenol	2 ug/mL
							2,4-Dichlorophenol	2 ug/mL
							2,4-Dimethylphenol	2 ug/mL
							2,4-Dinitrophenol	4 ug/mL
							2,4-Dinitrotoluene	2 ug/mL
							2,6-Dichlorophenol	2 ug/mL
							2,6-Dinitrotoluene	2 ug/mL
							2-Chloronaphthalene	2 ug/mL
							2-Chlorophenol	2 ug/mL
							2-Methylnaphthalene	2 ug/mL
							2-Methylphenol	2 ug/mL
							2-Nitroaniline	2 ug/mL
							2-Nitrophenol	2 ug/mL
							3 & 4 Methylphenol	2 ug/mL
							3-Nitroaniline	2 ug/mL
							4,6-Dinitro-2-methylphenol	4 ug/mL
							4-Bromophenyl phenyl ether	2 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	2 ug/mL
							4-Chloroaniline	2 ug/mL
							4-Chlorophenyl phenyl ether	2 ug/mL
							4-Nitroaniline	2 ug/mL
							4-Nitrophenol	4 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Acetophenone	2 ug/mL
							Aniline	2 ug/mL
							Anthracene	2 ug/mL
							Azobenzene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Benzyl alcohol	2 ug/mL
							Bis(2-chloroethoxy)methane	2 ug/mL
							Bis(2-chloroethyl)ether	2 ug/mL
							Bis(2-ethylhexyl) phthalate	2 ug/mL
							Butyl benzyl phthalate	2 ug/mL
							Carbazole	2 ug/mL
							Chrysene	2 ug/mL
							Di-n-butyl phthalate	2 ug/mL
							Di-n-octyl phthalate	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Dibenzofuran	2 ug/mL
							Diethyl phthalate	2 ug/mL
							Dimethyl phthalate	2 ug/mL
							Diphenylamine	1.7 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Hexachlorobenzene	2 ug/mL
							Hexachlorobutadiene	2 ug/mL
							Hexachlorocyclopentadiene	2 ug/mL
							Hexachloroethane	2 ug/mL
							Hexadecane	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Isophorone	2 ug/mL
							n-Decane	2 ug/mL
							N-Nitrosodi-n-propylamine	2 ug/mL
							N-Nitrosodimethylamine	2 ug/mL
							N-Nitrosodiphenylamine	2 ug/mL
							n-Octadecane	2 ug/mL
							Naphthalene	2 ug/mL
							Nitrobenzene	2 ug/mL
							Pentachlorophenol	4 ug/mL
							Phenanthrene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	2 ug/mL
							Pyrene	2 ug/mL
							Pyridine	4 ug/mL
							Benzoic acid	4 ug/mL
							Indene	4 ug/mL
							Atrazine	4 ug/mL
							Benzaldehyde	4 ug/mL
							Caprolactam	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzidine	4 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl (Surr)	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Terphenyl-d14 (Surr)	2 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24	Restek, Lot A0144889			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L5 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	100 uL	1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dinitrobenzene	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dichlorophenol	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL
							3 & 4 Methylphenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chloroaniline	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitroaniline	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Aniline	5 ug/mL
							Anthracene	5 ug/mL
							Azobenzene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Benzyl alcohol	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Chrysene	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Diphenylamine	4.25 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Hexadecane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	5 ug/mL
							n-Decane	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodimethylamine	5 ug/mL
							N-Nitrosodiphenylamine	5 ug/mL
							n-Octadecane	5 ug/mL
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Pyridine	10 ug/mL
							Benzoic acid	10 ug/mL
							Indene	10 ug/mL
							Atrazine	10 ug/mL
							Benzaldehyde	10 ug/mL
							Caprolactam	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzidine	10 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl (Surr)	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L6 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	200 uL	1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.5 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Hexadecane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							n-Decane	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							n-Octadecane	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	20 ug/mL
							Benzoic acid	20 ug/mL
							Indene	20 ug/mL
							Atrazine	20 ug/mL
							Benzaldehyde	20 ug/mL
							Caprolactam	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzidine	20 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24	Restek, Lot A0144889			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L7 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	300 uL	1,1'-Biphenyl	15 ug/mL
							1,2,4,5-Tetrachlorobenzene	15 ug/mL
							1,2,4-Trichlorobenzene	15 ug/mL
							1,2-Dichlorobenzene	15 ug/mL
							1,3-Dichlorobenzene	15 ug/mL
							1,3-Dinitrobenzene	15 ug/mL
							1,4-Dichlorobenzene	15 ug/mL
							1,4-Dioxane	15 ug/mL
							1-Methylnaphthalene	15 ug/mL
							2,2'-oxybis[1-chloropropane]	15 ug/mL
							2,3,4,6-Tetrachlorophenol	15 ug/mL
							2,4,5-Trichlorophenol	15 ug/mL
							2,4,6-Trichlorophenol	15 ug/mL
							2,4-Dichlorophenol	15 ug/mL
							2,4-Dimethylphenol	15 ug/mL
							2,4-Dinitrophenol	30 ug/mL
							2,4-Dinitrotoluene	15 ug/mL
							2,6-Dichlorophenol	15 ug/mL
							2,6-Dinitrotoluene	15 ug/mL
							2-Chloronaphthalene	15 ug/mL
							2-Chlorophenol	15 ug/mL
							2-Methylnaphthalene	15 ug/mL
							2-Methylphenol	15 ug/mL
							2-Nitroaniline	15 ug/mL
							2-Nitrophenol	15 ug/mL
							3 & 4 Methylphenol	15 ug/mL
							3-Nitroaniline	15 ug/mL
							4,6-Dinitro-2-methylphenol	30 ug/mL
							4-Bromophenyl phenyl ether	15 ug/mL
							4-Chloro-3-methylphenol	15 ug/mL
							4-Chloroaniline	15 ug/mL
							4-Chlorophenyl phenyl ether	15 ug/mL
							4-Nitroaniline	15 ug/mL
							4-Nitrophenol	30 ug/mL
							Acenaphthene	15 ug/mL
							Acenaphthylene	15 ug/mL
							Acetophenone	15 ug/mL
							Aniline	15 ug/mL
							Anthracene	15 ug/mL
							Azobenzene	15 ug/mL
							Benzo[a]anthracene	15 ug/mL
							Benzo[a]pyrene	15 ug/mL
							Benzo[b]fluoranthene	15 ug/mL
							Benzo[g,h,i]perylene	15 ug/mL
							Benzo[k]fluoranthene	15 ug/mL
							Benzyl alcohol	15 ug/mL
							Bis(2-chloroethoxy)methane	15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	15 ug/mL
							Bis(2-ethylhexyl) phthalate	15 ug/mL
							Butyl benzyl phthalate	15 ug/mL
							Carbazole	15 ug/mL
							Chrysene	15 ug/mL
							Di-n-butyl phthalate	15 ug/mL
							Di-n-octyl phthalate	15 ug/mL
							Dibenz(a,h)anthracene	15 ug/mL
							Dibenzofuran	15 ug/mL
							Diethyl phthalate	15 ug/mL
							Dimethyl phthalate	15 ug/mL
							Diphenylamine	12.75 ug/mL
							Fluoranthene	15 ug/mL
							Fluorene	15 ug/mL
							Hexachlorobenzene	15 ug/mL
							Hexachlorobutadiene	15 ug/mL
							Hexachlorocyclopentadiene	15 ug/mL
							Hexachloroethane	15 ug/mL
							Hexadecane	15 ug/mL
							Indeno[1,2,3-cd]pyrene	15 ug/mL
							Isophorone	15 ug/mL
							n-Decane	15 ug/mL
							N-Nitrosodi-n-propylamine	15 ug/mL
							N-Nitrosodimethylamine	15 ug/mL
							N-Nitrosodiphenylamine	15 ug/mL
							n-Octadecane	15 ug/mL
							Naphthalene	15 ug/mL
							Nitrobenzene	15 ug/mL
							Pentachlorophenol	30 ug/mL
							Phenanthrene	15 ug/mL
							Phenol	15 ug/mL
							Pyrene	15 ug/mL
							Pyridine	30 ug/mL
							Benzoic acid	30 ug/mL
							Indene	30 ug/mL
							Atrazine	30 ug/mL
							Benzaldehyde	30 ug/mL
							Caprolactam	30 ug/mL
							3,3'-Dichlorobenzidine	30 ug/mL
							Benzidine	30 ug/mL
							2,4,6-Tribromophenol (Surr)	15 ug/mL
							2-Fluorobiphenyl (Surr)	15 ug/mL
							2-Fluorophenol (Surr)	15 ug/mL
							Nitrobenzene-d5 (Surr)	15 ug/mL
							Phenol-d5 (Surr)	15 ug/mL
							Terphenyl-d14 (Surr)	15 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L8 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	400 uL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
							Benzoic acid	40 ug/mL
							Indene	40 ug/mL
							Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24	Restek, Lot A0144889			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L9 W_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	2 mL	SMIS80PPMW_00021	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00014	500 uL	1,1'-Biphenyl	25 ug/mL
							1,2,4,5-Tetrachlorobenzene	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dinitrobenzene	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	25 ug/mL
							1-Methylnaphthalene	25 ug/mL
							2,2'-oxybis[1-chloropropane]	25 ug/mL
							2,3,4,6-Tetrachlorophenol	25 ug/mL
							2,4,5-Trichlorophenol	25 ug/mL
							2,4,6-Trichlorophenol	25 ug/mL
							2,4-Dichlorophenol	25 ug/mL
							2,4-Dimethylphenol	25 ug/mL
							2,4-Dinitrophenol	50 ug/mL
							2,4-Dinitrotoluene	25 ug/mL
							2,6-Dichlorophenol	25 ug/mL
							2,6-Dinitrotoluene	25 ug/mL
							2-Chloronaphthalene	25 ug/mL
							2-Chlorophenol	25 ug/mL
							2-Methylnaphthalene	25 ug/mL
							2-Methylphenol	25 ug/mL
							2-Nitroaniline	25 ug/mL
							2-Nitrophenol	25 ug/mL
							3 & 4 Methylphenol	25 ug/mL
							3-Nitroaniline	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	50 ug/mL
							4-Bromophenyl phenyl ether	25 ug/mL
							4-Chloro-3-methylphenol	25 ug/mL
							4-Chloroaniline	25 ug/mL
							4-Chlorophenyl phenyl ether	25 ug/mL
							4-Nitroaniline	25 ug/mL
							4-Nitrophenol	50 ug/mL
							Acenaphthene	25 ug/mL
							Acenaphthylene	25 ug/mL
							Acetophenone	25 ug/mL
							Aniline	25 ug/mL
							Anthracene	25 ug/mL
							Azobenzene	25 ug/mL
							Benzo[a]anthracene	25 ug/mL
							Benzo[a]pyrene	25 ug/mL
							Benzo[b]fluoranthene	25 ug/mL
							Benzo[g,h,i]perylene	25 ug/mL
							Benzo[k]fluoranthene	25 ug/mL
							Benzyl alcohol	25 ug/mL
							Bis(2-chloroethoxy)methane	25 ug/mL
							Bis(2-chloroethyl)ether	25 ug/mL
							Bis(2-ethylhexyl) phthalate	25 ug/mL
							Butyl benzyl phthalate	25 ug/mL
							Carbazole	25 ug/mL
							Chrysene	25 ug/mL
							Di-n-butyl phthalate	25 ug/mL
							Di-n-octyl phthalate	25 ug/mL
							Dibenz(a,h)anthracene	25 ug/mL
							Dibenzofuran	25 ug/mL
							Diethyl phthalate	25 ug/mL
							Dimethyl phthalate	25 ug/mL
							Diphenylamine	21.25 ug/mL
							Fluoranthene	25 ug/mL
							Fluorene	25 ug/mL
							Hexachlorobenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexachlorocyclopentadiene	25 ug/mL
							Hexachloroethane	25 ug/mL
							Hexadecane	25 ug/mL
							Indeno[1,2,3-cd]pyrene	25 ug/mL
							Isophorone	25 ug/mL
							n-Decane	25 ug/mL
							N-Nitrosodi-n-propylamine	25 ug/mL
							N-Nitrosodimethylamine	25 ug/mL
							N-Nitrosodiphenylamine	25 ug/mL
							n-Octadecane	25 ug/mL
							Naphthalene	25 ug/mL
							Nitrobenzene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	50 ug/mL
							Phenanthrene	25 ug/mL
							Phenol	25 ug/mL
							Pyrene	25 ug/mL
							Pyridine	50 ug/mL
							Benzoic acid	50 ug/mL
							Indene	50 ug/mL
							Atrazine	50 ug/mL
							Benzaldehyde	50 ug/mL
							Caprolactam	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzidine	50 ug/mL
							2,4,6-Tribromophenol (Surr)	25 ug/mL
							2-Fluorobiphenyl (Surr)	25 ug/mL
							2-Fluorophenol (Surr)	25 ug/mL
							Nitrobenzene-d5 (Surr)	25 ug/mL
							Phenol-d5 (Surr)	25 ug/mL
							Terphenyl-d14 (Surr)	25 ug/mL
.SMIS80PPMW_00021	09/09/20	09/09/19	MECL2, Lot 0000235101	40 mL	SMIS R_00012	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00012	01/31/24		Restek, Lot A0144889		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00014	07/31/20	09/11/19	MECL2, Lot 0000235101	10 mL	SMLIST1 S1_00011	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00006	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00008	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00006	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00006	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00008	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00006	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 SS W_00015	10/31/20	04/02/20	MECL2, Lot 0000243867	2 mL	SMIS80PPMW_00022	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00022	02/03/21	02/03/20	MECL2, Lot 0000235101	40 mL	SMIS R_00013	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00013	09/30/24		Restek, Lot A0153348		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 SS W_00015	10/31/20	04/02/20	MECL2, Lot 0000243867	2 mL	SMLIST1 SS ST_00015	200 uL	Nitrobenzene	10 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMLIST1 SS ST_00015	10/31/20	04/02/20	MECL2, Lot 0000243867	10 mL	SMLIST1 SS S1_00010	1 mL	Nitrobenzene	100 ug/mL
					SMLIST1 SURR_00012	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 SS S1_00010	11/30/20		Restek, Lot A0148967		(Purchased Reagent)		Nitrobenzene	1000 ug/mL
..SMLIST1 SURR_00012	09/30/23		Restek, Lot A0141581		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL

Reagent

exBENZALDEHYD_00071

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

Standard No. 4642184 ID: exBENZALDEHYD_00071 Exp: 08/28/20 Prpd: BMB Crt: 02/28/20

Standard Name Benzaldehyde BNA Spike

Date Created 2-28-20

Extractionist Initials BB

Extractionist Comments Please confirm new spike

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 3/2/20

Passed? Yes ☑

No ☐

Returned copy of chromatogram and recovery page to Extractions? Yes ☑

No ☐

Analyst Initials MV

Analyst Comments

WI-NC-020A_101207

Report Date: 02-Mar-2020 10:10:27 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton

Data File: \\chromna\Canton\ChromData\A4AG3\20200302-96216.b\00302008.D

Injection Date: 02-Mar-2020 09:35:59 Instrument ID: A4AG3 Operator ID:

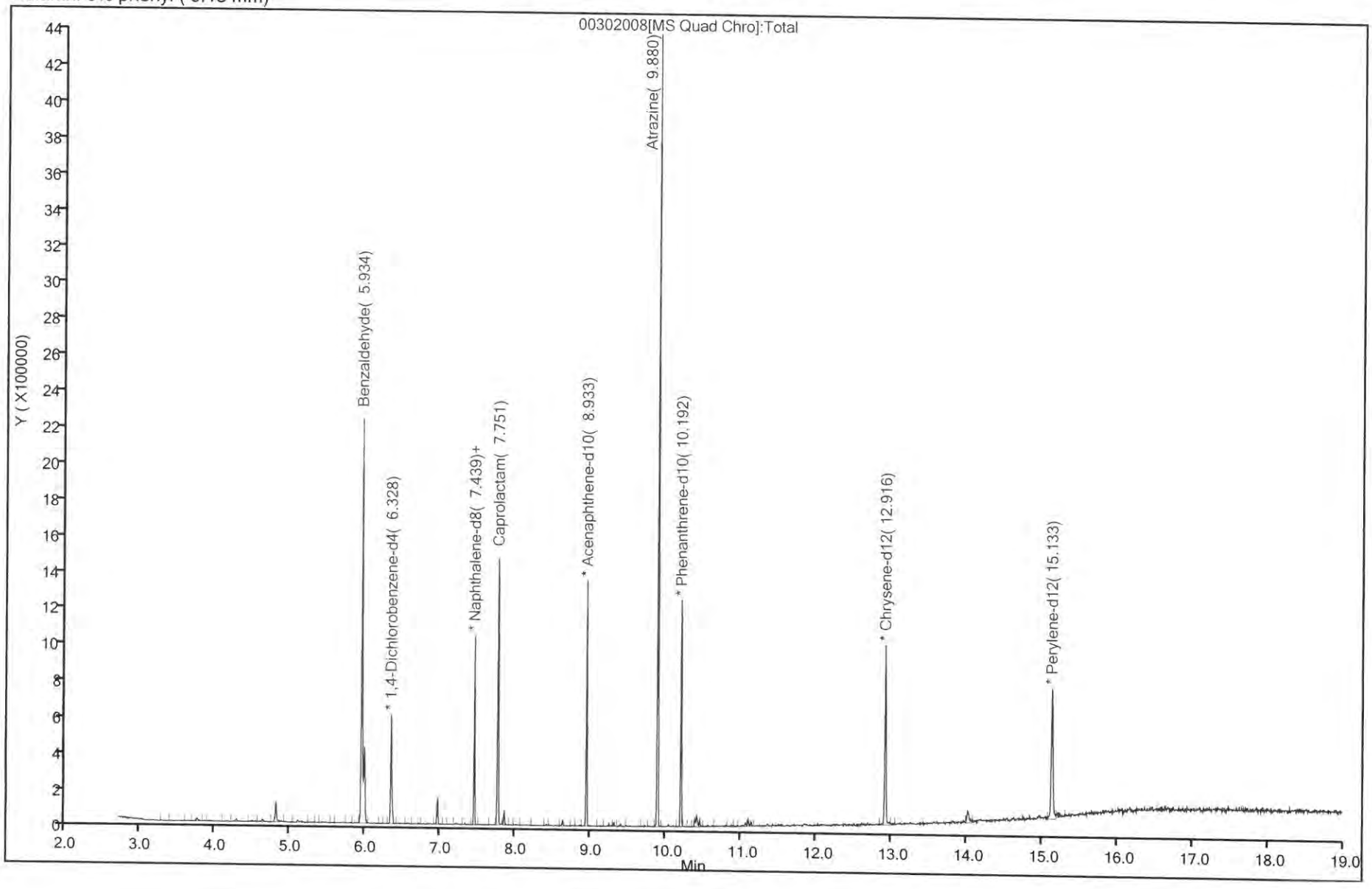
Lims ID: benzalspk071 Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 2.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270C ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 02-Mar-2020 10:10:27 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton

LCS, Lab Control Sample Report

Sample Path: \\chromna\Canton\ChromData\A4AG3\20200302-96216.b\00302008.D

Lims ID: benzalspk071 Inj. Date: 02-Mar-2020 09:35:59

Worklist ID: 240-0096216-008 Instrument: A4AG3

Method: 8270 AG3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3540C
30 Benzaldehyde	20.0	18.1	90.7	38-120
78 Caprolactam	20.0	20.1	100.5	55-120
140 Atrazine	20.0	16.2	81.2	54-120

Samples for Limit Group: 1, Lims Prep Method: 3540C

310-176055-A-1-B	310-176055-A-2-B	310-176055-A-3-B
310-176055-A-4-B	310-176055-A-5-B	310-176055-A-6-D
310-176055-A-7-B	310-176055-A-8-B	310-176055-A-9-B

Report Date: 02-Mar-2020 10:10:25 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File:	\\chromna\Canton\ChromData\A4AG3\20200302-96216.b\00302008.D				
Lims ID:	benzalspk071				
Client ID:					
Sample Type:	LCS				
Inject. Date:	02-Mar-2020 09:35:59	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	2.0000		
Sample Info:	240-0096216-008				
Misc. Info.:	BENZALSPK071				
Operator ID:		Instrument ID:	A4AG3		
Method:	\\chromna\Canton\ChromData\A4AG3\20200302-96216.b\8270 AG3.m				
Limit Group:	MSS 8270C ICAL				
Last Update:	02-Mar-2020 10:10:19	Calib Date:	12-Feb-2020 22:37:08		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Canton\ChromData\A4AG3\20200212-95695.b\00212028.D				
Column 1 :	5% phenyl (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0339				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.328	6.328	0.000	96	107614	4.00	4.00	
* 2 Naphthalene-d8	136	7.439	7.440	-0.001	99	375352	4.00	4.00	
* 3 Acenaphthene-d10	164	8.933	8.934	-0.001	94	216360	4.00	4.00	
* 4 Phenanthrene-d10	188	10.192	10.198	-0.006	97	411731	4.00	4.00	
* 5 Chrysene-d12	240	12.916	12.922	-0.006	99	383695	4.00	4.00	
* 6 Perylene-d12	264	15.133	15.139	-0.006	98	415978	4.00	4.00	
30 Benzaldehyde	77	5.934	5.934	0.000	96	508172	20.0	18.1	
78 Caprolactam	113	7.757	7.763	-0.006	87	180720	20.0	20.1	
140 Atrazine	200	9.880	9.881	-0.001	95	419819	20.0	16.2	

QC Flag Legend

Processing Flags

Reagents:

exBENZALDEHYD_00071	Amount Added:	1.00	Units: mL	
SMIS80PPMW_00021	Amount Added:	5.00	Units: uL	Run Reagent

Reagent

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exBNASPIKE_00109

LABORATORY STANDARDS DOCUMENTATION FORM FOR TESTAMERICA LABORATORIES, INC.

Standard No. 4619538 — ID: exBNASPIKE_00109 — Exp: 07/31/20 Prpd: BMB Crt: 02/10/20 — List 1 BNA Spike; 4619543 — ID: exBNA TCLPspk_00051 — Exp: 08/31/20 Prpd: BMB Crt: 02/10/20 — List 1 TCLP BNA Spike

Standard Name _____

Date Created 2-10-20

Extractionist Initials BB

Extractionist Comments Please confirm new spike

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 2/11/20

Passed? Yes ☑ No ☐

Returned copy of chromatogram and recovery page to Extractions? Yes ☑ No ☐

Analyst Initials MU

Analyst Comments _____

WI-NC-020A_101207

Report Date: 11-Feb-2020 13:41:56 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Eurofins TestAmerica, Canton

Data File: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D

Injection Date: 11-Feb-2020 13:18:30 Instrument ID: A4HP9 Operator ID:

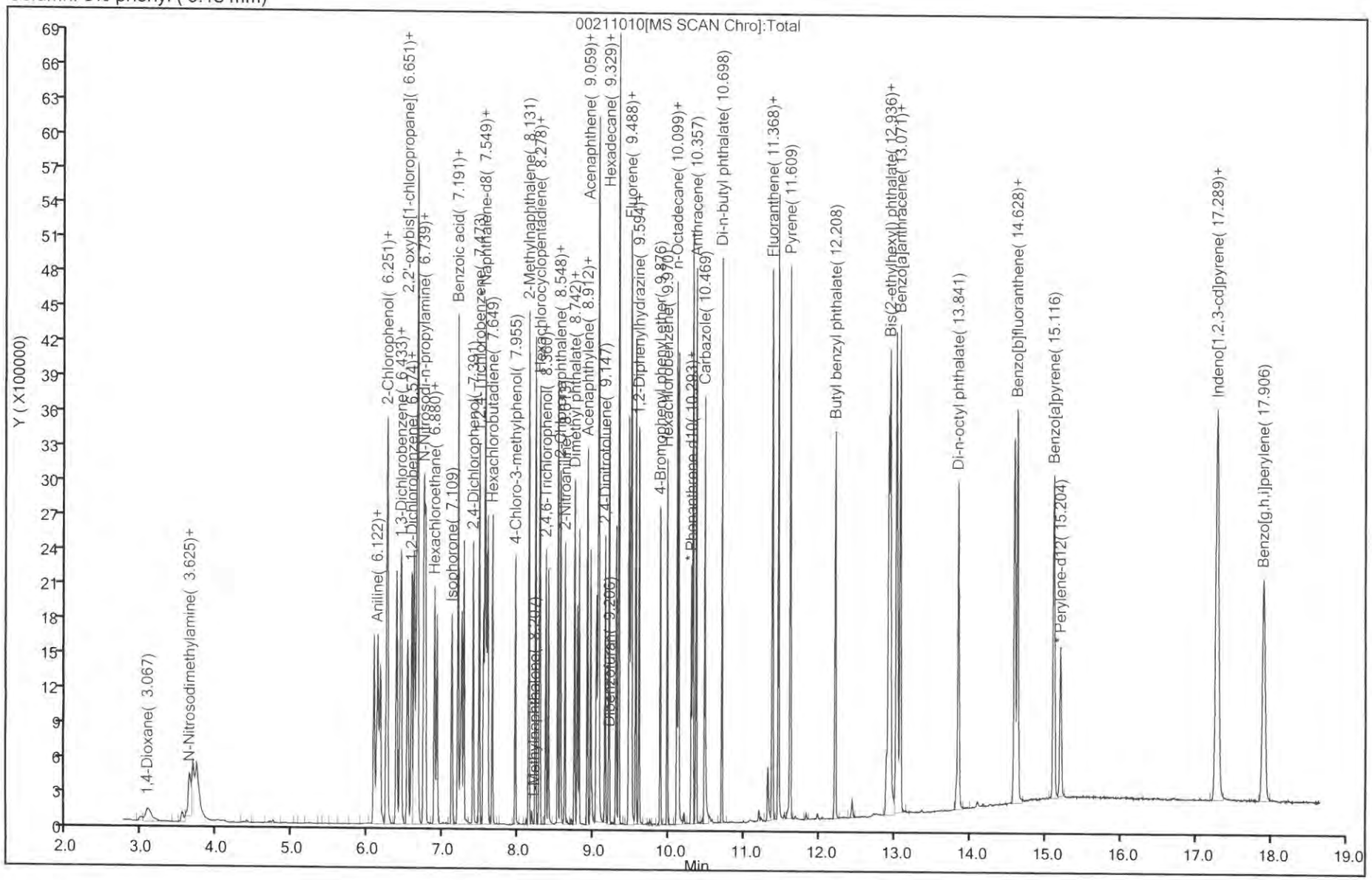
Lims ID: lst1spk109 Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 2.0000 ALS Bottle#: 10

Method: 8270 _9 Limit Group: MSS 8270C ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 11-Feb-2020 13:41:55 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Eurofins TestAmerica, Canton

LCS, Lab Control Sample Report

Sample Path: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D
Lims ID: lst1spk109
Worklist ID: 240-0095648-010
Method: 8270_9
Inj. Date: 11-Feb-2020 13:18:30
Instrument: A4HP9

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3540C
25 1,4-Dioxane	10.0	8.56	85.6	10-120
26 N-Nitrosodimethylamine	10.0	9.14	91.4	10-120
27 Pyridine	20.0	16.9	84.7	18-120
43 Phenol	10.0	9.35	93.5	12-120
44 Aniline	10.0	10.1	101.0	10-122
69 Bis(2-chloroethyl)ether	10.0	8.32	83.2	51-120
46 2-Chlorophenol	10.0	9.07	90.7	55-120
243 n-Decane	10.0	8.60	86.0	27-120
47 1,3-Dichlorobenzene	10.0	8.79	87.9	45-120
48 1,4-Dichlorobenzene	10.0	8.76	87.6	46-120
49 Benzyl alcohol	10.0	9.16	91.6	10-120
50 1,2-Dichlorobenzene	10.0	8.64	86.4	48-120
51 2-Methylphenol	10.0	9.06	90.6	50-120
53 2,2'-oxybis[1-chloropro	10.0	8.43	84.3	32-131
52 Indene	20.0	18.2	90.8	45-120
21 3 & 4 Methylphenol	10.0	8.56	85.6	45-120
57 N-Nitrosodi-n-propylami	10.0	8.44	84.4	52-120
58 Acetophenone	10.0	8.90	89.0	57-120
61 Hexachloroethane	10.0	9.04	90.4	40-120
62 Nitrobenzene	10.0	9.05	90.5	56-120
64 Isophorone	10.0	7.15	71.5	57-120
66 2-Nitrophenol	10.0	10.1	101.1	60-120
65 2,4-Dimethylphenol	10.0	8.10	81.0	56-120
71 Benzoic acid	20.0	18.5	92.4	10-120
70 Bis(2-chloroethoxy)meth	10.0	8.25	82.5	56-120
73 2,4-Dichlorophenol	10.0	8.35	83.5	60-120
74 1,2,4-Trichlorobenzene	10.0	8.73	87.3	50-120
75 Naphthalene	10.0	8.54	85.4	55-120
76 4-Chloroaniline	10.0	7.45	74.5	10-120
77 2,6-Dichlorophenol	10.0	8.08	80.8	61-120
79 Hexachlorobutadiene	10.0	8.83	88.3	39-120
86 4-Chloro-3-methylphenol	10.0	7.21	72.1	59-120
87 2-Methylnaphthalene	10.0	7.45	74.5	58-120
88 1-Methylnaphthalene	10.0	7.29	72.9	58-120
89 Hexachlorocyclopentadie	10.0	9.85	98.5	20-120
91 1,2,4,5-Tetrachlorobenz	10.0	8.75	87.5	54-120
92 2,4,6-Trichlorophenol	10.0	9.29	92.9	63-120
93 2,4,5-Trichlorophenol	10.0	9.94	99.4	61-120
98 1,1'-Biphenyl	10.0	7.98	79.8	57-120
100 2-Chloronaphthalene	10.0	8.25	82.5	58-120
102 2-Nitroaniline	10.0	11.3	113.5	55-124

Report Date: 11-Feb-2020 13:41:55 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Sample Path: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3540C
105 Dimethyl phthalate	10.0	11.3	112.8	55-120
106 1,3-Dinitrobenzene	10.0	11.9	119.0	67-120
107 2,6-Dinitrotoluene	10.0	11.8	117.9	70-120
109 Acenaphthylene	10.0	9.17	91.7	60-105
110 3-Nitroaniline	10.0	11.4	114.4	53-120
111 2,4-Dinitrophenol	20.0	12.1	60.7	20-122
112 Acenaphthene	10.0	8.42	84.2	60-120
113 4-Nitrophenol	20.0	24.0	120.0	10-120*
114 2,4-Dinitrotoluene	10.0	11.5	115.2	66-120
116 Dibenzofuran	10.0	9.11	91.1	62-120
119 2,3,4,6-Tetrachlorophen	10.0	12.5	125.0	59-120*
247 Hexadecane	10.0	8.52	85.2	41-123
121 Diethyl phthalate	10.0	11.1	110.9	60-120
123 4-Chlorophenyl phenyl e	10.0	9.96	99.6	63-120
125 4-Nitroaniline	10.0	11.1	110.7	58-120
126 Fluorene	10.0	10.1	101.2	62-105
128 4,6-Dinitro-2-methylphe	20.0	14.6	72.8	48-136
131 N-Nitrosodiphenylamine	10.0	9.46	94.6	61-120
130 Diphenylamine	8.55	8.04	94.0	61-120
133 Azobenzene	10.0	9.44	94.4	51-121
132 1,2-Diphenylhydrazine	10.0	9.44	94.4	51-120
139 4-Bromophenyl phenyl et	10.0	9.66	96.6	61-120
141 Hexachlorobenzene	10.0	9.01	90.1	57-120
244 n-Octadecane	10.0	9.20	92.0	44-134
143 Pentachlorophenol	20.0	20.3	101.3	32-120
148 Phenanthrene	10.0	8.84	88.4	62-120
149 Anthracene	10.0	9.75	97.5	63-120
151 Carbazole	10.0	9.83	98.3	66-120
154 Di-n-butyl phthalate	10.0	10.0	100.3	61-123
159 Fluoranthene	10.0	10.4	104.1	67-120
160 Benzidine	20.0	17.8	88.8	21-120
161 Pyrene	10.0	9.80	98.0	63-120
168 Butyl benzyl phthalate	10.0	9.33	93.3	56-124
173 Bis(2-ethylhexyl) phtha	10.0	9.81	98.1	54-133
175 3,3'-Dichlorobenzidine	20.0	17.7	88.4	53-125
177 Benzo[a]anthracene	10.0	9.67	96.7	63-120
178 Chrysene	10.0	8.87	88.7	64-120
180 Di-n-octyl phthalate	10.0	9.26	92.6	52-124
182 Benzo[b]fluoranthene	10.0	9.19	91.9	63-120
183 Benzo[k]fluoranthene	10.0	9.32	93.2	63-120
184 Benzo[a]pyrene	10.0	9.26	92.6	57-120
188 Indeno[1,2,3-cd]pyrene	10.0	9.99	99.9	65-120
189 Dibenz(a,h)anthracene	10.0	9.75	97.5	61-120
190 Benzo[g,h,i]perylene	10.0	9.74	97.4	66-120

Report Date: 11-Feb-2020 13:41:55 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Sample Path: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D

Samples for Limit Group: 1, Lims Prep Method: 3540C

240-125789-D-1-E 240-125474-G-2-D 240-125474-G-1-D

Report Date: 11-Feb-2020 13:41:52 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D
Lims ID: lst1spk109
Client ID:
Sample Type: LCS
Inject. Date: 11-Feb-2020 13:18:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 2.0000
Sample Info: 240-0095648-010
Misc. Info.: LST1SPK109
Operator ID: Instrument ID: A4HP9

Method: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\8270 _9.m
Limit Group: MSS 8270C ICAL
Last Update: 11-Feb-2020 13:41:50 Calib Date: 10-Feb-2020 15:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A4HP9\20200210-95617.b\00210010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0322

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.422	6.415	0.007	96	212991	4.00	4.00	
* 2 Naphthalene-d8	136	7.532	7.525	0.007	99	856185	4.00	4.00	
* 3 Acenaphthene-d10	164	9.030	9.029	0.001	94	341147	4.00	4.00	
* 4 Phenanthrene-d10	188	10.293	10.292	0.001	97	678125	4.00	4.00	
* 5 Chrysene-d12	240	13.036	13.035	0.001	99	652415	4.00	4.00	
* 6 Perylene-d12	264	15.204	15.203	0.001	97	702398	4.00	4.00	
25 1,4-Dioxane	88	3.079	3.079	0.047	96	306852	10.0	8.56	M
26 N-Nitrosodimethylamine	74	3.643	3.643	0.100	0	448187	10.0	9.14	1M
27 Pyridine	79	3.719	3.719	0.111	98	1443578	20.0	16.9	M
43 Phenol	94	6.075	6.070	0.012	96	914963	10.0	9.35	
44 Aniline	93	6.128	6.117	0.018	96	1246547	10.0	10.1	
69 Bis(2-chloroethyl)ether	93	6.157	6.158	0.006	96	720999	10.0	8.32	
46 2-Chlorophenol	128	6.245	6.234	0.017	96	671954	10.0	9.07	
243 n-Decane	57	6.251	6.258	0.000	99	702362	10.0	8.60	
47 1,3-Dichlorobenzene	146	6.375	6.375	0.007	97	720028	10.0	8.79	
48 1,4-Dichlorobenzene	146	6.439	6.434	0.012	93	720834	10.0	8.76	
49 Benzyl alcohol	108	6.521	6.516	0.012	94	404000	10.0	9.16	
50 1,2-Dichlorobenzene	146	6.580	6.581	0.006	96	672053	10.0	8.64	
51 2-Methylphenol	108	6.604	6.605	0.006	91	618644	10.0	9.06	
53 2,2'-oxybis[1-chloropropan	45	6.633	6.634	0.006	93	732711	10.0	8.43	
52 Indene	115	6.657	6.658	0.007	90	2250605	20.0	18.2	
21 3 & 4 Methylphenol	108	6.733	6.734	0.006	89	599534	10.0	8.56	p
57 N-Nitrosodi-n-propylamine	70	6.745	6.746	0.006	90	398000	10.0	8.44	p
58 Acetophenone	105	6.756	6.758	0.006	99	905219	10.0	8.90	
61 Hexachloroethane	117	6.880	6.881	0.006	96	279611	10.0	9.04	
62 Nitrobenzene	77	6.909	6.915	0.000	84	682569	10.0	9.05	
64 Isophorone	82	7.109	7.109	0.006	98	907075	10.0	7.15	
66 2-Nitrophenol	139	7.191	7.192	0.006	95	317995	10.0	10.1	
65 2,4-Dimethylphenol	107	7.191	7.197	0.000	92	543353	10.0	8.10	p
71 Benzoic acid	122	7.244	7.250	0.000	84	549919	20.0	18.5	p
70 Bis(2-chloroethoxy)methane	93	7.268	7.274	0.001	96	748811	10.0	8.25	

Preliminary Report

Data File: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
73 2,4-Dichlorophenol	162	7.391	7.397	0.000	94	433019	10.0	8.35	
74 1,2,4-Trichlorobenzene	180	7.473	7.480	0.000	93	540467	10.0	8.73	
75 Naphthalene	128	7.549	7.556	0.000	97	1910933	10.0	8.54	
76 4-Chloroaniline	127	7.567	7.574	0.000	97	676620	10.0	7.45	
77 2,6-Dichlorophenol	162	7.585	7.591	0.001	98	420286	10.0	8.08	
79 Hexachlorobutadiene	225	7.649	7.656	0.000	98	276569	10.0	8.83	
86 4-Chloro-3-methylphenol	107	7.955	7.962	0.000	95	404555	10.0	7.21	
87 2-Methylnaphthalene	142	8.131	8.138	0.000	92	1062867	10.0	7.45	
88 1-Methylnaphthalene	142	8.219	8.226	0.000	93	961033	10.0	7.29	
89 Hexachlorocyclopentadiene	237	8.272	8.273	0.000	97	253599	10.0	9.85	p
91 1,2,4,5-Tetrachlorobenzene	216	8.278	8.279	0.000	94	372029	10.0	8.75	p
92 2,4,6-Trichlorophenol	196	8.360	8.361	0.000	93	248102	10.0	9.29	
93 2,4,5-Trichlorophenol	196	8.395	8.396	0.000	95	283190	10.0	9.94	
98 1,1'-Biphenyl	154	8.519	8.519	0.000	95	1040869	10.0	7.98	
100 2-Chloronaphthalene	162	8.554	8.555	0.000	97	796072	10.0	8.25	
102 2-Nitroaniline	65	8.613	8.613	0.001	86	305102	10.0	11.3	
105 Dimethyl phthalate	163	8.742	8.743	0.000	99	1090410	10.0	11.3	
106 1,3-Dinitrobenzene	168	8.777	8.778	0.000	89	186255	10.0	11.9	
107 2,6-Dinitrotoluene	165	8.801	8.801	0.001	87	260704	10.0	11.8	
109 Acenaphthylene	152	8.912	8.913	0.000	98	1250896	10.0	9.17	
110 3-Nitroaniline	138	8.953	8.954	0.000	97	298250	10.0	11.4	
111 2,4-Dinitrophenol	184	9.042	9.042	0.001	88	140085	20.0	12.1	
112 Acenaphthene	153	9.053	9.054	0.000	94	828255	10.0	8.42	
113 4-Nitrophenol	109	9.059	9.066	-0.006	87	337291	20.0	24.0	
114 2,4-Dinitrotoluene	165	9.147	9.148	0.000	93	329406	10.0	11.5	
116 Dibenzofuran	168	9.200	9.201	0.000	98	1270296	10.0	9.11	
119 2,3,4,6-Tetrachlorophenol	232	9.294	9.295	0.000	74	259164	10.0	12.5	
247 Hexadecane	57	9.329	9.330	0.000	66	564230	10.0	8.52	p
121 Diethyl phthalate	149	9.329	9.347	0.000	98	1014380	10.0	11.1	p
123 4-Chlorophenyl phenyl ethe	204	9.459	9.465	-0.005	96	494236	10.0	9.96	
125 4-Nitroaniline	138	9.476	9.477	0.000	87	300841	10.0	11.1	
126 Fluorene	166	9.488	9.489	0.000	98	1077024	10.0	10.1	
128 4,6-Dinitro-2-methylphenol	198	9.500	9.500	0.000	89	271638	20.0	14.6	
131 N-Nitrosodiphenylamine	169	9.553	9.553	0.001	98	824493	10.0	9.46	
130 Diphenylamine	169	9.553	9.553	0.001	95	824493	8.55	8.04	
133 Azobenzene	77	9.594	9.600	-0.005	97	1249986	10.0	9.44	
132 1,2-Diphenylhydrazine	77	9.594	9.600	-0.005	96	1250178	10.0	9.44	
139 4-Bromophenyl phenyl ether	248	9.882	9.882	0.001	90	303521	10.0	9.66	
141 Hexachlorobenzene	284	9.970	9.976	-0.005	94	347066	10.0	9.01	
244 n-Octadecane	57	10.099	10.100	0.000	100	692339	10.0	9.20	
143 Pentachlorophenol	266	10.122	10.123	0.000	92	396291	20.0	20.3	
148 Phenanthrene	178	10.310	10.311	0.000	97	1641774	10.0	8.84	
149 Anthracene	178	10.357	10.358	0.000	97	1647967	10.0	9.75	
151 Carbazole	167	10.469	10.470	0.000	96	1536415	10.0	9.83	
154 Di-n-butyl phthalate	149	10.698	10.699	0.000	100	1957197	10.0	10.0	
159 Fluoranthene	202	11.368	11.375	-0.005	99	1824841	10.0	10.4	
160 Benzidine	184	11.450	11.451	0.000	100	1913654	20.0	17.8	
161 Pyrene	202	11.609	11.609	0.001	97	1856077	10.0	9.80	
168 Butyl benzyl phthalate	149	12.208	12.209	0.000	97	845619	10.0	9.33	
173 Bis(2-ethylhexyl) phthalat	149	12.913	12.919	-0.005	97	1196184	10.0	9.81	
175 3,3'-Dichlorobenzidine	252	12.936	12.937	0.000	74	1114467	20.0	17.7	

Report Date: 11-Feb-2020 13:41:52 Chrom Revision: 2.3 15-Dec-2019 06:20:02

Preliminary Report

Data File: \\chromna\Canton\ChromData\A4HP9\20200211-95648.b\00211010.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
177 Benzo[a]anthracene	228	13.019	13.019	0.001	99	1818621	10.0	9.67	
178 Chrysene	228	13.071	13.072	0.000	98	1794544	10.0	8.87	
180 Di-n-octyl phthalate	149	13.841	13.848	-0.006	99	2007595	10.0	9.26	
182 Benzo[b]fluoranthene	252	14.593	14.594	0.000	98	1864693	10.0	9.19	
183 Benzo[k]fluoranthene	252	14.634	14.635	0.000	99	1959710	10.0	9.32	
184 Benzo[a]pyrene	252	15.116	15.116	0.001	78	1702354	10.0	9.26	
188 Indeno[1,2,3-cd]pyrene	276	17.277	17.284	-0.006	97	2249348	10.0	9.99	p
189 Dibenz(a,h)anthracene	278	17.295	17.302	-0.006	91	1882035	10.0	9.75	p
190 Benzo[g,h,i]perylene	276	17.912	17.913	0.000	97	1963768	10.0	9.74	

QC Flag Legend

Processing Flags

1 - Missing Peaks

p - Peak ID'ed as Multiple Compounds

Review Flags

M - Manually Integrated

Reagents:

exBNASPIKE_00109	Amount Added:	1.00	Units: mL	
SMIS80PPMW_00021	Amount Added:	5.00	Units: uL	Run Reagent

Reagent

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exBNASURR W_00084

LABORATORY STANDARDS DOCUMENTATION FORM FOR TESTAMERICA LABORATORIES, INC.

4647224

Standard No. _____ ID: exBNASURR W_00084 Exp: 09/04/20 Prpd: SDE Crt: 03/04/20 BNA Surrogates

Standard Name _____

Date Created 3-4-20

Extractionist Initials SE

Extractionist Comments CONFIRM Surrogate

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 3/4/20

Passed? **Yes** ☑ **No** ☐

Returned copy of chromatogram and recovery page to Extractions? **Yes** ☑ **No** ☐

Analyst Initials MU

Analyst Comments _____

WI-NC-020A_101207

Report Date: 05-Mar-2020 08:59:04 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton

Data File: \\chromna\Canton\ChromData\A4HP9\20200304-96310.b\00304006.D

Injection Date: 04-Mar-2020 14:03:30 Instrument ID: A4HP9 Operator ID:

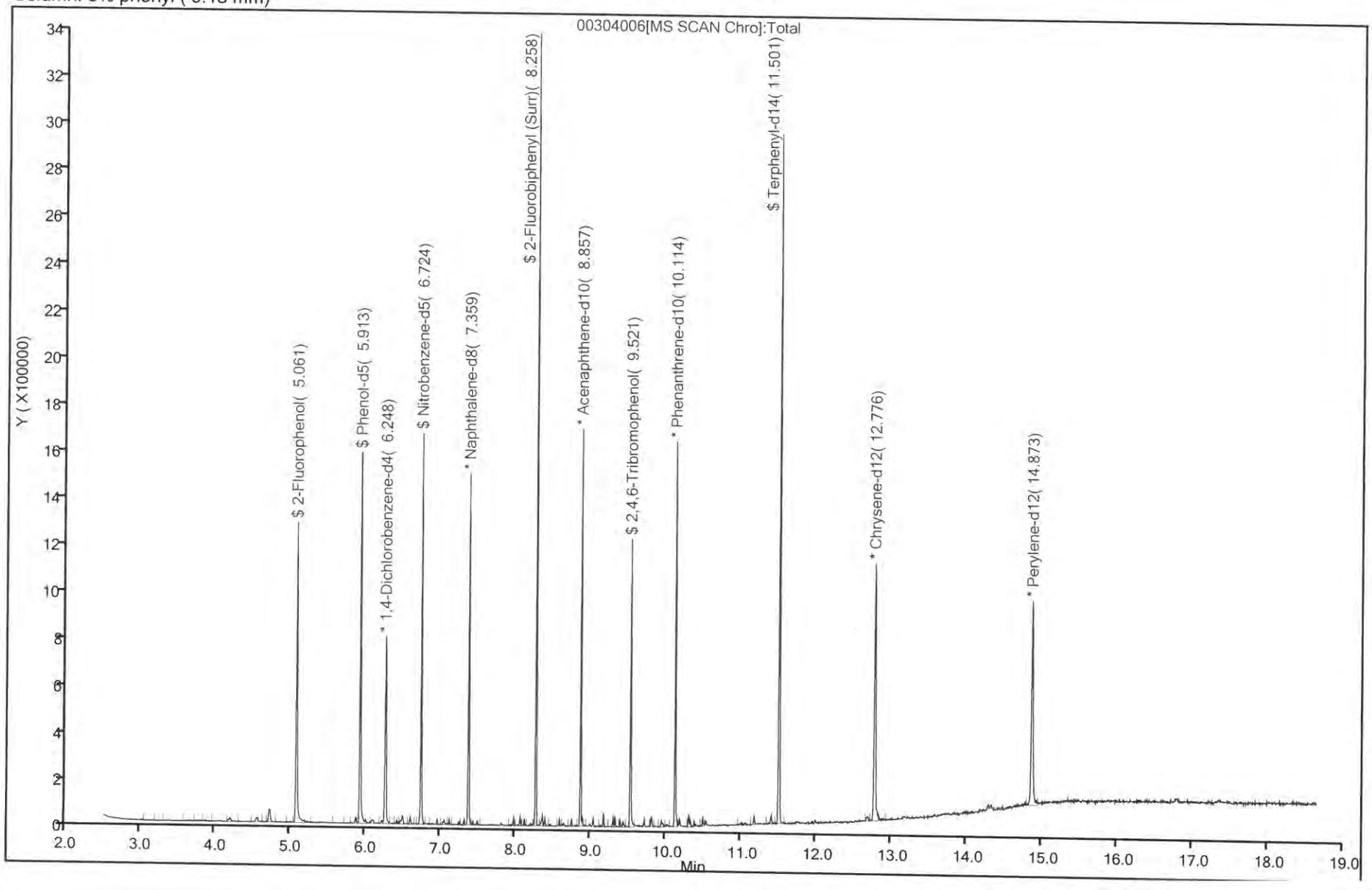
Lims ID: bnasur084 Lab Sample ID: Client 240-425272/6-A Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 2.0000 ALS Bottle#: 6

Method: 8270 _9 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 05-Mar-2020 08:59:03 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A4HP9\20200304-96310.b\00304006.D
Lims ID: bnasur084
Client ID:
Sample Type: Client
Inject. Date: 04-Mar-2020 14:03:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 2.0000
Sample Info: 240-0096310-006
Misc. Info.: BNASUR084
Operator ID: Instrument ID: A4HP9

Method: \\chromna\Canton\ChromData\A4HP9\20200304-96310.b\8270 _9.m
Limit Group: MSS 8270D ICAL
Last Update: 05-Mar-2020 07:40:14 Calib Date: 12-Feb-2020 11:59:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A4HP9\20200212-95683.b\00212011.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0317

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.248	6.311	-0.063	98	140874	4.00	
* 2 Naphthalene-d8	136	7.359	7.422	-0.063	100	540399	4.00	
* 3 Acenaphthene-d10	164	8.857	8.920	-0.063	93	300057	4.00	
* 4 Phenanthrene-d10	188	10.114	10.183	-0.069	98	490645	4.00	
* 5 Chrysene-d12	240	12.776	12.874	-0.098	99	443084	4.00	
* 6 Perylene-d12	264	14.873	14.995	-0.122	98	471428	4.00	
$ 7 2-Fluorophenol	112	5.061	5.055	-0.046	93	437735	9.54	
$ 8 Phenol-d5	99	5.913	5.905	-0.052	97	541144	9.60	
$ 9 Nitrobenzene-d5	82	6.724	6.729	-0.063	90	448796	10.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.258	8.256	-0.063	100	811726	8.74	
$ 11 2,4,6-Tribromophenol	330	9.521	9.509	-0.063	93	102913	10.2	
$ 12 Terphenyl-d14	244	11.501	11.482	-0.075	98	966295	10.9	
25 1,4-Dioxane	88		2.927				ND	
26 N-Nitrosodimethylamine	74		3.450				ND	
27 Pyridine	79		3.509				ND	
20 Dimethylformamide	73		4.033				ND	
28 Ethyl methacrylate	69		4.139				ND	U
31 2-Picoline	93		4.521				ND	U
32 N-Nitrosomethylethylamine	88		4.639				ND	U
303 Acrylamide	71		4.909				ND	U
34 Methyl methanesulfonate	80		4.956				ND	U
233 n,n'-Dimethylacetamide	44		5.055				ND	U
36 N-Nitrosodiethylamine	102		5.373				ND	U
37 Ethyl methanesulfonate	79		5.643				ND	U
308 2-Methylcyclohexanone	68		5.872				ND	U
309 3-Methylcyclohexanone	69		5.907				ND	U
41 Benzaldehyde	77		5.918				ND	U
307 4-Methylcyclohexanone	55		5.954				ND	U
43 Phenol	94		5.976				ND	U
44 Aniline	93		6.012				ND	U
69 Bis(2-chloroethyl)ether	93		6.047				ND	U

Report Date: 05-Mar-2020 08:59:04 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Preliminary Report

Eurofins TestAmerica, Canton

Recovery Report

Data File:	\\chromna\Canton\ChromData\A4HP9\20200304-96310.b\00304006.D				
Lims ID:	bnasur084				
Client ID:					
Sample Type:	Client				
Inject. Date:	04-Mar-2020 14:03:30	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	2.0000		
Sample Info:	240-0096310-006				
Misc. Info.:	BNASUR084				
Operator ID:		Instrument ID:	A4HP9		
Method:	\\chromna\Canton\ChromData\A4HP9\20200304-96310.b\8270 _9.m				
Limit Group:	MSS 8270D ICAL				
Last Update:	05-Mar-2020 07:40:14	Calib Date:	12-Feb-2020 11:59:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Canton\ChromData\A4HP9\20200212-95683.b\00212011.D				
Column 1 :	5% phenyl (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0317				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	20.0	9.54	95.42
$ 8 Phenol-d5	20.0	9.60	95.99
$ 9 Nitrobenzene-d5	20.0	10.1	100.70
$ 10 2-Fluorobiphenyl (Surr)	20.0	8.74	87.39
$ 11 2,4,6-Tribromophenol	20.0	10.2	101.67
$ 12 Terphenyl-d14	20.0	10.9	109.25

Reagent

---

exLIST1_S1_00020

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0147571

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000µg/mL, Methylene chloride, 5mL/ampul

4364453
ID: exLIST1_S1_00020
Exp:09/30/20 Prpd:BMB Opn:08/30/19
8270 List 1/Std #1 MegaMi

Container Size : **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,004.1 µg/mL	+/- 5.8379 µg/mL +/- 12.0031 µg/mL +/- 19.1027 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 190214JLM) **Purity** 99%	1,004.7 µg/mL	+/- 5.8414 µg/mL +/- 12.0102 µg/mL +/- 19.1141 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBJ3129) **Purity** 99%	2,005.9 µg/mL	+/- 11.6625 µg/mL +/- 23.9787 µg/mL +/- 38.1617 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.7 µg/mL	+/- 5.8647 µg/mL +/- 12.0581 µg/mL +/- 19.1902 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.5 µg/mL	+/- 5.8519 µg/mL +/- 12.0318 µg/mL +/- 19.1484 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBJ2059) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBK4937) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot STBF2690V)	1,007.3	µg/mL	+/- 5.8565 +/- 12.0413 +/- 19.1636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBQ7100V)	1,005.4	µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBJ0534)	1,002.7	µg/mL	+/- 5.8298 +/- 11.9863 +/- 19.0761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBG3111V)	1,004.2	µg/mL	+/- 5.8385 +/- 12.0043 +/- 19.1046	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBH6379)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 8021900)	1,006.3	µg/mL	+/- 5.8507 +/- 12.0294 +/- 19.1446	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot STBH5416)	1,006.8	µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	500.9	µg/mL	+/- 2.9190 +/- 5.9911 +/- 9.5315	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.6	µg/mL	+/- 2.9173 +/- 5.9875 +/- 9.5258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot 2D5VJ)	1,004.7	µg/mL	+/- 5.8414 +/- 12.0102 +/- 19.1141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,001.5	µg/mL	+/- 5.8228 +/- 11.9720 +/- 19.0532	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBG5577V)	1,006.8	µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	1,007.0	µg/mL	+/- 5.8545 +/- 12.0371 +/- 19.1569	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,005.9	µg/mL	+/- 5.8484 +/- 12.0246 +/- 19.1370	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,000.5	µg/mL	+/- 5.8170 +/- 11.9600 +/- 19.0342	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,002.7 µg/mL	+/- 5.8298	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 8238500)		+/- 11.9863	µg/mL	Unstressed
	Purity 99%			+/- 19.0761	µg/mL	Stressed
25	2,4-Dichlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.9 µg/mL	+/- 5.8484	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ9215)		+/- 12.0246	µg/mL	Unstressed
	Purity 99%			+/- 19.1370	µg/mL	Stressed
27	Naphthalene		1,002.3 µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBZ8680V)		+/- 11.9816	µg/mL	Unstressed
	Purity 99%			+/- 19.0685	µg/mL	Stressed
28	2,6-Dichlorophenol		1,005.4 µg/mL	+/- 5.8455	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)		+/- 12.0186	µg/mL	Unstressed
	Purity 99%			+/- 19.1274	µg/mL	Stressed
29	4-Chloroaniline		1,005.1 µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)		+/- 12.0150	µg/mL	Unstressed
	Purity 99%			+/- 19.1217	µg/mL	Stressed
30	Hexachlorobutadiene		1,005.8 µg/mL	+/- 5.8478	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)		+/- 12.0234	µg/mL	Unstressed
	Purity 99%			+/- 19.1351	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,008.2 µg/mL	+/- 5.8618	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)		+/- 12.0521	µg/mL	Unstressed
	Purity 99%			+/- 19.1807	µg/mL	Stressed
32	2-Methylnaphthalene		1,004.7 µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)		+/- 12.0107	µg/mL	Unstressed
	Purity 96%			+/- 19.1148	µg/mL	Stressed
33	1-Methylnaphthalene		1,008.5 µg/mL	+/- 5.8635	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)		+/- 12.0557	µg/mL	Unstressed
	Purity 99%			+/- 19.1864	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,001.7 µg/mL	+/- 5.8240	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)		+/- 11.9744	µg/mL	Unstressed
	Purity 99%			+/- 19.0571	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,004.2 µg/mL	+/- 5.8385	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)		+/- 12.0043	µg/mL	Unstressed
	Purity 99%			+/- 19.1046	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,005.4 µg/mL	+/- 5.8455	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)		+/- 12.0186	µg/mL	Unstressed
	Purity 99%			+/- 19.1274	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,003.8 µg/mL	+/- 5.8362	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)		+/- 11.9995	µg/mL	Unstressed
	Purity 99%			+/- 19.0970	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.4 µg/mL	+/- 5.8513	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)		+/- 12.0306	µg/mL	Unstressed
	Purity 99%			+/- 19.1465	µg/mL	Stressed
39	Biphenyl		1,006.9 µg/mL	+/- 5.8542	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKCD8504)		+/- 12.0365	µg/mL	Unstressed
	Purity 99%			+/- 19.1560	µg/mL	Stressed

40	2-Nitroaniline		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBV9629V)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
41	Acenaphthylene		1,002.1	µg/mL	+/-	5.8266	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot N25T)			+/-	11.9797	µg/mL	Unstressed
	Purity 98%				+/-	19.0656	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,009.8	µg/mL	+/-	5.8711	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	12.0712	µg/mL	Unstressed
	Purity 99%				+/-	19.2112	µg/mL	Stressed
43	Dimethylphthalate		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,006.0	µg/mL	+/-	5.8490	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	12.0258	µg/mL	Unstressed
	Purity 99%				+/-	19.1389	µg/mL	Stressed
45	3-Nitroaniline		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
46	Acenaphthene		1,004.9	µg/mL	+/-	5.8426	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCG4614)			+/-	12.0126	µg/mL	Unstressed
	Purity 99%				+/-	19.1179	µg/mL	Stressed
47	2,4-Dinitrophenol		2,016.7	µg/mL	+/-	11.7253	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBH7564)			+/-	24.1078	µg/mL	Unstressed
	Purity 99%				+/-	38.3671	µg/mL	Stressed
48	Dibenzofuran		1,002.8	µg/mL	+/-	5.8304	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)			+/-	11.9875	µg/mL	Unstressed
	Purity 99%				+/-	19.0780	µg/mL	Stressed
49	4-Nitrophenol		2,004.8	µg/mL	+/-	11.6561	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/-	23.9655	µg/mL	Unstressed
	Purity 99%				+/-	38.1407	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
52	Fluorene		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10207515)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
53	n-Hexadecane (C16)		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ7508)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
54	Diethylphthalate		1,007.5	µg/mL	+/-	5.8577	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)			+/-	12.0437	µg/mL	Unstressed
	Purity 99%				+/-	19.1674	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKCD9935)			+/-	12.0067	µg/mL	Unstressed
	Purity 99%				+/-	19.1084	µg/mL	Stressed

56	4-Nitroaniline		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBT9940)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,008.4	µg/mL	+/-	11.6770	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LRAC0549)			+/-	24.0085	µg/mL	Unstressed
	Purity 99%				+/-	38.2092	µg/mL	Stressed
58	Diphenylamine		852.7	µg/mL	+/-	4.9691	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1988	µg/mL	Unstressed
	Purity 99%				+/-	16.2259	µg/mL	Stressed
59	Azobenzene		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBW2006)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
61	Hexachlorobenzene		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7990700)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
62	Pentachlorophenol		2,010.3	µg/mL	+/-	11.6881	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 190227CGKJ)			+/-	24.0313	µg/mL	Unstressed
	Purity 99%				+/-	38.2454	µg/mL	Stressed
63	n-Octadecane (C18)		1,007.4	µg/mL	+/-	5.8571	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot O8LZH)			+/-	12.0425	µg/mL	Unstressed
	Purity 99%				+/-	19.1655	µg/mL	Stressed
64	Phenanthrene		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCD3760)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
65	Anthracene		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKCC7378)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
66	Carbazole		1,004.7	µg/mL	+/-	5.8414	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 8210200)			+/-	12.0102	µg/mL	Unstressed
	Purity 99%				+/-	19.1141	µg/mL	Stressed
67	Di-n-butylphthalate		1,009.5	µg/mL	+/-	5.8693	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBW8599V)			+/-	12.0676	µg/mL	Unstressed
	Purity 99%				+/-	19.2054	µg/mL	Stressed
68	Fluoranthene		1,007.3	µg/mL	+/-	5.8568	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0418	µg/mL	Unstressed
	Purity 98%				+/-	19.1644	µg/mL	Stressed
69	Pyrene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBW7698)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
70	Benzyl butyl phthalate		1,008.5	µg/mL	+/-	5.8635	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0557	µg/mL	Unstressed
	Purity 99%				+/-	19.1864	µg/mL	Stressed
71	Benz(a)anthracene		1,007.1	µg/mL	+/-	5.8556	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0022018)			+/-	12.0394	µg/mL	Unstressed
	Purity 96%				+/-	19.1605	µg/mL	Stressed

72	Chrysene		1,000.5	µg/mL	+/- 5.8170	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/- 11.9600	µg/mL	Unstressed
	Purity 99%				+/- 19.0342	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.9	µg/mL	+/- 5.8309	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/- 11.9887	µg/mL	Unstressed
	Purity 99%				+/- 19.0799	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.8	µg/mL	+/- 5.8594	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7962600)			+/- 12.0473	µg/mL	Unstressed
	Purity 99%				+/- 19.1731	µg/mL	Stressed
75	Benzo(b)fluoranthene		987.2	µg/mL	+/- 5.7394	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/- 11.8005	µg/mL	Unstressed
	Purity 98%				+/- 18.7803	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.6	µg/mL	+/- 5.8466	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/- 12.0210	µg/mL	Unstressed
	Purity 99%				+/- 19.1312	µg/mL	Stressed
77	Benzo(a)pyrene		1,001.9	µg/mL	+/- 5.8251	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot 1-NAZ-99-1)			+/- 11.9768	µg/mL	Unstressed
	Purity 99%				+/- 19.0609	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,002.8	µg/mL	+/- 5.8304	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/- 11.9875	µg/mL	Unstressed
	Purity 99%				+/- 19.0780	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.6	µg/mL	+/- 5.8234	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/- 11.9732	µg/mL	Unstressed
	Purity 99%				+/- 19.0551	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,006.9	µg/mL	+/- 5.8542	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/- 12.0365	µg/mL	Unstressed
	Purity 99%				+/- 19.1560	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

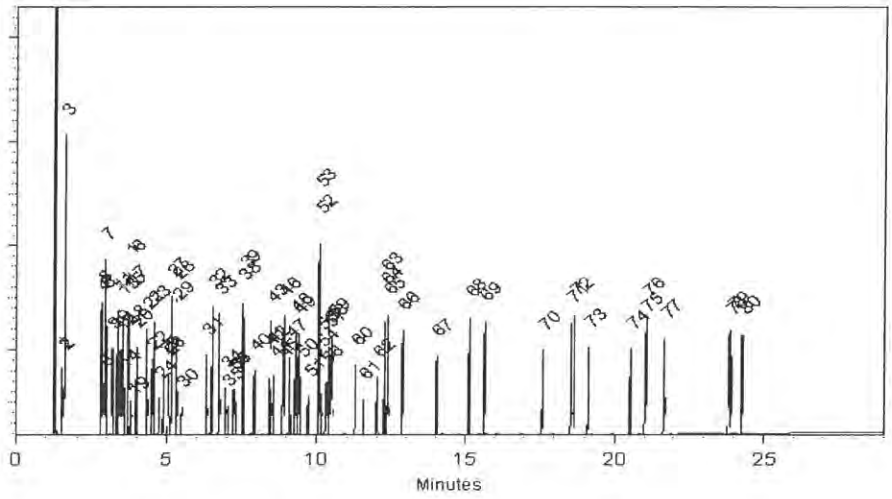
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 28-Mar-2019 **Balance:** B442140311

Feng-Yun Lo - QC Analyst

Date Passed: 01-May-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

EXLIST1_S10_00013

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0150520

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

4364463
ID: EXLIST1_S10_00013
Exp:01/31/21 Prpd:BMB Opn:08/30/19
8270 List 1/Standard #10

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2021 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene	2,001.8 µg/mL	+/- 11.6389	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.2415	µg/mL	Unstressed
	Purity 98%		+/- 114.8678	µg/mL	Stressed
2	Benzoic acid	2,005.8 µg/mL	+/- 11.6619	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKCC9722)		+/- 112.4632	µg/mL	Unstressed
	Purity 99%		+/- 115.0947	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

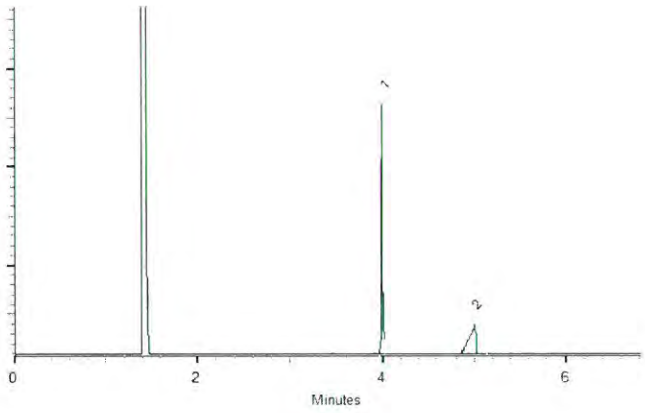
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 01-Jul-2019 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 03-Jul-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

exLIST1_S11_00012

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4458546
ID exLIST1_S11_00012
Exp:09/30/20 Prpd:BMB Opn:10/23/19
8270 List 1/Standard #11

Catalog No. : 569732 **Lot No.:** A0147257

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 **Purity** 99%	(Lot SHBJ3062)	2,004.5 µg/mL	+/- 11.6543 +/- 64.2556 +/- 74.6946	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 **Purity** 99%	(Lot I16X016)	2,001.7 µg/mL	+/- 11.6381 +/- 64.1658 +/- 74.5903	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 **Purity** 99%	(Lot 77P7D)	2,002.2 µg/mL	+/- 11.6410 +/- 64.1818 +/- 74.6089	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

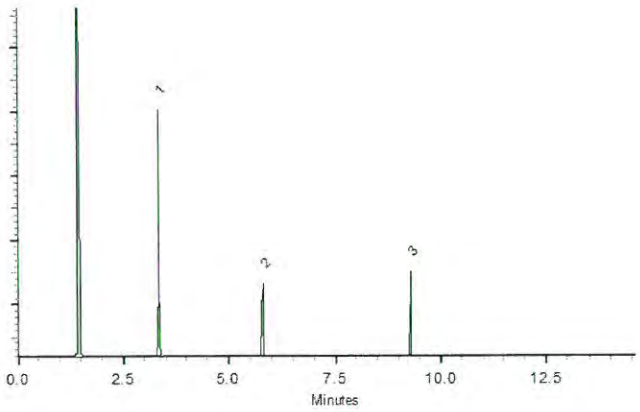
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Clara Windle - Operations Technician I

Date Mixed: 19-Mar-2019 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 21-Mar-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

exLIST1_S9_00018

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Catalog No. : 569730 **Lot No.:** A0145230

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

4364458
ID exLIST1_S9_00018
Exp 07/31/20 Prpd BMB Opn 08/30/19
8270 List 1/Std #9

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine **CAS #** 92-87-5 (Lot 190115JACG) **Purity** 99%	2,009.3 µg/mL	+/- 11.6822 +/- 24.0193 +/- 38.2264	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1 (Lot 190104JACG) **Purity** 99%	2,004.5 µg/mL	+/- 11.6543 +/- 23.9619 +/- 38.1350	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

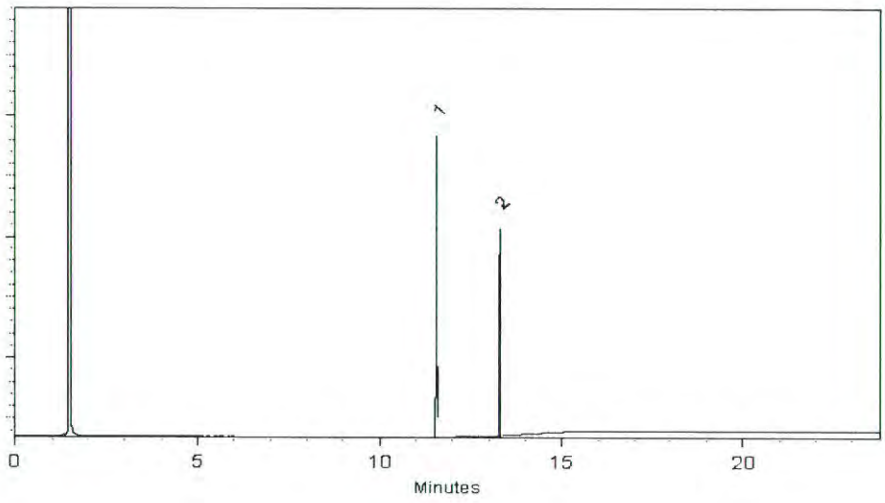
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph J Jaglowski
Joseph Jaglowski - Mix Technician **Date Mixed:** 23-Jan-2019 **Balance:** 1128360905

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 30-Jan-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

exLIST1_SURR_00004

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Catalog No. : 567685 **Lot No.:** A0153515

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

4458552
ID exLIST1_SURR_00004
Exp:10/31/24 Prpd:BMB Opn:10/23/19
8270 Surrogate Standard

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2024 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBF3761V)	5,005.5 µg/mL	+/- 29.1024 +/- 146.0773 +/- 177.2591	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot CD-105)	5,003.6 µg/mL	+/- 29.0914 +/- 146.0218 +/- 177.1919	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-29603)	5,003.5 µg/mL	+/- 29.0908 +/- 146.0189 +/- 177.1883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot Q165-67)	5,005.9 µg/mL	+/- 29.1047 +/- 146.0889 +/- 177.2733	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot S55013V)	5,008.9 µg/mL	+/- 29.1222 +/- 146.1765 +/- 177.3795	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-27278)	5,002.3 µg/mL	+/- 29.0838 +/- 145.9839 +/- 177.1458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

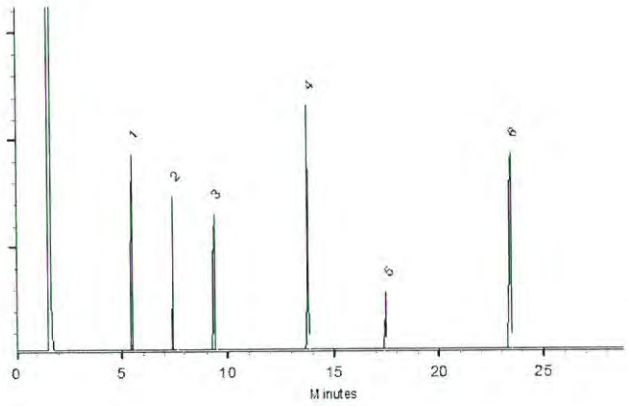
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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Miranda Kline
Miranda Kline - Operations Technician I

Date Mixed: 01-Oct-2019 **Balance:** 1128360905

Justine Albertson
Justine Albertson - Operations Tech-ARM QC

Date Passed: 04-Oct-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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Purity Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMDFTPPR_00012

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Catalog No. : 31615 **Lot No.:** A0151587

Description : GC/MS Tuning Mixture

GC/MS Tuning Mixture 1,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachlorophenol **CAS #** 87-86-5 (Lot 190227CGKJ) **Purity** 99%	1,002.4 µg/mL	+/- 5.8826 µg/mL +/- 45.6585 µg/mL +/- 65.9247 µg/mL	Gravimetric Unstressed Stressed
2	DFTPP (Decafluorotriphenylphosphine) **CAS #** 5074-71-5 (Lot 10198748) **Purity** 99%	1,008.8 µg/mL	+/- 5.9202 µg/mL +/- 45.9501 µg/mL +/- 66.3457 µg/mL	Gravimetric Unstressed Stressed
3	Benzidine **CAS #** 92-87-5 (Lot 190409JACG) **Purity** 99%	1,000.8 µg/mL	+/- 5.8733 µg/mL +/- 45.5857 µg/mL +/- 65.8195 µg/mL	Gravimetric Unstressed Stressed
4	4,4'-DDT **CAS #** 50-29-3 (Lot S37912V) **Purity** 99%	1,010.0 µg/mL	+/- 5.9272 µg/mL +/- 46.0047 µg/mL +/- 66.4246 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

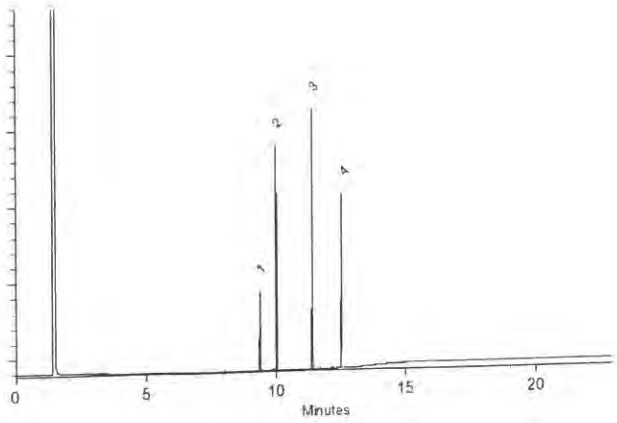
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

Date Mixed: 06-Aug-2019 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 09-Aug-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0144889

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2024 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4		2,016.2 µg/mL	+/- 11.7221	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)		+/- 90.8086	µg/mL	Unstressed
	Purity 99%			+/- 100.7634	µg/mL	Stressed
2	Naphthalene-d8		2,012.3 µg/mL	+/- 11.6994	µg/mL	Gravimetric
	CAS # 1146-65-2	(Lot M-1452)		+/- 90.6329	µg/mL	Unstressed
	Purity 99%			+/- 100.5684	µg/mL	Stressed
3	Acenaphthene-d10		2,011.2 µg/mL	+/- 11.6930	µg/mL	Gravimetric
	CAS # 15067-26-2	(Lot PR-28021)		+/- 90.5834	µg/mL	Unstressed
	Purity 99%			+/- 100.5135	µg/mL	Stressed
4	Phenanthrene-d10		2,014.0 µg/mL	+/- 11.7093	µg/mL	Gravimetric
	CAS # 1517-22-2	(Lot PR-27621)		+/- 90.7095	µg/mL	Unstressed
	Purity 99%			+/- 100.6534	µg/mL	Stressed
5	Chrysene-d12		2,015.7 µg/mL	+/- 11.7192	µg/mL	Gravimetric
	CAS # 1719-03-5	(Lot PR-29295)		+/- 90.7861	µg/mL	Unstressed
	Purity 99%			+/- 100.7384	µg/mL	Stressed
6	Perylene-d12		2,014.7 µg/mL	+/- 11.7136	µg/mL	Gravimetric
	CAS # 1520-96-3	(Lot PR-24113)		+/- 90.7433	µg/mL	Unstressed
	Purity 99%			+/- 100.6909	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

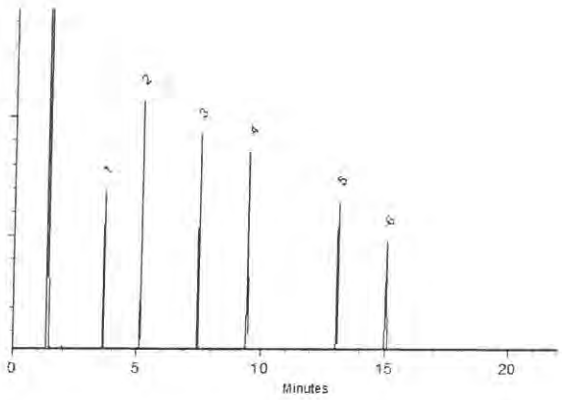
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 13-Jan-2019 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 15-Jan-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0153348

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2024 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,001.9 µg/mL	+/- 11.6390 µg/mL +/- 90.1653 µg/mL +/- 100.0495 µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 (Lot M-1452) **Purity** 99%	2,004.6 µg/mL	+/- 11.6549 µg/mL +/- 90.2884 µg/mL +/- 100.1861 µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 (Lot PR-28021) **Purity** 99%	2,003.3 µg/mL	+/- 11.6476 µg/mL +/- 90.2313 µg/mL +/- 100.1228 µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 (Lot PR-27621) **Purity** 99%	2,001.9 µg/mL	+/- 11.6390 µg/mL +/- 90.1653 µg/mL +/- 100.0495 µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 (Lot PR-29295) **Purity** 99%	2,003.7 µg/mL	+/- 11.6499 µg/mL +/- 90.2493 µg/mL +/- 100.1428 µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 (Lot PR-27342) **Purity** 99%	2,002.0 µg/mL	+/- 11.6398 µg/mL +/- 90.1713 µg/mL +/- 100.0562 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

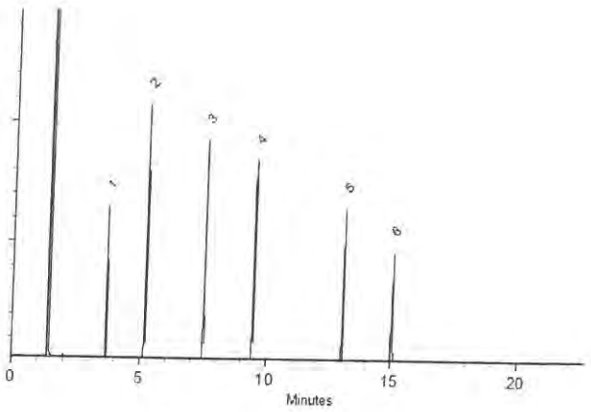
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 26-Sep-2019 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 01-Oct-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0147571

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000µg/mL, Methylene chloride, 5mL/ampul

Container Size : **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,004.1 µg/mL	+/- 5.8379 +/- 12.0031 +/- 19.1027	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 190214JLM) **Purity** 99%	1,004.7 µg/mL	+/- 5.8414 +/- 12.0102 +/- 19.1141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBJ3129) **Purity** 99%	2,005.9 µg/mL	+/- 11.6625 +/- 23.9787 +/- 38.1617	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.7 µg/mL	+/- 5.8647 +/- 12.0581 +/- 19.1902	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.5 µg/mL	+/- 5.8519 +/- 12.0318 +/- 19.1484	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBJ2059) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 +/- 12.0282 +/- 19.1427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBK4937) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 +/- 12.0569 +/- 19.1883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot STBF2690V)	1,007.3 µg/mL	+/- 5.8565 +/- 12.0413 +/- 19.1636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBQ7100V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,008.9 µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBJ0534)	1,002.7 µg/mL	+/- 5.8298 +/- 11.9863 +/- 19.0761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBG3111V)	1,004.2 µg/mL	+/- 5.8385 +/- 12.0043 +/- 19.1046	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBH6379)	1,009.2 µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 8021900)	1,006.3 µg/mL	+/- 5.8507 +/- 12.0294 +/- 19.1446	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot STBH5416)	1,006.8 µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	500.9 µg/mL	+/- 2.9190 +/- 5.9911 +/- 9.5315	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.6 µg/mL	+/- 2.9173 +/- 5.9875 +/- 9.5258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot 2D5VJ)	1,004.7 µg/mL	+/- 5.8414 +/- 12.0102 +/- 19.1141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,001.5 µg/mL	+/- 5.8228 +/- 11.9720 +/- 19.0532	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBG5577V)	1,006.8 µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	1,007.0 µg/mL	+/- 5.8545 +/- 12.0371 +/- 19.1569	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,005.9 µg/mL	+/- 5.8484 +/- 12.0246 +/- 19.1370	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,000.5 µg/mL	+/- 5.8170 +/- 11.9600 +/- 19.0342	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 8238500)	1,002.7 µg/mL	+/- 5.8298 +/- 11.9863 +/- 19.0761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBJ8113V)	1,005.3 µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBJ9215)	1,005.9 µg/mL	+/- 5.8484 +/- 12.0246 +/- 19.1370	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBZ8680V)	1,002.3 µg/mL	+/- 5.8275 +/- 11.9816 +/- 19.0685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBP8620V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot BCBJ1580V)	1,005.1 µg/mL	+/- 5.8437 +/- 12.0150 +/- 19.1217	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 99%	(Lot J31X013)	1,005.8 µg/mL	+/- 5.8478 +/- 12.0234 +/- 19.1351	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC7309V)	1,008.2 µg/mL	+/- 5.8618 +/- 12.0521 +/- 19.1807	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 96%	(Lot STBG8884)	1,004.7 µg/mL	+/- 5.8416 +/- 12.0107 +/- 19.1148	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-9)	1,008.5 µg/mL	+/- 5.8635 +/- 12.0557 +/- 19.1864	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot MKBW7717V)	1,001.7 µg/mL	+/- 5.8240 +/- 11.9744 +/- 19.0571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 99%	(Lot 0012015)	1,004.2 µg/mL	+/- 5.8385 +/- 12.0043 +/- 19.1046	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot STBF3742V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHN01)	1,003.8 µg/mL	+/- 5.8362 +/- 11.9995 +/- 19.0970	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI)	1,006.4 µg/mL	+/- 5.8513 +/- 12.0306 +/- 19.1465	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot MKCD8504)	1,006.9 µg/mL	+/- 5.8542 +/- 12.0365 +/- 19.1560	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBV9629V)	1,004.8	µg/mL	+/- 5.8420 +/- 12.0114 +/- 19.1160	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 98%	(Lot N25T)	1,002.1	µg/mL	+/- 5.8266 +/- 11.9797 +/- 19.0656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,007.7	µg/mL	+/- 5.8589 +/- 12.0461 +/- 19.1712	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,006.0	µg/mL	+/- 5.8490 +/- 12.0258 +/- 19.1389	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,004.0	µg/mL	+/- 5.8373 +/- 12.0019 +/- 19.1008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCG4614)	1,004.9	µg/mL	+/- 5.8426 +/- 12.0126 +/- 19.1179	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBH7564)	2,016.7	µg/mL	+/- 11.7253 +/- 24.1078 +/- 38.3671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,002.8	µg/mL	+/- 5.8304 +/- 11.9875 +/- 19.0780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,004.8	µg/mL	+/- 11.6561 +/- 23.9655 +/- 38.1407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,001.5	µg/mL	+/- 5.8228 +/- 11.9720 +/- 19.0532	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 99%	(Lot 10207515)	1,001.2	µg/mL	+/- 5.8211 +/- 11.9684 +/- 19.0475	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ7508)	1,008.3	µg/mL	+/- 5.8623 +/- 12.0533 +/- 19.1826	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKCD9935)	1,004.4	µg/mL	+/- 5.8397 +/- 12.0067 +/- 19.1084	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,006.8	µg/mL	+/- 5.8536	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBT9940)			+/- 12.0353	µg/mL	Unstressed
	Purity 99%				+/- 19.1541	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,008.4	µg/mL	+/- 11.6770	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LRAC0549)			+/- 24.0085	µg/mL	Unstressed
	Purity 99%				+/- 38.2092	µg/mL	Stressed
58	Diphenylamine		852.7	µg/mL	+/- 4.9691	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/- 10.1988	µg/mL	Unstressed
	Purity 99%				+/- 16.2259	µg/mL	Stressed
59	Azobenzene		1,001.4	µg/mL	+/- 5.8222	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBW2006)			+/- 11.9708	µg/mL	Unstressed
	Purity 99%				+/- 19.0513	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,005.8	µg/mL	+/- 5.8478	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/- 12.0234	µg/mL	Unstressed
	Purity 99%				+/- 19.1351	µg/mL	Stressed
61	Hexachlorobenzene		1,004.8	µg/mL	+/- 5.8420	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7990700)			+/- 12.0114	µg/mL	Unstressed
	Purity 99%				+/- 19.1160	µg/mL	Stressed
62	Pentachlorophenol		2,010.3	µg/mL	+/- 11.6881	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 190227CGKJ)			+/- 24.0313	µg/mL	Unstressed
	Purity 99%				+/- 38.2454	µg/mL	Stressed
63	n-Octadecane (C18)		1,007.4	µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot O8LZH)			+/- 12.0425	µg/mL	Unstressed
	Purity 99%				+/- 19.1655	µg/mL	Stressed
64	Phenanthrene		1,009.2	µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCD3760)			+/- 12.0640	µg/mL	Unstressed
	Purity 99%				+/- 19.1997	µg/mL	Stressed
65	Anthracene		1,004.6	µg/mL	+/- 5.8408	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKCC7378)			+/- 12.0091	µg/mL	Unstressed
	Purity 99%				+/- 19.1122	µg/mL	Stressed
66	Carbazole		1,004.7	µg/mL	+/- 5.8414	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 8210200)			+/- 12.0102	µg/mL	Unstressed
	Purity 99%				+/- 19.1141	µg/mL	Stressed
67	Di-n-butylphthalate		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBW8599V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
68	Fluoranthene		1,007.3	µg/mL	+/- 5.8568	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/- 12.0418	µg/mL	Unstressed
	Purity 98%				+/- 19.1644	µg/mL	Stressed
69	Pyrene		1,000.7	µg/mL	+/- 5.8182	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBW7698)			+/- 11.9624	µg/mL	Unstressed
	Purity 99%				+/- 19.0380	µg/mL	Stressed
70	Benzyl butyl phthalate		1,008.5	µg/mL	+/- 5.8635	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/- 12.0557	µg/mL	Unstressed
	Purity 99%				+/- 19.1864	µg/mL	Stressed
71	Benz(a)anthracene		1,007.1	µg/mL	+/- 5.8556	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0022018)			+/- 12.0394	µg/mL	Unstressed
	Purity 96%				+/- 19.1605	µg/mL	Stressed

72	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot 012015)	1,000.5 µg/mL	+/- 5.8170 +/- 11.9600 +/- 19.0342	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBZ3868V)	1,002.9 µg/mL	+/- 5.8309 +/- 11.9887 +/- 19.0799	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 7962600)	1,007.8 µg/mL	+/- 5.8594 +/- 12.0473 +/- 19.1731	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 98%	(Lot 012012B)	987.2 µg/mL	+/- 5.7394 +/- 11.8005 +/- 18.7803	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012012K)	1,005.6 µg/mL	+/- 5.8466 +/- 12.0210 +/- 19.1312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot 1-NAZ-99-1)	1,001.9 µg/mL	+/- 5.8251 +/- 11.9768 +/- 19.0609	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,002.8 µg/mL	+/- 5.8304 +/- 11.9875 +/- 19.0780	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,001.6 µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER05121401)	1,006.9 µg/mL	+/- 5.8542 +/- 12.0365 +/- 19.1560	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

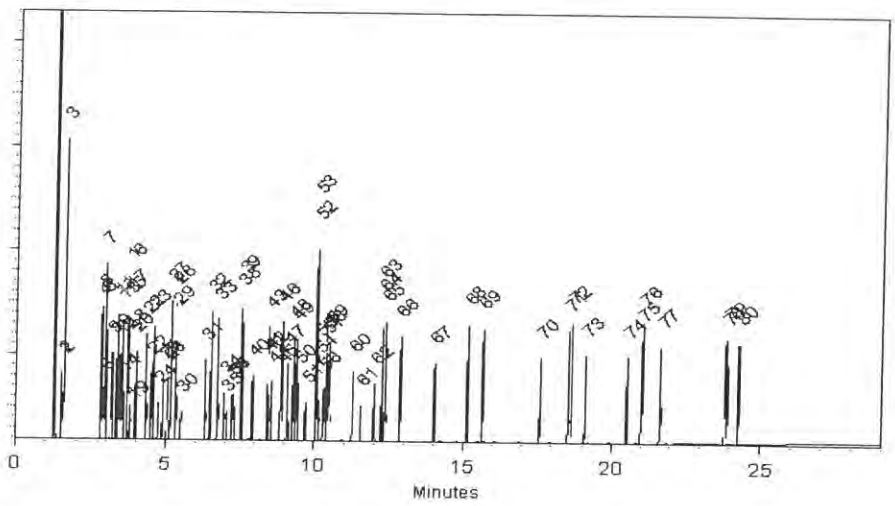
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 28-Mar-2019 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 01-May-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 S1_00011

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0147571

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000µg/mL, Methylene chloride, 5mL/ampul

Container Size : **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,004.1 µg/mL	+/- 5.8379 +/- 12.0031 +/- 19.1027	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 190214JLM) **Purity** 99%	1,004.7 µg/mL	+/- 5.8414 +/- 12.0102 +/- 19.1141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBJ3129) **Purity** 99%	2,005.9 µg/mL	+/- 11.6625 +/- 23.9787 +/- 38.1617	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.7 µg/mL	+/- 5.8647 +/- 12.0581 +/- 19.1902	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.5 µg/mL	+/- 5.8519 +/- 12.0318 +/- 19.1484	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBJ2059) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 +/- 12.0282 +/- 19.1427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBK4937) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 +/- 12.0569 +/- 19.1883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot STBF2690V)	1,007.3 µg/mL	+/- 5.8565 +/- 12.0413 +/- 19.1636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBQ7100V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,008.9 µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBJ0534)	1,002.7 µg/mL	+/- 5.8298 +/- 11.9863 +/- 19.0761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBG3111V)	1,004.2 µg/mL	+/- 5.8385 +/- 12.0043 +/- 19.1046	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBH6379)	1,009.2 µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 99%	(Lot 8021900)	1,006.3 µg/mL	+/- 5.8507 +/- 12.0294 +/- 19.1446	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot STBH5416)	1,006.8 µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	500.9 µg/mL	+/- 2.9190 +/- 5.9911 +/- 9.5315	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.6 µg/mL	+/- 2.9173 +/- 5.9875 +/- 9.5258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot 2D5VJ)	1,004.7 µg/mL	+/- 5.8414 +/- 12.0102 +/- 19.1141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,001.5 µg/mL	+/- 5.8228 +/- 11.9720 +/- 19.0532	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBG5577V)	1,006.8 µg/mL	+/- 5.8536 +/- 12.0353 +/- 19.1541	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	1,007.0 µg/mL	+/- 5.8545 +/- 12.0371 +/- 19.1569	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,005.9 µg/mL	+/- 5.8484 +/- 12.0246 +/- 19.1370	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,000.5 µg/mL	+/- 5.8170 +/- 11.9600 +/- 19.0342	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 8238500)	1,002.7 µg/mL	+/- 5.8298 +/- 11.9863 +/- 19.0761	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBJ8113V)	1,005.3 µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBJ9215)	1,005.9 µg/mL	+/- 5.8484 +/- 12.0246 +/- 19.1370	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBZ8680V)	1,002.3 µg/mL	+/- 5.8275 +/- 11.9816 +/- 19.0685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBP8620V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot BCBJ1580V)	1,005.1 µg/mL	+/- 5.8437 +/- 12.0150 +/- 19.1217	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 99%	(Lot J31X013)	1,005.8 µg/mL	+/- 5.8478 +/- 12.0234 +/- 19.1351	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC7309V)	1,008.2 µg/mL	+/- 5.8618 +/- 12.0521 +/- 19.1807	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 96%	(Lot STBG8884)	1,004.7 µg/mL	+/- 5.8416 +/- 12.0107 +/- 19.1148	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-9)	1,008.5 µg/mL	+/- 5.8635 +/- 12.0557 +/- 19.1864	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot MKBW7717V)	1,001.7 µg/mL	+/- 5.8240 +/- 11.9744 +/- 19.0571	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 99%	(Lot 0012015)	1,004.2 µg/mL	+/- 5.8385 +/- 12.0043 +/- 19.1046	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot STBF3742V)	1,005.4 µg/mL	+/- 5.8455 +/- 12.0186 +/- 19.1274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHN01)	1,003.8 µg/mL	+/- 5.8362 +/- 11.9995 +/- 19.0970	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI)	1,006.4 µg/mL	+/- 5.8513 +/- 12.0306 +/- 19.1465	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot MKCD8504)	1,006.9 µg/mL	+/- 5.8542 +/- 12.0365 +/- 19.1560	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline		1,004.8	µg/mL	+/- 5.8420	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBV9629V)			+/- 12.0114	µg/mL	Unstressed
	Purity 99%				+/- 19.1160	µg/mL	Stressed
41	Acenaphthylene		1,002.1	µg/mL	+/- 5.8266	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot N25T)			+/- 11.9797	µg/mL	Unstressed
	Purity 98%				+/- 19.0656	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,009.8	µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/- 12.0712	µg/mL	Unstressed
	Purity 99%				+/- 19.2112	µg/mL	Stressed
43	Dimethylphthalate		1,007.7	µg/mL	+/- 5.8589	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/- 12.0461	µg/mL	Unstressed
	Purity 99%				+/- 19.1712	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,006.0	µg/mL	+/- 5.8490	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/- 12.0258	µg/mL	Unstressed
	Purity 99%				+/- 19.1389	µg/mL	Stressed
45	3-Nitroaniline		1,004.0	µg/mL	+/- 5.8373	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/- 12.0019	µg/mL	Unstressed
	Purity 99%				+/- 19.1008	µg/mL	Stressed
46	Acenaphthene		1,004.9	µg/mL	+/- 5.8426	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCG4614)			+/- 12.0126	µg/mL	Unstressed
	Purity 99%				+/- 19.1179	µg/mL	Stressed
47	2,4-Dinitrophenol		2,016.7	µg/mL	+/- 11.7253	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBH7564)			+/- 24.1078	µg/mL	Unstressed
	Purity 99%				+/- 38.3671	µg/mL	Stressed
48	Dibenzofuran		1,002.8	µg/mL	+/- 5.8304	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)			+/- 11.9875	µg/mL	Unstressed
	Purity 99%				+/- 19.0780	µg/mL	Stressed
49	4-Nitrophenol		2,004.8	µg/mL	+/- 11.6561	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/- 23.9655	µg/mL	Unstressed
	Purity 99%				+/- 38.1407	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,005.2	µg/mL	+/- 5.8443	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690)			+/- 12.0162	µg/mL	Unstressed
	Purity 99%				+/- 19.1236	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.5	µg/mL	+/- 5.8228	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)			+/- 11.9720	µg/mL	Unstressed
	Purity 99%				+/- 19.0532	µg/mL	Stressed
52	Fluorene		1,001.2	µg/mL	+/- 5.8211	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10207515)			+/- 11.9684	µg/mL	Unstressed
	Purity 99%				+/- 19.0475	µg/mL	Stressed
53	n-Hexadecane (C16)		1,008.3	µg/mL	+/- 5.8623	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ7508)			+/- 12.0533	µg/mL	Unstressed
	Purity 99%				+/- 19.1826	µg/mL	Stressed
54	Diethylphthalate		1,007.5	µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)			+/- 12.0437	µg/mL	Unstressed
	Purity 99%				+/- 19.1674	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,004.4	µg/mL	+/- 5.8397	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKCD9935)			+/- 12.0067	µg/mL	Unstressed
	Purity 99%				+/- 19.1084	µg/mL	Stressed

56	4-Nitroaniline		1,006.8	µg/mL	+/- 5.8536	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBT9940)			+/- 12.0353	µg/mL	Unstressed
	Purity 99%				+/- 19.1541	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,008.4	µg/mL	+/- 11.6770	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LRAC0549)			+/- 24.0085	µg/mL	Unstressed
	Purity 99%				+/- 38.2092	µg/mL	Stressed
58	Diphenylamine		852.7	µg/mL	+/- 4.9691	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/- 10.1988	µg/mL	Unstressed
	Purity 99%				+/- 16.2259	µg/mL	Stressed
59	Azobenzene		1,001.4	µg/mL	+/- 5.8222	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBW2006)			+/- 11.9708	µg/mL	Unstressed
	Purity 99%				+/- 19.0513	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,005.8	µg/mL	+/- 5.8478	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/- 12.0234	µg/mL	Unstressed
	Purity 99%				+/- 19.1351	µg/mL	Stressed
61	Hexachlorobenzene		1,004.8	µg/mL	+/- 5.8420	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7990700)			+/- 12.0114	µg/mL	Unstressed
	Purity 99%				+/- 19.1160	µg/mL	Stressed
62	Pentachlorophenol		2,010.3	µg/mL	+/- 11.6881	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 190227CGKJ)			+/- 24.0313	µg/mL	Unstressed
	Purity 99%				+/- 38.2454	µg/mL	Stressed
63	n-Octadecane (C18)		1,007.4	µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot O8LZH)			+/- 12.0425	µg/mL	Unstressed
	Purity 99%				+/- 19.1655	µg/mL	Stressed
64	Phenanthrene		1,009.2	µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCD3760)			+/- 12.0640	µg/mL	Unstressed
	Purity 99%				+/- 19.1997	µg/mL	Stressed
65	Anthracene		1,004.6	µg/mL	+/- 5.8408	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKCC7378)			+/- 12.0091	µg/mL	Unstressed
	Purity 99%				+/- 19.1122	µg/mL	Stressed
66	Carbazole		1,004.7	µg/mL	+/- 5.8414	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 8210200)			+/- 12.0102	µg/mL	Unstressed
	Purity 99%				+/- 19.1141	µg/mL	Stressed
67	Di-n-butylphthalate		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBW8599V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
68	Fluoranthene		1,007.3	µg/mL	+/- 5.8568	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/- 12.0418	µg/mL	Unstressed
	Purity 98%				+/- 19.1644	µg/mL	Stressed
69	Pyrene		1,000.7	µg/mL	+/- 5.8182	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBW7698)			+/- 11.9624	µg/mL	Unstressed
	Purity 99%				+/- 19.0380	µg/mL	Stressed
70	Benzyl butyl phthalate		1,008.5	µg/mL	+/- 5.8635	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/- 12.0557	µg/mL	Unstressed
	Purity 99%				+/- 19.1864	µg/mL	Stressed
71	Benz(a)anthracene		1,007.1	µg/mL	+/- 5.8556	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0022018)			+/- 12.0394	µg/mL	Unstressed
	Purity 96%				+/- 19.1605	µg/mL	Stressed

72	Chrysene		1,000.5 µg/mL	+/- 5.8170	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)		+/- 11.9600	µg/mL	Unstressed
	Purity 99%			+/- 19.0342	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.9 µg/mL	+/- 5.8309	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)		+/- 11.9887	µg/mL	Unstressed
	Purity 99%			+/- 19.0799	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.8 µg/mL	+/- 5.8594	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7962600)		+/- 12.0473	µg/mL	Unstressed
	Purity 99%			+/- 19.1731	µg/mL	Stressed
75	Benzo(b)fluoranthene		987.2 µg/mL	+/- 5.7394	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)		+/- 11.8005	µg/mL	Unstressed
	Purity 98%			+/- 18.7803	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.6 µg/mL	+/- 5.8466	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)		+/- 12.0210	µg/mL	Unstressed
	Purity 99%			+/- 19.1312	µg/mL	Stressed
77	Benzo(a)pyrene		1,001.9 µg/mL	+/- 5.8251	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot 1-NAZ-99-1)		+/- 11.9768	µg/mL	Unstressed
	Purity 99%			+/- 19.0609	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,002.8 µg/mL	+/- 5.8304	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)		+/- 11.9875	µg/mL	Unstressed
	Purity 99%			+/- 19.0780	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.6 µg/mL	+/- 5.8234	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)		+/- 11.9732	µg/mL	Unstressed
	Purity 99%			+/- 19.0551	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,006.9 µg/mL	+/- 5.8542	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)		+/- 12.0365	µg/mL	Unstressed
	Purity 99%			+/- 19.1560	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

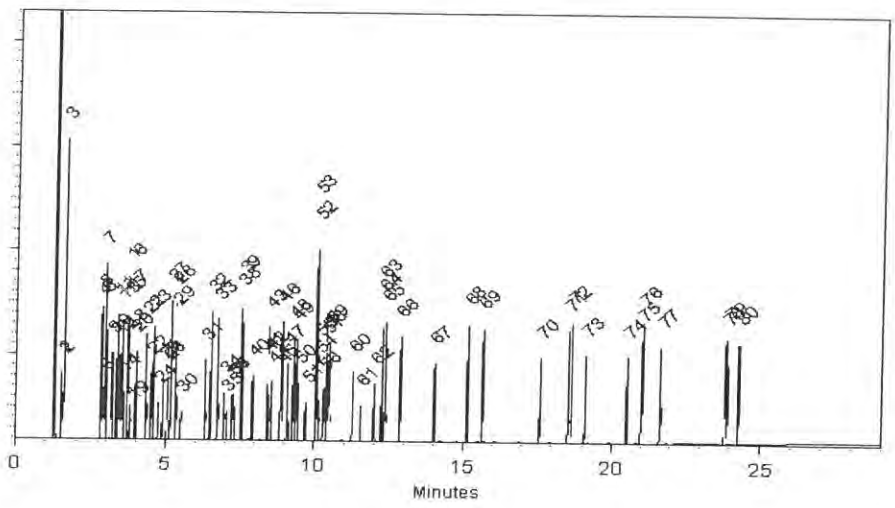
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 28-Mar-2019 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 01-May-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 S10_00006

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0150520

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2021 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene	2,001.8 µg/mL	+/- 11.6389	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.2415	µg/mL	Unstressed
	Purity 98%		+/- 114.8678	µg/mL	Stressed
2	Benzoic acid	2,005.8 µg/mL	+/- 11.6619	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKCC9722)		+/- 112.4632	µg/mL	Unstressed
	Purity 99%		+/- 115.0947	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

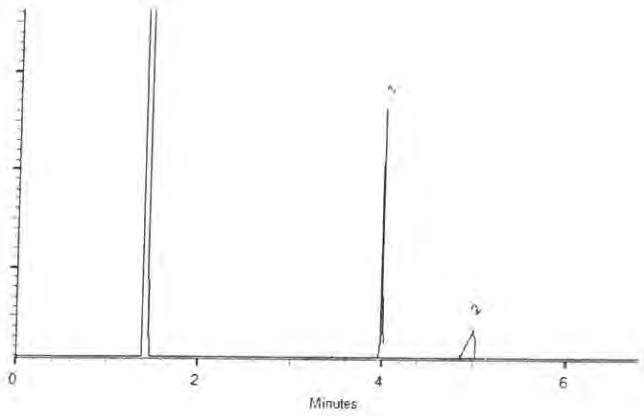
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 01-Jul-2019 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 03-Jul-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0147257

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 (Lot SHBJ3062) **Purity** 99%	2,004.5 µg/mL	+/- 11.6543 +/- 64.2556 +/- 74.6946	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 (Lot I16X016) **Purity** 99%	2,001.7 µg/mL	+/- 11.6381 +/- 64.1658 +/- 74.5903	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 (Lot 77P7D) **Purity** 99%	2,002.2 µg/mL	+/- 11.6410 +/- 64.1818 +/- 74.6089	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

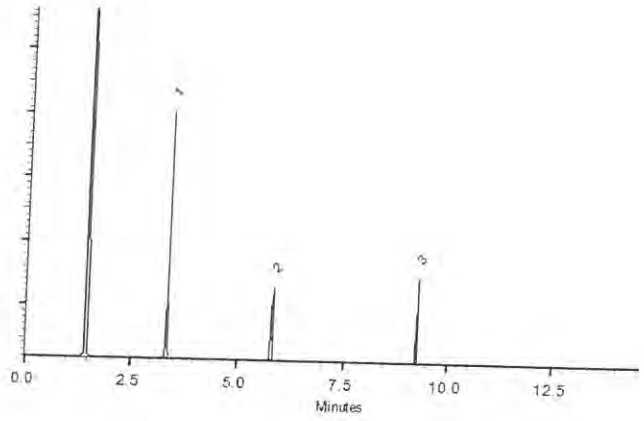
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Clara Windle - Operations Technician I

Date Mixed: 19-Mar-2019 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 21-Mar-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0145230

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	2,009.3 µg/mL	+/- 11.6822 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 190115JACG)		+/- 24.0193 µg/mL	Unstressed
	Purity 99%		+/- 38.2264 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,004.5 µg/mL	+/- 11.6543 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 190104JACG)		+/- 23.9619 µg/mL	Unstressed
	Purity 99%		+/- 38.1350 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

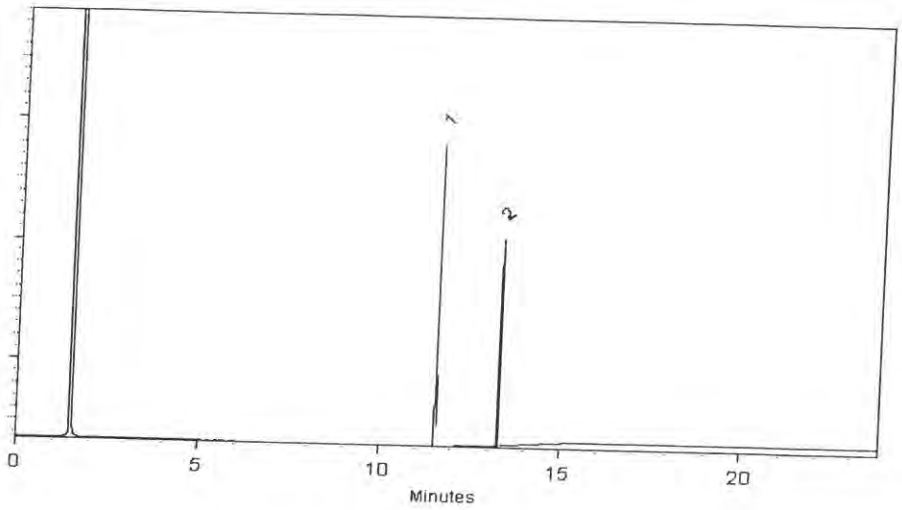
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 23-Jan-2019 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 30-Jan-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995.SEC **Lot No.:** A0148967

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane **CAS #** 123-91-1.SEC (Lot CHA4A) **Purity** 99%	1,002.8 µg/mL	+/- 5.8438 +/- 11.9941 +/- 19.0821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9.SEC (Lot 61H72) **Purity** 99%	1,001.0 µg/mL	+/- 5.8333 +/- 11.9726 +/- 19.0478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1.SEC (Lot QN8DK) **Purity** 99%	2,007.8 µg/mL	+/- 11.6735 +/- 24.0014 +/- 38.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2.SEC (Lot EDPYN) **Purity** 99%	1,000.6 µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3.SEC (Lot ZCD3N) **Purity** 99%	1,000.0 µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4.SEC (Lot FA010143) **Purity** 99%	1,000.8 µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5.SEC (Lot UCVNN) **Purity** 99%	1,000.0 µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8.SEC **Purity** 99%	(Lot GJ01)	1,002.8	µg/mL	+/- 5.8438 +/- 11.9941 +/- 19.0821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1.SEC **Purity** 99%	(Lot FMDFD)	1,001.2	µg/mL	+/- 5.8345 +/- 11.9750 +/- 19.0517	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7.SEC **Purity** 99%	(Lot 4Y5DC)	1,001.0	µg/mL	+/- 5.8333 +/- 11.9726 +/- 19.0478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6.SEC **Purity** 99%	(Lot QZBUO)	1,002.8	µg/mL	+/- 5.8438 +/- 11.9941 +/- 19.0821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1.SEC **Purity** 99%	(Lot R6QDM)	1,000.2	µg/mL	+/- 5.8287 +/- 11.9630 +/- 19.0326	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7.SEC **Purity** 99%	(Lot NC7HL)	1,002.4	µg/mL	+/- 5.8415 +/- 11.9893 +/- 19.0745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1.SEC **Purity** 99%	(Lot 2-KMW-57-8)	1,002.6	µg/mL	+/- 5.8427 +/- 11.9917 +/- 19.0783	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2.SEC **Purity** 99%	(Lot NSGTI)	1,002.6	µg/mL	+/- 5.8427 +/- 11.9917 +/- 19.0783	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4.SEC **Purity** 99%	(Lot 6LHTM)	500.4	µg/mL	+/- 2.9161 +/- 5.9851 +/- 9.5220	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) **CAS #** 106-44-5.SEC **Purity** 99%	(Lot 65S2E)	503.8	µg/mL	+/- 2.9359 +/- 6.0258 +/- 9.5867	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7.SEC **Purity** 99%	(Lot 4423200)	1,003.8	µg/mL	+/- 5.8497 +/- 12.0061 +/- 19.1011	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1.SEC **Purity** 99%	(Lot 10173016)	1,001.0	µg/mL	+/- 5.8333 +/- 11.9726 +/- 19.0478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3.SEC **Purity** 99%	(Lot FLYIG)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1.SEC **Purity** 99%	(Lot XHGJI)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5.SEC **Purity** 99%	(Lot GXJ7J)	1,003.2	µg/mL	+/- 5.8462 +/- 11.9989 +/- 19.0897	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9.SEC **Purity** 99%	(Lot MKBL3650V)	1,002.4	µg/mL	+/- 5.8415 +/- 11.9893 +/- 19.0745	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

as 3+4 Methyl Phenol

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 * **Purity** 99%	(Lot 8238500)	1,003.4 µg/mL	+/- 5.8473 +/- 12.0013 +/- 19.0935	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2.SEC **Purity** 99%	(Lot FHM01)	1,005.2 µg/mL	+/- 5.8578 +/- 12.0228 +/- 19.1278	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1.SEC **Purity** 99%	(Lot 3LYYC)	1,004.0 µg/mL	+/- 5.8508 +/- 12.0084 +/- 19.1049	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3.SEC **Purity** 99%	(Lot SKZ5N)	1,001.8 µg/mL	+/- 5.8380 +/- 11.9821 +/- 19.0631	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0.SEC **Purity** 99%	(Lot SIDBB)	1,000.0 µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8.SEC **Purity** 99%	(Lot 10171860)	999.8 µg/mL	+/- 5.8264 +/- 11.9582 +/- 19.0250	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3.SEC **Purity** 97%	(Lot 8290900)	999.7 µg/mL	+/- 5.8257 +/- 11.9568 +/- 19.0228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	4-Chloro-3-methylphenol **CAS #** 59-50-7.SEC **Purity** 99%	(Lot FDO02)	1,000.0 µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	2-Methylnaphthalene **CAS #** 91-57-6.SEC **Purity** 99%	(Lot 76023-1)	1,001.2 µg/mL	+/- 5.8345 +/- 11.9750 +/- 19.0517	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0.SEC **Purity** 98%	(Lot UATSA)	1,003.1 µg/mL	+/- 5.8457 +/- 11.9980 +/- 19.0883	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3.SEC **Purity** 99%	(Lot AF02)	1,000.8 µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4.SEC **Purity** 99%	(Lot 8236100)	1,000.0 µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2.SEC **Purity** 98%	(Lot UUMYM)	1,006.3 µg/mL	+/- 5.8640 +/- 12.0355 +/- 19.1480	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4.SEC **Purity** 99%	(Lot MKBQ9937V)	1,000.8 µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7.SEC **Purity** 99%	(Lot 6984000)	1,000.8 µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4.SEC **Purity** 99%	(Lot 33OQE)	1,005.0 µg/mL	+/- 5.8567 +/- 12.0204 +/- 19.1240	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline **CAS #** 88-74-4.SEC **Purity** 99%	(Lot T6E7B)	1,003.4	µg/mL	+/- 5.8473 +/- 12.0013 +/- 19.0935	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8.SEC **Purity** 96%	(Lot 0012014)	1,004.9	µg/mL	+/- 5.8562 +/- 12.0195 +/- 19.1226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0.SEC **Purity** 99%	(Lot 3XXLB)	1,002.8	µg/mL	+/- 5.8438 +/- 11.9941 +/- 19.0821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3.SEC **Purity** 99%	(Lot 483WC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2.SEC **Purity** 99%	(Lot GE01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2.SEC **Purity** 99%	(Lot FGN03)	1,003.4	µg/mL	+/- 5.8473 +/- 12.0013 +/- 19.0935	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9.SEC **Purity** 99%	(Lot BWZJE)	1,004.2	µg/mL	+/- 5.8520 +/- 12.0108 +/- 19.1087	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5.SEC **Purity** 99%	(Lot YTR6B)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9.SEC **Purity** 99%	(Lot 27ZGC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7.SEC **Purity** 99%	(Lot H75QG)	2,002.0	µg/mL	+/- 11.6398 +/- 23.9320 +/- 38.0875	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2.SEC **Purity** 99%	(Lot SHRSA)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2.SEC **Purity** 99%	(Lot LRAB8148)	1,007.2	µg/mL	+/- 5.8695 +/- 12.0467 +/- 19.1658	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7.SEC **Purity** 99%	(Lot 7214400)	1,003.2	µg/mL	+/- 5.8462 +/- 11.9989 +/- 19.0897	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3.SEC **Purity** 99%	(Lot A0328141)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2.SEC **Purity** 99%	(Lot UMBJC)	1,000.2	µg/mL	+/- 5.8287 +/- 11.9630 +/- 19.0326	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3.SEC **Purity** 98%	(Lot P31G)	1,004.5	µg/mL	+/- 5.8537 +/- 12.0144 +/- 19.1144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,000.8	µg/mL	+/- 5.8322	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/- 11.9702	µg/mL	Unstressed
	Purity 99%				+/- 19.0440	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,009.6	µg/mL	+/- 11.6840	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/- 24.0229	µg/mL	Unstressed
	Purity 99%				+/- 38.2321	µg/mL	Stressed
58	Diphenylamine		854.0	µg/mL	+/- 4.9767	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/- 10.2144	µg/mL	Unstressed
	Purity 99%				+/- 16.2506	µg/mL	Stressed
59	Azobenzene		1,005.4	µg/mL	+/- 5.8590	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/- 12.0252	µg/mL	Unstressed
	Purity 99% 122-66-7 1,2-Diphenylhydrazine				+/- 19.1316	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,005.6	µg/mL	+/- 5.8602	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/- 12.0276	µg/mL	Unstressed
	Purity 99%				+/- 19.1354	µg/mL	Stressed
61	Hexachlorobenzene		1,003.6	µg/mL	+/- 5.8485	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G137934)			+/- 12.0037	µg/mL	Unstressed
	Purity 99%				+/- 19.0973	µg/mL	Stressed
62	Pentachlorophenol		2,008.2	µg/mL	+/- 11.6758	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5223600)			+/- 24.0061	µg/mL	Unstressed
	Purity 99%				+/- 38.2054	µg/mL	Stressed
63	n-Octadecane (C18)		1,005.0	µg/mL	+/- 5.8567	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/- 12.0204	µg/mL	Unstressed
	Purity 99%				+/- 19.1240	µg/mL	Stressed
64	Phenanthrene		1,000.0	µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 7248800)			+/- 11.9605	µg/mL	Unstressed
	Purity 98%				+/- 19.0287	µg/mL	Stressed
65	Anthracene		1,004.4	µg/mL	+/- 5.8532	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/- 12.0132	µg/mL	Unstressed
	Purity 99%				+/- 19.1125	µg/mL	Stressed
66	Carbazole		1,006.0	µg/mL	+/- 5.8625	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/- 12.0324	µg/mL	Unstressed
	Purity 99%				+/- 19.1430	µg/mL	Stressed
67	Di-n-butylphthalate		1,006.6	µg/mL	+/- 5.8660	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/- 12.0395	µg/mL	Unstressed
	Purity 99%				+/- 19.1544	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/- 11.9606	µg/mL	Unstressed
	Purity 99%				+/- 19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/- 11.9606	µg/mL	Unstressed
	Purity 99%				+/- 19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,002.7	µg/mL	+/- 5.8435	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/- 11.9933	µg/mL	Unstressed
	Purity 98%				+/- 19.0809	µg/mL	Stressed
71	Benz(a)anthracene		1,001.8	µg/mL	+/- 5.8380	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/- 11.9821	µg/mL	Unstressed
	Purity 99%				+/- 19.0631	µg/mL	Stressed

72	chrysene **CAS #** 218-01-9.SEC **Purity** 99%	(Lot NICZC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7.SEC **Purity** 99%	(Lot MT8AG)	1,007.2	µg/mL	+/- 5.8695 +/- 12.0467 +/- 19.1658	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0.SEC **Purity** 99%	(Lot O8DLD)	1,001.6	µg/mL	+/- 5.8368 +/- 11.9797 +/- 19.0593	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2.SEC **Purity** 99%	(Lot FLUSD)	1,002.8	µg/mL	+/- 5.8438 +/- 11.9941 +/- 19.0821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9.SEC **Purity** 98%	(Lot 6143600)	993.9	µg/mL	+/- 5.7921 +/- 11.8878 +/- 18.9130	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8.SEC **Purity** 97%	(Lot NPEZF)	1,001.0	µg/mL	+/- 5.8336 +/- 11.9730 +/- 19.0486	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5.SEC **Purity** 99%	(Lot 0012014)	1,004.8	µg/mL	+/- 5.8555 +/- 12.0180 +/- 19.1202	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3.SEC **Purity** 99%	(Lot 0012011)	1,001.2	µg/mL	+/- 5.8345 +/- 11.9750 +/- 19.0517	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2.SEC **Purity** 97%	(Lot 0022012)	999.8	µg/mL	+/- 5.8266 +/- 11.9587 +/- 19.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

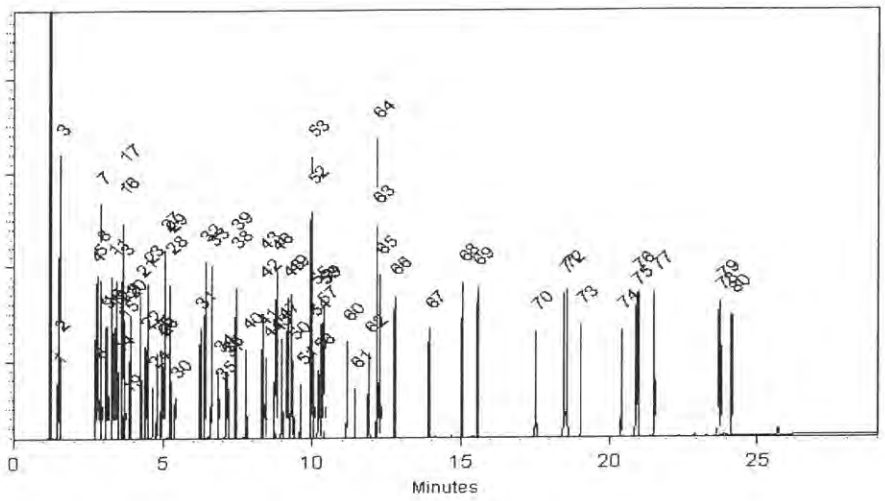
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 08-May-2019 **Balance:** 1128353505

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-May-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 SURR_00012

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0141581

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2023 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBF3761V)	5,002.0 µg/mL	+/- 29.0821 µg/mL +/- 145.9751 µg/mL +/- 177.1352 µg/mL		Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot CD-105)	5,000.6 µg/mL	+/- 29.0739 µg/mL +/- 145.9343 µg/mL +/- 177.0856 µg/mL		Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-29603)	5,006.0 µg/mL	+/- 29.1053 µg/mL +/- 146.0919 µg/mL +/- 177.2768 µg/mL		Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot M09E045)	5,000.8 µg/mL	+/- 29.0751 µg/mL +/- 145.9401 µg/mL +/- 177.0927 µg/mL		Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,000.8 µg/mL	+/- 29.0751 µg/mL +/- 145.9401 µg/mL +/- 177.0927 µg/mL		Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-21037)	5,001.0 µg/mL	+/- 29.0762 µg/mL +/- 145.9459 µg/mL +/- 177.0998 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

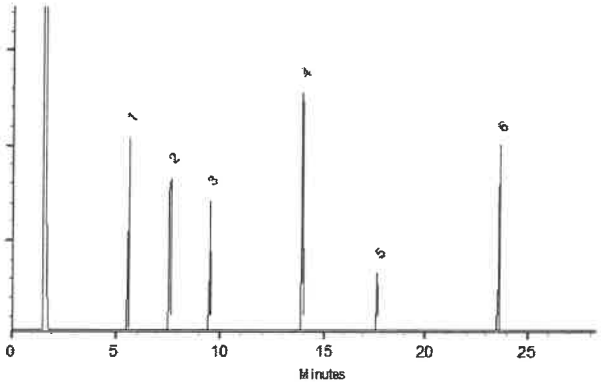
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 14-Sep-2018 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 18-Sep-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS/ ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
5WC21	240-129236-3	32	17	61	74	76	75
	MB 240-431869/13-A	54	34	63	76	75	99
	LCS 240-431869/14-A	48	32	74	76	84	98

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-120
PHL = Phenol-d5 (Surr)	10-120
NBZ = Nitrobenzene-d5 (Surr)	33-120
FBP = 2-Fluorobiphenyl (Surr)	39-120
TBP = 2,4,6-Tribromophenol (Surr)	33-120
TPHL = Terphenyl-d14 (Surr)	36-122

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Matrix: Water Level: Low Lab File ID: 00428005.D

Lab ID: LCS 240-431869/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Nitrobenzene	20.0	14.4	72	56-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab File ID: 00428004.D Lab Sample ID: MB 240-431869/13-A

Matrix: Water Date Extracted: 04/23/2020 06:49

Instrument ID: A4AG3 Date Analyzed: 04/28/2020 15:44

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-431869/14-A	00428005.D	04/28/2020 16:07
5WC21	240-129236-3	00428008.D	04/28/2020 17:17

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab File ID: 00423101.D DFTPP Injection Date: 04/23/2020

Instrument ID: A4AG3 DFTPP Injection Time: 15:21

Analysis Batch No.: 431934

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0- 80.0% of mass 198	34.9
68	Less than 2.0% of mass 69	0.2 (0.4) 1
69	Mass 69 relative abundance	41.1
70	Less than 2.0% of mass 69	0.4 (0.9) 1
127	25.0 - 75.0% of mass 198	41.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0- 30.0% of mass 198	27.5
365	Greater than 0.75% of mass 198	4.3
441	Present, but less than mass 443	10.9
442	40.0 - 110.0% of mass 198	62.3
443	15.0 - 24.0% of mass 442	12.1 (19.5) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-431934/2	00423002.D	04/23/2020	15:38
	STD4 240-431934/3	00423003.D	04/23/2020	16:01
	STD3 240-431934/4	00423004.D	04/23/2020	16:25
	STD1 240-431934/6	00423006.D	04/23/2020	17:11
	STD2 240-431934/5	00423005.D	04/23/2020	17:38
	STD6 240-431934/7	00423007.D	04/23/2020	18:01
	STD7 240-431934/8	00423008.D	04/23/2020	18:25
	STD8 240-431934/9	00423009.D	04/23/2020	18:48
	STD9 240-431934/10	00423010.D	04/23/2020	19:12
	ICV 240-431934/11	00423011.D	04/23/2020	19:35

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab File ID: 00428101.D DFTPP Injection Date: 04/28/2020

Instrument ID: A4AG3 DFTPP Injection Time: 14:58

Analysis Batch No.: 432443

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0- 80.0% of mass 198	30.7
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	40.6
70	Less than 2.0% of mass 69	0.3 (0.7) 1
127	25.0 - 75.0% of mass 198	40.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0- 30.0% of mass 198	28.4
365	Greater than 0.75% of mass 198	4.4
441	Present, but less than mass 443	10.4
442	40.0 - 110.0% of mass 198	71.1
443	15.0 - 24.0% of mass 442	13.6 (19.1) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-432443/2	00428002.D	04/28/2020	15:17
	MB 240-431869/13-A	00428004.D	04/28/2020	15:44
	LCS 240-431869/14-A	00428005.D	04/28/2020	16:07
5WC21	240-129236-3	00428008.D	04/28/2020	17:17

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Sample No.: STD6 240-431934/7 Date Analyzed: 04/23/2020 18:01

Instrument ID: A4AG3 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 00423007.D Heated Purge: (Y/N) N

Calibration ID: 56791

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		79238	6.59	266627	7.69	185638	9.20
UPPER LIMIT		158476	7.09	533254	8.19	371276	9.70
LOWER LIMIT		39619	6.09	133314	7.19	92819	8.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-431934/11		77933	6.59	275823	7.69	192106	9.20
CCV 240-432443/2 CCVIS		110193	6.56	365550	7.66	252814	9.17

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Sample No.: STD6 240-431934/7 Date Analyzed: 04/23/2020 18:01

Instrument ID: A4AG3 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 00423007.D Heated Purge: (Y/N) N

Calibration ID: 56791

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		324356	10.48	423443	13.36	440079	15.69
UPPER LIMIT		648712	10.98	846886	13.86	880158	16.19
LOWER LIMIT		162178	9.98	211722	12.86	220040	15.19
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-431934/11		309419	10.48	400276	13.36	397797	15.69
CCV 240-432443/2 CCVIS		407460	10.45	526157	13.31	545612	15.63

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Sample No.: CCV 240-432443/2 Date Analyzed: 04/28/2020 15:17

Instrument ID: A4AG3 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 00428002.D Heated Purge: (Y/N) N

Calibration ID: 56791

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		110193	6.56	365550	7.66	252814	9.17
UPPER LIMIT		220386	7.06	731100	8.16	505628	9.67
LOWER LIMIT		55097	6.06	182775	7.16	126407	8.67
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-431869/13-A		97896	6.56	343818	7.66	232100	9.17
LCS 240-431869/14-A		97775	6.56	325744	7.67	227501	9.17
240-129236-3	5WC21	92463	6.56	299884	7.66	210435	9.17

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Sample No.: CCV 240-432443/2 Date Analyzed: 04/28/2020 15:17

Instrument ID: A4AG3 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 00428002.D Heated Purge: (Y/N) N

Calibration ID: 56791

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		407460	10.45	526157	13.31	545612	15.63
UPPER LIMIT		814920	10.95	1052314	13.81	1091224	16.13
LOWER LIMIT		203730	9.95	263079	12.81	272806	15.13
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-431869/13-A		466089	10.45	465081	13.31	486191	15.63
LCS 240-431869/14-A		358844	10.45	453522	13.31	471288	15.63
240-129236-3	5WC21	408848	10.45	427080	13.30	428765	15.62

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Client Sample ID: 5WC21 Lab Sample ID: 240-129236-3

Matrix: Water Lab File ID: 00428008.D

Analysis Method: 8270D Date Collected: 04/20/2020 13:10

Extract. Method: 3510C Date Extracted: 04/23/2020 06:49

Sample wt/vol: 1040(mL) Date Analyzed: 04/28/2020 17:17

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 432443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-95-3	Nitrobenzene	9.6	U	9.6	0.77

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	75		36-122
4165-62-2	Phenol-d5 (Surr)	17		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	61		33-120
367-12-4	2-Fluorophenol (Surr)	32		10-120
321-60-8	2-Fluorobiphenyl (Surr)	74		39-120
118-79-6	2,4,6-Tribromophenol (Surr)	76		33-120

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428008.D
Lims ID: 240-129236-A-3-A
Client ID: 5WC21
Sample Type: Client
Inject. Date: 28-Apr-2020 17:17:40 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-008
Misc. Info.: 240-129236-A-3-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 06-May-2020 16:38:23 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX1041

First Level Reviewer: ulmanm Date: 28-Apr-2020 17:55:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.563	6.563	0.000	95	92463	4.00	
* 2 Naphthalene-d8	136	7.663	7.663	0.000	98	299884	4.00	
* 3 Acenaphthene-d10	164	9.169	9.169	0.000	92	210435	4.00	
* 4 Phenanthrene-d10	188	10.445	10.445	0.000	98	408848	4.00	
* 5 Chrysene-d12	240	13.304	13.310	-0.006	98	427080	4.00	
* 6 Perylene-d12	264	15.621	15.628	-0.007	98	428765	4.00	
$ 7 2-Fluorophenol	112	5.398	5.399	-0.001	92	80459	3.16	
$ 8 Phenol-d5	99	6.204	6.204	0.000	71	56242	1.65	
$ 9 Nitrobenzene-d5	82	7.028	7.034	-0.006	91	264728	6.13	
$ 10 2-Fluorobiphenyl (Surr)	172	8.563	8.563	0.000	99	505557	7.38	
$ 11 2,4,6-Tribromophenol	330	9.839	9.840	-0.001	90	84459	7.61	
$ 12 Terphenyl-d14	244	11.898	11.904	-0.006	97	663742	7.45	
55 Nitrobenzene	77	7.045	7.045	-0.007	85	12348	0.3102	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SMIS80PPMW_00021 Amount Added: 5.00 Units: uL Run Reagent

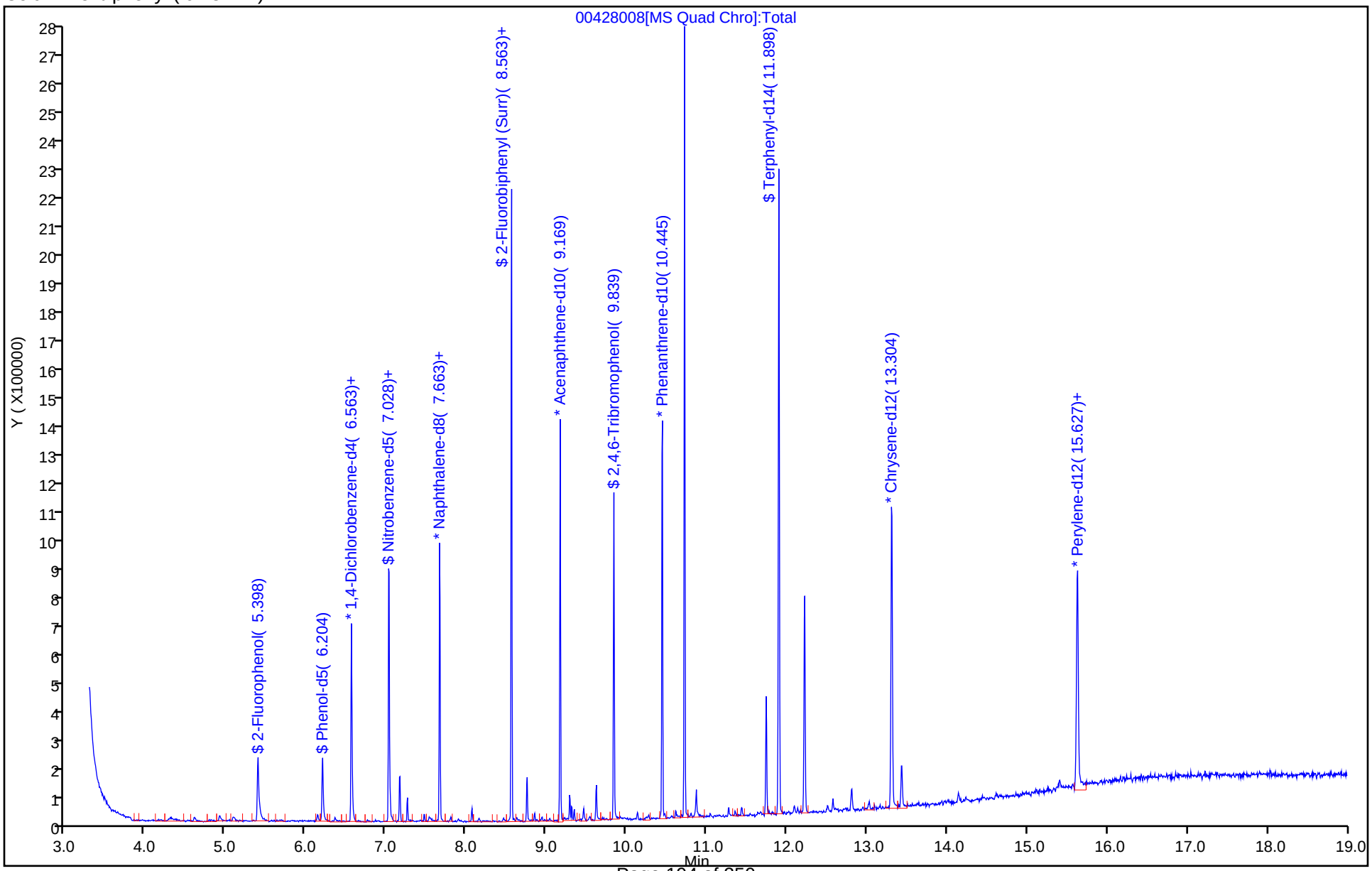
Report Date: 06-May-2020 16:39:03 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428008.D

Injection Date:	28-Apr-2020 17:17:40	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	240-129236-A-3-A	Lab Sample ID:	240-129236-3	Worklist Smp#:	8
Client ID:	5WC21				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428008.D
Lims ID: 240-129236-A-3-A
Client ID: 5WC21
Sample Type: Client
Inject. Date: 28-Apr-2020 17:17:40 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-008
Misc. Info.: 240-129236-A-3-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 06-May-2020 16:38:23 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX1041

First Level Reviewer: ulmanm Date: 28-Apr-2020 17:55:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	10.0	3.16	31.55
$ 8 Phenol-d5	10.0	1.65	16.53
$ 9 Nitrobenzene-d5	10.0	6.13	61.34
$ 10 2-Fluorobiphenyl (Surr)	10.0	7.38	73.77
$ 11 2,4,6-Tribromophenol	10.0	7.61	76.11
$ 12 Terphenyl-d14	10.0	7.45	74.50

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

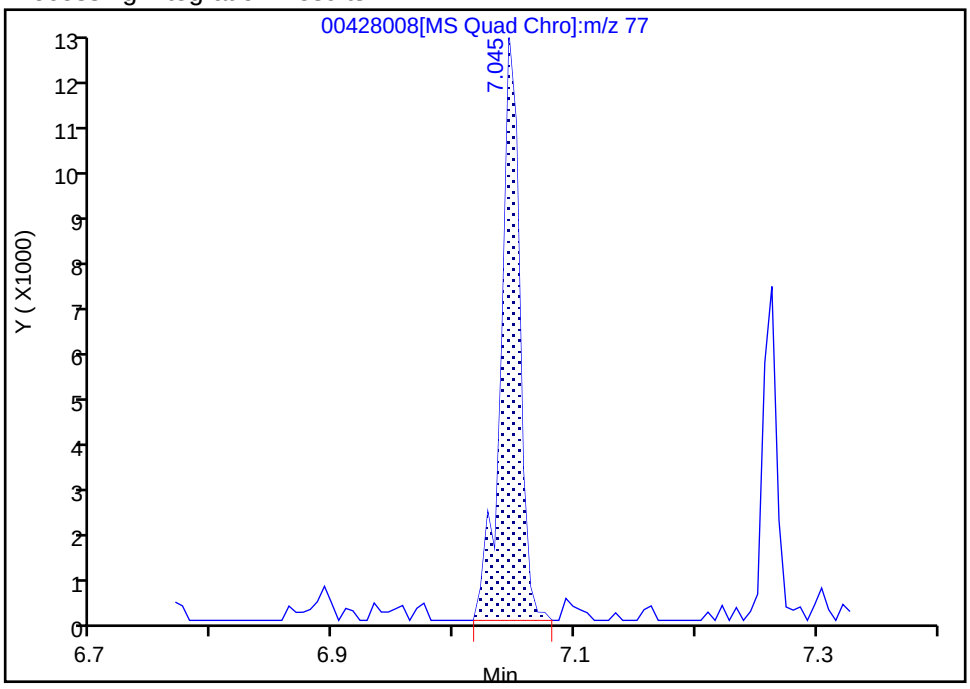
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428008.D				
Injection Date:	28-Apr-2020 17:17:40	Instrument ID:	A4AG3		
Lims ID:	240-129236-A-3-A	Lab Sample ID:	240-129236-3		
Client ID:	5WC21				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

55 Nitrobenzene, CAS: 98-95-3

Signal: 1

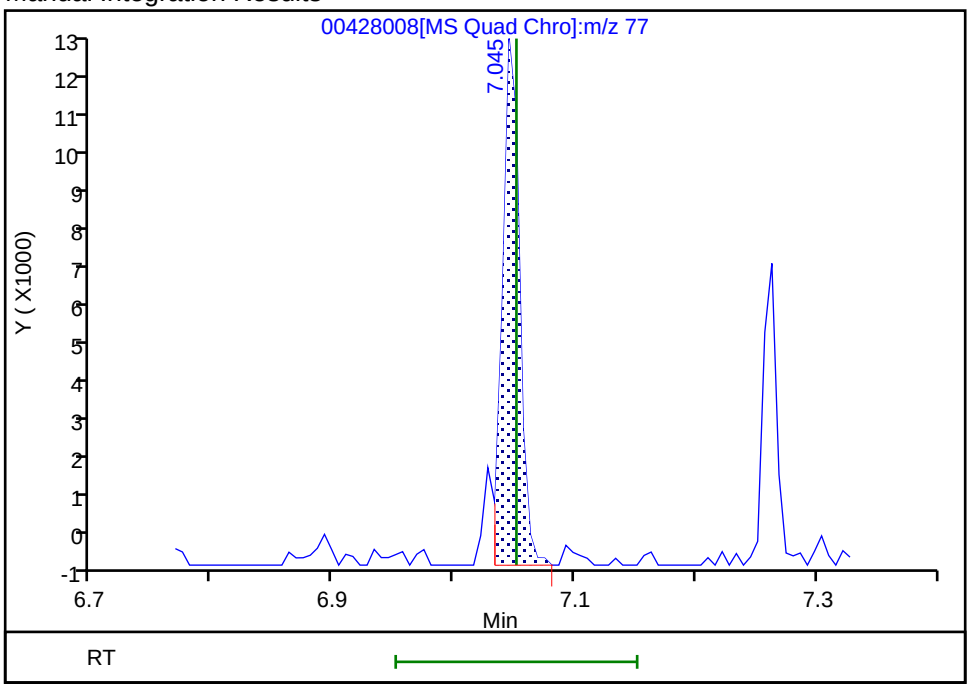
Processing Integration Results

RT: 7.05
Area: 13410
Amount: 0.336883
Amount Units: ng/ul



Manual Integration Results

RT: 7.05
Area: 12348
Amount: 0.310203
Amount Units: ng/ul



Reviewer: ulmanm, 06-May-2020 16:38:17

Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-431934/6	00423006.D
Level 2	STD2 240-431934/5	00423005.D
Level 3	STD3 240-431934/4	00423004.D
Level 4	STD4 240-431934/3	00423003.D
Level 5	STD5 240-431934/2	00423002.D
Level 6	STD6 240-431934/7	00423007.D
Level 7	STD7 240-431934/8	00423008.D
Level 8	STD8 240-431934/9	00423009.D
Level 9	STD9 240-431934/10	00423010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5615	0.5908 0.6416	0.5067 0.6013	0.6598 0.6094	0.5892	Ave		0.5950				7.9		20.0			
N-Nitrosodimethylamine	0.8247	0.8007 0.8890	0.7131 0.8099	0.9096 0.8991	0.7845	Ave		0.8288				8.1		20.0			
Pyridine	2.0917 1.4319	1.4086 1.5299	1.4337 1.4724	1.2371 1.4607	1.3589	Lin1	0.0424	1.4588							0.9980		0.9900
Benzaldehyde	1.3313 1.2607	1.4673 1.2640	1.4506 1.1877	1.2869 1.2040	1.2168	Ave		1.2966			0.0100	7.9		20.0			
Phenol	1.5968	1.6942 1.6529	1.7108 1.6103	1.6440 1.6812	1.5594	Ave		1.6437			0.8000	3.2		20.0			
Aniline	1.9273	2.0020 2.0695	2.0443 1.9397	2.1074 2.0144	1.8411	Ave		1.9932				4.3		20.0			
Bis(2-chloroethyl)ether	1.3373	1.6925 1.4353	1.6910 1.3419	1.4364 1.4332	1.4681	Ave		1.4795			0.7000	9.4		20.0			
2-Chlorophenol	1.1614	1.0111 1.2178	1.2268 1.1809	1.2594 1.2423	1.1587	Ave		1.1823			0.8000	6.6		20.0			
n-Decane	0.9758	1.0238 1.0283	1.1460 0.9829	1.0473 1.0463	0.9691	Ave		1.0274				5.6		20.0			
1,3-Dichlorobenzene	1.3967	1.5072 1.4335	1.4851 1.4076	1.4800 1.4488	1.3864	Ave		1.4432				3.1		20.0			
1,4-Dichlorobenzene	1.4363	1.6474 1.4731	1.7575 1.4547	1.5207 1.5174	1.4585	Ave		1.5332				7.3		20.0			
Benzyl alcohol	0.7788	0.8787 0.8670	0.7945 0.8100	0.7907 0.8669	0.8279	Ave		0.8268				4.8		20.0			
1,2-Dichlorobenzene	1.3557	1.5704 1.3930	1.6352 1.3212	1.4150 1.3760	1.3432	Ave		1.4262				8.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylphenol	1.1391	1.2393 1.2196	1.2478 1.1833	1.3304 1.2466	1.1946	Ave		1.2251			0.7000	4.6		20.0			
bis (2-chloroisopropyl) ether	0.7929	0.7528 0.8126	0.8224 0.7739	0.8520 0.8058	0.7856	Ave		0.7997				3.8		20.0			
Indene	2.0990	2.2785 2.2003	2.3756 2.1419	2.1782 2.2421	2.0584	Ave		2.1967				4.6		20.0			
3 & 4 Methylphenol	1.2035	1.3086 1.3121	1.2558 1.2483	1.2374 1.2792	1.1953	Ave		1.2550				3.5		20.0			
N-Nitrosodi-n-propylamine	1.1757	1.2225 1.2202	1.2251 1.1240	1.2030 1.1796	1.1894	Ave		1.1924			0.5000	2.8		20.0			
Acetophenone	1.9437	2.0128 1.9993	2.1725 1.8889	1.9717 1.9923	1.8635	Ave		1.9806			0.0100	4.7		20.0			
Hexachloroethane	0.6645	0.7317 0.6652	0.7205 0.6322	0.6800 0.6560	0.6495	Ave		0.6750			0.3000	5.1		20.0			
Nitrobenzene	0.5134	0.5461 0.5150	0.5935 0.5048	0.5260 0.5293	0.5195	Ave		0.5310			0.2000	5.3		20.0			
Isophorone	0.8961	0.8530 0.9089	0.9380 0.8719	0.8740 0.9133	0.8769	Ave		0.8915			0.4000	3.1		20.0			
2,4-Dimethylphenol	0.4701	0.4755 0.4848	0.5352 0.4604	0.4688 0.4926	0.4663	Ave		0.4817			0.2000	5.0		20.0			
2-Nitrophenol	0.1988	0.1607 0.2068	0.2128 0.2030	0.1863 0.2150	0.1797	Ave		0.1954			0.1000	9.5		20.0			
Benzoic acid	0.2464	+++++ 0.2739	0.1781 0.2725	0.1923 0.3029	0.2324	Lin1	-0.323	0.2879							0.9940		0.9900
Bis(2-chloroethoxy)methane	0.4410	0.4634 0.4389	0.4828 0.4295	0.4484 0.4627	0.4437	Ave		0.4513			0.3000	3.8		20.0			
2,4-Dichlorophenol	0.3526	0.3715 0.3448	0.3710 0.3410	0.3192 0.3661	0.3472	Ave		0.3517			0.2000	5.1		20.0			
1,2,4-Trichlorobenzene	0.4095	0.4451 0.4193	0.4407 0.4012	0.4200 0.4202	0.4098	Ave		0.4207				3.6		20.0			
Naphthalene	1.1959 1.0488	1.0788 1.0997	1.1521 1.0490	1.0622 1.1330	1.0854	Ave		1.1005			0.7000	4.6		20.0			
4-Chloroaniline	0.4614	0.4130 0.4706	0.5092 0.4714	0.4428 0.5071	0.4721	Ave		0.4685			0.0100	6.7		20.0			
2,6-Dichlorophenol	0.3498	0.3236 0.3466	0.3531 0.3296	0.3355 0.3603	0.3357	Ave		0.3418				3.7		20.0			
Hexachlorobutadiene	0.3227	0.3835 0.3165	0.3578 0.3064	0.3404 0.3173	0.3257	Ave		0.3338			0.0100	7.7		20.0			
Caprolactam	0.0503 0.0981	0.1016 0.1027	0.1061 0.1019	0.0960 0.1079	0.0972	Lin1	-0.010	0.1036			0.0100				0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.3947	0.3568 0.4022	0.4257 0.3797	0.3968 0.4011	0.3882	Ave		0.3931			0.2000	5.0		20.0			
2-Methylnaphthalene	0.9369 0.7725	0.8216 0.7877	0.8324 0.7641	0.7757 0.7991	0.7371	Ave		0.8030			0.4000	7.2		20.0			
1-Methylnaphthalene	0.6928 0.7081	0.8538 0.7221	0.7661 0.7051	0.7057 0.7488	0.7182	Ave		0.7356				6.8		20.0			
Hexachlorocyclopentadiene	0.5305	0.4626 0.5445	0.5350 0.5356	0.5282 0.5724	0.5418	Ave		0.5313			0.0500	5.8		20.0			
1,2,4,5-Tetrachlorobenzene	0.7202	0.7206 0.7077	0.7670 0.7082	0.7850 0.7463	0.7019	Ave		0.7321			0.0100	4.2		20.0			
2,4,6-Trichlorophenol	0.4446	0.3920 0.4256	0.4356 0.4221	0.4357 0.4509	0.4204	Ave		0.4284			0.2000	4.2		20.0			
2,4,5-Trichlorophenol	0.4325	0.4012 0.4259	0.4463 0.4274	0.4496 0.4491	0.4282	Ave		0.4325			0.2000	3.7		20.0			
1,1'-Biphenyl	1.4700 1.4240	1.3467 1.3631	1.3916 1.3903	1.4175 1.4492	1.3164	Ave		1.3965			0.0100	3.5		20.0			
2-Chloronaphthalene	1.0755 1.0880	1.1393 1.0688	1.2314 1.0767	1.1284 1.1327	1.0775	Ave		1.1131			0.8000	4.7		20.0			
2-Nitroaniline	0.4097	0.3289 0.4106	0.4021 0.3978	0.4124 0.4069	0.3838	Ave		0.3940			0.0100	7.1		20.0			
Dimethyl phthalate	1.3235	1.4556 1.2015	1.5609 1.2009	1.4005 1.2271	1.3442	Ave		1.3393			0.0100	9.7		20.0			
1,3-Dinitrobenzene	0.1934	0.1528 0.1891	0.2103 0.1933	0.1925 0.2071	0.2188	Ave		0.1947				10.2		20.0			
2,6-Dinitrotoluene	0.2985	0.2664 0.2663	0.3075 0.2714	0.3065 0.2777	0.3003	Ave		0.2868				6.3		20.0			
Acenaphthylene	1.4170 1.6395	1.5505 1.5939	1.6749 1.6032	1.5981 1.6996	1.5828	Ave		1.5955			0.9000	5.1		20.0			
3-Nitroaniline	0.2203	0.2035 0.2007	0.2703 0.2171	0.2674 0.2312	0.2458	Ave		0.2320			0.0100	11.6		20.0			
2,4-Dinitrophenol	0.1615	+++++ 0.1873	0.1192 0.1918	0.1407 0.2052	0.1565	Qua	-0.068	0.1496	0.0011384		0.0100				0.9990		0.9900
Acenaphthene	1.2368 1.1372	1.1850 1.1059	1.1644 1.1009	1.0645 1.1582	1.0641	Ave		1.1352			0.9000	5.0		20.0			
4-Nitrophenol	0.3496	+++++ 0.3557	0.3141 0.3425	0.2706 +++++	0.2749	Ave		0.3179				11.9		20.0			
2,4-Dinitrotoluene	0.3499	0.3236 0.3555	0.4164 0.3648	0.3886 0.3947	0.3613	Ave		0.3694			0.2000	7.9		20.0			
Dibenzofuran	1.8887 1.7062	1.7565 1.6266	1.8329 1.6253	1.7607 1.6826	1.6483	Ave		1.7253			0.8000	5.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3,4,6-Tetrachlorophenol	0.3465	0.3761 0.3520	0.4502 0.3687	0.4101 0.3845	0.3859	Ave		0.3842			0.0100	8.7		20.0			
Hexadecane	0.6113	0.5002 0.5964	0.6073 0.5995	0.5917 0.6374	0.5542	Ave		0.5873				7.2		20.0			
Diethyl phthalate	1.1530	1.5066 1.2080	1.5485 1.2415	1.3966 1.3243	1.2054	Ave		1.3230			0.0100	11.2		20.0			
4-Chlorophenyl phenyl ether	0.8345	0.9360 0.7638	0.9404 0.7787	0.8273 0.7806	0.8066	Ave		0.8335			0.4000	8.3		20.0			
4-Nitroaniline	0.2585	0.1981 0.2315	0.2803 0.2158	0.2097 0.2307	0.2285	Ave		0.2316			0.0100	11.5		20.0			
Fluorene	1.2133 1.3851	1.3149 1.2511	1.4503 1.2629	1.3340 1.2818	1.2610	Ave		1.3061			0.9000	5.7		20.0			
4,6-Dinitro-2-methylphenol	0.1568	+++++ 0.1673	0.1116 0.1662	0.1145 0.1693	0.1478	Lin1	-0.162	0.1702			0.0100				0.9990		0.9900
Diphenylamine	0.5634	0.6528 0.5827	0.7169 0.5482	0.6193 0.5560	0.7642	Ave		0.6254				12.8		20.0			
N-Nitrosodiphenylamine	0.4789	0.5548 0.4953	0.6093 0.4660	0.5264 0.4726	0.6496	Ave		0.5316			0.0100	12.8		20.0			
Azobenzene	0.9899	0.8496 0.8737	0.9436 0.7837	0.9146 +++++	1.0624	Ave		0.9168				10.1		20.0			
4-Bromophenyl phenyl ether	0.2675	0.2558 0.2312	0.2705 0.2180	0.2395 0.2168	0.3180	Ave		0.2522			0.1000	13.4		20.0			
Atrazine	0.2411 0.2863	0.2012 0.2809	0.2097 0.2820	0.2091 0.2754	0.2717	Ave		0.2508			0.0100	14.2		20.0			
Hexachlorobenzene	0.3586 0.3061	0.2967 0.2757	0.2892 0.2597	0.2761 0.2613	0.3231	Ave		0.2940			0.1000	10.8		20.0			
n-Octadecane	0.2287	0.2703 0.2074	0.3249 0.2106	0.2972 0.2080	0.3329	Qua	0.1661	0.2255	-0.001087						0.9910		0.9900
Pentachlorophenol	0.1789	+++++ 0.1901	0.1478 0.1853	0.1400 0.1939	0.1698	Ave		0.1723			0.0500	12.2		20.0			
Phenanthrene	1.0940 1.0295	1.1205 1.0446	1.1587 1.0188	1.0255 1.0587	1.0304	Ave		1.0645			0.7000	4.6		20.0			
Anthracene	0.9483 1.0420	1.0914 1.0925	1.1114 1.0441	1.0687 1.0869	1.0731	Ave		1.0620			0.7000	4.6		20.0			
Carbazole	0.7397	0.8327 0.6724	0.9027 0.6394	0.6302 0.6463	0.8144	Ave		0.7347			0.0100	14.2		20.0			
Di-n-butyl phthalate	1.3088	0.8388 1.2966	0.8796 1.2445	0.9034 1.2419	1.2635	Lin1	-0.318	1.2796			0.0100				0.9980		0.9900
Fluoranthene	0.9198 1.4989	1.1138 1.4844	1.1136 1.4266	1.0061 1.4062	1.4093	Lin1	-0.110	1.4345			0.6000				0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzidine	0.4645	0.2416 0.5700	0.3423 0.5713	0.3597 0.5888	0.4169	Lin1	-0.501	0.5683							0.9910		0.9900
Pyrene	1.2919 1.1484	1.2164 1.2469	1.0520 1.1805	0.9951 1.2704	1.1123	Ave		1.1682			0.6000	8.6		20.0			
Butyl benzyl phthalate	0.4305	0.3070 0.4822	0.4754 0.4666	0.4552 0.5079	0.4681	Ave		0.4491			0.0100	13.7		20.0			
Bis(2-ethylhexyl) phthalate	0.6540	0.5092 0.7054	0.6784 0.6868	0.5895 0.7290	0.6264	Ave		0.6473			0.0100	11.0		20.0			
3,3'-Dichlorobenzidine	0.2706	0.3318 0.2807	0.3616 0.2910	0.2987 0.3310	0.2634	Ave		0.3036			0.0100	11.4		20.0			
Benzo[a]anthracene	1.2937 1.1929	1.1941 1.2530	1.4027 1.2029	1.2395 1.2769	1.2142	Ave		1.2522			0.8000	5.3		20.0			
Chrysene	1.3137 1.1936	1.2534 1.2463	1.4040 1.2020	1.2531 1.2644	1.1855	Ave		1.2573			0.7000	5.4		20.0			
Di-n-octyl phthalate	1.0558	0.6883 1.1431	0.9654 1.1353	0.9253 1.1936	1.0163	Lin1	-0.285	1.1564			0.0100				0.9980		0.9900
Benzo[b]fluoranthene	1.2913 1.1682	1.0267 1.2035	1.3492 1.2300	1.1553 1.2264	1.1159	Ave		1.1963			0.7000	7.9		20.0			
Benzo[k]fluoranthene	1.1657 1.2082	1.1249 1.3290	1.3978 1.2270	1.2546 1.3167	1.2044	Ave		1.2476			0.7000	6.9		20.0			
Benzo[a]pyrene	1.0666 1.0534	0.9185 1.1285	1.0901 1.1040	1.0517 1.1453	1.0189	Ave		1.0641			0.7000	6.3		20.0			
Indeno[1,2,3-cd]pyrene	1.3325 1.1517	1.1603 1.2401	1.3640 1.2133	1.2127 1.2385	1.1273	Ave		1.2267			0.5000	6.5		20.0			
Dibenz(a,h)anthracene	1.0439 1.0192	0.9975 1.0718	1.1576 1.0588	1.0721 1.0898	0.9584	Ave		1.0521			0.4000	5.4		20.0			
Benzo[g,h,i]perylene	1.2616 0.9406	1.0773 0.9793	1.0732 0.9348	1.0074 0.9838	0.9350	Ave		1.0214			0.5000	10.3		20.0			
2-Fluorophenol (Surr)	1.0420	1.1478 1.1279	1.1565 1.0829	1.0956 1.1463	1.0263	Ave		1.1031				4.5		20.0			
Phenol-d5 (Surr)	1.4237	1.5212 1.4856	1.6339 1.3960	1.4365 1.4804	1.4001	Ave		1.4722				5.4		20.0			
Nitrobenzene-d5 (Surr)	0.6137 0.5619	0.5889 0.5664	0.6372 0.5359	0.5501 0.5651	0.5622	Ave		0.5757				5.6		20.0			
2-Fluorobiphenyl (Surr)	1.2268 1.2797	1.3263 1.2772	1.4070 1.2965	1.2826 1.3545	1.2728	Ave		1.3026				4.1		20.0			
2,4,6-Tribromophenol (Surr)	0.1695	0.2132 0.1969	0.2560 0.1950	0.2222 0.2134	0.2214	Ave		0.2109				11.9		20.0			
Terphenyl-d14 (Surr)	0.8080 0.8423	0.7259 0.8885	0.8141 0.8449	0.8295 0.8990	0.8578	Ave		0.8344				6.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-431934/6	00423006.D
Level 2	STD2 240-431934/5	00423005.D
Level 3	STD3 240-431934/4	00423004.D
Level 4	STD4 240-431934/3	00423003.D
Level 5	STD5 240-431934/2	00423002.D
Level 6	STD6 240-431934/7	00423007.D
Level 7	STD7 240-431934/8	00423008.D
Level 8	STD8 240-431934/9	00423009.D
Level 9	STD9 240-431934/10	00423010.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCBd 4	Ave	111237	5265 203016	10929 259314	30502 312589	61397	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCBd 4	Ave	163363	7135 281294	15381 349303	42052 461178	81745	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCBd 4	Lin1	8437 567320	25104 968226	61845 1270023	114391 1498436	283200	0.200 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Benzaldehyde	DCBd 4	Ave	5370 499469	26151 799911	62574 1024454	118996 1235129	253583	0.200 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenol	DCBd 4	Ave	316321	15097 523035	36899 694505	76004 862277	162502	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCBd 4	Ave	381779	17840 654850	44094 836551	97430 1033214	191856	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCBd 4	Ave	264909	15082 454169	36472 578716	66410 735103	152987	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCBd 4	Ave	230058	9010 385350	26460 509287	58227 637178	120746	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
n-Decane	DCBd 4	Ave	193293	9123 325382	24717 423885	48417 536660	100985	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	276687	13431 453609	32032 607051	68422 743118	144465	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	284518	14680 466149	37908 627391	70307 778292	151986	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzyl alcohol	DCBd 4	Ave	154284	7830 274358	17137 349328	36556 444620	86274	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	268551	13994 440776	35269 569811	65420 705760	139972	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylphenol	DCBd 4	Ave	225643	11044 385931	26913 510340	61509 639414	124482	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCBd 4	Ave	157070	6708 257129	17738 333756	39389 413325	81865	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indene	DCBd 4	Ave	831598	40609 1392494	102477 1847481	201404 2299972	428997	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
3 & 4 Methylphenol	DCBd 4	Ave	238405	11661 415204	27086 538348	57210 656113	124558	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodi-n-propylamine	DCBd 4	Ave	232910	10894 386104	26423 484772	55617 605006	123937	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acetophenone	DCBd 4	Ave	385040	17937 632652	46858 814633	91155 1021869	194188	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachloroethane	DCBd 4	Ave	131644	6520 210496	15541 272645	31437 336488	67686	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene	NPT	Ave	342238	16204 560334	42328 739281	81661 908187	179773	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Isophorone	NPT	Ave	597301	25312 988970	66906 1276724	135675 1567075	303445	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dimethylphenol	NPT	Ave	313381	14108 527457	38176 674169	72778 845276	161364	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitrophenol	NPT	Ave	132546	4769 224963	15176 297261	28927 368898	62179	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Lin1	328426	+++++ 596121	25406 798110	59694 1039567	160865	20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Bis(2-chloroethoxy)methane	NPT	Ave	293963	13750 477559	34438 629008	69616 793984	153521	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dichlorophenol	NPT	Ave	235015	11023 375138	26464 499295	49550 628244	120134	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,4-Trichlorobenzene	NPT	Ave	272989	13206 456182	31430 587484	65204 721002	141822	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Naphthalene	NPT	Ave	7814 699065	32011 1196566	82175 1536105	164896 1944097	375594	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chloroaniline	NPT	Ave	307569	12256 512060	36322 690310	68743 870064	163373	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,6-Dichlorophenol	NPT	Ave	233143	9601 377089	25184 482693	52089 618213	116154	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobutadiene	NPT	Ave	215086	11380 344403	25522 448660	52846 544402	112721	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Lin1	657 130846	6029 223530	15130 298378	29802 370345	67299	0.200 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
4-Chloro-3-methylphenol	NPT	Ave	263124	10588 437624	30360 556011	61592 688322	134320	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylnaphthalene	NPT	Ave	6122 514946	24380 857021	59374 1118869	120417 1371267	255060	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1-Methylnaphthalene	NPT	Ave	4527 471999	25336 785659	54642 1032505	109558 1284835	248517	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorocyclopentadiene	ANT	Ave	 246194	9656 423682	26217 533260	55144 671540	130595	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,4,5-Tetrachlorobenzene	ANT	Ave	 334246	15039 550640	37585 705081	81954 875517	169190	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Trichlorophenol	ANT	Ave	 206317	8181 331113	21345 420250	45490 528945	101332	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,5-Trichlorophenol	ANT	Ave	 200733	8374 331362	21870 425513	46937 526807	103222	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,1'-Biphenyl	ANT	Ave	6323 660890	28107 1060595	68191 1384087	147987 1700122	317308	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chloronaphthalene	ANT	Ave	4626 504931	23778 831567	60337 1071904	117806 1328809	259718	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitroaniline	ANT	Ave	 190126	6864 319460	19703 396064	43051 477338	92501	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dimethyl phthalate	ANT	Ave	 614239	30381 934880	76484 1195607	146214 1439539	324013	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dinitrobenzene	ANT	Ave	 89765	3189 147122	10305 192483	20096 242915	52741	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,6-Dinitrotoluene	ANT	Ave	 138527	5561 207202	15066 270243	31998 325741	72387	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acenaphthylene	ANT	Ave	6095 760878	32361 1240190	82072 1596055	166836 1993919	381513	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Nitroaniline	ANT	Ave	 102245	4248 156161	13246 216101	27913 271270	59251	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dinitrophenol	ANT	Qua	 149883	+++++ 291406	11681 381866	29384 481461	75461	 20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Acenaphthene	ANT	Ave	5320 527752	24732 860501	57056 1096058	111135 1358706	256490	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitrophenol	ANT	Ave	 324532	+++++ 553465	30786 682031	56507 +++++	132533	 20.0	+++++ 30.0	2.00 40.0	4.00 +++++	10.0
2,4-Dinitrotoluene	ANT	Ave	 162375	6754 276629	20405 363165	40570 463055	87094	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenzofuran	ANT	Ave	8124 791821	36661 1265636	89811 1618071	183817 1973946	397298	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,3,4,6-Tetrachlorophenol	ANT	Ave	 160787	7850 273844	22061 367033	42812 451112	93020	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexadecane	ANT	Ave	 283680	10440 464078	29760 596821	61769 747815	133583	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Diethyl phthalate	ANT	Ave	 535122	31445 939935	75876 1236002	145800 1553643	290548	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chlorophenyl phenyl ether	ANT	Ave	387278	19535 594276	46081 775244	86371 915707	194413	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitroaniline	ANT	Ave	119947	4134 180111	13737 214796	21896 270642	55068	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluorene	ANT	Ave	5219 642827	27444 973472	71066 1257329	139265 1503778	303951	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4,6-Dinitro-2-methylphenol	PHN	Lin1	254363	+++++ 442203	20709 592166	46116 751864	105870	20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Diphenylamine	PHN	Ave	388353	22191 654447	56555 830410	106047 1049737	232632	8.50	0.425 12.8	0.850 17.0	1.70 21.3	4.25
N-Nitrosodiphenylamine	PHN	Ave	388353	22191 654447	56555 830410	106047 1049737	232632	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Azobenzene	PHN	Ave	802697	33978 1154404	87576 1396548	184262 +++++	380471	10.0	0.500 15.0	1.00 20.0	2.00 +++++	5.00
4-Bromophenyl phenyl ether	PHN	Ave	216929	10229 305521	25110 388416	48251 481481	113890	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Atrazine	PHN	Ave	4016 464274	16093 742232	38933 1004963	84243 1223490	194597	0.200 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Hexachlorobenzene	PHN	Ave	2986 248211	11867 364309	26841 462717	55613 580371	115713	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
n-Octadecane	PHN	Qua	185484	10809 274033	30154 375239	59870 462046	119235	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pentachlorophenol	PHN	Ave	290151	+++++ 502358	27444 660523	56406 861326	121614	20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Phenanthrene	PHN	Ave	9111 834824	44814 1380136	107544 1815470	206585 2351510	369041	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Anthracene	PHN	Ave	7897 844953	43652 1443461	103155 1860605	215304 2414075	384309	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Carbazole	PHN	Ave	599835	33303 888462	83785 1139341	126966 1435497	291662	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-butyl phthalate	PHN	Lin1	1061322	33549 1713181	81634 2217735	181992 2758428	452505	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluoranthene	PHN	Lin1	7660 1215459	44546 1961244	103355 2542129	202687 3123295	504709	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzidine	CRY	Lin1	983414	20222 1824171	68048 2422739	153931 2934818	400906	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Pyrene	CRY	Ave	10754 1215715	50908 1995140	104573 2502864	212934 3166044	534856	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Butyl benzyl phthalate	CRY	Ave	455727	12849 771653	47257 989329	97399 1265796	225107	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-ethylhexyl) phthalate	CRY	Ave	692326	21310 1128749	67438 1456261	126137 1816941	301193	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2 Analy Batch No.: 431934

SDG No.:

Instrument ID: A4AG3 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2020 15:38 Calibration End Date: 04/23/2020 19:12 Calibration ID: 56791

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
3,3'-Dichlorobenzidine	CRY	Ave	572912	27771 898334	71894 1233793	127821 1650066	253360	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Benzo[a]anthracene	CRY	Ave	10769 1262811	49971 2004964	139427 2550485	265245 3182260	583834	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Chrysene	CRY	Ave	10935 1263606	52453 1994265	139558 2548405	268148 3151168	570059	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-octyl phthalate	PRY	Lin1	1161591	28673 1864930	92726 2397658	198175 3019100	524399	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[b]fluoranthene	PRY	Ave	10372 1285303	42774 1963368	129593 2597568	247423 3102016	575779	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[k]fluoranthene	PRY	Ave	9363 1329261	46861 2168179	134259 2591252	268699 3330253	621485	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]pyrene	PRY	Ave	8567 1158974	38264 1841083	104703 2331556	225235 2896700	525742	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indeno[1,2,3-cd]pyrene	PRY	Ave	10703 1267092	48336 2023190	131012 2562323	259731 3132432	581700	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenz(a,h)anthracene	PRY	Ave	8385 1121303	41556 1748627	111188 2236084	229616 2756483	494555	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[g,h,i]perylene	PRY	Ave	10133 1034828	44878 1597686	103086 1974099	215762 2488215	482470	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorophenol (Surr)	DCBd 4	Ave	206412	10228 356904	24944 467036	50652 587929	106942	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Phenol-d5 (Surr)	DCBd 4	Ave	282027	13556 470085	35242 602056	66413 759306	145893	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene-d5 (Surr)	NPT	Ave	4010 374514	17474 616242	45445 784699	85398 969719	194539	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorobiphenyl (Surr)	ANT	Ave	5277 593883	27681 993770	68944 1290759	133901 1589034	306801	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Tribromophenol (Surr)	ANT	Ave	78663	4450 153191	12542 194151	23197 250294	53373	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Terphenyl-d14 (Surr)	CRY	Ave	6726 891681	30379 1421638	80921 1791282	177499 2240441	412494	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423002.D
Lims ID: std5 lst1
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Apr-2020 15:38:23 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-002
Misc. Info.: STD5 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:43:54 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 16:25:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	93	83364	4.00	4.00	
* 2 Naphthalene-d8	136	7.692	7.692	0.000	98	276831	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	92	192831	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	286509	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.363	0.000	98	384686	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	97	412798	4.00	4.00	
$ 7 2-Fluorophenol	112	5.422	5.422	0.000	89	106942	5.00	4.65	
$ 8 Phenol-d5	99	6.222	6.222	0.000	85	145893	5.00	4.76	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	88	194539	5.00	4.88	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	99	306801	5.00	4.89	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	92	53373	5.00	5.25	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	412494	5.00	5.14	
13 1,4-Dioxane	88	3.704	3.704	0.000	85	61397	5.00	4.95	M
14 N-Nitrosodimethylamine	74	4.063	4.063	0.000	89	81745	5.00	4.73	
15 Pyridine	79	4.110	4.110	0.000	91	283200	10.0	9.29	
30 Benzaldehyde	77	6.210	6.210	0.000	89	253583	10.0	9.38	
31 Phenol	94	6.234	6.234	0.000	91	162502	5.00	4.74	
32 Aniline	93	6.293	6.293	0.000	94	191856	5.00	4.62	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	94	152987	5.00	4.96	
36 2-Chlorophenol	128	6.410	6.410	0.000	92	120746	5.00	4.90	
37 n-Decane	57	6.422	6.422	0.000	70	100985	5.00	4.72	
39 1,3-Dichlorobenzene	146	6.551	6.551	0.000	90	144465	5.00	4.80	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	85	151986	5.00	4.76	
41 Benzyl alcohol	108	6.681	6.681	0.000	87	86274	5.00	5.01	
44 1,2-Dichlorobenzene	146	6.745	6.745	0.000	87	139972	5.00	4.71	
45 2-Methylphenol	108	6.763	6.763	0.000	93	124482	5.00	4.88	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	67	81865	5.00	4.91	
47 Indene	115	6.822	6.822	0.000	90	428997	10.0	9.37	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	93	124558	5.00	4.76	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	77	123937	5.00	4.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	90	194188	5.00	4.70	
54 Hexachloroethane	117	7.045	7.045	0.000	84	67686	5.00	4.81	
55 Nitrobenzene	77	7.075	7.075	0.000	86	179773	5.00	4.89	
57 Isophorone	82	7.269	7.269	0.000	99	303445	5.00	4.92	
58 2,4-Dimethylphenol	107	7.345	7.345	0.000	88	161364	5.00	4.84	
59 2-Nitrophenol	139	7.351	7.351	0.000	85	62179	5.00	4.60	
63 Benzoic acid	105	7.381	7.381	0.000	86	160865	10.0	9.20	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	98	153521	5.00	4.92	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	96	120134	5.00	4.94	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	141822	5.00	4.87	
69 Naphthalene	128	7.710	7.710	0.000	94	375594	5.00	4.93	
70 4-Chloroaniline	127	7.728	7.728	0.000	93	163373	5.00	5.04	M
71 2,6-Dichlorophenol	162	7.745	7.745	0.000	92	116154	5.00	4.91	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	95	112721	5.00	4.88	
78 Caprolactam	113	7.998	7.998	0.000	84	67299	10.0	9.48	
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	90	134320	5.00	4.94	
82 2-Methylnaphthalene	142	8.298	8.298	0.000	88	255060	5.00	4.59	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	92	248517	5.00	4.88	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	95	130595	5.00	5.10	
86 1,2,4,5-Tetrachlorobenzene	216	8.439	8.439	0.000	98	169190	5.00	4.79	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	101332	5.00	4.91	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	91	103222	5.00	4.95	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	97	317308	5.00	4.71	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	259718	5.00	4.84	
99 2-Nitroaniline	65	8.781	8.781	0.000	73	92501	5.00	4.87	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	324013	5.00	5.02	
103 1,3-Dinitrobenzene	168	8.945	8.945	0.000	85	52741	5.00	5.62	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	84	72387	5.00	5.24	
105 Acenaphthylene	152	9.081	9.081	0.000	98	381513	5.00	4.96	
106 3-Nitroaniline	138	9.122	9.122	0.000	85	59251	5.00	5.30	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	79	75461	10.0	10.1	
109 Acenaphthene	153	9.228	9.228	0.000	94	256490	5.00	4.69	
110 4-Nitrophenol	109	9.228	9.228	0.000	62	132533	10.0	8.65	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	86	87094	5.00	4.89	
113 Dibenzofuran	168	9.369	9.369	0.000	95	397298	5.00	4.78	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	73	93020	5.00	5.02	
117 Hexadecane	57	9.492	9.492	0.000	87	133583	5.00	4.72	
118 Diethyl phthalate	149	9.492	9.492	0.000	96	290548	5.00	4.56	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	95	194413	5.00	4.84	
125 4-Nitroaniline	138	9.663	9.663	0.000	65	55068	5.00	4.93	M
126 Fluorene	166	9.663	9.663	0.000	94	303951	5.00	4.83	
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	82	105870	10.0	9.63	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	98	232632	5.00	6.11	
129 Diphenylamine	169	9.722	9.722	0.000	94	232632	4.25	5.19	
130 Azobenzene	77	9.769	9.769	0.000	99	380471	5.00	5.79	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	68	113890	5.00	6.31	
140 Atrazine	200	10.145	10.145	0.000	92	194597	10.0	10.8	
141 Hexachlorobenzene	284	10.151	10.151	0.000	91	115713	5.00	5.49	
142 n-Octadecane	57	10.269	10.269	0.000	82	119235	5.00	6.87	
145 Pentachlorophenol	266	10.298	10.298	0.000	90	121614	10.0	9.86	
149 Phenanthrene	178	10.492	10.492	0.000	97	369041	5.00	4.84	
150 Anthracene	178	10.539	10.539	0.000	97	384309	5.00	5.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	291662	5.00	5.54	
154 Di-n-butyl phthalate	149	10.881	10.881	0.000	99	452505	5.00	5.19	
160 Fluoranthene	202	11.592	11.592	0.000	96	504709	5.00	4.99	
161 Benzidine	184	11.669	11.669	0.000	98	400906	10.0	8.22	
163 Pyrene	202	11.839	11.839	0.000	98	534856	5.00	4.76	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	93	225107	5.00	5.21	
176 Bis(2-ethylhexyl) phthalat	149	13.222	13.222	0.000	95	301193	5.00	4.84	
178 3,3'-Dichlorobenzidine	252	13.251	13.251	0.000	74	253360	10.0	8.68	
179 Benzo[a]anthracene	228	13.345	13.345	0.000	96	583834	5.00	4.85	
180 Chrysene	228	13.404	13.404	0.000	95	570059	5.00	4.71	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	524399	5.00	4.64	
185 Benzo[b]fluoranthene	252	15.045	15.045	0.000	94	575779	5.00	4.66	
186 Benzo[k]fluoranthene	252	15.092	15.092	0.000	95	621485	5.00	4.83	
187 Benzo[a]pyrene	252	15.604	15.604	0.000	73	525742	5.00	4.79	
191 Indeno[1,2,3-cd]pyrene	276	17.739	17.739	0.000	92	581700	5.00	4.59	
192 Dibenz(a,h)anthracene	278	17.751	17.751	0.000	78	494555	5.00	4.55	
193 Benzo[g,h,i]perylene	276	18.345	18.345	0.000	95	482470	5.00	4.58	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L5 W_00014 Amount Added: 1.00 Units: mL

Report Date: 24-Apr-2020 13:43:58 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423002.D

Injection Date: 23-Apr-2020 15:38:23 Instrument ID: A4AG3 Operator ID:

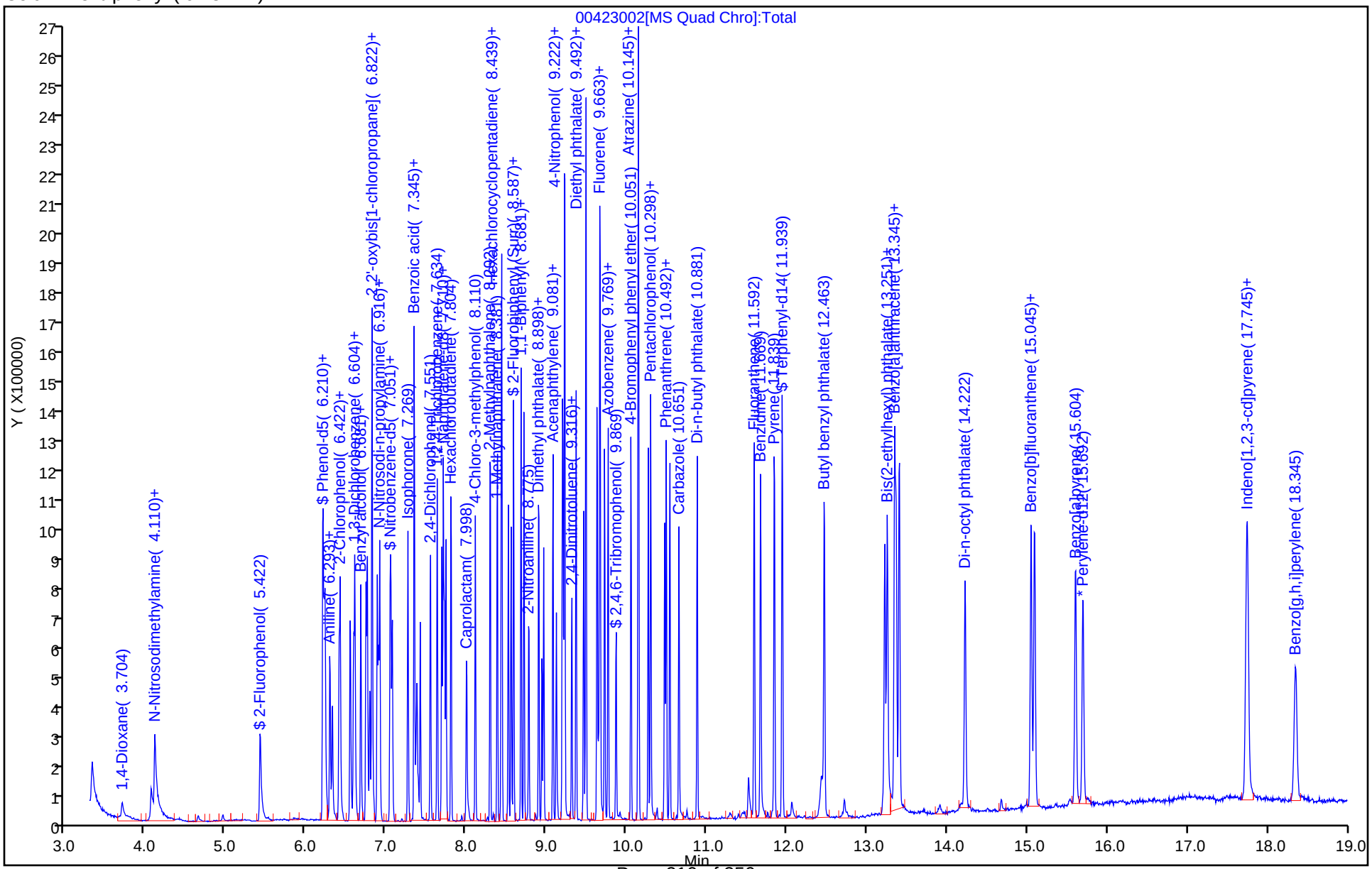
Lims ID: std5 lst1 Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

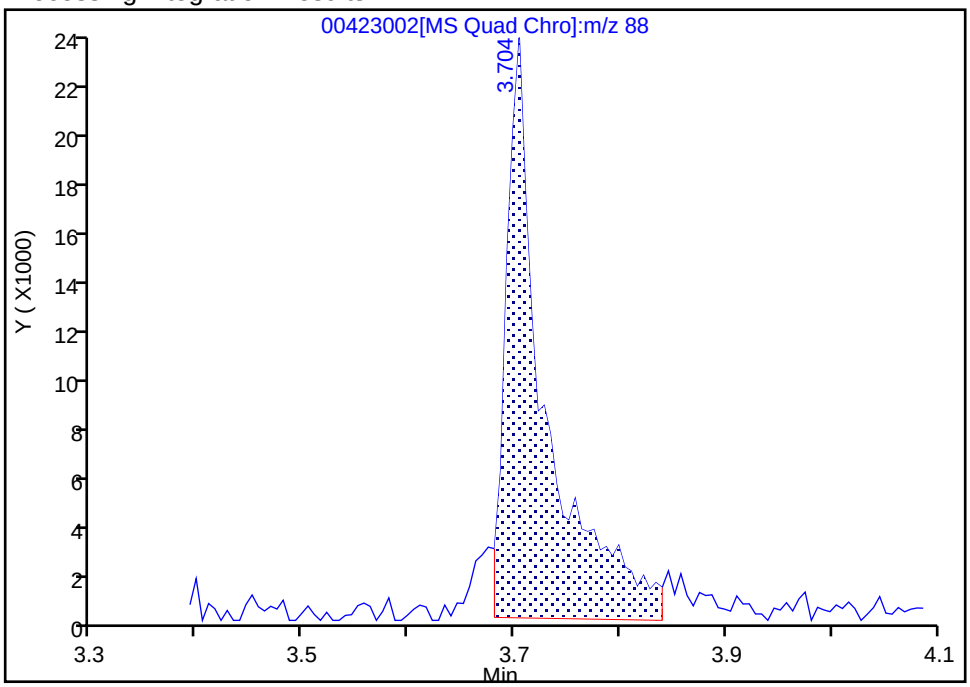
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423002.D				
Injection Date:	23-Apr-2020 15:38:23	Instrument ID:	A4AG3		
Lims ID:	std5 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

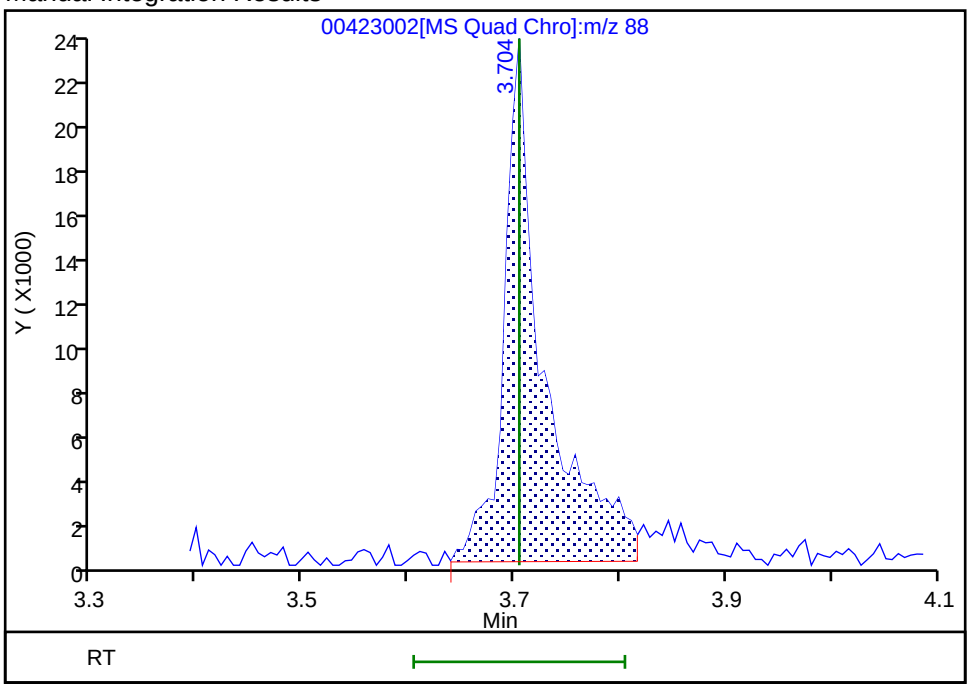
Processing Integration Results

RT: 3.70
Area: 60812
Amount: 5.000000
Amount Units: ng/ul



Manual Integration Results

RT: 3.70
Area: 61397
Amount: 4.950899
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:06:19

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

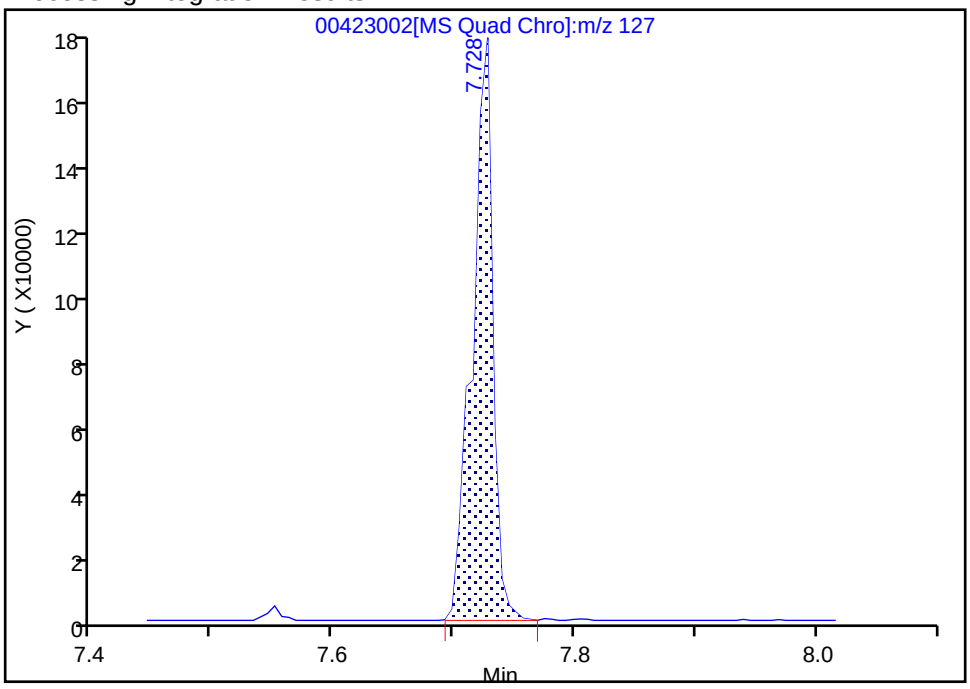
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423002.D
Injection Date: 23-Apr-2020 15:38:23 Instrument ID: A4AG3
Lims ID: std5 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

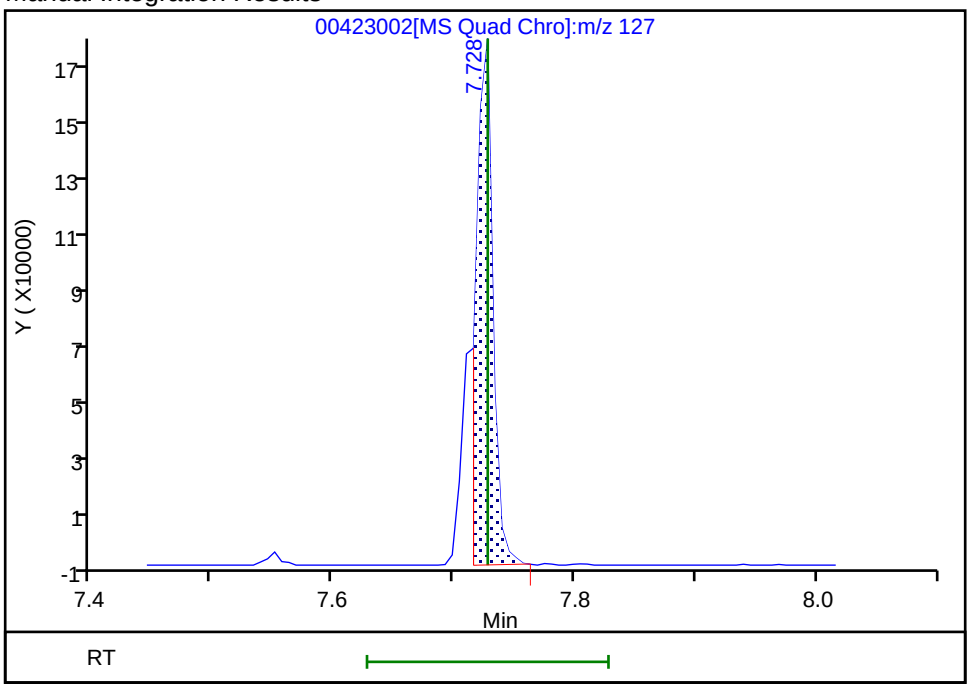
Processing Integration Results

RT: 7.73
Area: 198860
Amount: 5.000000
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 163373
Amount: 5.039034
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:07:16
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

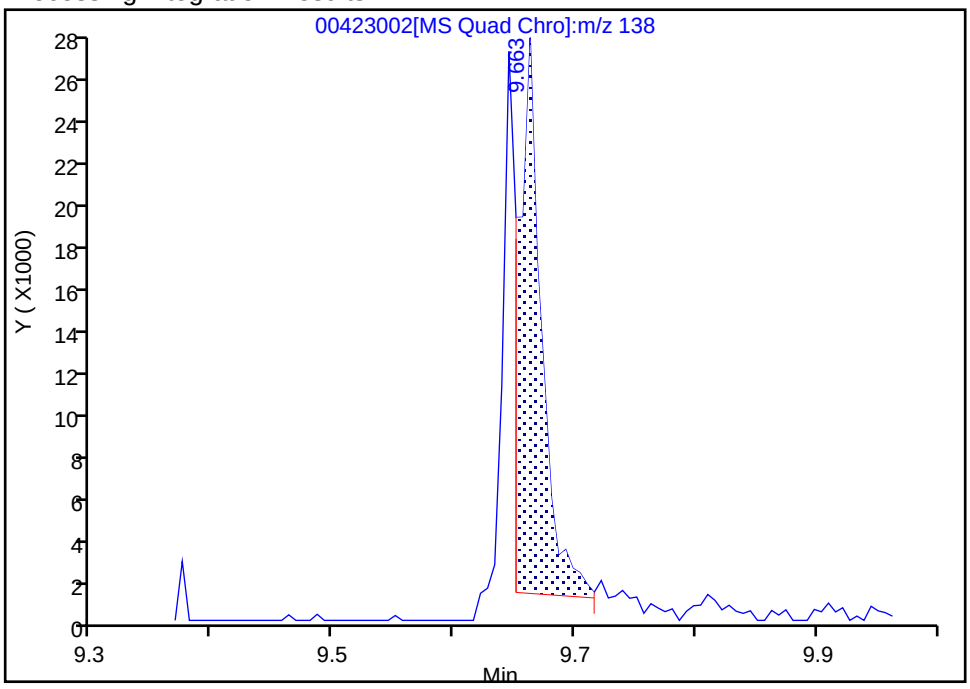
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423002.D
Injection Date: 23-Apr-2020 15:38:23 Instrument ID: A4AG3
Lims ID: std5 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

125 4-Nitroaniline, CAS: 100-01-6

Signal: 1

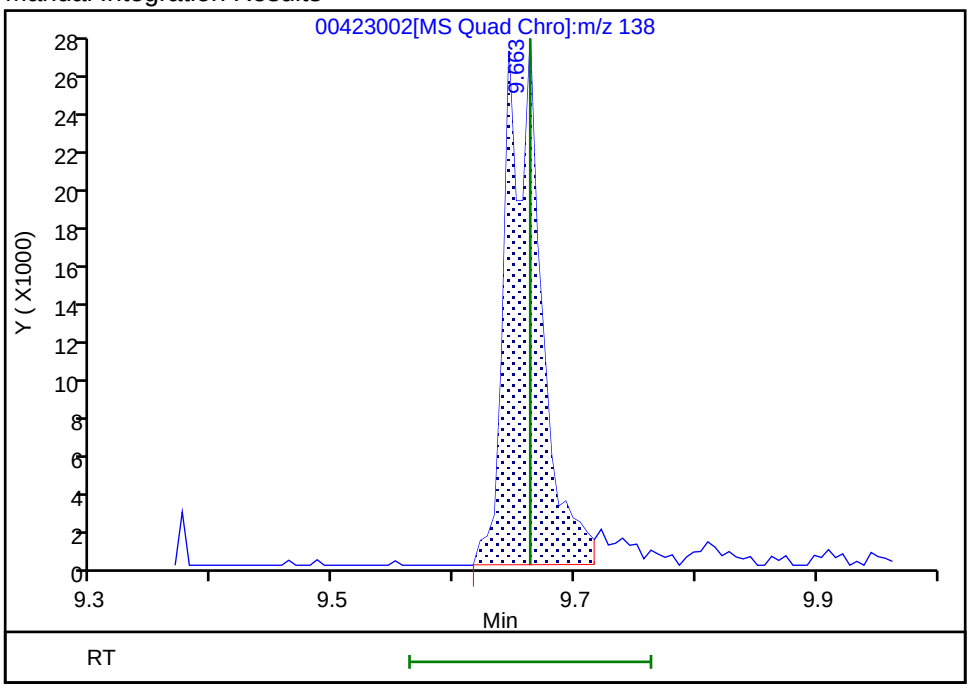
Processing Integration Results

RT: 9.66
Area: 34982
Amount: 5.000000
Amount Units: ng/ul



Manual Integration Results

RT: 9.66
Area: 55068
Amount: 4.931703
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:08:02
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423003.D
Lims ID: std4 lst1
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Apr-2020 16:01:40 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-003
Misc. Info.: STD4 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:00 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 17:11:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.001	94	92465	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.692	0.001	98	310474	4.00	4.00	
* 3 Acenaphthene-d10	164	9.192	9.198	-0.006	93	208796	4.00	4.00	
* 4 Phenanthrene-d10	188	10.469	10.475	-0.006	97	402914	4.00	4.00	
* 5 Chrysene-d12	240	13.357	13.363	-0.006	98	427970	4.00	4.00	
* 6 Perylene-d12	264	15.686	15.692	-0.006	98	428334	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.422	0.006	90	50652	2.00	1.99	
$ 8 Phenol-d5	99	6.222	6.222	0.000	71	66413	2.00	1.95	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	85398	2.00	1.91	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	98	133901	2.00	1.97	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	90	23197	2.00	2.11	
$ 12 Terphenyl-d14	244	11.933	11.939	-0.006	98	177499	2.00	1.99	
13 1,4-Dioxane	88	3.710	3.704	0.006	87	30502	2.00	2.22	M
14 N-Nitrosodimethylamine	74	4.069	4.063	0.006	94	42052	2.00	2.19	
15 Pyridine	79	4.122	4.110	0.012	91	114391	4.00	3.36	
30 Benzaldehyde	77	6.210	6.210	0.000	90	118996	4.00	3.97	
31 Phenol	94	6.234	6.234	0.000	90	76004	2.00	2.00	
32 Aniline	93	6.293	6.293	0.000	95	97430	2.00	2.11	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	97	66410	2.00	1.94	
36 2-Chlorophenol	128	6.410	6.410	0.000	92	58227	2.00	2.13	
37 n-Decane	57	6.422	6.422	0.000	70	48417	2.00	2.04	
39 1,3-Dichlorobenzene	146	6.546	6.551	-0.005	87	68422	2.00	2.05	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	86	70307	2.00	1.98	
41 Benzyl alcohol	108	6.681	6.681	0.000	84	36556	2.00	1.91	
44 1,2-Dichlorobenzene	146	6.746	6.745	0.001	88	65420	2.00	1.98	
45 2-Methylphenol	108	6.763	6.763	0.000	91	61509	2.00	2.17	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.001	65	39389	2.00	2.13	
47 Indene	115	6.822	6.822	0.000	88	201404	4.00	3.97	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	94	57210	2.00	1.97	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	74	55617	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	90	91155	2.00	1.99	
54 Hexachloroethane	117	7.046	7.045	0.001	84	31437	2.00	2.01	
55 Nitrobenzene	77	7.075	7.075	0.000	87	81661	2.00	1.98	
57 Isophorone	82	7.269	7.269	0.000	99	135675	2.00	1.96	
58 2,4-Dimethylphenol	107	7.346	7.345	0.001	92	72778	2.00	1.95	
59 2-Nitrophenol	139	7.346	7.351	-0.005	79	28927	2.00	1.91	
63 Benzoic acid	105	7.369	7.381	-0.012	91	59694	4.00	3.80	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	98	69616	2.00	1.99	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	93	49550	2.00	1.82	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	65204	2.00	2.00	
69 Naphthalene	128	7.710	7.710	0.000	98	164896	2.00	1.93	
70 4-Chloroaniline	127	7.728	7.728	0.000	90	68743	2.00	1.89	M
71 2,6-Dichlorophenol	162	7.745	7.745	0.000	91	52089	2.00	1.96	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	93	52846	2.00	2.04	
78 Caprolactam	113	7.993	7.998	-0.005	81	29802	4.00	3.80	
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	88	61592	2.00	2.02	
82 2-Methylnaphthalene	142	8.293	8.298	-0.005	90	120417	2.00	1.93	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	91	109558	2.00	1.92	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	96	55144	2.00	1.99	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.439	0.001	97	81954	2.00	2.14	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	45490	2.00	2.03	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	92	46937	2.00	2.08	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	98	147987	2.00	2.03	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	117806	2.00	2.03	
99 2-Nitroaniline	65	8.775	8.781	-0.006	69	43051	2.00	2.09	
102 Dimethyl phthalate	163	8.898	8.904	-0.006	96	146214	2.00	2.09	
103 1,3-Dinitrobenzene	168	8.940	8.945	-0.005	82	20096	2.00	1.98	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	84	31998	2.00	2.14	
105 Acenaphthylene	152	9.081	9.081	0.000	98	166836	2.00	2.00	
106 3-Nitroaniline	138	9.122	9.122	0.000	87	27913	2.00	2.30	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	82	29384	4.00	4.09	
109 Acenaphthene	153	9.222	9.228	-0.006	92	111135	2.00	1.88	
110 4-Nitrophenol	109	9.222	9.228	-0.006	60	56507	4.00	3.41	
111 2,4-Dinitrotoluene	165	9.310	9.316	-0.006	85	40570	2.00	2.10	
113 Dibenzofuran	168	9.369	9.369	0.000	95	183817	2.00	2.04	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	73	42812	2.00	2.13	
117 Hexadecane	57	9.487	9.492	-0.005	86	61769	2.00	2.02	
118 Diethyl phthalate	149	9.492	9.492	0.000	96	145800	2.00	2.11	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	93	86371	2.00	1.99	
126 Fluorene	166	9.663	9.663	0.000	95	139265	2.00	2.04	
125 4-Nitroaniline	138	9.645	9.663	-0.018	69	21896	2.00	1.81	M
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	88	46116	4.00	3.64	
129 Diphenylamine	169	9.722	9.722	0.000	94	106047	1.70	1.68	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	98	106047	2.00	1.98	
130 Azobenzene	77	9.763	9.769	-0.006	98	184262	2.00	2.00	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	79	48251	2.00	1.90	
140 Atrazine	200	10.139	10.145	-0.006	92	84243	4.00	3.33	
141 Hexachlorobenzene	284	10.145	10.151	-0.006	92	55613	2.00	1.88	
142 n-Octadecane	57	10.269	10.269	0.000	81	59870	2.00	1.92	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	56406	4.00	3.25	
149 Phenanthrene	178	10.492	10.492	0.000	97	206585	2.00	1.93	
150 Anthracene	178	10.534	10.539	-0.005	97	215304	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	126966	2.00	1.72	
154 Di-n-butyl phthalate	149	10.875	10.881	-0.006	99	181992	2.00	1.66	
160 Fluoranthene	202	11.586	11.592	-0.006	96	202687	2.00	1.48	
161 Benzidine	184	11.669	11.669	0.000	98	153931	4.00	3.41	
163 Pyrene	202	11.839	11.839	0.000	98	212934	2.00	1.70	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	91	97399	2.00	2.03	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.222	-0.006	95	126137	2.00	1.82	
178 3,3'-Dichlorobenzidine	252	13.245	13.251	-0.006	74	127821	4.00	3.93	
179 Benzo[a]anthracene	228	13.339	13.345	-0.006	96	265245	2.00	1.98	
180 Chrysene	228	13.392	13.404	-0.012	95	268148	2.00	1.99	
183 Di-n-octyl phthalate	149	14.216	14.222	-0.006	99	198175	2.00	1.85	
185 Benzo[b]fluoranthene	252	15.039	15.045	-0.006	94	247423	2.00	1.93	
186 Benzo[k]fluoranthene	252	15.080	15.092	-0.012	96	268699	2.00	2.01	
187 Benzo[a]pyrene	252	15.598	15.604	-0.006	73	225235	2.00	1.98	
191 Indeno[1,2,3-cd]pyrene	276	17.727	17.739	-0.012	95	259731	2.00	1.98	
192 Dibenz(a,h)anthracene	278	17.739	17.751	-0.012	86	229616	2.00	2.04	
193 Benzo[g,h,i]perylene	276	18.333	18.345	-0.012	94	215762	2.00	1.97	
S 219 Methyl Phenols,Total	100				0			4.14	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L4 W_00014 Amount Added: 1.00 Units: mL

Report Date: 24-Apr-2020 13:44:05 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423003.D

Injection Date: 23-Apr-2020 16:01:40 Instrument ID: A4AG3 Operator ID:

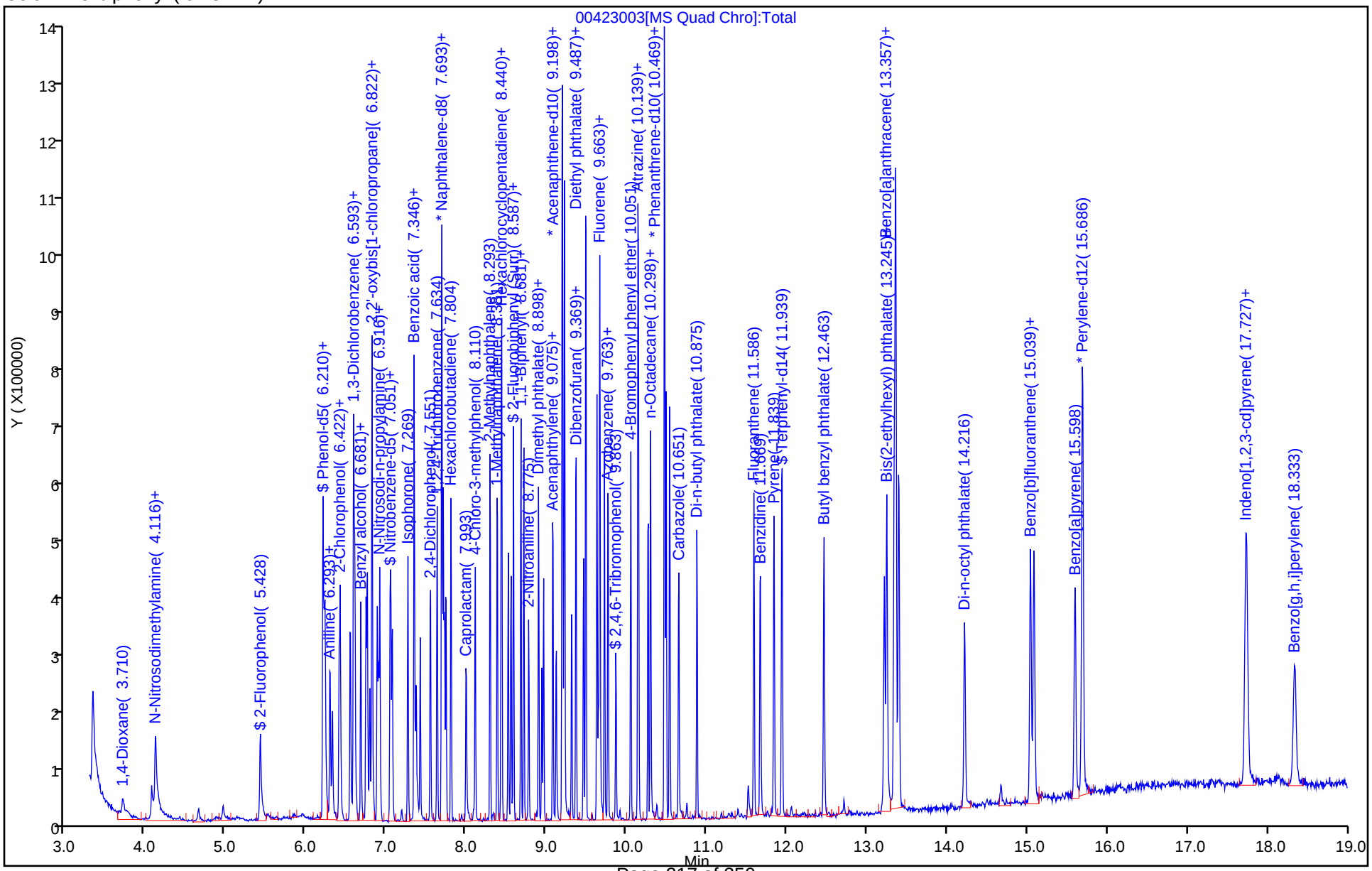
Lims ID: std4 lst1 Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

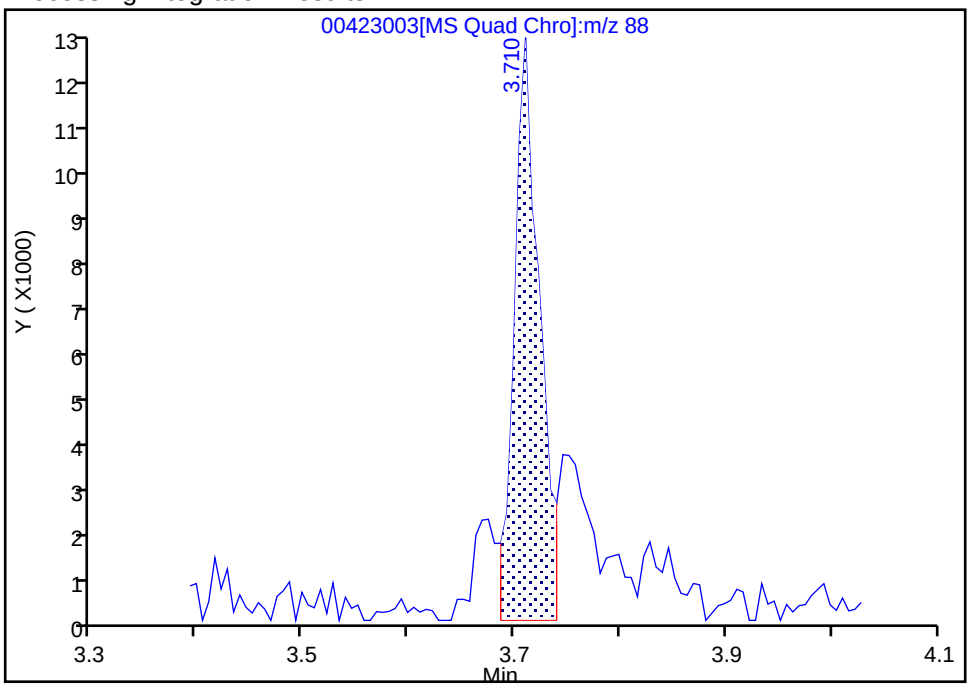
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423003.D				
Injection Date:	23-Apr-2020 16:01:40	Instrument ID:	A4AG3		
Lims ID:	std4 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

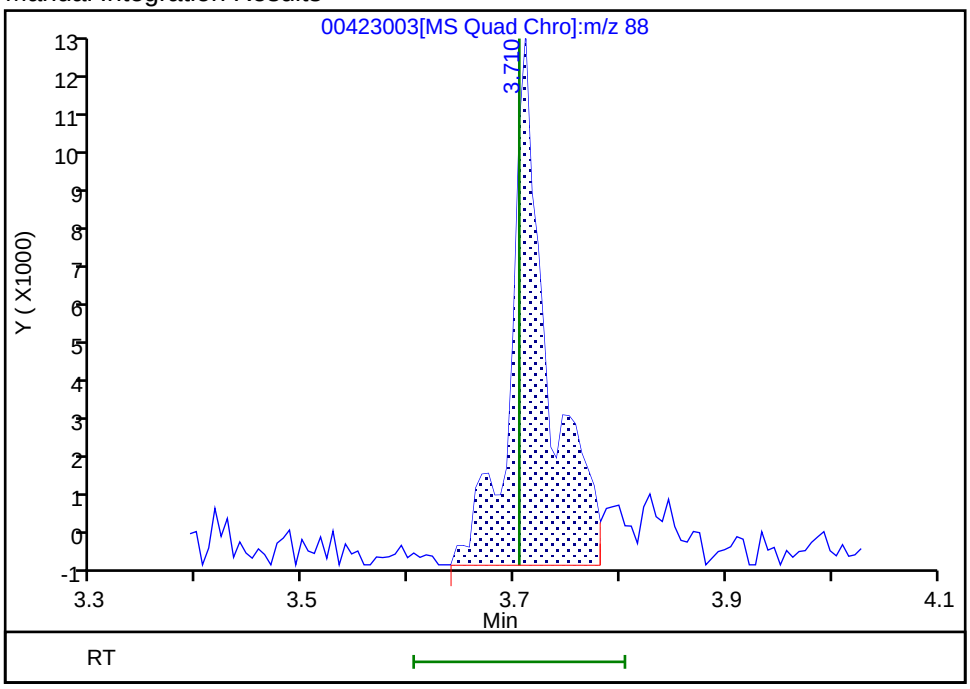
Processing Integration Results

RT: 3.71
Area: 20813
Amount: 1.732506
Amount Units: ng/ul



Manual Integration Results

RT: 3.71
Area: 30502
Amount: 2.217514
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:26:22

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

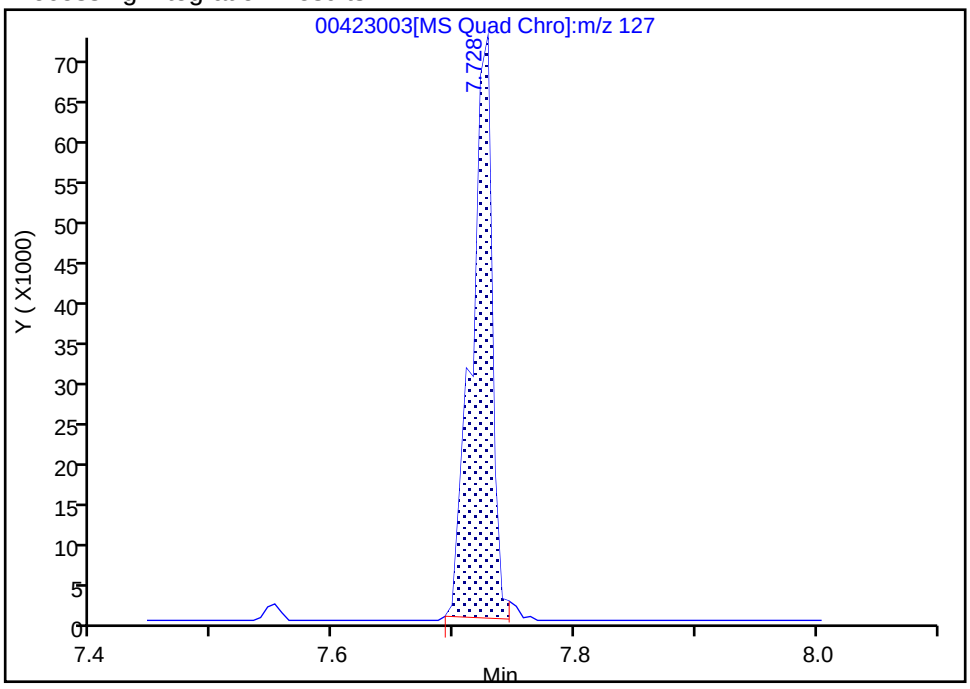
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423003.D
Injection Date: 23-Apr-2020 16:01:40 Instrument ID: A4AG3
Lims ID: std4 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

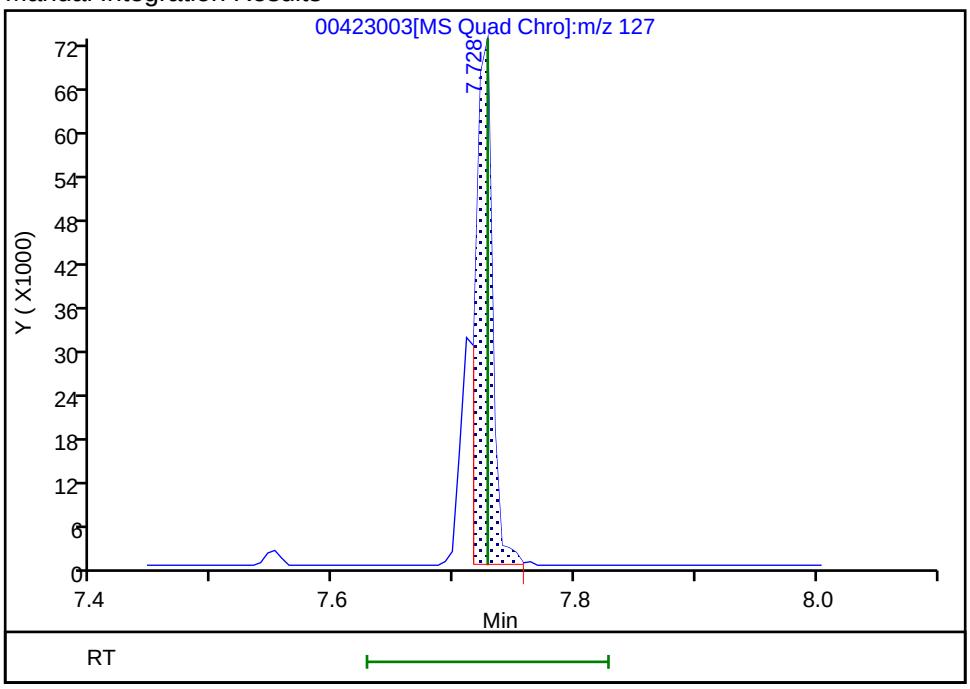
Processing Integration Results

RT: 7.73
Area: 84527
Amount: 2.142392
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 68743
Amount: 1.890536
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:27:23
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

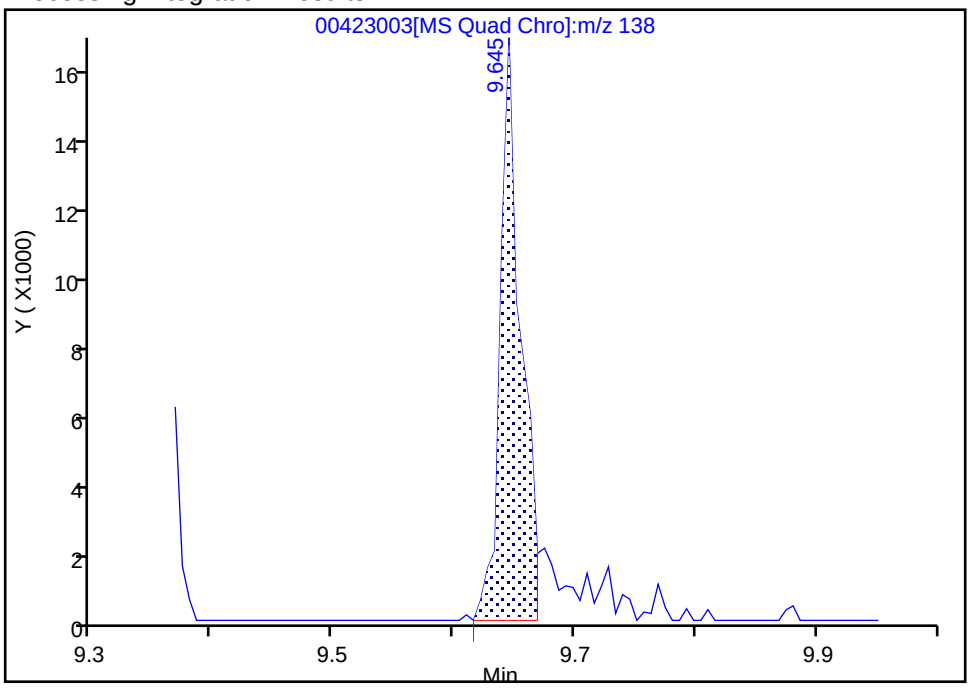
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423003.D				
Injection Date:	23-Apr-2020 16:01:40	Instrument ID:	A4AG3		
Lims ID:	std4 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

125 4-Nitroaniline, CAS: 100-01-6

Signal: 1

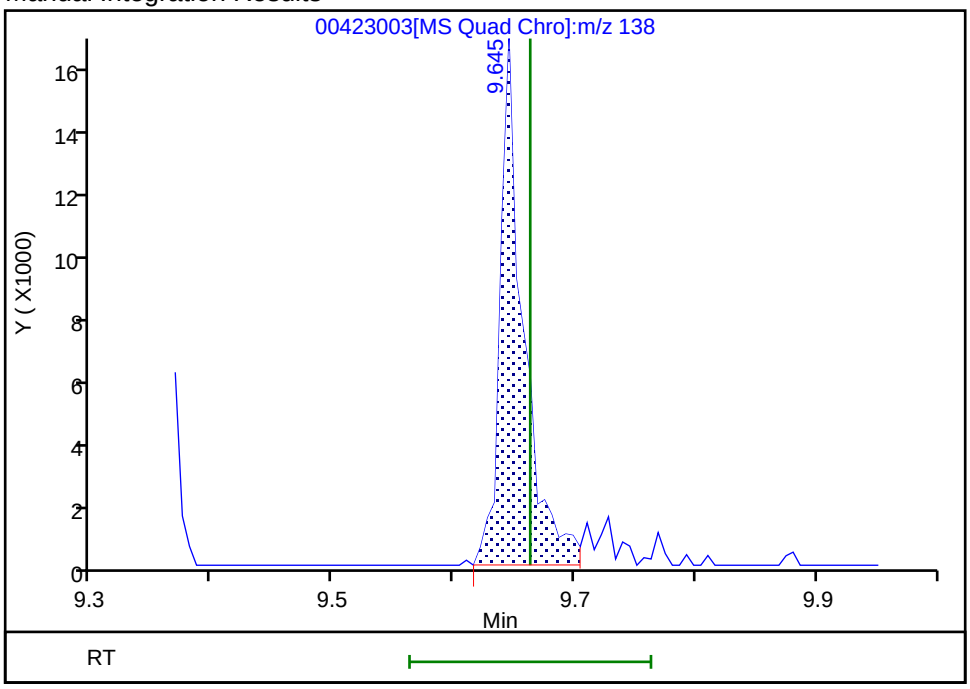
Processing Integration Results

RT: 9.65
Area: 19496
Amount: 1.799068
Amount Units: ng/ul



Manual Integration Results

RT: 9.65
Area: 21896
Amount: 1.810994
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 16:28:05

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423004.D
Lims ID: std3 lst1
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Apr-2020 16:25:09 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-004
Misc. Info.: STD3 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:10 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 17:12:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.001	94	86275	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.692	0.001	98	285301	4.00	4.00	
* 3 Acenaphthene-d10	164	9.193	9.198	-0.005	93	196002	4.00	4.00	
* 4 Phenanthrene-d10	188	10.469	10.475	-0.006	97	371249	4.00	4.00	
* 5 Chrysene-d12	240	13.357	13.363	-0.006	98	397607	4.00	4.00	
* 6 Perylene-d12	264	15.686	15.692	-0.006	98	384208	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.422	0.006	92	24944	1.00	1.05	
$ 8 Phenol-d5	99	6.222	6.222	0.000	73	35242	1.00	1.11	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	91	45445	1.00	1.11	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	97	68944	1.00	1.08	
$ 11 2,4,6-Tribromophenol	330	9.863	9.869	-0.006	89	12542	1.00	1.21	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	97	80921	1.00	0.9756	
13 1,4-Dioxane	88	3.711	3.704	0.006	74	10929	1.00	0.8516	
14 N-Nitrosodimethylamine	74	4.069	4.063	0.006	92	15381	1.00	0.8604	M
15 Pyridine	79	4.116	4.110	0.006	89	61845	2.00	1.94	
30 Benzaldehyde	77	6.210	6.210	0.000	87	62574	2.00	2.24	
31 Phenol	94	6.234	6.234	0.000	91	36899	1.00	1.04	
32 Aniline	93	6.293	6.293	0.000	97	44094	1.00	1.03	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	95	36472	1.00	1.14	
36 2-Chlorophenol	128	6.410	6.410	0.000	82	26460	1.00	1.04	
37 n-Decane	57	6.422	6.422	0.000	76	24717	1.00	1.12	
39 1,3-Dichlorobenzene	146	6.546	6.551	-0.005	88	32032	1.00	1.03	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	89	37908	1.00	1.15	
41 Benzyl alcohol	108	6.681	6.681	0.000	80	17137	1.00	0.9609	
44 1,2-Dichlorobenzene	146	6.746	6.745	0.001	87	35269	1.00	1.15	
45 2-Methylphenol	108	6.763	6.763	0.000	89	26913	1.00	1.02	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.001	63	17738	1.00	1.03	
47 Indene	115	6.822	6.822	0.000	88	102477	2.00	2.16	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	90	27086	1.00	1.00	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	76	26423	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	89	46858	1.00	1.10	
54 Hexachloroethane	117	7.046	7.045	0.001	86	15541	1.00	1.07	
55 Nitrobenzene	77	7.075	7.075	0.000	85	42328	1.00	1.12	
57 Isophorone	82	7.269	7.269	0.000	98	66906	1.00	1.05	
58 2,4-Dimethylphenol	107	7.346	7.345	0.001	92	38176	1.00	1.11	
59 2-Nitrophenol	139	7.351	7.351	0.000	85	15176	1.00	1.09	
63 Benzoic acid	105	7.369	7.381	-0.012	79	25406	2.00	2.36	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	97	34438	1.00	1.07	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	93	26464	1.00	1.06	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	31430	1.00	1.05	
69 Naphthalene	128	7.710	7.710	0.000	96	82175	1.00	1.05	
70 4-Chloroaniline	127	7.722	7.728	-0.006	90	36322	1.00	1.09	M
71 2,6-Dichlorophenol	162	7.746	7.745	0.001	91	25184	1.00	1.03	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	94	25522	1.00	1.07	
78 Caprolactam	113	7.993	7.998	-0.005	86	15130	2.00	2.15	
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	89	30360	1.00	1.08	
82 2-Methylnaphthalene	142	8.293	8.298	-0.005	89	59374	1.00	1.04	
83 1-Methylnaphthalene	142	8.381	8.387	-0.006	88	54642	1.00	1.04	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	94	26217	1.00	1.01	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.439	0.001	97	37585	1.00	1.05	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	93	21345	1.00	1.02	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	90	21870	1.00	1.03	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	97	68191	1.00	1.00	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	60337	1.00	1.11	
99 2-Nitroaniline	65	8.775	8.781	-0.006	69	19703	1.00	1.02	
102 Dimethyl phthalate	163	8.898	8.904	-0.006	95	76484	1.00	1.17	
103 1,3-Dinitrobenzene	168	8.940	8.945	-0.005	84	10305	1.00	1.08	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	84	15066	1.00	1.07	
105 Acenaphthylene	152	9.081	9.081	0.000	98	82072	1.00	1.05	
106 3-Nitroaniline	138	9.122	9.122	0.000	86	13246	1.00	1.16	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	75	11681	2.00	2.01	
110 4-Nitrophenol	109	9.222	9.228	-0.006	58	30786	2.00	1.98	
109 Acenaphthene	153	9.222	9.228	-0.006	95	57056	1.00	1.03	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	81	20405	1.00	1.13	
113 Dibenzofuran	168	9.369	9.369	0.000	93	89811	1.00	1.06	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	22061	1.00	1.17	
117 Hexadecane	57	9.487	9.492	-0.005	89	29760	1.00	1.03	
118 Diethyl phthalate	149	9.493	9.492	0.001	96	75876	1.00	1.17	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	92	46081	1.00	1.13	
126 Fluorene	166	9.663	9.663	0.000	95	71066	1.00	1.11	
125 4-Nitroaniline	138	9.645	9.663	-0.018	69	13737	1.00	1.21	
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	78	20709	2.00	2.26	
129 Diphenylamine	169	9.722	9.722	0.000	94	56555	0.8500	0.9743	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	99	56555	1.00	1.15	
130 Azobenzene	77	9.763	9.769	-0.006	99	87576	1.00	1.03	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	76	25110	1.00	1.07	
140 Atrazine	200	10.140	10.145	-0.005	92	38933	2.00	1.67	
141 Hexachlorobenzene	284	10.151	10.151	0.000	88	26841	1.00	0.9835	
142 n-Octadecane	57	10.263	10.269	-0.006	79	30154	1.00	0.7065	
145 Pentachlorophenol	266	10.298	10.298	0.000	86	27444	2.00	1.72	
149 Phenanthrene	178	10.493	10.492	0.000	97	107544	1.00	1.09	
150 Anthracene	178	10.534	10.539	-0.005	97	103155	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	96	83785	1.00	1.23	
154 Di-n-butyl phthalate	149	10.875	10.881	-0.006	100	81634	1.00	0.9361	
160 Fluoranthene	202	11.587	11.592	-0.005	96	103355	1.00	0.8528	
161 Benzidine	184	11.669	11.669	0.000	98	68048	2.00	2.09	
163 Pyrene	202	11.839	11.839	0.000	98	104573	1.00	0.9005	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	93	47257	1.00	1.06	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.222	-0.006	95	67438	1.00	1.05	
178 3,3'-Dichlorobenzidine	252	13.245	13.251	-0.006	73	71894	2.00	2.38	
179 Benzo[a]anthracene	228	13.339	13.345	-0.006	96	139427	1.00	1.12	
180 Chrysene	228	13.392	13.404	-0.012	96	139558	1.00	1.12	
183 Di-n-octyl phthalate	149	14.216	14.222	-0.006	99	92726	1.00	1.08	
185 Benzo[b]fluoranthene	252	15.039	15.045	-0.006	94	129593	1.00	1.13	
186 Benzo[k]fluoranthene	252	15.080	15.092	-0.012	95	134259	1.00	1.12	
187 Benzo[a]pyrene	252	15.592	15.604	-0.012	74	104703	1.00	1.02	
191 Indeno[1,2,3-cd]pyrene	276	17.722	17.739	-0.017	92	131012	1.00	1.11	
192 Dibenz(a,h)anthracene	278	17.733	17.751	-0.018	79	111188	1.00	1.10	
193 Benzo[g,h,i]perylene	276	18.333	18.345	-0.012	95	103086	1.00	1.05	
S 219 Methyl Phenols,Total	100				0			2.02	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L3 W_00014 Amount Added: 1.00 Units: mL

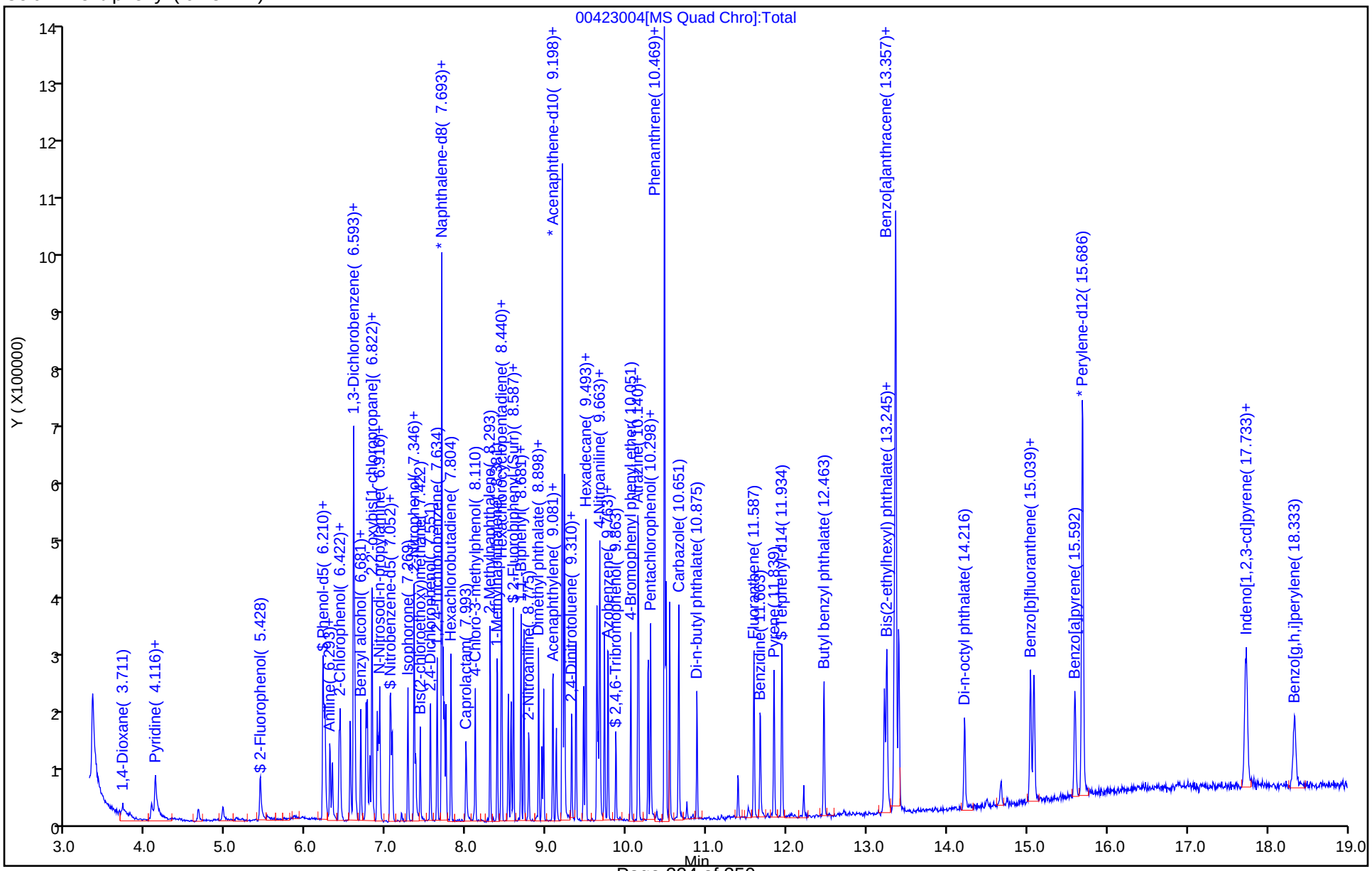
Report Date: 24-Apr-2020 13:44:13 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423004.D

Injection Date:	23-Apr-2020 16:25:09	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std3 lst1			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

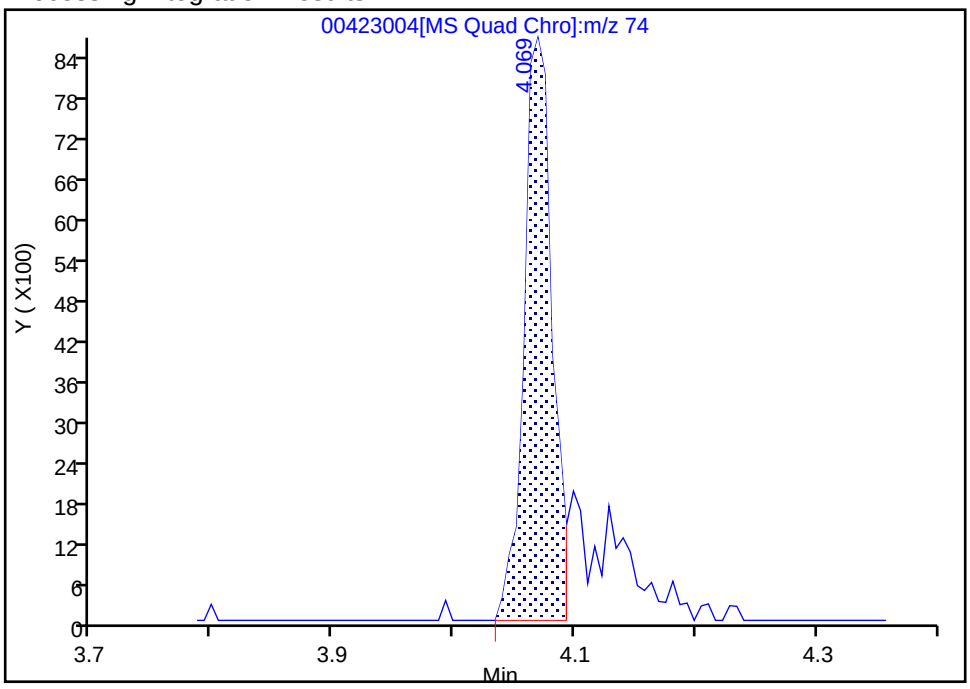
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423004.D				
Injection Date:	23-Apr-2020 16:25:09	Instrument ID:	A4AG3		
Lims ID:	std3 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

14 N-Nitrosodimethylamine, CAS: 62-75-9

Signal: 1

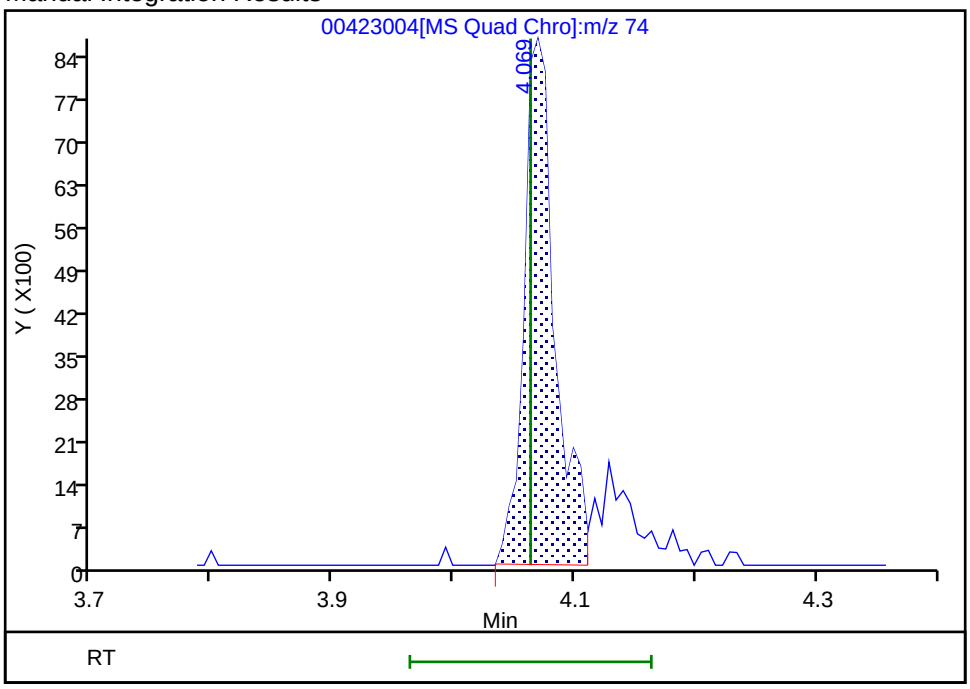
Processing Integration Results

RT: 4.07
Area: 13987
Amount: 0.830494
Amount Units: ng/ul



Manual Integration Results

RT: 4.07
Area: 15381
Amount: 0.860403
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:12:16

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

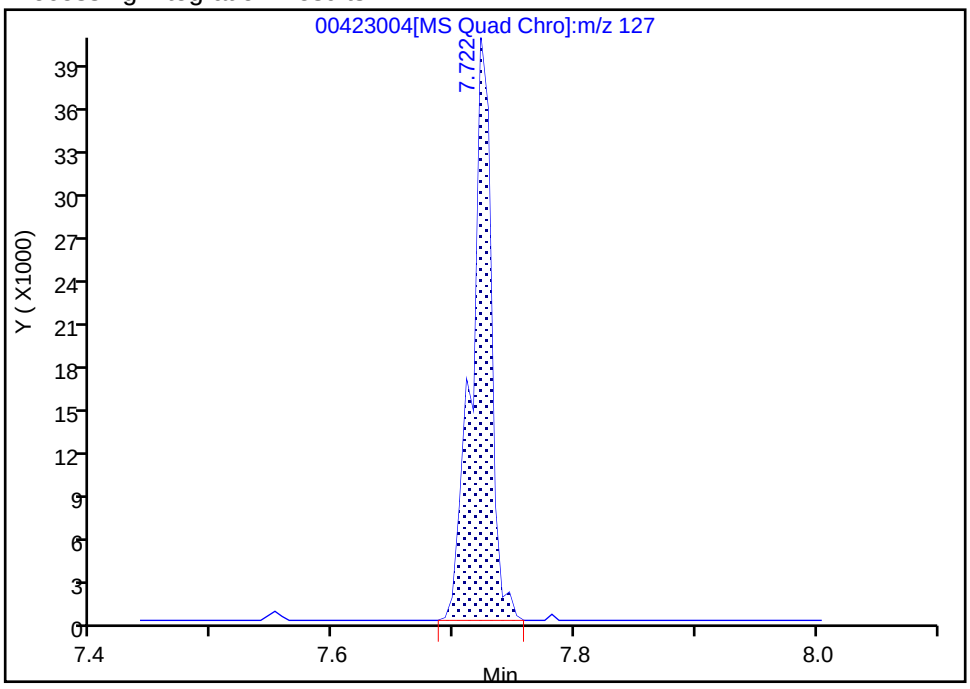
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423004.D				
Injection Date:	23-Apr-2020 16:25:09	Instrument ID:	A4AG3		
Lims ID:	std3 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

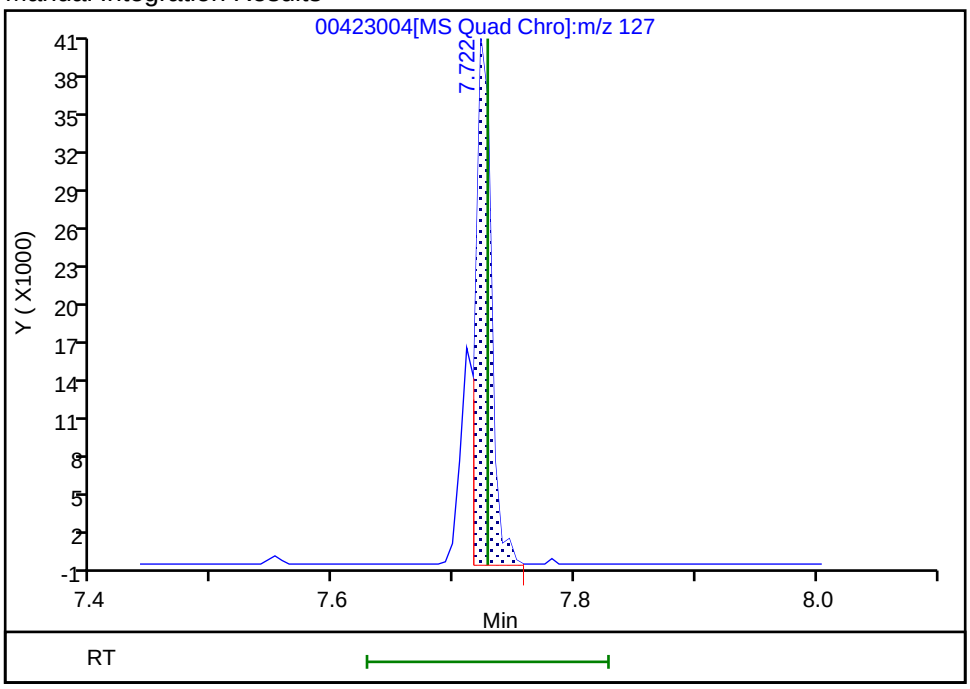
Processing Integration Results

RT: 7.72
Area: 45362
Amount: 1.313186
Amount Units: ng/ul



Manual Integration Results

RT: 7.72
Area: 36322
Amount: 1.087047
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:11:44

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Lims ID: std2 lst1
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Apr-2020 17:38:29 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-005
Misc. Info.: STD2 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:15 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 18:03:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.001	96	71290	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.692	0.001	98	237383	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	94	166970	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	98	319962	4.00	4.00	
* 5 Chrysene-d12	240	13.357	13.363	-0.006	98	334798	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	333277	4.00	4.00	
$ 7 2-Fluorophenol	112	5.422	5.422	0.000	92	10228	0.5000	0.5202	
$ 8 Phenol-d5	99	6.222	6.222	0.000	82	13556	0.5000	0.5167	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	87	17474	0.5000	0.5115	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	98	27681	0.5000	0.5091	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	87	4450	0.5000	0.5054	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	98	30379	0.5000	0.4350	
13 1,4-Dioxane	88	3.710	3.704	0.006	45	5265	0.5000	0.4965	a
14 N-Nitrosodimethylamine	74	4.075	4.063	0.012	83	7135	0.5000	0.4830	
15 Pyridine	79	4.122	4.110	0.012	93	25104	1.00	0.9365	
30 Benzaldehyde	77	6.204	6.210	-0.006	85	26151	1.00	1.13	
31 Phenol	94	6.234	6.234	0.000	90	15097	0.5000	0.5153	
32 Aniline	93	6.293	6.293	0.000	98	17840	0.5000	0.5022	
33 Bis(2-chloroethyl)ether	93	6.322	6.328	-0.006	98	15082	0.5000	0.5720	
36 2-Chlorophenol	128	6.410	6.410	0.000	77	9010	0.5000	0.4276	
37 n-Decane	57	6.422	6.422	0.000	79	9123	0.5000	0.4982	
39 1,3-Dichlorobenzene	146	6.546	6.551	-0.005	85	13431	0.5000	0.5222	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	87	14680	0.5000	0.5372	
41 Benzyl alcohol	108	6.681	6.681	0.000	86	7830	0.5000	0.5314	
44 1,2-Dichlorobenzene	146	6.746	6.745	0.001	85	13994	0.5000	0.5505	
45 2-Methylphenol	108	6.763	6.763	0.000	90	11044	0.5000	0.5058	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.001	56	6708	0.5000	0.4706	
47 Indene	115	6.822	6.822	0.000	90	40609	1.00	1.04	
48 3 & 4 Methylphenol	108	6.881	6.887	-0.006	91	11661	0.5000	0.5213	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	72	10894	0.5000	0.5126	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	83	17937	0.5000	0.5081	
54 Hexachloroethane	117	7.046	7.045	0.001	86	6520	0.5000	0.5420	
55 Nitrobenzene	77	7.075	7.075	0.000	84	16204	0.5000	0.5143	
57 Isophorone	82	7.269	7.269	0.000	98	25312	0.5000	0.4784	
58 2,4-Dimethylphenol	107	7.346	7.345	0.001	86	14108	0.5000	0.4935	
59 2-Nitrophenol	139	7.346	7.351	-0.005	74	4769	0.5000	0.4113	
63 Benzoic acid	105		7.381				ND	ND	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	96	13750	0.5000	0.5134	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	91	11023	0.5000	0.5282	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	92	13206	0.5000	0.5289	
69 Naphthalene	128	7.710	7.710	0.000	94	32011	0.5000	0.4901	
70 4-Chloroaniline	127	7.728	7.728	0.000	87	12256	0.5000	0.4408	M
71 2,6-Dichlorophenol	162	7.746	7.745	0.001	85	9601	0.5000	0.4734	
73 Hexachlorobutadiene	225	7.810	7.804	0.006	93	11380	0.5000	0.5745	
78 Caprolactam	113	7.998	7.998	0.000	89	6029	1.00	1.08	
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	88	10588	0.5000	0.4538	
82 2-Methylnaphthalene	142	8.293	8.298	-0.005	88	24380	0.5000	0.5116	
83 1-Methylnaphthalene	142	8.381	8.387	-0.006	92	25336	0.5000	0.5803	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	95	9656	0.5000	0.4354	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.439	0.001	94	15039	0.5000	0.4921	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	92	8181	0.5000	0.4575	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	87	8374	0.5000	0.4638	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	94	28107	0.5000	0.4821	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	96	23778	0.5000	0.5117	
99 2-Nitroaniline	65	8.781	8.781	0.000	70	6864	0.5000	0.4173	
102 Dimethyl phthalate	163	8.904	8.904	0.000	95	30381	0.5000	0.5434	
103 1,3-Dinitrobenzene	168	8.945	8.945	0.000	85	3189	0.5000	0.3925	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	80	5561	0.5000	0.4645	
105 Acenaphthylene	152	9.081	9.081	0.000	98	32361	0.5000	0.4859	
106 3-Nitroaniline	138	9.122	9.122	0.000	83	4248	0.5000	0.4386	
108 2,4-Dinitrophenol	184		9.204				ND	ND	
109 Acenaphthene	153	9.222	9.228	-0.006	90	24732	0.5000	0.5219	
110 4-Nitrophenol	109		9.228				ND	ND	U
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	82	6754	0.5000	0.4381	
113 Dibenzofuran	168	9.369	9.369	0.000	93	36661	0.5000	0.5090	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	72	7850	0.5000	0.4894	
117 Hexadecane	57	9.487	9.492	-0.005	83	10440	0.5000	0.4259	
118 Diethyl phthalate	149	9.493	9.492	0.001	95	31445	0.5000	0.5694	
122 4-Chlorophenyl phenyl ethe	204	9.634	9.628	0.006	93	19535	0.5000	0.5615	
126 Fluorene	166	9.663	9.663	0.000	95	27444	0.5000	0.5034	
125 4-Nitroaniline	138	9.645	9.663	-0.018	66	4134	0.5000	0.4276	
127 4,6-Dinitro-2-methylphenol	198		9.669				ND	ND	U
129 Diphenylamine	169	9.722	9.722	0.000	95	22191	0.4250	0.4436	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	96	22191	0.5000	0.5218	
130 Azobenzene	77	9.769	9.769	0.000	97	33978	0.5000	0.4633	
138 4-Bromophenyl phenyl ether	248	10.057	10.051	0.006	74	10229	0.5000	0.5071	
140 Atrazine	200	10.140	10.145	-0.005	92	16093	1.00	0.8021	
141 Hexachlorobenzene	284	10.151	10.151	0.000	92	11867	0.5000	0.5045	
142 n-Octadecane	57	10.269	10.269	0.000	74	10809	0.5000	-0.1373	
145 Pentachlorophenol	266		10.298				ND	ND	U
149 Phenanthrene	178	10.492	10.492	0.000	97	44814	0.5000	0.5263	
150 Anthracene	178	10.540	10.539	0.001	97	43652	0.5000	0.5138	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	33303	0.5000	0.5667	
154 Di-n-butyl phthalate	149	10.881	10.881	0.000	99	33549	0.5000	0.5765	
160 Fluoranthene	202	11.587	11.592	-0.005	96	44546	0.5000	0.4647	
161 Benzidine	184	11.669	11.669	0.000	96	20222	1.00	1.31	
163 Pyrene	202	11.839	11.839	0.000	99	50908	0.5000	0.5206	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	85	12849	0.5000	0.3418	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.222	-0.006	93	21310	0.5000	0.3933	
178 3,3'-Dichlorobenzidine	252	13.251	13.251	0.000	73	27771	1.00	1.09	
179 Benzo[a]anthracene	228	13.345	13.345	0.000	95	49971	0.5000	0.4768	
180 Chrysene	228	13.398	13.404	-0.006	95	52453	0.5000	0.4984	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	28673	0.5000	0.5441	a
185 Benzo[b]fluoranthene	252	15.045	15.045	0.000	93	42774	0.5000	0.4291	
186 Benzo[k]fluoranthene	252	15.086	15.092	-0.006	95	46861	0.5000	0.4508	
187 Benzo[a]pyrene	252	15.598	15.604	-0.006	72	38264	0.5000	0.4316	
191 Indeno[1,2,3-cd]pyrene	276	17.721	17.739	-0.018	94	48336	0.5000	0.4729	
192 Dibenz(a,h)anthracene	278	17.739	17.751	-0.012	77	41556	0.5000	0.4740	
193 Benzo[g,h,i]perylene	276	18.345	18.345	0.000	95	44878	0.5000	0.5273	
S 219 Methyl Phenols,Total	100				0			1.03	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST1 L2 W_00014 Amount Added: 1.00 Units: mL

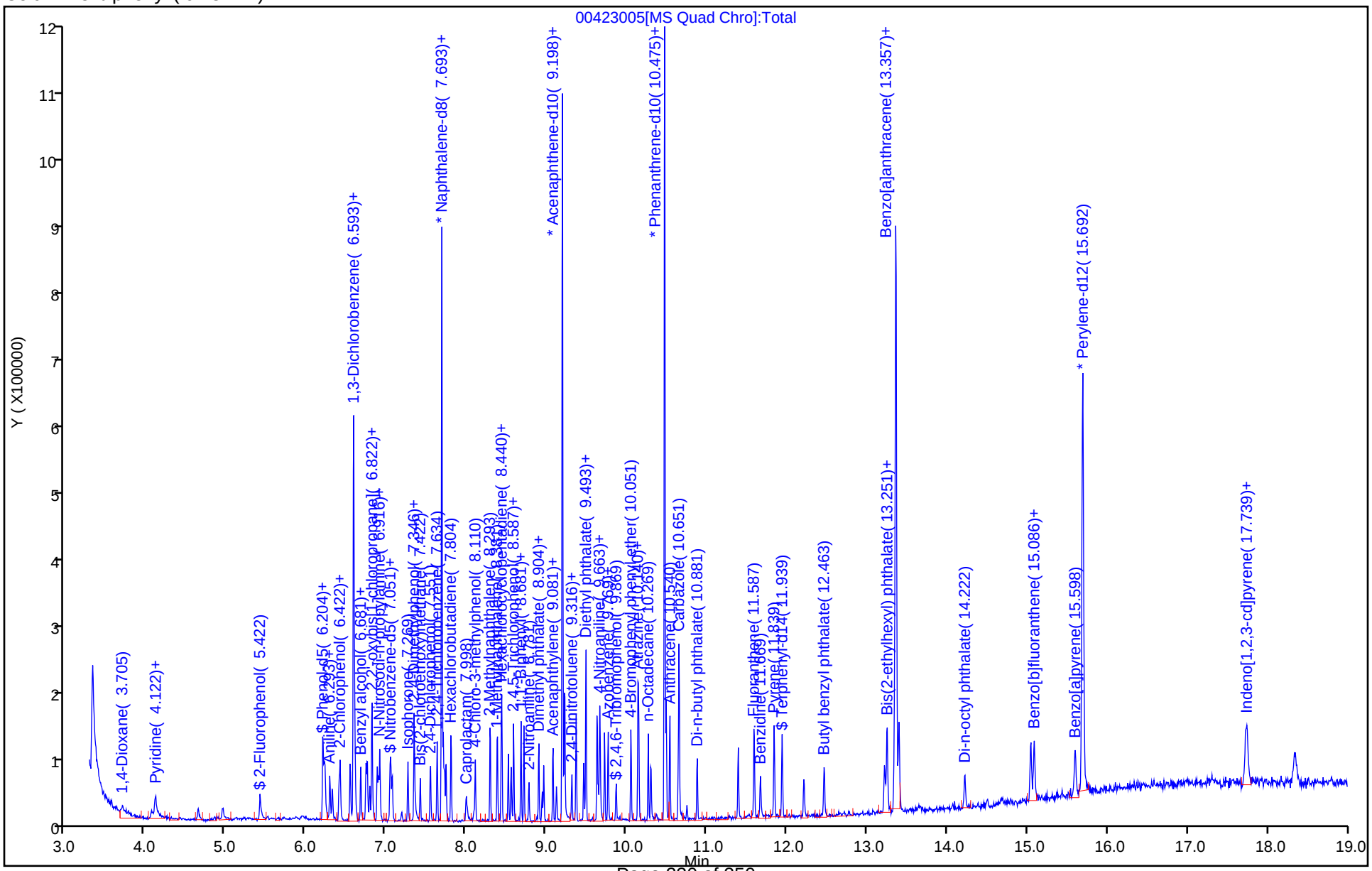
Report Date: 24-Apr-2020 13:44:18 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D

Injection Date:	23-Apr-2020 17:38:29	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std2 lst1			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

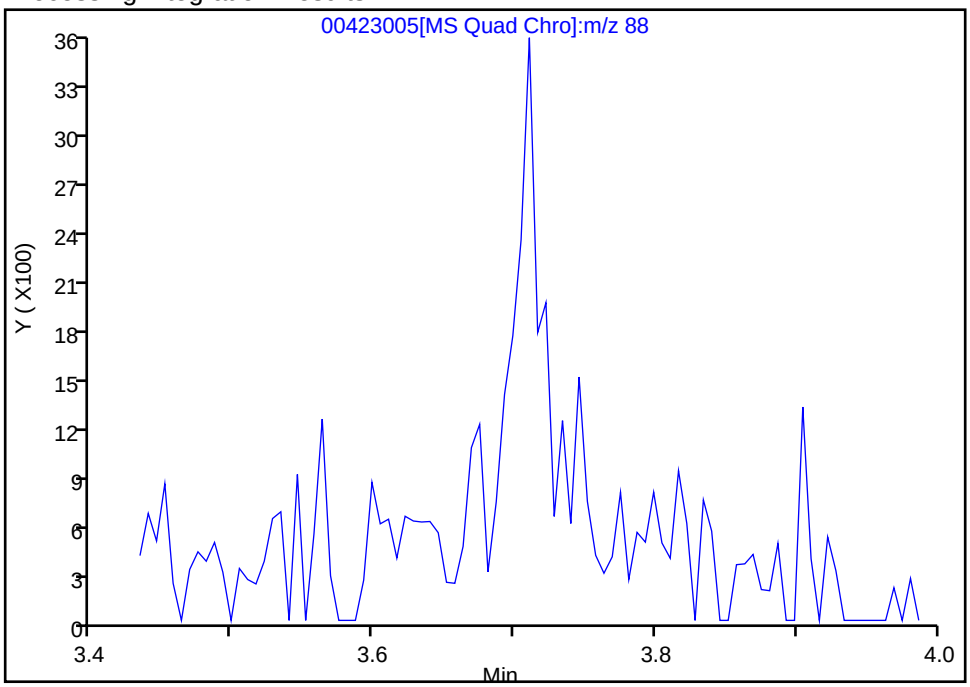
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Injection Date: 23-Apr-2020 17:38:29 Instrument ID: A4AG3
Lims ID: std2 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

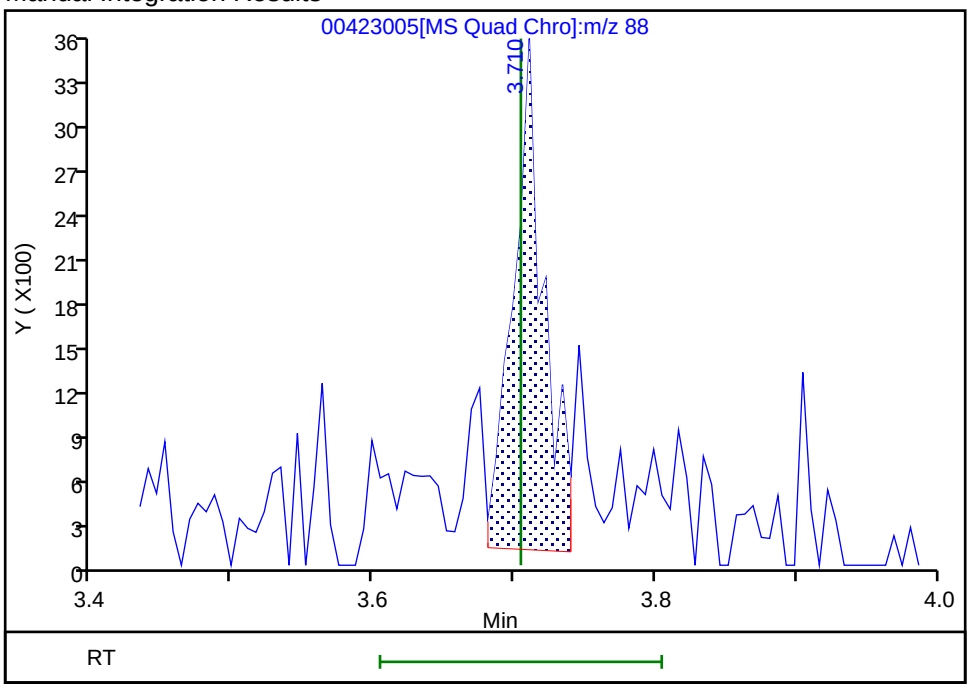
Not Detected
Expected RT: 3.70

Processing Integration Results



Manual Integration Results

RT: 3.71
Area: 5265
Amount: 0.496461
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:00:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

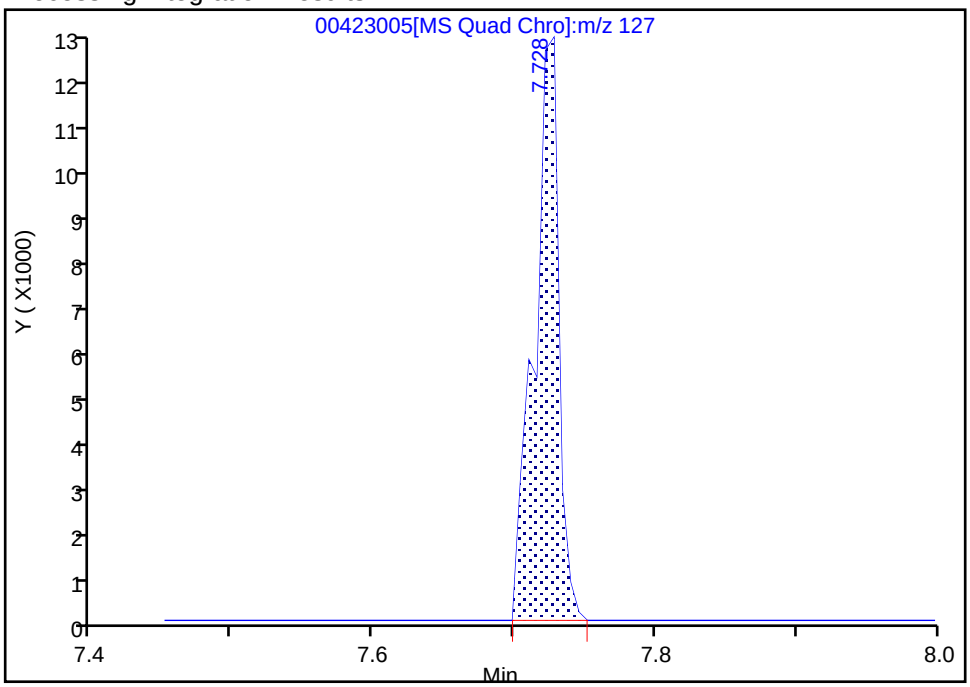
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Injection Date: 23-Apr-2020 17:38:29 Instrument ID: A4AG3
Lims ID: std2 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

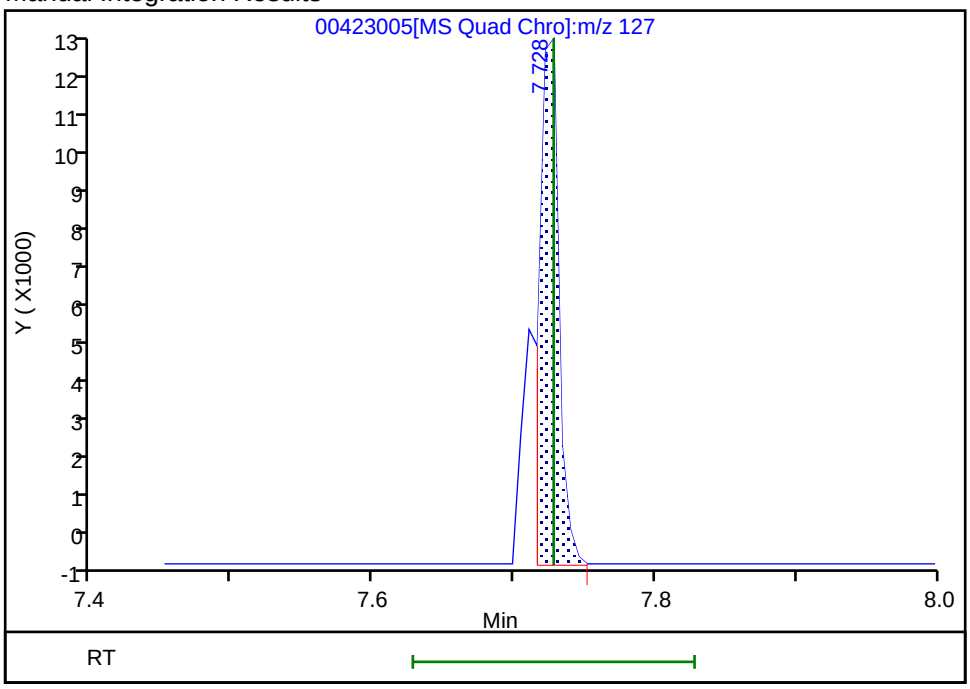
Processing Integration Results

RT: 7.73
Area: 15292
Amount: 0.498819
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 12256
Amount: 0.440840
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:01:36
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

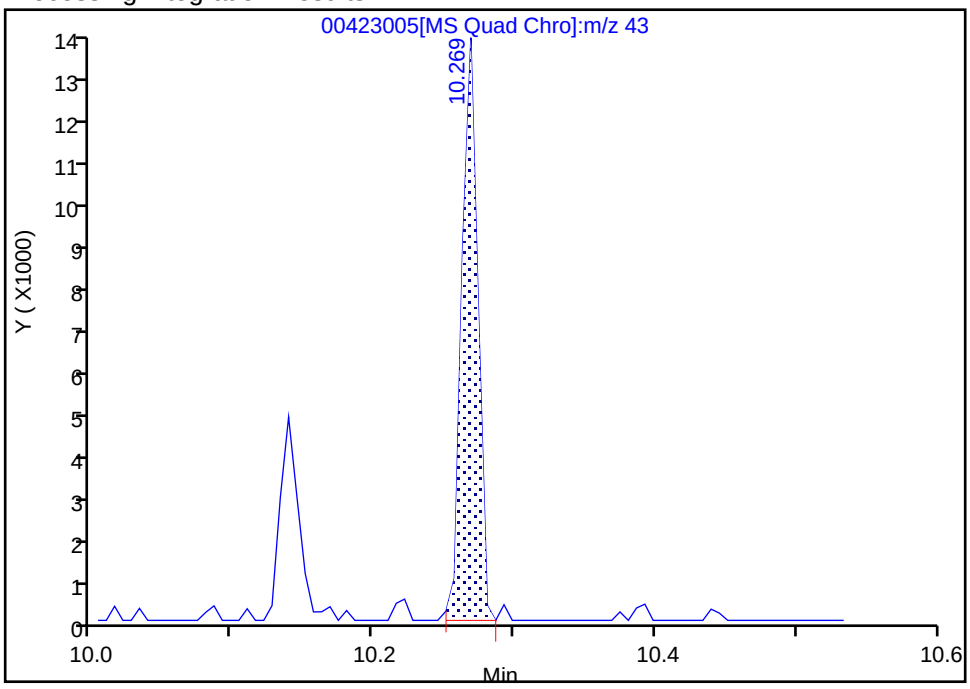
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Injection Date: 23-Apr-2020 17:38:29 Instrument ID: A4AG3
Lims ID: std2 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

142 n-Octadecane, CAS: 593-45-3

Signal: 2

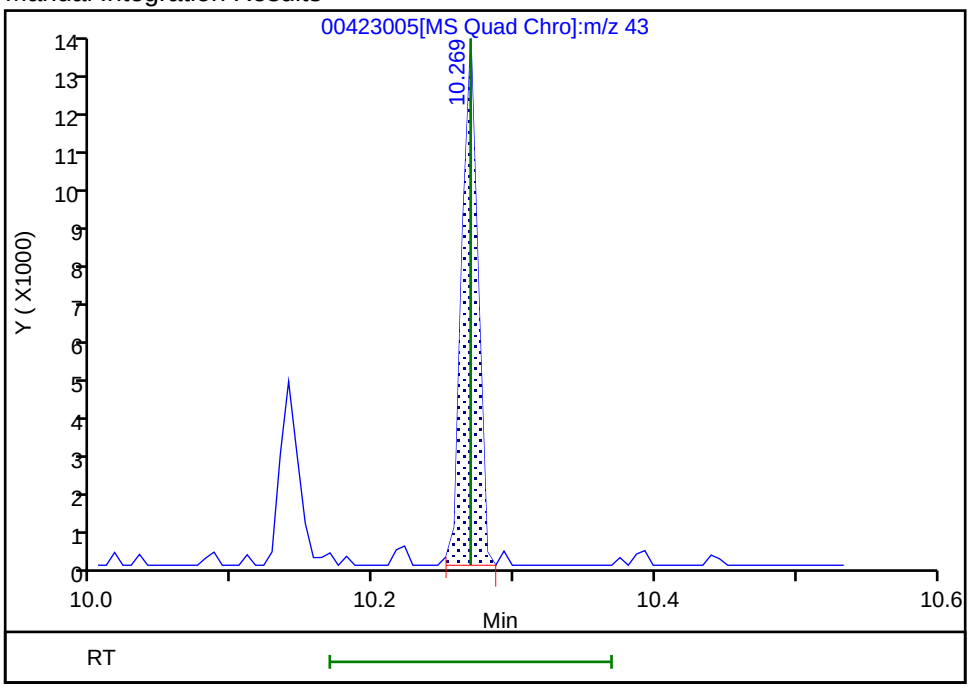
Processing Integration Results

RT: 10.27
Area: 10467
Amount: 0.519723
Amount Units: ng/ul



Manual Integration Results

RT: 10.27
Area: 10467
Amount: -0.137317
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:25:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

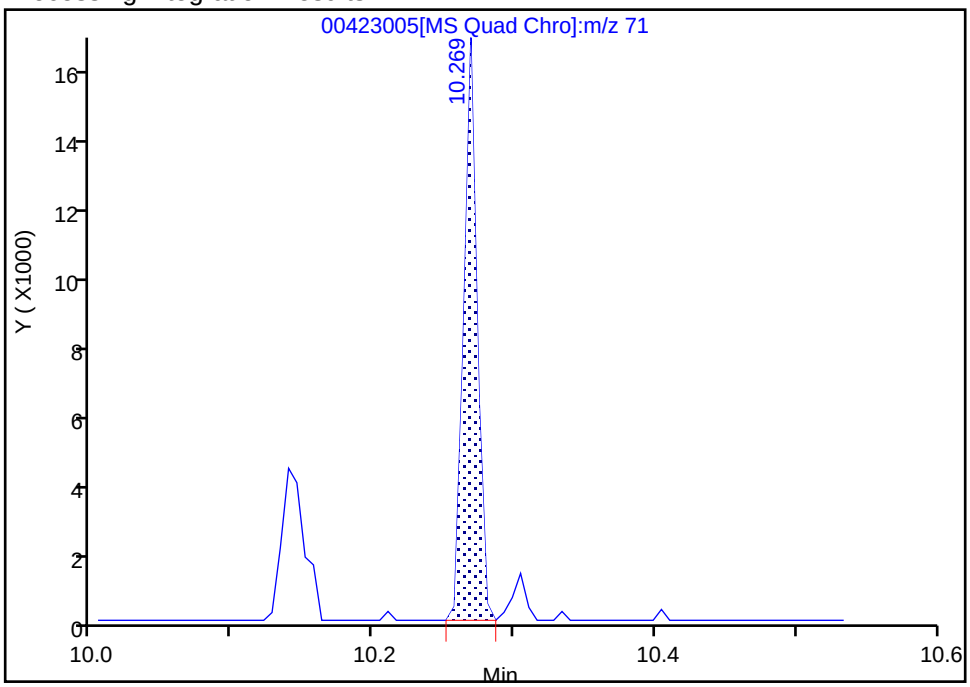
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Injection Date: 23-Apr-2020 17:38:29 Instrument ID: A4AG3
Lims ID: std2 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

142 n-Octadecane, CAS: 593-45-3

Signal: 3

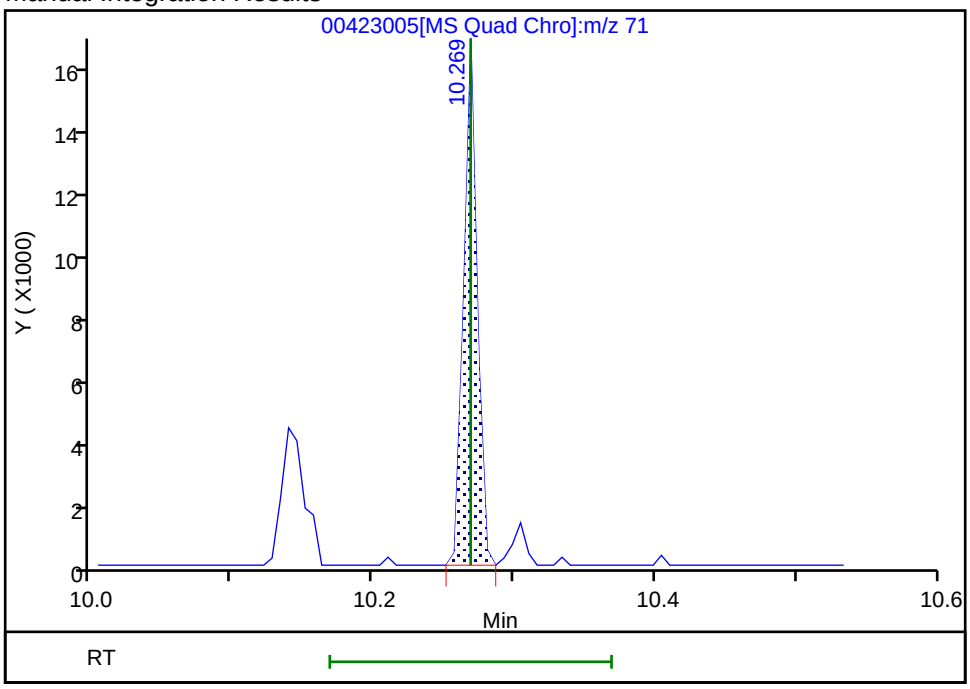
Processing Integration Results

RT: 10.27
Area: 10978
Amount: 0.519723
Amount Units: ng/ul



Manual Integration Results

RT: 10.27
Area: 10978
Amount: -0.137317
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:25:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

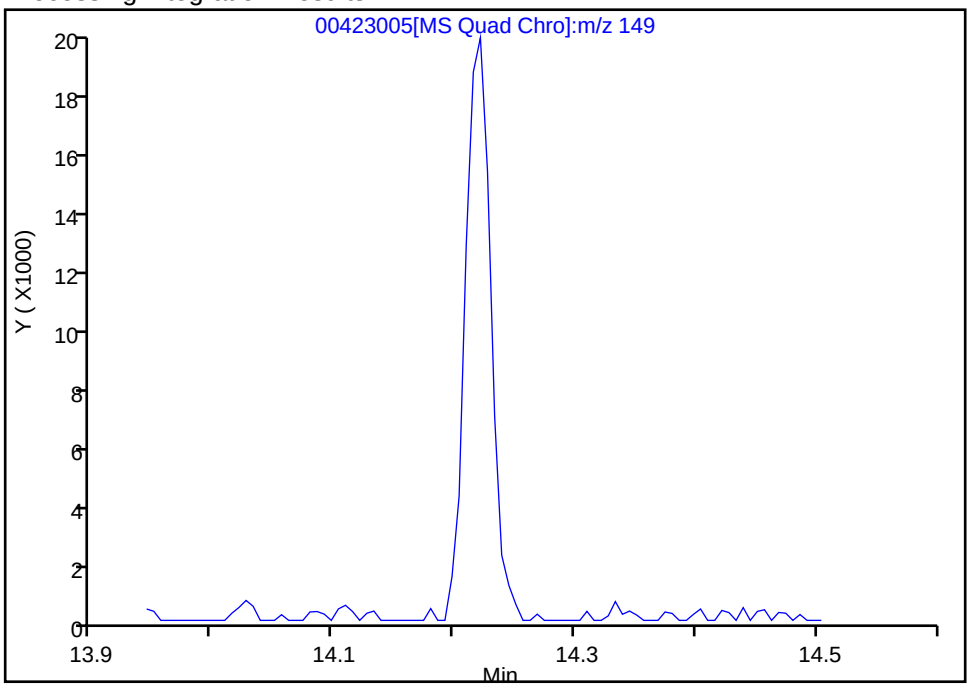
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D				
Injection Date:	23-Apr-2020 17:38:29	Instrument ID:	A4AG3		
Lims ID:	std2 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

183 Di-n-octyl phthalate, CAS: 117-84-0

Signal: 1

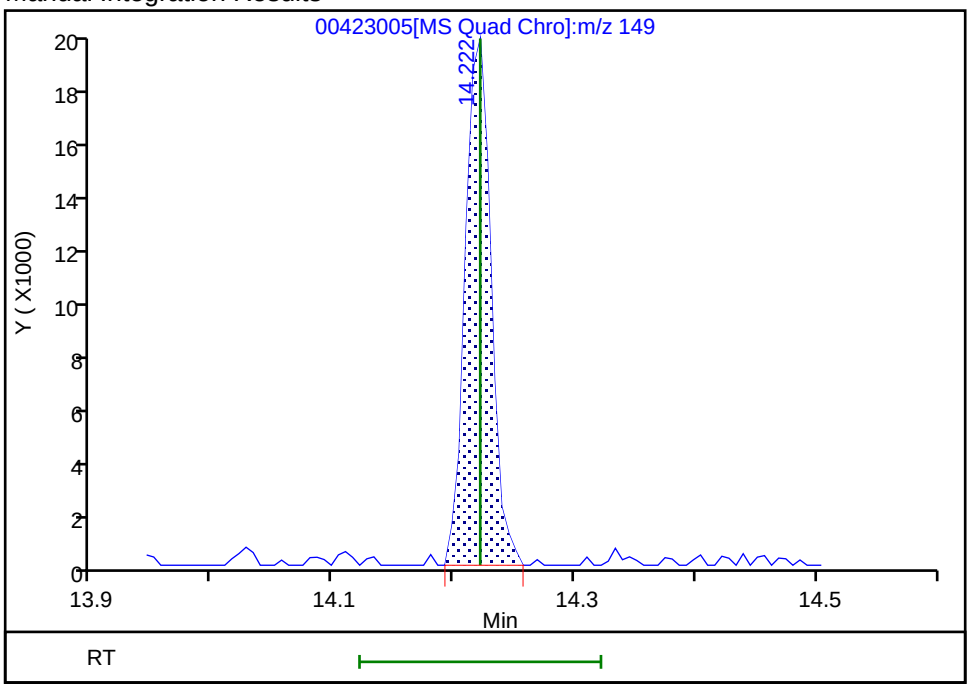
Not Detected
Expected RT: 14.22

Processing Integration Results



Manual Integration Results

RT: 14.22
Area: 28673
Amount: 0.544080
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:02:44
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

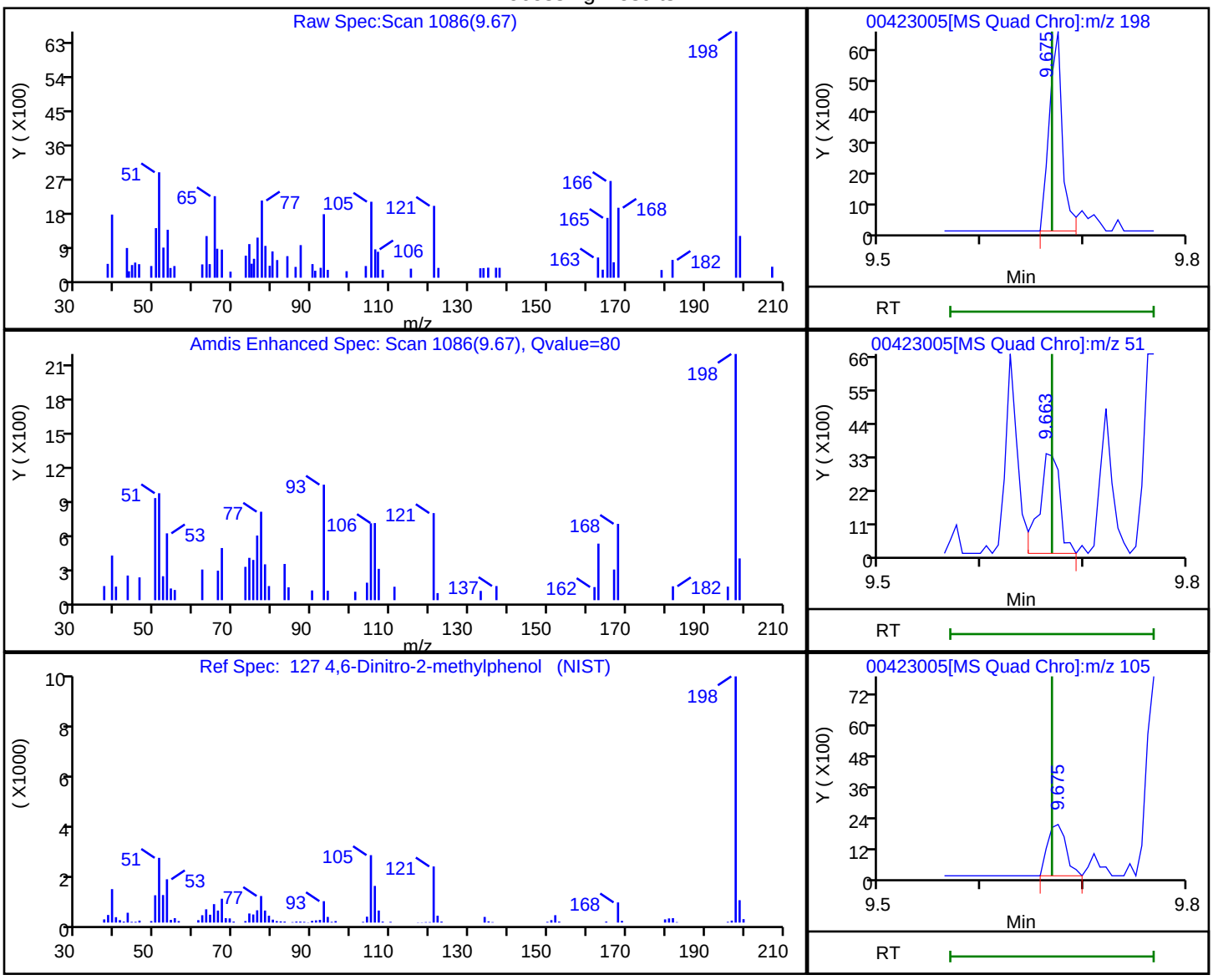
User Disabled Compound Report

Eurofins TestAmerica, Canton

Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D				
Injection Date:	23-Apr-2020 17:38:29	Instrument ID:	A4AG3		
Lims ID:	std2 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

127 4,6-Dinitro-2-methylphenol, CAS: 534-52-1

Processing Results



RT	Mass	Response	Amount
9.67	198.00	5815	1.049752
9.66	51.00	4699	
9.67	105.00	2526	

Reviewer: ulmanm, 23-Apr-2020 18:02:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

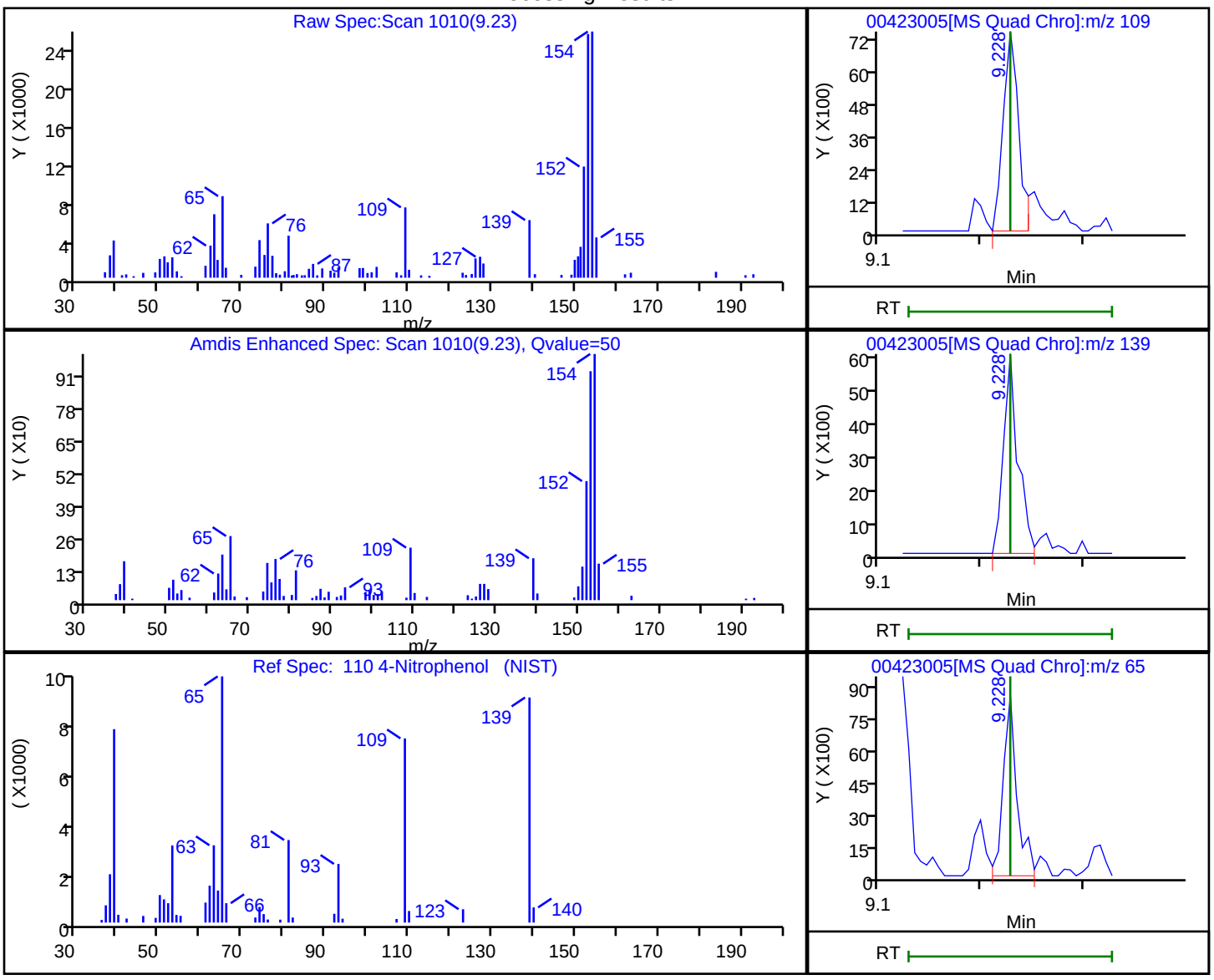
User Disabled Compound Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D
Injection Date: 23-Apr-2020 17:38:29 Instrument ID: A4AG3
Lims ID: std2 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 4-Nitrophenol, CAS: 100-02-7

Processing Results



RT	Mass	Response	Amount
9.23	109.00	7873	0.719674
9.23	139.00	6040	
9.23	65.00	8151	

Reviewer: ulmanm, 23-Apr-2020 18:01:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

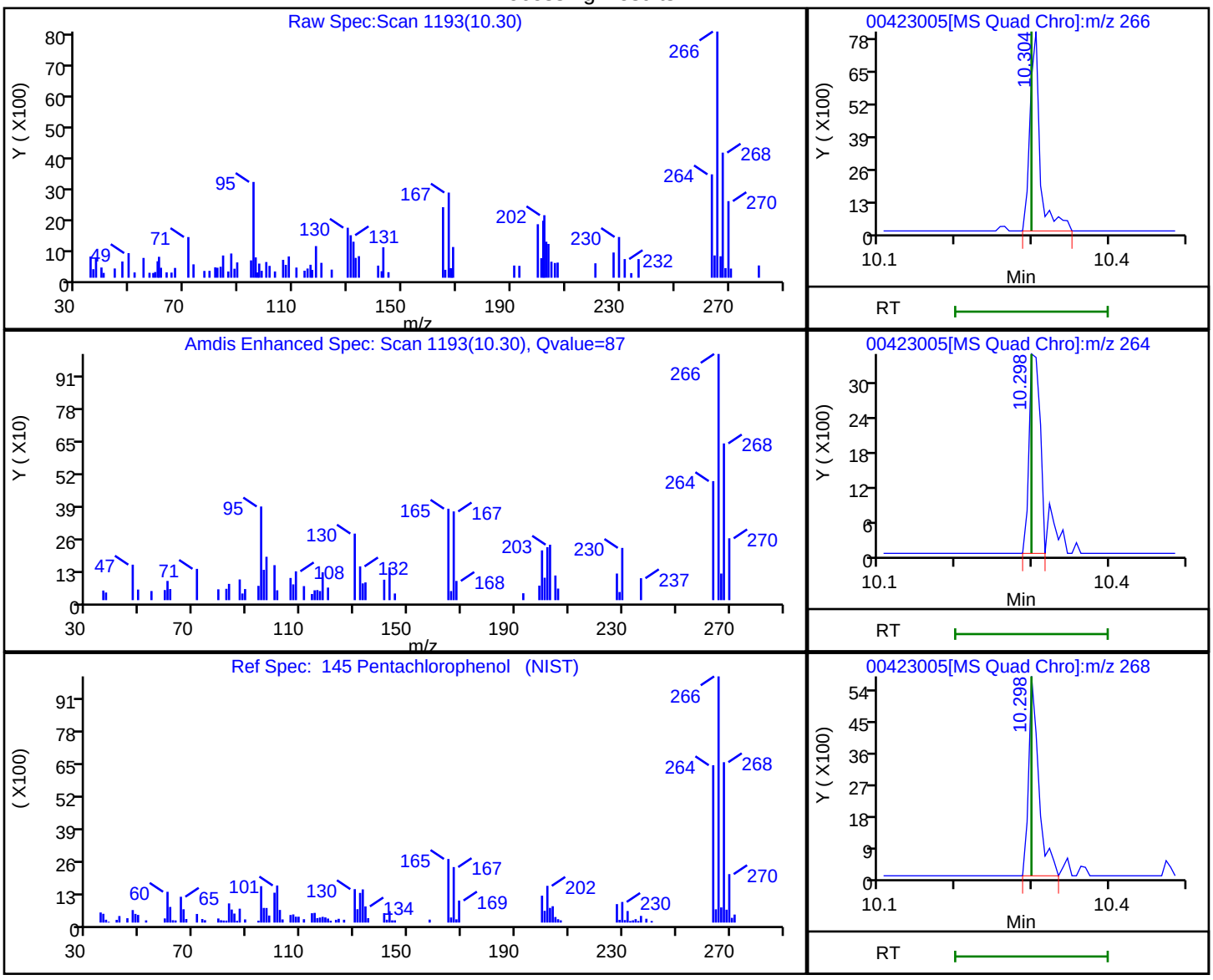
User Disabled Compound Report

Eurofins TestAmerica, Canton

Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423005.D				
Injection Date:	23-Apr-2020 17:38:29	Instrument ID:	A4AG3		
Lims ID:	std2 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

145 Pentachlorophenol, CAS: 87-86-5

Processing Results



RT	Mass	Response	Amount
10.30	266.00	7414	0.673694
10.30	264.00	3470	
10.30	268.00	5266	

Reviewer: ulmanm, 23-Apr-2020 18:02:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D
Lims ID: std1 lst1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Apr-2020 17:11:57 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-006
Misc. Info.: STD1 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:20 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 17:36:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.001	95	80670	4.00	4.00	
* 2 Naphthalene-d8	136	7.692	7.692	0.000	98	261366	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	93	172053	4.00	4.00	
* 4 Phenanthrene-d10	188	10.469	10.475	-0.006	97	333118	4.00	4.00	
* 5 Chrysene-d12	240	13.357	13.363	-0.006	97	332964	4.00	4.00	
* 6 Perylene-d12	264	15.686	15.692	-0.006	98	321281	4.00	4.00	
$ 9 Nitrobenzene-d5	82	7.051	7.057	-0.006	56	4010	0.1000	0.1066	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	96	5277	0.1000	0.0942	
$ 12 Terphenyl-d14	244	11.933	11.939	-0.006	94	6726	0.1000	0.0968	a
15 Pyridine	79	4.110	4.110	0.000	47	8437	0.2000	0.2577	M
30 Benzaldehyde	77	6.204	6.210	-0.006	85	5370	0.2000	0.2054	
69 Naphthalene	128	7.710	7.710	0.000	92	7814	0.1000	0.1087	
78 Caprolactam	113	8.022	7.998	0.024	12	657	0.2000	0.1947	Ma
82 2-Methylnaphthalene	142	8.292	8.298	-0.006	83	6122	0.1000	0.1167	
83 1-Methylnaphthalene	142	8.381	8.387	-0.006	95	4527	0.1000	0.0942	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	92	6323	0.1000	0.1053	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	94	4626	0.1000	0.0966	
105 Acenaphthylene	152	9.081	9.081	0.000	97	6095	0.1000	0.0888	
109 Acenaphthene	153	9.222	9.228	-0.006	88	5320	0.1000	0.1089	
113 Dibenzofuran	168	9.369	9.369	0.000	92	8124	0.1000	0.1095	
126 Fluorene	166	9.663	9.663	0.000	94	5219	0.1000	0.0929	
140 Atrazine	200	10.139	10.145	-0.006	89	4016	0.2000	0.1923	
141 Hexachlorobenzene	284	10.151	10.151	0.000	85	2986	0.1000	0.1219	
149 Phenanthrene	178	10.492	10.492	0.000	92	9111	0.1000	0.1028	
150 Anthracene	178	10.534	10.539	-0.005	94	7897	0.1000	0.0893	
160 Fluoranthene	202	11.586	11.592	-0.006	94	7660	0.1000	0.1406	
163 Pyrene	202	11.839	11.839	0.000	96	10754	0.1000	0.1106	
179 Benzo[a]anthracene	228	13.339	13.345	-0.006	47	10769	0.1000	0.1033	a
180 Chrysene	228	13.392	13.404	-0.012	92	10935	0.1000	0.1045	
185 Benzo[b]fluoranthene	252	15.033	15.045	-0.012	91	10372	0.1000	0.1079	a

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
186 Benzo[k]fluoranthene	252	15.080	15.092	-0.012	94	9363	0.1000	0.0934	
187 Benzo[a]pyrene	252	15.592	15.604	-0.012	73	8567	0.1000	0.1002	a
191 Indeno[1,2,3-cd]pyrene	276	17.727	17.739	-0.012	90	10703	0.1000	0.1086	M
192 Dibenz(a,h)anthracene	278	17.733	17.751	-0.018	0	8385	0.1000	0.0992	M
193 Benzo[g,h,i]perylene	276	18.333	18.345	-0.012	90	10133	0.1000	0.1235	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST1 L1+ W_00008 Amount Added: 1.00 Units: mL

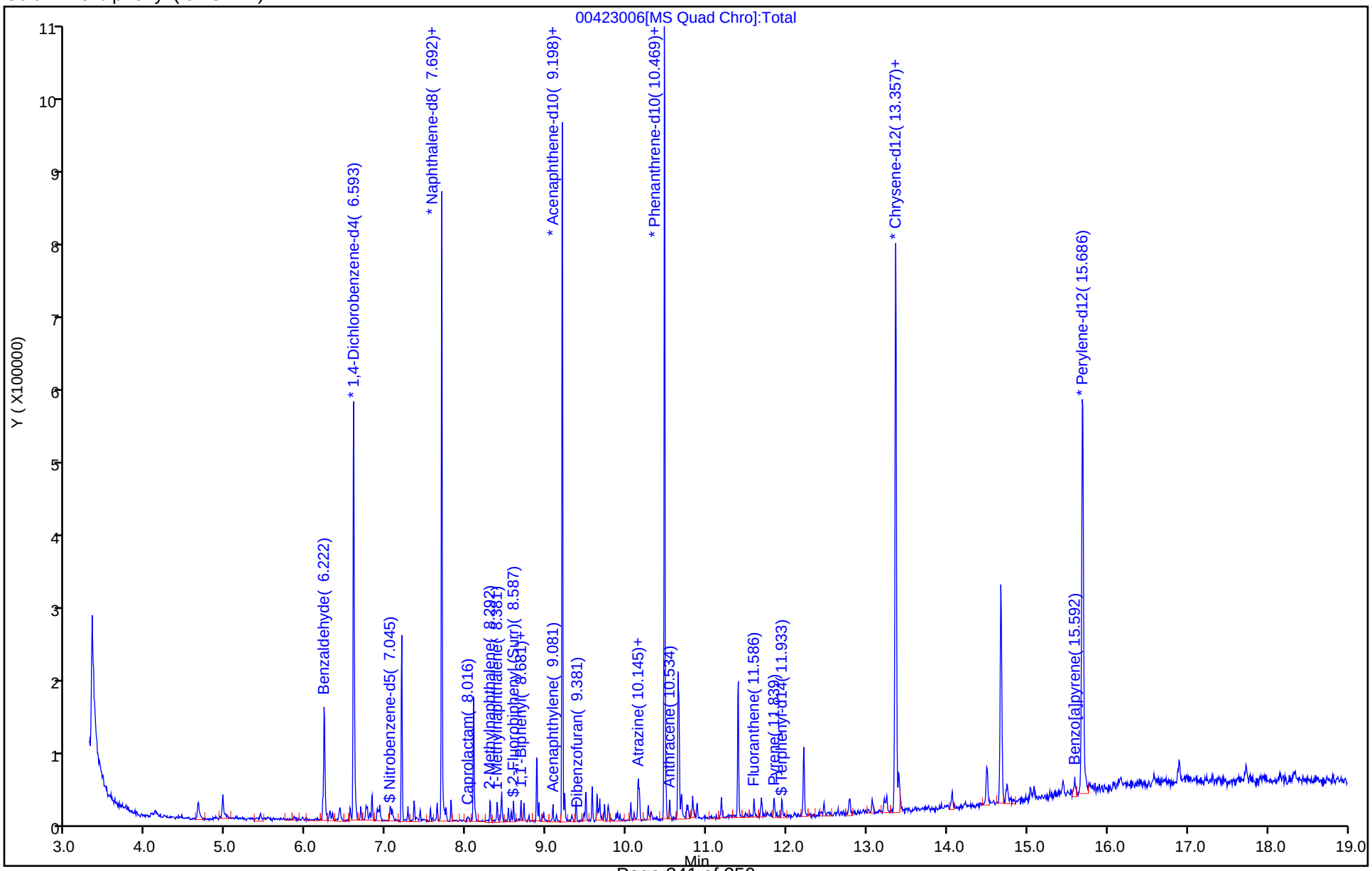
Report Date: 24-Apr-2020 13:44:22 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D

Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std1 lst1			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

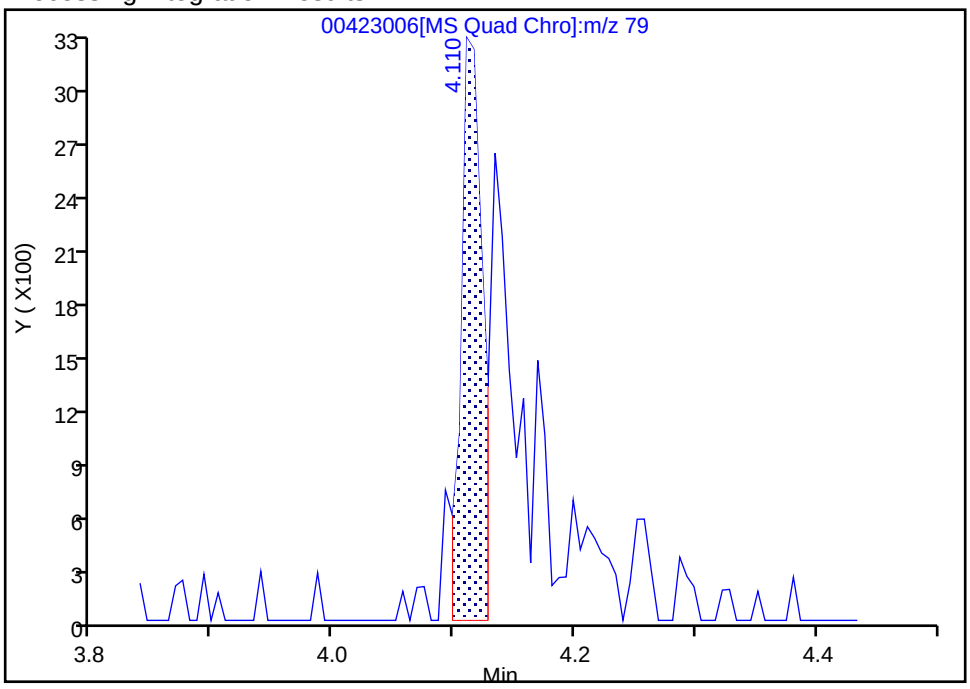
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D				
Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3		
Lims ID:	std1 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

15 Pyridine, CAS: 110-86-1

Signal: 1

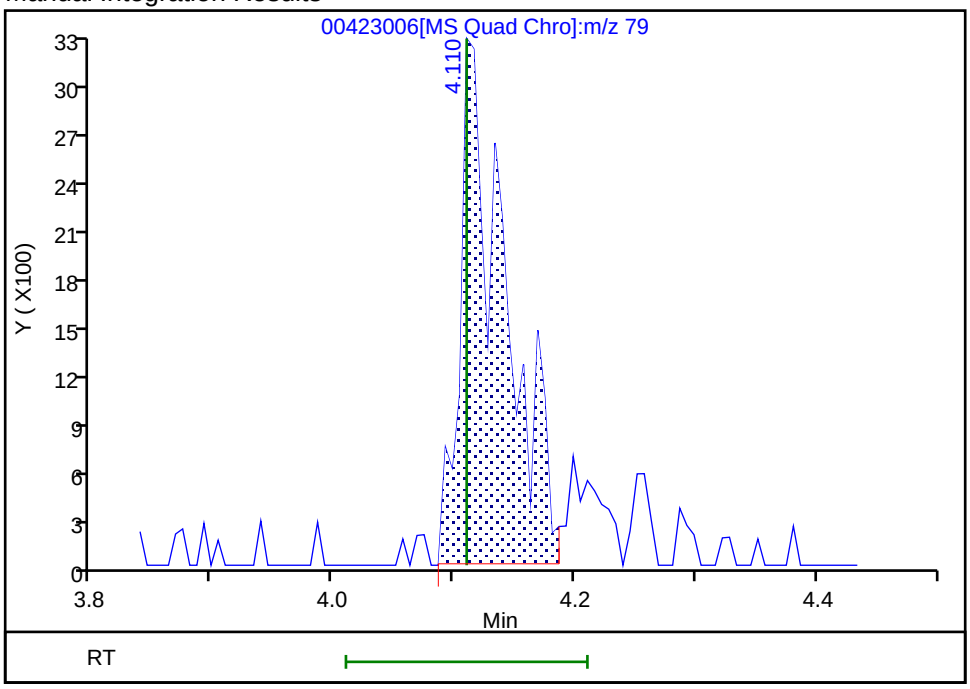
Processing Integration Results

RT: 4.11
Area: 4115
Amount: 0.161621
Amount Units: ng/ul



Manual Integration Results

RT: 4.11
Area: 8437
Amount: 0.257700
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:34:46

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

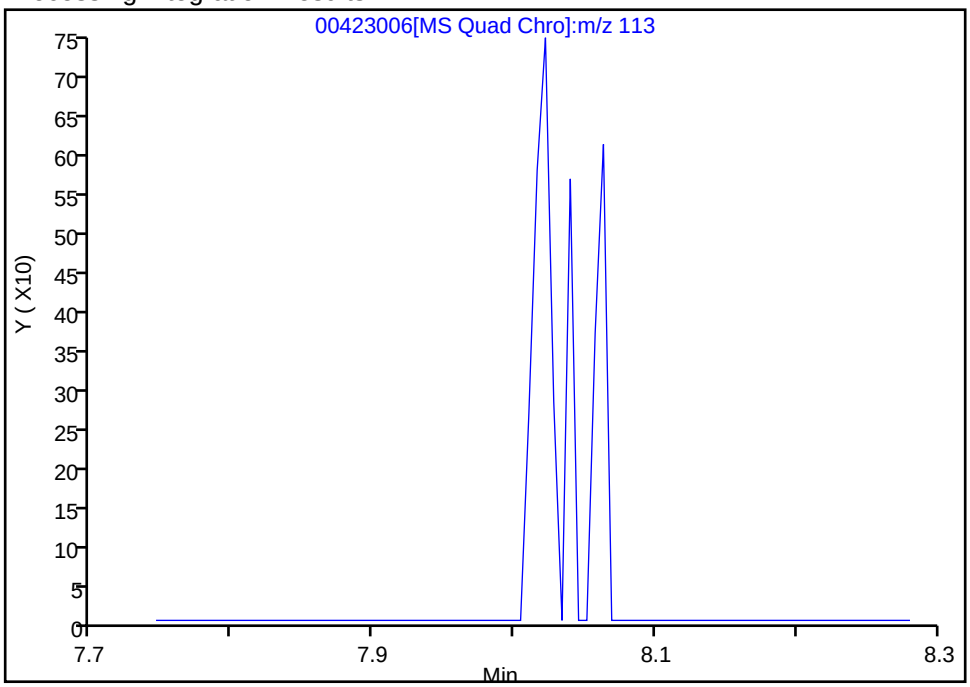
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D
Injection Date: 23-Apr-2020 17:11:57 Instrument ID: A4AG3
Lims ID: std1 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

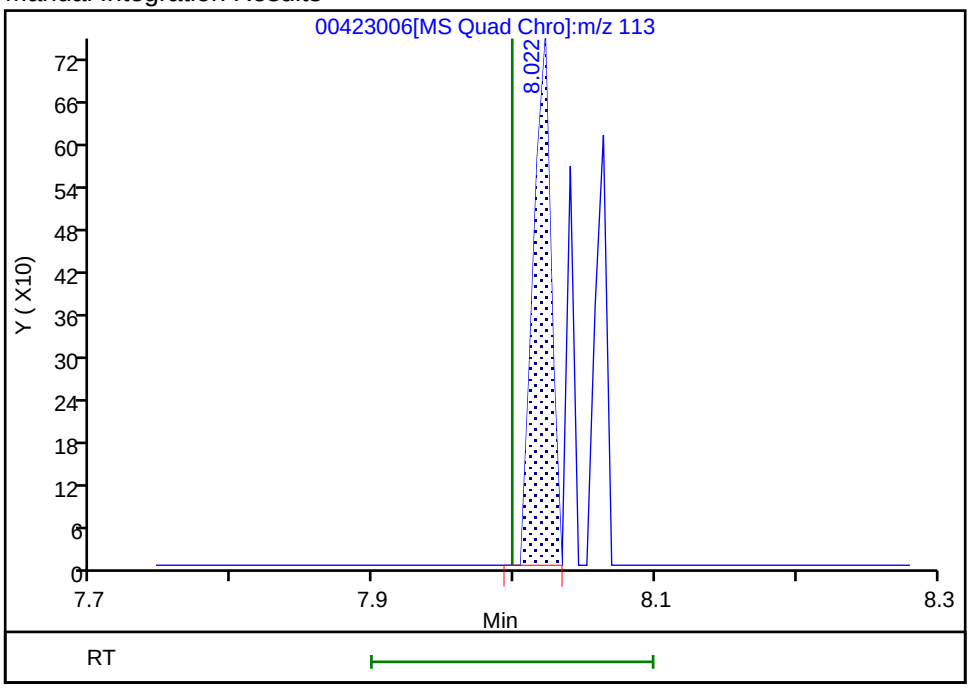
Not Detected
Expected RT: 8.00

Processing Integration Results



Manual Integration Results

RT: 8.02
Area: 657
Amount: 0.194730
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:13:58
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

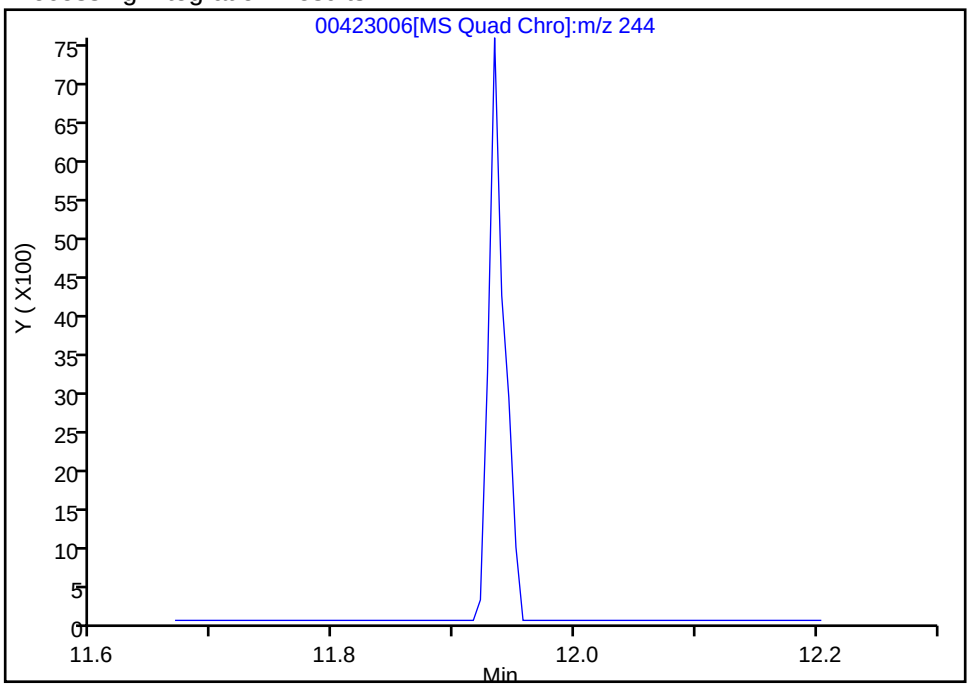
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D
Injection Date: 23-Apr-2020 17:11:57 Instrument ID: A4AG3
Lims ID: std1 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

$ 12 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

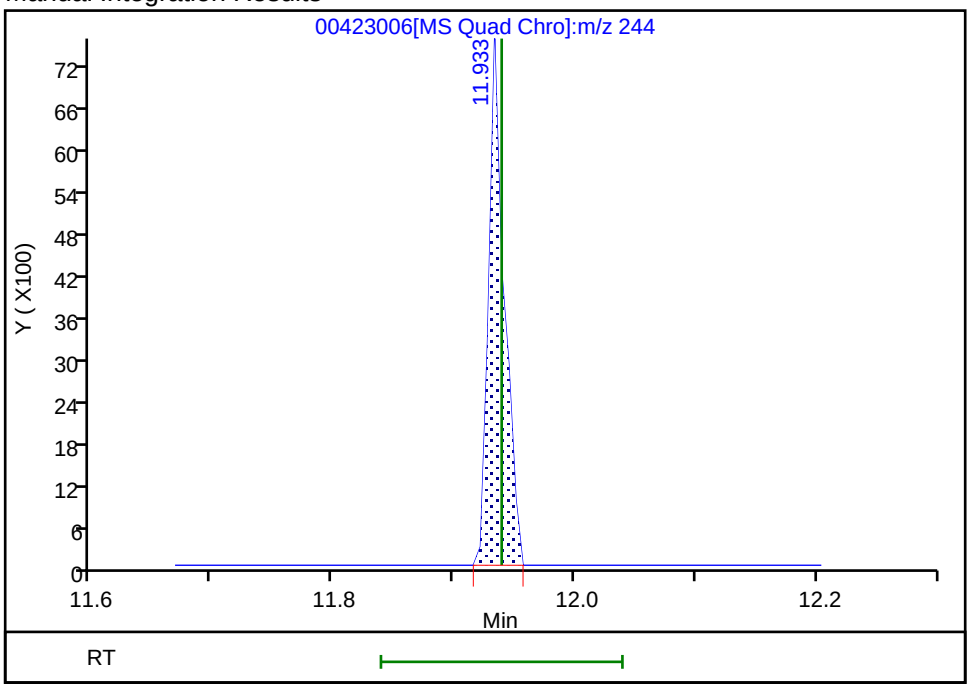
Processing Integration Results

Not Detected
Expected RT: 11.94



Manual Integration Results

RT: 11.93
Area: 6726
Amount: 0.096834
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:34:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

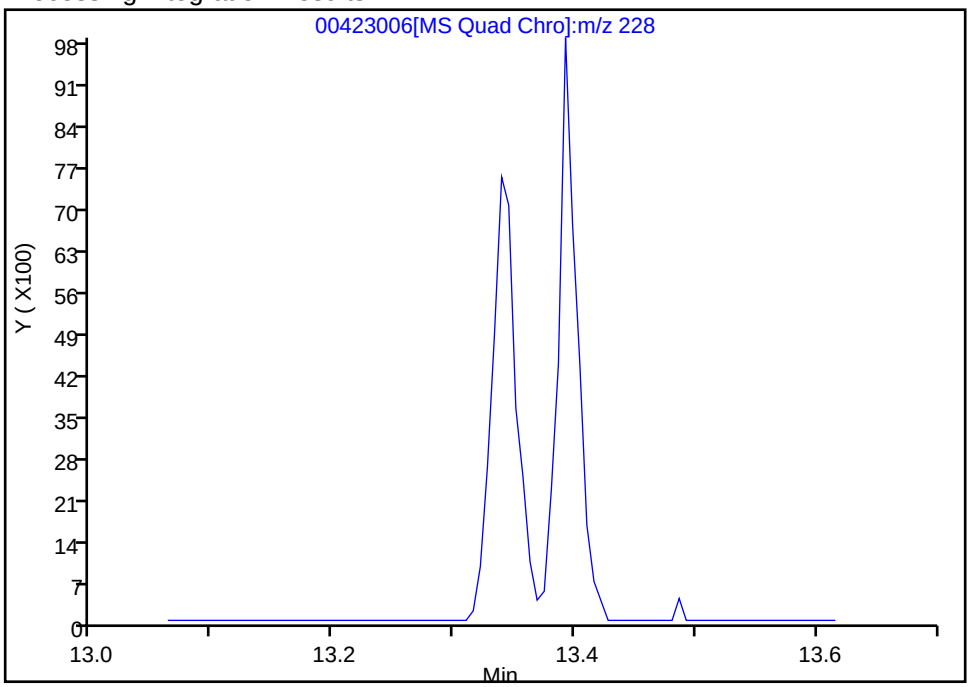
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D				
Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3		
Lims ID:	std1 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

179 Benzo[a]anthracene, CAS: 56-55-3

Signal: 1

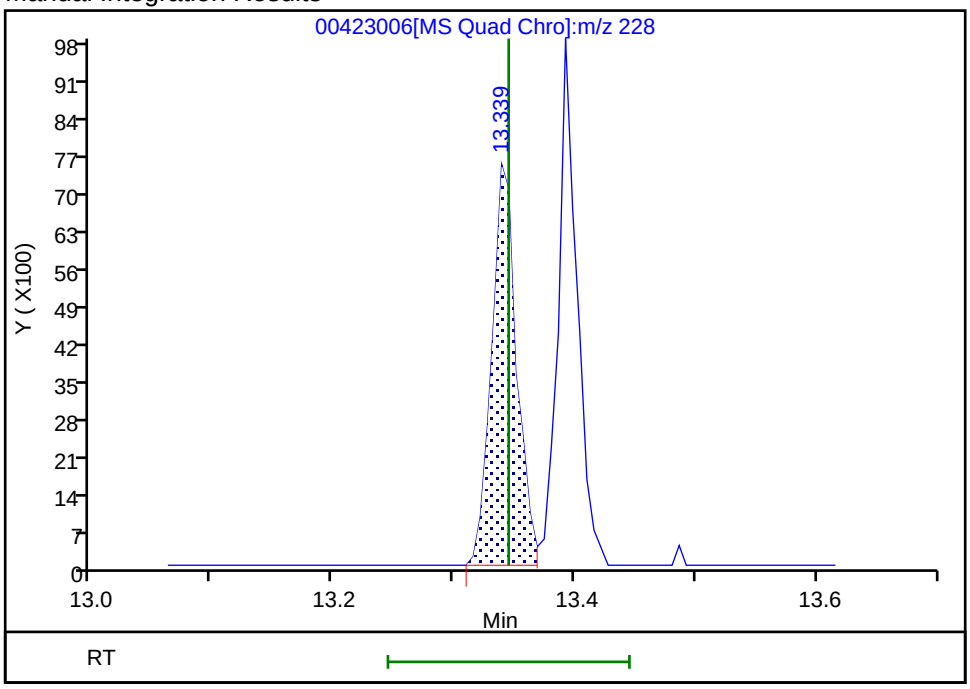
Not Detected
Expected RT: 13.35

Processing Integration Results



Manual Integration Results

RT: 13.34
Area: 10769
Amount: 0.103315
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:35:44
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

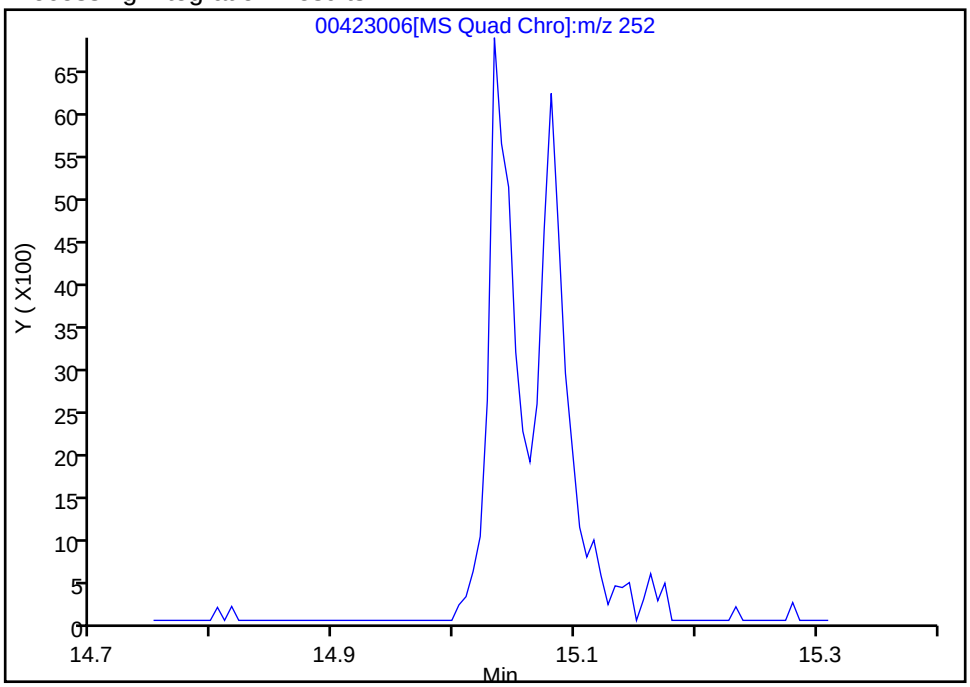
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D				
Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3		
Lims ID:	std1 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

185 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

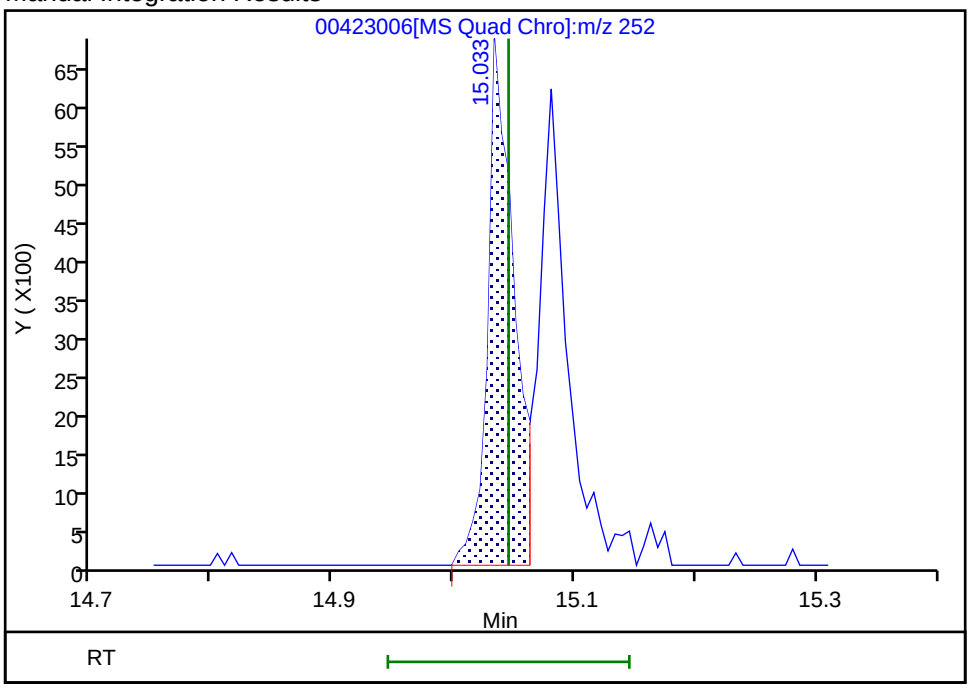
Not Detected
Expected RT: 15.05

Processing Integration Results



Manual Integration Results

RT: 15.03
Area: 10372
Amount: 0.107946
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:35:52
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

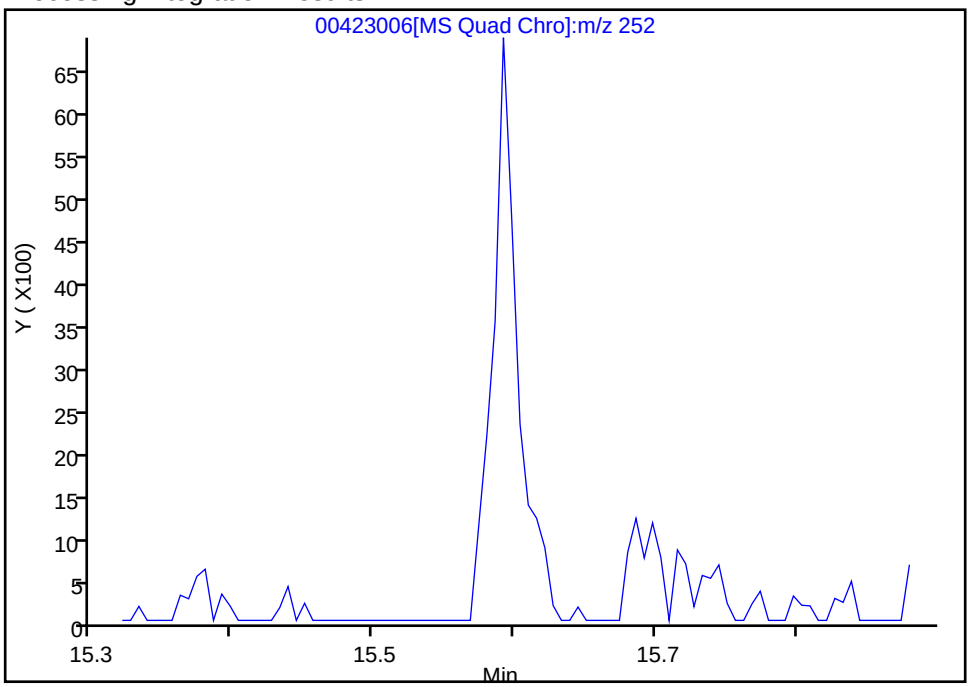
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D				
Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3		
Lims ID:	std1 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

187 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

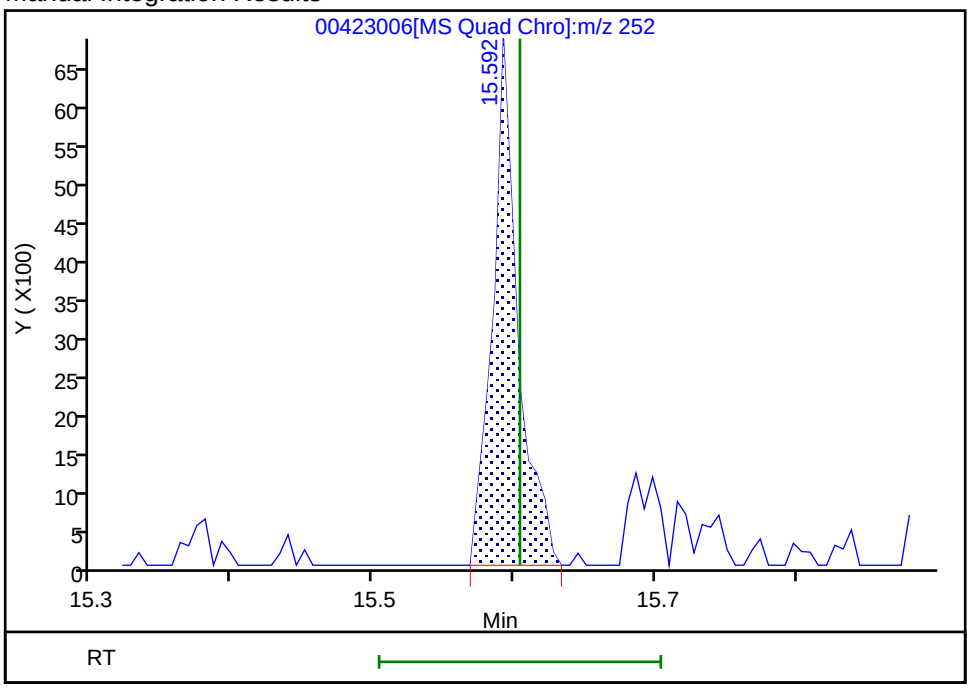
Not Detected
Expected RT: 15.60

Processing Integration Results



Manual Integration Results

RT: 15.59
Area: 8567
Amount: 0.100235
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:36:01
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

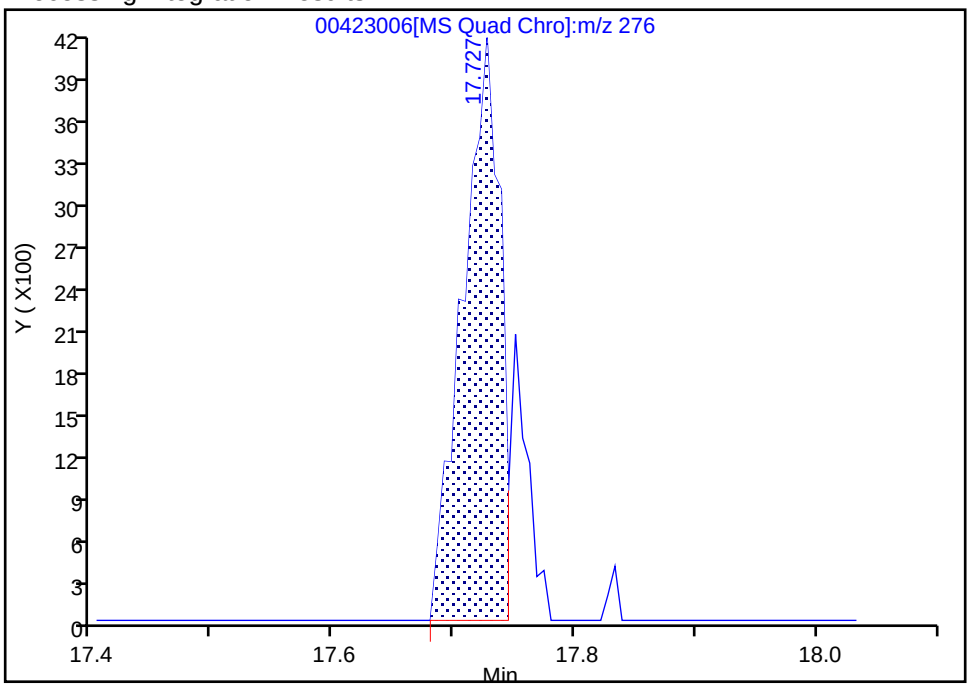
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D				
Injection Date:	23-Apr-2020 17:11:57	Instrument ID:	A4AG3		
Lims ID:	std1 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

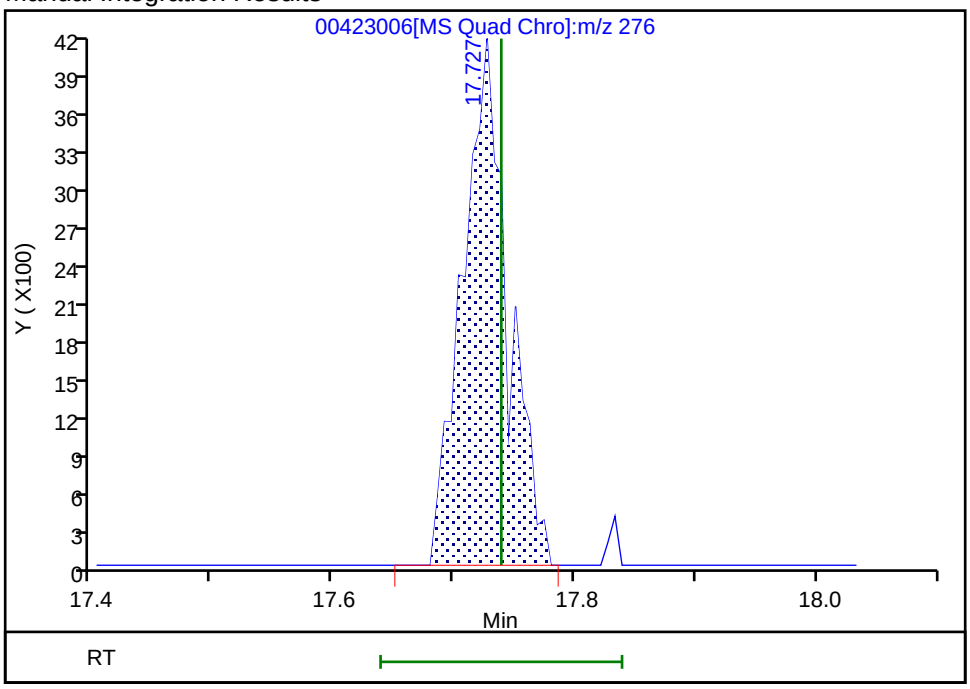
Processing Integration Results

RT: 17.73
Area: 8902
Amount: 0.092122
Amount Units: ng/ul



Manual Integration Results

RT: 17.73
Area: 10703
Amount: 0.108627
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:36:08

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

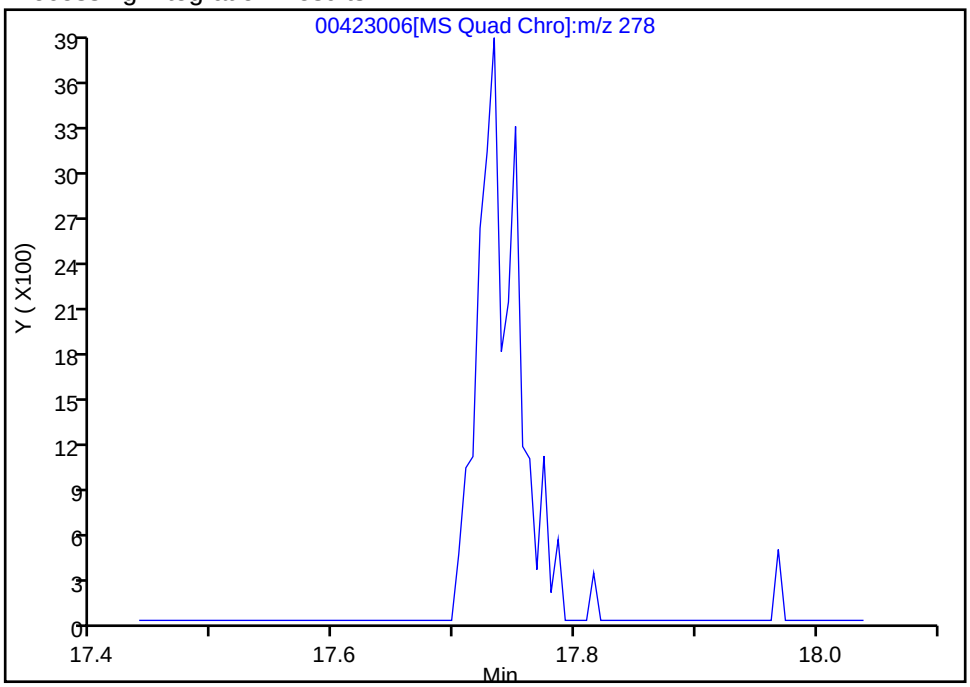
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423006.D
Injection Date: 23-Apr-2020 17:11:57 Instrument ID: A4AG3
Lims ID: std1 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

192 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

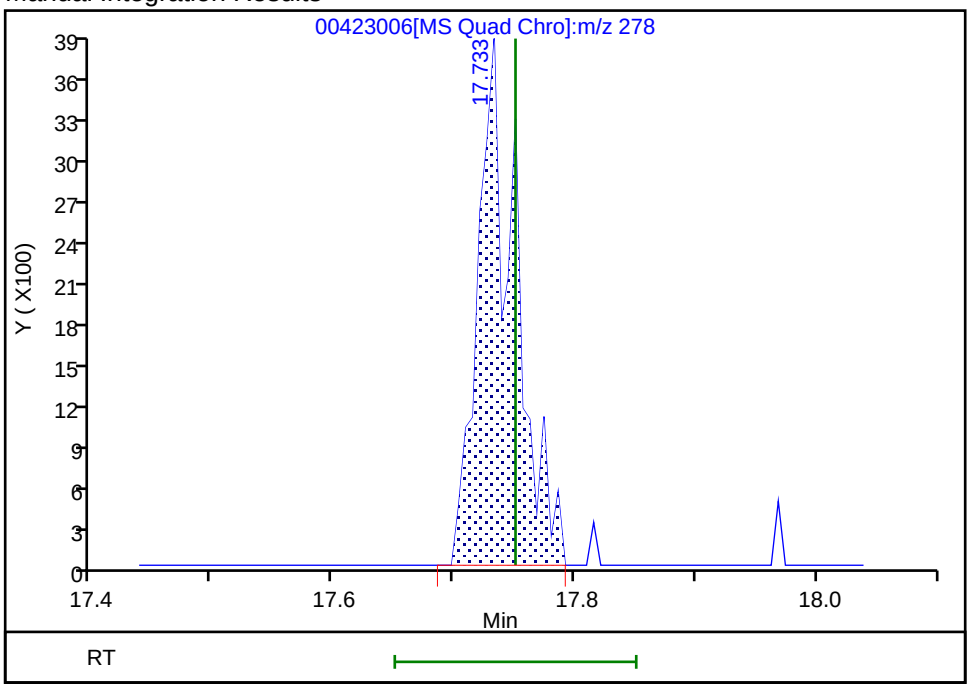
Not Detected
Expected RT: 17.75

Processing Integration Results



Manual Integration Results

RT: 17.73
Area: 8385
Amount: 0.099221
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 17:36:13
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D
Lims ID: std6 lst1
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 23-Apr-2020 18:01:51 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-007
Misc. Info.: STD6 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:24 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 18:31:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	92	79238	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.693	0.000	98	266627	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	93	185638	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	324356	4.00	4.00	
* 5 Chrysene-d12	240	13.357	13.357	0.000	98	423443	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	440079	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	91	206412	10.0	9.45	
$ 8 Phenol-d5	99	6.228	6.228	0.000	71	282027	10.0	9.67	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	374514	10.0	9.76	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	99	593883	10.0	9.82	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	89	78663	10.0	8.04	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	891681	10.0	10.1	
13 1,4-Dioxane	88	3.711	3.711	0.000	89	111237	10.0	9.44	M
14 N-Nitrosodimethylamine	74	4.075	4.075	0.000	82	163363	10.0	9.95	
15 Pyridine	79	4.116	4.116	0.000	92	567320	20.0	19.6	
30 Benzaldehyde	77	6.210	6.210	0.000	88	499469	20.0	19.4	
31 Phenol	94	6.240	6.240	0.000	90	316321	10.0	9.71	
32 Aniline	93	6.299	6.299	0.000	95	381779	10.0	9.67	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	96	264909	10.0	9.04	
36 2-Chlorophenol	128	6.410	6.410	0.000	89	230058	10.0	9.82	
37 n-Decane	57	6.422	6.422	0.000	80	193293	10.0	9.50	
39 1,3-Dichlorobenzene	146	6.552	6.552	0.000	89	276687	10.0	9.68	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	85	284518	10.0	9.37	
41 Benzyl alcohol	108	6.681	6.681	0.000	84	154284	10.0	9.42	
44 1,2-Dichlorobenzene	146	6.746	6.746	0.000	87	268551	10.0	9.51	
45 2-Methylphenol	108	6.763	6.763	0.000	90	225643	10.0	9.30	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	64	157070	10.0	9.91	
47 Indene	115	6.822	6.822	0.000	88	831598	20.0	19.1	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	93	238405	10.0	9.59	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	77	232910	10.0	9.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	89	385040	10.0	9.81	
54 Hexachloroethane	117	7.046	7.046	0.000	82	131644	10.0	9.85	
55 Nitrobenzene	77	7.075	7.075	0.000	86	342238	10.0	9.67	
57 Isophorone	82	7.269	7.269	0.000	98	597301	10.0	10.1	
58 2,4-Dimethylphenol	107	7.346	7.346	0.000	94	313381	10.0	9.76	
59 2-Nitrophenol	139	7.351	7.351	0.000	84	132546	10.0	10.2	
63 Benzoic acid	105	7.399	7.399	0.000	86	328426	20.0	18.2	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	97	293963	10.0	9.77	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	94	235015	10.0	10.0	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	272989	10.0	9.73	
69 Naphthalene	128	7.710	7.710	0.000	95	699065	10.0	9.53	
70 4-Chloroaniline	127	7.728	7.728	0.000	89	307569	10.0	9.85	M
71 2,6-Dichlorophenol	162	7.746	7.746	0.000	91	233143	10.0	10.2	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	95	215086	10.0	9.67	
78 Caprolactam	113	8.010	8.010	0.000	84	130846	20.0	19.0	M
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	88	263124	10.0	10.0	
82 2-Methylnaphthalene	142	8.293	8.293	0.000	90	514946	10.0	9.62	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	90	471999	10.0	9.63	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	96	246194	10.0	9.98	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.440	0.000	98	334246	10.0	9.84	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	206317	10.0	10.4	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	89	200733	10.0	10.0	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	96	660890	10.0	10.2	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	504931	10.0	9.77	
99 2-Nitroaniline	65	8.775	8.775	0.000	72	190126	10.0	10.4	
102 Dimethyl phthalate	163	8.904	8.904	0.000	95	614239	10.0	9.88	
103 1,3-Dinitrobenzene	168	8.946	8.946	0.000	85	89765	10.0	9.94	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	83	138527	10.0	10.4	
105 Acenaphthylene	152	9.081	9.081	0.000	98	760878	10.0	10.3	
106 3-Nitroaniline	138	9.122	9.122	0.000	87	102245	10.0	9.49	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	77	149883	20.0	19.2	
109 Acenaphthene	153	9.222	9.222	0.000	95	527752	10.0	10.0	
110 4-Nitrophenol	109	9.228	9.228	0.000	83	324532	20.0	22.0	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	83	162375	10.0	9.47	
113 Dibenzofuran	168	9.369	9.369	0.000	94	791821	10.0	9.89	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	160787	10.0	9.02	
117 Hexadecane	57	9.487	9.487	0.000	90	283680	10.0	10.4	
118 Diethyl phthalate	149	9.493	9.493	0.000	97	535122	10.0	8.72	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	96	387278	10.0	10.0	
126 Fluorene	166	9.663	9.663	0.000	94	642827	10.0	10.6	
125 4-Nitroaniline	138	9.645	9.645	0.000	70	119947	10.0	11.2	M
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	85	254363	20.0	19.4	
129 Diphenylamine	169	9.722	9.722	0.000	94	388353	8.50	7.66	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	99	388353	10.0	9.01	
130 Azobenzene	77	9.769	9.769	0.000	99	802697	10.0	10.8	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	68	216929	10.0	10.6	
140 Atrazine	200	10.145	10.145	0.000	93	464274	20.0	22.8	
141 Hexachlorobenzene	284	10.151	10.151	0.000	93	248211	10.0	10.4	
142 n-Octadecane	57	10.269	10.269	0.000	79	185484	10.0	9.88	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	290151	20.0	20.8	
149 Phenanthrene	178	10.492	10.492	0.000	98	834824	10.0	9.67	
150 Anthracene	178	10.540	10.540	0.000	97	844953	10.0	9.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	599835	10.0	10.1	
154 Di-n-butyl phthalate	149	10.875	10.875	0.000	99	1061322	10.0	10.5	
160 Fluoranthene	202	11.592	11.592	0.000	96	1215459	10.0	10.5	
161 Benzidine	184	11.669	11.669	0.000	99	983414	20.0	17.2	
163 Pyrene	202	11.839	11.839	0.000	98	1215715	10.0	9.83	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	93	455727	10.0	9.59	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.216	0.000	95	692326	10.0	10.1	
178 3,3'-Dichlorobenzidine	252	13.251	13.251	0.000	74	572912	20.0	17.8	
179 Benzo[a]anthracene	228	13.339	13.339	0.000	96	1262811	10.0	9.53	
180 Chrysene	228	13.398	13.398	0.000	95	1263606	10.0	9.49	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	1161591	10.0	9.38	
185 Benzo[b]fluoranthene	252	15.045	15.045	0.000	94	1285303	10.0	9.77	
186 Benzo[k]fluoranthene	252	15.086	15.086	0.000	96	1329261	10.0	9.68	
187 Benzo[a]pyrene	252	15.604	15.604	0.000	73	1158974	10.0	9.90	
191 Indeno[1,2,3-cd]pyrene	276	17.739	17.739	0.000	95	1267092	10.0	9.39	
192 Dibenz(a,h)anthracene	278	17.745	17.745	0.000	89	1121303	10.0	9.69	
193 Benzo[g,h,i]perylene	276	18.345	18.345	0.000	95	1034828	10.0	9.21	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L6 W_00014 Amount Added: 1.00 Units: mL

Report Date: 24-Apr-2020 13:44:28 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D

Injection Date: 23-Apr-2020 18:01:51 Instrument ID: A4AG3 Operator ID:

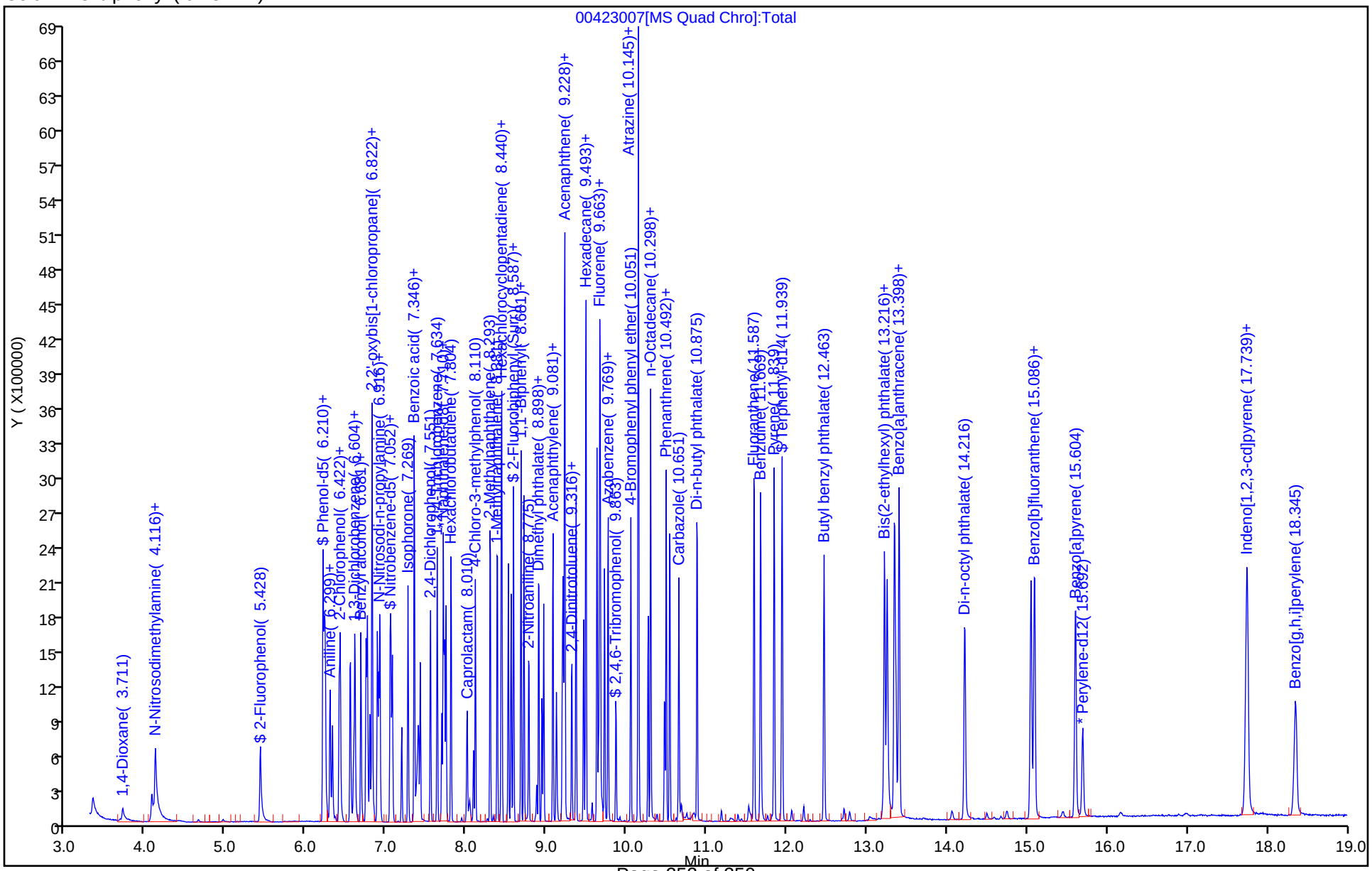
Lims ID: std6 lst1 Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

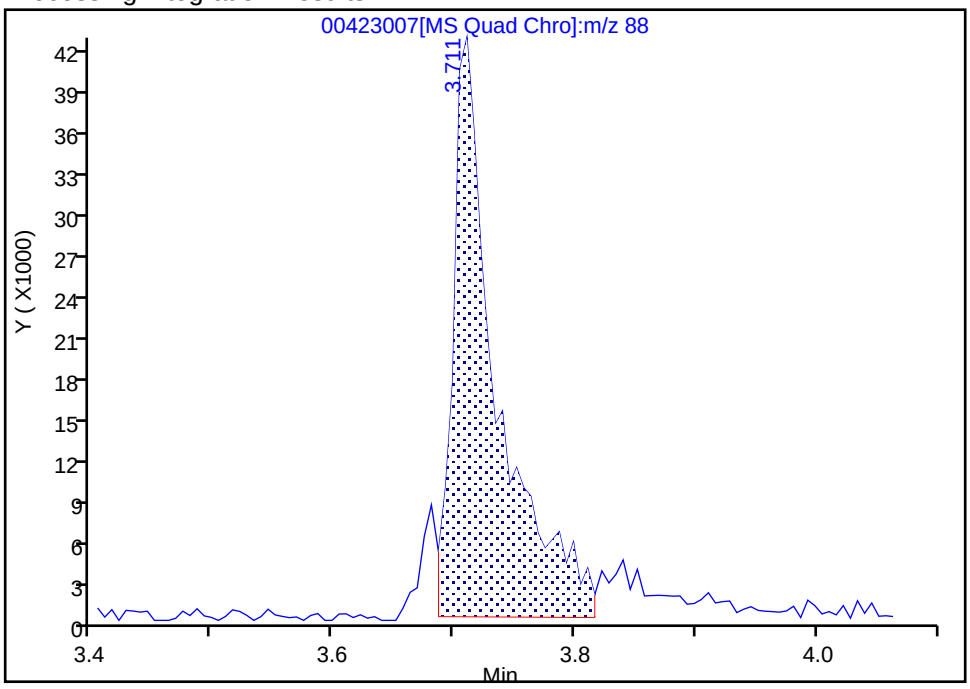
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D
Injection Date: 23-Apr-2020 18:01:51 Instrument ID: A4AG3
Lims ID: std6 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

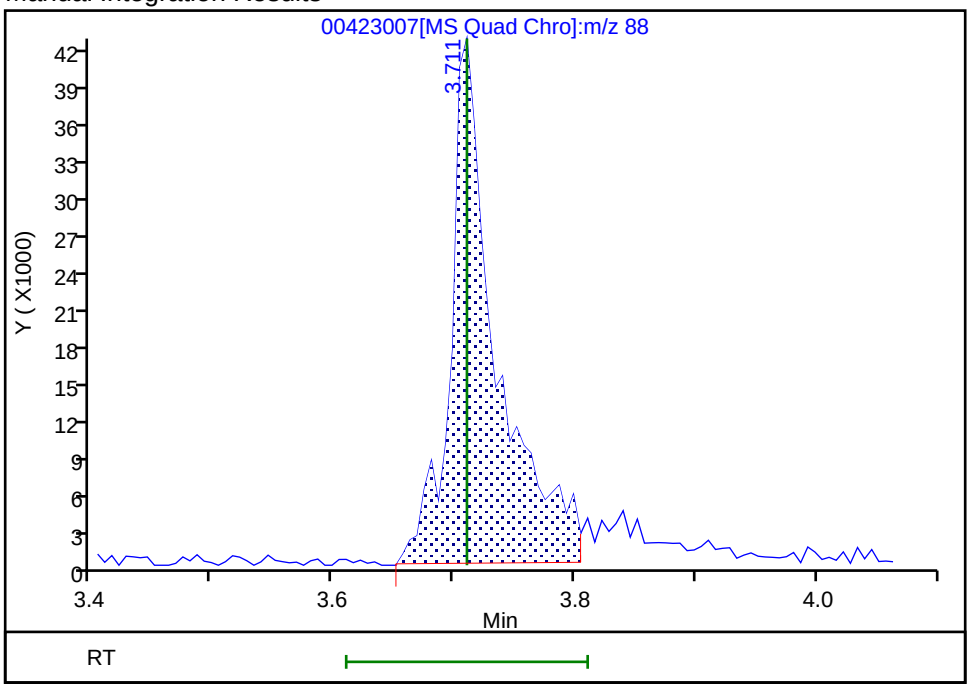
Processing Integration Results

RT: 3.71
Area: 106013
Amount: 9.285724
Amount Units: ng/ul



Manual Integration Results

RT: 3.71
Area: 111237
Amount: 9.436941
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:28:50
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

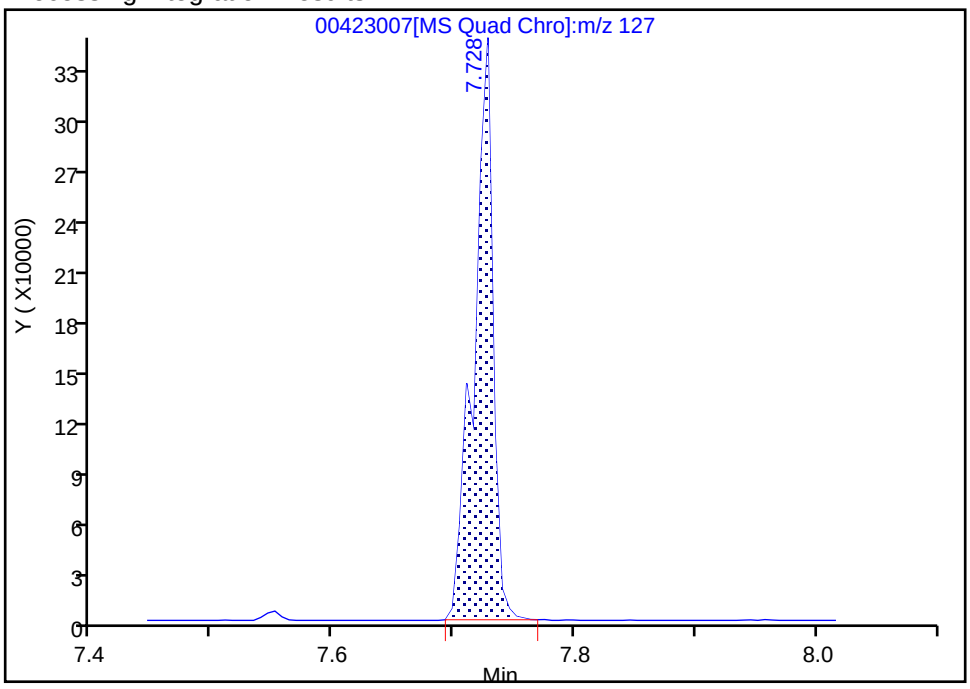
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D
Injection Date: 23-Apr-2020 18:01:51 Instrument ID: A4AG3
Lims ID: std6 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

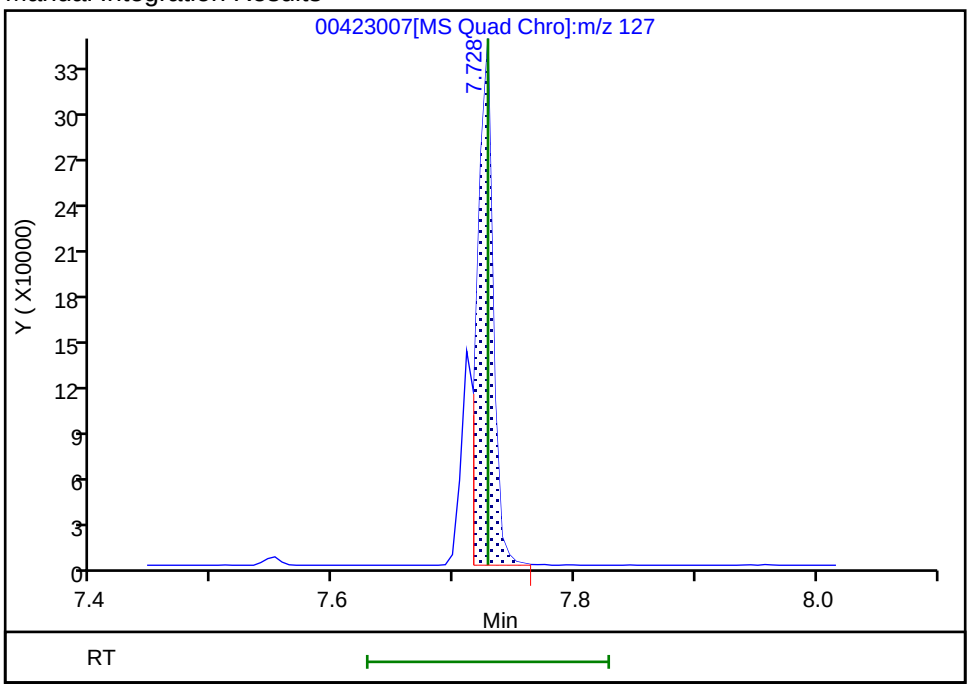
Processing Integration Results

RT: 7.73
Area: 378165
Amount: 10.283764
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 307569
Amount: 9.849636
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:29:26
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

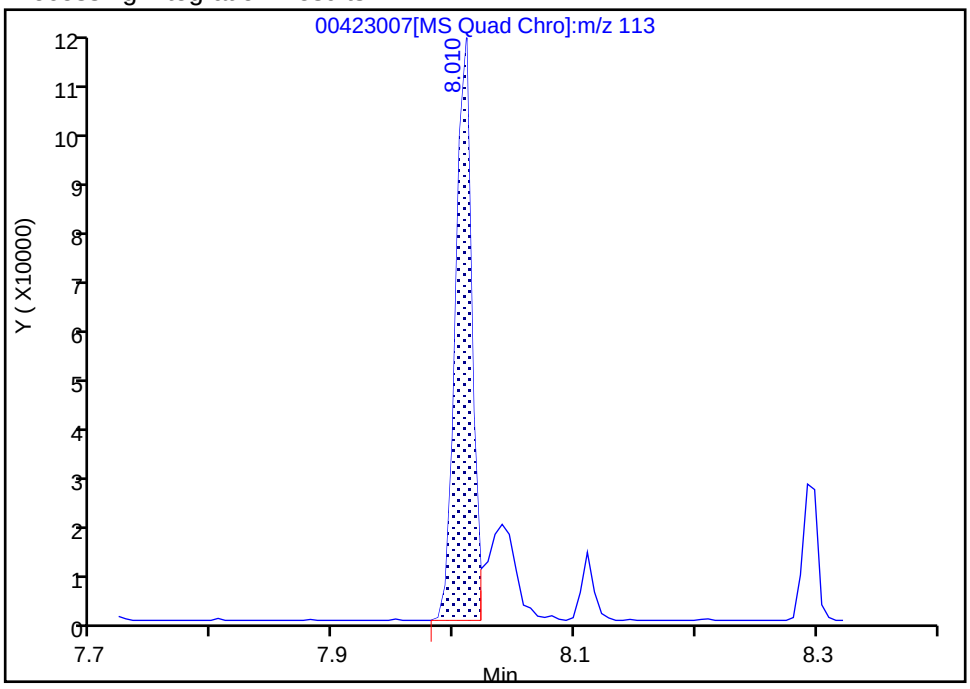
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D
Injection Date: 23-Apr-2020 18:01:51 Instrument ID: A4AG3
Lims ID: std6 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

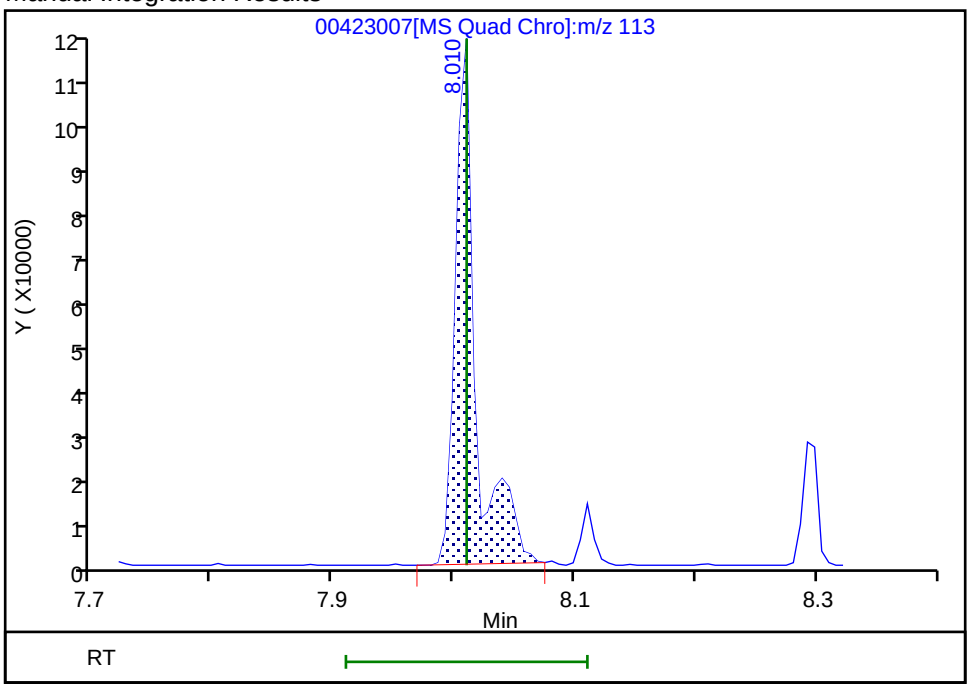
Processing Integration Results

RT: 8.01
Area: 104883
Amount: 16.405473
Amount Units: ng/ul



Manual Integration Results

RT: 8.01
Area: 130846
Amount: 19.044492
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:29:42
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

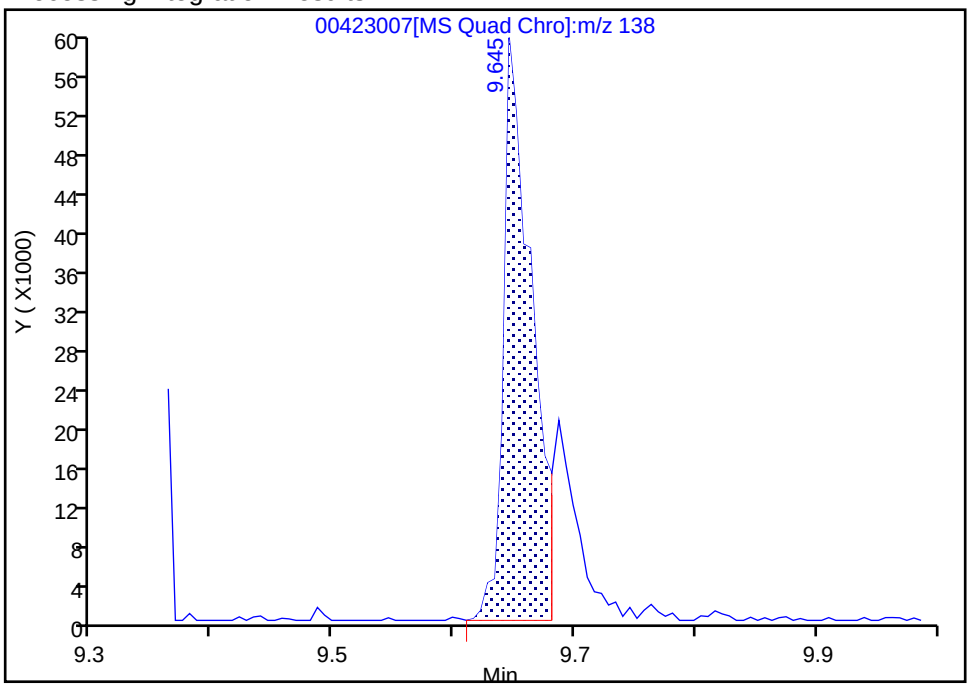
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423007.D				
Injection Date:	23-Apr-2020 18:01:51	Instrument ID:	A4AG3		
Lims ID:	std6 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

125 4-Nitroaniline, CAS: 100-01-6

Signal: 1

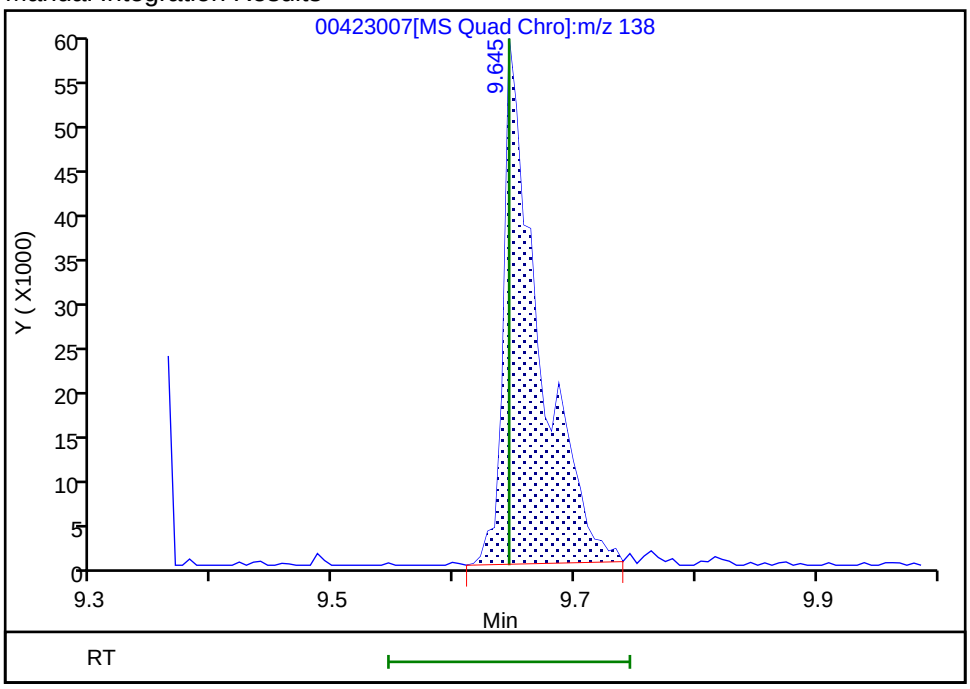
Processing Integration Results

RT: 9.65
Area: 96594
Amount: 9.252488
Amount Units: ng/ul



Manual Integration Results

RT: 9.65
Area: 119947
Amount: 11.158272
Amount Units: ng/ul



Reviewer: ulmanm, 23-Apr-2020 18:30:09

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423008.D
Lims ID: std7 lst1
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Apr-2020 18:25:17 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-008
Misc. Info.: STD7 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:30 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 24-Apr-2020 10:56:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	95	84382	4.00	4.00	
* 2 Naphthalene-d8	136	7.692	7.693	-0.001	98	290149	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	91	207486	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	352337	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.357	0.006	98	426700	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	435050	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	91	356904	15.0	15.3	
$ 8 Phenol-d5	99	6.228	6.228	0.000	71	470085	15.0	15.1	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	616242	15.0	14.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	99	993770	15.0	14.7	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	91	153191	15.0	14.0	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	1421638	15.0	16.0	
13 1,4-Dioxane	88	3.704	3.711	-0.006	89	203016	15.0	16.2	
14 N-Nitrosodimethylamine	74	4.069	4.075	-0.006	85	281294	15.0	16.1	
15 Pyridine	79	4.116	4.116	0.000	91	968226	30.0	31.4	
30 Benzaldehyde	77	6.210	6.210	0.000	90	799911	30.0	29.2	
31 Phenol	94	6.240	6.240	0.000	90	523035	15.0	15.1	
32 Aniline	93	6.298	6.299	-0.001	96	654850	15.0	15.6	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	97	454169	15.0	14.6	
36 2-Chlorophenol	128	6.410	6.410	0.000	90	385350	15.0	15.5	
37 n-Decane	57	6.422	6.422	0.000	73	325382	15.0	15.0	
39 1,3-Dichlorobenzene	146	6.551	6.552	-0.001	89	453609	15.0	14.9	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	84	466149	15.0	14.4	
41 Benzyl alcohol	108	6.681	6.681	0.000	85	274358	15.0	15.7	
44 1,2-Dichlorobenzene	146	6.745	6.746	-0.001	87	440776	15.0	14.7	
45 2-Methylphenol	108	6.763	6.763	0.000	91	385931	15.0	14.9	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	-0.001	64	257129	15.0	15.2	
47 Indene	115	6.822	6.822	0.000	89	1392494	30.0	30.0	
48 3 & 4 Methylphenol	108	6.893	6.887	0.005	91	415204	15.0	15.7	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	78	386104	15.0	15.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.922	6.916	0.006	90	632652	15.0	15.1	
54 Hexachloroethane	117	7.045	7.046	-0.001	83	210496	15.0	14.8	
55 Nitrobenzene	77	7.075	7.075	0.000	86	560334	15.0	14.5	
57 Isophorone	82	7.269	7.269	0.000	98	988970	15.0	15.3	
58 2,4-Dimethylphenol	107	7.345	7.346	-0.001	95	527457	15.0	15.1	
59 2-Nitrophenol	139	7.351	7.351	0.000	85	224963	15.0	15.9	
63 Benzoic acid	105	7.416	7.399	0.017	87	596121	30.0	29.7	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	99	477559	15.0	14.6	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	94	375138	15.0	14.7	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	92	456182	15.0	14.9	
69 Naphthalene	128	7.710	7.710	0.000	95	1196566	15.0	15.0	
70 4-Chloroaniline	127	7.728	7.728	0.000	90	512060	15.0	15.1	M
71 2,6-Dichlorophenol	162	7.745	7.746	-0.001	92	377089	15.0	15.2	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	96	344403	15.0	14.2	
78 Caprolactam	113	8.016	8.010	0.006	85	223530	30.0	29.8	M
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	89	437624	15.0	15.3	
82 2-Methylnaphthalene	142	8.298	8.293	0.005	89	857021	15.0	14.7	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	90	785659	15.0	14.7	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	96	423682	15.0	15.4	
86 1,2,4,5-Tetrachlorobenzene	216	8.439	8.440	-0.001	99	550640	15.0	14.5	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	93	331113	15.0	14.9	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	90	331362	15.0	14.8	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	97	1060595	15.0	14.6	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	831567	15.0	14.4	
99 2-Nitroaniline	65	8.781	8.775	0.006	72	319460	15.0	15.6	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	934880	15.0	13.5	
103 1,3-Dinitrobenzene	168	8.945	8.946	-0.001	84	147122	15.0	14.6	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	82	207202	15.0	13.9	
105 Acenaphthylene	152	9.081	9.081	0.000	98	1240190	15.0	15.0	
106 3-Nitroaniline	138	9.128	9.122	0.006	86	156161	15.0	13.0	
108 2,4-Dinitrophenol	184	9.210	9.204	0.006	84	291406	30.0	30.8	
109 Acenaphthene	153	9.228	9.222	0.006	94	860501	15.0	14.6	
110 4-Nitrophenol	109	9.234	9.228	0.006	82	553465	30.0	33.6	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	83	276629	15.0	14.4	
113 Dibenzofuran	168	9.369	9.369	0.000	94	1265636	15.0	14.1	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	273844	15.0	13.7	
117 Hexadecane	57	9.492	9.487	0.005	90	464078	15.0	15.2	
118 Diethyl phthalate	149	9.492	9.493	-0.001	96	939935	15.0	13.7	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	96	594276	15.0	13.7	
125 4-Nitroaniline	138	9.651	9.645	0.006	70	180111	15.0	15.0	M
126 Fluorene	166	9.663	9.663	0.000	95	973472	15.0	14.4	
127 4,6-Dinitro-2-methylphenol	198	9.675	9.669	0.006	83	442203	30.0	30.4	
128 N-Nitrosodiphenylamine	169	9.728	9.722	0.006	98	654447	15.0	14.0	
129 Diphenylamine	169	9.728	9.722	0.006	95	654447	12.8	11.9	
130 Azobenzene	77	9.769	9.769	0.000	99	1154404	15.0	14.3	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	67	305521	15.0	13.8	
140 Atrazine	200	10.145	10.145	0.000	94	742232	30.0	33.6	
141 Hexachlorobenzene	284	10.151	10.151	0.000	95	364309	15.0	14.1	
142 n-Octadecane	57	10.269	10.269	0.000	80	274033	15.0	14.0	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	502358	30.0	33.1	
149 Phenanthrene	178	10.492	10.492	0.000	98	1380136	15.0	14.7	
150 Anthracene	178	10.539	10.540	-0.001	97	1443461	15.0	15.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	888462	15.0	13.7	
154 Di-n-butyl phthalate	149	10.881	10.875	0.006	99	1713181	15.0	15.4	
160 Fluoranthene	202	11.592	11.592	0.000	96	1961244	15.0	15.6	
161 Benzidine	184	11.675	11.669	0.006	98	1824171	30.0	31.0	
163 Pyrene	202	11.845	11.839	0.006	98	1995140	15.0	16.0	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	94	771653	15.0	16.1	
176 Bis(2-ethylhexyl) phthalat	149	13.222	13.216	0.006	95	1128749	15.0	16.3	
178 3,3'-Dichlorobenzidine	252	13.257	13.251	0.006	74	898334	30.0	27.7	
179 Benzo[a]anthracene	228	13.345	13.339	0.006	97	2004964	15.0	15.0	
180 Chrysene	228	13.404	13.398	0.006	95	1994265	15.0	14.9	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	1864930	15.0	15.1	
185 Benzo[b]fluoranthene	252	15.051	15.045	0.006	94	1963368	15.0	15.1	
186 Benzo[k]fluoranthene	252	15.092	15.086	0.006	97	2168179	15.0	16.0	
187 Benzo[a]pyrene	252	15.604	15.604	0.000	73	1841083	15.0	15.9	
191 Indeno[1,2,3-cd]pyrene	276	17.745	17.739	0.006	95	2023190	15.0	15.2	
192 Dibenz(a,h)anthracene	278	17.757	17.745	0.012	86	1748627	15.0	15.3	
193 Benzo[g,h,i]perylene	276	18.357	18.345	0.012	95	1597686	15.0	14.4	
S 219 Methyl Phenols,Total	100				0			30.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L7 W_00014 Amount Added: 1.00 Units: mL

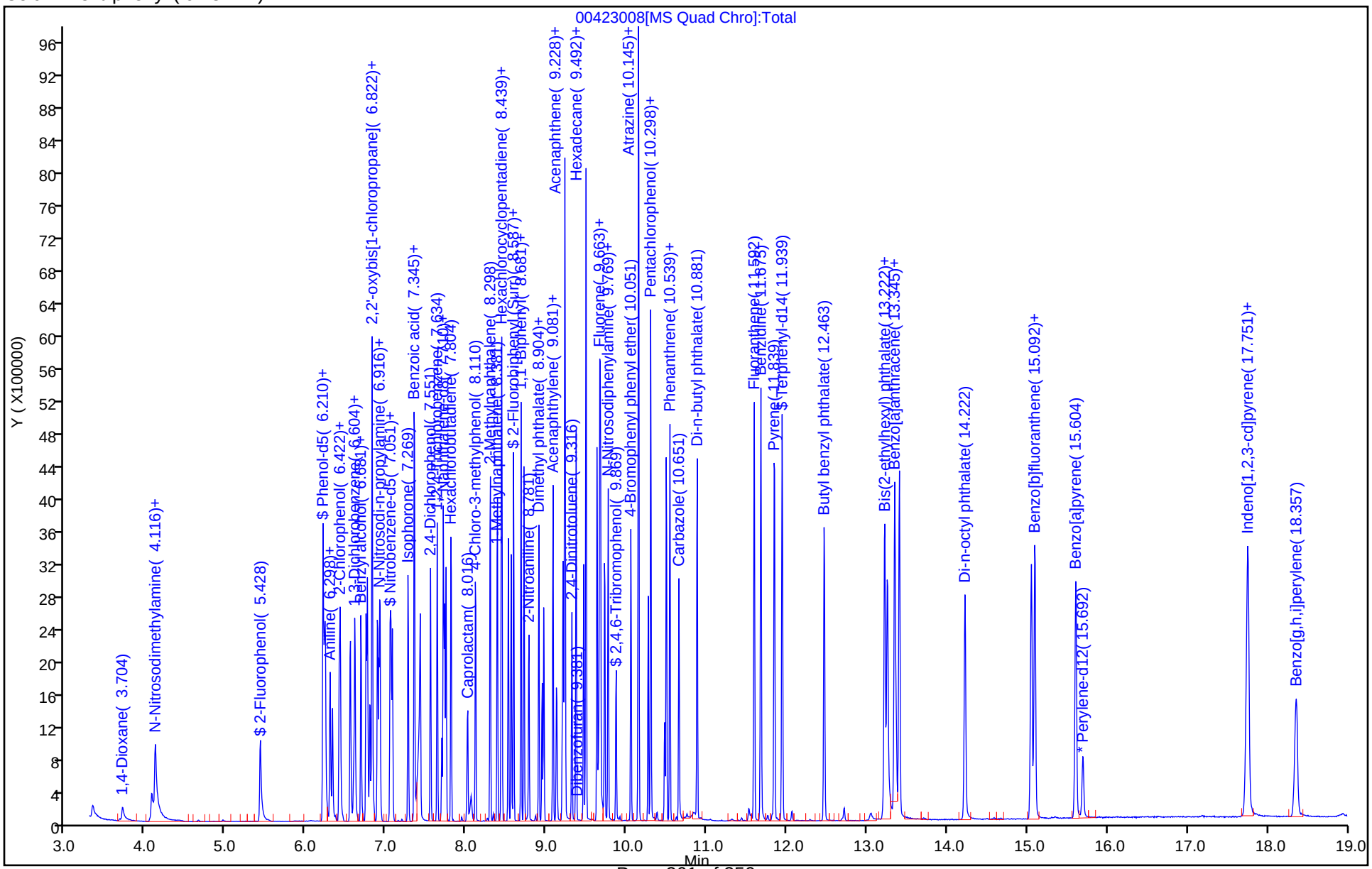
Report Date: 24-Apr-2020 13:44:34 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423008.D

Injection Date:	23-Apr-2020 18:25:17	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std7 lst1			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

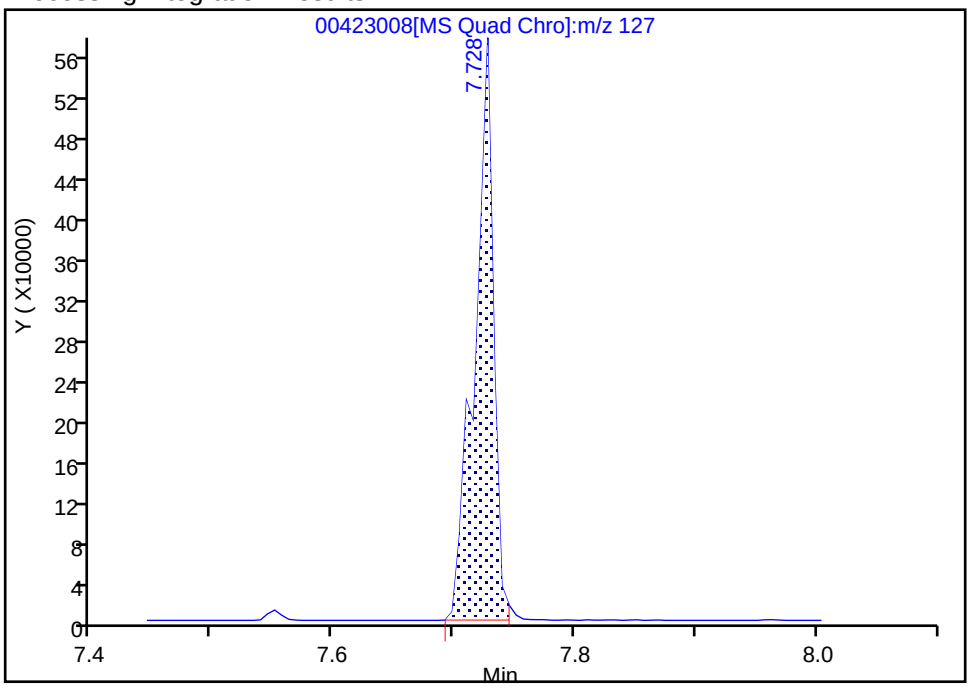
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423008.D
Injection Date: 23-Apr-2020 18:25:17 Instrument ID: A4AG3
Lims ID: std7 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

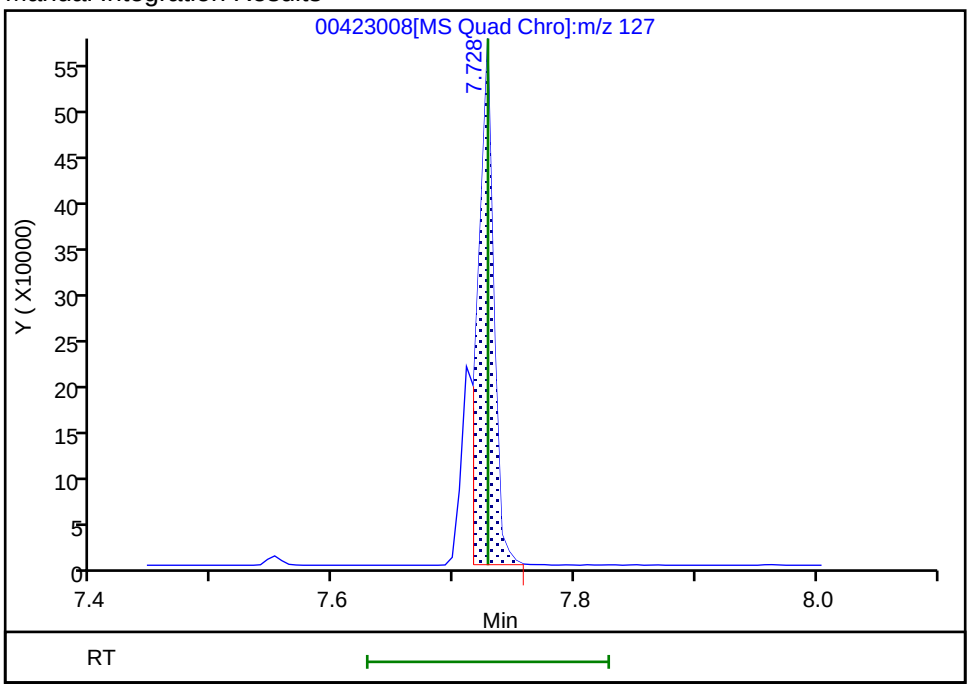
Processing Integration Results

RT: 7.73
Area: 619635
Amount: 15.282098
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 512060
Amount: 15.068899
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:54:34
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

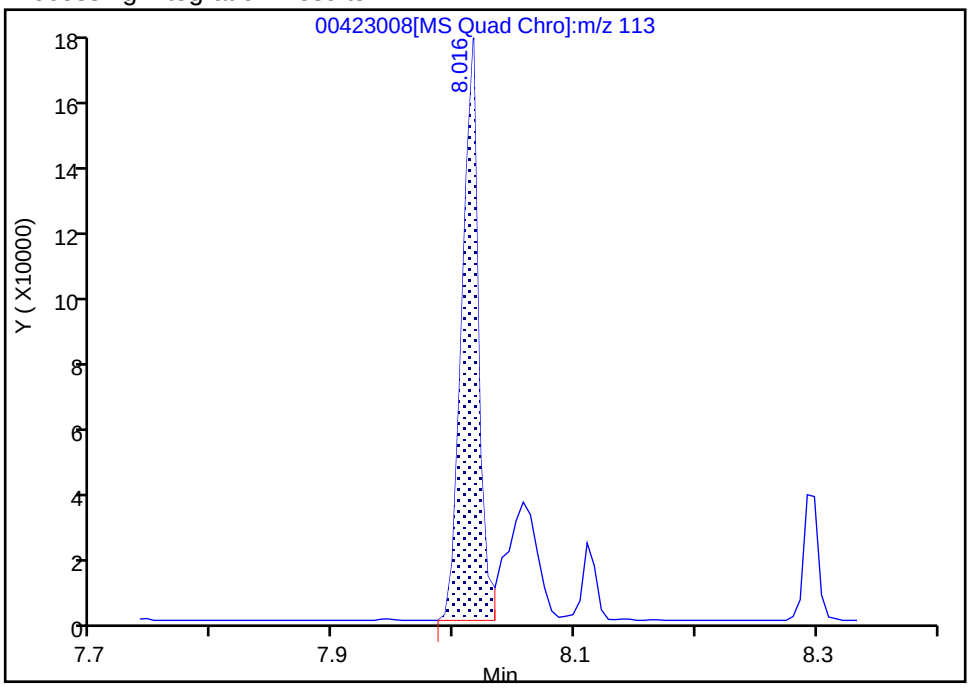
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423008.D
Injection Date: 23-Apr-2020 18:25:17 Instrument ID: A4AG3
Lims ID: std7 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

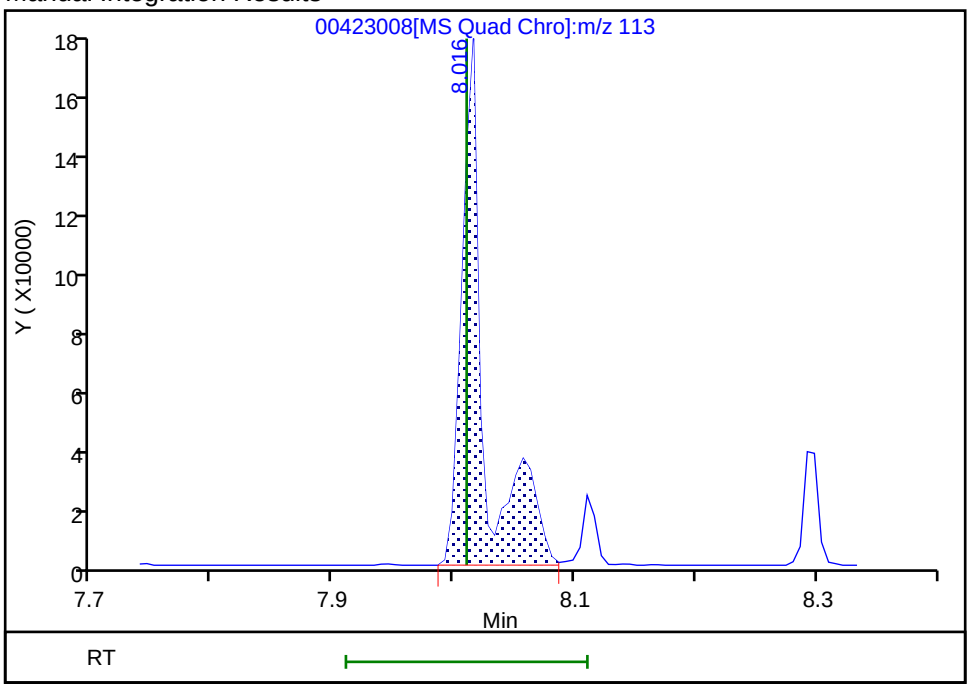
Processing Integration Results

RT: 8.02
Area: 164199
Amount: 24.888039
Amount Units: ng/ul



Manual Integration Results

RT: 8.02
Area: 223530
Amount: 29.841351
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:55:09
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

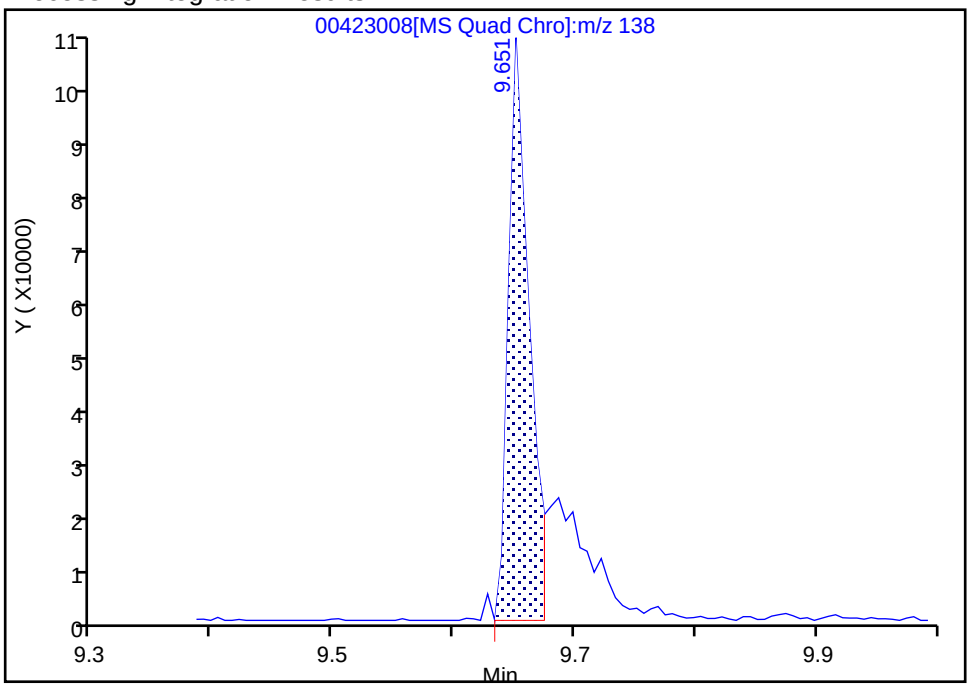
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423008.D				
Injection Date:	23-Apr-2020 18:25:17	Instrument ID:	A4AG3		
Lims ID:	std7 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

125 4-Nitroaniline, CAS: 100-01-6

Signal: 1

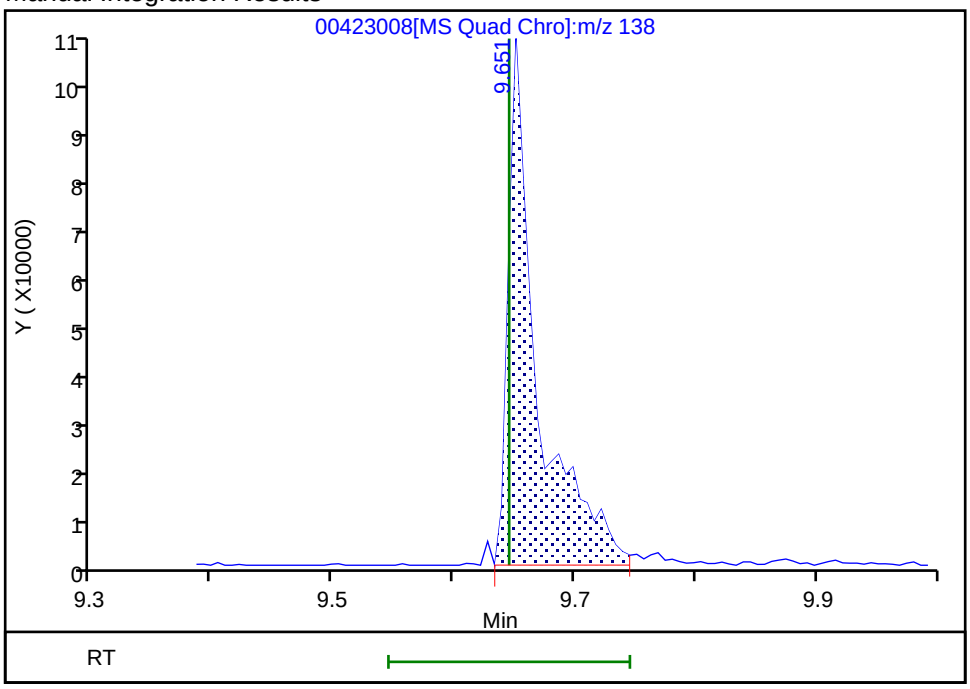
Processing Integration Results

RT: 9.65
Area: 129067
Amount: 11.408852
Amount Units: ng/ul



Manual Integration Results

RT: 9.65
Area: 180111
Amount: 14.990837
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:55:51

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423009.D
Lims ID: std8 lst1
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Apr-2020 18:48:48 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-009
Misc. Info.: STD8 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:35 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 24-Apr-2020 10:58:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	95	86256	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.693	0.000	98	292872	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	92	199112	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	356400	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.357	0.006	98	424041	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	97	422380	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	90	467036	20.0	19.6	
$ 8 Phenol-d5	99	6.228	6.228	0.000	77	602056	20.0	19.0	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	784699	20.0	18.6	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	99	1290759	20.0	19.9	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	91	194151	20.0	18.5	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	1791282	20.0	20.2	
13 1,4-Dioxane	88	3.699	3.711	-0.011	90	259314	20.0	20.2	
14 N-Nitrosodimethylamine	74	4.063	4.075	-0.012	88	349303	20.0	19.5	
15 Pyridine	79	4.110	4.116	-0.006	91	1270023	40.0	40.3	
30 Benzaldehyde	77	6.210	6.210	0.000	90	1024454	40.0	36.6	
31 Phenol	94	6.240	6.240	0.000	92	694505	20.0	19.6	
32 Aniline	93	6.299	6.299	0.000	96	836551	20.0	19.5	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	95	578716	20.0	18.1	
36 2-Chlorophenol	128	6.410	6.410	0.000	91	509287	20.0	20.0	
37 n-Decane	57	6.422	6.422	0.000	73	423885	20.0	19.1	
39 1,3-Dichlorobenzene	146	6.551	6.552	-0.001	92	607051	20.0	19.5	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	86	627391	20.0	19.0	
41 Benzyl alcohol	108	6.681	6.681	0.000	84	349328	20.0	19.6	
44 1,2-Dichlorobenzene	146	6.746	6.746	0.000	88	569811	20.0	18.5	
45 2-Methylphenol	108	6.763	6.763	0.000	93	510340	20.0	19.3	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	86	333756	20.0	19.4	
47 Indene	115	6.822	6.822	0.000	89	1847481	40.0	39.0	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	94	538348	20.0	19.9	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	80	484772	20.0	18.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.922	6.916	0.006	91	814633	20.0	19.1	
54 Hexachloroethane	117	7.046	7.046	0.000	84	272645	20.0	18.7	
55 Nitrobenzene	77	7.075	7.075	0.000	86	739281	20.0	19.0	
57 Isophorone	82	7.269	7.269	0.000	99	1276724	20.0	19.6	
58 2,4-Dimethylphenol	107	7.346	7.346	0.000	89	674169	20.0	19.1	
59 2-Nitrophenol	139	7.351	7.351	0.000	84	297261	20.0	20.8	
63 Benzoic acid	105	7.422	7.399	0.023	89	798110	40.0	39.0	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	99	629008	20.0	19.0	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	95	499295	20.0	19.4	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	92	587484	20.0	19.1	
69 Naphthalene	128	7.710	7.710	0.000	95	1536105	20.0	19.1	
70 4-Chloroaniline	127	7.728	7.728	0.000	92	690310	20.0	20.1	M
71 2,6-Dichlorophenol	162	7.746	7.746	0.000	92	482693	20.0	19.3	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	95	448660	20.0	18.4	
78 Caprolactam	113	8.016	8.010	0.006	87	298378	40.0	39.4	M
80 4-Chloro-3-methylphenol	107	8.116	8.110	0.006	90	556011	20.0	19.3	
82 2-Methylnaphthalene	142	8.298	8.293	0.005	89	1118869	20.0	19.0	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	91	1032505	20.0	19.2	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	97	533260	20.0	20.2	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.440	0.000	99	705081	20.0	19.3	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	420250	20.0	19.7	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	91	425513	20.0	19.8	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	96	1384087	20.0	19.9	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	1071904	20.0	19.3	
99 2-Nitroaniline	65	8.781	8.775	0.006	72	396064	20.0	20.2	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	1195607	20.0	17.9	
103 1,3-Dinitrobenzene	168	8.945	8.946	-0.001	84	192483	20.0	19.9	
104 2,6-Dinitrotoluene	165	8.969	8.963	0.006	85	270243	20.0	18.9	
105 Acenaphthylene	152	9.081	9.081	0.000	98	1596055	20.0	20.1	
106 3-Nitroaniline	138	9.122	9.122	0.000	86	216101	20.0	18.7	
108 2,4-Dinitrophenol	184	9.210	9.204	0.006	84	381866	40.0	39.7	
109 Acenaphthene	153	9.228	9.222	0.006	94	1096058	20.0	19.4	
110 4-Nitrophenol	109	9.234	9.228	0.006	84	682031	40.0	43.1	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	85	363165	20.0	19.8	
113 Dibenzofuran	168	9.369	9.369	0.000	94	1618071	20.0	18.8	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	367033	20.0	19.2	
117 Hexadecane	57	9.493	9.487	0.005	88	596821	20.0	20.4	
118 Diethyl phthalate	149	9.493	9.493	-0.001	96	1236002	20.0	18.8	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	96	775244	20.0	18.7	
125 4-Nitroaniline	138	9.651	9.645	0.006	75	214796	20.0	18.6	M
126 Fluorene	166	9.663	9.663	0.000	95	1257329	20.0	19.3	
127 4,6-Dinitro-2-methylphenol	198	9.675	9.669	0.006	84	592166	40.0	40.0	
128 N-Nitrosodiphenylamine	169	9.728	9.722	0.006	99	830410	20.0	17.5	
129 Diphenylamine	169	9.728	9.722	0.006	94	830410	17.0	14.9	
130 Azobenzene	77	9.769	9.769	0.000	99	1396548	20.0	17.1	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	68	388416	20.0	17.3	
140 Atrazine	200	10.151	10.145	0.006	93	1004963	40.0	45.0	
141 Hexachlorobenzene	284	10.151	10.151	0.000	75	462717	20.0	17.7	
142 n-Octadecane	57	10.269	10.269	0.000	82	375239	20.0	19.8	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	660523	40.0	43.0	
149 Phenanthrene	178	10.492	10.492	0.000	98	1815470	20.0	19.1	
150 Anthracene	178	10.540	10.540	0.000	97	1860605	20.0	19.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	1139341	20.0	17.4	
154 Di-n-butyl phthalate	149	10.881	10.875	0.006	100	2217735	20.0	19.7	
160 Fluoranthene	202	11.592	11.592	0.000	96	2542129	20.0	20.0	
161 Benzidine	184	11.675	11.669	0.006	98	2422739	40.0	41.1	
163 Pyrene	202	11.839	11.839	0.000	98	2502864	20.0	20.2	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	96	989329	20.0	20.8	
176 Bis(2-ethylhexyl) phthalat	149	13.222	13.216	0.006	95	1456261	20.0	21.2	
178 3,3'-Dichlorobenzidine	252	13.257	13.251	0.006	73	1233793	40.0	38.3	
179 Benzo[a]anthracene	228	13.345	13.339	0.006	97	2550485	20.0	19.2	
180 Chrysene	228	13.404	13.398	0.006	95	2548405	20.0	19.1	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	2397658	20.0	19.9	
185 Benzo[b]fluoranthene	252	15.051	15.045	0.006	94	2597568	20.0	20.6	
186 Benzo[k]fluoranthene	252	15.098	15.086	0.012	95	2591252	20.0	19.7	
187 Benzo[a]pyrene	252	15.610	15.604	0.006	73	2331556	20.0	20.8	
191 Indeno[1,2,3-cd]pyrene	276	17.751	17.739	0.012	95	2562323	20.0	19.8	
192 Dibenz(a,h)anthracene	278	17.757	17.745	0.012	88	2236084	20.0	20.1	
193 Benzo[g,h,i]perylene	276	18.363	18.345	0.018	95	1974099	20.0	18.3	
S 219 Methyl Phenols,Total	100				0			39.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L8 W_00014 Amount Added: 1.00 Units: mL

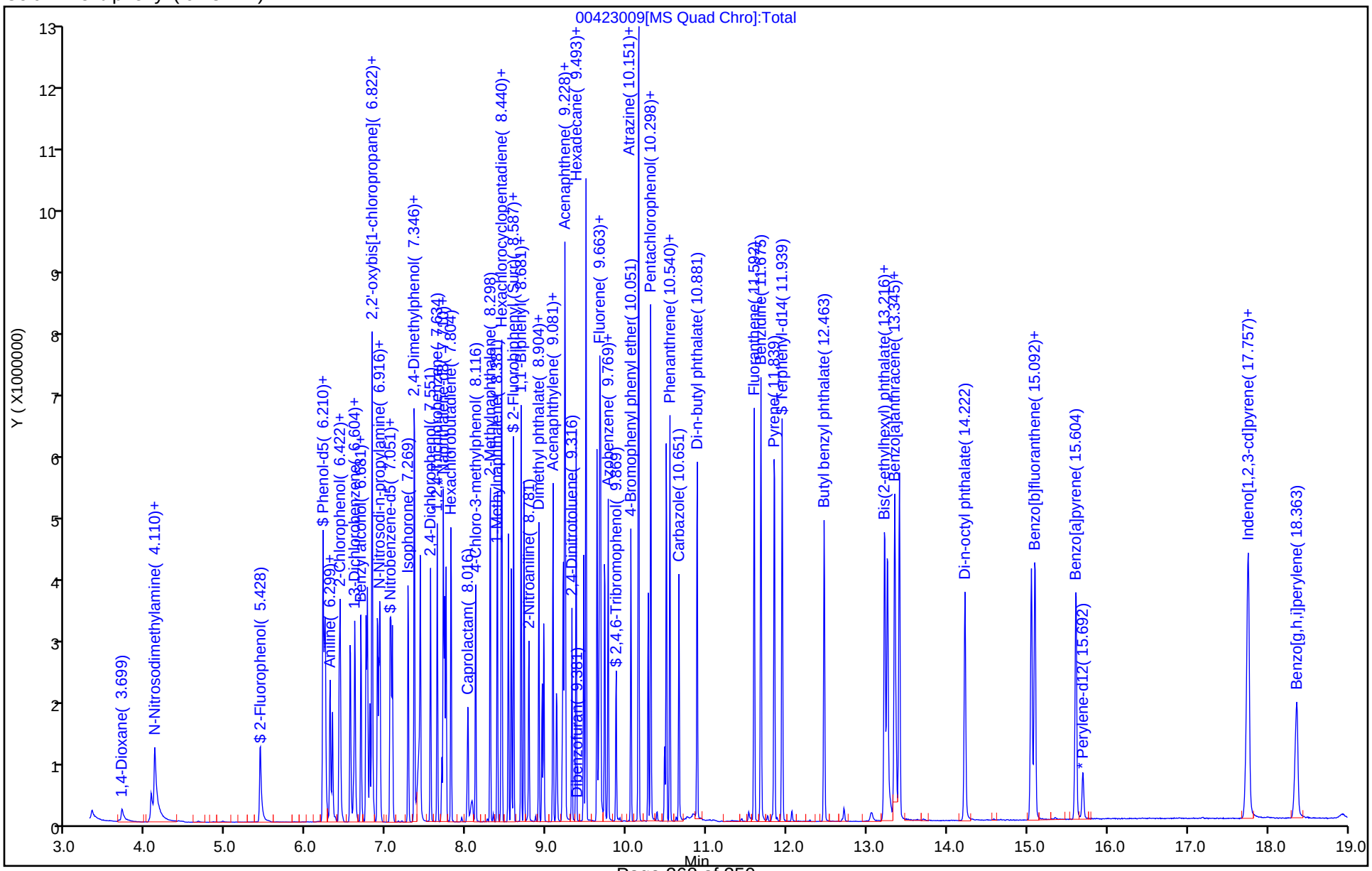
Report Date: 24-Apr-2020 13:44:39 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423009.D

Injection Date:	23-Apr-2020 18:48:48	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std8 lst1			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

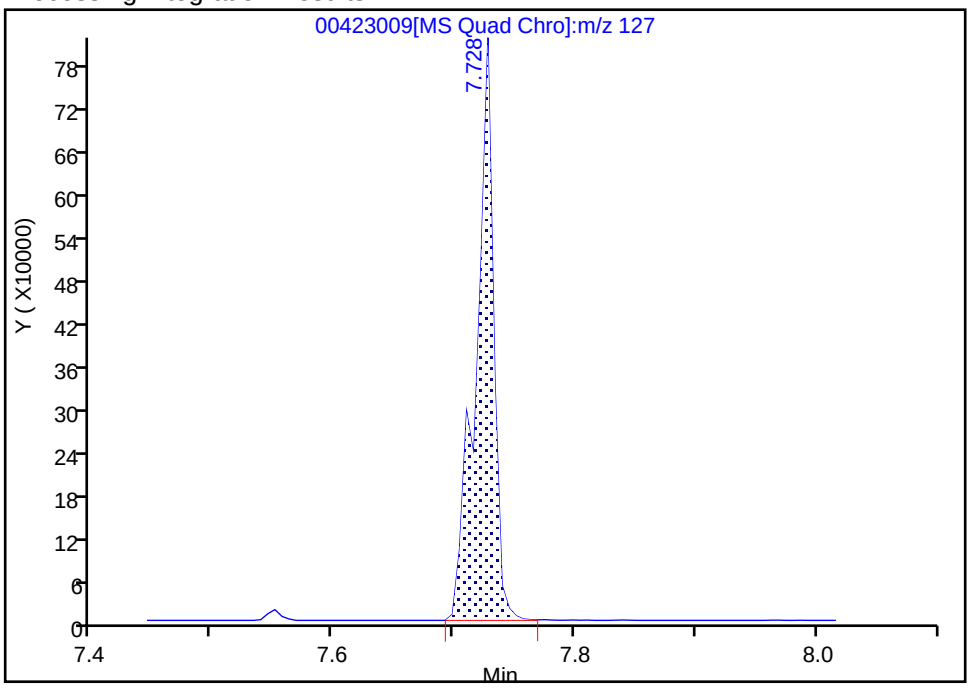
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423009.D
Injection Date: 23-Apr-2020 18:48:48 Instrument ID: A4AG3
Lims ID: std8 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

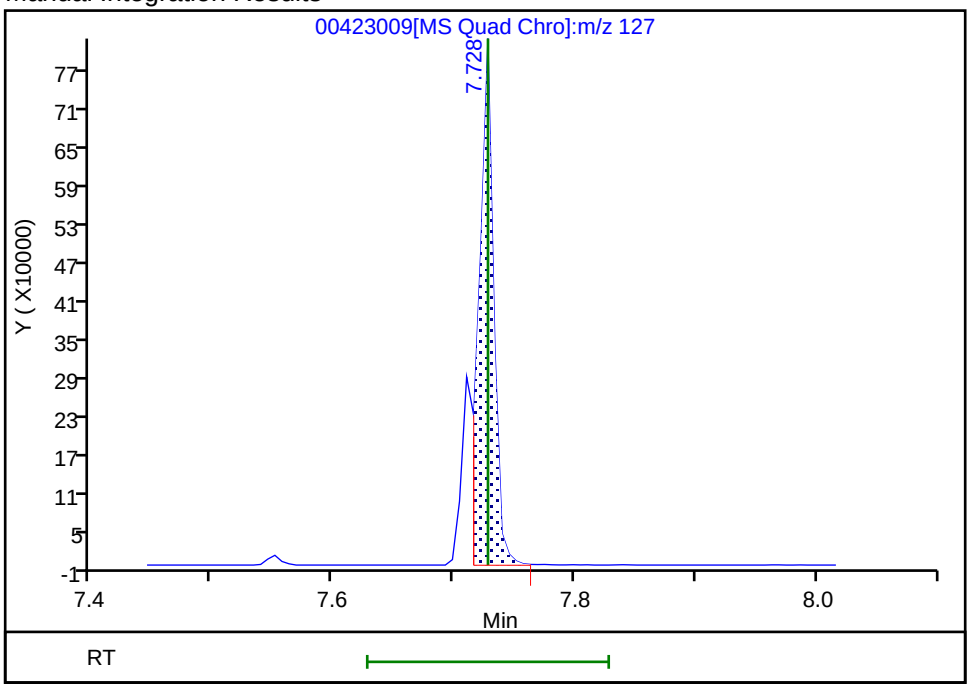
Processing Integration Results

RT: 7.73
Area: 830911
Amount: 22.336284
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 690310
Amount: 20.125564
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:57:13
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

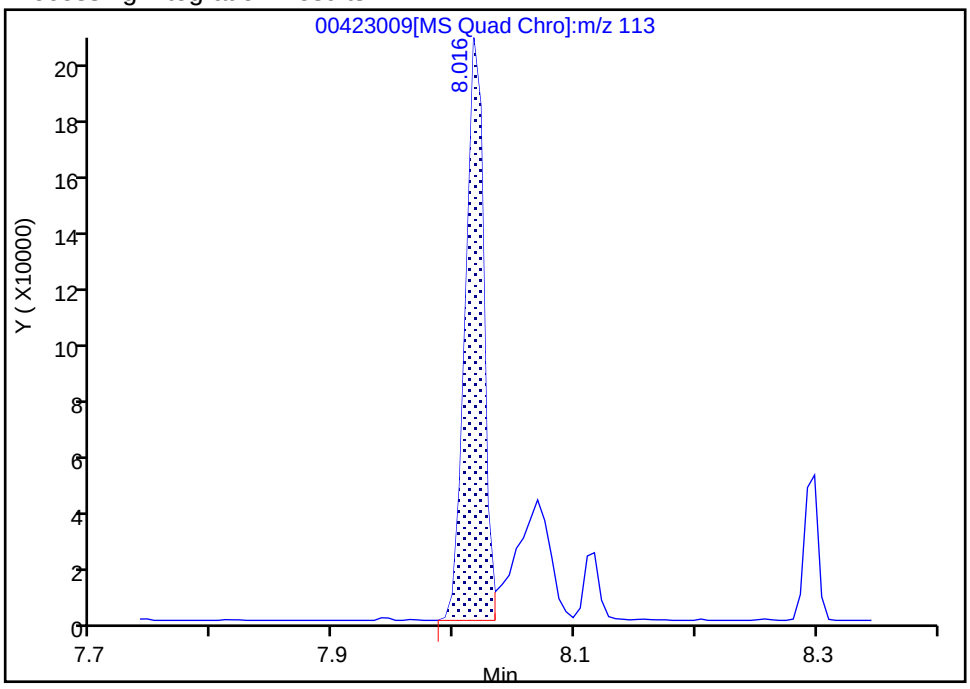
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423009.D				
Injection Date:	23-Apr-2020 18:48:48	Instrument ID:	A4AG3		
Lims ID:	std8 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

78 Caprolactam, CAS: 105-60-2

Signal: 1

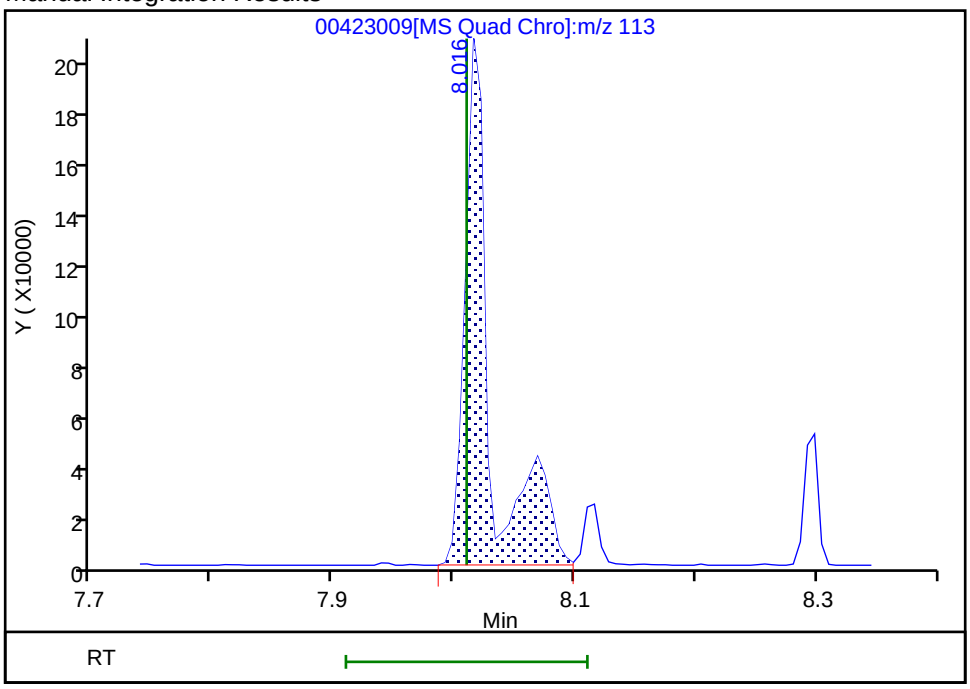
Processing Integration Results

RT: 8.02
Area: 218002
Amount: 31.553539
Amount Units: ng/ul



Manual Integration Results

RT: 8.02
Area: 298378
Amount: 39.431740
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:57:41

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

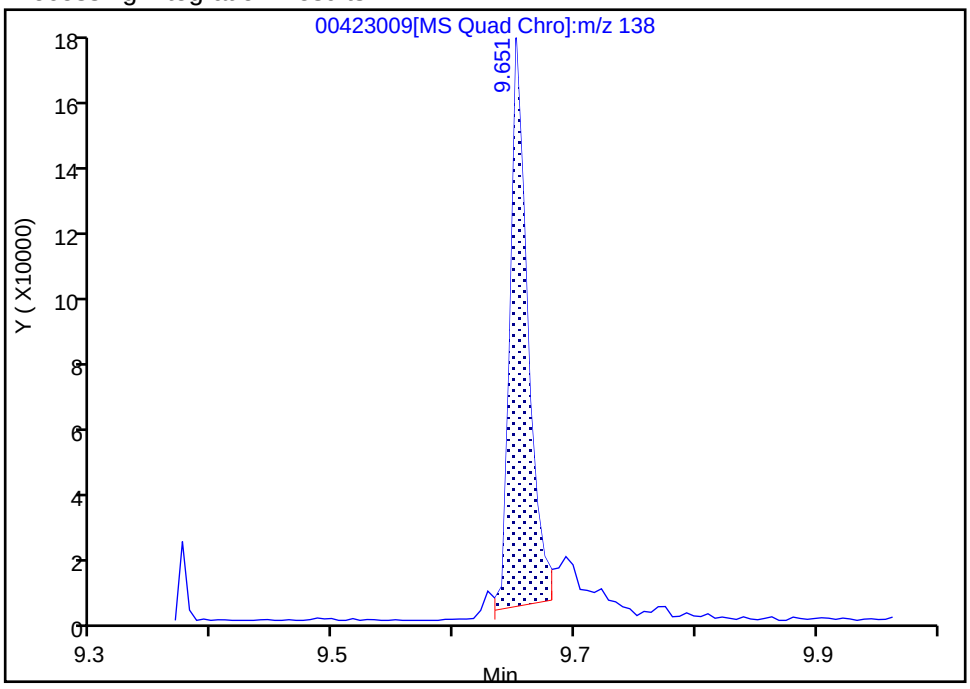
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423009.D				
Injection Date:	23-Apr-2020 18:48:48	Instrument ID:	A4AG3		
Lims ID:	std8 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

125 4-Nitroaniline, CAS: 100-01-6

Signal: 1

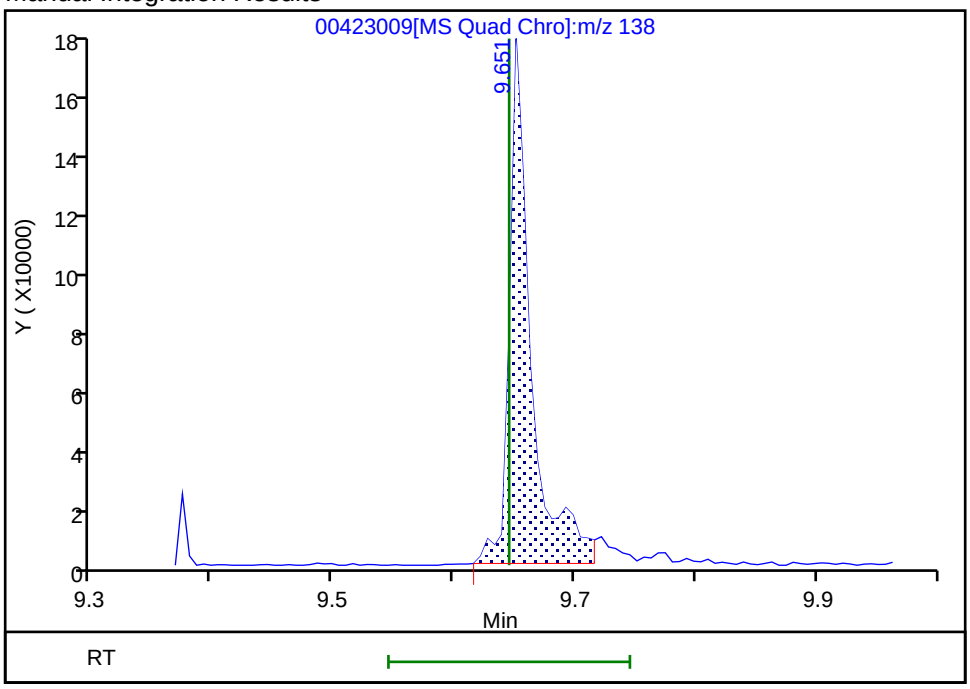
Processing Integration Results

RT: 9.65
Area: 172343
Amount: 15.299657
Amount Units: ng/ul



Manual Integration Results

RT: 9.65
Area: 214796
Amount: 18.629586
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:58:21

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D
Lims ID: std9 lst1
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-Apr-2020 19:12:10 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-010
Misc. Info.: STD9 LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:41 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 24-Apr-2020 11:11:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	95	82065	4.00	4.00	
* 2 Naphthalene-d8	136	7.692	7.693	-0.001	98	274549	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	91	187704	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	355371	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.357	0.006	98	398761	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	404689	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	93	587929	25.0	26.0	
$ 8 Phenol-d5	99	6.228	6.228	0.000	71	759306	25.0	25.1	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	969719	25.0	24.5	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	99	1589034	25.0	26.0	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	91	250294	25.0	25.3	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	2240441	25.0	26.9	
13 1,4-Dioxane	88	3.704	3.711	-0.006	90	312589	25.0	25.6	M
14 N-Nitrosodimethylamine	74	4.069	4.075	-0.006	85	461178	25.0	27.1	
15 Pyridine	79	4.110	4.116	-0.006	92	1498436	50.0	50.0	M
30 Benzaldehyde	77	6.210	6.210	0.000	91	1235129	50.0	46.4	
31 Phenol	94	6.240	6.240	0.000	91	862277	25.0	25.6	
32 Aniline	93	6.298	6.299	-0.001	96	1033214	25.0	25.3	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	96	735103	25.0	24.2	
36 2-Chlorophenol	128	6.410	6.410	0.000	91	637178	25.0	26.3	
37 n-Decane	57	6.422	6.422	0.000	72	536660	25.0	25.5	
39 1,3-Dichlorobenzene	146	6.551	6.552	-0.001	89	743118	25.0	25.1	
40 1,4-Dichlorobenzene	146	6.610	6.604	0.006	88	778292	25.0	24.7	
41 Benzyl alcohol	108	6.687	6.681	0.006	86	444620	25.0	26.2	
44 1,2-Dichlorobenzene	146	6.745	6.746	-0.001	88	705760	25.0	24.1	
45 2-Methylphenol	108	6.763	6.763	0.000	92	639414	25.0	25.4	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	65	413325	25.0	25.2	
47 Indene	115	6.822	6.822	0.000	90	2299972	50.0	51.0	
48 3 & 4 Methylphenol	108	6.893	6.887	0.006	93	656113	25.0	25.5	
50 N-Nitrosodi-n-propylamine	70	6.910	6.904	0.006	79	605006	25.0	24.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.922	6.916	0.006	91	1021869	25.0	25.1	
54 Hexachloroethane	117	7.045	7.046	-0.001	85	336488	25.0	24.3	
55 Nitrobenzene	77	7.075	7.075	0.000	86	908187	25.0	24.9	
57 Isophorone	82	7.275	7.269	0.006	99	1567075	25.0	25.6	
58 2,4-Dimethylphenol	107	7.351	7.346	0.005	89	845276	25.0	25.6	
59 2-Nitrophenol	139	7.351	7.351	0.000	81	368898	25.0	27.5	
63 Benzoic acid	105	7.428	7.399	0.029	50	1039567	50.0	53.7	
64 Bis(2-chloroethoxy)methane	93	7.428	7.422	0.006	98	793984	25.0	25.6	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	96	628244	25.0	26.0	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	92	721002	25.0	25.0	
69 Naphthalene	128	7.710	7.710	0.000	96	1944097	25.0	25.7	
70 4-Chloroaniline	127	7.728	7.728	0.000	92	870064	25.0	27.1	M
71 2,6-Dichlorophenol	162	7.745	7.746	-0.001	93	618213	25.0	26.4	
73 Hexachlorobutadiene	225	7.810	7.804	0.006	96	544402	25.0	23.8	
78 Caprolactam	113	8.022	8.010	0.012	83	370345	50.0	52.2	M
80 4-Chloro-3-methylphenol	107	8.116	8.110	0.006	90	688322	25.0	25.5	
82 2-Methylnaphthalene	142	8.298	8.293	0.005	89	1371267	25.0	24.9	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	91	1284835	25.0	25.4	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	97	671540	25.0	26.9	
86 1,2,4,5-Tetrachlorobenzene	216	8.445	8.440	0.005	98	875517	25.0	25.5	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	95	528945	25.0	26.3	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	91	526807	25.0	26.0	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	96	1700122	25.0	25.9	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	99	1328809	25.0	25.4	
99 2-Nitroaniline	65	8.781	8.775	0.006	73	477338	25.0	25.8	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	1439539	25.0	22.9	
103 1,3-Dinitrobenzene	168	8.945	8.946	-0.001	84	242915	25.0	26.6	
104 2,6-Dinitrotoluene	165	8.969	8.963	0.006	88	325741	25.0	24.2	
105 Acenaphthylene	152	9.081	9.081	0.000	98	1993919	25.0	26.6	
106 3-Nitroaniline	138	9.128	9.122	0.006	86	271270	25.0	24.9	
108 2,4-Dinitrophenol	184	9.210	9.204	0.006	78	481461	50.0	50.0	
109 Acenaphthene	153	9.228	9.222	0.006	95	1358706	25.0	25.5	
110 4-Nitrophenol	109		9.228				ND	ND	U
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	85	463055	25.0	26.7	
113 Dibenzofuran	168	9.369	9.369	0.000	94	1973946	25.0	24.4	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	451112	25.0	25.0	
117 Hexadecane	57	9.492	9.487	0.005	91	747815	25.0	27.1	
118 Diethyl phthalate	149	9.492	9.493	-0.001	96	1553643	25.0	25.0	
122 4-Chlorophenyl phenyl ethe	204	9.634	9.628	0.006	93	915707	25.0	23.4	
125 4-Nitroaniline	138	9.657	9.645	0.012	73	270642	25.0	24.9	
126 Fluorene	166	9.663	9.663	0.000	94	1503778	25.0	24.5	
127 4,6-Dinitro-2-methylphenol	198	9.675	9.669	0.006	84	751864	50.0	50.7	
128 N-Nitrosodiphenylamine	169	9.728	9.722	0.006	99	1049737	25.0	22.2	
129 Diphenylamine	169	9.728	9.722	0.006	95	1049737	21.3	18.9	
130 Azobenzene	77		9.769				ND	ND	U
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	68	481481	25.0	21.5	
140 Atrazine	200	10.151	10.145	0.006	93	1223490	50.0	54.9	
141 Hexachlorobenzene	284	10.151	10.151	0.000	75	580371	25.0	22.2	
142 n-Octadecane	57	10.269	10.269	0.000	80	462046	25.0	25.4	
145 Pentachlorophenol	266	10.304	10.298	0.006	89	861326	50.0	56.3	
149 Phenanthrene	178	10.498	10.492	0.006	97	2351510	25.0	24.9	
150 Anthracene	178	10.539	10.540	-0.001	97	2414075	25.0	25.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.651	10.651	0.000	97	1435497	25.0	22.0	
154 Di-n-butyl phthalate	149	10.881	10.875	0.006	100	2758428	25.0	24.5	
160 Fluoranthene	202	11.592	11.592	0.000	96	3123295	25.0	24.6	
161 Benzidine	184	11.680	11.669	0.011	98	2934818	50.0	52.7	
163 Pyrene	202	11.845	11.839	0.006	98	3166044	25.0	27.2	
171 Butyl benzyl phthalate	149	12.469	12.463	0.006	95	1265796	25.0	28.3	
176 Bis(2-ethylhexyl) phthalat	149	13.222	13.216	0.006	96	1816941	25.0	28.2	
178 3,3'-Dichlorobenzidine	252	13.257	13.251	0.006	74	1650066	50.0	54.5	
179 Benzo[a]anthracene	228	13.345	13.339	0.006	97	3182260	25.0	25.5	
180 Chrysene	228	13.404	13.398	0.006	95	3151168	25.0	25.1	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	3019100	25.0	26.1	
185 Benzo[b]fluoranthene	252	15.057	15.045	0.012	94	3102016	25.0	25.6	
186 Benzo[k]fluoranthene	252	15.098	15.086	0.012	96	3330253	25.0	26.4	
187 Benzo[a]pyrene	252	15.610	15.604	0.006	73	2896700	25.0	26.9	
191 Indeno[1,2,3-cd]pyrene	276	17.757	17.739	0.018	94	3132432	25.0	25.2	
192 Dibenz(a,h)anthracene	278	17.768	17.745	0.023	88	2756483	25.0	25.9	
193 Benzo[g,h,i]perylene	276	18.368	18.345	0.023	95	2488215	25.0	24.1	
S 219 Methyl Phenols,Total	100				0			50.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

SMLIST1 L9 W_00014 Amount Added: 1.00 Units: mL

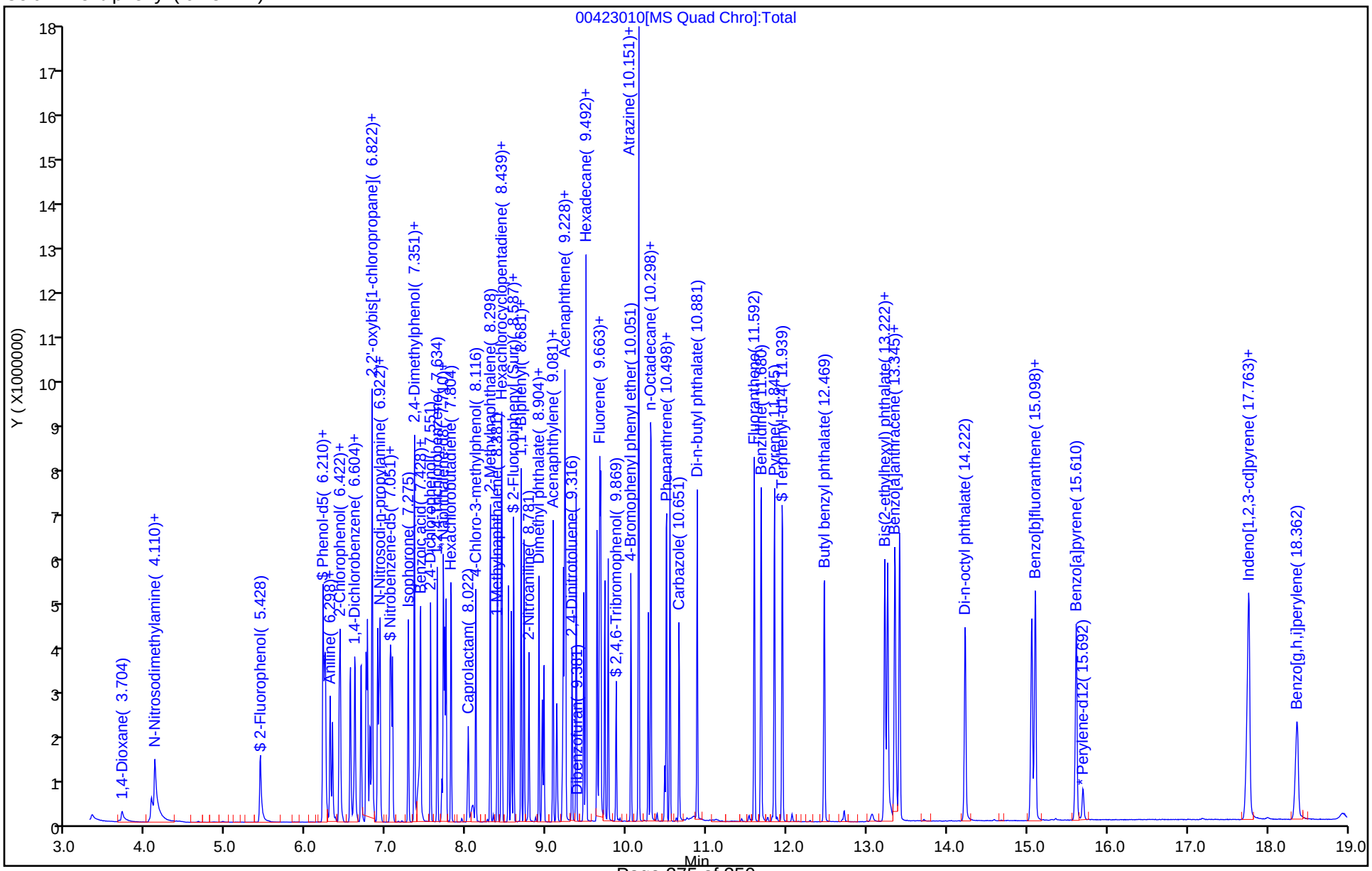
Report Date: 24-Apr-2020 13:44:44 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Injection Date:	23-Apr-2020 19:12:10	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	std9 lst1			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

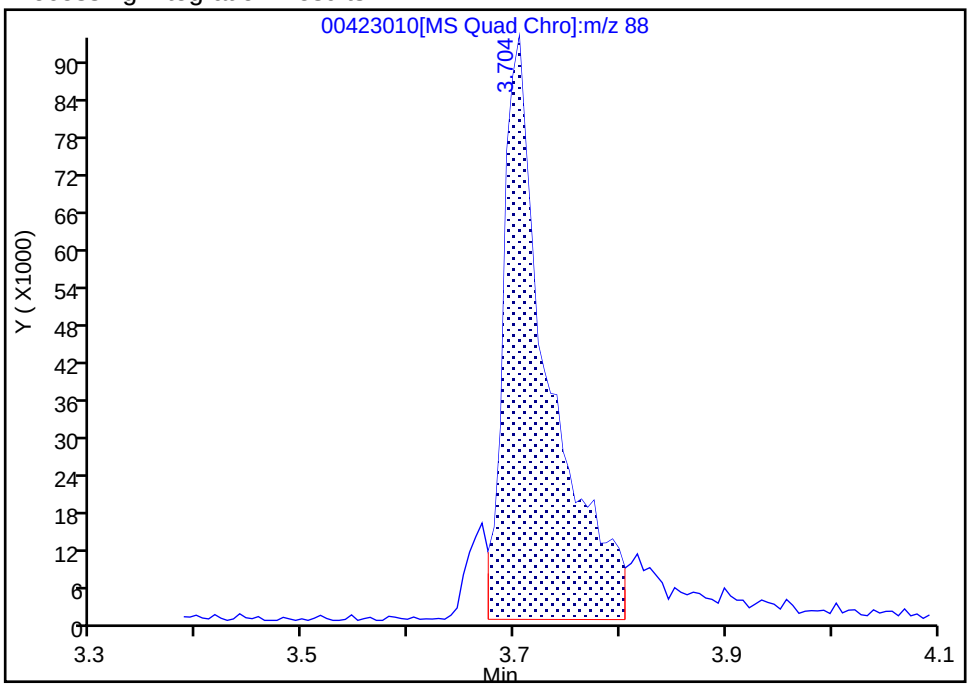
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D				
Injection Date:	23-Apr-2020 19:12:10	Instrument ID:	A4AG3		
Lims ID:	std9 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

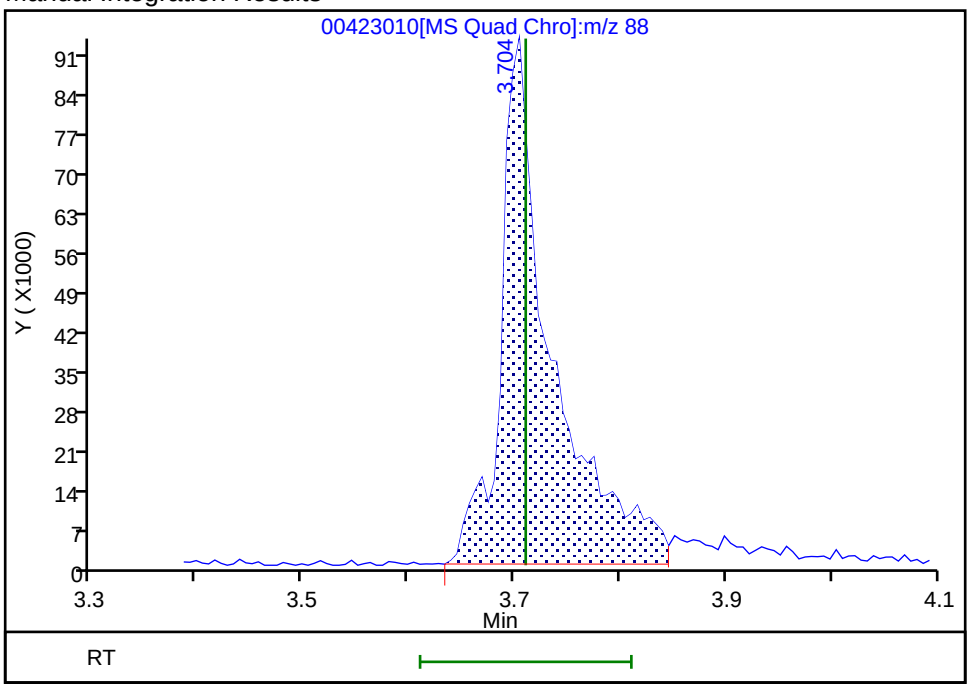
Processing Integration Results

RT: 3.70
Area: 277761
Amount: 23.081730
Amount Units: ng/ul



Manual Integration Results

RT: 3.70
Area: 312589
Amount: 25.605378
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 10:59:44

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

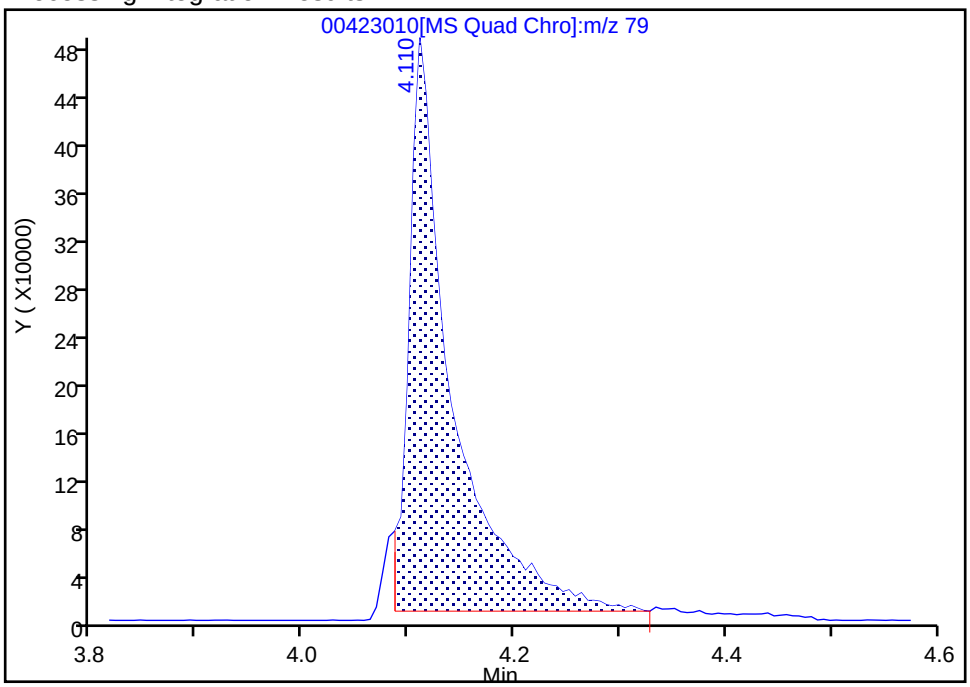
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D				
Injection Date:	23-Apr-2020 19:12:10	Instrument ID:	A4AG3		
Lims ID:	std9 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

15 Pyridine, CAS: 110-86-1

Signal: 1

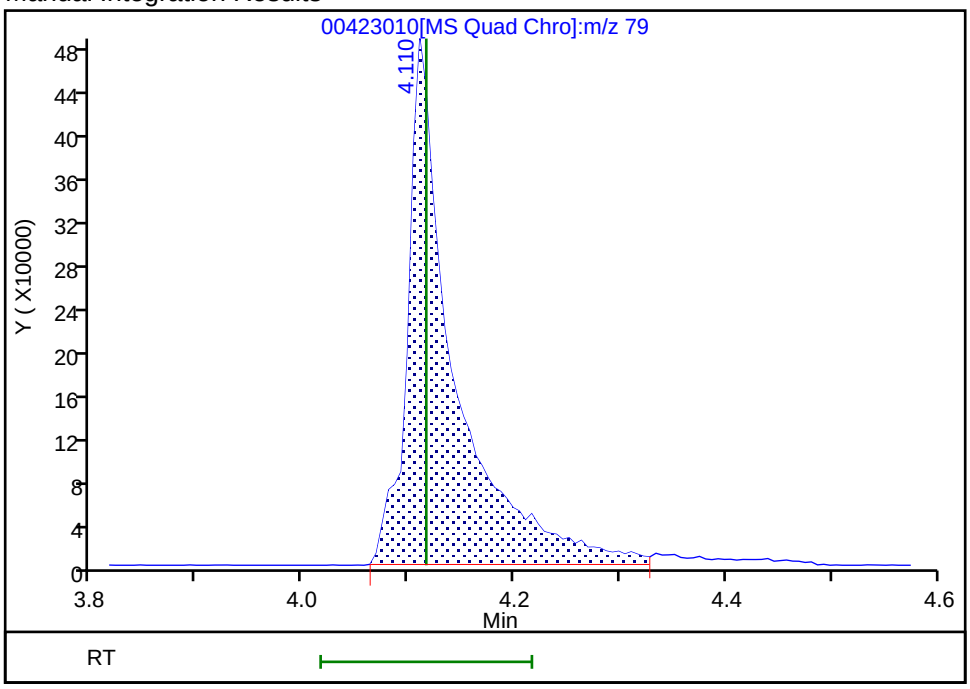
Processing Integration Results

RT: 4.11
Area: 1352357
Amount: 46.652937
Amount Units: ng/ul



Manual Integration Results

RT: 4.11
Area: 1498436
Amount: 50.038340
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:00:03

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

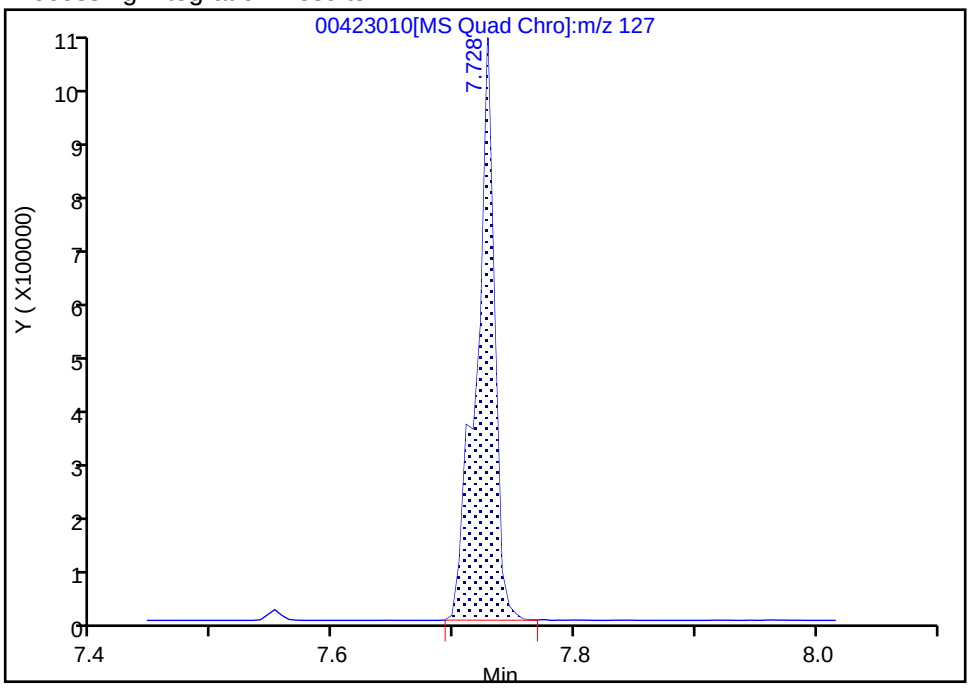
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D				
Injection Date:	23-Apr-2020 19:12:10	Instrument ID:	A4AG3		
Lims ID:	std9 lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

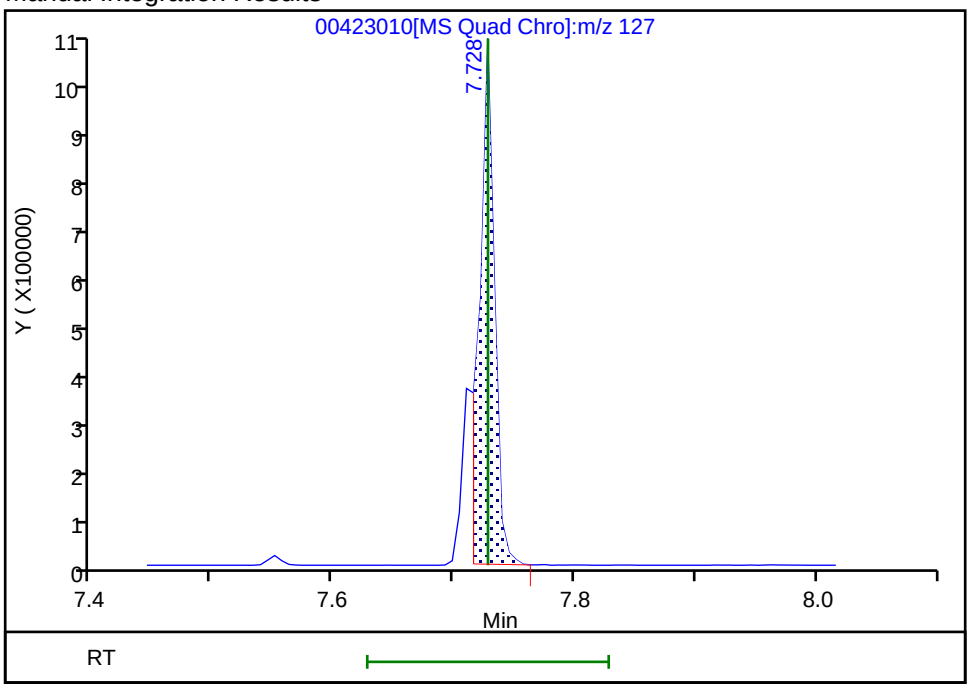
Processing Integration Results

RT: 7.73
Area: 1031520
Amount: 30.295231
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 870064
Amount: 27.059084
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:00:38

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

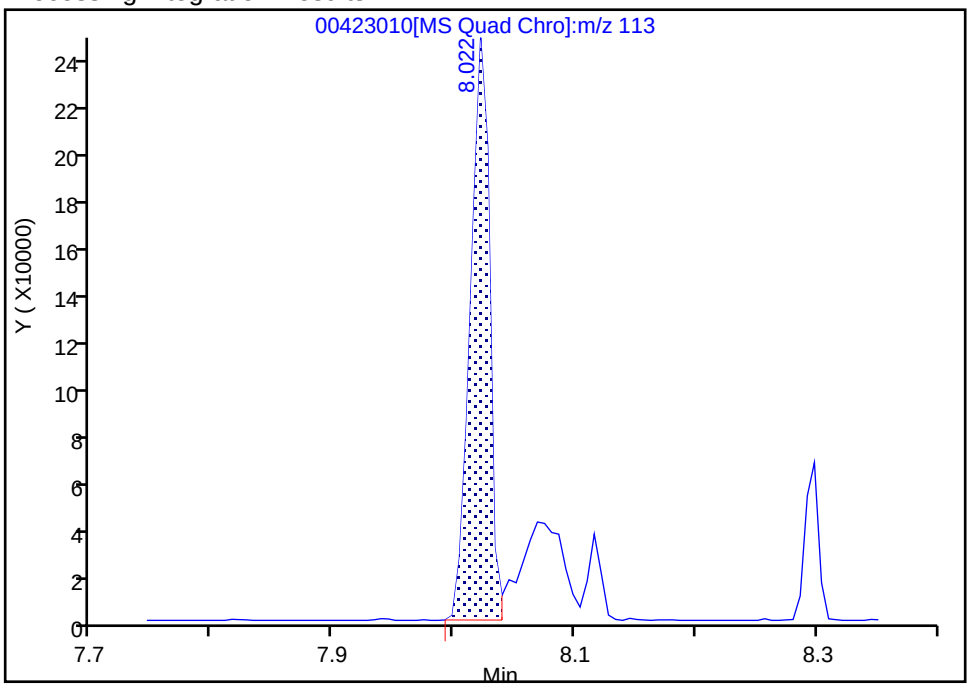
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D
Injection Date: 23-Apr-2020 19:12:10 Instrument ID: A4AG3
Lims ID: std9 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

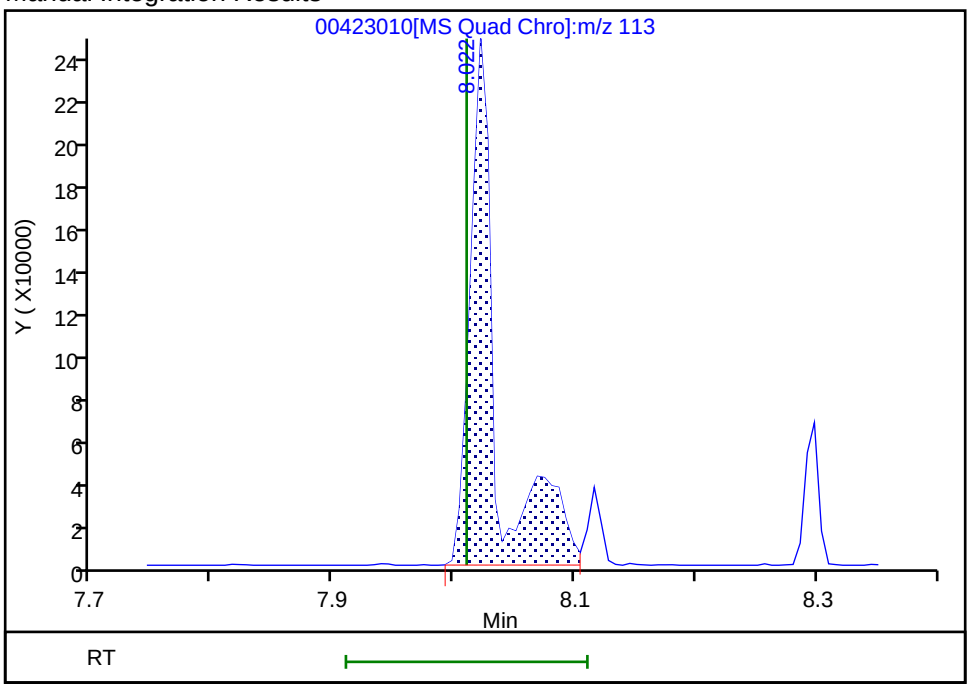
Processing Integration Results

RT: 8.02
Area: 270093
Amount: 40.239296
Amount Units: ng/ul



Manual Integration Results

RT: 8.02
Area: 370345
Amount: 52.177137
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:01:14
Audit Action: Manually Integrated Audit Reason: Poor chromatography

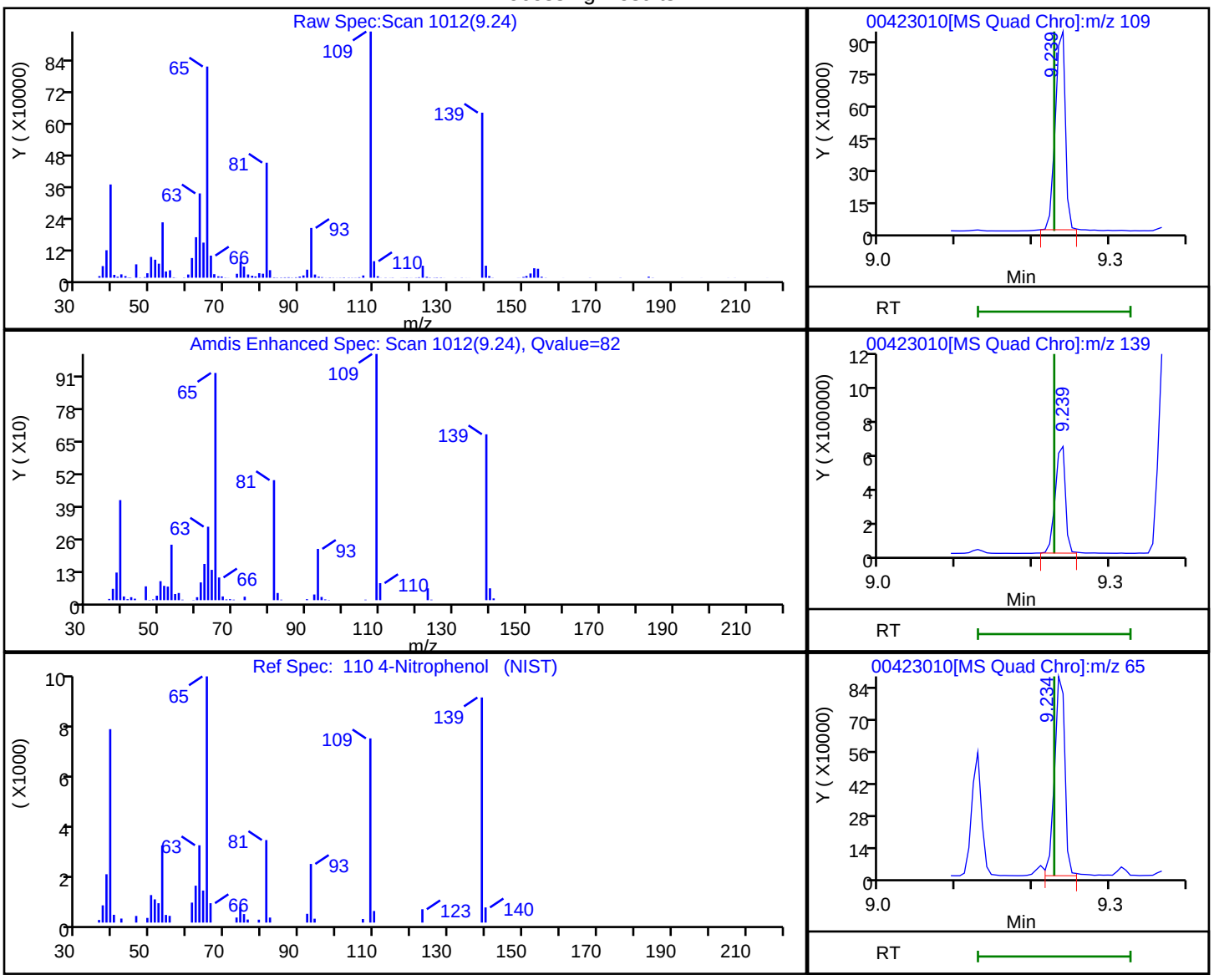
User Disabled Compound Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D
Injection Date: 23-Apr-2020 19:12:10 Instrument ID: A4AG3
Lims ID: std9 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 4-Nitrophenol, CAS: 100-02-7

Processing Results



RT	Mass	Response	Amount
9.24	109.00	856310	56.209876
9.24	139.00	586300	
9.23	65.00	831806	

Reviewer: ulmanm, 24-Apr-2020 11:16:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

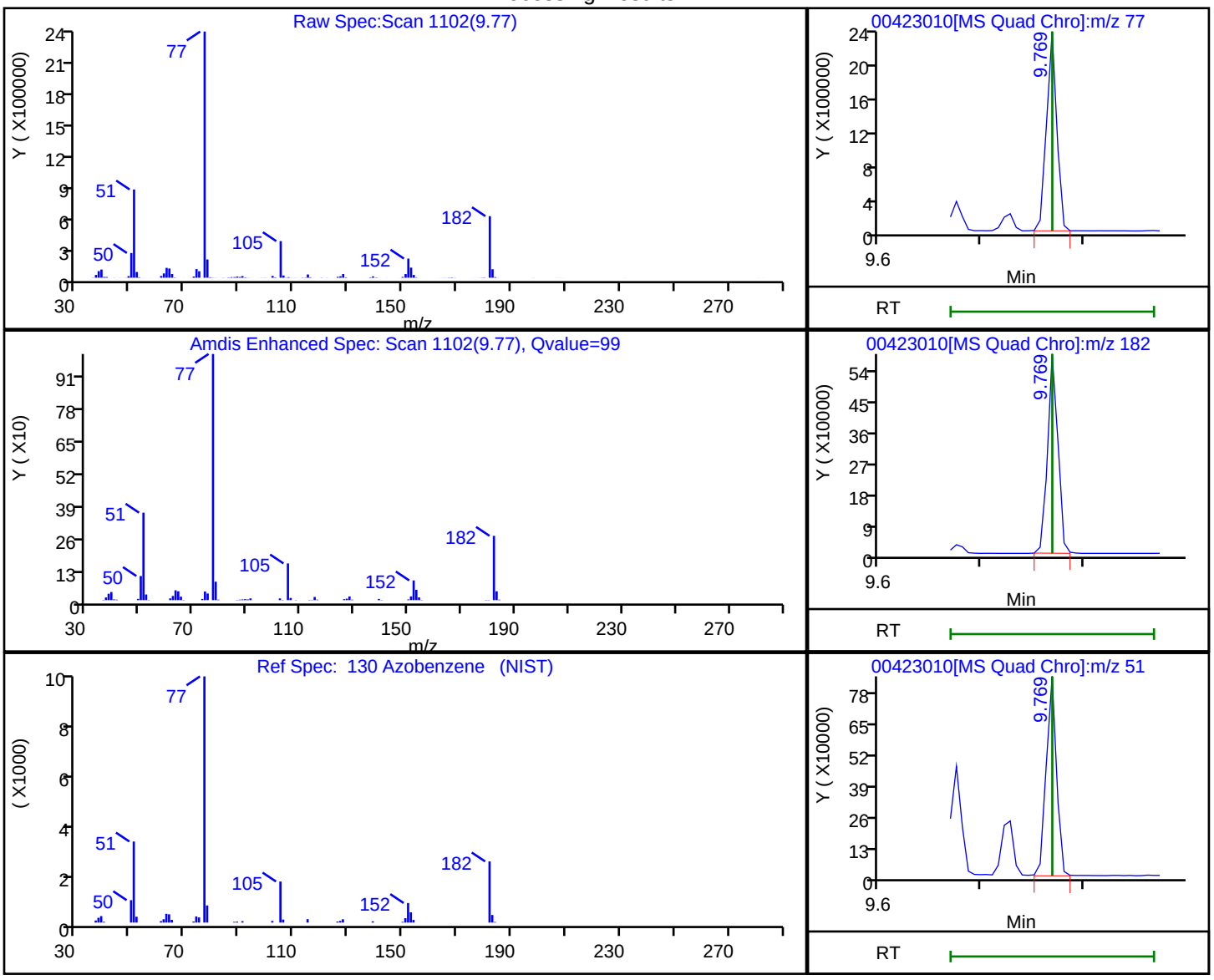
User Disabled Compound Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D
Injection Date: 23-Apr-2020 19:12:10 Instrument ID: A4AG3
Lims ID: std9 lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 Azobenzene, CAS: 103-33-3

Processing Results



RT	Mass	Response	Amount
9.77	77.00	1649745	20.747150
9.77	182.00	415711	
9.77	51.00	594140	

Reviewer: ulmanm, 24-Apr-2020 11:20:06
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: ICV 240-431934/11 Calibration Date: 04/23/2020 19:35

Instrument ID: A4AG3 Calib Start Date: 01/16/2019 13:15

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 01/16/2019 16:23

Lab File ID: 00423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.8774	0.9696		10.6	10.0	10.5	30.0

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D
Lims ID: icv lst1
Client ID:
Sample Type: ICV
Inject. Date: 23-Apr-2020 19:35:35 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-011
Misc. Info.: ICV LST1
Operator ID: Instrument ID: A4AG3
Sublist:

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:41 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 24-Apr-2020 11:41:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	94	77933	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.693	0.000	98	275823	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	91	192106	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	309419	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.357	0.006	97	400276	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	397797	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	92	261061	10.0	12.1	
$ 8 Phenol-d5	99	6.222	6.228	-0.006	73	344627	10.0	12.0	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	428269	10.0	10.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	100	705326	10.0	11.3	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	92	97862	10.0	9.66	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	964929	10.0	11.6	
13 1,4-Dioxane	88	3.693	3.711	-0.017	86	123593	10.0	10.7	M
14 N-Nitrosodimethylamine	74	4.063	4.075	-0.012	88	161225	10.0	9.98	
15 Pyridine	79	4.110	4.116	-0.006	92	555478	20.0	19.5	
30 Benzaldehyde	77	6.210	6.210	0.000	90	506728	20.0	20.1	
31 Phenol	94	6.234	6.240	-0.006	91	325082	10.0	10.2	
32 Aniline	93	6.299	6.299	0.000	95	369348	10.0	9.51	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	94	297657	10.0	10.3	
36 2-Chlorophenol	128	6.410	6.410	0.000	92	238590	10.0	10.4	
37 n-Decane	57	6.422	6.422	0.000	77	197328	10.0	9.86	
39 1,3-Dichlorobenzene	146	6.552	6.552	0.000	91	281862	10.0	10.0	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	86	296693	10.0	9.93	
41 Benzyl alcohol	108	6.681	6.681	0.000	85	172619	10.0	10.7	
44 1,2-Dichlorobenzene	146	6.746	6.746	0.000	87	268606	10.0	9.67	
45 2-Methylphenol	108	6.763	6.763	0.000	90	243339	10.0	10.2	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	66	157071	10.0	10.1	
47 Indene	115	6.822	6.822	0.000	89	846878	20.0	19.8	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	92	248976	10.0	10.2	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	74	232996	10.0	10.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	89	383258	10.0	9.93	
54 Hexachloroethane	117	7.046	7.046	0.000	83	122494	10.0	9.31	
55 Nitrobenzene	77	7.075	7.075	0.000	86	343889	10.0	9.39	
57 Isophorone	82	7.269	7.269	0.000	98	586458	10.0	9.54	
58 2,4-Dimethylphenol	107	7.346	7.346	0.000	95	308115	10.0	9.28	
59 2-Nitrophenol	139	7.351	7.351	0.000	84	130687	10.0	9.70	
63 Benzoic acid	105	7.399	7.399	0.000	88	359493	20.0	19.2	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	98	291926	10.0	9.38	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	95	225747	10.0	9.31	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	278037	10.0	9.58	
69 Naphthalene	128	7.710	7.710	0.000	95	717485	10.0	9.45	
70 4-Chloroaniline	127	7.728	7.728	0.000	92	307955	10.0	9.53	M
71 2,6-Dichlorophenol	162	7.746	7.746	0.000	92	228619	10.0	9.70	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	95	213632	10.0	9.28	
78 Caprolactam	113	8.004	8.010	-0.006	84	130533	20.0	18.4	M
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	89	265549	10.0	9.80	
82 2-Methylnaphthalene	142	8.298	8.293	0.005	90	503385	10.0	9.09	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	90	473565	10.0	9.34	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	97	247764	10.0	9.71	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.440	0.000	98	336188	10.0	9.56	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	204639	10.0	9.95	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	91	199160	10.0	9.59	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	96	628572	10.0	9.37	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	511936	10.0	9.58	
99 2-Nitroaniline	65	8.775	8.775	0.000	73	197482	10.0	10.4	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	604304	10.0	9.40	
103 1,3-Dinitrobenzene	168	8.945	8.946	-0.001	85	92155	10.0	9.86	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	83	133397	10.0	9.68	
105 Acenaphthylene	152	9.081	9.081	0.000	98	784488	10.0	10.2	
106 3-Nitroaniline	138	9.122	9.122	0.000	87	110441	10.0	9.91	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	80	157494	20.0	19.5	
109 Acenaphthene	153	9.228	9.222	0.006	94	500746	10.0	9.18	
110 4-Nitrophenol	109	9.228	9.228	0.000	84	288804	20.0	18.9	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	84	153453	10.0	8.65	
113 Dibenzofuran	168	9.369	9.369	0.000	94	767340	10.0	9.26	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	159792	10.0	8.66	
117 Hexadecane	57	9.487	9.487	0.000	83	270012	10.0	9.57	
118 Diethyl phthalate	149	9.493	9.493	0.000	95	508772	10.0	8.01	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	96	366501	10.0	9.16	
125 4-Nitroaniline	138	9.645	9.645	0.000	74	103016	10.0	9.26	
126 Fluorene	166	9.663	9.663	0.000	94	615673	10.0	9.82	
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	83	235428	20.0	18.8	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	99	397347	10.0	9.66	
129 Diphenylamine	169	9.722	9.722	0.000	95	397347	8.54	8.21	
130 Azobenzene	77	9.769	9.769	0.000	99	750840	10.0	10.6	
131 1,2-Diphenylhydrazine	77	9.769	9.770	-0.001	93	750016	10.0	10.6	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	67	212381	10.0	10.9	
140 Atrazine	200	10.145	10.145	0.000	94	419312	20.0	21.6	
141 Hexachlorobenzene	284	10.151	10.151	0.000	91	236724	10.0	10.4	
142 n-Octadecane	57	10.269	10.269	0.000	81	198397	10.0	11.2	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	290469	20.0	21.8	
149 Phenanthrene	178	10.492	10.492	0.000	97	772466	10.0	9.38	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
150 Anthracene	178	10.540	10.540	0.000	97	784584	10.0	9.55	
152 Carbazole	167	10.651	10.651	0.000	97	547095	10.0	9.63	
154 Di-n-butyl phthalate	149	10.881	10.875	0.006	99	965096	10.0	10.0	
160 Fluoranthene	202	11.592	11.592	0.000	96	1098987	10.0	9.98	
161 Benzidine	184	11.669	11.669	0.000	99	986742	20.0	18.2	
163 Pyrene	202	11.839	11.839	0.000	98	1142928	10.0	9.78	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	94	434047	10.0	9.66	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.216	0.000	95	627525	10.0	9.69	
178 3,3'-Dichlorobenzidine	252	13.251	13.251	0.000	73	519714	20.0	17.1	M
179 Benzo[a]anthracene	228	13.339	13.339	0.000	96	1188846	10.0	9.49	
180 Chrysene	228	13.398	13.398	0.000	95	1138555	10.0	9.05	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	1037686	10.0	9.27	
185 Benzo[b]fluoranthene	252	15.045	15.045	0.000	94	1169153	10.0	9.83	
186 Benzo[k]fluoranthene	252	15.092	15.086	0.006	96	1197615	10.0	9.65	
187 Benzo[a]pyrene	252	15.604	15.604	0.000	74	1089143	10.0	10.3	
191 Indeno[1,2,3-cd]pyrene	276	17.739	17.739	0.000	96	1158612	10.0	9.50	
192 Dibenz(a,h)anthracene	278	17.751	17.745	0.006	87	1008055	10.0	9.63	
193 Benzo[g,h,i]perylene	276	18.351	18.345	0.006	95	908164	10.0	8.94	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 SS W_00015 Amount Added: 1.00 Units: mL

Report Date: 24-Apr-2020 13:44:50 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D

Injection Date: 23-Apr-2020 19:35:35 Instrument ID: A4AG3 Operator ID:

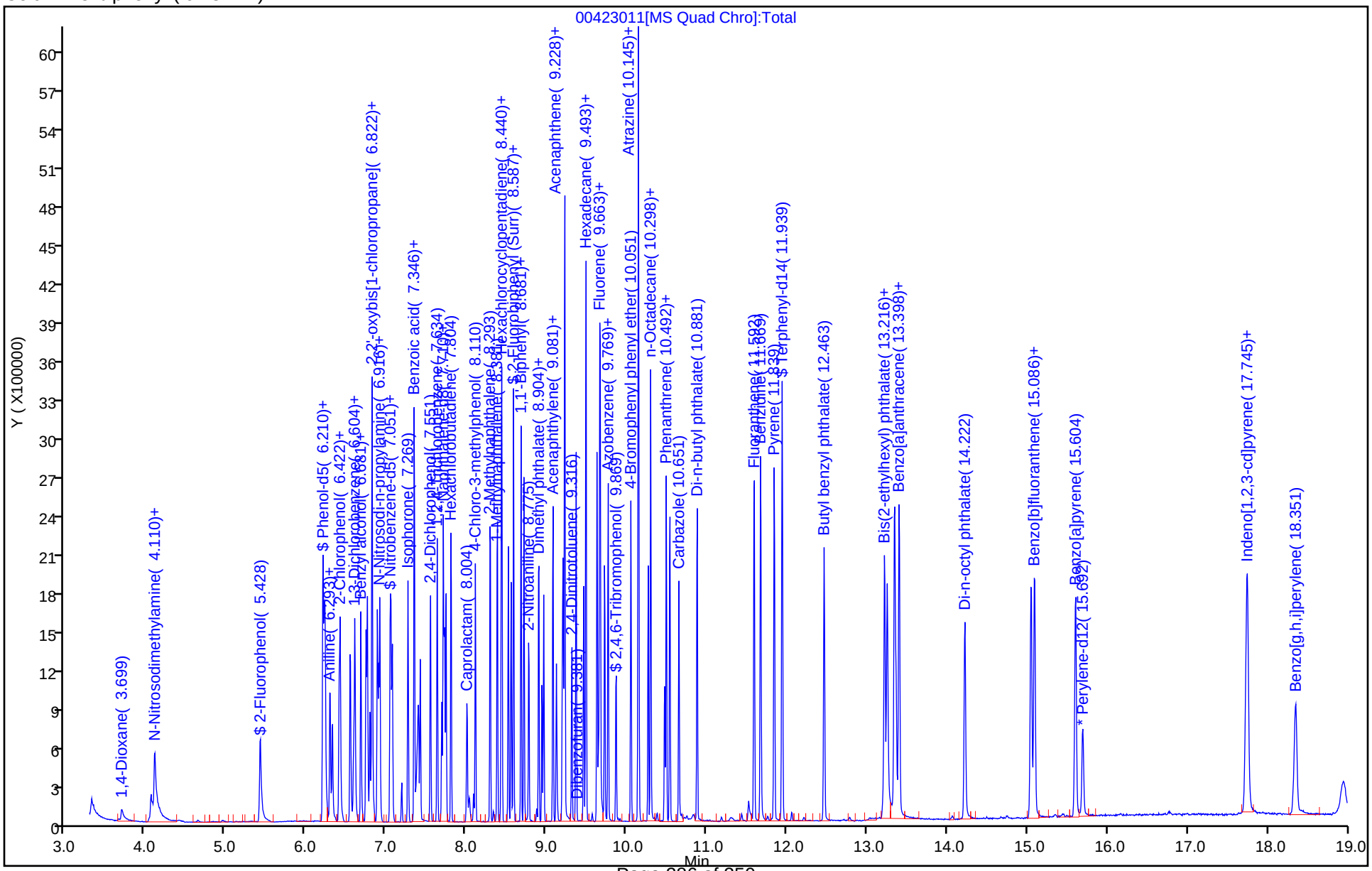
Lims ID: icv lst1 Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: ICV 240-431934/11 Calibration Date: 04/23/2020 19:35

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5950	0.6344		10.7	10.0	6.6	30.0
N-Nitrosodimethylamine	Ave	0.8288	0.8275		9.98	10.0	-0.2	30.0
Pyridine	Lin1		1.426		19.5	20.0	-2.4	30.0
Benzaldehyde	Ave	1.297	1.300	0.0100	20.1	20.0	0.3	30.0
Phenol	Ave	1.644	1.669	0.8000	10.2	10.0	1.5	30.0
Aniline	Ave	1.993	1.896		9.51	10.0	-4.9	30.0
Bis(2-chloroethyl)ether	Ave	1.479	1.528	0.7000	10.3	10.0	3.3	30.0
2-Chlorophenol	Ave	1.182	1.225	0.8000	10.4	10.0	3.6	30.0
n-Decane	Ave	1.027	1.013		9.86	10.0	-1.4	30.0
1,3-Dichlorobenzene	Ave	1.443	1.447		10.0	10.0	0.2	30.0
1,4-Dichlorobenzene	Ave	1.533	1.523		9.93	10.0	-0.7	30.0
Benzyl alcohol	Ave	0.8268	0.8860		10.7	10.0	7.2	30.0
1,2-Dichlorobenzene	Ave	1.426	1.379		9.67	10.0	-3.3	30.0
2-Methylphenol	Ave	1.225	1.249	0.7000	10.2	10.0	1.9	30.0
bis (2-chloroisopropyl) ether	Ave	0.7997	0.8062		10.1	10.0	0.8	30.0
Indene	Ave	2.197	2.173		19.8	20.0	-1.1	30.0
3 & 4 Methylphenol	Ave	1.255	1.278		10.2	10.0	1.8	30.0
N-Nitrosodi-n-propylamine	Ave	1.192	1.196	0.5000	10.0	10.0	0.3	30.0
Acetophenone	Ave	1.981	1.967	0.0100	9.93	10.0	-0.7	30.0
Hexachloroethane	Ave	0.6750	0.6287	0.3000	9.31	10.0	-6.9	30.0
Nitrobenzene	Ave	0.5310	0.4987	0.2000	9.39	10.0	-6.1	30.0
Isophorone	Ave	0.8915	0.8505	0.4000	9.54	10.0	-4.6	30.0
2,4-Dimethylphenol	Ave	0.4817	0.4468	0.2000	9.28	10.0	-7.2	30.0
2-Nitrophenol	Ave	0.1954	0.1895	0.1000	9.70	10.0	-3.0	30.0
Benzoic acid	Lin1		0.2607		19.2	20.0	-3.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.4513	0.4234	0.3000	9.38	10.0	-6.2	30.0
2,4-Dichlorophenol	Ave	0.3517	0.3274	0.2000	9.31	10.0	-6.9	30.0
1,2,4-Trichlorobenzene	Ave	0.4207	0.4032		9.58	10.0	-4.2	30.0
Naphthalene	Ave	1.101	1.041	0.7000	9.45	10.0	-5.5	30.0
4-Chloroaniline	Ave	0.4685	0.4466	0.0100	9.53	10.0	-4.7	30.0
2,6-Dichlorophenol	Ave	0.3418	0.3315		9.70	10.0	-3.0	30.0
Hexachlorobutadiene	Ave	0.3338	0.3098	0.0100	9.28	10.0	-7.2	30.0
Caprolactam	Lin1		0.0947	0.0100	18.4	20.0	-8.2	30.0
4-Chloro-3-methylphenol	Ave	0.3931	0.3851	0.2000	9.80	10.0	-2.0	30.0
2-Methylnaphthalene	Ave	0.8030	0.7300	0.4000	9.09	10.0	-9.1	30.0
1-Methylnaphthalene	Ave	0.7356	0.6868		9.34	10.0	-6.6	30.0
Hexachlorocyclopentadiene	Ave	0.5313	0.5159	0.0500	9.71	10.0	-2.9	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.7321	0.7000	0.0100	9.56	10.0	-4.4	30.0
2,4,6-Trichlorophenol	Ave	0.4284	0.4261	0.2000	9.95	10.0	-0.5	30.0
2,4,5-Trichlorophenol	Ave	0.4325	0.4147	0.2000	9.59	10.0	-4.1	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: ICV 240-431934/11 Calibration Date: 04/23/2020 19:35

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.397	1.309	0.0100	9.37	10.0	-6.3	30.0
2-Chloronaphthalene	Ave	1.113	1.066	0.8000	9.58	10.0	-4.2	30.0
2-Nitroaniline	Ave	0.3940	0.4112	0.0100	10.4	10.0	4.4	30.0
Dimethyl phthalate	Ave	1.339	1.258	0.0100	9.40	10.0	-6.0	30.0
1,3-Dinitrobenzene	Ave	0.1947	0.1919		9.86	10.0	-1.4	30.0
2,6-Dinitrotoluene	Ave	0.2868	0.2778		9.68	10.0	-3.2	30.0
Acenaphthylene	Ave	1.596	1.633	0.9000	10.2	10.0	2.4	30.0
3-Nitroaniline	Ave	0.2320	0.2300	0.0100	9.91	10.0	-0.9	30.0
2,4-Dinitrophenol	Qua		0.1640	0.0100	19.5	20.0	-2.6	30.0
4-Nitrophenol	Ave	0.3179	0.3007		18.9	20.0	-5.4	30.0
Acenaphthene	Ave	1.135	1.043	0.9000	9.18	10.0	-8.2	30.0
2,4-Dinitrotoluene	Ave	0.3694	0.3195	0.2000	8.65	10.0	-13.5	30.0
Dibenzofuran	Ave	1.725	1.598	0.8000	9.26	10.0	-7.4	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.3842	0.3327	0.0100	8.66	10.0	-13.4	30.0
Hexadecane	Ave	0.5873	0.5622		9.57	10.0	-4.3	30.0
Diethyl phthalate	Ave	1.323	1.059	0.0100	8.01	10.0	-19.9	30.0
4-Chlorophenyl phenyl ether	Ave	0.8335	0.7631	0.4000	9.16	10.0	-8.4	30.0
4-Nitroaniline	Ave	0.2316	0.2145	0.0100	9.26	10.0	-7.4	30.0
Fluorene	Ave	1.306	1.282	0.9000	9.82	10.0	-1.8	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1522	0.0100	18.8	20.0	-5.9	30.0
Diphenylamine	Ave	0.6254	0.6015		8.21	8.54	-3.8	30.0
N-Nitrosodiphenylamine	Ave	0.5316	0.5137	0.0100	9.66	10.0	-3.4	30.0
Azobenzene	Ave	0.9168	0.9706		10.6	10.0	5.9	30.0
4-Bromophenyl phenyl ether	Ave	0.2522	0.2746	0.1000	10.9	10.0	8.9	30.0
Atrazine	Ave	0.2508	0.2710	0.0100	21.6	20.0	8.1	30.0
Hexachlorobenzene	Ave	0.2940	0.3060	0.1000	10.4	10.0	4.1	30.0
n-Octadecane	Qua		0.2565		11.2	10.0	12.5	30.0
Pentachlorophenol	Ave	0.1723	0.1878	0.0500	21.8	20.0	9.0	30.0
Phenanthrene	Ave	1.065	0.999	0.7000	9.38	10.0	-6.2	30.0
Anthracene	Ave	1.062	1.014	0.7000	9.55	10.0	-4.5	30.0
Carbazole	Ave	0.7347	0.7073	0.0100	9.63	10.0	-3.7	30.0
Di-n-butyl phthalate	Lin1		1.248	0.0100	10.0	10.0	-0.0	30.0
Fluoranthene	Lin1		1.421	0.6000	9.98	10.0	-0.2	30.0
Benzidine	Lin1		0.4930		18.2	20.0	-8.8	30.0
Pyrene	Ave	1.168	1.142	0.6000	9.78	10.0	-2.2	30.0
Butyl benzyl phthalate	Ave	0.4491	0.4338	0.0100	9.66	10.0	-3.4	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.6473	0.6271	0.0100	9.69	10.0	-3.1	30.0
3,3'-Dichlorobenzidine	Ave	0.3036	0.2597	0.0100	17.1	20.0	-14.5	30.0
Benzo[a]anthracene	Ave	1.252	1.188	0.8000	9.49	10.0	-5.1	30.0
Chrysene	Ave	1.257	1.138	0.7000	9.05	10.0	-9.5	30.0
Di-n-octyl phthalate	Lin1		1.043	0.0100	9.27	10.0	-7.3	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: ICV 240-431934/11 Calibration Date: 04/23/2020 19:35

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[b]fluoranthene	Ave	1.196	1.176	0.7000	9.83	10.0	-1.7	30.0
Benzo[k]fluoranthene	Ave	1.248	1.204	0.7000	9.65	10.0	-3.5	30.0
Benzo[a]pyrene	Ave	1.064	1.095	0.7000	10.3	10.0	2.9	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.227	1.165	0.5000	9.50	10.0	-5.0	30.0
Dibenz(a,h)anthracene	Ave	1.052	1.014	0.4000	9.63	10.0	-3.7	30.0
Benzo[g,h,i]perylene	Ave	1.021	0.9132	0.5000	8.94	10.0	-10.6	30.0
2-Fluorophenol (Surr)	Ave	1.103	1.340		12.1	10.0	21.5	30.0
Phenol-d5 (Surr)	Ave	1.472	1.769		12.0	10.0	20.2	30.0
Nitrobenzene-d5 (Surr)	Ave	0.5757	0.6211		10.8	10.0	7.9	30.0
2-Fluorobiphenyl (Surr)	Ave	1.303	1.469		11.3	10.0	12.7	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.2109	0.2038		9.66	10.0	-3.4	30.0
Terphenyl-d14 (Surr)	Ave	0.8344	0.9643		11.6	10.0	15.6	30.0

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D
Lims ID: icv lst1
Client ID:
Sample Type: ICV
Inject. Date: 23-Apr-2020 19:35:35 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-011
Misc. Info.: ICV LST1
Operator ID: Instrument ID: A4AG3
Sublist:

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 13:44:41 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 24-Apr-2020 11:41:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.593	6.593	0.000	94	77933	4.00	4.00	
* 2 Naphthalene-d8	136	7.693	7.693	0.000	98	275823	4.00	4.00	
* 3 Acenaphthene-d10	164	9.198	9.198	0.000	91	192106	4.00	4.00	
* 4 Phenanthrene-d10	188	10.475	10.475	0.000	97	309419	4.00	4.00	
* 5 Chrysene-d12	240	13.363	13.357	0.006	97	400276	4.00	4.00	
* 6 Perylene-d12	264	15.692	15.692	0.000	98	397797	4.00	4.00	
$ 7 2-Fluorophenol	112	5.428	5.428	0.000	92	261061	10.0	12.1	
$ 8 Phenol-d5	99	6.222	6.228	-0.006	73	344627	10.0	12.0	
$ 9 Nitrobenzene-d5	82	7.057	7.057	0.000	90	428269	10.0	10.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.587	8.587	0.000	100	705326	10.0	11.3	
$ 11 2,4,6-Tribromophenol	330	9.869	9.869	0.000	92	97862	10.0	9.66	
$ 12 Terphenyl-d14	244	11.939	11.939	0.000	99	964929	10.0	11.6	
13 1,4-Dioxane	88	3.693	3.711	-0.017	86	123593	10.0	10.7	M
14 N-Nitrosodimethylamine	74	4.063	4.075	-0.012	88	161225	10.0	9.98	
15 Pyridine	79	4.110	4.116	-0.006	92	555478	20.0	19.5	
30 Benzaldehyde	77	6.210	6.210	0.000	90	506728	20.0	20.1	
31 Phenol	94	6.234	6.240	-0.006	91	325082	10.0	10.2	
32 Aniline	93	6.299	6.299	0.000	95	369348	10.0	9.51	
33 Bis(2-chloroethyl)ether	93	6.328	6.328	0.000	94	297657	10.0	10.3	
36 2-Chlorophenol	128	6.410	6.410	0.000	92	238590	10.0	10.4	
37 n-Decane	57	6.422	6.422	0.000	77	197328	10.0	9.86	
39 1,3-Dichlorobenzene	146	6.552	6.552	0.000	91	281862	10.0	10.0	
40 1,4-Dichlorobenzene	146	6.604	6.604	0.000	86	296693	10.0	9.93	
41 Benzyl alcohol	108	6.681	6.681	0.000	85	172619	10.0	10.7	
44 1,2-Dichlorobenzene	146	6.746	6.746	0.000	87	268606	10.0	9.67	
45 2-Methylphenol	108	6.763	6.763	0.000	90	243339	10.0	10.2	
46 2,2'-oxybis[1-chloropropan	45	6.793	6.793	0.000	66	157071	10.0	10.1	
47 Indene	115	6.822	6.822	0.000	89	846878	20.0	19.8	
48 3 & 4 Methylphenol	108	6.887	6.887	0.000	92	248976	10.0	10.2	
50 N-Nitrosodi-n-propylamine	70	6.904	6.904	0.000	74	232996	10.0	10.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.916	6.916	0.000	89	383258	10.0	9.93	
54 Hexachloroethane	117	7.046	7.046	0.000	83	122494	10.0	9.31	
55 Nitrobenzene	77	7.075	7.075	0.000	86	343889	10.0	9.39	
57 Isophorone	82	7.269	7.269	0.000	98	586458	10.0	9.54	
58 2,4-Dimethylphenol	107	7.346	7.346	0.000	95	308115	10.0	9.28	
59 2-Nitrophenol	139	7.351	7.351	0.000	84	130687	10.0	9.70	
63 Benzoic acid	105	7.399	7.399	0.000	88	359493	20.0	19.2	
64 Bis(2-chloroethoxy)methane	93	7.422	7.422	0.000	98	291926	10.0	9.38	
66 2,4-Dichlorophenol	162	7.551	7.551	0.000	95	225747	10.0	9.31	
68 1,2,4-Trichlorobenzene	180	7.634	7.634	0.000	91	278037	10.0	9.58	
69 Naphthalene	128	7.710	7.710	0.000	95	717485	10.0	9.45	
70 4-Chloroaniline	127	7.728	7.728	0.000	92	307955	10.0	9.53	M
71 2,6-Dichlorophenol	162	7.746	7.746	0.000	92	228619	10.0	9.70	
73 Hexachlorobutadiene	225	7.804	7.804	0.000	95	213632	10.0	9.28	
78 Caprolactam	113	8.004	8.010	-0.006	84	130533	20.0	18.4	M
80 4-Chloro-3-methylphenol	107	8.110	8.110	0.000	89	265549	10.0	9.80	
82 2-Methylnaphthalene	142	8.298	8.293	0.005	90	503385	10.0	9.09	
83 1-Methylnaphthalene	142	8.387	8.387	0.000	90	473565	10.0	9.34	
85 Hexachlorocyclopentadiene	237	8.434	8.434	0.000	97	247764	10.0	9.71	
86 1,2,4,5-Tetrachlorobenzene	216	8.440	8.440	0.000	98	336188	10.0	9.56	
88 2,4,6-Trichlorophenol	196	8.522	8.522	0.000	94	204639	10.0	9.95	
89 2,4,5-Trichlorophenol	196	8.557	8.557	0.000	91	199160	10.0	9.59	
92 1,1'-Biphenyl	154	8.681	8.681	0.000	96	628572	10.0	9.37	
96 2-Chloronaphthalene	162	8.716	8.716	0.000	98	511936	10.0	9.58	
99 2-Nitroaniline	65	8.775	8.775	0.000	73	197482	10.0	10.4	
102 Dimethyl phthalate	163	8.904	8.904	0.000	96	604304	10.0	9.40	
103 1,3-Dinitrobenzene	168	8.945	8.946	-0.001	85	92155	10.0	9.86	
104 2,6-Dinitrotoluene	165	8.963	8.963	0.000	83	133397	10.0	9.68	
105 Acenaphthylene	152	9.081	9.081	0.000	98	784488	10.0	10.2	
106 3-Nitroaniline	138	9.122	9.122	0.000	87	110441	10.0	9.91	
108 2,4-Dinitrophenol	184	9.204	9.204	0.000	80	157494	20.0	19.5	
109 Acenaphthene	153	9.228	9.222	0.006	94	500746	10.0	9.18	
110 4-Nitrophenol	109	9.228	9.228	0.000	84	288804	20.0	18.9	
111 2,4-Dinitrotoluene	165	9.316	9.316	0.000	84	153453	10.0	8.65	
113 Dibenzofuran	168	9.369	9.369	0.000	94	767340	10.0	9.26	
116 2,3,4,6-Tetrachlorophenol	232	9.463	9.463	0.000	74	159792	10.0	8.66	
117 Hexadecane	57	9.487	9.487	0.000	83	270012	10.0	9.57	
118 Diethyl phthalate	149	9.493	9.493	0.000	95	508772	10.0	8.01	
122 4-Chlorophenyl phenyl ethe	204	9.628	9.628	0.000	96	366501	10.0	9.16	
125 4-Nitroaniline	138	9.645	9.645	0.000	74	103016	10.0	9.26	
126 Fluorene	166	9.663	9.663	0.000	94	615673	10.0	9.82	
127 4,6-Dinitro-2-methylphenol	198	9.669	9.669	0.000	83	235428	20.0	18.8	
128 N-Nitrosodiphenylamine	169	9.722	9.722	0.000	99	397347	10.0	9.66	
129 Diphenylamine	169	9.722	9.722	0.000	95	397347	8.54	8.21	
130 Azobenzene	77	9.769	9.769	0.000	99	750840	10.0	10.6	
131 1,2-Diphenylhydrazine	77	9.769	9.770	-0.001	93	750016	10.0	10.6	
138 4-Bromophenyl phenyl ether	248	10.051	10.051	0.000	67	212381	10.0	10.9	
140 Atrazine	200	10.145	10.145	0.000	94	419312	20.0	21.6	
141 Hexachlorobenzene	284	10.151	10.151	0.000	91	236724	10.0	10.4	
142 n-Octadecane	57	10.269	10.269	0.000	81	198397	10.0	11.2	
145 Pentachlorophenol	266	10.298	10.298	0.000	89	290469	20.0	21.8	
149 Phenanthrene	178	10.492	10.492	0.000	97	772466	10.0	9.38	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
150 Anthracene	178	10.540	10.540	0.000	97	784584	10.0	9.55	
152 Carbazole	167	10.651	10.651	0.000	97	547095	10.0	9.63	
154 Di-n-butyl phthalate	149	10.881	10.875	0.006	99	965096	10.0	10.0	
160 Fluoranthene	202	11.592	11.592	0.000	96	1098987	10.0	9.98	
161 Benzidine	184	11.669	11.669	0.000	99	986742	20.0	18.2	
163 Pyrene	202	11.839	11.839	0.000	98	1142928	10.0	9.78	
171 Butyl benzyl phthalate	149	12.463	12.463	0.000	94	434047	10.0	9.66	
176 Bis(2-ethylhexyl) phthalat	149	13.216	13.216	0.000	95	627525	10.0	9.69	
178 3,3'-Dichlorobenzidine	252	13.251	13.251	0.000	73	519714	20.0	17.1	M
179 Benzo[a]anthracene	228	13.339	13.339	0.000	96	1188846	10.0	9.49	
180 Chrysene	228	13.398	13.398	0.000	95	1138555	10.0	9.05	
183 Di-n-octyl phthalate	149	14.222	14.222	0.000	99	1037686	10.0	9.27	
185 Benzo[b]fluoranthene	252	15.045	15.045	0.000	94	1169153	10.0	9.83	
186 Benzo[k]fluoranthene	252	15.092	15.086	0.006	96	1197615	10.0	9.65	
187 Benzo[a]pyrene	252	15.604	15.604	0.000	74	1089143	10.0	10.3	
191 Indeno[1,2,3-cd]pyrene	276	17.739	17.739	0.000	96	1158612	10.0	9.50	
192 Dibenz(a,h)anthracene	278	17.751	17.745	0.006	87	1008055	10.0	9.63	
193 Benzo[g,h,i]perylene	276	18.351	18.345	0.006	95	908164	10.0	8.94	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 SS W_00015 Amount Added: 1.00 Units: mL

Report Date: 24-Apr-2020 13:44:50 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D

Injection Date: 23-Apr-2020 19:35:35 Instrument ID: A4AG3 Operator ID:

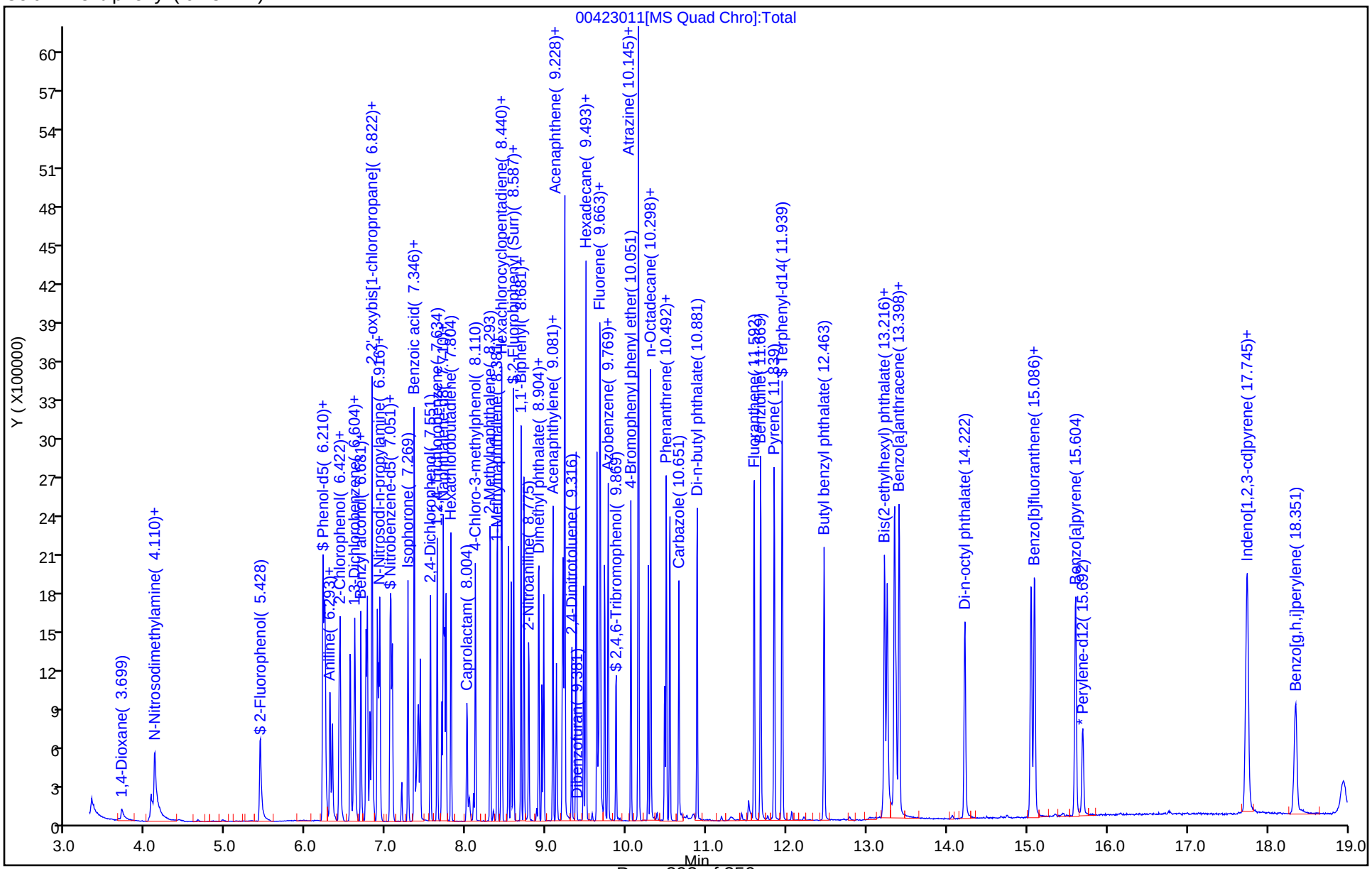
Lims ID: icv lst1 Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

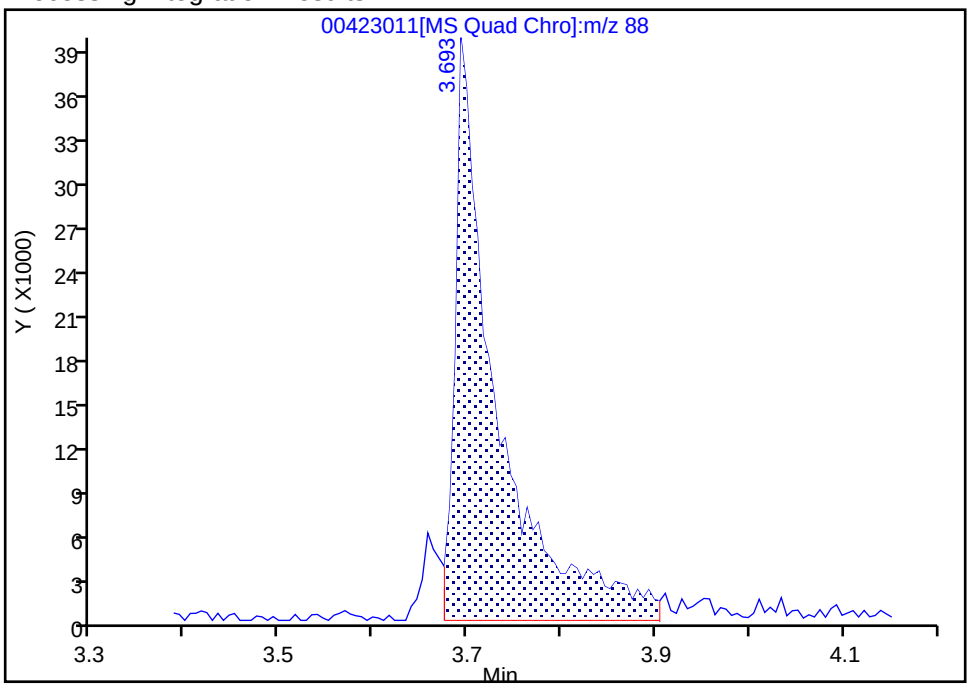
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D
Injection Date: 23-Apr-2020 19:35:35 Instrument ID: A4AG3
Lims ID: icv lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

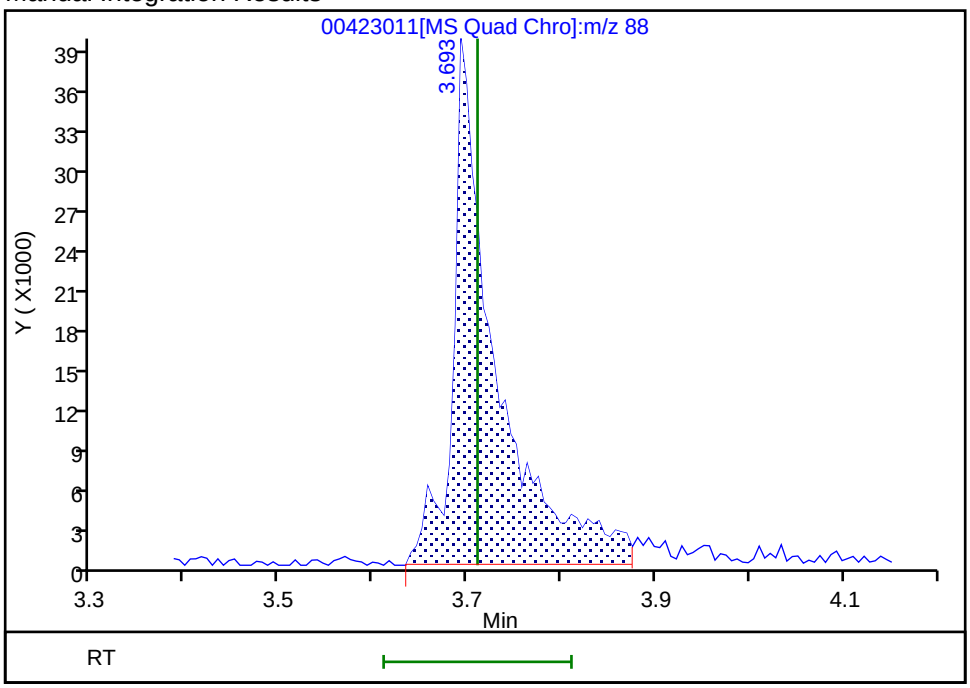
Processing Integration Results

RT: 3.69
Area: 120502
Amount: 10.394134
Amount Units: ng/ul



Manual Integration Results

RT: 3.69
Area: 123593
Amount: 10.660755
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:36:20
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

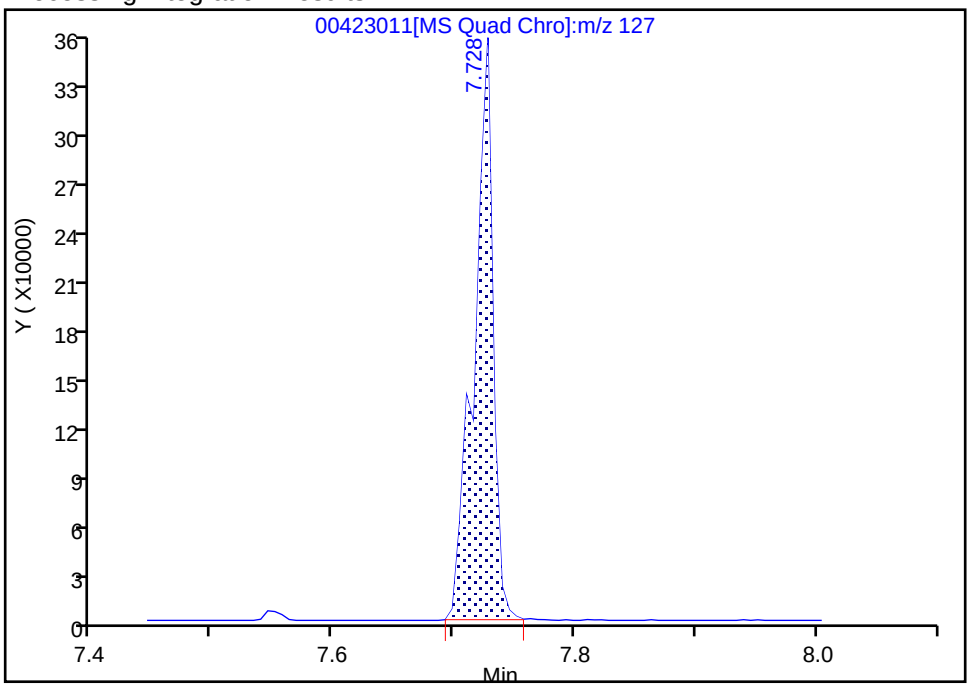
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D				
Injection Date:	23-Apr-2020 19:35:35	Instrument ID:	A4AG3		
Lims ID:	icv lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 4-Chloroaniline, CAS: 106-47-8

Signal: 1

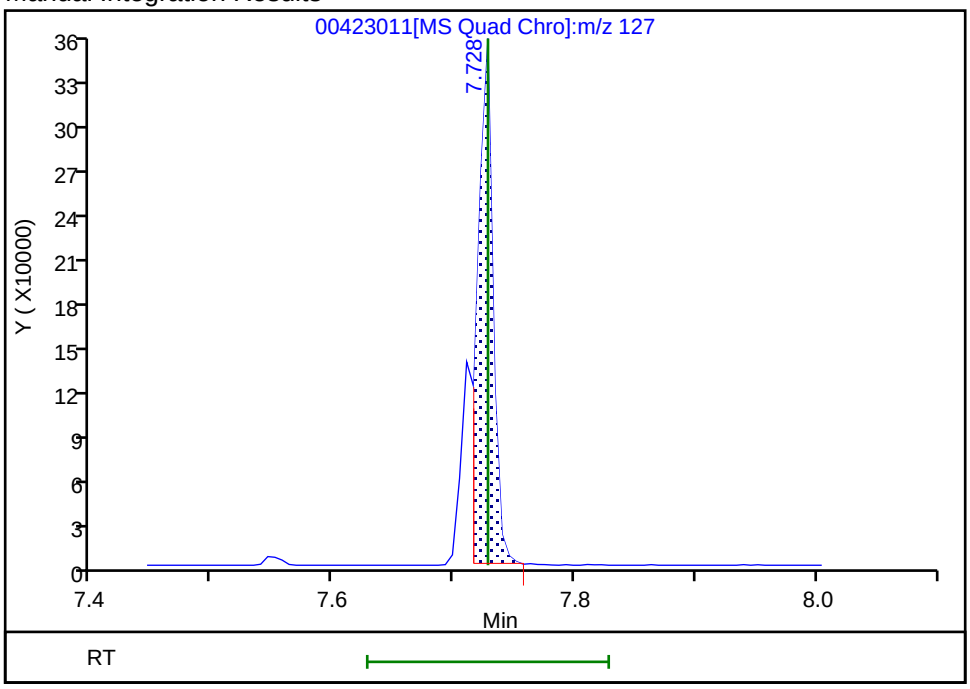
Processing Integration Results

RT: 7.73
Area: 380952
Amount: 11.792925
Amount Units: ng/ul



Manual Integration Results

RT: 7.73
Area: 307955
Amount: 9.533196
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:36:53

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

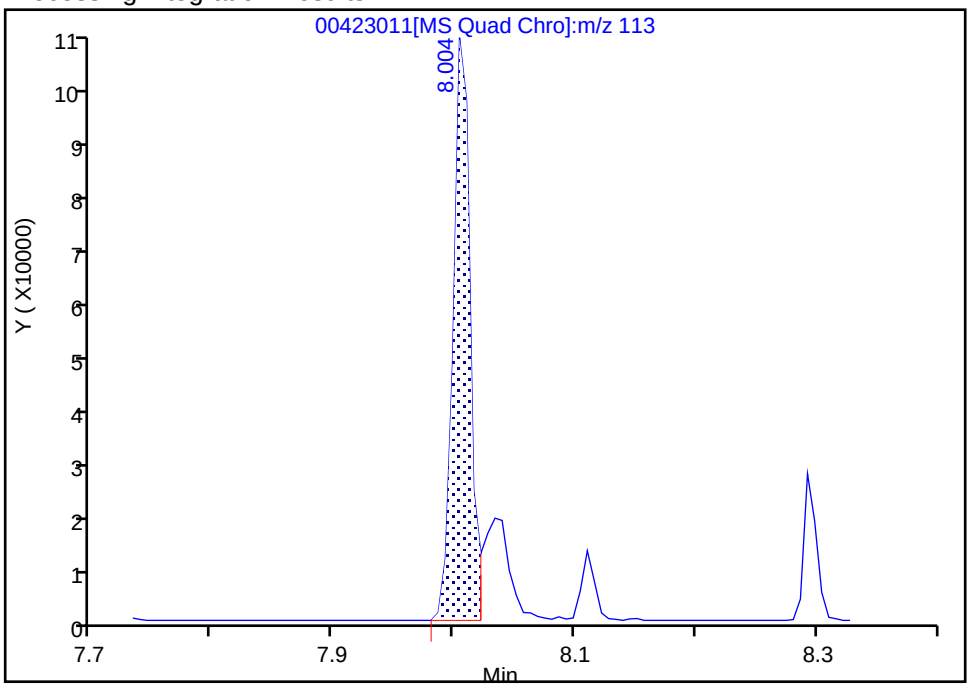
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D
Injection Date: 23-Apr-2020 19:35:35 Instrument ID: A4AG3
Lims ID: icv lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

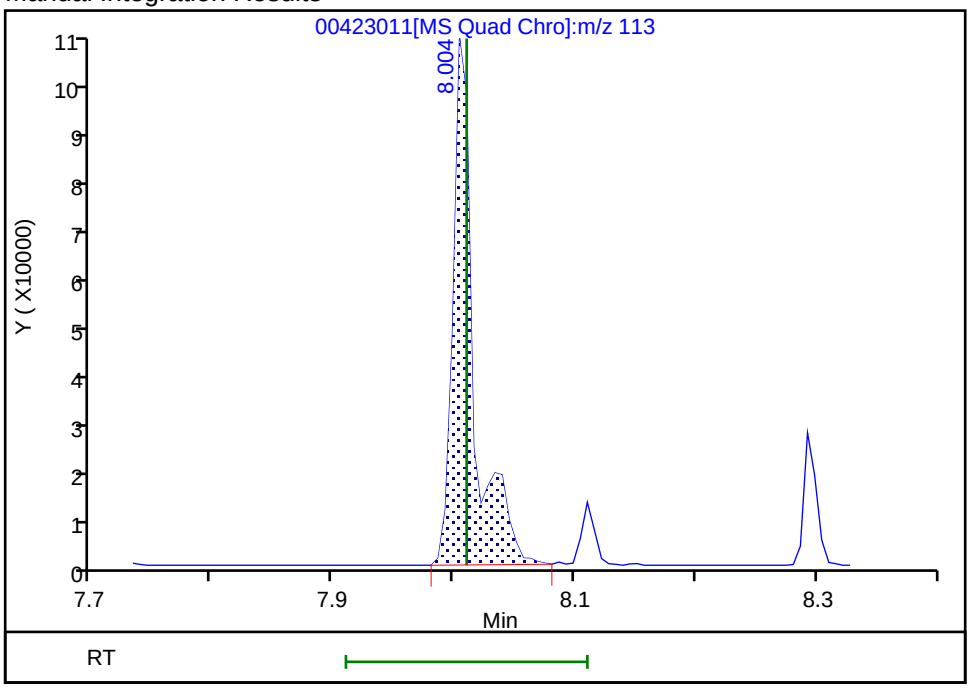
Processing Integration Results

RT: 8.00
Area: 105937
Amount: 14.926173
Amount Units: ng/ul



Manual Integration Results

RT: 8.00
Area: 130533
Amount: 18.368989
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:37:07
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

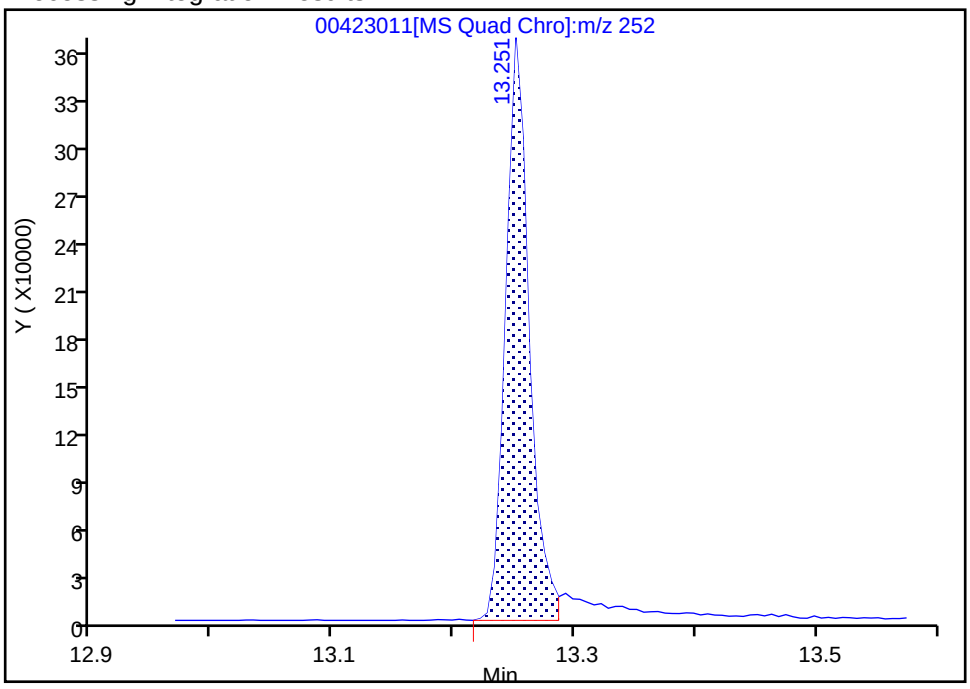
Data File:	\\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423011.D				
Injection Date:	23-Apr-2020 19:35:35	Instrument ID:	A4AG3		
Lims ID:	icv lst1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

178 3,3'-Dichlorobenzidine, CAS: 91-94-1

Signal: 1

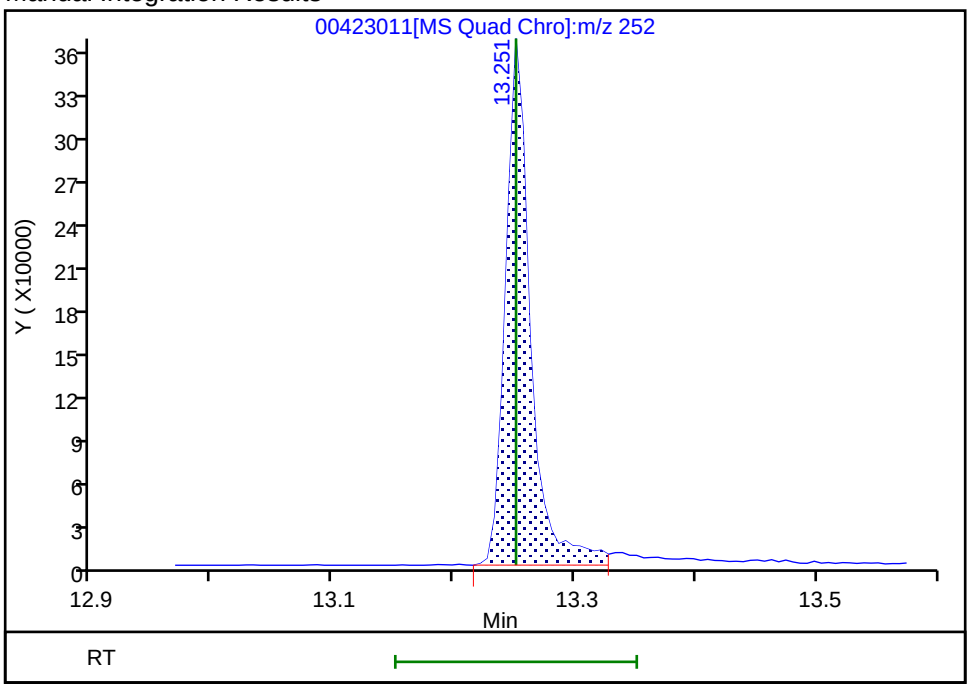
Processing Integration Results

RT: 13.25
Area: 491391
Amount: 16.174011
Amount Units: ng/ul



Manual Integration Results

RT: 13.25
Area: 519714
Amount: 17.106255
Amount Units: ng/ul



Reviewer: ulmanm, 24-Apr-2020 11:37:47

Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: CCV 240-432443/2 Calibration Date: 04/28/2020 15:17

Instrument ID: A4AG3 Calib Start Date: 01/16/2019 13:15

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 01/16/2019 16:23

Lab File ID: 00428002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.8774	0.9521		10.4	10.0	8.5	20.0

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D
Lims ID: ccv lst1
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Apr-2020 15:17:24 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-002
Misc. Info.: CCV LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 15:40:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.563	6.563	0.000	94	110193	4.00	4.00	
* 2 Naphthalene-d8	136	7.663	7.663	0.000	98	365550	4.00	4.00	
* 3 Acenaphthene-d10	164	9.169	9.169	0.000	92	252814	4.00	4.00	
* 4 Phenanthrene-d10	188	10.445	10.445	0.000	97	407460	4.00	4.00	
* 5 Chrysene-d12	240	13.310	13.310	0.000	98	526157	4.00	4.00	
* 6 Perylene-d12	264	15.628	15.628	0.000	98	545612	4.00	4.00	
$ 7 2-Fluorophenol	112	5.399	5.399	0.000	92	299904	10.0	9.87	
$ 8 Phenol-d5	99	6.204	6.204	0.000	71	381278	10.0	9.40	
$ 9 Nitrobenzene-d5	82	7.034	7.034	0.000	89	480437	10.0	9.13	
$ 10 2-Fluorobiphenyl (Surr)	172	8.563	8.563	0.000	100	812525	10.0	9.87	
$ 11 2,4,6-Tribromophenol	330	9.840	9.840	0.000	92	115555	10.0	8.67	
$ 12 Terphenyl-d14	244	11.904	11.904	0.000	99	1109197	10.0	10.1	
13 1,4-Dioxane	88	3.628	3.628	0.000	87	148375	10.0	9.05	M
14 N-Nitrosodimethylamine	74	4.005	4.005	0.000	87	226821	10.0	9.93	
15 Pyridine	79	4.052	4.052	0.000	92	761473	20.0	18.9	
30 Benzaldehyde	77	6.181	6.181	0.000	92	662902	20.0	18.6	
31 Phenol	94	6.216	6.216	0.000	93	452675	10.0	10.0	
32 Aniline	93	6.269	6.269	0.000	96	523217	10.0	9.53	
33 Bis(2-chloroethyl)ether	93	6.299	6.299	0.000	99	374932	10.0	9.20	
36 2-Chlorophenol	128	6.387	6.387	0.000	92	331413	10.0	10.2	
37 n-Decane	57	6.399	6.399	0.000	81	267707	10.0	9.46	
39 1,3-Dichlorobenzene	146	6.522	6.522	0.000	91	379280	10.0	9.54	
40 1,4-Dichlorobenzene	146	6.581	6.581	0.000	88	392682	10.0	9.30	
41 Benzyl alcohol	108	6.657	6.657	0.000	86	210338	10.0	9.23	
44 1,2-Dichlorobenzene	146	6.722	6.722	0.000	91	376921	10.0	9.59	
45 2-Methylphenol	108	6.740	6.740	0.000	93	337960	10.0	10.0	
46 2,2'-oxybis[1-chloropropan	45	6.769	6.769	0.000	70	219225	10.0	9.95	
47 Indene	115	6.793	6.793	0.000	90	1154036	20.0	19.1	
48 3 & 4 Methylphenol	108	6.869	6.869	0.000	92	354763	10.0	10.3	
50 N-Nitrosodi-n-propylamine	70	6.881	6.881	0.000	79	299434	10.0	9.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.893	6.893	0.000	91	514981	10.0	9.44	
54 Hexachloroethane	117	7.016	7.016	0.000	85	166351	10.0	8.95	
55 Nitrobenzene	77	7.052	7.052	0.000	87	446516	10.0	9.20	
57 Isophorone	82	7.246	7.246	0.000	99	773073	10.0	9.49	
59 2-Nitrophenol	139	7.322	7.322	0.000	82	182130	10.0	10.2	
58 2,4-Dimethylphenol	107	7.328	7.328	0.000	91	430657	10.0	9.78	
63 Benzoic acid	105	7.381	7.381	0.000	87	473301	20.0	19.1	
64 Bis(2-chloroethoxy)methane	93	7.399	7.399	0.000	99	392835	10.0	9.52	
66 2,4-Dichlorophenol	162	7.528	7.528	0.000	96	321884	10.0	10.0	
68 1,2,4-Trichlorobenzene	180	7.610	7.610	0.000	92	362278	10.0	9.42	
69 Naphthalene	128	7.687	7.687	0.000	98	962908	10.0	9.57	
70 4-Chloroaniline	127	7.704	7.704	0.000	91	417456	10.0	9.75	
71 2,6-Dichlorophenol	162	7.722	7.722	0.000	94	324174	10.0	10.4	
73 Hexachlorobutadiene	225	7.781	7.781	0.000	96	266390	10.0	8.73	
78 Caprolactam	113	7.987	7.987	0.000	85	189028	20.0	20.1	M
80 4-Chloro-3-methylphenol	107	8.093	8.093	0.000	90	360024	10.0	10.0	
82 2-Methylnaphthalene	142	8.269	8.269	0.000	90	701916	10.0	9.56	
83 1-Methylnaphthalene	142	8.357	8.357	0.000	93	646951	10.0	9.62	
85 Hexachlorocyclopentadiene	237	8.410	8.410	0.000	95	319394	10.0	9.51	
86 1,2,4,5-Tetrachlorobenzene	216	8.416	8.416	0.000	98	439035	10.0	9.49	
88 2,4,6-Trichlorophenol	196	8.498	8.498	0.000	94	278760	10.0	10.3	
89 2,4,5-Trichlorophenol	196	8.534	8.534	0.000	91	275193	10.0	10.1	
92 1,1'-Biphenyl	154	8.657	8.657	0.000	96	872068	10.0	9.88	
96 2-Chloronaphthalene	162	8.693	8.693	0.000	98	709259	10.0	10.1	
99 2-Nitroaniline	65	8.751	8.751	0.000	75	255977	10.0	10.3	
102 Dimethyl phthalate	163	8.875	8.875	0.000	96	829132	10.0	9.80	
103 1,3-Dinitrobenzene	168	8.916	8.916	0.000	86	130559	10.0	10.6	
104 2,6-Dinitrotoluene	165	8.940	8.940	0.000	89	189862	10.0	10.5	
105 Acenaphthylene	152	9.051	9.051	0.000	98	1030572	10.0	10.2	
106 3-Nitroaniline	138	9.098	9.098	0.000	87	139621	10.0	9.52	
108 2,4-Dinitrophenol	184	9.181	9.181	0.000	85	236139	20.0	21.8	
109 Acenaphthene	153	9.198	9.198	0.000	95	679512	10.0	9.47	
110 4-Nitrophenol	109	9.210	9.210	0.000	84	385362	20.0	19.2	
111 2,4-Dinitrotoluene	165	9.287	9.287	0.000	86	221898	10.0	9.51	
113 Dibenzofuran	168	9.340	9.340	0.000	95	1051898	10.0	9.65	
116 2,3,4,6-Tetrachlorophenol	232	9.440	9.440	0.000	73	226673	10.0	9.33	
117 Hexadecane	57	9.463	9.463	0.000	91	362253	10.0	9.76	
118 Diethyl phthalate	149	9.469	9.469	0.000	97	705478	10.0	8.44	
122 4-Chlorophenyl phenyl ethe	204	9.604	9.604	0.000	91	503848	10.0	9.56	
125 4-Nitroaniline	138	9.622	9.622	0.000	71	167489	10.0	11.4	
126 Fluorene	166	9.634	9.634	0.000	98	843585	10.0	10.2	
127 4,6-Dinitro-2-methylphenol	198	9.645	9.645	0.000	83	335342	20.0	20.3	
128 N-Nitrosodiphenylamine	169	9.698	9.698	0.000	99	542226	10.0	10.0	
129 Diphenylamine	169	9.698	9.698	0.000	94	542226	8.50	8.51	
131 1,2-Diphenylhydrazine	77	9.740	9.740	0.000	93	969882	10.0	10.4	
130 Azobenzene	77	9.740	9.740	0.000	100	970659	10.0	10.4	
138 4-Bromophenyl phenyl ether	248	10.022	10.022	0.000	66	283514	10.0	11.0	
141 Hexachlorobenzene	284	10.122	10.122	0.000	79	323809	10.0	10.8	
140 Atrazine	200	10.122	10.122	0.000	93	594865	20.0	23.3	
142 n-Octadecane	57	10.240	10.240	0.000	81	277605	10.0	12.0	
145 Pentachlorophenol	266	10.275	10.275	0.000	91	370361	20.0	21.1	
149 Phenanthrene	178	10.463	10.463	0.000	97	1072371	10.0	9.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
150 Anthracene	178	10.510	10.510	0.000	97	1117544	10.0	10.3	
152 Carbazole	167	10.622	10.622	0.000	97	829025	10.0	11.1	
154 Di-n-butyl phthalate	149	10.851	10.851	0.000	100	1365965	10.0	10.7	
160 Fluoranthene	202	11.557	11.557	0.000	97	1521067	10.0	10.5	
161 Benzidine	184	11.634	11.634	0.000	98	1138237	20.0	16.1	
163 Pyrene	202	11.804	11.804	0.000	98	1531436	10.0	9.97	
171 Butyl benzyl phthalate	149	12.422	12.422	0.000	95	591316	10.0	10.0	
176 Bis(2-ethylhexyl) phthalat	149	13.169	13.169	0.000	95	852183	10.0	10.0	
178 3,3'-Dichlorobenzidine	252	13.204	13.204	0.000	74	778752	20.0	19.5	
179 Benzo[a]anthracene	228	13.292	13.292	0.000	97	1532221	10.0	9.30	
180 Chrysene	228	13.351	13.351	0.000	95	1559494	10.0	9.43	
183 Di-n-octyl phthalate	149	14.169	14.169	0.000	99	1521457	10.0	9.89	
185 Benzo[b]fluoranthene	252	14.986	14.986	0.000	94	1572887	10.0	9.64	
186 Benzo[k]fluoranthene	252	15.033	15.033	0.000	96	1599225	10.0	9.40	
187 Benzo[a]pyrene	252	15.539	15.539	0.000	73	1422002	10.0	9.80	
191 Indeno[1,2,3-cd]pyrene	276	17.651	17.651	0.000	96	1616397	10.0	9.66	
192 Dibenz(a,h)anthracene	278	17.657	17.657	0.000	88	1403301	10.0	9.78	
193 Benzo[g,h,i]perylene	276	18.251	18.251	0.000	95	1317750	10.0	9.46	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L6 W_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2020 15:56:11 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D

Injection Date: 28-Apr-2020 15:17:24 Instrument ID: A4AG3 Operator ID:

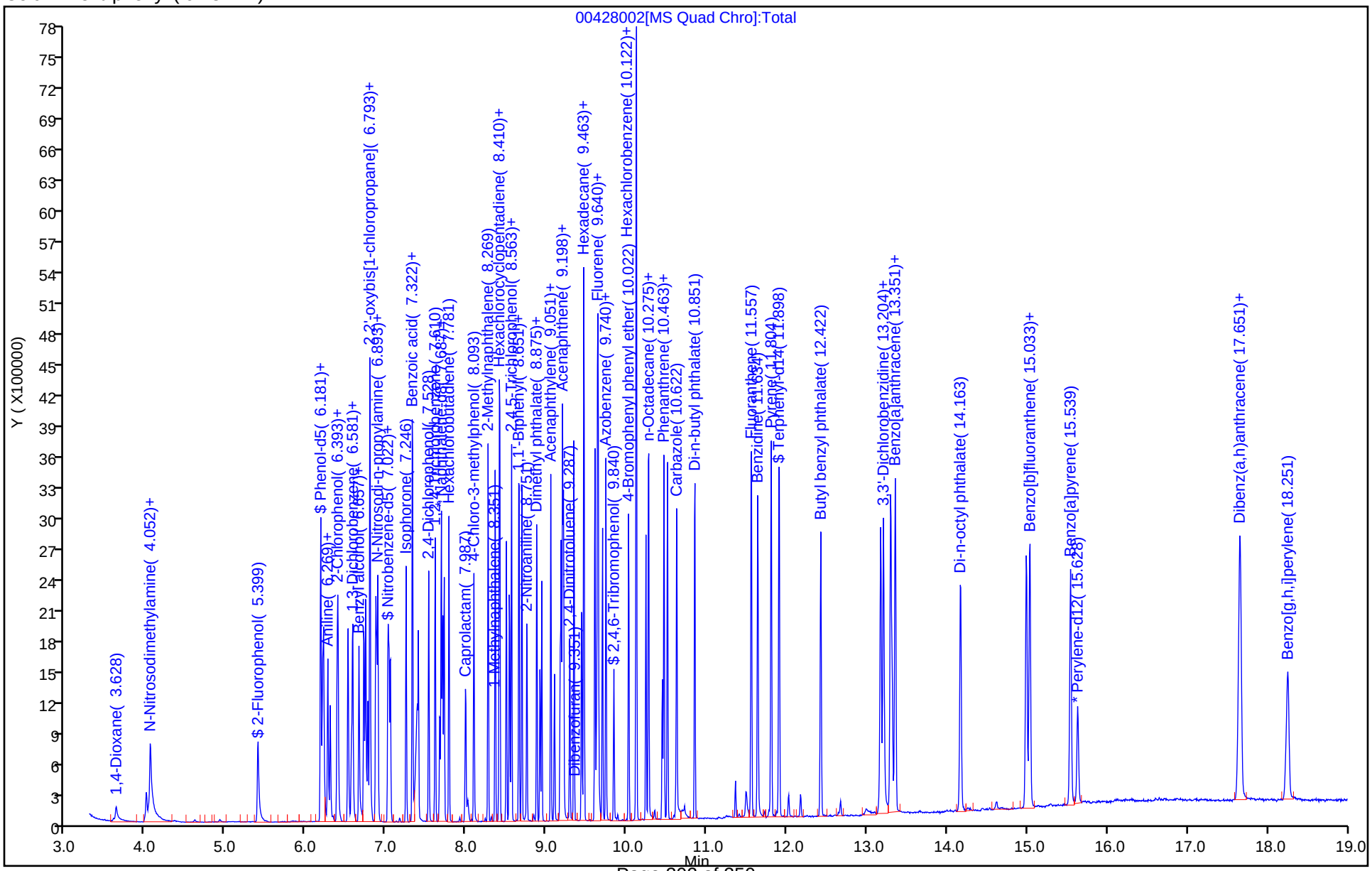
Lims ID: ccv lst1 Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: CCV 240-432443/2 Calibration Date: 04/28/2020 15:17

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00428002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5950	0.5386		9.05	10.0	-9.5	20.0
N-Nitrosodimethylamine	Ave	0.8288	0.8234		9.93	10.0	-0.7	20.0
Pyridine	Lin1		1.382		18.9	20.0	-5.4	20.0
Benzaldehyde	Ave	1.297	1.203	0.0100	18.6	20.0	-7.2	20.0
Phenol	Ave	1.644	1.643	0.8000	10.0	10.0	-0.0	20.0
Aniline	Ave	1.993	1.899		9.53	10.0	-4.7	20.0
Bis(2-chloroethyl)ether	Ave	1.479	1.361	0.7000	9.20	10.0	-8.0	20.0
2-Chlorophenol	Ave	1.182	1.203	0.8000	10.2	10.0	1.8	20.0
n-Decane	Ave	1.027	0.9718		9.46	10.0	-5.4	20.0
1,3-Dichlorobenzene	Ave	1.443	1.377		9.54	10.0	-4.6	20.0
1,4-Dichlorobenzene	Ave	1.533	1.425		9.30	10.0	-7.0	20.0
Benzyl alcohol	Ave	0.8268	0.7635		9.23	10.0	-7.7	20.0
1,2-Dichlorobenzene	Ave	1.426	1.368		9.59	10.0	-4.1	20.0
2-Methylphenol	Ave	1.225	1.227	0.7000	10.0	10.0	0.1	20.0
bis (2-chloroisopropyl) ether	Ave	0.7997	0.7958		9.95	10.0	-0.5	20.0
Indene	Ave	2.197	2.095		19.1	20.0	-4.7	20.0
3 & 4 Methylphenol	Ave	1.255	1.288		10.3	10.0	2.6	20.0
N-Nitrosodi-n-propylamine	Ave	1.192	1.087	0.5000	9.12	10.0	-8.8	20.0
Acetophenone	Ave	1.981	1.869	0.0100	9.44	10.0	-5.6	20.0
Hexachloroethane	Ave	0.6750	0.6039	0.3000	8.95	10.0	-10.5	20.0
Nitrobenzene	Ave	0.5310	0.4886	0.2000	9.20	10.0	-8.0	20.0
Isophorone	Ave	0.8915	0.8459	0.4000	9.49	10.0	-5.1	20.0
2-Nitrophenol	Ave	0.1954	0.1993	0.1000	10.2	10.0	2.0	20.0
2,4-Dimethylphenol	Ave	0.4817	0.4712	0.2000	9.78	10.0	-2.2	20.0
Benzoic acid	Lin1		0.2590		19.1	20.0	-4.4	20.0
Bis(2-chloroethoxy)methane	Ave	0.4513	0.4299	0.3000	9.52	10.0	-4.8	20.0
2,4-Dichlorophenol	Ave	0.3517	0.3522	0.2000	10.0	10.0	0.2	20.0
1,2,4-Trichlorobenzene	Ave	0.4207	0.3964		9.42	10.0	-5.8	20.0
Naphthalene	Ave	1.101	1.054	0.7000	9.57	10.0	-4.3	20.0
4-Chloroaniline	Ave	0.4685	0.4568	0.0100	9.75	10.0	-2.5	20.0
2,6-Dichlorophenol	Ave	0.3418	0.3547		10.4	10.0	3.8	20.0
Hexachlorobutadiene	Ave	0.3338	0.2915	0.0100	8.73	10.0	-12.7	20.0
Caprolactam	Lin1		0.1034	0.0100	20.1	20.0	0.3	20.0
4-Chloro-3-methylphenol	Ave	0.3931	0.3940	0.2000	10.0	10.0	0.2	20.0
2-Methylnaphthalene	Ave	0.8030	0.7681	0.4000	9.56	10.0	-4.4	20.0
1-Methylnaphthalene	Ave	0.7356	0.7079		9.62	10.0	-3.8	20.0
Hexachlorocyclopentadiene	Ave	0.5313	0.5053	0.0500	9.51	10.0	-4.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.7321	0.6946	0.0100	9.49	10.0	-5.1	20.0
2,4,6-Trichlorophenol	Ave	0.4284	0.4411	0.2000	10.3	10.0	3.0	20.0
2,4,5-Trichlorophenol	Ave	0.4325	0.4354	0.2000	10.1	10.0	0.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: CCV 240-432443/2 Calibration Date: 04/28/2020 15:17

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00428002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.397	1.380	0.0100	9.88	10.0	-1.2	20.0
2-Chloronaphthalene	Ave	1.113	1.122	0.8000	10.1	10.0	0.8	20.0
2-Nitroaniline	Ave	0.3940	0.4050	0.0100	10.3	10.0	2.8	20.0
Dimethyl phthalate	Ave	1.339	1.312	0.0100	9.80	10.0	-2.0	20.0
1,3-Dinitrobenzene	Ave	0.1947	0.2066		10.6	10.0	6.1	20.0
2,6-Dinitrotoluene	Ave	0.2868	0.3004		10.5	10.0	4.7	20.0
Acenaphthylene	Ave	1.596	1.631	0.9000	10.2	10.0	2.2	20.0
3-Nitroaniline	Ave	0.2320	0.2209	0.0100	9.52	10.0	-4.8	20.0
2,4-Dinitrophenol	Qua		0.1868	0.0100	21.8	20.0	9.0	20.0
Acenaphthene	Ave	1.135	1.075	0.9000	9.47	10.0	-5.3	20.0
4-Nitrophenol	Ave	0.3179	0.3049		19.2	20.0	-4.1	20.0
2,4-Dinitrotoluene	Ave	0.3694	0.3511	0.2000	9.51	10.0	-4.9	20.0
Dibenzofuran	Ave	1.725	1.664	0.8000	9.65	10.0	-3.5	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3842	0.3586	0.0100	9.33	10.0	-6.7	20.0
Hexadecane	Ave	0.5873	0.5732		9.76	10.0	-2.4	20.0
Diethyl phthalate	Ave	1.323	1.116	0.0100	8.44	10.0	-15.6	20.0
4-Chlorophenyl phenyl ether	Ave	0.8335	0.7972	0.4000	9.56	10.0	-4.4	20.0
4-Nitroaniline	Ave	0.2316	0.2650	0.0100	11.4	10.0	14.4	20.0
Fluorene	Ave	1.306	1.335	0.9000	10.2	10.0	2.2	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1646	0.0100	20.3	20.0	1.4	20.0
Diphenylamine	Ave	0.6254	0.6262		8.51	8.50	0.1	20.0
N-Nitrosodiphenylamine	Ave	0.5316	0.5323	0.0100	10.0	10.0	0.1	20.0
Azobenzene	Ave	0.9168	0.9529		10.4	10.0	3.9	20.0
4-Bromophenyl phenyl ether	Ave	0.2522	0.2783	0.1000	11.0	10.0	10.4	20.0
Atrazine	Ave	0.2508	0.2920	0.0100	23.3	20.0	16.4	20.0
Hexachlorobenzene	Ave	0.2940	0.3179	0.1000	10.8	10.0	8.1	20.0
n-Octadecane	Qua		0.2725		12.0	10.0	20.5*	20.0
Pentachlorophenol	Ave	0.1723	0.1818	0.0500	21.1	20.0	5.5	20.0
Phenanthrene	Ave	1.065	1.053	0.7000	9.89	10.0	-1.1	20.0
Anthracene	Ave	1.062	1.097	0.7000	10.3	10.0	3.3	20.0
Carbazole	Ave	0.7347	0.8139	0.0100	11.1	10.0	10.8	20.0
Di-n-butyl phthalate	Lin1		1.341	0.0100	10.7	10.0	7.3	20.0
Fluoranthene	Lin1		1.493	0.6000	10.5	10.0	4.9	20.0
Benzidine	Lin1		0.4327		16.1	20.0	-19.5	20.0
Pyrene	Ave	1.168	1.164	0.6000	9.97	10.0	-0.3	20.0
Butyl benzyl phthalate	Ave	0.4491	0.4495	0.0100	10.0	10.0	0.0	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.6473	0.6479	0.0100	10.0	10.0	0.0	20.0
3,3'-Dichlorobenzidine	Ave	0.3036	0.2960	0.0100	19.5	20.0	-2.5	20.0
Benzo[a]anthracene	Ave	1.252	1.165	0.8000	9.30	10.0	-7.0	20.0
Chrysene	Ave	1.257	1.186	0.7000	9.43	10.0	-5.7	20.0
Di-n-octyl phthalate	Lin1		1.115	0.0100	9.89	10.0	-1.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Lab Sample ID: CCV 240-432443/2 Calibration Date: 04/28/2020 15:17

Instrument ID: A4AG3 Calib Start Date: 04/23/2020 15:38

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2020 19:12

Lab File ID: 00428002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[b]fluoranthene	Ave	1.196	1.153	0.7000	9.64	10.0	-3.6	20.0
Benzo[k]fluoranthene	Ave	1.248	1.172	0.7000	9.40	10.0	-6.0	20.0
Benzo[a]pyrene	Ave	1.064	1.043	0.7000	9.80	10.0	-2.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.227	1.185	0.5000	9.66	10.0	-3.4	20.0
Dibenz(a,h)anthracene	Ave	1.052	1.029	0.4000	9.78	10.0	-2.2	20.0
Benzo[g,h,i]perylene	Ave	1.021	0.9661	0.5000	9.46	10.0	-5.4	20.0
2-Fluorophenol (Surr)	Ave	1.103	1.089		9.87	10.0	-1.3	20.0
Phenol-d5 (Surr)	Ave	1.472	1.384		9.40	10.0	-6.0	20.0
Nitrobenzene-d5 (Surr)	Ave	0.5757	0.5257		9.13	10.0	-8.7	20.0
2-Fluorobiphenyl (Surr)	Ave	1.303	1.286		9.87	10.0	-1.3	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2109	0.1828		8.67	10.0	-13.3	20.0
Terphenyl-d14 (Surr)	Ave	0.8344	0.8432		10.1	10.0	1.1	20.0

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D
Lims ID: ccv lst1
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Apr-2020 15:17:24 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-002
Misc. Info.: CCV LST1
Operator ID: Instrument ID: A4AG3
Sublist: chrom-8270 AG3*sub4

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 15:40:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.563	6.563	0.000	94	110193	4.00	4.00	
* 2 Naphthalene-d8	136	7.663	7.663	0.000	98	365550	4.00	4.00	
* 3 Acenaphthene-d10	164	9.169	9.169	0.000	92	252814	4.00	4.00	
* 4 Phenanthrene-d10	188	10.445	10.445	0.000	97	407460	4.00	4.00	
* 5 Chrysene-d12	240	13.310	13.310	0.000	98	526157	4.00	4.00	
* 6 Perylene-d12	264	15.628	15.628	0.000	98	545612	4.00	4.00	
$ 7 2-Fluorophenol	112	5.399	5.399	0.000	92	299904	10.0	9.87	
$ 8 Phenol-d5	99	6.204	6.204	0.000	71	381278	10.0	9.40	
$ 9 Nitrobenzene-d5	82	7.034	7.034	0.000	89	480437	10.0	9.13	
$ 10 2-Fluorobiphenyl (Surr)	172	8.563	8.563	0.000	100	812525	10.0	9.87	
$ 11 2,4,6-Tribromophenol	330	9.840	9.840	0.000	92	115555	10.0	8.67	
$ 12 Terphenyl-d14	244	11.904	11.904	0.000	99	1109197	10.0	10.1	
13 1,4-Dioxane	88	3.628	3.628	0.000	87	148375	10.0	9.05	M
14 N-Nitrosodimethylamine	74	4.005	4.005	0.000	87	226821	10.0	9.93	
15 Pyridine	79	4.052	4.052	0.000	92	761473	20.0	18.9	
30 Benzaldehyde	77	6.181	6.181	0.000	92	662902	20.0	18.6	
31 Phenol	94	6.216	6.216	0.000	93	452675	10.0	10.0	
32 Aniline	93	6.269	6.269	0.000	96	523217	10.0	9.53	
33 Bis(2-chloroethyl)ether	93	6.299	6.299	0.000	99	374932	10.0	9.20	
36 2-Chlorophenol	128	6.387	6.387	0.000	92	331413	10.0	10.2	
37 n-Decane	57	6.399	6.399	0.000	81	267707	10.0	9.46	
39 1,3-Dichlorobenzene	146	6.522	6.522	0.000	91	379280	10.0	9.54	
40 1,4-Dichlorobenzene	146	6.581	6.581	0.000	88	392682	10.0	9.30	
41 Benzyl alcohol	108	6.657	6.657	0.000	86	210338	10.0	9.23	
44 1,2-Dichlorobenzene	146	6.722	6.722	0.000	91	376921	10.0	9.59	
45 2-Methylphenol	108	6.740	6.740	0.000	93	337960	10.0	10.0	
46 2,2'-oxybis[1-chloropropan	45	6.769	6.769	0.000	70	219225	10.0	9.95	
47 Indene	115	6.793	6.793	0.000	90	1154036	20.0	19.1	
48 3 & 4 Methylphenol	108	6.869	6.869	0.000	92	354763	10.0	10.3	
50 N-Nitrosodi-n-propylamine	70	6.881	6.881	0.000	79	299434	10.0	9.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
52 Acetophenone	105	6.893	6.893	0.000	91	514981	10.0	9.44	
54 Hexachloroethane	117	7.016	7.016	0.000	85	166351	10.0	8.95	
55 Nitrobenzene	77	7.052	7.052	0.000	87	446516	10.0	9.20	
57 Isophorone	82	7.246	7.246	0.000	99	773073	10.0	9.49	
59 2-Nitrophenol	139	7.322	7.322	0.000	82	182130	10.0	10.2	
58 2,4-Dimethylphenol	107	7.328	7.328	0.000	91	430657	10.0	9.78	
63 Benzoic acid	105	7.381	7.381	0.000	87	473301	20.0	19.1	
64 Bis(2-chloroethoxy)methane	93	7.399	7.399	0.000	99	392835	10.0	9.52	
66 2,4-Dichlorophenol	162	7.528	7.528	0.000	96	321884	10.0	10.0	
68 1,2,4-Trichlorobenzene	180	7.610	7.610	0.000	92	362278	10.0	9.42	
69 Naphthalene	128	7.687	7.687	0.000	98	962908	10.0	9.57	
70 4-Chloroaniline	127	7.704	7.704	0.000	91	417456	10.0	9.75	
71 2,6-Dichlorophenol	162	7.722	7.722	0.000	94	324174	10.0	10.4	
73 Hexachlorobutadiene	225	7.781	7.781	0.000	96	266390	10.0	8.73	
78 Caprolactam	113	7.987	7.987	0.000	85	189028	20.0	20.1	M
80 4-Chloro-3-methylphenol	107	8.093	8.093	0.000	90	360024	10.0	10.0	
82 2-Methylnaphthalene	142	8.269	8.269	0.000	90	701916	10.0	9.56	
83 1-Methylnaphthalene	142	8.357	8.357	0.000	93	646951	10.0	9.62	
85 Hexachlorocyclopentadiene	237	8.410	8.410	0.000	95	319394	10.0	9.51	
86 1,2,4,5-Tetrachlorobenzene	216	8.416	8.416	0.000	98	439035	10.0	9.49	
88 2,4,6-Trichlorophenol	196	8.498	8.498	0.000	94	278760	10.0	10.3	
89 2,4,5-Trichlorophenol	196	8.534	8.534	0.000	91	275193	10.0	10.1	
92 1,1'-Biphenyl	154	8.657	8.657	0.000	96	872068	10.0	9.88	
96 2-Chloronaphthalene	162	8.693	8.693	0.000	98	709259	10.0	10.1	
99 2-Nitroaniline	65	8.751	8.751	0.000	75	255977	10.0	10.3	
102 Dimethyl phthalate	163	8.875	8.875	0.000	96	829132	10.0	9.80	
103 1,3-Dinitrobenzene	168	8.916	8.916	0.000	86	130559	10.0	10.6	
104 2,6-Dinitrotoluene	165	8.940	8.940	0.000	89	189862	10.0	10.5	
105 Acenaphthylene	152	9.051	9.051	0.000	98	1030572	10.0	10.2	
106 3-Nitroaniline	138	9.098	9.098	0.000	87	139621	10.0	9.52	
108 2,4-Dinitrophenol	184	9.181	9.181	0.000	85	236139	20.0	21.8	
109 Acenaphthene	153	9.198	9.198	0.000	95	679512	10.0	9.47	
110 4-Nitrophenol	109	9.210	9.210	0.000	84	385362	20.0	19.2	
111 2,4-Dinitrotoluene	165	9.287	9.287	0.000	86	221898	10.0	9.51	
113 Dibenzofuran	168	9.340	9.340	0.000	95	1051898	10.0	9.65	
116 2,3,4,6-Tetrachlorophenol	232	9.440	9.440	0.000	73	226673	10.0	9.33	
117 Hexadecane	57	9.463	9.463	0.000	91	362253	10.0	9.76	
118 Diethyl phthalate	149	9.469	9.469	0.000	97	705478	10.0	8.44	
122 4-Chlorophenyl phenyl ethe	204	9.604	9.604	0.000	91	503848	10.0	9.56	
125 4-Nitroaniline	138	9.622	9.622	0.000	71	167489	10.0	11.4	
126 Fluorene	166	9.634	9.634	0.000	98	843585	10.0	10.2	
127 4,6-Dinitro-2-methylphenol	198	9.645	9.645	0.000	83	335342	20.0	20.3	
128 N-Nitrosodiphenylamine	169	9.698	9.698	0.000	99	542226	10.0	10.0	
129 Diphenylamine	169	9.698	9.698	0.000	94	542226	8.50	8.51	
131 1,2-Diphenylhydrazine	77	9.740	9.740	0.000	93	969882	10.0	10.4	
130 Azobenzene	77	9.740	9.740	0.000	100	970659	10.0	10.4	
138 4-Bromophenyl phenyl ether	248	10.022	10.022	0.000	66	283514	10.0	11.0	
141 Hexachlorobenzene	284	10.122	10.122	0.000	79	323809	10.0	10.8	
140 Atrazine	200	10.122	10.122	0.000	93	594865	20.0	23.3	
142 n-Octadecane	57	10.240	10.240	0.000	81	277605	10.0	12.0	
145 Pentachlorophenol	266	10.275	10.275	0.000	91	370361	20.0	21.1	
149 Phenanthrene	178	10.463	10.463	0.000	97	1072371	10.0	9.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
150 Anthracene	178	10.510	10.510	0.000	97	1117544	10.0	10.3	
152 Carbazole	167	10.622	10.622	0.000	97	829025	10.0	11.1	
154 Di-n-butyl phthalate	149	10.851	10.851	0.000	100	1365965	10.0	10.7	
160 Fluoranthene	202	11.557	11.557	0.000	97	1521067	10.0	10.5	
161 Benzidine	184	11.634	11.634	0.000	98	1138237	20.0	16.1	
163 Pyrene	202	11.804	11.804	0.000	98	1531436	10.0	9.97	
171 Butyl benzyl phthalate	149	12.422	12.422	0.000	95	591316	10.0	10.0	
176 Bis(2-ethylhexyl) phthalat	149	13.169	13.169	0.000	95	852183	10.0	10.0	
178 3,3'-Dichlorobenzidine	252	13.204	13.204	0.000	74	778752	20.0	19.5	
179 Benzo[a]anthracene	228	13.292	13.292	0.000	97	1532221	10.0	9.30	
180 Chrysene	228	13.351	13.351	0.000	95	1559494	10.0	9.43	
183 Di-n-octyl phthalate	149	14.169	14.169	0.000	99	1521457	10.0	9.89	
185 Benzo[b]fluoranthene	252	14.986	14.986	0.000	94	1572887	10.0	9.64	
186 Benzo[k]fluoranthene	252	15.033	15.033	0.000	96	1599225	10.0	9.40	
187 Benzo[a]pyrene	252	15.539	15.539	0.000	73	1422002	10.0	9.80	
191 Indeno[1,2,3-cd]pyrene	276	17.651	17.651	0.000	96	1616397	10.0	9.66	
192 Dibenz(a,h)anthracene	278	17.657	17.657	0.000	88	1403301	10.0	9.78	
193 Benzo[g,h,i]perylene	276	18.251	18.251	0.000	95	1317750	10.0	9.46	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L6 W_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2020 15:56:11 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D

Injection Date: 28-Apr-2020 15:17:24 Instrument ID: A4AG3 Operator ID:

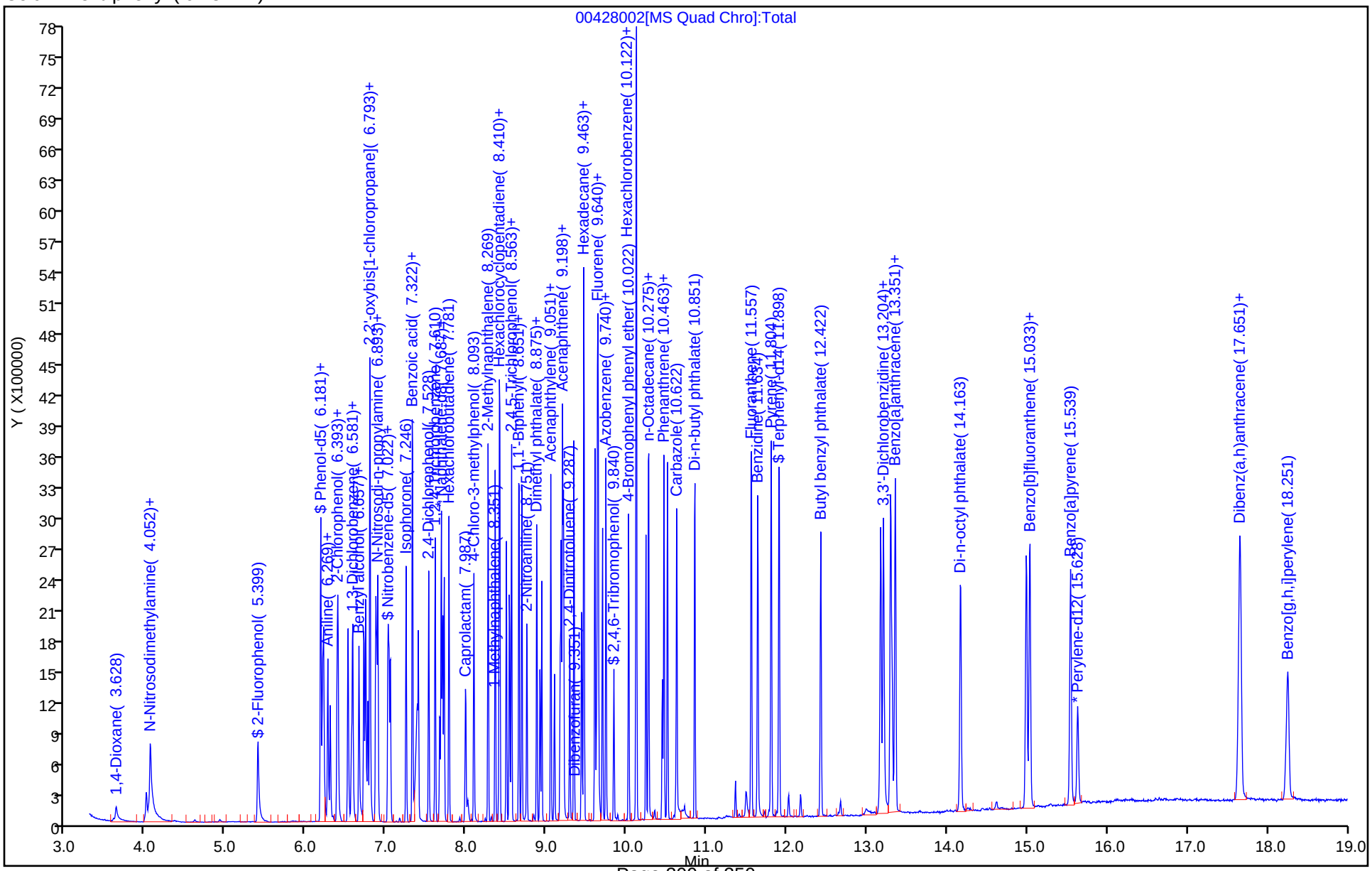
Lims ID: ccv lst1 Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

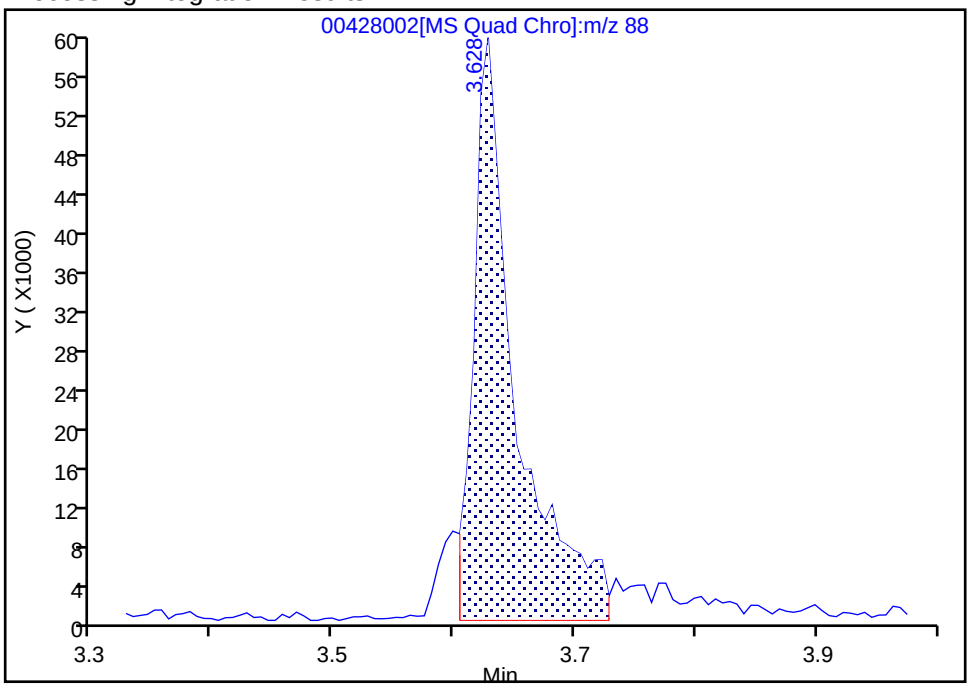
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D
Injection Date: 28-Apr-2020 15:17:24 Instrument ID: A4AG3
Lims ID: ccv lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

13 1,4-Dioxane, CAS: 123-91-1

Signal: 1

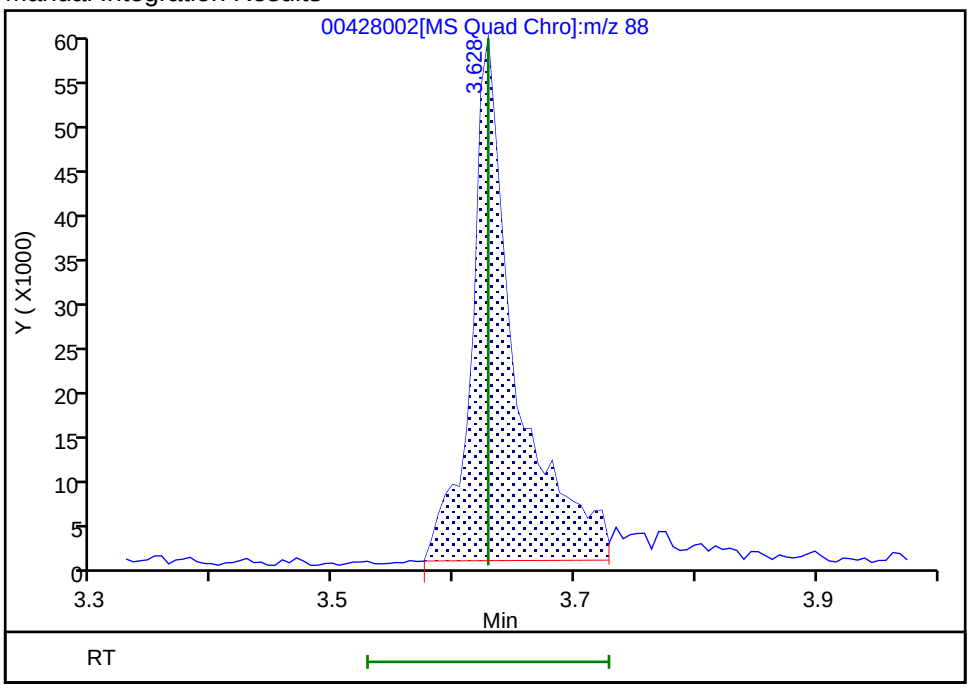
Processing Integration Results

RT: 3.63
Area: 144229
Amount: 8.798610
Amount Units: ng/ul



Manual Integration Results

RT: 3.63
Area: 148375
Amount: 9.051534
Amount Units: ng/ul



Reviewer: ulmanm, 28-Apr-2020 15:39:54
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Canton

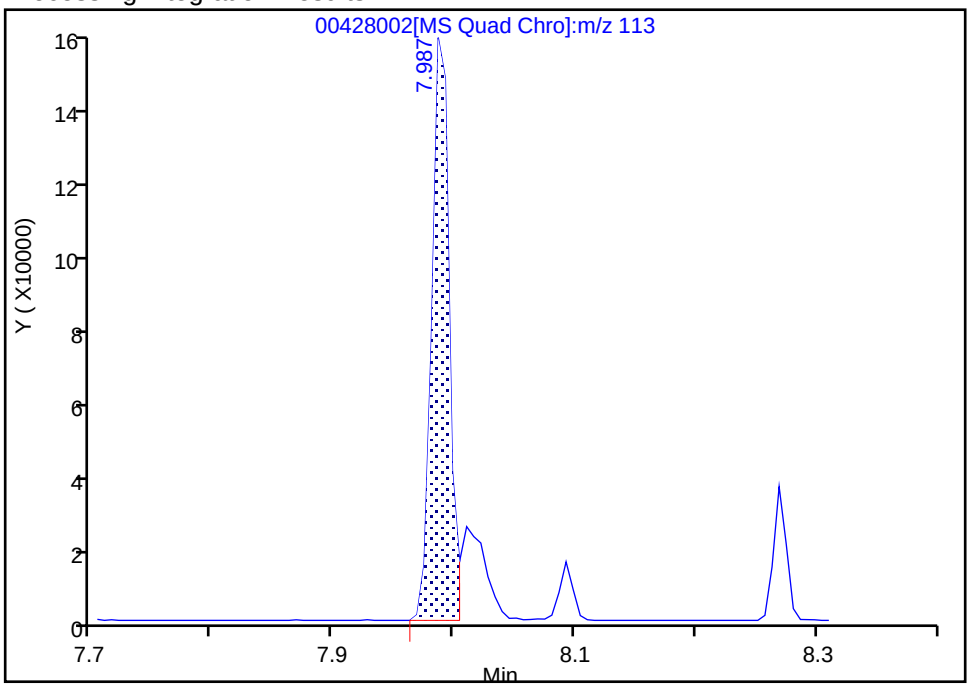
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428002.D
Injection Date: 28-Apr-2020 15:17:24 Instrument ID: A4AG3
Lims ID: ccv lst1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

78 Caprolactam, CAS: 105-60-2

Signal: 1

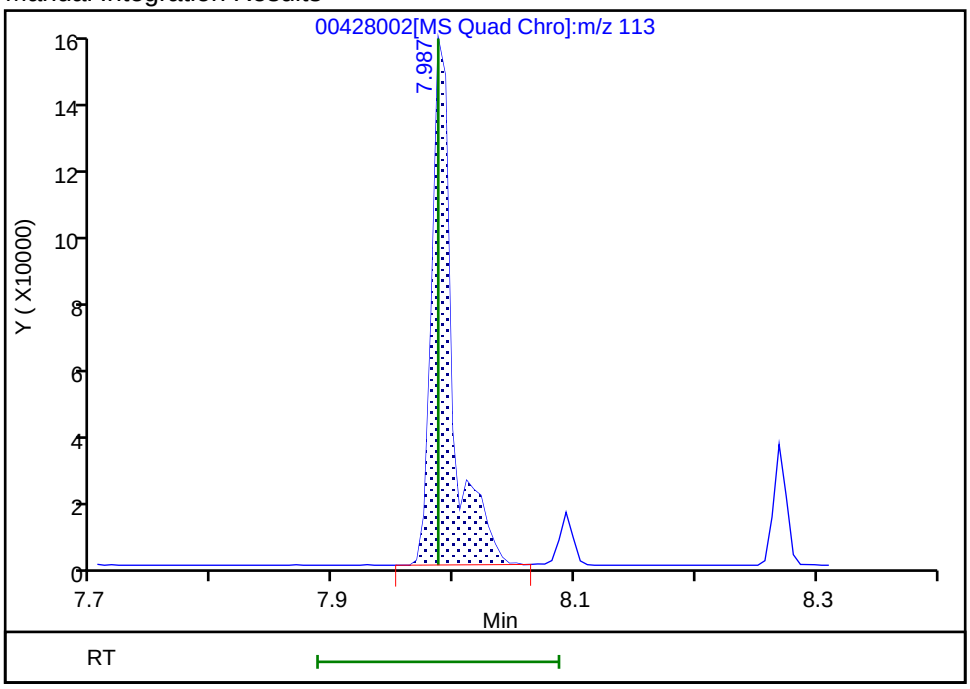
Processing Integration Results

RT: 7.99
Area: 157960
Amount: 16.780911
Amount Units: ng/ul



Manual Integration Results

RT: 7.99
Area: 189028
Amount: 20.062214
Amount Units: ng/ul



Reviewer: ulmanm, 28-Apr-2020 15:40:19
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 23-Apr-2020 15:21:22 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097748-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2020 11:55:30 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0305

First Level Reviewer: ulmanm Date: 23-Apr-2020 15:36:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
145 Pentachlorophenol	266	10.304	10.304	0.000	90	682698	NR	NR	
161 Benzidine	184	11.675	11.675	0.000	98	1760248	NR	NR	
165 4,4'-DDE	246	11.875	11.875	0.000	86	2792		NR	
169 4,4'-DDD	235	12.263	12.263	0.000	91	5989		NR	
173 4,4'-DDT	235	12.651	12.651	0.000	97	1654905	NR	NR	
213 DFTPP									

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

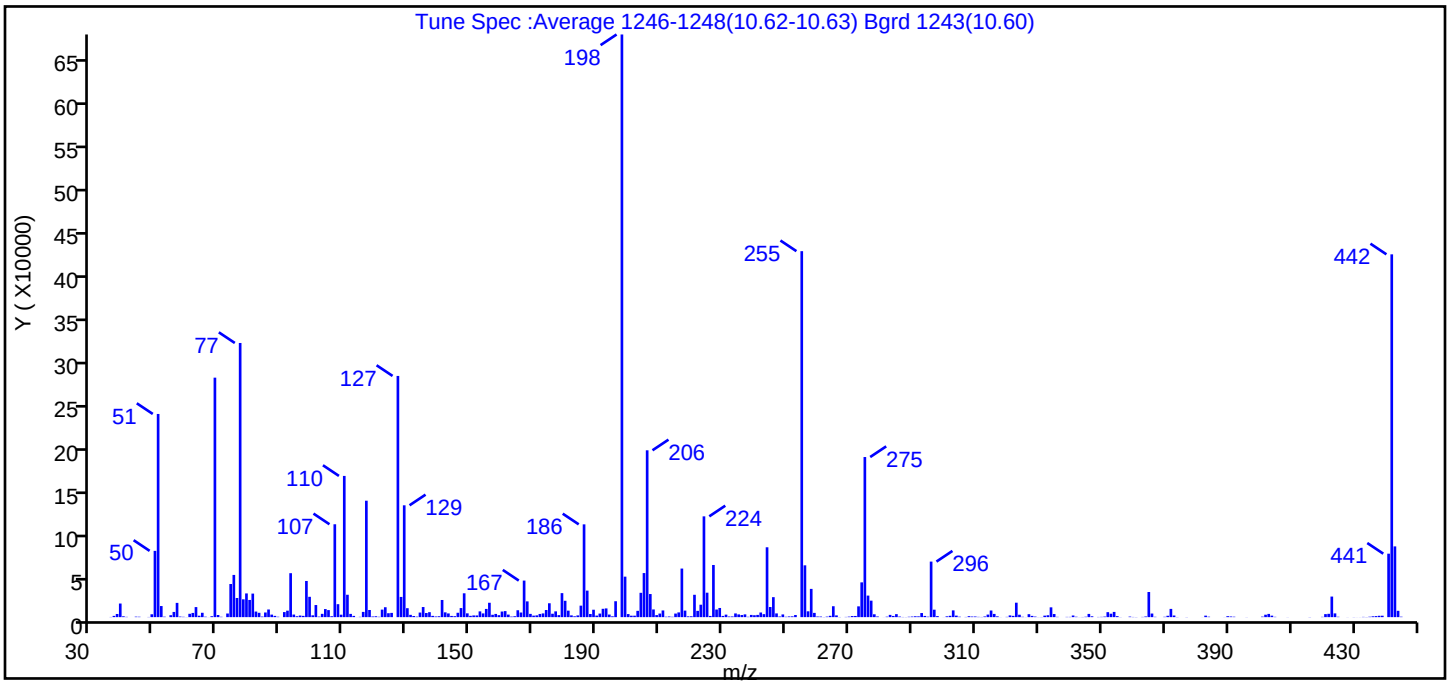
SMDFTPPW_00018 Amount Added: 1.00 Units: mL

MS Tune Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D
Injection Date: 23-Apr-2020 15:21:22 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

213 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	34.9
68	Less than 2.0 percent of mass 69	0.2 (0.4)
69	Present	41.1
70	Less than 2.0 percent of mass 69	0.4 (0.9)
127	25.0 - 75.0 percent of mass 198	41.4
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.9
275	10.0 - 30.0 percent of mass 198	27.5
365	Greater than 0.75 percent of mass 198	4.3
441	Present but less than mass 443	10.9 (89.7)
442	40.0 - 110.0 percent of mass 198	62.3
443	15.0 - 24.0 percent of mass 442	12.1 (19.5)

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D\8270 AG3.rslt\spectra.d
Injection Date: 23-Apr-2020 15:21:22
Spectrum: Tune Spec :Average 1246-1248(10.62-10.63) Bgrd 1243(10.60)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	209	133.00	591	223.00	14313	317.00	911
37.00	1457	134.00	5266	224.00	116064	318.00	76
38.00	3646	135.00	11633	225.00	28160	320.00	299
39.00	15676	136.00	4758	226.00	1388	321.00	1983
40.00	975	137.00	5718	227.00	60064	322.00	1482
41.00	321	138.00	1479	228.00	8784	323.00	16632
44.00	569	139.00	762	229.00	10562	324.00	2777
45.00	457	140.00	1032	230.00	1412	325.00	414
48.00	217	141.00	19752	231.00	2897	326.00	77
49.00	3301	142.00	5527	232.00	736	327.00	3420
50.00	76320	143.00	4258	233.00	792	328.00	1442
51.00	233984	144.00	1405	234.00	4272	329.00	635
52.00	12775	145.00	1105	235.00	3140	330.00	103
53.00	528	146.00	5036	236.00	2428	331.00	182
55.00	2235	147.00	10452	237.00	3201	332.00	1734
56.00	5987	148.00	27456	238.00	403	333.00	2173
57.00	16416	149.00	4377	239.00	2560	334.00	11288
58.00	653	150.00	1524	240.00	2209	335.00	3580
59.00	386	151.00	1970	241.00	2579	336.00	345
60.00	104	152.00	1955	242.00	5340	339.00	279
61.00	3848	153.00	6631	243.00	3459	340.00	286
62.00	4854	154.00	4308	244.00	80456	341.00	1895
63.00	11582	155.00	9455	245.00	11664	342.00	476
64.00	1636	156.00	16560	246.00	23016	343.00	83
65.00	5018	157.00	2718	247.00	4299	344.00	192
66.00	519	158.00	3697	248.00	730	345.00	463
67.00	71	159.00	2258	249.00	3127	346.00	3724
68.00	1053	160.00	6460	250.00	422	347.00	975
69.00	275776	161.00	6950	251.00	818	349.00	227
70.00	2464	162.00	2930	252.00	908	350.00	335
71.00	408	163.00	651	253.00	2439	351.00	637
73.00	4188	164.00	1045	255.00	421440	352.00	5734
74.00	38152	165.00	7946	256.00	59664	353.00	3954

Report Date: 24-Apr-2020 11:55:32 Chrom Revision: 2.3 11-Mar-2020 18:53:20
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D\8270 AG3.rslt\spectra.d
Injection Date: 23-Apr-2020 15:21:22
Spectrum: Tune Spec :Average 1246-1248(10.62-10.63) Bgrd 1243(10.60)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	48616	166.00	5313	257.00	6725	354.00	6018
76.00	22048	167.00	42104	258.00	32536	355.00	1142
77.00	315712	168.00	18160	259.00	4905	356.00	130
78.00	20528	169.00	3750	260.00	729	359.00	638
79.00	27312	170.00	1739	261.00	672	360.00	221
80.00	19800	171.00	2049	262.00	156	361.00	155
81.00	27120	172.00	3674	263.00	595	363.00	260
82.00	6435	173.00	4293	264.00	1543	364.00	750
83.00	4996	174.00	8205	265.00	12560	365.00	28944
84.00	656	175.00	15983	266.00	2006	366.00	4155
85.00	5358	176.00	3921	267.00	181	367.00	377
86.00	8814	177.00	6653	269.00	253	370.00	395
87.00	2904	178.00	2307	270.00	577	371.00	1572
88.00	1465	179.00	27648	271.00	1262	372.00	9495
89.00	463	180.00	18832	272.00	1346	373.00	1874
91.00	5816	181.00	7471	273.00	12435	374.00	175
92.00	7458	182.00	2031	274.00	40048	377.00	147
93.00	50616	183.00	979	275.00	184384	382.00	50
94.00	2979	184.00	2000	276.00	24816	383.00	1716
95.00	1047	185.00	13234	277.00	18984	384.00	534
96.00	1831	186.00	106856	278.00	3287	389.00	76
97.00	1473	187.00	30552	279.00	773	390.00	1089
98.00	41648	188.00	3622	281.00	52	391.00	744
99.00	23416	189.00	8547	282.00	527	392.00	496
100.00	2078	190.00	1798	283.00	2607	396.00	101
101.00	13937	191.00	4109	284.00	1381	401.00	613
102.00	614	192.00	9616	285.00	3458	402.00	2794
103.00	3802	193.00	10044	286.00	696	403.00	3724
104.00	9290	194.00	2981	287.00	207	404.00	1708
105.00	8101	195.00	964	288.00	132	405.00	349
106.00	1052	196.00	18320	289.00	439	409.00	91
107.00	106952	198.00	670976	290.00	693	416.00	165
108.00	14935	199.00	46624	291.00	996	420.00	334
109.00	2816	200.00	3542	292.00	896	421.00	3479

Report Date: 24-Apr-2020 11:55:32 Chrom Revision: 2.3 11-Mar-2020 18:53:20
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D\8270 AG3.rslt\spectra.d
Injection Date: 23-Apr-2020 15:21:22
Spectrum: Tune Spec :Average 1246-1248(10.62-10.63) Bgrd 1243(10.60)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
110.00	162624	201.00	1664	293.00	4723	422.00	3834
111.00	25784	202.00	1679	294.00	1401	423.00	23696
112.00	3740	203.00	7262	295.00	539	424.00	4310
113.00	1431	204.00	28016	296.00	63976	425.00	441
114.00	57	205.00	50760	297.00	8583	428.00	73
115.00	353	206.00	192128	298.00	1189	430.00	121
116.00	6037	207.00	26600	300.00	63	431.00	55
117.00	134080	208.00	8855	301.00	919	432.00	69
118.00	8232	209.00	2369	302.00	1561	433.00	287
119.00	743	210.00	4121	303.00	7795	434.00	165
120.00	1010	211.00	7709	304.00	1746	435.00	479
121.00	418	212.00	474	305.00	509	436.00	962
122.00	8668	213.00	757	307.00	224	437.00	1214
123.00	11406	214.00	415	308.00	1103	438.00	1565
124.00	4525	215.00	4120	309.00	688	439.00	1633
125.00	4898	216.00	5439	310.00	733	441.00	73080
127.00	277760	217.00	55944	311.00	319	442.00	417792
128.00	23264	218.00	7522	312.00	209	443.00	81472
129.00	128784	219.00	922	313.00	790	444.00	7306
130.00	10307	220.00	996	314.00	2938	445.00	515
131.00	2649	221.00	25752	315.00	7640		
132.00	1294	222.00	7236	316.00	3708		

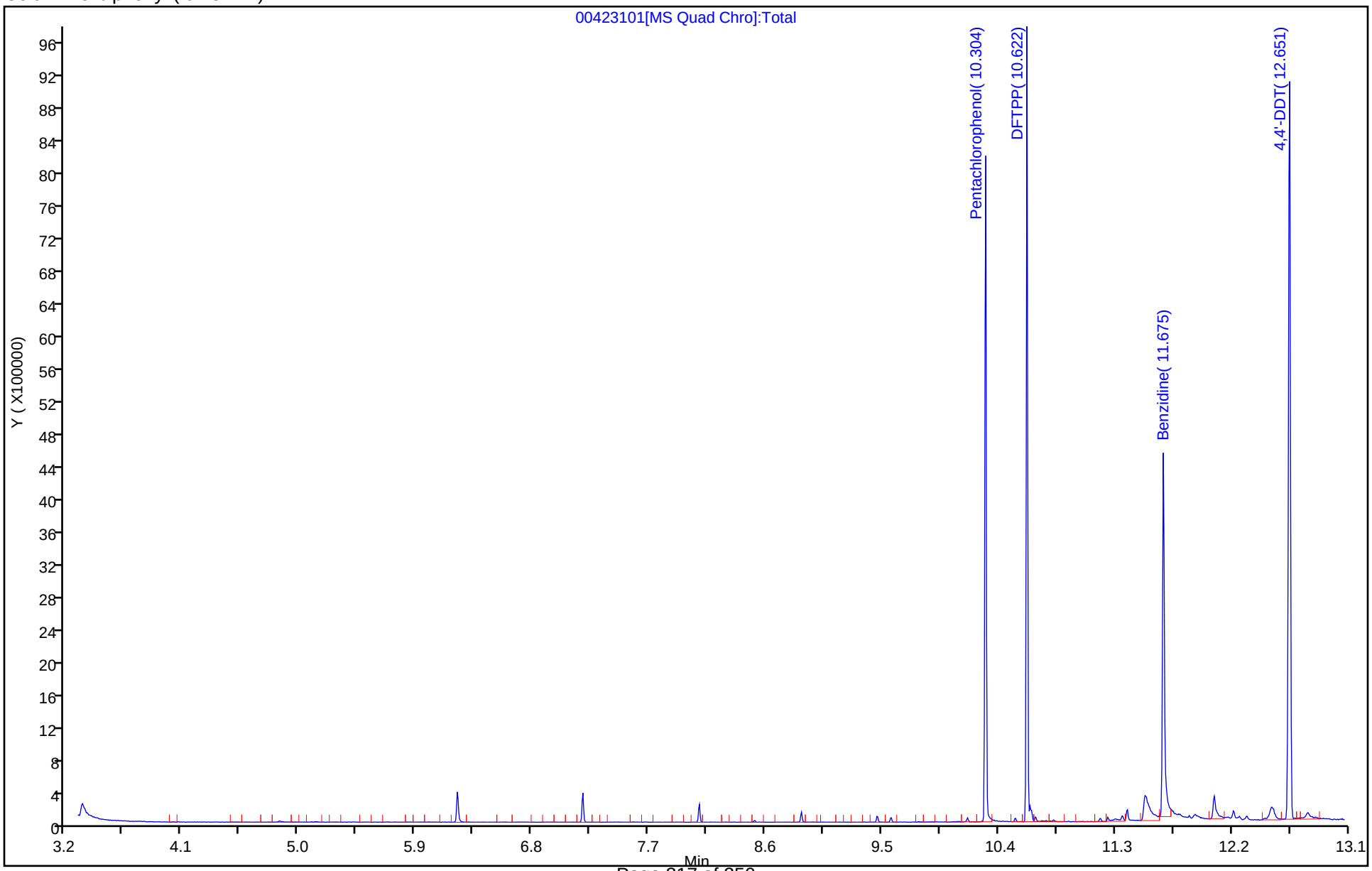
Report Date: 24-Apr-2020 11:55:32 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D

Injection Date:	23-Apr-2020 15:21:22	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Breakdown Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D
Injection Date: 23-Apr-2020 15:21:22 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

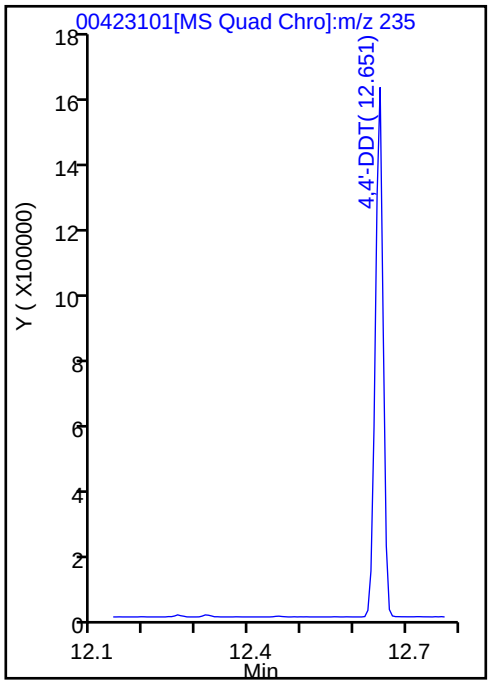
173 4,4'-DDT, Detector: MS Quad

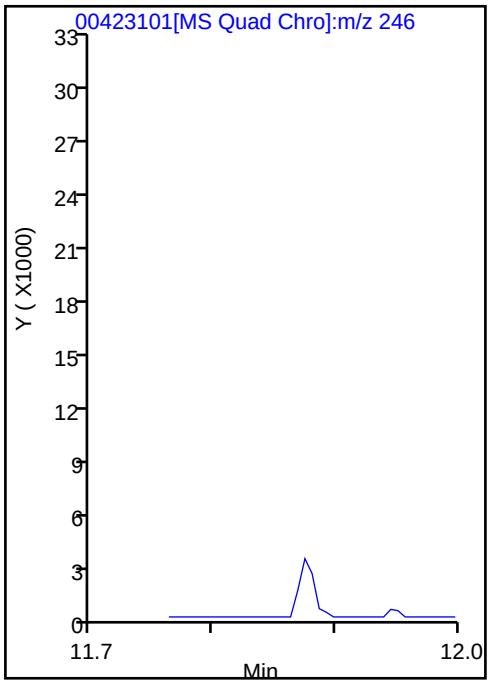
SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

173 4,4'-DDT, Area = 1654905
169 4,4'-DDD, Area = 5989
165 4,4'-DDE, Area = 2792

%Breakdown: 0.53%, <= 20.00%
Passed





Peak Tailing Report

Eurofins TestAmerica, Canton

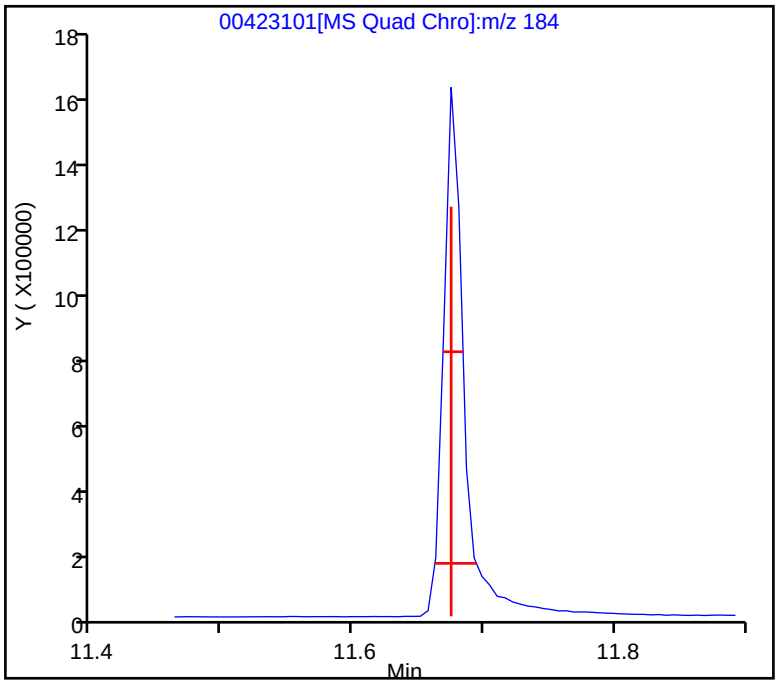
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D
Injection Date: 23-Apr-2020 15:21:22 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

161 Benzidine, Detector: MS Quad

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.019 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 1.6, Max. Tailing < 2.00
Passed



Peak Tailing Report

Eurofins TestAmerica, Canton

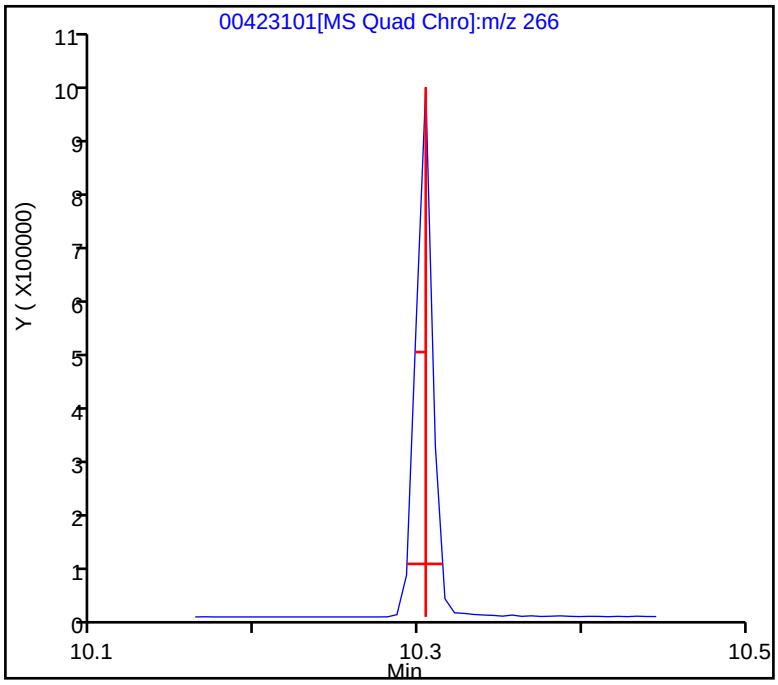
Data File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423101.D
Injection Date: 23-Apr-2020 15:21:22 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

145 Pentachlorophenol, Detector: MS Quad

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 28-Apr-2020 14:58:34 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:06 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 15:15:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
145 Pentachlorophenol	266	10.275	10.275	0.000	90	747984	NR	NR	
161 Benzidine	184	11.639	11.639	0.000	98	1972116	NR	NR	
165 4,4'-DDE	246	11.839	11.839	0.000	41	4238		NR	a
169 4,4'-DDD	235	12.222	12.222	0.000	36	8860		NR	a
173 4,4'-DDT	235	12.604	12.604	0.000	97	2043314	NR	NR	
213 DFTPP									

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

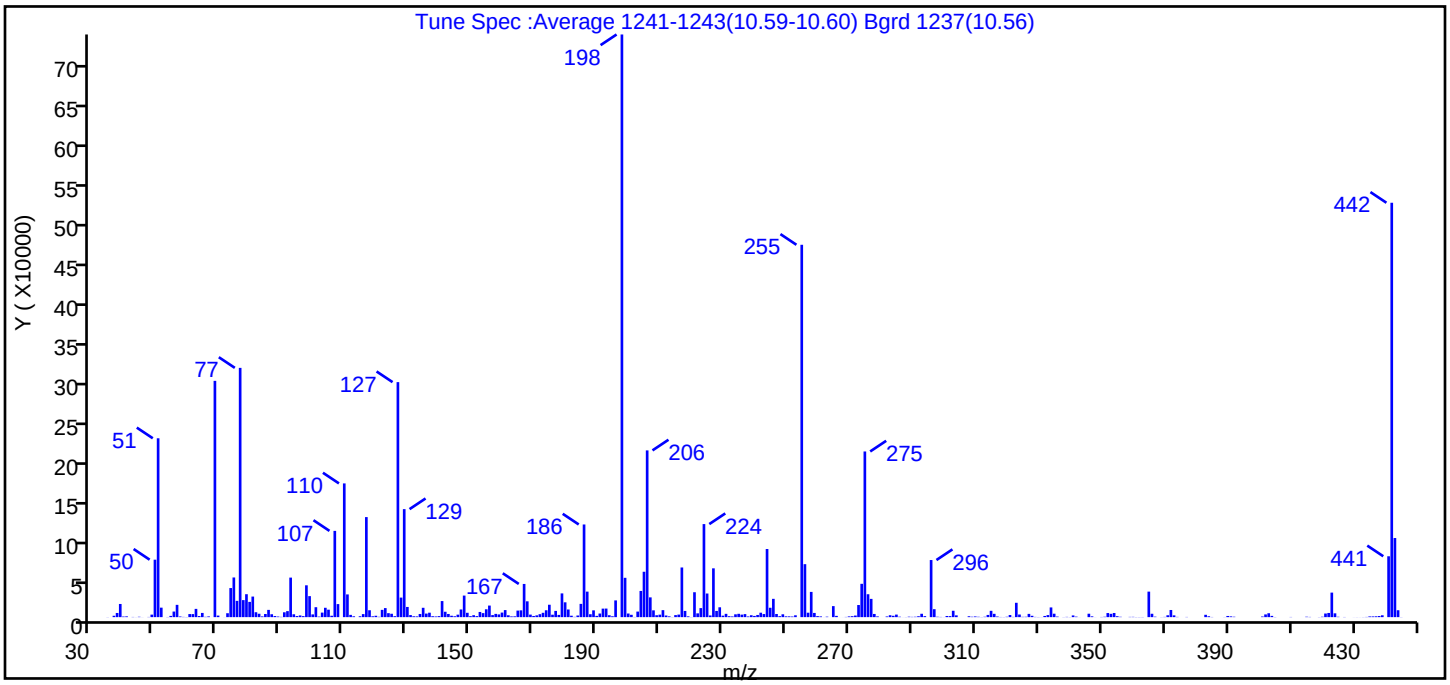
SMDFTPPW_00018 Amount Added: 1.00 Units: mL

MS Tune Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D
Injection Date: 28-Apr-2020 14:58:34 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

213 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	30.7
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	40.6
70	Less than 2.0 percent of mass 69	0.3 (0.7)
127	25.0 - 75.0 percent of mass 198	40.3
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.8
275	10.0 - 30.0 percent of mass 198	28.4
365	Greater than 0.75 percent of mass 198	4.4
441	Present but less than mass 443	10.4 (76.9)
442	40.0 - 110.0 percent of mass 198	71.1
443	15.0 - 24.0 percent of mass 442	13.6 (19.1)

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D\8270 AG3.rslt\spectra.d
Injection Date: 28-Apr-2020 14:58:34
Spectrum: Tune Spec :Average 1241-1243(10.59-10.60) Bgrd 1237(10.56)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	125	131.00	2607	221.00	31288	318.00	225
37.00	1728	132.00	1069	222.00	4769	319.00	151
38.00	5240	133.00	932	223.00	11350	320.00	461
39.00	16544	134.00	3969	224.00	116896	321.00	2649
40.00	754	135.00	11755	225.00	29688	322.00	314
41.00	990	136.00	4468	226.00	2106	323.00	18032
43.00	248	137.00	5593	227.00	61320	324.00	3289
44.00	76	138.00	1156	228.00	7793	325.00	390
45.00	461	139.00	847	229.00	12390	326.00	468
46.00	70	140.00	1285	230.00	1861	327.00	4101
48.00	253	141.00	20192	231.00	4146	328.00	1680
49.00	3157	142.00	6779	232.00	1189	329.00	289
50.00	72176	143.00	3987	233.00	871	330.00	196
51.00	224704	144.00	1761	234.00	3545	331.00	113
52.00	11927	145.00	1103	235.00	4185	332.00	1486
53.00	16	146.00	3112	236.00	3168	333.00	2590
54.00	197	147.00	9634	237.00	3819	334.00	12202
55.00	1573	148.00	27096	238.00	860	335.00	4307
56.00	7031	149.00	5467	239.00	2388	336.00	730
57.00	15442	150.00	1243	240.00	1533	338.00	128
58.00	817	151.00	2449	241.00	2738	339.00	325
59.00	296	152.00	1287	242.00	5576	340.00	141
60.00	188	153.00	6505	243.00	3905	341.00	2149
61.00	3873	154.00	5049	244.00	85600	342.00	648
62.00	3825	155.00	9863	245.00	11783	343.00	56
63.00	10380	156.00	14543	246.00	23000	346.00	4301
64.00	1367	157.00	2574	247.00	3963	347.00	991
65.00	5282	158.00	4091	248.00	1224	348.00	68
66.00	403	159.00	3418	249.00	3593	350.00	232
67.00	909	160.00	5729	250.00	990	351.00	485
69.00	296832	161.00	8858	251.00	987	352.00	5146
70.00	1954	162.00	2339	252.00	764	353.00	4163
72.00	63	163.00	914	253.00	2313	354.00	5220

Report Date: 29-Apr-2020 15:56:07 Chrom Revision: 2.3 11-Mar-2020 18:53:20
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D\8270 AG3.rslt\spectra.d
Injection Date: 28-Apr-2020 14:58:34
Spectrum: Tune Spec :Average 1241-1243(10.59-10.60) Bgrd 1237(10.56)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	4924	164.00	991	255.00	467776	355.00	1169
74.00	36544	165.00	8235	256.00	66544	356.00	445
75.00	49832	166.00	8544	257.00	5570	359.00	317
76.00	20440	167.00	41704	258.00	31704	360.00	371
77.00	313152	168.00	19880	259.00	5288	361.00	168
78.00	21392	169.00	3185	260.00	1309	362.00	175
79.00	28816	170.00	1473	261.00	902	363.00	187
80.00	19168	171.00	2250	262.00	52	365.00	32064
81.00	25848	172.00	3732	263.00	601	366.00	4250
82.00	6172	173.00	5454	265.00	13853	367.00	594
83.00	4259	174.00	8647	266.00	1609	369.00	126
84.00	918	175.00	15588	267.00	21	370.00	286
85.00	3952	176.00	3044	268.00	35	371.00	2351
86.00	9121	177.00	7838	269.00	262	372.00	8987
87.00	3641	178.00	2814	270.00	913	373.00	2242
88.00	1385	179.00	29824	271.00	1189	374.00	309
89.00	769	180.00	18624	272.00	1992	377.00	249
90.00	328	181.00	9618	273.00	15222	383.00	2942
91.00	6100	182.00	1792	274.00	41864	384.00	1100
92.00	7556	183.00	332	275.00	208128	385.00	221
93.00	49672	184.00	2060	276.00	28776	389.00	111
94.00	3615	185.00	16664	277.00	22944	390.00	1468
95.00	1393	186.00	116416	278.00	3997	391.00	949
96.00	2123	187.00	32056	279.00	918	392.00	519
97.00	1265	188.00	3655	282.00	860	401.00	805
98.00	40000	189.00	8532	283.00	2397	402.00	3417
99.00	26400	190.00	1600	284.00	1714	403.00	4903
100.00	3448	191.00	4538	285.00	3204	404.00	1582
101.00	12484	192.00	10712	286.00	562	405.00	195
102.00	682	193.00	10773	287.00	52	410.00	231
103.00	5698	194.00	2412	288.00	118	415.00	522
104.00	11758	195.00	1095	289.00	571	416.00	277
105.00	9373	196.00	21032	290.00	351	419.00	157
106.00	1755	198.00	731968	291.00	497	420.00	509

Report Date: 29-Apr-2020 15:56:07 Chrom Revision: 2.3 11-Mar-2020 18:53:20
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D\8270 AG3.rslt\spectra.d
Injection Date: 28-Apr-2020 14:58:34
Spectrum: Tune Spec :Average 1241-1243(10.59-10.60) Bgrd 1237(10.56)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	108360	199.00	49408	292.00	1143	421.00	4540
108.00	16392	200.00	4542	293.00	4238	422.00	5251
110.00	168000	201.00	2936	294.00	1271	423.00	30832
111.00	28552	202.00	227	296.00	71752	424.00	4782
112.00	2857	203.00	6975	297.00	9992	425.00	466
113.00	1059	204.00	32896	298.00	506	427.00	210
115.00	1104	205.00	57016	299.00	260	430.00	55
116.00	3817	206.00	209472	300.00	81	431.00	90
117.00	125688	207.00	24832	301.00	1437	432.00	53
118.00	8661	208.00	8535	302.00	1281	433.00	120
119.00	1045	209.00	2414	303.00	8018	434.00	258
120.00	1733	210.00	3102	304.00	2236	435.00	893
121.00	419	211.00	8776	308.00	1117	436.00	913
122.00	9138	212.00	2048	309.00	523	437.00	1049
123.00	11365	213.00	998	310.00	866	438.00	1398
124.00	4992	214.00	150	311.00	461	439.00	2334
125.00	4244	215.00	2552	312.00	163	441.00	76472
126.00	1213	216.00	3193	313.00	483	442.00	520576
127.00	295232	217.00	62392	314.00	2765	443.00	99392
128.00	24560	218.00	7786	315.00	7950	444.00	8687
129.00	135680	219.00	1008	316.00	4154	445.00	141
130.00	12806	220.00	139	317.00	786		

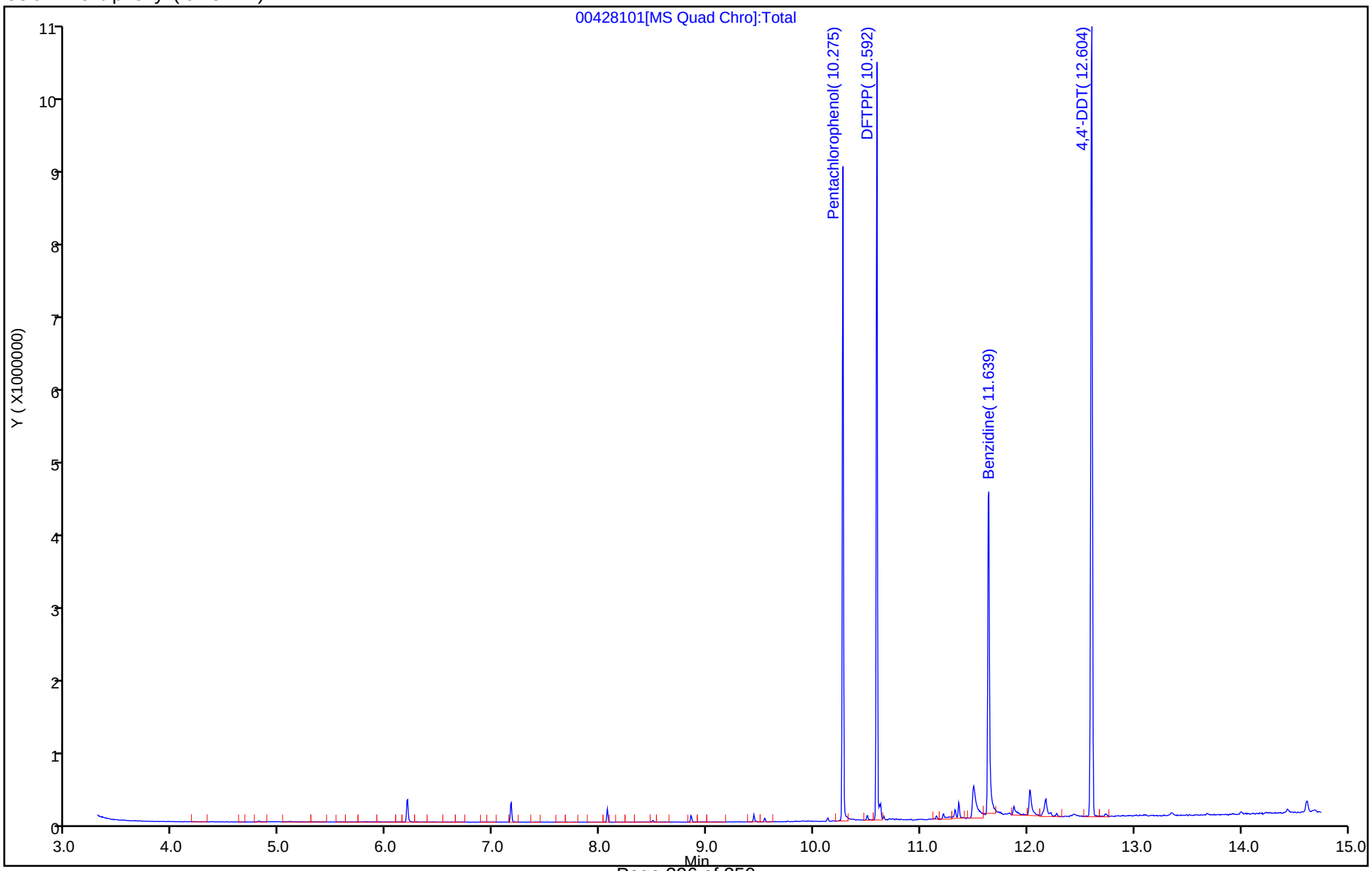
Report Date: 29-Apr-2020 15:56:07 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D

Injection Date:	28-Apr-2020 14:58:34	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Breakdown Report

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D
Injection Date: 28-Apr-2020 14:58:34 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

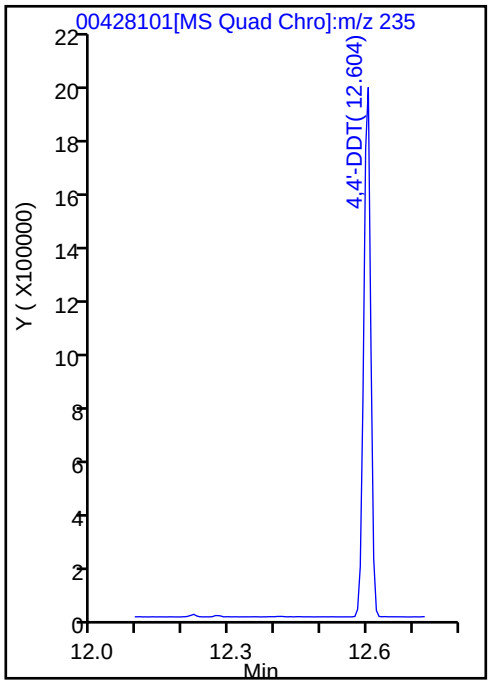
173 4,4'-DDT, Detector: MS Quad

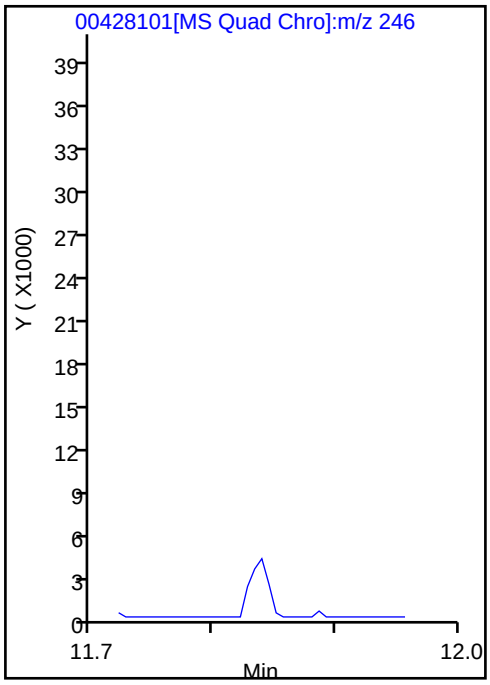
SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

173 4,4'-DDT, Area = 2043314
169 4,4'-DDD, Area = 8860
165 4,4'-DDE, Area = 4238

%Breakdown: 0.64%, <= 20.00%
Passed





Peak Tailing Report

Eurofins TestAmerica, Canton

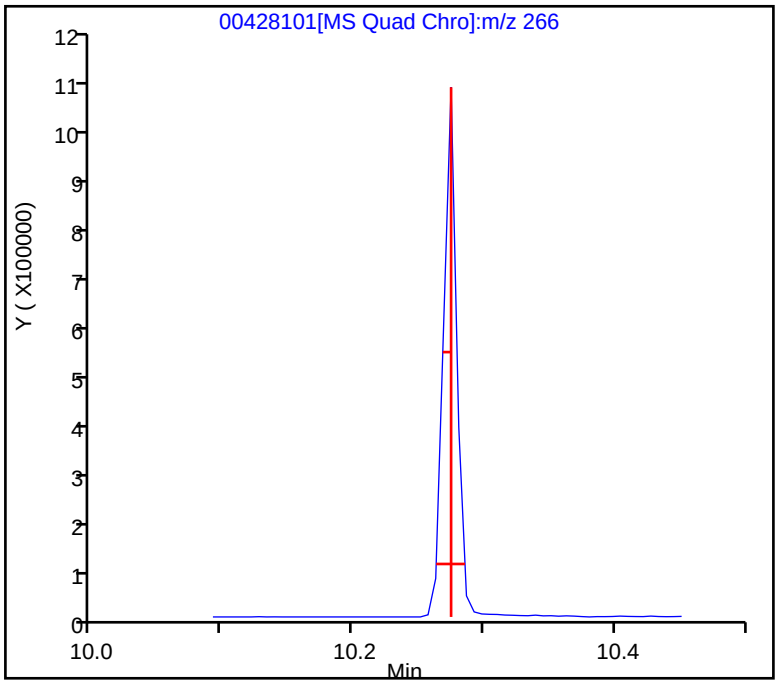
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D
Injection Date: 28-Apr-2020 14:58:34 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

145 Pentachlorophenol, Detector: MS Quad

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



Peak Tailing Report

Eurofins TestAmerica, Canton

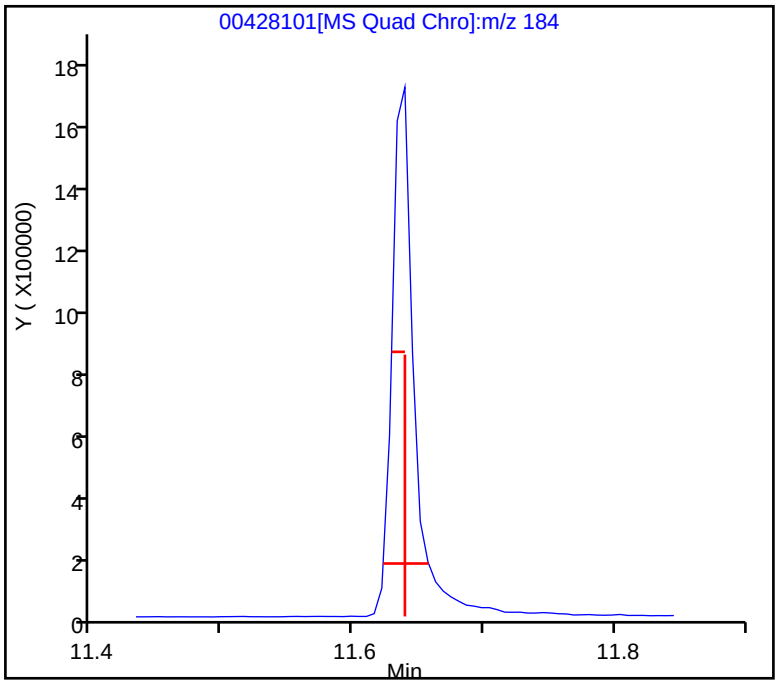
Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428101.D
Injection Date: 28-Apr-2020 14:58:34 Instrument ID: A4AG3
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8270 AG3 Limit Group: MSS 8270D ICAL

161 Benzidine, Detector: MS Quad

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.018 (min.)
Front Width = 0.017 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-431869/13-A

Matrix: Water Lab File ID: 00428004.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3510C Date Extracted: 04/23/2020 06:49

Sample wt/vol: 1000(mL) Date Analyzed: 04/28/2020 15:44

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 432443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-95-3	Nitrobenzene	10	U	10	0.80

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	99		36-122
4165-62-2	Phenol-d5 (Surr)	34		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	63		33-120
367-12-4	2-Fluorophenol (Surr)	54		10-120
321-60-8	2-Fluorobiphenyl (Surr)	76		39-120
118-79-6	2,4,6-Tribromophenol (Surr)	75		33-120

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428004.D
Lims ID: MB 240-431869/13-A
Client ID:
Sample Type: MB
Inject. Date: 28-Apr-2020 15:44:12 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-004
Misc. Info.: MB 240-431869/13-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 16:18:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.563	6.563	0.000	95	97896	4.00	4.00	
* 2 Naphthalene-d8	136	7.663	7.663	0.000	98	343818	4.00	4.00	
* 3 Acenaphthene-d10	164	9.169	9.169	0.000	93	232100	4.00	4.00	
* 4 Phenanthrene-d10	188	10.445	10.445	0.000	97	466089	4.00	4.00	
* 5 Chrysene-d12	240	13.310	13.310	0.000	98	465081	4.00	4.00	
* 6 Perylene-d12	264	15.627	15.628	-0.001	98	486191	4.00	4.00	
$ 7 2-Fluorophenol	112	5.393	5.399	-0.007	93	145661	10.0	5.40	
$ 8 Phenol-d5	99	6.204	6.204	0.000	72	121505	10.0	3.37	
$ 9 Nitrobenzene-d5	82	7.028	7.034	-0.006	90	309333	10.0	6.25	
$ 10 2-Fluorobiphenyl (Surr)	172	8.563	8.563	0.000	99	576550	10.0	7.63	
$ 11 2,4,6-Tribromophenol	330	9.839	9.840	-0.001	92	92349	10.0	7.54	
$ 12 Terphenyl-d14	244	11.904	11.904	0.000	97	957246	10.0	9.87	
13 1,4-Dioxane	88		3.628					ND	
14 N-Nitrosodimethylamine	74		4.005					ND	
15 Pyridine	79		4.052					ND	
17 Dimethylformamide	73		4.087					ND	U
18 Ethyl methacrylate	69		4.169					ND	U
16 Chlorobenzene TIC	112		4.370					ND	U
19 2-Picoline	93		4.492					ND	U
20 N-Nitrosomethylethylamine	88		4.622					ND	U
22 Methyl methanesulfonate	80		4.940					ND	U
23 n,n'-Dimethylacetamide	44		5.092					ND	U
25 N-Nitrosodiethylamine	102		5.357					ND	U
26 Ethyl methanesulfonate	79		5.634					ND	U
27 2-Methylcyclohexanone	68		5.892					ND	U
28 3-Methylcyclohexanone	69		5.928					ND	U
24 Phenylmercaptan	110		5.955					ND	U
29 4-Methylcyclohexanone	55		5.975					ND	U
35 Pentachloroethane	167		6.116					ND	U
30 Benzaldehyde	77		6.181					ND	
31 Phenol	94		6.216					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
32 Aniline	93		6.269					ND	
33 Bis(2-chloroethyl)ether	93		6.299					ND	
34 4-Methyl-1-cyclohexanemeth	55		6.341					ND	U
36 2-Chlorophenol	128		6.387					ND	
37 n-Decane	57		6.399					ND	U
38 4-Methyl-1-cyclohexanemeth	55		6.475					ND	U
39 1,3-Dichlorobenzene	146		6.522					ND	
40 1,4-Dichlorobenzene	146		6.581					ND	
41 Benzyl alcohol	108		6.657					ND	
49 N-Nitrosopyrrolidine	100		6.669					ND	U
42 1-Methyl-2-pyrrilidinone	99		6.687					ND	U
51 N-Nitrosomorpholine	56		6.698					ND	U
44 1,2-Dichlorobenzene	146		6.722					ND	
53 2-Toluidine	106		6.734					ND	U
45 2-Methylphenol	108		6.740					ND	
46 2,2'-oxybis[1-chloropropan	45		6.769					ND	
47 Indene	115		6.793					ND	
48 3 & 4 Methylphenol	108		6.869					ND	
50 N-Nitrosodi-n-propylamine	70		6.881					ND	
52 Acetophenone	105		6.893					ND	U
56 N-Nitrosopiperidine	114		6.981					ND	U
54 Hexachloroethane	117		7.016					ND	
55 Nitrobenzene	77		7.052					ND	
43 2-Chloroaniline	127		7.134					ND	U
62 o,o',o''-Triethylphosphoro	198		7.186					ND	U
60 1,3,5-Trichlorobenzene	180		7.186					ND	U
57 Isophorone	82		7.246					ND	
65 alpha,alpha-Dimethyl phene	58		7.304					ND	U
59 2-Nitrophenol	139		7.322					ND	
58 2,4-Dimethylphenol	107		7.328					ND	
61 1-Phenoxy-2-propanol	94		7.373					ND	U
63 Benzoic acid	105		7.381					ND	
64 Bis(2-chloroethoxy)methane	93		7.399					ND	
206 3 & 4 Chlorophenol	128		7.428					ND	U
66 2,4-Dichlorophenol	162		7.528					ND	
72 Hexachloropropene	213		7.569					ND	U
68 1,2,4-Trichlorobenzene	180		7.610					ND	
74 1,2,3-Trichlorobenzene	180		7.651					ND	U
69 Naphthalene	128		7.687					ND	
70 4-Chloroaniline	127		7.704					ND	
71 2,6-Dichlorophenol	162		7.722					ND	
75 Benzothiazole	135		7.739					ND	U
77 Quinoline	129		7.769					ND	U
76 N-Nitrosodi-n-butylamine	84		7.775					ND	U
73 Hexachlorobutadiene	225		7.781					ND	
79 p-Phenylene diamine	108		7.804					ND	U
67 4-tert-Butylphenol	135		7.951					ND	U
81 Safrole, Total	162		7.975					ND	U
78 Caprolactam	113		7.987					ND	
80 4-Chloro-3-methylphenol	107		8.093					ND	
87 Isosafrole Peak 1	162		8.193					ND	U
84 1,2,3,5-Tetrachlorobenzene	216		8.245					ND	U

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
82 2-Methylnaphthalene	142		8.269					ND	
83 1-Methylnaphthalene	142		8.357					ND	
85 Hexachlorocyclopentadiene	237		8.410					ND	
86 1,2,4,5-Tetrachlorobenzene	216		8.416					ND	
93 1,2,3,4 -Tetrachlorobenzen	216		8.434					ND	U
90 Isosafrole Peak 2	162		8.446					ND	U
91 2,4-Toluene diamine	121		8.469					ND	U
88 2,4,6-Trichlorophenol	196		8.498					ND	
97 1-Chloronaphthalene	162		8.516					ND	U
95 3,4-Dichloronitrobenzene	109		8.522					ND	U
89 2,4,5-Trichlorophenol	196		8.534					ND	
98 Phenyl ether	170		8.575					ND	U
100 1,4-Naphthoquinone	158		8.622					ND	U
101 1,4-Dinitrobenzene	168		8.651					ND	U
92 1,1'-Biphenyl	154		8.657					ND	U
96 2-Chloronaphthalene	162		8.693					ND	
99 2-Nitroaniline	65		8.751					ND	
102 Dimethyl phthalate	163		8.875					ND	
103 1,3-Dinitrobenzene	168		8.916					ND	
104 2,6-Dinitrotoluene	165		8.940					ND	
105 Acenaphthylene	152		9.051					ND	
94 o-Phenylphenol	170		9.098					ND	U
106 3-Nitroaniline	138		9.098					ND	
112 Pentachlorobenzene	250		9.110					ND	U
108 2,4-Dinitrophenol	184		9.181					ND	
114 1-Naphthylamine	143		9.192					ND	U
115 2,3,5,6-Tetrachlorophenol	232		9.198					ND	U
109 Acenaphthene	153		9.198					ND	
110 4-Nitrophenol	109		9.210					ND	
119 2-Naphthylamine	143		9.257					ND	U
111 2,4-Dinitrotoluene	165		9.287					ND	
121 Thionazin	97		9.339					ND	U
113 Dibenzofuran	168		9.340					ND	
124 N-Nitro-o-toluidine	152		9.410					ND	U
116 2,3,4,6-Tetrachlorophenol	232		9.440					ND	
123 Tributyl phosphate	99		9.457					ND	U
117 Hexadecane	57		9.463					ND	U
118 Diethyl phthalate	149		9.469					ND	
132 Sulfotepp	202		9.575					ND	U
122 4-Chlorophenyl phenyl ethe	204		9.604					ND	
125 4-Nitroaniline	138		9.622					ND	
126 Fluorene	166		9.634					ND	
127 4,6-Dinitro-2-methylphenol	198		9.645					ND	
136 Phorate	121		9.646					ND	U
107 Benzophenone	105		9.651					ND	U
133 1,3,5-Trinitrobenzene	213		9.686					ND	U
128 N-Nitrosodiphenylamine	169		9.698					ND	
129 Diphenylamine	169		9.698					ND	
135 Phenacetin	108		9.716					ND	U
134 Diallate Peak 1	86		9.722					ND	U
131 1,2-Diphenylhydrazine	77		9.740					ND	U
130 Azobenzene	77		9.740					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
137 Diallate Peak 2	86		9.804					ND	U
120 3 & 4 Phenoxyphenol	186		9.910					ND	U
139 Dimethoate	87		9.957					ND	U
144 Pronamide	173		9.969					ND	U
138 4-Bromophenyl phenyl ether	248		10.022					ND	
143 4-Aminobiphenyl	169		10.027					ND	U
147 Disulfoton	88		10.057					ND	U
146 Pentachloronitrobenzene	237		10.075					ND	U
141 Hexachlorobenzene	284		10.122					ND	
140 Atrazine	200		10.122					ND	
148 Dinoseb	211		10.175					ND	U
142 n-Octadecane	57		10.240					ND	U
145 Pentachlorophenol	266		10.275					ND	
153 Methyl parathion	109		10.410					ND	U
149 Phenanthrene	178		10.463					ND	
150 Anthracene	178		10.510					ND	
152 Carbazole	167		10.622					ND	
155 Diphenylsulfone	125		10.716					ND	U
151 Chlorpyrifos	97		10.798					ND	U
156 Ethyl Parathion	97		10.816					ND	U
154 Di-n-butyl phthalate	149	10.851	10.851	0.000	97	4610		0.2797	
157 4-Nitroquinoline-1-oxide	190		10.880					ND	U
158 Methapyrilene	58		10.910					ND	U
159 Isodrin	66		11.187					ND	U
164 Aramite Peak 1	185		11.451					ND	U
160 Fluoranthene	202		11.557					ND	
166 Aramite Peak 2	185		11.627					ND	U
161 Benzidine	184		11.634					ND	
167 p-Dimethylamino azobenzene	225		11.769					ND	U
168 Chlorobenzilate	139		11.798					ND	U
163 Pyrene	202		11.804					ND	
162 Kepone	272		11.808					ND	U
165 4,4'-DDE	246		11.839					ND	U
170 Famphur	218		12.074					ND	U
172 3,3'-Dimethylbenzidine	212		12.145					ND	U
169 4,4'-DDD	235		12.222					ND	U
171 Butyl benzyl phthalate	149		12.422					ND	
174 2-Acetylaminofluorene	181		12.469					ND	U
173 4,4'-DDT	235		12.604					ND	U
177 4,4'-Methylene bis(2-chlor	231		12.845					ND	U
175 3,3'-Dimethoxybenzidine	244		12.857					ND	U
181 Hexabromobenzene	232		13.074					ND	U
176 Bis(2-ethylhexyl) phthalat	149		13.169					ND	
178 3,3'-Dichlorobenzidine	252		13.204					ND	
179 Benzo[a]anthracene	228		13.292					ND	
180 Chrysene	228		13.351					ND	
182 6-Methylchrysene	242		13.651					ND	U
183 Di-n-octyl phthalate	149		14.169					ND	
184 7,12-Dimethylbenz(a)anthra	256		14.545					ND	U
185 Benzo[b]fluoranthene	252		14.986					ND	
186 Benzo[k]fluoranthene	252		15.033					ND	
187 Benzo[a]pyrene	252		15.539					ND	U

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
188 3-Methylcholanthrene	268		15.657					ND	U
189 Dibenz[a,h]acridine	279		16.580					ND	U
190 Dibenz[a,j]acridine	279		16.768					ND	U
191 Indeno[1,2,3-cd]pyrene	276		17.651					ND	
192 Dibenz(a,h)anthracene	278		17.657					ND	
193 Benzo[g,h,i]perylene	276		18.251					ND	
194 Dibenzo[a,e]pyrene	302		20.130					ND	U
198 Triphenyl Phosphate TIC	1		0.000					ND	U
197 Perylene TIC	1		0.000					ND	U
199 Tris(2,3-dibromopropyl)pho	1		0.000					ND	U
200 Trimethyl phosphate TIC	1		0.000					ND	U
201 Total Cresols	1		0.000					ND	U
202 Tricresyl phosphate TIC	1		0.000					ND	U
308 1,2,4,5-Tetrachlorobenzene	1		0.000					ND	U
204 2-Chloroaniline TIC	1		0.000					ND	U
212 3,3'-Dimethoxybenzidine TI	1		0.000					ND	U
196 Diisobutyl phthalate TIC	1		0.000					ND	U
210 4-Chlorophenol TIC	1		0.000					ND	U
309 Bis(2-chloroethoxy)ethane	1		0.000					ND	U
214 2,3,7,8 TCDF TIC	304		12.500					ND	U
S 215 Isosafrole	162		5.181					ND	
S 216 4-Methyl-1-cyclohexanemeth	55		6.170					ND	
S 217 Diallate	86		6.385					ND	
S 218 Aramite, Total	185		7.898					ND	
S 219 Methyl Phenols,Total	100		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

SMIS80PPMW_00021 Amount Added: 5.00 Units: uL Run Reagent

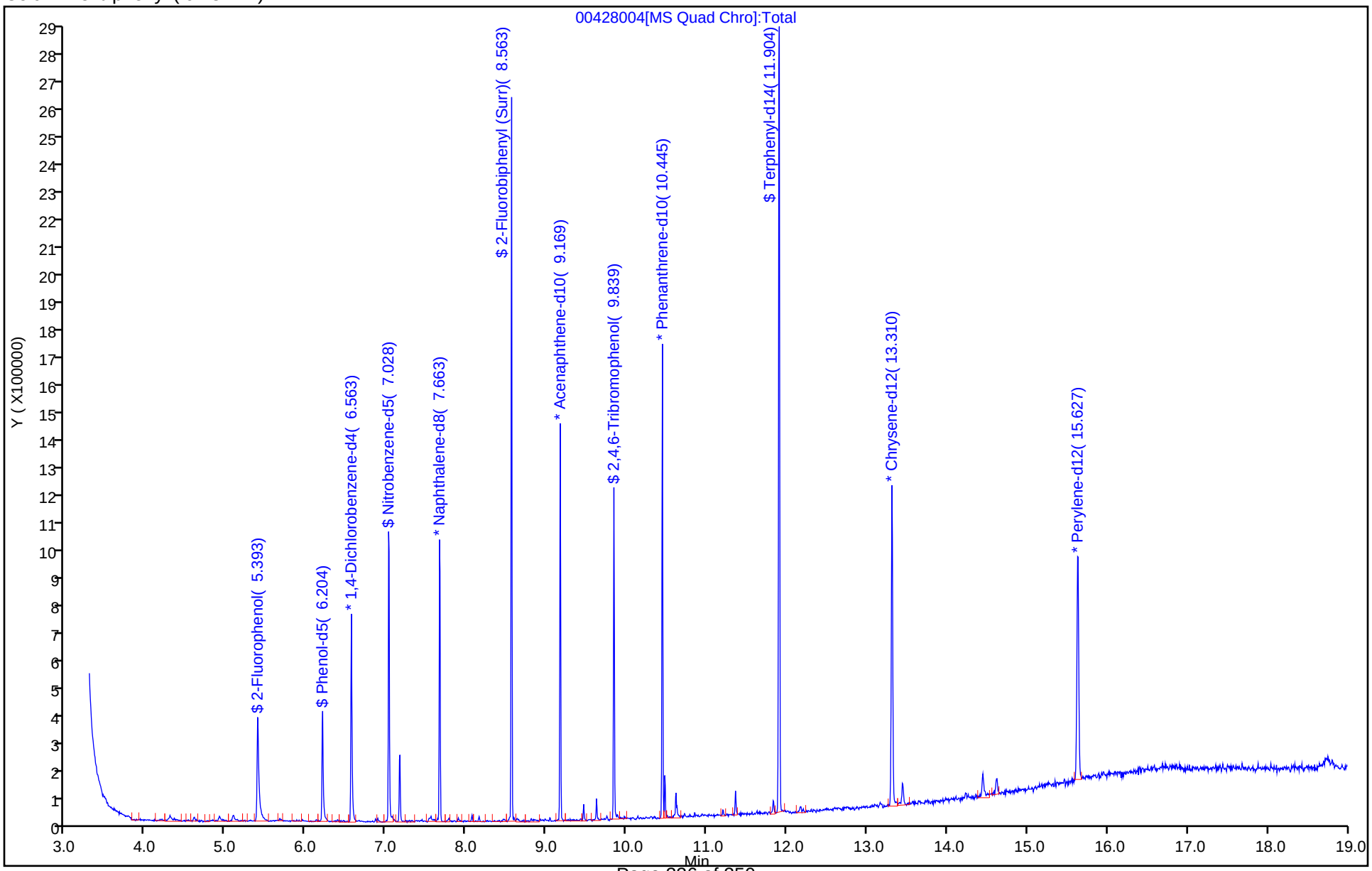
Report Date: 29-Apr-2020 15:56:27 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428004.D

Injection Date:	28-Apr-2020 15:44:12	Instrument ID:	A4AG3	Operator ID:	
Lims ID:	MB 240-431869/13-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8270 AG3	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428004.D
Lims ID: MB 240-431869/13-A
Client ID:
Sample Type: MB
Inject. Date: 28-Apr-2020 15:44:12 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-004
Misc. Info.: MB 240-431869/13-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 16:18:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	10.0	5.40	53.95
$ 8 Phenol-d5	10.0	3.37	33.72
$ 9 Nitrobenzene-d5	10.0	6.25	62.51
$ 10 2-Fluorobiphenyl (Surr)	10.0	7.63	76.28
$ 11 2,4,6-Tribromophenol	10.0	7.54	75.45
$ 12 Terphenyl-d14	10.0	9.87	98.66

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-431869/14-A

Matrix: Water Lab File ID: 00428005.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3510C Date Extracted: 04/23/2020 06:49

Sample wt/vol: 1000(mL) Date Analyzed: 04/28/2020 16:07

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 432443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
98-95-3	Nitrobenzene	14.4		10	0.80

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	98		36-122
4165-62-2	Phenol-d5 (Surr)	32		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	74		33-120
367-12-4	2-Fluorophenol (Surr)	48		10-120
321-60-8	2-Fluorobiphenyl (Surr)	76		39-120
118-79-6	2,4,6-Tribromophenol (Surr)	84		33-120

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428005.D
Lims ID: LCS 240-431869/14-A
Client ID:
Sample Type: LCS
Inject. Date: 28-Apr-2020 16:07:32 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-005
Misc. Info.: LCS 240-431869/14-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 16:59:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.563	6.563	0.000	95	97775	4.00	4.00	
* 2 Naphthalene-d8	136	7.669	7.663	0.006	99	325744	4.00	4.00	
* 3 Acenaphthene-d10	164	9.169	9.169	0.000	92	227501	4.00	4.00	
* 4 Phenanthrene-d10	188	10.445	10.445	0.000	97	358844	4.00	4.00	
* 5 Chrysene-d12	240	13.310	13.310	0.000	98	453522	4.00	4.00	
* 6 Perylene-d12	264	15.627	15.628	-0.001	99	471288	4.00	4.00	
$ 7 2-Fluorophenol	112	5.398	5.399	-0.001	92	129158	10.0	4.79	
$ 8 Phenol-d5	99	6.204	6.204	0.000	71	115945	10.0	3.22	
$ 9 Nitrobenzene-d5	82	7.034	7.034	0.000	90	348126	10.0	7.43	
$ 10 2-Fluorobiphenyl (Surr)	172	8.563	8.563	0.000	99	562634	10.0	7.59	
$ 11 2,4,6-Tribromophenol	330	9.839	9.840	-0.001	91	101312	10.0	8.44	
$ 12 Terphenyl-d14	244	11.898	11.904	-0.006	97	925374	10.0	9.78	
13 1,4-Dioxane	88	3.616	3.628	-0.012	87	40264	10.0	2.77	M
14 N-Nitrosodimethylamine	74	3.998	4.005	-0.007	88	61383	10.0	3.03	
15 Pyridine	79		4.052				ND	ND	
30 Benzaldehyde	77	6.181	6.181	0.000	91	461242	20.0	14.6	
31 Phenol	94	6.216	6.216	0.000	92	121302	10.0	3.02	
32 Aniline	93		6.269				ND	ND	
33 Bis(2-chloroethyl)ether	93	6.298	6.299	-0.001	99	219275	10.0	6.06	
36 2-Chlorophenol	128	6.387	6.387	0.000	92	200065	10.0	6.92	
37 n-Decane	57	6.392	6.399	-0.007	73	164206	10.0	6.54	
39 1,3-Dichlorobenzene	146	6.522	6.522	0.000	90	239244	10.0	6.78	
40 1,4-Dichlorobenzene	146	6.581	6.581	0.000	88	252232	10.0	6.73	
41 Benzyl alcohol	108	6.657	6.657	0.000	85	87685	10.0	4.34	
44 1,2-Dichlorobenzene	146	6.722	6.722	0.000	89	231528	10.0	6.64	
45 2-Methylphenol	108	6.740	6.740	0.000	92	187014	10.0	6.25	
46 2,2'-oxybis[1-chloropropan	45	6.769	6.769	0.000	68	143677	10.0	7.35	
47 Indene	115	6.792	6.793	-0.001	87	775897	20.0	14.4	
48 3 & 4 Methylphenol	108	6.869	6.869	0.000	93	178712	10.0	5.83	
50 N-Nitrosodi-n-propylamine	70	6.881	6.881	0.000	76	202439	10.0	6.95	
52 Acetophenone	105	6.892	6.893	-0.001	91	348742	10.0	7.20	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
54 Hexachloroethane	117	7.022	7.016	0.006	84	101170	10.0	6.13	
55 Nitrobenzene	77	7.051	7.052	-0.001	86	310406	10.0	7.18	
57 Isophorone	82	7.245	7.246	-0.001	99	526379	10.0	7.25	
59 2-Nitrophenol	139	7.322	7.322	0.000	82	124423	10.0	7.82	
58 2,4-Dimethylphenol	107	7.328	7.328	0.000	91	277718	10.0	7.08	
63 Benzoic acid	105	7.357	7.381	-0.024	85	70399	20.0	4.13	
64 Bis(2-chloroethoxy)methane	93	7.398	7.399	-0.001	99	254020	10.0	6.91	
66 2,4-Dichlorophenol	162	7.528	7.528	0.000	95	208858	10.0	7.29	
68 1,2,4-Trichlorobenzene	180	7.610	7.610	0.000	92	244730	10.0	7.14	
69 Naphthalene	128	7.687	7.687	0.000	98	610873	10.0	6.82	
70 4-Chloroaniline	127	7.704	7.704	0.000	80	78539	10.0	2.06	a
71 2,6-Dichlorophenol	162	7.722	7.722	0.000	92	199816	10.0	7.18	
73 Hexachlorobutadiene	225	7.781	7.781	0.000	96	171151	10.0	6.30	
78 Caprolactam	113	7.987	7.987	-0.001	87	22439	20.0	2.76	M
80 4-Chloro-3-methylphenol	107	8.092	8.093	-0.001	90	244189	10.0	7.63	
82 2-Methylnaphthalene	142	8.269	8.269	0.000	90	459715	10.0	7.03	
83 1-Methylnaphthalene	142	8.357	8.357	0.000	90	422872	10.0	7.06	
85 Hexachlorocyclopentadiene	237	8.410	8.410	0.000	95	174940	10.0	5.79	
86 1,2,4,5-Tetrachlorobenzene	216	8.416	8.416	0.000	99	290253	10.0	6.97	
88 2,4,6-Trichlorophenol	196	8.498	8.498	0.000	93	181655	10.0	7.46	
89 2,4,5-Trichlorophenol	196	8.534	8.534	0.000	91	191250	10.0	7.77	
92 1,1'-Biphenyl	154	8.657	8.657	0.000	96	576425	10.0	7.26	
96 2-Chloronaphthalene	162	8.692	8.693	-0.001	99	454914	10.0	7.19	
99 2-Nitroaniline	65	8.751	8.751	0.000	72	173437	10.0	7.74	
102 Dimethyl phthalate	163	8.875	8.875	0.000	96	581219	10.0	7.63	
103 1,3-Dinitrobenzene	168	8.916	8.916	0.000	85	94302	10.0	8.52	
104 2,6-Dinitrotoluene	165	8.939	8.940	-0.001	87	131525	10.0	8.06	
105 Acenaphthylene	152	9.051	9.051	0.000	97	659689	10.0	7.27	
106 3-Nitroaniline	138	9.098	9.098	0.000	86	101219	10.0	7.67	
108 2,4-Dinitrophenol	184	9.181	9.181	0.000	81	144685	20.0	15.6	
109 Acenaphthene	153	9.198	9.198	0.000	95	457492	10.0	7.09	
110 4-Nitrophenol	109	9.210	9.210	0.000	83	117621	20.0	6.50	
111 2,4-Dinitrotoluene	165	9.286	9.287	-0.001	88	162758	10.0	7.75	
113 Dibenzofuran	168	9.339	9.340	-0.001	94	701490	10.0	7.15	
116 2,3,4,6-Tetrachlorophenol	232	9.439	9.440	-0.001	73	184666	10.0	8.45	
117 Hexadecane	57	9.463	9.463	0.000	90	233252	10.0	6.98	
118 Diethyl phthalate	149	9.469	9.469	0.000	97	512313	10.0	6.81	
122 4-Chlorophenyl phenyl ethe	204	9.604	9.604	0.000	92	339293	10.0	7.16	
125 4-Nitroaniline	138	9.622	9.622	0.000	76	83207	10.0	6.32	
126 Fluorene	166	9.633	9.634	-0.001	95	563486	10.0	7.59	
127 4,6-Dinitro-2-methylphenol	198	9.645	9.645	0.000	84	219800	20.0	15.3	
128 N-Nitrosodiphenylamine	169	9.698	9.698	0.000	98	427600	10.0	8.97	
129 Diphenylamine	169	9.698	9.698	0.000	96	427600	8.55	7.62	
131 1,2-Diphenylhydrazine	77	9.739	9.740	-0.001	93	678268	10.0	8.25	
130 Azobenzene	77	9.739	9.740	-0.001	99	678619	10.0	8.25	
138 4-Bromophenyl phenyl ether	248	10.022	10.022	0.000	67	207365	10.0	9.17	
141 Hexachlorobenzene	284	10.122	10.122	0.000	93	218279	10.0	8.27	
140 Atrazine	200	10.116	10.122	-0.006	93	408277	20.0	18.1	
142 n-Octadecane	57	10.239	10.240	-0.001	81	211391	10.0	10.2	
145 Pentachlorophenol	266	10.275	10.275	0.000	89	222772	20.0	14.4	
149 Phenanthrene	178	10.463	10.463	0.000	97	711134	10.0	7.45	
150 Anthracene	178	10.510	10.510	0.000	97	725590	10.0	7.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
152 Carbazole	167	10.622	10.622	0.000	96	692667	10.0	10.5	
154 Di-n-butyl phthalate	149	10.845	10.851	-0.006	99	944138	10.0	8.47	
160 Fluoranthene	202	11.551	11.557	-0.006	96	1043152	10.0	8.18	
161 Benzidine	184		11.634				ND	ND	
163 Pyrene	202	11.804	11.804	0.000	98	1042221	10.0	7.87	
171 Butyl benzyl phthalate	149	12.422	12.422	0.000	95	418983	10.0	8.23	
176 Bis(2-ethylhexyl) phthalat	149	13.169	13.169	0.000	95	600871	10.0	8.19	
178 3,3'-Dichlorobenzidine	252	13.204	13.204	0.000	74	1007073	20.0	29.3	
179 Benzo[a]anthracene	228	13.292	13.292	0.000	96	1053839	10.0	7.42	
180 Chrysene	228	13.351	13.351	0.000	95	1032240	10.0	7.24	
183 Di-n-octyl phthalate	149	14.163	14.169	-0.006	99	1018314	10.0	7.72	
185 Benzo[b]fluoranthene	252	14.986	14.986	0.000	94	1038319	10.0	7.37	
186 Benzo[k]fluoranthene	252	15.027	15.033	-0.006	97	1132846	10.0	7.71	
187 Benzo[a]pyrene	252	15.533	15.539	-0.006	73	959086	10.0	7.65	
191 Indeno[1,2,3-cd]pyrene	276	17.645	17.651	-0.006	94	1090651	10.0	7.55	
192 Dibenz(a,h)anthracene	278	17.651	17.657	-0.006	85	938020	10.0	7.57	
193 Benzo[g,h,i]perylene	276	18.245	18.251	-0.006	96	871671	10.0	7.24	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMIS80PPMW_00021 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 29-Apr-2020 15:56:32 Chrom Revision: 2.3 11-Mar-2020 18:53:20

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428005.D

Injection Date: 28-Apr-2020 16:07:32 Instrument ID: A4AG3 Operator ID:

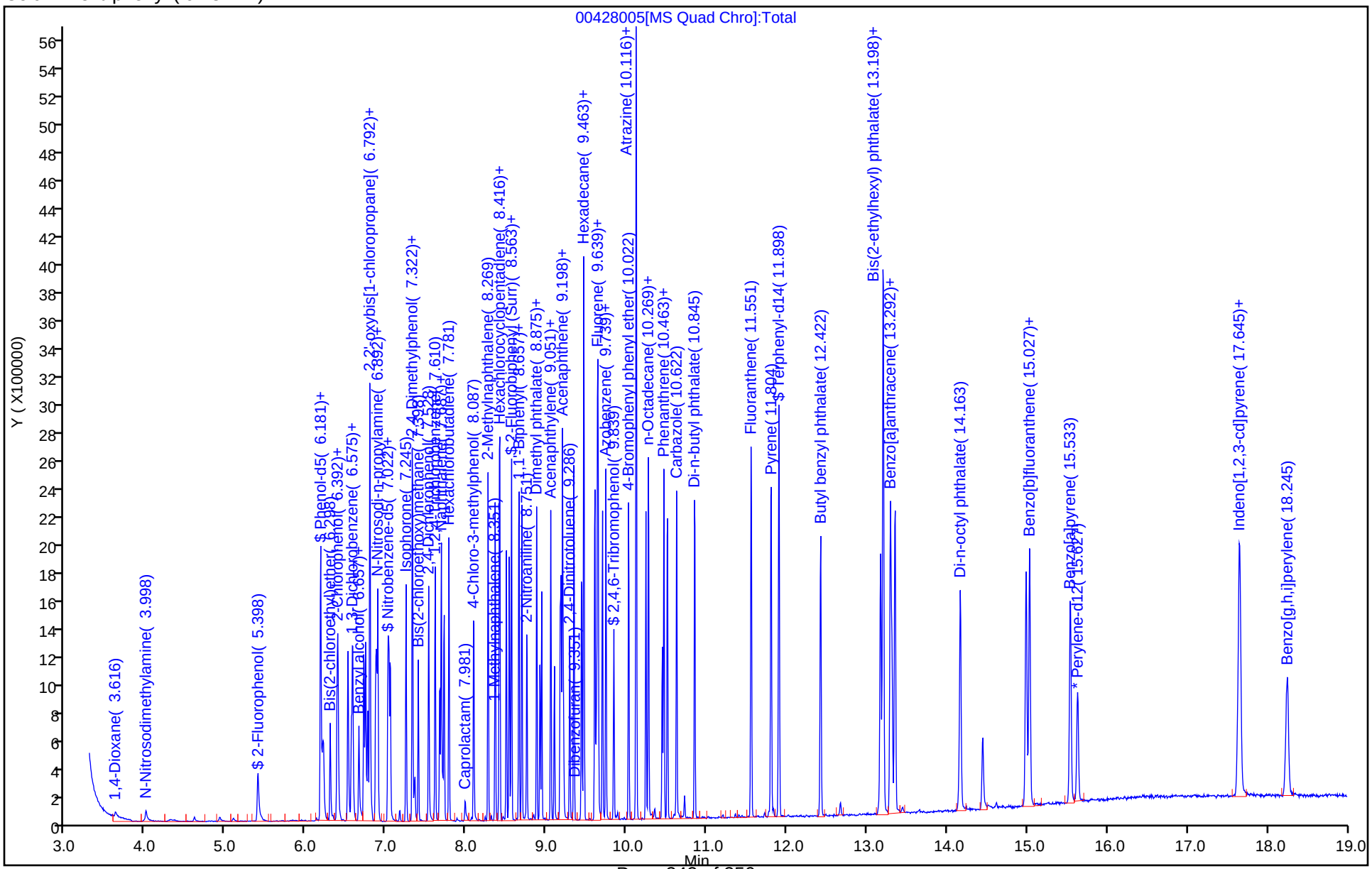
Lims ID: LCS 240-431869/14-A Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 8270 AG3 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\00428005.D
Lims ID: LCS 240-431869/14-A
Client ID:
Sample Type: LCS
Inject. Date: 28-Apr-2020 16:07:32 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0097853-005
Misc. Info.: LCS 240-431869/14-A
Operator ID: Instrument ID: A4AG3

Method: \\chromfs\Canton\ChromData\A4AG3\20200428-97853.b\8270 AG3.m
Limit Group: MSS 8270D ICAL
Last Update: 29-Apr-2020 15:56:08 Calib Date: 23-Apr-2020 19:12:10
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A4AG3\20200423-97748.b\00423010.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: ulmanm Date: 28-Apr-2020 16:59:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	10.0	4.79	47.90
$ 8 Phenol-d5	10.0	3.22	32.22
$ 9 Nitrobenzene-d5	10.0	7.43	74.26
$ 10 2-Fluorobiphenyl (Surr)	10.0	7.59	75.94
$ 11 2,4,6-Tribromophenol	10.0	8.44	84.44
$ 12 Terphenyl-d14	10.0	9.78	97.81

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Start Date: 04/23/2020 15:21

Analysis Batch Number: 431934 End Date: 04/23/2020 21:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-431934/1		04/23/2020 15:21	1	00423101.D	RXI-5SILMS/IIG 0.25(mm)
STD5 240-431934/2 IC		04/23/2020 15:38	1	00423002.D	RXI-5SILMS/IIG 0.25(mm)
STD4 240-431934/3 IC		04/23/2020 16:01	1	00423003.D	RXI-5SILMS/IIG 0.25(mm)
STD3 240-431934/4 IC		04/23/2020 16:25	1	00423004.D	RXI-5SILMS/IIG 0.25(mm)
STD1 240-431934/6 IC		04/23/2020 17:11	1	00423006.D	RXI-5SILMS/IIG 0.25(mm)
STD2 240-431934/5 IC		04/23/2020 17:38	1	00423005.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-431934/7 ICIS		04/23/2020 18:01	1	00423007.D	RXI-5SILMS/IIG 0.25(mm)
STD7 240-431934/8 IC		04/23/2020 18:25	1	00423008.D	RXI-5SILMS/IIG 0.25(mm)
STD8 240-431934/9 IC		04/23/2020 18:48	1	00423009.D	RXI-5SILMS/IIG 0.25(mm)
STD9 240-431934/10 IC		04/23/2020 19:12	1	00423010.D	RXI-5SILMS/IIG 0.25(mm)
ICV 240-431934/11		04/23/2020 19:35	1	00423011.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2020 19:59	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2020 20:22	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2020 21:32	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2020 21:56	1		RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Instrument ID: A4AG3 Start Date: 04/28/2020 14:58

Analysis Batch Number: 432443 End Date: 04/28/2020 23:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-432443/1		04/28/2020 14:58	1	00428101.D	RXI-5SILMS/IIG 0.25(mm)
CCV 240-432443/2 CCVIS		04/28/2020 15:17	1	00428002.D	RXI-5SILMS/IIG 0.25(mm)
MB 240-431869/13-A		04/28/2020 15:44	1	00428004.D	RXI-5SILMS/IIG 0.25(mm)
LCS 240-431869/14-A		04/28/2020 16:07	1	00428005.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 16:30	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 16:54	1		RXI-5SILMS/IIG 0.25(mm)
240-129236-3		04/28/2020 17:17	1	00428008.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 17:41	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 18:04	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 18:27	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 18:51	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 19:14	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 20:01	10		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 20:25	4		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 20:48	5		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 21:11	4		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 21:35	2.5		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 21:58	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 22:21	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 22:45	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 23:08	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/28/2020 23:32	1		RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-129236-2

SDG No.:

Batch Number: 431869 Batch Start Date: 04/23/20 06:49 Batch Analyst: Earle, Steve

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	exBENZALDEHYD 00071	exBNASPIKE 00109
240-129236-A-3	5WC21	3510C, 8270D	T	1040 mL	2 mL	7 SU	2 SU		
MB 240-431869/13		3510C, 8270D		1000 mL	2 mL	7 SU	2 SU		
LCS 240-431869/14		3510C, 8270D		1000 mL	2 mL	7 SU	2 SU	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	exBNASURR W 00084					
240-129236-A-3	5WC21	3510C, 8270D	T	1 mL					
MB 240-431869/13		3510C, 8270D		1 mL					
LCS 240-431869/14		3510C, 8270D		1 mL					

Batch Notes	
Acid Used for pH Adjustment ID	4631150
Analyst ID - Concentration	EBONE FORD JESSICA TRUSHEL
Analyst ID - Extraction	STEVE EARLE
Na2SO4 ID	2548156
pH Indicator ID	3734946 2794736
Pipette/Syringe/Dispenser ID	6 7
Prep Solvent ID	4701664
Analyst ID - Spike Analyst	STEVE EARLE

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

3-4/4-1 4.3/5-0

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins/- **Former Test America Canton**, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Project Manager/1-800-966-9387

JCF 3-25-2020 JJE 3-27-2020

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 **Event:** 2nd Quarter 2020 Groundwater Corrective Action Monitoring Event **DAA JN:** B03204-20A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS: **Carrier:** 12-237-301-01-9276-4554 **Tracking Number:** ~~12.237-301-01-9446-4562~~		

Box 1: Matrix	Box 2: Preservative	Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$ E NaOH F ZnAc G Other (Specify) H None	F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic AG Amber Glass V VOA CG Clear Glass	G Grab C Composite	Copy to Consultant: YES Bill: CLIENT OTHER Preserved and shipped on ice: YES

		Sample ID	Date: 2020	Time	Box 1: Matrix	Number of Bottles	8270D/3510C- Low Level
Box 4 - Sample Type	G	5W8B	4/20	0815	GW	0	
Box 3 - Filtered/Unfiltered	U	5W5B	4/20	1055	GW	2	X
Required pH of Sample		5W7B	4/20	0955	GW	6	X
Box 2 - Preservative	H	5WC21	4/20	1310	GW	2	X
Box 5 - Sample Container Type	2-250mL AG	5WDUP	4/20	1320	GW	0	
		5WC22	4/20	1140	GW	2	X
		5WC23	4/20	1225	GW	2	X
		5W12A	4/20	0915	GW	0	

GENERAL NOTES:

1. Report results to at or above *QL/RL of 2 ug/l*. Full deliverable. batch QC
2. Extract and hold. p-nitroaniline only - VELAP checked 3-20-2020 JCF

240-129236 Chain of Custody

Clients Special Instructions: Full Deliverable with edd.

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 4/20/2020	#1 Relinquished by (Signature):	Date: 4/20/2020	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ian McGregor	Date: 4-20-2020	#1 Received by (Signature):	Date: 4-21-20	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name: ETA	Time: 1015	Company Name:	Time:	

JJE 3-27-2020

4/7/2020 1/1

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 129236

Client Draper Arden Site Name

Cooler Received on 4-21-20 Opened on 4-21-20

Cooler unpacked by: Adam Gaertner

FedEx: 1st Grd Exp (UPS) FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 1 Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ASG 4/21/20 ☒ See Multiple Cooler Form ASG 4/21/20

IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 3.4 °C Corrected Cooler Temp. 4.1 °C

IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   - -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   - -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   - -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC902937**
13. Were VOAs on the COC? Yes (No)
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No (NA)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes (No)
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

ASG 4/21/20

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

Login # : 129236

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	**IR-10** IR-11	3.4	4.1	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	~~IR-10~~ IR-11	4.3	5.0	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Report of Analysis

Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU5

Project Number: B03204-20A

Lot Number:**VD21024**

Date Completed:5/15/2020

05/15/2020
Approved and released by:
Project Manager: **Cathy S. Dover**

The electronic signature above is the equivalent of a handwritten signature.

Case Narrative
Draper Aden Associates
Lot Number: VD21024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Pace Analytical Services, LLC ("Pace") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Pace policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Summary
Draper Aden Associates
Lot Number: VD21024
Project Name: RAAP HWMU5
Project Number: B03204-20A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	5W8B	Aqueous	04/20/2020 0815	04/21/2020
002	5W5B	Aqueous	04/20/2020 1055	04/21/2020
003	5W7B	Aqueous	04/20/2020 0955	04/21/2020
004	5WC21	Aqueous	04/20/2020 1310	04/21/2020
005	5WDUP	Aqueous	04/20/2020 1320	04/21/2020
006	5WC22	Aqueous	04/20/2020 1140	04/21/2020
007	5WC23	Aqueous	04/20/2020 1225	04/21/2020
008	5W12A	Aqueous	04/20/2020 0915	04/21/2020

(8 samples)

Detection Summary
Draper Aden Associates
Lot Number: VD21024
Project Name: RAAP HWMU5
Project Number: B03204-20A

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	5W5B	Aqueous	Barium	6020B	19		ug/L	7
002	5W5B	Aqueous	Copper	6020B	2.7	J	ug/L	7
002	5W5B	Aqueous	Zinc	6020B	8.3	J	ug/L	7
003	5W7B	Aqueous	Barium	6020B	40		ug/L	9
003	5W7B	Aqueous	Beryllium	6020B	0.66	J	ug/L	9
003	5W7B	Aqueous	Chromium	6020B	5.2		ug/L	9
003	5W7B	Aqueous	Cobalt	6020B	11		ug/L	9
003	5W7B	Aqueous	Copper	6020B	5.6		ug/L	9
003	5W7B	Aqueous	Lead	6020B	2.1	J	ug/L	9
003	5W7B	Aqueous	Nickel	6020B	13		ug/L	9
003	5W7B	Aqueous	Zinc	6020B	24	J	ug/L	9
004	5WC21	Aqueous	Barium	6020B	14		ug/L	11
004	5WC21	Aqueous	Beryllium	6020B	0.22	J	ug/L	11
004	5WC21	Aqueous	Chromium	6020B	2.4	J	ug/L	11
004	5WC21	Aqueous	Cobalt	6020B	19		ug/L	11
004	5WC21	Aqueous	Nickel	6020B	11		ug/L	11
005	5WDUP	Aqueous	Barium	6020B	14		ug/L	13
005	5WDUP	Aqueous	Chromium	6020B	2.0	J	ug/L	13
005	5WDUP	Aqueous	Cobalt	6020B	19		ug/L	13
005	5WDUP	Aqueous	Nickel	6020B	10		ug/L	13
006	5WC22	Aqueous	Barium	6020B	22		ug/L	15
006	5WC22	Aqueous	Cobalt	6020B	3.1	J	ug/L	15
006	5WC22	Aqueous	Nickel	6020B	2.8	J	ug/L	15
007	5WC23	Aqueous	Barium	6020B	19		ug/L	17
007	5WC23	Aqueous	Cobalt	6020B	1.4	J	ug/L	17
007	5WC23	Aqueous	Nickel	6020B	2.3	J	ug/L	17

(26 detections)

ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-001**

Description: **5W8B** Matrix: **Aqueous**

Date Sampled: **04/20/2020 0815** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1115	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-002**

Description: **5W5B** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1055** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1357	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-002**

Description: **5W5B** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1055** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1121	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**19**		**10**	**1.3**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1
Copper	**7440-50-8**	**6020B**	**2.7**	**J**	**5.0**	**2.0**	**ug/L**	**1**
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	**7440-66-6**	**6020B**	**8.3**	**J**	**30**	**7.3**	**ug/L**	**1**

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-003**

Description: **5W7B** Matrix: **Aqueous**

Date Sampled: **04/20/2020 0955** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1400	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-003**

Description: **5W7B** Matrix: **Aqueous**

Date Sampled: **04/20/2020 0955** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1127	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**40**		**10**	**1.3**	**ug/L**	**1**
Beryllium	**7440-41-7**	**6020B**	**0.66**	**J**	**1.0**	**0.20**	**ug/L**	**1**
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	**7440-47-3**	**6020B**	**5.2**		**5.0**	**1.3**	**ug/L**	**1**
Cobalt	**7440-48-4**	**6020B**	**11**		**5.0**	**1.3**	**ug/L**	**1**
Copper	**7440-50-8**	**6020B**	**5.6**		**5.0**	**2.0**	**ug/L**	**1**
Lead	**7439-92-1**	**6020B**	**2.1**	**J**	**3.0**	**1.0**	**ug/L**	**1**
Nickel	**7440-02-0**	**6020B**	**13**		**10**	**2.0**	**ug/L**	**1**
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	**7440-66-6**	**6020B**	**24**	**J**	**30**	**7.3**	**ug/L**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-004**

Description: **5WC21** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1310** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1412	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-004**

Description: **5WC21** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1310** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1208	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**14**		**10**	**1.3**	**ug/L**	**1**
Beryllium	**7440-41-7**	**6020B**	**0.22**	**J**	**1.0**	**0.20**	**ug/L**	**1**
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	**7440-47-3**	**6020B**	**2.4**	**J**	**5.0**	**1.3**	**ug/L**	**1**
Cobalt	**7440-48-4**	**6020B**	**19**		**5.0**	**1.3**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**11**		**10**	**2.0**	**ug/L**	**1**
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-005**

Description: **5WDUP** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1320** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1415	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-005**

Description: **5WDUP** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1320** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1214	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**14**		**10**	**1.3**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	**7440-47-3**	**6020B**	**2.0**	**J**	**5.0**	**1.3**	**ug/L**	**1**
Cobalt	**7440-48-4**	**6020B**	**19**		**5.0**	**1.3**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**10**		**10**	**2.0**	**ug/L**	**1**
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-006**

Description: **5WC22** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1140** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1417	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-006**

Description: **5WC22** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1140** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1220	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**22**		**10**	**1.3**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**3.1**	**J**	**5.0**	**1.3**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**2.8**	**J**	**10**	**2.0**	**ug/L**	**1**
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Mercury

Client: **Draper Aden Associates** Laboratory ID: **VD21024-007**

Description: **5WC23** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1225** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1420	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-007**

Description: **5WC23** Matrix: **Aqueous**

Date Sampled: **04/20/2020 1225** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1225	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	**7440-39-3**	**6020B**	**19**		**10**	**1.3**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**1.4**	**J**	**5.0**	**1.3**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**2.3**	**J**	**10**	**2.0**	**ug/L**	**1**
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **VD21024-008**

Description: **5W12A** Matrix: **Aqueous**

Date Sampled: **04/20/2020 0915** Project Name: **RAAP HWMU5**

Date Received: **04/21/2020** Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1231	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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QC Summary

ICP-MS - MB

Sample ID: VQ51844-001
Batch: 51844
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	04/24/2020 1058
Arsenic	10	U	1	10	2.0	ug/L	04/24/2020 1058
Barium	10	U	1	10	1.3	ug/L	04/24/2020 1058
Beryllium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Cadmium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Chromium	5.0	U	1	5.0	1.3	ug/L	04/24/2020 1058
Cobalt	5.0	U	1	5.0	1.3	ug/L	04/24/2020 1058
Copper	5.0	U	1	5.0	2.0	ug/L	04/24/2020 1058
Lead	3.0	U	1	3.0	1.0	ug/L	04/24/2020 1058
Nickel	10	U	1	10	2.0	ug/L	04/24/2020 1058
Selenium	10	U	1	10	3.0	ug/L	04/24/2020 1058
Silver	2.0	U	1	2.0	0.30	ug/L	04/24/2020 1058
Thallium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Vanadium	10	U	1	10	2.5	ug/L	04/24/2020 1058
Zinc	30	U	1	30	7.3	ug/L	04/24/2020 1058

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ51844-002
Batch: 51844
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	94		1	94	80-120	04/24/2020 1103
Arsenic	100	99		1	99	80-120	04/24/2020 1103
Barium	100	100		1	100	80-120	04/24/2020 1103
Beryllium	100	96		1	96	80-120	04/24/2020 1103
Cadmium	100	99		1	99	80-120	04/24/2020 1103
Chromium	100	96		1	96	80-120	04/24/2020 1103
Cobalt	100	95		1	95	80-120	04/24/2020 1103
Copper	100	96		1	96	80-120	04/24/2020 1103
Lead	100	100		1	105	80-120	04/24/2020 1103
Nickel	100	95		1	95	80-120	04/24/2020 1103
Selenium	100	100		1	101	80-120	04/24/2020 1103
Silver	100	97		1	97	80-120	04/24/2020 1103
Thallium	100	110		1	108	80-120	04/24/2020 1103
Vanadium	100	96		1	96	80-120	04/24/2020 1103
Zinc	100	98		1	98	80-120	04/24/2020 1103

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: VD21024-003MS
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	0.0	100	97		1	97	70-130	04/24/2020 1133
Arsenic	0.0	100	98		1	98	70-130	04/24/2020 1133
Barium	40	100	140		1	103	70-130	04/24/2020 1133
Beryllium	0.66	100	97		1	97	70-130	04/24/2020 1133
Cadmium	0.0	100	100		1	102	70-130	04/24/2020 1133
Chromium	5.2	100	100		1	97	70-130	04/24/2020 1133
Cobalt	11	100	110		1	99	70-130	04/24/2020 1133
Copper	5.6	100	100		1	99	70-130	04/24/2020 1133
Lead	2.1	100	110		1	108	70-130	04/24/2020 1133
Nickel	13	100	110		1	98	70-130	04/24/2020 1133
Selenium	0.0	100	98		1	98	70-130	04/24/2020 1133
Silver	0.0	100	97		1	97	70-130	04/24/2020 1133
Thallium	0.0	100	110		1	110	70-130	04/24/2020 1133
Vanadium	0.0	100	97		1	97	70-130	04/24/2020 1133
Zinc	24	100	120		1	97	70-130	04/24/2020 1133

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: VD21024-003MD
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Antimony	0.0	100	95		1	95	2.6	70-130	20	04/24/2020 1139
Arsenic	0.0	100	94		1	94	3.9	70-130	20	04/24/2020 1139
Barium	40	100	140		1	100	2.3	70-130	20	04/24/2020 1139
Beryllium	0.66	100	94		1	93	3.4	70-130	20	04/24/2020 1139
Cadmium	0.0	100	99		1	99	2.9	70-130	20	04/24/2020 1139
Chromium	5.2	100	100		1	96	1.3	70-130	20	04/24/2020 1139
Cobalt	11	100	110		1	95	4.0	70-130	20	04/24/2020 1139
Copper	5.6	100	100		1	97	2.2	70-130	20	04/24/2020 1139
Lead	2.1	100	110		1	105	3.0	70-130	20	04/24/2020 1139
Nickel	13	100	110		1	95	2.7	70-130	20	04/24/2020 1139
Selenium	0.0	100	94		1	94	4.2	70-130	20	04/24/2020 1139
Silver	0.0	100	95		1	95	2.5	70-130	20	04/24/2020 1139
Thallium	0.0	100	110		1	107	2.7	70-130	20	04/24/2020 1139
Vanadium	0.0	100	95		1	95	2.1	70-130	20	04/24/2020 1139
Zinc	24	100	110		1	91	4.7	70-130	20	04/24/2020 1139

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MB

Sample ID: VQ51713-001
Batch: 51713
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	0.20	U	1	0.20	0.12	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: VQ51713-002
Batch: 51713
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MS

Sample ID: VD21024-003MS
Batch: 51713
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	2.0		1	100	85-115	04/22/2020 1407

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MSD

Sample ID: VD21024-003MD
Batch: 51713
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	96	3.8	85-115	20	04/22/2020 1410

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

JCF 3-25-2020

CHAIN OF CUSTODY RECORD

Laboratory: PACE -Shealy Environmental Services, Inc. - 106 Vantage Point Drive, West Columbia, SC 29172 - (803)791-9700 lab, (919)616-1180 cell -Cathy Dover, PM

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Jonat C. Fresler Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RFAAP, Radford, Virginia Location: HWMU5 Event: 2Q/2020 Corrective Action Annual Monitoring Event DAA JN: B03204-23A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES UPS: Carrier: 1Z-237-301-01-9471-3140 Tracking Number:
Box 1: Matrix SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other	Box 2: Preservative A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None	Box 3: Filtered/Unfiltered F Filtered; U Unfiltered Box 5: Sample Container Type P Plastic; V VOA; AG Amber Glass; CG Clear Glass Box 4: Sample Type G Grab; C Composite	Invoice Copy to Consultant: YES Bill: CA/SW7 OTHER Preserved and shipped on ice: YES

SAMPLE ID	Date: 2020	Time	Box 1: Matrix	Number of Bottles			(Metals-Total) 6020B(3005A)/ 7470A	Cobalt only-Total 6020B/3005A	Metals pH				
Box 4 - Sample Type							G	G					
Box 3 - Filtered/Unfiltered							U	U					
Required pH of Sample							<2	<2					
Box 2 - Preservative							B	B					
Box 5 - Sample Container Type							1-500ml P	1-500ml P					
5W3B	4/20	0815	GW	1				x	<2				
5W5B	4/20	1055	GW	1			x		<2				upgradient monitoring well
5W7B	4/20	0955	GW	3			x		<2,<2,<2				USE FOR QC
5WC21	4/20	1310	GW	1			x		<2				
5WDUP	4/20	1320	GW	1			x		<2				
5WC22	4/20	1140	GW	1			x		<2				
5WC23	4/20	1225	GW	1			x		<2				
5W12A	4/20	0915	GW	1				x	<2				plume well

GENERAL NOTES:
1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QLs attached.
5. ERIS DELIVERABLE REQUIRED

VD21024

CSD

Clients Special Instructions: Full deliverable with pdf, edd and ERIS

Received by lab in Good Condition X Yes ___ No Custody Seal Intact X Yes ___ No Temperature upon arrival 2.1°C Received on Ice X Yes ___ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 4/20/2020	#1 Relinquished by (Signature): [signature]	Date: 4/20/2020	#2 Relinquished by (Signature): FedEx 5/21	Date: 4/21/20	Sample Storage Time Requested:
Sampler Signature: [signature]	Time: 0700	Company Name: DAA	Time: 1700	Company Name: UPS	Time: 0933	
Sampler Name (Print): Erin McGregor	Date: 4-20-2020	#1 Received by (Signature):	Date:	#2 Received by (Signature): [signature]	Date: 4/21/20	DC EVS ORG/8 TRS NORG
Sampler Signature: [signature]	Time: 0700	Company Name:	Time:	Company Name: PACE/EQI	Time: 0933	

JCF 3-25-2020
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7ojc 3-27-2020

Kg 4/17/2020

1/2

2/2

HWMU5 - Appendix K
Radford Army Ammunition Plant (RFAAP)
Groundwater Corrective Action Annual Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020A (ICP/MS)/3020A

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Antimony	7440-36-0	2	0.4 *0.5*
2.	Arsenic	7440-38-2	10	2
3.	Barium	7440-39-3	10	1
4.	Beryllium	7440-41-7	1	0.2
5.	Cadmium	7440-43-9	1	0.2
6.	Chromium	7440-47-3	5	1
7.	Cobalt	7440-48-4	5	1
8.	Copper	7440-50-8	5	1 *2*
9.	Lead	7440-92-1	2 *3*	~~0.2~~ *1*
10.	Nickel	7440-02-0	10	2
11.	Selenium	7782-49-2	10	3
12.	Silver	7440-22-4	2	~~0.2~~ *0.3*
13.	Thallium	7440-28-0	1	0.2
14.	Vanadium	7440-62-2	10	1 2.5
15.	Zinc	7440-66-6	30	7.3

Method SW 7470A/CVAA

16.	Mercury	7439-97-6	2	0.2

Final Report must list the project required MDLs listed above. Report results between the project required QL noted above and MDL above as estimated value. Report lab's current MDL, if higher than listed above.

. Note: # 6 added on Jan 2004 due To 4Q2003 detection.

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
10/9/2007 JCF - 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfs
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. JCF
Revised 4/2017 due to class 1 permit mod dec 2016.
3-25-2020 – strikeouts above reflect DEQ preapproval (2019). Class I permit mod pending. Cu DL reflects presented class I permit mod

c:\environmental\hlg\databases\rap\sample event set up\semi-annual events\hwmu-5\hwmu5 - one rev 2010\hwmu 5 - appendix k cap target analyte list - rev 2017.docx

JCF 3-25-2020
Page 2 of 2

Shealy Environmental Services, Inc.
Document Number: ME301SC-14

Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: DRAPER Cooler Inspected by/date: JSH / 04/21/2020 Lot #: VD21024

Means of receipt: ☐ SESI ☐ Client ☑ UPS ~~☑ FedEx~~ ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 20-0209 Chlorine Strip ID: NA Tested by: JSH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

2.6 / 2.6 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☐ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22022

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L. (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JSH Date: 04/21/2020

Comments:

Metals

ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-001
Description: 5W8B
Matrix: Aqueous
Date Sampled: 04/20/2020 0815
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1115	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-002
Description: 5W5B
Matrix: Aqueous
Date Sampled: 04/20/2020 1055
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1357	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-002
Description: 5W5B
Matrix: Aqueous
Date Sampled: 04/20/2020 1055
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1121	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	19		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	2.7	J	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	8.3	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-003
Description: 5W7B
Matrix: Aqueous
Date Sampled: 04/20/2020 0955
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1400	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-003
Description: 5W7B
Matrix: Aqueous
Date Sampled: 04/20/2020 0955
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1127	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	40		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	0.66	J	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.2		5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	11		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.6		5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	2.1	J	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	13		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	24	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-004
Description: 5WC21
Matrix: Aqueous
Date Sampled: 04/20/2020 1310
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1412	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-004
Description: 5WC21
Matrix: Aqueous
Date Sampled: 04/20/2020 1310
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1208	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	14		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	0.22	J	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	2.4	J	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	19		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	11		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-005
Description: 5WDUP
Matrix: Aqueous
Date Sampled: 04/20/2020 1320
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1415	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-005
Description: 5WDUP
Matrix: Aqueous
Date Sampled: 04/20/2020 1320
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1214	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	14		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	2.0	J	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	19		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	10		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-006
Description: 5WC22
Matrix: Aqueous
Date Sampled: 04/20/2020 1140
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1417	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-006
Description: 5WC22
Matrix: Aqueous
Date Sampled: 04/20/2020 1140
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1220	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	22		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	3.1	J	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	2.8	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates
Laboratory ID: VD21024-007
Description: 5WC23
Matrix: Aqueous
Date Sampled: 04/20/2020 1225
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1420	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	0.20	U	0.20	0.12	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

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ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-007
Description: 5WC23
Matrix: Aqueous
Date Sampled: 04/20/2020 1225
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1225	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	19		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	1.4	J	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	2.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	2.3	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

ICP-MS

Client: Draper Aden Associates
Laboratory ID: VD21024-008
Description: 5W12A
Matrix: Aqueous
Date Sampled: 04/20/2020 0915
Project Name: RAAP HWMU5
Date Received: 04/21/2020
Project Number: B03204-20A

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/24/2020 1231	BNW	04/23/2020 1610	51844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

ICP-MS - MB

Sample ID: VQ51844-001
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	04/24/2020 1058
Arsenic	10	U	1	10	2.0	ug/L	04/24/2020 1058
Barium	10	U	1	10	1.3	ug/L	04/24/2020 1058
Beryllium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Cadmium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Chromium	5.0	U	1	5.0	1.3	ug/L	04/24/2020 1058
Cobalt	5.0	U	1	5.0	1.3	ug/L	04/24/2020 1058
Copper	5.0	U	1	5.0	2.0	ug/L	04/24/2020 1058
Lead	3.0	U	1	3.0	1.0	ug/L	04/24/2020 1058
Nickel	10	U	1	10	2.0	ug/L	04/24/2020 1058
Selenium	10	U	1	10	3.0	ug/L	04/24/2020 1058
Silver	2.0	U	1	2.0	0.30	ug/L	04/24/2020 1058
Thallium	1.0	U	1	1.0	0.20	ug/L	04/24/2020 1058
Vanadium	10	U	1	10	2.5	ug/L	04/24/2020 1058
Zinc	30	U	1	30	7.3	ug/L	04/24/2020 1058

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ51844-002
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	94		1	94	80-120	04/24/2020 1103
Arsenic	100	99		1	99	80-120	04/24/2020 1103
Barium	100	100		1	100	80-120	04/24/2020 1103
Beryllium	100	96		1	96	80-120	04/24/2020 1103
Cadmium	100	99		1	99	80-120	04/24/2020 1103
Chromium	100	96		1	96	80-120	04/24/2020 1103
Cobalt	100	95		1	95	80-120	04/24/2020 1103
Copper	100	96		1	96	80-120	04/24/2020 1103
Lead	100	100		1	105	80-120	04/24/2020 1103
Nickel	100	95		1	95	80-120	04/24/2020 1103
Selenium	100	100		1	101	80-120	04/24/2020 1103
Silver	100	97		1	97	80-120	04/24/2020 1103
Thallium	100	110		1	108	80-120	04/24/2020 1103
Vanadium	100	96		1	96	80-120	04/24/2020 1103
Zinc	100	98		1	98	80-120	04/24/2020 1103

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: VD21024-003MS
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	0.0	100	97		1	97	70-130	04/24/2020 1133
Arsenic	0.0	100	98		1	98	70-130	04/24/2020 1133
Barium	40	100	140		1	103	70-130	04/24/2020 1133
Beryllium	0.66	100	97		1	97	70-130	04/24/2020 1133
Cadmium	0.0	100	100		1	102	70-130	04/24/2020 1133
Chromium	5.2	100	100		1	97	70-130	04/24/2020 1133
Cobalt	11	100	110		1	99	70-130	04/24/2020 1133
Copper	5.6	100	100		1	99	70-130	04/24/2020 1133
Lead	2.1	100	110		1	108	70-130	04/24/2020 1133
Nickel	13	100	110		1	98	70-130	04/24/2020 1133
Selenium	0.0	100	98		1	98	70-130	04/24/2020 1133
Silver	0.0	100	97		1	97	70-130	04/24/2020 1133
Thallium	0.0	100	110		1	110	70-130	04/24/2020 1133
Vanadium	0.0	100	97		1	97	70-130	04/24/2020 1133
Zinc	24	100	120		1	97	70-130	04/24/2020 1133

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: VD21024-003MD
Batch: 51844
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 04/23/2020 1610

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Antimony	0.0	100	95		1	95	2.6	70-130	20	04/24/2020 1139
Arsenic	0.0	100	94		1	94	3.9	70-130	20	04/24/2020 1139
Barium	40	100	140		1	100	2.3	70-130	20	04/24/2020 1139
Beryllium	0.66	100	94		1	93	3.4	70-130	20	04/24/2020 1139
Cadmium	0.0	100	99		1	99	2.9	70-130	20	04/24/2020 1139
Chromium	5.2	100	100		1	96	1.3	70-130	20	04/24/2020 1139
Cobalt	11	100	110		1	95	4.0	70-130	20	04/24/2020 1139
Copper	5.6	100	100		1	97	2.2	70-130	20	04/24/2020 1139
Lead	2.1	100	110		1	105	3.0	70-130	20	04/24/2020 1139
Nickel	13	100	110		1	95	2.7	70-130	20	04/24/2020 1139
Selenium	0.0	100	94		1	94	4.2	70-130	20	04/24/2020 1139
Silver	0.0	100	95		1	95	2.5	70-130	20	04/24/2020 1139
Thallium	0.0	100	110		1	107	2.7	70-130	20	04/24/2020 1139
Vanadium	0.0	100	95		1	95	2.1	70-130	20	04/24/2020 1139
Zinc	24	100	110		1	91	4.7	70-130	20	04/24/2020 1139

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MB

Sample ID: VQ51713-001
Batch: 51713
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	0.20	U	1	0.20	0.12	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: VQ51713-002
Batch: 51713
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MS

Sample ID: VD21024-003MS
Batch: 51713
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	2.0		1	100	85-115	04/22/2020 1407

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MSD

Sample ID: VD21024-003MD
Batch: 51713
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	96	3.8	85-115	20	04/22/2020 1410

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS Metals

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD21024 **Method Type:** ICP-MS **SOW No.:**

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
VD21024-001	5W8B	
VD21024-002	5W5B	
VD21024-003	5W7B	
VD21024-003S	5W7BS	Matrix Spike
VD21024-003SD	5W7BSD	Matrix Spike Duplicate
VD21024-004	5WC21	
VD21024-005	5WDUP	
VD21024-006	5WC22	
VD21024-007	5WC23	
VD21024-008	5W12A	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Antimony	199.73	200.0	100	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Arsenic	208.60	200.0	104	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Barium	200.90	200.0	100	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Beryllium	200.90	200.0	100	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Cadmium	196.30	200.0	98	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Chromium	196.30	200.0	98	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Cobalt	192.67	200.0	96	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Copper	188.97	200.0	94	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Lead	198.00	200.0	99	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Nickel	191.13	200.0	96	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Selenium	197.43	200.0	99	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Silver	188.87	200.0	94	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Thallium	205.90	200.0	103	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Vanadium	204.53	200.0	102	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
	Zinc	197.50	200.0	99	90.0 - 110.0	MS	4/24/2020	09:06	MS2042420A 6020B 200.8, g
CCV1									
	Antimony	291.40	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Arsenic	292.13	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Barium	296.83	300.0	99	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Beryllium	299.50	300.0	100	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Cadmium	290.17	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Chromium	292.47	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Cobalt	289.60	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Copper	278.27	300.0	93	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Lead	295.57	300.0	99	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Nickel	282.83	300.0	94	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Selenium	294.53	300.0	98	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Silver	282.30	300.0	94	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Thallium	289.67	300.0	97	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Vanadium	302.27	300.0	101	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g
	Zinc	287.53	300.0	96	90.0 - 110.0	MS	4/24/2020	09:24	MS2042420A 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Antimony	289.80	300.0	97	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Arsenic	293.53	300.0	98	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Barium	299.83	300.0	100	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Beryllium	294.53	300.0	98	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Cadmium	291.73	300.0	97	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Chromium	290.80	300.0	97	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Cobalt	288.07	300.0	96	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Copper	276.87	300.0	92	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Lead	303.10	300.0	101	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Nickel	282.23	300.0	94	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Selenium	294.40	300.0	98	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Silver	286.07	300.0	95	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Thallium	294.93	300.0	98	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Vanadium	300.80	300.0	100	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
	Zinc	286.07	300.0	95	90.0 - 110.0	MS	4/24/2020	10:34	MS2042420A 6020B 200.8, g
CCV3									
	Antimony	285.97	300.0	95	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Arsenic	282.77	300.0	94	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Barium	296.93	300.0	99	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Beryllium	287.60	300.0	96	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Cadmium	290.27	300.0	97	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Chromium	290.83	300.0	97	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Cobalt	289.57	300.0	97	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Copper	275.43	300.0	92	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Lead	306.47	300.0	102	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Nickel	280.23	300.0	93	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Selenium	283.87	300.0	95	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Silver	281.60	300.0	94	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Thallium	295.97	300.0	99	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Vanadium	299.67	300.0	100	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g
	Zinc	280.07	300.0	93	90.0 - 110.0	MS	4/24/2020	11:50	MS2042420A 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV4									
	Antimony	285.40	300.0	95	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Arsenic	280.63	300.0	94	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Barium	297.83	300.0	99	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Beryllium	287.60	300.0	96	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Cadmium	293.90	300.0	98	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Chromium	288.50	300.0	96	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Cobalt	289.47	300.0	96	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Copper	279.23	300.0	93	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Lead	312.13	300.0	104	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Nickel	281.67	300.0	94	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Selenium	280.57	300.0	94	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Silver	281.97	300.0	94	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Thallium	299.13	300.0	100	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Vanadium	298.43	300.0	99	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g
	Zinc	274.93	300.0	92	90.0 - 110.0	MS	4/24/2020	13:01	MS2042420A 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Antimony	0.215	+/-1.000	U	0.500	1.000	MS	4/24/2020	09:12	MS2042420A 6
	Arsenic	0.015	+/-1.000	U	1.250	1.000	MS	4/24/2020	09:12	MS2042420A 6
	Barium	0.002	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Beryllium	-0.005	+/-0.200	U	0.150	0.200	MS	4/24/2020	09:12	MS2042420A 6
	Cadmium	0.008	+/-0.250	U	0.125	0.250	MS	4/24/2020	09:12	MS2042420A 6
	Chromium	-0.009	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Cobalt	0.007	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Copper	0.003	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Lead	-0.001	+/-0.500	U	0.250	0.500	MS	4/24/2020	09:12	MS2042420A 6
	Nickel	-0.003	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Selenium	0.187	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Silver	0.150	+/-0.500	U	0.250	0.500	MS	4/24/2020	09:12	MS2042420A 6
	Thallium	0.004	+/-0.250	U	0.150	0.250	MS	4/24/2020	09:12	MS2042420A 6
	Vanadium	0.002	+/-2.500	U	2.500	2.500	MS	4/24/2020	09:12	MS2042420A 6
	Zinc	0.243	+/-5.000	U	2.500	5.000	MS	4/24/2020	09:12	MS2042420A 6
CCB1										
	Antimony	0.373	+/-1.000	U	0.500	1.000	MS	4/24/2020	09:30	MS2042420A 6
	Arsenic	0.004	+/-1.000	U	1.250	1.000	MS	4/24/2020	09:30	MS2042420A 6
	Barium	0.006	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Beryllium	0.000	+/-0.200	U	0.150	0.200	MS	4/24/2020	09:30	MS2042420A 6
	Cadmium	0.010	+/-0.250	U	0.125	0.250	MS	4/24/2020	09:30	MS2042420A 6
	Chromium	-0.024	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Cobalt	0.008	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Copper	0.004	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Lead	0.005	+/-0.500	U	0.250	0.500	MS	4/24/2020	09:30	MS2042420A 6
	Nickel	0.005	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Selenium	0.180	+/-2.500	U	1.250	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Silver	0.042	+/-0.500	U	0.250	0.500	MS	4/24/2020	09:30	MS2042420A 6
	Thallium	0.009	+/-0.250	U	0.150	0.250	MS	4/24/2020	09:30	MS2042420A 6
	Vanadium	-0.003	+/-2.500	U	2.500	2.500	MS	4/24/2020	09:30	MS2042420A 6
	Zinc	0.202	+/-5.000	U	2.500	5.000	MS	4/24/2020	09:30	MS2042420A 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Antimony	0.357	+/-1.000	U	0.500	1.000	MS	4/24/2020	10:40	MS2042420A 6
	Arsenic	0.019	+/-1.000	U	1.250	1.000	MS	4/24/2020	10:40	MS2042420A 6
	Barium	0.003	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Beryllium	-0.011	+/-0.200	U	0.150	0.200	MS	4/24/2020	10:40	MS2042420A 6
	Cadmium	0.009	+/-0.250	U	0.125	0.250	MS	4/24/2020	10:40	MS2042420A 6
	Chromium	-0.018	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Cobalt	0.008	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Copper	0.013	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Lead	0.016	+/-0.500	U	0.250	0.500	MS	4/24/2020	10:40	MS2042420A 6
	Nickel	0.000	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Selenium	0.273	+/-2.500	U	1.250	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Silver	0.002	+/-0.500	U	0.250	0.500	MS	4/24/2020	10:40	MS2042420A 6
	Thallium	0.005	+/-0.250	U	0.150	0.250	MS	4/24/2020	10:40	MS2042420A 6
	Vanadium	-0.024	+/-2.500	U	2.500	2.500	MS	4/24/2020	10:40	MS2042420A 6
	Zinc	-0.161	+/-5.000	U	2.500	5.000	MS	4/24/2020	10:40	MS2042420A 6
CCB3										
	Antimony	0.366	+/-1.000	U	0.500	1.000	MS	4/24/2020	11:56	MS2042420A 6
	Arsenic	0.102	+/-1.000	U	1.250	1.000	MS	4/24/2020	11:56	MS2042420A 6
	Barium	0.012	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Beryllium	0.010	+/-0.200	U	0.150	0.200	MS	4/24/2020	11:56	MS2042420A 6
	Cadmium	0.014	+/-0.250	U	0.125	0.250	MS	4/24/2020	11:56	MS2042420A 6
	Chromium	-0.022	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Cobalt	0.014	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Copper	0.003	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Lead	0.027	+/-0.500	U	0.250	0.500	MS	4/24/2020	11:56	MS2042420A 6
	Nickel	0.004	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Selenium	0.662	+/-2.500	U	1.250	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Silver	0.008	+/-0.500	U	0.250	0.500	MS	4/24/2020	11:56	MS2042420A 6
	Thallium	0.015	+/-0.250	U	0.150	0.250	MS	4/24/2020	11:56	MS2042420A 6
	Vanadium	0.004	+/-2.500	U	2.500	2.500	MS	4/24/2020	11:56	MS2042420A 6
	Zinc	-0.234	+/-5.000	U	2.500	5.000	MS	4/24/2020	11:56	MS2042420A 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
CCB4										
	Antimony	0.354	+/-1.000	U	0.500	1.000	MS	4/24/2020	13:07	MS2042420A 6
	Arsenic	0.031	+/-1.000	U	1.250	1.000	MS	4/24/2020	13:07	MS2042420A 6
	Barium	0.010	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Beryllium	0.021	+/-0.200	U	0.150	0.200	MS	4/24/2020	13:07	MS2042420A 6
	Cadmium	0.010	+/-0.250	U	0.125	0.250	MS	4/24/2020	13:07	MS2042420A 6
	Chromium	-0.017	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Cobalt	0.006	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Copper	0.029	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Lead	0.018	+/-0.500	U	0.250	0.500	MS	4/24/2020	13:07	MS2042420A 6
	Nickel	0.008	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Selenium	0.202	+/-2.500	U	1.250	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Silver	0.011	+/-0.500	U	0.250	0.500	MS	4/24/2020	13:07	MS2042420A 6
	Thallium	0.008	+/-0.250	U	0.150	0.250	MS	4/24/2020	13:07	MS2042420A 6
	Vanadium	0.008	+/-2.500	U	2.500	2.500	MS	4/24/2020	13:07	MS2042420A 6
	Zinc	-0.206	+/-5.000	U	2.500	5.000	MS	4/24/2020	13:07	MS2042420A 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Antimony	0.15			-4.00 to 4.00	4/24/2020	09:18	MS2042420A 6
	Arsenic	-0.39			-4.00 to 4.00	4/24/2020	09:18	MS2042420A 6
	Barium	0.039			-10.000 to 10.000	4/24/2020	09:18	MS2042420A 6
	Beryllium	-0.0057			-0.8000 to 0.8000	4/24/2020	09:18	MS2042420A 6
	Cadmium	-0.095			-1.000 to 1.000	4/24/2020	09:18	MS2042420A 6
	Chromium	-1.1			-10.0 to 10.0	4/24/2020	09:18	MS2042420A 6
	Cobalt	0.22			-10.00 to 10.00	4/24/2020	09:18	MS2042420A 6
	Copper	-0.30			-10.00 to 10.00	4/24/2020	09:18	MS2042420A 6
	Lead	0.058			-2.000 to 2.000	4/24/2020	09:18	MS2042420A 6
	Nickel	0.45			-10.00 to 10.00	4/24/2020	09:18	MS2042420A 6
	Selenium	-1.4			-10.0 to 10.0	4/24/2020	09:18	MS2042420A 6
	Silver	0.022			-2.000 to 2.000	4/24/2020	09:18	MS2042420A 6
	Thallium	0.0080			-1.0000 to 1.0000	4/24/2020	09:18	MS2042420A 6
	Vanadium	-0.72			-10.00 to 10.00	4/24/2020	09:18	MS2042420A 6
	Zinc	1.4			-20.0 to 20.0	4/24/2020	09:18	MS2042420A 6

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SERIAL DILUTION SAMPLE SUMMARY

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Matrix: WATER **Level:** **Client ID:** 5W7BL

Sample ID: **VD21024-003** **Serial Dilution ID:** **VD21024-003L**

Batch Number: 51844

Analyte	Initial Result ug/L	C	Serial Result ug/L	C	% Difference	Qual	Acceptance Limits	M
Antimony	0.50	U	2.50	U			10.00 %	MS
Arsenic	2.00	U	10.00	U			10.00 %	MS
Barium	39.99		38.94	J	2.6		10.00 %	MS
Beryllium	0.66	J	1.00	U	100.0		10.00 %	MS
Cadmium	0.20	U	1.00	U			10.00 %	MS
Chromium	5.25		6.50	U	100.0		10.00 %	MS
Cobalt	10.55		10.41	J	1.4		10.00 %	MS
Copper	5.59		10.00	U	100.0		10.00 %	MS
Lead	2.12	J	5.00	U	100.0		10.00 %	MS
Nickel	13.01		13.78	J	5.9		10.00 %	MS
Selenium	3.00	U	15.00	U			10.00 %	MS
Silver	0.30	U	1.50	U			10.00 %	MS
Thallium	0.20	U	1.00	U			10.00 %	MS
Vanadium	2.50	U	12.50	U			10.00 %	MS
Zinc	23.56	J	36.50	U	100.0		10.00 %	MS

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METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ Mod. Ref. No.: _____ SDG No.: VD21024

Instrument Type: MS Instrument ID: ICPMS2 _____

Preparation Method: 3005A

Concentration Units (ug/L, mg/kg, or ug): UG/L

Analyte	Wavelength/Mass	MDL
Antimony	123.00	0.500
Arsenic	75.00	1.25
Barium	135.00	1.3
Beryllium	9.00	0.150
Cadmium	114.00	0.13
Chromium	52.00	1.25
Cobalt	59.00	1.250
Copper	65.00	1.25
Lead	208.00	0.25
Nickel	60.00	1.250
Selenium	82.00	1.25
Silver	107.00	0.250
Thallium	205.00	0.150
Vanadium	51.00	2.500
Zinc	66.00	2.50

Comments: _____

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LINEAR RANGES

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Instrument ID: ICPMS2 **Date:** Analyzed Daily

Analyte	Integration Time (sec)	LDR ug/L
Antimony	0.10	1000
Arsenic	0.10	2000
Barium	0.10	10000
Beryllium	0.10	1000
Cadmium	0.10	2000
Chromium	0.10	2000
Cobalt	0.10	2000
Copper	0.10	2000
Lead	0.10	2000
Nickel	0.10	2000
Selenium	0.10	2000
Silver	0.10	500
Thallium	0.10	1000
Vanadium	0.10	2000
Zinc	0.10	2000

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU5

Lab Code: Case No.: SAS No.: SDG No.: VD21024

Instrument ID Number: ICPMS2 Run Number: MS2042420A 6020B 200.8, generate

Start Date: 4/24/2020 End Date: 4/24/2020

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0801																										
BLANK	1.00	0807			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
MW12519B	1.00	0813																										
MW12617	1.00	0819																										
CAL1	1.00	0825			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
MW12644	1.00	0830			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CAL2	1.00	0836			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CAL3	1.00	0842			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CAL4	1.00	0848			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CAL5	1.00	0854																										
CAL6	1.00	0900																										
ICV1	1.00	0906			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ICB1	1.00	0912			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ICSA	1.00	0918			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCV1	1.00	0924			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCB1	1.00	0930			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ZZZZZZ	1.00	0935																										
ZZZZZZ	1.00	0941																										
ZZZZZZ	1.00	0947																										
ZZZZZZ	1.00	0953																										
ZZZZZZ	1.00	0959																										
ZZZZZZ	1.00	1005																										
ZZZZZZ	1.00	1011																										
ZZZZZZ	1.00	1016																										
ZZZZZZ	1.00	1022																										
ZZZZZZ	5.00	1028																										
CCV2	1.00	1034			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCB2	1.00	1040			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ZZZZZZ	1.00	1046																										
ZZZZZZ	1.00	1052																										
VO51844-001	1.00	1058			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VO51844-002	1.00	1103			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ZZZZZZ	1.00	1109																										
VD21024-001	1.00	1115										X																
VD21024-002	1.00	1121			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-003	1.00	1127			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD21024

Instrument ID Number: ICPMS2 Run Number: MS2042420A 6020B 200.8, generate

Start Date: 4/24/2020 End Date: 4/24/2020

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
VD21024-003S	1.00	1133			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-003SD	1.00	1139			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-003L	5.00	1144			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCV3	1.00	1150			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCB3	1.00	1156			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ZZZZZZ	1.00	1202																									
VD21024-004	1.00	1208			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-005	1.00	1214			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-006	1.00	1220			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-007	1.00	1225			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
VD21024-008	1.00	1231										X															
ZZZZZZ	1.00	1237																									
ZZZZZZ	1.00	1243																									
ZZZZZZ	1.00	1249																									
ZZZZZZ	1.00	1255																									
CCV4	1.00	1301			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
CCB4	1.00	1307			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
ZZZZZZ	1.00	1312																									
ZZZZZZ	1.00	1318																									
ZZZZZZ	1.00	1324																									
ZZZZZZ	5.00	1330																									
ZZZZZZ	1.00	1336																									
ZZZZZZ	1.00	1342																									
ZZZZZZ	1.00	1348																									
ZZZZZZ	1.00	1353																									
ZZZZZZ	1.00	1359																									
ZZZZZZ	1.00	1405																									
ZZZZZZ	1.00	1411																									
ZZZZZZ	1.00	1417																									
ZZZZZZ	1.00	1423																									
ZZZZZZ	1.00	1429																									

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD21024

ICP-MS Instrument ID: ICPMS2 Start Date: 04/24/2020 End Date: 04/24/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
TUNE	ZZZZZZ	0801												
BLANK	BLANK IM9936-01	0807	100		100		100		100		100		100	
MW12519B	MW12519B	0813	106		102		100		101		103		103	
MW12617	MW12617	0819	108		104		101		102		104		104	
CAL1	CAL1 MW-12643	0825	108		103		103		103		103		104	
MW12644	MW12644	0830	104		102		102		102		101		102	
CAL2	CAL2 MW-12645	0836	104		100		103		103		100		102	
CAL3	CAL3 MW-12520	0842	104		98		98		96		99		97	
CAL4	CAL4 MW-12521	0848	104		95		94		92		98		94	
CAL5	CAL5 MW-12618	0854	97		89		88		88		94		90	
CAL6	CAL6 MW-12619	0900	91		87		86		87		91		88	
ICV1	ICV1	0906	94		88		89		88		92		89	
ICB1	ICB1	0912	105		99		99		99		99		99	
ICSA	ICSA	0918	95		89		83		83		94		88	
CCV1	CCV1	0924	95		88		85		85		92		87	
CCB1	CCB1	0930	103		98		100		99		97		99	
VQ51842-001	ZZZZZZ	0935												
VQ51842-002	ZZZZZZ	0941												
VD15032-003	ZZZZZZ	0947												
VD15032-004	ZZZZZZ	0953												
VD15032-008	ZZZZZZ	0959												
VD15032-009	ZZZZZZ	1005												
VD15032-010	ZZZZZZ	1011												
VD15032-010	ZZZZZZ	1016												
VD15032-010	ZZZZZZ	1022												
VD15032-010	ZZZZZZ	1028												
CCV2	CCV2	1034	91		81		83		80		87		82	
CCB2	CCB2	1040	99		87		91		86		90		87	
LR	ZZZZZZ	1046												
VD15032-010	ZZZZZZ	1052												
VQ51844-001	VQ51844-001MB	1058	103		91		93		87		94		91	
VQ51844-002	LCS	1103	103		88		89		85		94		85	
VD18010-001	ZZZZZZ	1109												
VD21024-001	5W8B	1115	101		86		85		81		91		85	
VD21024-002	5W5B	1121	100		87		86		80		92		86	
VD21024-003	5W7B	1127	100		84		83		77		91		87	
VD21024-003	5W7BS	1133	101		85		82		78		92		89	
VD21024-003	5W7BSD	1139	102		86		81		78		93		90	
VD21024-003	5W7BL	1144	102		88		84		80		92		86	
CCV3	CCV3	1150	92		81		78		76		87		80	
CCB3	CCB3	1156	99		84		84		79		88		82	
VD21024-003	ZZZZZZ	1202												
VD21024-004	5WC21	1208	95		79		73		69		88		85	
VD21024-005	5WDUP	1214	95		78		71		67		86		82	
VD21024-006	5WC22	1220	95		82		76		72		89		86	

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD21024

ICP-MS Instrument ID: ICPMS2 Start Date: 04/24/2020 End Date: 04/24/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
VD21024-007	5WC23	1225	95		82		76		72		89		83	
VD21024-008	5W12A	1231	97		82		76		72		89		81	
VQ51841-001	ZZZZZZ	1237												
VQ51841-002	ZZZZZZ	1243												
VD21045-001	ZZZZZZ	1249												
VD22038-001	ZZZZZZ	1255												
CCV4	CCV4	1301	92		79		75		73		86		79	
CCB4	CCB4	1307	99		83		82		77		88		81	
VD22039-001	ZZZZZZ	1312												
VD22039-001	ZZZZZZ	1318												
VD22039-001	ZZZZZZ	1324												
VD22039-001	ZZZZZZ	1330												
VD22078-001	ZZZZZZ	1336												
VD20029-001	ZZZZZZ	1342												
VD21073-001	ZZZZZZ	1348												
VD22097-001	ZZZZZZ	1353												
VD21065-001	ZZZZZZ	1359												
VD21072-001	ZZZZZZ	1405												
CCV	ZZZZZZ	1411												
CCB	ZZZZZZ	1417												
IS	ZZZZZZ	1423												
RINSE	ZZZZZZ	1429												

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC **Contract:** RAAP HWMU5

Lab Code: _____ **Case No.:** _____ **MA No.:** _____ **SDG No.:** VD21024

Instrument ID: ICPMS2 **Start Date:** 4/24/2020

Analytical Method: ICP-MS **Run Batch:** MS2042420A 6020B 200.8, generated 0

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	0.00	0	0	2.00	2.1	6	10.0	11	5
Arsenic	0.00	0	0	2.00	2.0	1	10.0	10	4
Barium	0.00	0	0	5.00	4.8	-3	25.0	25	0
Beryllium	0.00	0	0	0.400	0.35	-13	2.00	1.9	-5
Cadmium	0.00	0	0	0.100	0.11	8	0.500	0.47	-6
Chromium	0.00	0	0	5.00	4.8	-3	25.0	24	-4
Cobalt	0.00	0	0	1.00	1.0	1	5.00	4.9	-2
Copper	0.00	0	0	5.00	5.2	5	25.0	25	-1
Lead	0.00	0	0	1.00	0.99	-1	5.00	4.9	-3
Nickel	0.00	0	0	5.00	5.0	1	25.0	25	-1
Selenium	0.00	0	0	5.00	5.3	5	25.0	27	7
Silver	0.00	0	0	1.00	0.96	-4	5.00	4.9	-2
Thallium	0.00	0	0	0.500	0.52	3	2.50	2.5	0
Vanadium	0.00	0	0	5.00	4.9	-1	25.0	25	-1
Zinc	0.00	0	0	10.0	10	4	50.0	51	2

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC **Contract:** RAAP HWMU5

Lab Code: _____ **Case No.:** _____ **MA No.:** _____ **SDG No.:** VD21024

Instrument ID: ICPMS2 **Start Date:** 4/24/2020

Analytical Method: ICP-MS **Run Batch:** MS2042420A 6020B 200.8, generat

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	250	248	-1	500	501	0			
Arsenic	250	253	1	500	493	-1			
Barium	250	250	0	500	501	0			
Beryllium	250	250	0	500	500	0			
Cadmium	250	250	0	500	501	0			
Chromium	250	253	1	500	503	1			
Cobalt	250	254	2	500	477	-5			
Copper	250	254	1	500	498	0			
Lead	250	258	3	500	500	0			
Nickel	250	254	1	500	498	0			
Selenium	250	256	2	500	497	-1			
Silver	250	250	0	500	503	1			
Thallium	250	269	7	500	491	-2			
Vanadium	250	255	2	500	498	-1			
Zinc	250	254	2	500	498	0			

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC **Contract:** RAAP HWMU5

Lab Code: _____ **Case No.:** _____ **MA No.:** _____ **SDG No.:** VD21024

Instrument ID: ICPMS2 **Start Date:** 4/24/2020

Analytical Method: ICP-MS **Run Batch:** MS2042420A 6020B 200.8, generat

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony				4.00	4.3	7			
Arsenic				4.00	4.2	4			
Barium				10.0	10	0			
Beryllium				0.800	0.79	-1			
Cadmium				0.200	0.20	1			
Chromium				10.0	10	0			
Cobalt				2.00	2.0	-2			
Copper				10.0	10	0			
Lead				2.00	2.0	-1			
Nickel				10.0	10	2			
Selenium				10.0	10	1			
Silver				2.00	2.0	-1			
Thallium				1.00	1.0	1			
Vanadium				10.0	9.9	-1			
Zinc				20.0	21	3			

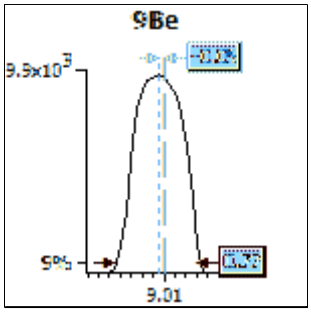
Raw Sample Data

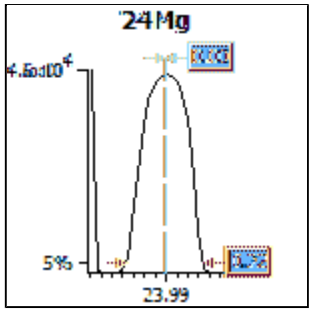
Performance Report

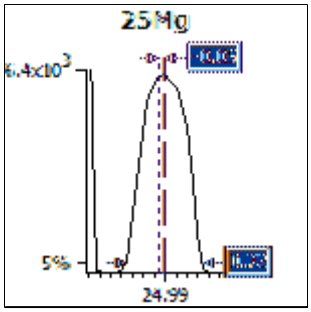
Sample details
Acquired at : 4/24/2020 07:51:05
Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

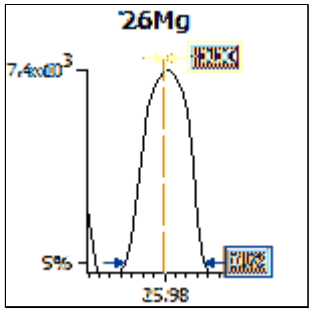
Mass Calibration verification

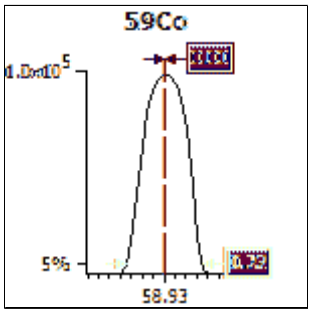
Acquisition parameters
Sweeps : 25
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum

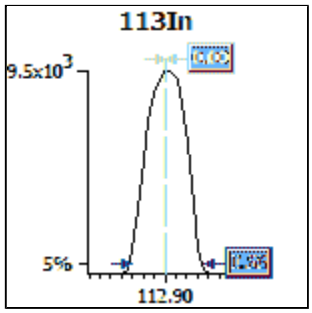


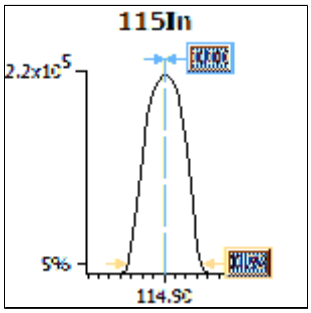


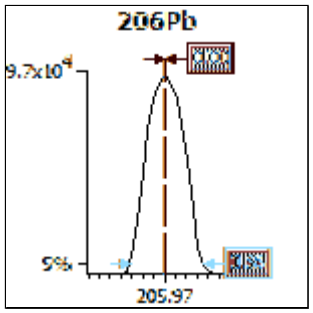


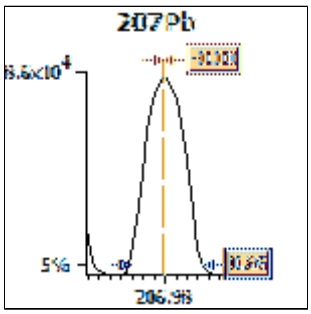


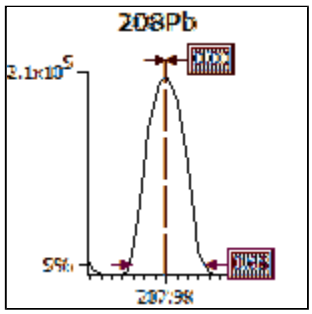












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.77	-0.05
24Mg	0.85	0.65	0.10	0.72	0.00
25Mg	0.85	0.65	0.10	0.72	-0.05
26Mg	0.85	0.65	0.10	0.72	-0.00
59Co	0.85	0.65	0.10	0.72	0.00
113In	0.85	0.65	0.10	0.66	0.00
115In	0.85	0.65	0.10	0.72	0.00
206Pb	0.85	0.65	0.10	0.66	0.00
207Pb	0.85	0.65	0.10	0.66	-0.00
208Pb	0.85	0.65	0.10	0.66	0.00

Sample details
Acquired at : 4/24/2020 07:51:05
Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Tune conditions

Major	
Extraction	-117.6
Lens 1	-1208
Lens 2	-87.1
Focus	15.5
D1	-43.1
D2	-147
Pole Bias	1.0
Hexapole Bias	-2.0
Nebuliser	0.81

Minor	
Lens 3	-196.1
Forward power	1404
Horizontal	85
Vertical	802
DA	-49.4
Cool	13.0
Auxiliary	1.00
Sampling Depth	90

Global	
Standard resolution	100
High resolution	90
Analogue Detector	2304
PC Detector	3627

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 130

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	136Ba++	101Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-	-
	Countrate	-	>5000	>1000	>1000	>1000	-	>10000	-	-
1	07:52:30	0.000	10428.285	46289.087	6349.139	7570.843	186342.73	105115.76	1068.524	0.000
2	07:53:01	0.000	10148.739	45633.477	6246.761	7386.846	184579.61	104960.91	1056.215	0.769
3	07:53:33	0.769	10355.895	45914.888	6342.212	7424.569	187240.12	104606.08	1053.907	0.000
4	07:54:05	0.000	10252.701	46185.485	6366.074	7519.262	188086.56	105433.25	1086.219	0.769
5	07:54:37	0.000	10429.056	46076.472	6345.291	7507.714	188183.93	105710.28	1036.982	0.769
x		0.154	10322.935	46019.882	6329.895	7481.847	186886.59	105165.26	1060.370	0.462
s		0.34	121.16	256.63	47.38	74.66	1488.78	425.96	18.31	0.42
%RSD		223.607	1.174	0.558	0.749	0.998	0.797	0.405	1.727	91.287

Run	Time	113In	115In	138Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	5.0%	5.0%	-	-	-	5.0%	5.0%	5.0%	-
	Countrate	>1000	>10000	-	-	-	>10000	>10000	>10000	<2
1	07:52:30	9669.755	224158.39	179114.21	238727.72	3549.154	97650.115	84739.263	206500.54	0.000
2	07:53:01	9861.500	223714.58	178849.07	238546.92	3468.354	96881.962	84618.919	205822.34	0.000
3	07:53:33	9669.755	224024.38	177996.43	237893.98	3456.811	96096.771	83507.947	205001.80	0.000
4	07:54:05	9694.397	222919.24	178423.91	238508.23	3414.487	95746.955	84198.892	204734.33	0.769
5	07:54:37	9692.087	223463.91	178261.54	238794.84	3471.432	96483.138	84330.876	204631.28	0.000
x		9717.499	223656.10	178529.03	238494.34	3472.048	96571.788	84279.179	205338.06	0.154
s		81.36	492.76	450.31	356.42	48.75	737.03	482.45	800.46	0.34
%RSD		0.837	0.220	0.252	0.149	1.404	0.763	0.572	0.390	223.607

Ratio results

Run	Time	56Ar O/59Co	136Ba++/138Ba	115In/101Bkg	156Ce O/140Ce
Ratio limits		-	-	-	-
1	07:52:30	1.773	0.006	INF	0.015
2	07:53:01	1.759	0.006	290828.94	0.015
3	07:53:33	1.790	0.006	INF	0.015
4	07:54:05	1.784	0.006	289795.00	0.014
5	07:54:37	1.780	0.006	290503.07	0.015
x		1.7771	0.0059	290375.67	0.0146
s		0.01	0.00	159045.74	0.00
%RSD		0.6802	1.6655	54.7724	1.3544

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Pace Analytical Services, LLC **Contract:**

Lab Code: **Case No.:** **MA No.:** **SDG No.:**

Instrument ID: ICPMS2

Run Batch: MS2042420A 6020B 200.8, gen **Date:** 4/24/2020

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	115In	
Barium	115In	
Beryllium	6Li	
Boron	6Li	45Sc
Cadmium	115In	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	45Sc	
Iron	45Sc	
Lead	159Tb	
Magnesium	45Sc	
Manganese	45Sc	
Molybdenum	115In	
Nickel	45Sc	
Potassium	45Sc	
Selenium	115In	
Silicon	6Li	
Silver	115In	
Sodium	6Li	45Sc
Thallium	159Tb	
Tin	115In	159Tb
Titanium	45Sc	
Vanadium	45Sc	
Zinc	115In	

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2041020A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	4/27/2020 07:12:17
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.
Underlining indicates that a data warning flag is set.

Column headings
- No flag
- Semi Quant
- Standard Addition
- Multi Element

Result cells
- Internal Standard
- Excluded
- QC Warning
- QC Failure

Transient TRA only:
- Peak Not Found
- Manually Edited
- Merged Peak

Data warning flags
I - Invalid calibration
T - Tripped
F - Interference correction failed
M - Result over max
V - Valley integration failed
D - Different method used

Fully Quantitative Concentrations

Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617			25.000				50.000			200.000
5	cal1 MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
6	MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
7	cal2 MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
8	cal3 MW-12520	250.000	250.000	250.000					250.000	250.000	
9	cal4 MW-12521	500.000	500.000	500.000					500.000	500.000	
10	cal5 MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
11	cal6 MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000

Id	Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617									20.000	
5	cal1 MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
6	MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
7	cal2 MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
8	cal3 MW-12520			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12521			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
11	cal6 MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	

Id	Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B	2.000									
4	MW12617				1.000						
5	cal1 MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
6	MW12644	10.000			10.000	20.000			4.000		10.000
7	cal2 MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
8	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										

Id	Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617										
5	cal1 MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
6	MW12644	20.000		20.000	20.000	2.000				0.200	
7	cal2 MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
8	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										

Id	Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										

4	MW12617	5.000									
5	cal1 MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
6	MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
7	cal2 MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
8	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										

Id	Label	232Th	238U
		ppb	ppb
3	MW12519B		
4	MW12617		
5	cal1 MW-12643		50.000
6	MW12644		
7	cal2 MW-12645		250.000
8	cal3 MW-12520		
9	cal4 MW-12521		500.000
10	cal5 MW-12618		
11	cal6 MW-12619		

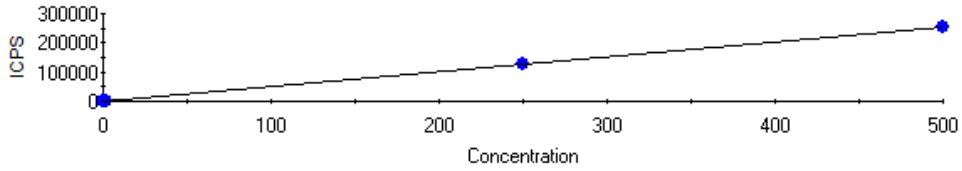
Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12793	Unknown	1.000	0	1	5	144
2	BLANK IM9936-01	Blank	1.000	0	1	1	144
3	MW12519B	Fully Quant Standard	1.000	4	5	1	144
4	MW12617	Fully Quant Standard	1.000	4	5	2	144
5	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
6	MW12644	Fully Quant Standard	1.000	4	5	4	144
7	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
8	cal3 MW-12520	Fully Quant Standard	1.000	4	5	6	144
9	cal4 MW-12521	Fully Quant Standard	1.000	4	5	7	144
10	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
11	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
12	ICV MW12798 PREP 4/24/20	QC Sample	1.000	4	5	11	144
13	ICB IM9936-01	QC Sample	1.000	0	1	1	144
14	ICSA MW12579	QC Sample	1.000	4	5	12	144
15	CCV MW12620	QC Sample	1.000	0	1	8	144
16	CCB IM9936-01	QC Sample	1.000	0	1	1	144
17	VQ51842-001	QC Sample	1.000	1	1	1	144
18	VQ51842-002	QC Sample	1.000	1	1	2	144
19	VD15032-003	Unknown	1.000	1	1	3	144
20	VD15032-004	Unknown	1.000	1	1	4	144
21	VD15032-008	Unknown	1.000	1	1	5	144
22	VD15032-009	Unknown	1.000	1	1	6	144
23	VD15032-010	Unknown	1.000	1	1	7	144
24	VD15032-010S	Unknown	1.000	1	1	8	144
25	VD15032-010SD	Unknown	1.000	1	1	9	144
26	VD15032-010L(5)	Unknown	1.000	1	1	10	144
27	CCV MW12620	QC Sample	1.000	0	1	8	144
28	CCB IM9936-01	QC Sample	1.000	0	1	1	144
29	LR MW12519A	QC Sample	1.000	4	5	10	144
30	VD15032-010A	Unknown	1.000	1	2	1	144
31	VQ51844-001	QC Sample	1.000	1	2	2	144
32	VQ51844-002	QC Sample	1.000	1	2	3	144
33	VD18010-001	Unknown	1.000	1	2	4	144
34	VD21024-001	Unknown	1.000	1	2	5	144
35	VD21024-002	Unknown	1.000	1	2	6	144
36	VD21024-003	Unknown	1.000	1	2	7	144
37	VD21024-003S	Unknown	1.000	1	2	8	144
38	VD21024-003SD	Unknown	1.000	1	2	9	144
39	VD21024-003L(5)	Unknown	1.000	1	2	10	144
40	CCV MW12620	QC Sample	1.000	0	1	8	144
41	CCB IM9936-01	QC Sample	1.000	0	1	1	144
42	VD21024-003A	Unknown	1.000	1	3	1	144
43	VD21024-004	Unknown	1.000	1	3	2	144
44	VD21024-005	Unknown	1.000	1	3	3	144
45	VD21024-006	Unknown	1.000	1	3	4	144
46	VD21024-007	Unknown	1.000	1	3	5	144
47	VD21024-008	Unknown	1.000	1	3	6	144
48	VQ51841-001	QC Sample	1.000	1	3	7	144
49	VQ51841-002	QC Sample	1.000	1	3	8	144
50	VD21045-001	Unknown	1.000	1	3	9	144
51	VD22038-001	Unknown	1.000	1	3	10	144
52	CCV MW12620	QC Sample	1.000	0	1	8	144
53	CCB IM9936-01	QC Sample	1.000	0	1	1	144
54	VD22039-001	Unknown	1.000	1	4	1	144
55	VD22039-001S	Unknown	1.000	1	4	2	144
56	VD22039-001SD	Unknown	1.000	1	4	3	144
57	VD22039-001L(5)	Unknown	1.000	1	4	4	144
58	VD22078-001	Unknown	1.000	1	4	5	144
59	VD20029-001	Unknown	1.000	1	4	6	144

60	VD21073-001	Unknown	1.000	1	4	7	144
61	VD22097-001	Unknown	1.000	1	4	8	144
62	VD21065-001	Unknown	1.000	1	4	9	144
63	VD21072-001	Unknown	1.000	1	4	10	144
64	CCV MW12620	QC Sample	1.000	0	1	8	144
65	CCB IM9936-01	QC Sample	1.000	0	1	1	144
66	IS MW12794	Unknown	1.000	0	1	6	144
67	RINSE	Unknown	1.000	0	1	5	144

Fully Quant Calibration

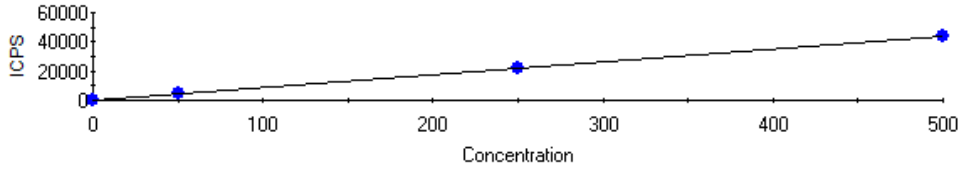
9Be FQ Block 1



Intercept CPS=17.315858 Intercept Conc=0.034216
Sensitivity=506.074758 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.32	0.00
cal1 MW-12643	0.400	0.348	0.052	193.63	12.90
MW12644	0.800	0.791	0.009	417.50	1.16
cal2 MW-12645	2.000	1.907	0.093	982.58	4.63
cal3 MW-12520	250.000	250.269	0.269	126672.37	0.11
cal4 MW-12521	500.000	499.866	0.134	252986.73	0.03

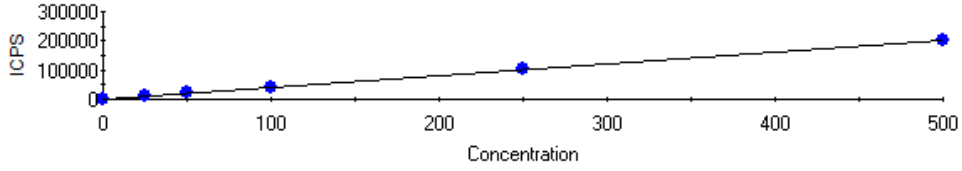
10B FQ Block 1



Intercept CPS=85.340212 Intercept Conc=0.972963
Sensitivity=87.711634 Correlation Coeff=0.999970

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	85.34	0.00
cal1 MW-12643	50.000	51.251	1.251	4580.67	2.50
cal3 MW-12520	250.000	252.907	2.907	22268.23	1.16
cal4 MW-12521	500.000	498.421	1.579	43802.69	0.32

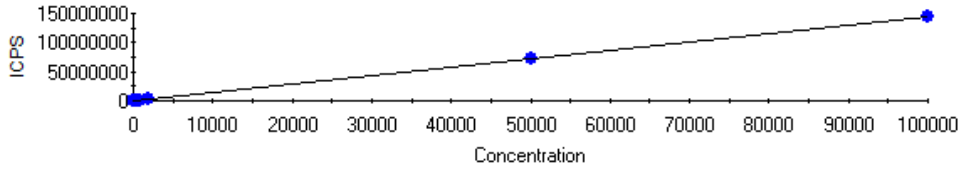
11B FQ Block 1



Intercept CPS=409.337170 Intercept Conc=1.013884
Sensitivity=403.731932 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	409.34	0.00
MW12617	25.000	24.311	0.689	10224.60	2.75
cal1 MW-12643	50.000	50.074	0.074	20625.91	0.15
MW12644	100.000	102.632	2.632	41845.12	2.63
cal3 MW-12520	250.000	250.757	0.757	101647.88	0.30
cal4 MW-12521	500.000	492.064	7.936	199071.27	1.59

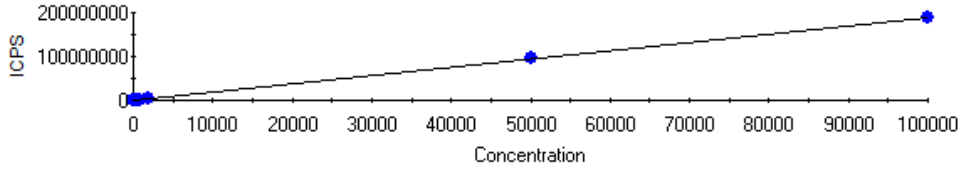
23Na FQ Block 1



Intercept CPS=93535.254593 Intercept Conc=65.100794
Sensitivity=1436.775938 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	93535.25	0.00
cal1 MW-12643	400.000	440.465	40.465	726384.76	10.12
MW12644	800.000	811.515	11.515	1259500.25	1.44
cal2 MW-12645	2000.000	2033.618	33.618	3015388.53	1.68
cal5 MW-12618	50000.000	50769.191	769.191	73037486.97	1.54
cal6 MW-12619	100000.000	99614.478	385.522	143217220.68	0.39

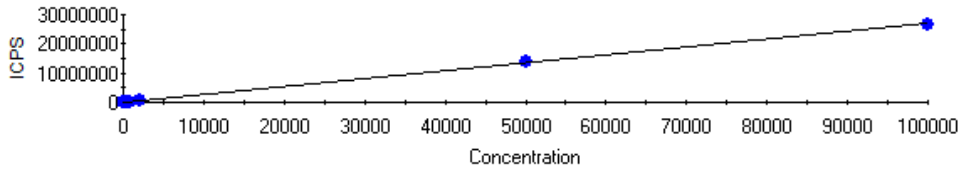
24Mg FQ Block 1



Intercept CPS=2466.999470 Intercept Conc=1.311180
Sensitivity=1881.511336 Correlation Coeff=0.999953

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	2467.00	0.00
cal1 MW-12643	400.000	464.959	64.959	877293.10	16.24
MW12644	800.000	956.722	156.722	1802550.35	19.59
cal2 MW-12645	2000.000	2101.843	101.843	3957108.09	5.09
cal5 MW-12618	50000.000	50845.683	845.683	95669196.45	1.69
cal6 MW-12619	100000.000	99573.608	426.392	187351339.03	0.43

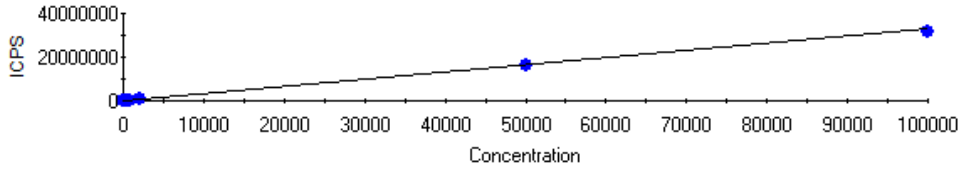
25Mg FQ Block 1



Intercept CPS=304.000008 Intercept Conc=1.132926
Sensitivity=268.331828 Correlation Coeff=0.999965

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	304.00	0.00
cal1 MW-12643	400.000	438.553	38.553	117981.67	9.64
MW12644	800.000	892.734	92.734	239853.07	11.59
cal2 MW-12645	2000.000	2210.232	210.232	593379.54	10.51
cal5 MW-12618	50000.000	50725.183	725.183	13611485.05	1.45
cal6 MW-12619	100000.000	99632.308	367.692	26734823.34	0.37

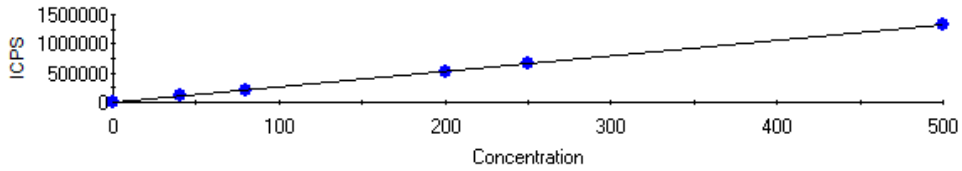
26Mg FQ Block 1



Intercept CPS=378.649411 Intercept Conc=1.156816
Sensitivity=327.320458 Correlation Coeff=0.999973

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	378.65	0.00
MW12617	50.000	53.296	3.296	17823.38	6.59
cal1 MW-12643	400.000	419.881	19.881	137814.45	4.97
MW12644	800.000	853.370	53.370	279704.24	6.67
cal2 MW-12645	2000.000	2101.773	101.773	688331.91	5.09
cal5 MW-12618	50000.000	48940.780	1059.220	16019697.25	2.12
cal6 MW-12619	100000.000	96318.743	3681.257	31527473.63	3.68

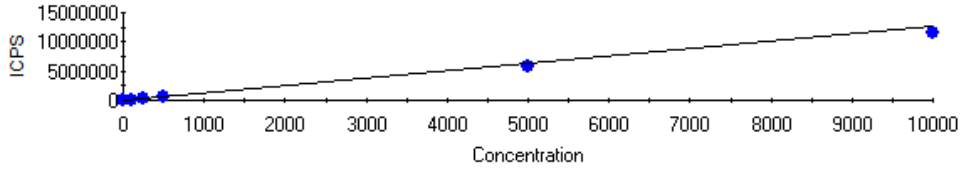
27Al FQ Block 1



Intercept CPS=424.018500 Intercept Conc=0.159861
Sensitivity=2652.425975 Correlation Coeff=0.999941

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	424.02	0.00
cal1 MW-12643	40.000	40.006	0.006	106538.08	0.02
MW12644	80.000	79.947	0.053	212478.65	0.07
cal2 MW-12645	200.000	196.083	3.917	520520.89	1.96
cal3 MW-12520	250.000	251.708	1.708	668061.54	0.68
cal4 MW-12521	500.000	502.406	2.406	1333017.83	0.48

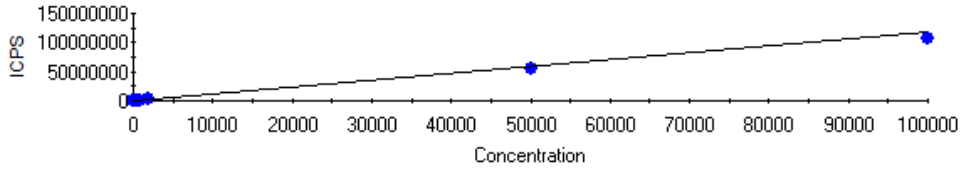
28Si FQ Block 1



Intercept CPS=17494.370182 Intercept Conc=13.862965
Sensitivity=1261.950103 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	17494.37	0.00
cal1 MW-12643	100.000	99.084	0.916	142533.93	0.92
cal3 MW-12520	250.000	267.937	17.937	355617.26	7.17
cal4 MW-12521	500.000	530.195	30.195	686573.67	6.04
cal5 MW-12618	5000.000	4467.076	532.924	5654721.97	10.66
cal6 MW-12619	10000.000	9078.413	921.587	11473997.98	9.22

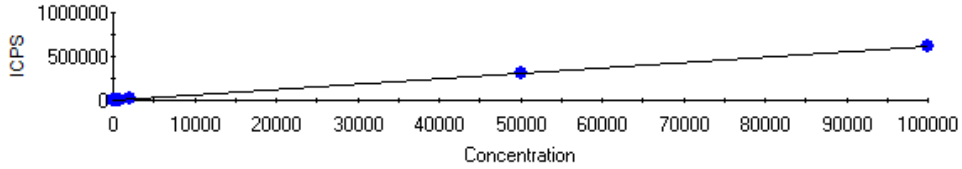
39K FQ Block 1



Intercept CPS=83591.391384 Intercept Conc=70.786012
Sensitivity=1180.902674 Correlation Coeff=0.999802

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	83591.39	0.00
MW12617	200.000	209.873	9.873	331431.01	4.94
cal1 MW-12643	400.000	412.564	12.564	570789.02	3.14
MW12644	800.000	803.429	3.429	1032362.31	0.43
cal2 MW-12645	2000.000	1826.082	173.918	2240016.81	8.70
cal5 MW-12618	50000.000	47556.482	2443.518	56243168.31	4.89
cal6 MW-12619	100000.000	91108.819	8891.181	107674239.79	8.89

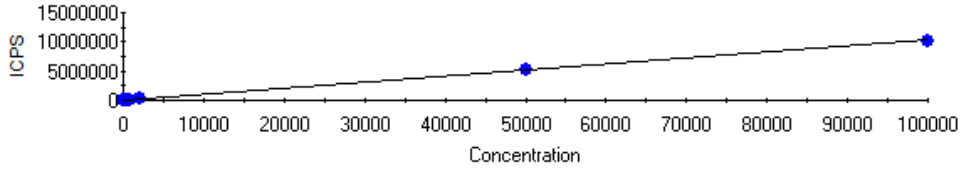
43Ca FQ Block 1



Intercept CPS=19.997201 Intercept Conc=3.260688
Sensitivity=6.132816 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	20.00	0.00
cal1 MW-12643	400.000	400.989	0.989	2479.19	0.25
MW12644	800.000	797.960	2.040	4913.74	0.26
cal2 MW-12645	2000.000	2026.027	26.027	12445.25	1.30
cal5 MW-12618	50000.000	50238.761	238.761	308125.08	0.48
cal6 MW-12619	100000.000	99880.111	119.889	612566.34	0.12

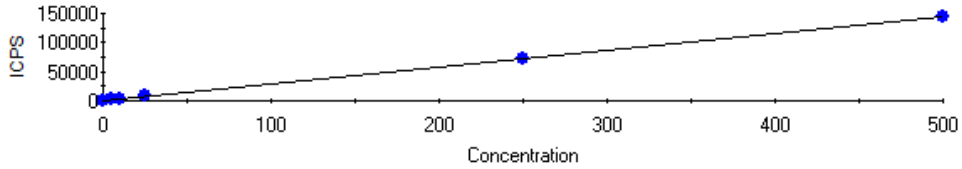
44Ca FQ Block 1



Intercept CPS=1417.445247 Intercept Conc=13.815679
Sensitivity=102.596859 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1417.45	0.00
cal1 MW-12643	400.000	400.108	0.108	42467.25	0.03
MW12644	800.000	813.162	13.162	84845.28	1.65
cal2 MW-12645	2000.000	1991.471	8.529	205736.10	0.43
cal5 MW-12618	50000.000	49984.537	15.463	5129674.01	0.03
cal6 MW-12619	100000.000	99696.705	303.295	10229986.29	0.30

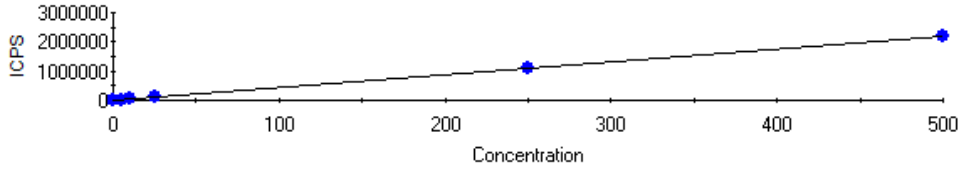
47Ti FQ Block 1



Intercept CPS=17.335599 Intercept Conc=0.059827
Sensitivity=289.760276 Correlation Coeff=0.999975

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.34	0.00
cal1 MW-12643	5.000	5.182	0.182	1518.96	3.65
MW12644	10.000	10.291	0.291	2999.21	2.91
cal2 MW-12645	25.000	26.201	1.201	7609.39	4.80
cal3 MW-12520	250.000	253.676	3.676	73522.68	1.47
cal4 MW-12521	500.000	499.812	0.188	144842.95	0.04

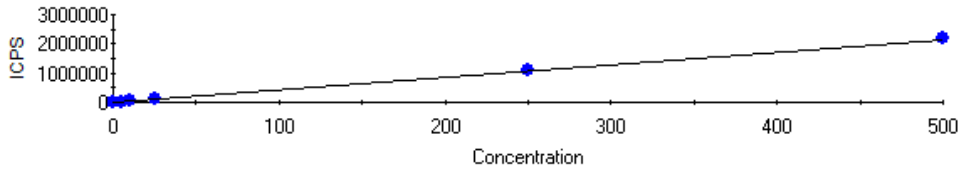
51V FQ Block 1



Intercept CPS=268.850292 Intercept Conc=0.061227
Sensitivity=4391.041033 Correlation Coeff=0.999927

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	268.85	0.00
cal1 MW-12643	5.000	4.930	0.070	21915.54	1.41
MW12644	10.000	9.948	0.052	43949.47	0.52
cal2 MW-12645	25.000	24.700	0.300	108727.99	1.20
cal3 MW-12520	250.000	255.025	5.025	1120095.66	2.01
cal4 MW-12521	500.000	497.504	2.496	2184829.61	0.50

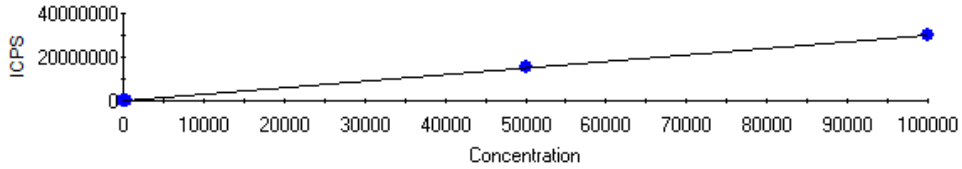
52Cr FQ Block 1



Intercept CPS=778.445656 Intercept Conc=0.180166
Sensitivity=4320.708003 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	778.45	0.00
cal1 MW-12643	5.000	4.839	0.161	21686.73	3.22
MW12644	10.000	10.005	0.005	44005.07	0.05
cal2 MW-12645	25.000	24.090	0.910	104865.89	3.64
cal3 MW-12520	250.000	252.615	2.615	1092252.92	1.05
cal4 MW-12521	500.000	503.307	3.307	2175422.80	0.66

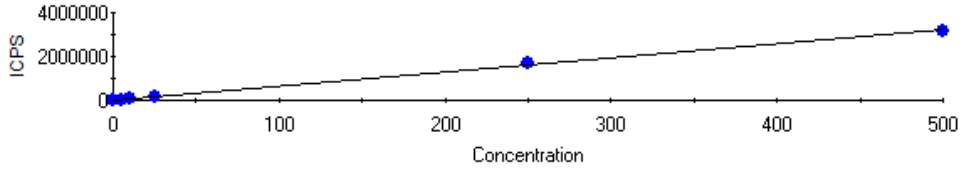
54Fe FQ Block 1



Intercept CPS=5545.710709 Intercept Conc=18.439767
Sensitivity=300.747338 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	5545.71	0.00
cal1 MW-12643	50.000	54.421	4.421	21912.64	8.84
cal3 MW-12520	250.000	386.490	136.490	121781.64	54.60
cal4 MW-12521	500.000	762.797	262.797	234954.77	52.56
cal5 MW-12618	50000.000	50279.863	279.863	15127080.69	0.56
cal6 MW-12619	100000.000	99858.411	141.589	30037697.06	0.14

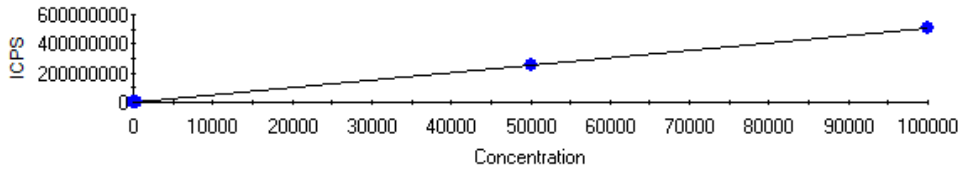
55Mn FQ Block 1



Intercept CPS=532.064812 Intercept Conc=0.082355
Sensitivity=6460.643212 Correlation Coeff=0.999208

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	532.06	0.00
cal1 MW-12643	5.000	5.117	0.117	33591.59	2.34
MW12644	10.000	10.402	0.402	67732.74	4.02
cal2 MW-12645	25.000	25.378	0.378	164488.98	1.51
cal3 MW-12520	250.000	266.695	16.695	1723552.82	6.68
cal4 MW-12521	500.000	491.624	8.376	3176742.21	1.68

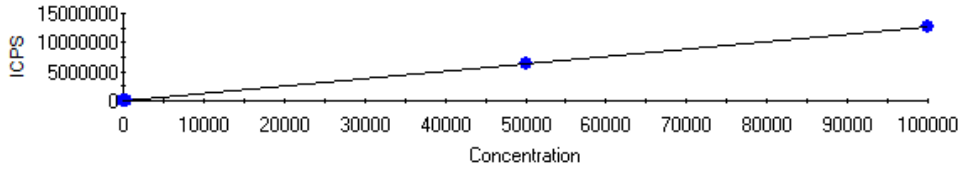
56Fe FQ Block 1



Intercept CPS=198109.153325 Intercept Conc=38.900563
Sensitivity=5092.706573 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	198109.15	0.00
cal1 MW-12643	50.000	56.821	6.821	487483.08	13.64
cal3 MW-12520	250.000	285.280	35.280	1650959.03	14.11
cal4 MW-12521	500.000	505.524	5.524	2772595.33	1.10
cal5 MW-12618	50000.000	50389.739	389.739	256818261.85	0.78
cal6 MW-12619	100000.000	99805.011	194.989	508475747.19	0.19

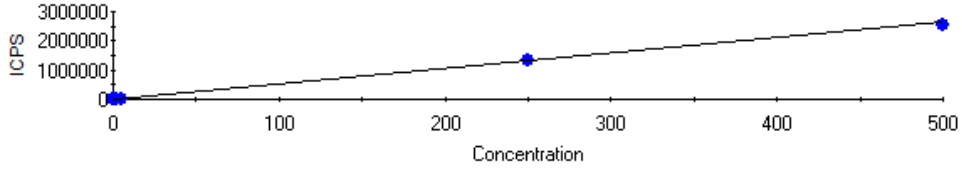
57Fe FQ Block 1



Intercept CPS=1212.169916 Intercept Conc=9.561194
Sensitivity=126.780182 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1212.17	0.00
MW12617	20.000	21.635	1.635	3955.09	8.18
cal1 MW-12643	50.000	54.679	4.679	8144.44	9.36
MW12644	100.000	109.184	9.184	15054.59	9.18
cal3 MW-12520	250.000	273.180	23.180	35845.94	9.27
cal4 MW-12521	500.000	541.562	41.562	69871.51	8.31
cal5 MW-12618	50000.000	50233.221	233.221	6369789.01	0.47
cal6 MW-12619	100000.000	99820.203	179.797	12656435.64	0.18

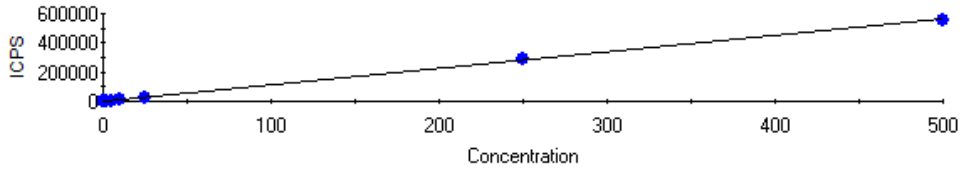
59Co FQ Block 1



Intercept CPS=36.004175 Intercept Conc=0.006819
Sensitivity=5279.998862 Correlation Coeff=0.999550

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	36.00	0.00
cal1 MW-12643	1.000	1.008	0.008	5358.75	0.81
MW12644	2.000	1.960	0.040	10382.48	2.02
cal2 MW-12645	5.000	4.875	0.125	25773.46	2.51
cal3 MW-12520	250.000	253.900	3.900	1340629.76	1.56
cal4 MW-12521	500.000	476.943	23.057	2518295.27	4.61

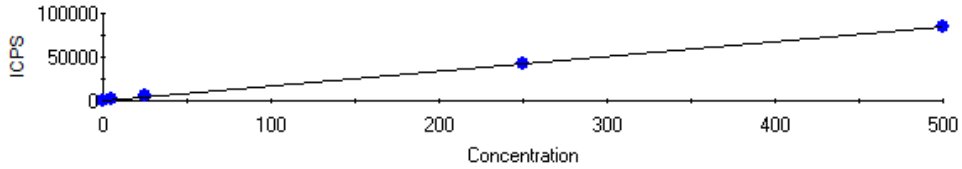
60Ni FQ Block 1



Intercept CPS=35.997049 Intercept Conc=0.032126
Sensitivity=1120.485215 Correlation Coeff=0.999965

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	36.00	0.00
MW12519B	2.000	2.025	0.025	2305.27	1.26
cal1 MW-12643	5.000	5.034	0.034	5677.00	0.69
MW12644	10.000	10.207	0.207	11472.64	2.07
cal2 MW-12645	25.000	24.719	0.281	27733.61	1.12
cal3 MW-12520	250.000	253.615	3.615	284207.58	1.45
cal4 MW-12521	500.000	498.202	1.798	558264.06	0.36

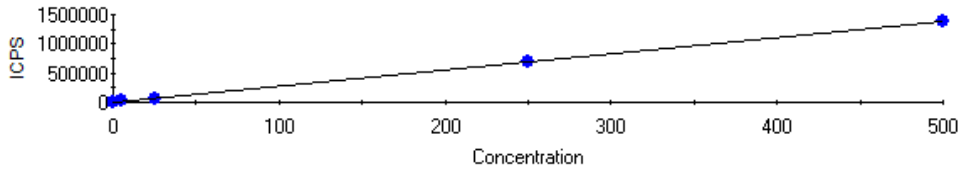
62Ni FQ Block 1



Intercept CPS=578.695685 Intercept Conc=3.414881
Sensitivity=169.462916 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	578.70	0.00
cal1 MW-12643	5.000	4.961	0.039	1419.46	0.77
cal2 MW-12645	25.000	25.911	0.911	4969.66	3.64
cal3 MW-12520	250.000	251.136	1.136	43136.85	0.45
cal4 MW-12521	500.000	499.387	0.613	85206.28	0.12

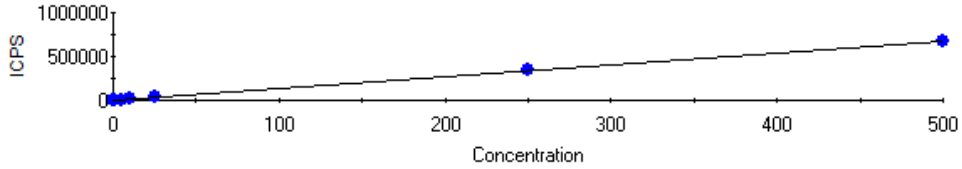
63Cu FQ Block 1



Intercept CPS=770.530823 Intercept Conc=0.278973
Sensitivity=2762.029650 Correlation Coeff=0.999977

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	770.53	0.00
cal1 MW-12643	5.000	4.967	0.033	14489.07	0.66
cal2 MW-12645	25.000	24.825	0.175	69336.56	0.70
cal3 MW-12520	250.000	252.725	2.725	698803.22	1.09
cal4 MW-12521	500.000	498.647	1.353	1378047.87	0.27

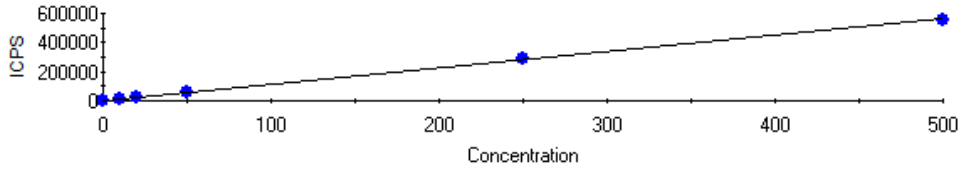
65Cu FQ Block 1



Intercept CPS=169.298848 Intercept Conc=0.126834
Sensitivity=1334.801623 Correlation Coeff=0.999963

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	169.30	0.00
MW12617	1.000	1.013	0.013	1521.97	1.34
cal1 MW-12643	5.000	5.226	0.226	7144.88	4.52
MW12644	10.000	10.026	0.026	13551.86	0.26
cal2 MW-12645	25.000	24.821	0.179	33300.59	0.72
cal3 MW-12520	250.000	253.731	3.731	338849.74	1.49
cal4 MW-12521	500.000	498.141	1.859	665088.29	0.37

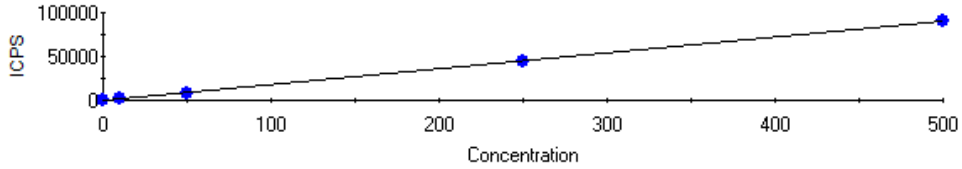
66Zn FQ Block 1



Intercept CPS=432.104103 Intercept Conc=0.386334
Sensitivity=1118.473217 Correlation Coeff=0.999954

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	432.10	0.00
cal1 MW-12643	10.000	10.422	0.422	12088.56	4.22
MW12644	20.000	20.506	0.506	23367.10	2.53
cal2 MW-12645	50.000	51.223	1.223	57723.17	2.45
cal3 MW-12520	250.000	253.957	3.957	284476.03	1.58
cal4 MW-12521	500.000	497.803	2.197	557211.73	0.44

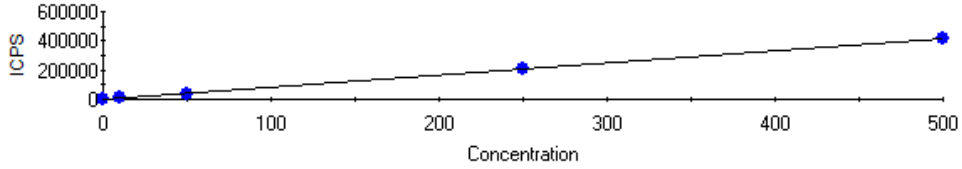
67Zn FQ Block 1



Intercept CPS=51.990235 Intercept Conc=0.288590
Sensitivity=180.152331 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	51.99	0.00
cal1 MW-12643	10.000	9.172	0.828	1704.35	8.28
cal2 MW-12645	50.000	47.180	2.820	8551.49	5.64
cal3 MW-12520	250.000	249.156	0.844	44938.07	0.34
cal4 MW-12521	500.000	500.720	0.720	90257.95	0.14

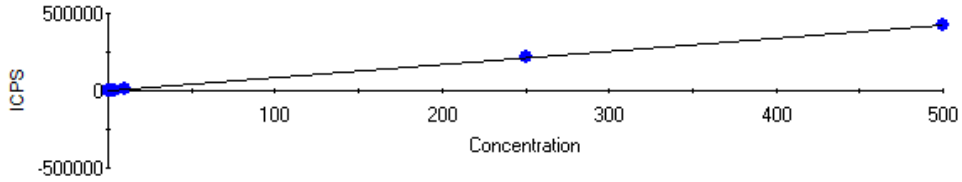
68Zn FQ Block 1



Intercept CPS=265.360742 Intercept Conc=0.322013
Sensitivity=824.067753 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	265.36	0.00
cal1 MW-12643	10.000	10.009	0.009	8513.59	0.09
cal2 MW-12645	50.000	48.638	1.362	40346.44	2.72
cal3 MW-12520	250.000	252.922	2.922	208690.17	1.17
cal4 MW-12521	500.000	500.062	0.062	412349.92	0.01

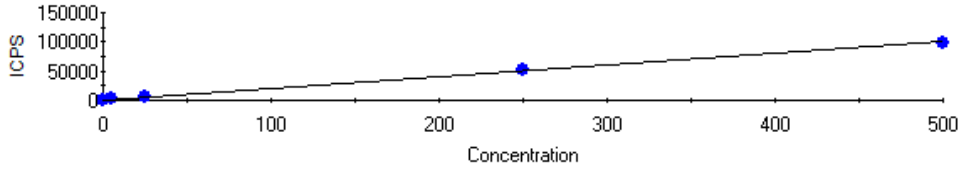
75As FQ Block 1



Intercept CPS=89.000252 Intercept Conc=0.104612
Sensitivity=850.768696 Correlation Coeff=0.999925

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	89.00	0.00
cal1 MW-12643	2.000	2.024	0.024	1810.81	1.19
MW12644	4.000	4.178	0.178	3643.30	4.44
cal2 MW-12645	10.000	10.366	0.366	8908.47	3.66
cal3 MW-12520	250.000	253.071	3.071	215394.08	1.23
cal4 MW-12521	500.000	493.150	6.850	419645.71	1.37

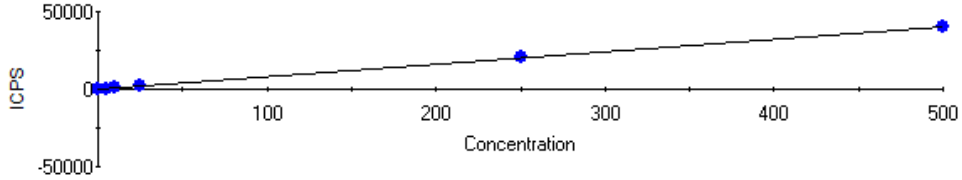
78Se FQ Block 1



Intercept CPS=746.645484 Intercept Conc=3.776482
Sensitivity=197.709263 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	746.65	0.00
cal1 MW-12643	5.000	5.141	0.141	1763.03	2.82
cal2 MW-12645	25.000	25.080	0.080	5705.23	0.32
cal3 MW-12520	250.000	252.727	2.727	50713.13	1.09
cal4 MW-12521	500.000	498.631	1.369	99330.62	0.27

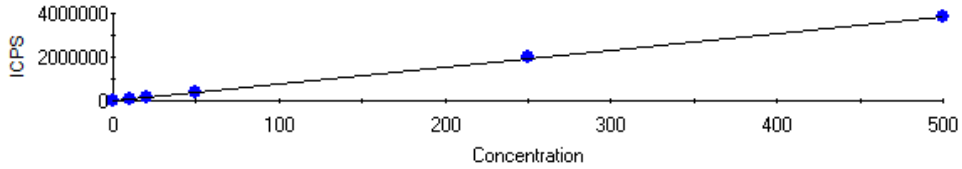
82Se FQ Block 1



Intercept CPS=30.994228 Intercept Conc=0.388627
Sensitivity=79.753198 Correlation Coeff=0.999911

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	30.99	0.00
cal1 MW-12643	5.000	5.274	0.274	451.60	5.48
MW12644	10.000	10.062	0.062	833.49	0.62
cal2 MW-12645	25.000	26.711	1.711	2161.26	6.84
cal3 MW-12520	250.000	255.598	5.598	20415.74	2.24
cal4 MW-12521	500.000	497.112	2.888	39677.23	0.58

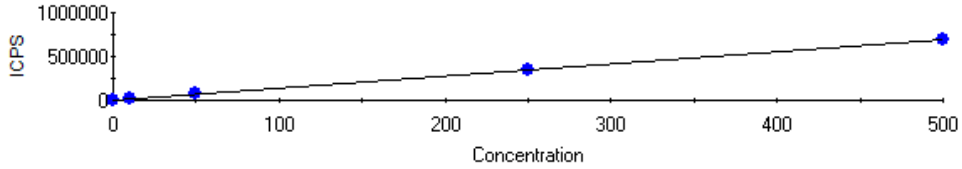
88Sr FQ Block 1



Intercept CPS=37.324976 Intercept Conc=0.004842
Sensitivity=7709.200485 Correlation Coeff=0.999766

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	37.32	0.00
cal1 MW-12643	10.000	9.968	0.032	76883.80	0.32
MW12644	20.000	20.090	0.090	154916.79	0.45
cal2 MW-12645	50.000	50.083	0.083	386139.58	0.17
cal3 MW-12520	250.000	258.889	8.889	1995860.95	3.56
cal4 MW-12521	500.000	495.544	4.456	3820288.68	0.89

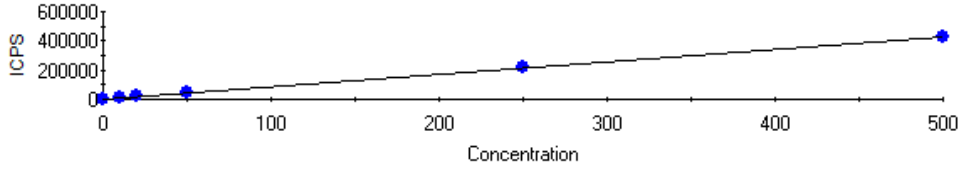
95Mo FQ Block 1



Intercept CPS=277.273063 Intercept Conc=0.200941
Sensitivity=1379.876300 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	277.27	0.00
cal1 MW-12643	10.000	9.992	0.008	14064.45	0.08
cal2 MW-12645	50.000	51.447	1.447	71267.49	2.89
cal3 MW-12520	250.000	250.213	0.213	345539.63	0.09
cal4 MW-12521	500.000	496.587	3.413	685505.31	0.68

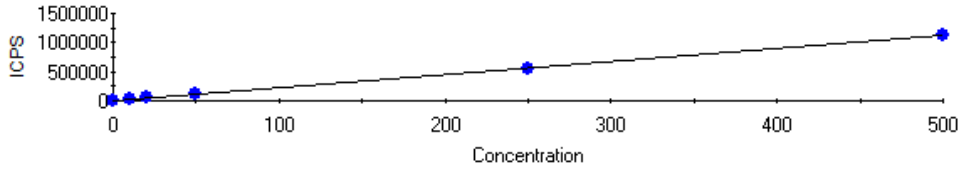
97Mo FQ Block 1



Intercept CPS=149.365482 Intercept Conc=0.174848
Sensitivity=854.260928 Correlation Coeff=0.999988

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	149.37	0.00
cal1 MW-12643	10.000	10.118	0.118	8793.19	1.18
MW12644	20.000	20.600	0.600	17747.19	3.00
cal2 MW-12645	50.000	51.974	1.974	44549.10	3.95
cal3 MW-12520	250.000	251.470	1.470	214970.69	0.59
cal4 MW-12521	500.000	499.041	0.959	426460.59	0.19

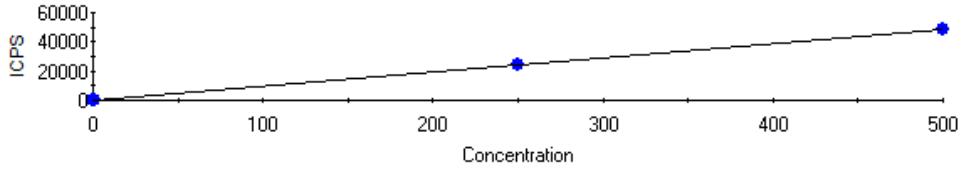
98Mo FQ Block 1



Intercept CPS=435.795328 Intercept Conc=0.194036
Sensitivity=2245.945507 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	435.80	0.00
cal1 MW-12643	10.000	9.813	0.187	22476.32	1.87
MW12644	20.000	19.936	0.064	45209.86	0.32
cal2 MW-12645	50.000	50.641	0.641	114172.28	1.28
cal3 MW-12520	250.000	248.286	1.714	558072.81	0.69
cal4 MW-12521	500.000	500.799	0.799	1125203.48	0.16

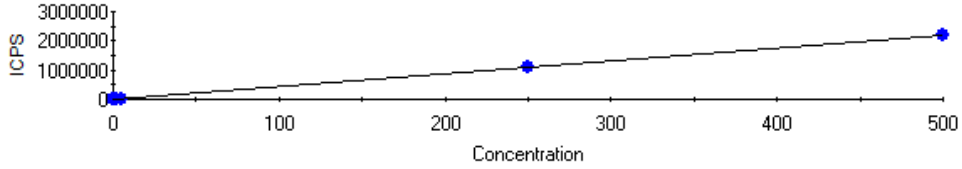
106Cd FQ Block 1



Intercept CPS=222.358770 Intercept Conc=2.308804
Sensitivity=96.309051 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	222.36	0.00
cal1 MW-12643	0.100	-0.084	0.184	214.24	184.27
cal2 MW-12645	0.500	0.806	0.306	299.99	61.21
cal3 MW-12520	250.000	249.707	0.293	24271.44	0.12
cal4 MW-12521	500.000	500.146	0.146	48390.95	0.03

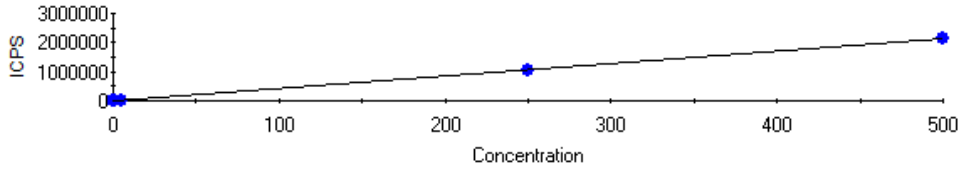
107Ag FQ Block 1



Intercept CPS=33.285339 Intercept Conc=0.007619
Sensitivity=4368.496305 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	33.29	0.00
cal1 MW-12643	1.000	0.958	0.042	4217.12	4.23
MW12644	2.000	1.983	0.017	8694.66	0.87
cal2 MW-12645	5.000	4.909	0.091	21476.61	1.83
cal3 MW-12520	250.000	250.426	0.426	1094019.31	0.17
cal4 MW-12521	500.000	503.348	3.348	2198905.19	0.67

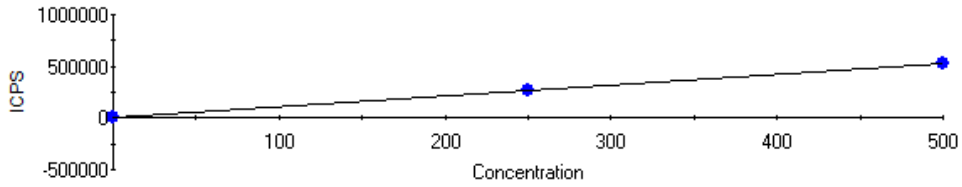
109Ag FQ Block 1



Intercept CPS=10.671162 Intercept Conc=0.002530
Sensitivity=4218.651219 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	10.67	0.00
cal1 MW-12643	1.000	0.956	0.044	4041.67	4.45
cal2 MW-12645	5.000	4.909	0.091	20721.53	1.81
cal3 MW-12520	250.000	250.198	0.198	1055507.28	0.08
cal4 MW-12521	500.000	502.450	2.450	2119669.96	0.49

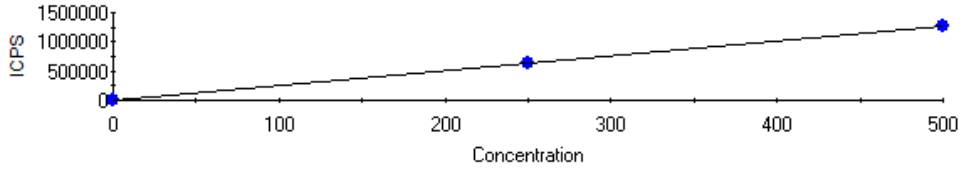
111Cd FQ Block 1



Intercept CPS=3.169816 Intercept Conc=0.002989
Sensitivity=1060.631356 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	3.17	0.00
cal1 MW-12643	0.100	0.065	0.035	71.95	35.16
cal2 MW-12645	0.500	0.343	0.157	366.70	31.45
cal3 MW-12520	250.000	251.709	1.709	266973.70	0.68
cal4 MW-12521	500.000	499.146	0.854	529412.68	0.17

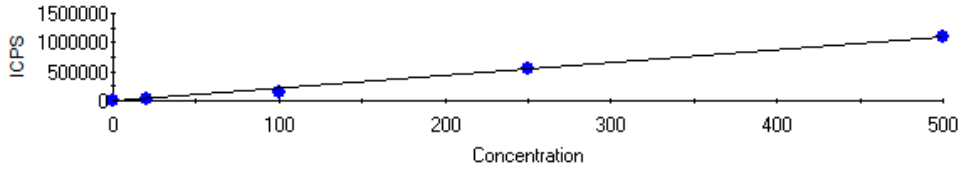
114Cd FQ Block 1



Intercept CPS=5.258851 Intercept Conc=0.002064
Sensitivity=2547.939923 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	5.26	0.00
cal1 MW-12643	0.100	0.108	0.008	281.39	8.37
MW12644	0.200	0.203	0.003	521.83	1.37
cal2 MW-12645	0.500	0.470	0.030	1202.07	6.06
cal3 MW-12520	250.000	249.605	0.395	635984.50	0.16
cal4 MW-12521	500.000	500.612	0.612	1275533.78	0.12

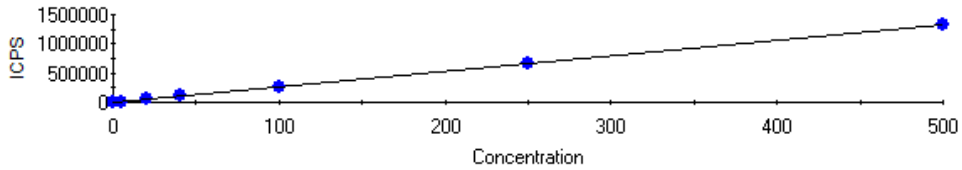
116Sn FQ Block 1



Intercept CPS=31.970253 Intercept Conc=0.014567
Sensitivity=2194.655311 Correlation Coeff=0.998188

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	31.97	0.00
cal1 MW-12643	20.000	13.509	6.491	29680.17	32.45
cal2 MW-12645	100.000	69.540	30.460	152648.14	30.46
cal3 MW-12520	250.000	250.719	0.719	550274.63	0.29
cal4 MW-12521	500.000	505.992	5.992	1110509.88	1.20

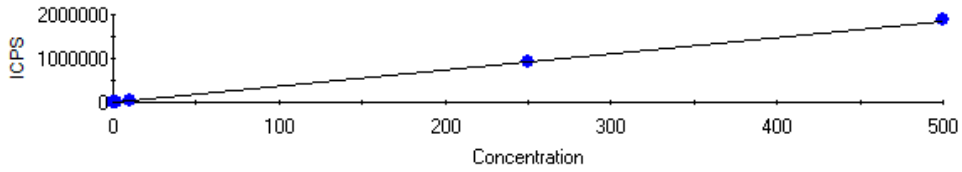
118Sn FQ Block 1



Intercept CPS=44.026562 Intercept Conc=0.016637
Sensitivity=2646.280013 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	44.03	0.00
MW12617	5.000	4.916	0.084	13053.81	1.67
cal1 MW-12643	20.000	19.172	0.828	50778.58	4.14
MW12644	40.000	39.273	0.727	103971.12	1.82
cal2 MW-12645	100.000	99.629	0.371	263690.01	0.37
cal3 MW-12520	250.000	248.097	1.903	656577.81	0.76
cal4 MW-12521	500.000	501.118	1.118	1326142.33	0.22

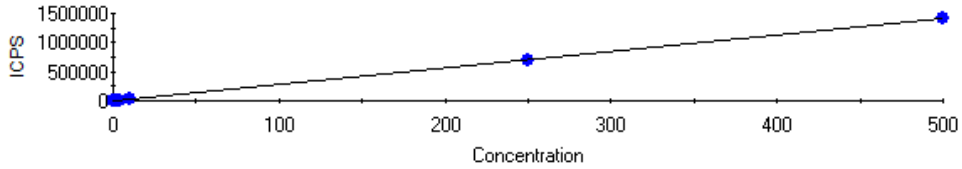
121Sb FQ Block 1



Intercept CPS=114.697935 Intercept Conc=0.030805
Sensitivity=3723.402577 Correlation Coeff=0.999956

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	114.70	0.00
cal1 MW-12643	2.000	2.044	0.044	7726.19	2.21
cal2 MW-12645	10.000	10.275	0.275	38371.09	2.75
cal3 MW-12520	250.000	246.200	3.800	916814.58	1.52
cal4 MW-12521	500.000	501.895	1.895	1868870.26	0.38

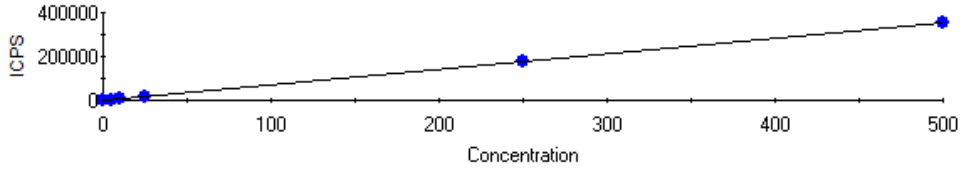
123Sb FQ Block 1



Intercept CPS=116.012275 Intercept Conc=0.041387
Sensitivity=2803.130157 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	116.01	0.00
cal1 MW-12643	2.000	2.127	0.127	6077.89	6.34
MW12644	4.000	4.264	0.264	12067.99	6.59
cal2 MW-12645	10.000	10.489	0.489	29516.87	4.89
cal3 MW-12520	250.000	248.301	1.699	696137.35	0.68
cal4 MW-12521	500.000	500.837	0.837	1404026.96	0.17

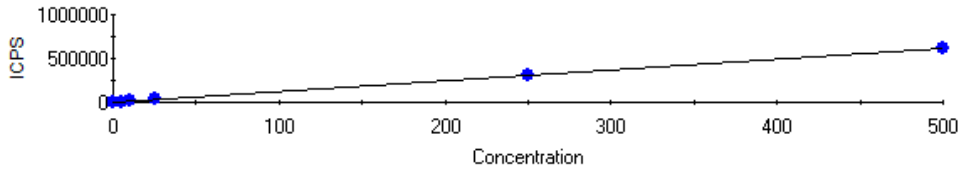
135Ba FQ Block 1



Intercept CPS=2.653491 Intercept Conc=0.003735
Sensitivity=710.410781 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	2.65	0.00
cal1 MW-12643	5.000	4.838	0.162	3439.44	3.25
MW12644	10.000	10.020	0.020	7120.81	0.20
cal2 MW-12645	25.000	24.987	0.013	17753.72	0.05
cal3 MW-12520	250.000	250.342	0.342	177848.27	0.14
cal4 MW-12521	500.000	500.925	0.925	355864.89	0.18

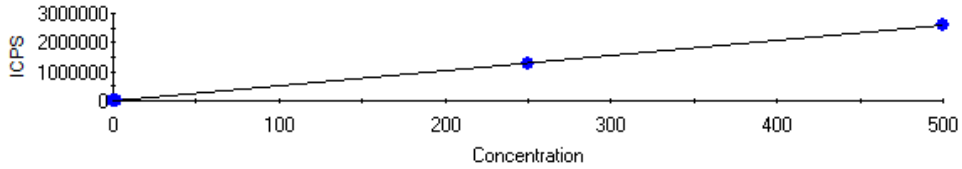
137Ba FQ Block 1



Intercept CPS=11.997189 Intercept Conc=0.009658
Sensitivity=1242.197682 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	12.00	0.00
cal1 MW-12643	5.000	5.062	0.062	6300.24	1.24
MW12644	10.000	9.886	0.114	12291.93	1.14
cal2 MW-12645	25.000	25.135	0.135	31234.21	0.54
cal3 MW-12520	250.000	250.801	0.801	311556.91	0.32
cal4 MW-12521	500.000	499.799	0.201	620861.45	0.04

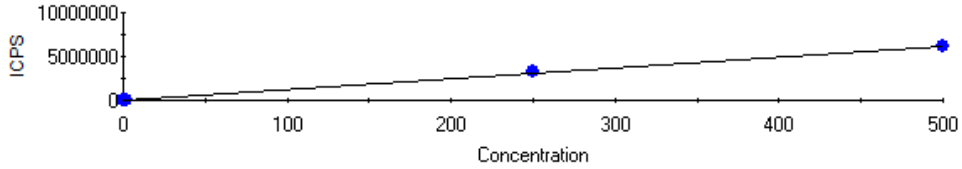
203Tl FQ Block 1



Intercept CPS=52.010311 Intercept Conc=0.010068
Sensitivity=5166.080841 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	52.01	0.00
cal1 MW-12643	0.500	0.499	0.001	2628.24	0.26
MW12644	1.000	1.001	0.001	5223.20	0.10
cal2 MW-12645	2.500	2.489	0.011	12908.89	0.45
cal3 MW-12520	250.000	247.510	2.490	1278709.95	1.00
cal4 MW-12521	500.000	501.198	1.198	2589279.79	0.24

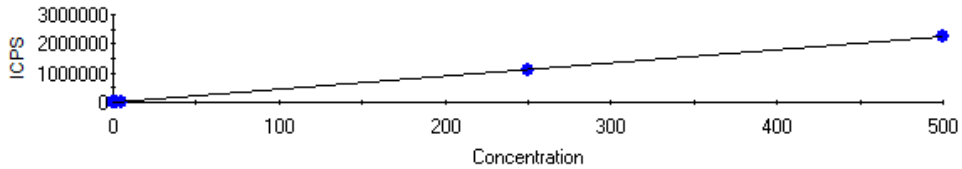
205Tl FQ Block 1



Intercept CPS=169.343511 Intercept Conc=0.013560
Sensitivity=12488.075936 Correlation Coeff=0.999043

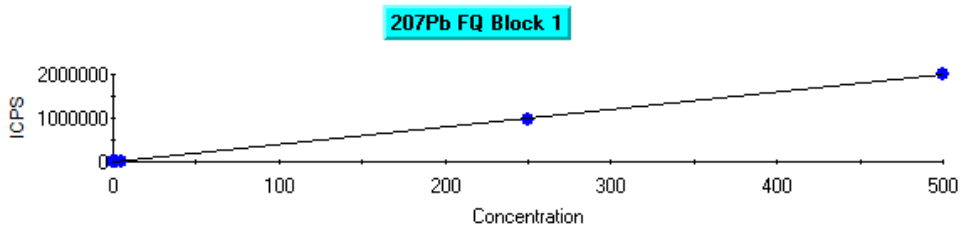
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	169.34	0.00
cal1 MW-12643	0.500	0.517	0.017	6620.16	3.31
MW12644	1.000	1.014	0.014	12827.86	1.36
cal2 MW-12645	2.500	2.514	0.014	31569.14	0.58
cal3 MW-12520	250.000	268.626	18.626	3354786.32	7.45
cal4 MW-12521	500.000	490.687	9.313	6127906.87	1.86

206Pb FQ Block 1



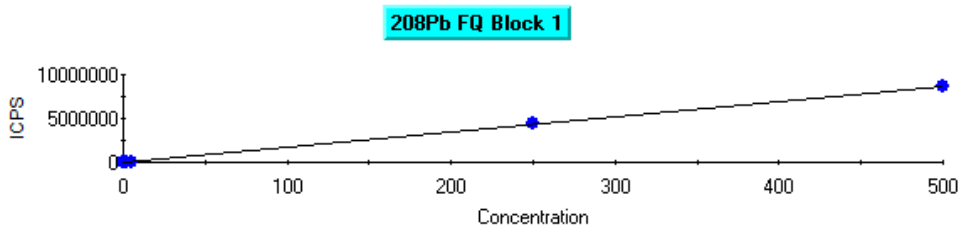
Intercept CPS=126.688139 Intercept Conc=0.028198
Sensitivity=4492.801907 Correlation Coeff=0.999968

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	126.69	0.00
cal1 MW-12643	1.000	0.978	0.022	4519.70	2.22
MW12644	2.000	1.891	0.109	8620.93	5.47
cal2 MW-12645	5.000	4.678	0.322	21142.44	6.45
cal3 MW-12520	250.000	246.549	3.451	1107822.02	1.38
cal4 MW-12521	500.000	501.729	1.729	2254296.86	0.35



Intercept CPS=97.354503 Intercept Conc=0.024573
Sensitivity=3961.791227 Correlation Coeff=0.999950

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	97.35	0.00
cal1 MW-12643	1.000	0.981	0.019	3983.70	1.90
MW12644	2.000	1.924	0.076	7721.56	3.78
cal2 MW-12645	5.000	4.729	0.271	18831.22	5.43
cal3 MW-12520	250.000	245.700	4.300	973509.38	1.72
cal4 MW-12521	500.000	502.153	2.153	1989522.96	0.43



Intercept CPS=469.378752 Intercept Conc=0.026830
Sensitivity=17494.262539 Correlation Coeff=0.999892

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	469.38	0.00
cal1 MW-12643	1.000	0.991	0.009	17811.60	0.87
MW12644	2.000	1.974	0.026	34999.29	1.31
cal2 MW-12645	5.000	4.868	0.132	85622.75	2.65
cal3 MW-12520	250.000	257.782	7.782	4510176.45	3.11
cal4 MW-12521	500.000	499.875	0.125	8745411.98	0.03

Dilution Corrected Concentrations

TUNE MW12793 4/24/2020 08:01:26

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	100.2%	-0.011	0.597	0.595	148.900	7.375	0.185	0.237	0.423	1.240
2	08:02:20	99.8%	-0.003	0.672	0.901	155.100	6.650	0.249	0.417	0.305	1.321
3	08:02:47	100.0%	0.029	0.693	0.766	156.700	7.672	0.196	0.090	0.101	1.291
x		100.0%	0.005	0.654	0.754	153.600	7.232	0.210	0.248	0.276	1.284
s		0.2%	0.021	0.050	0.154	4.140	0.526	0.034	0.164	0.163	0.041
%RSD		0.2	394.000	7.713	20.380	2.696	7.270	16.380	66.100	59.030	3.183

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	1.237	219.400	1.454	3.226	3.171	100.5%	-0.005	-0.004	0.009	-16.270
2	08:02:20	1.873	208.500	1.395	1.289	3.048	100.3%	-0.019	0.012	0.026	-27.720
3	08:02:47	0.947	206.900	1.560	-0.628	5.068	99.1%	-0.060	0.021	0.039	-32.580
x		1.352	211.600	1.470	1.296	3.762	100.0%	-0.028	0.010	0.025	-25.530
s		0.474	6.812	0.083	1.927	1.133	0.8%	0.029	0.013	0.015	8.375
%RSD		35.060	3.220	5.661	148.800	30.110	0.8	103.000	133.300	60.350	32.810

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	0.298	0.029	-1.287	2.616	0.010	0.046	0.717	0.040	0.073	0.247
2	08:02:20	0.891	0.022	-1.065	1.413	0.013	0.007	0.466	0.083	0.040	0.184
3	08:02:47	0.649	0.042	-0.331	0.881	0.017	0.036	-0.152	0.031	0.067	0.119
x		0.613	0.031	-0.894	1.636	0.013	0.030	0.344	0.051	0.060	0.184
s		0.298	0.010	0.500	0.889	0.004	0.020	0.447	0.028	0.017	0.064
%RSD		48.690	32.760	55.950	54.300	27.160	68.190	130.100	54.100	28.750	34.960

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	0.376	0.274	0.116	-0.320	2.631	3.275	6.231	0.334	4.794	0.003
2	08:02:20	0.266	0.168	0.121	-0.151	2.866	3.141	8.555	0.741	5.490	0.006
3	08:02:47	0.313	0.223	-0.066	0.087	2.661	4.337	4.611	-0.379	7.524	0.003
x		0.318	0.222	0.057	-0.128	2.719	3.584	6.466	0.232	5.936	0.004
s		0.055	0.053	0.106	0.205	0.128	0.655	1.982	0.567	1.419	0.001
%RSD		17.300	23.830	186.000	160.100	4.696	18.270	30.660	244.400	23.900	29.340

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	99.9%	0.092	0.130	0.070	0.019	-0.000	0.007	0.004	0.003	99.9%
2	08:02:20	99.7%	0.157	0.161	0.105	-0.359	-0.001	0.003	0.003	0.009	100.3%
3	08:02:47	100.3%	0.127	0.187	0.055	-0.148	-0.001	0.001	0.019	0.016	99.8%
x		100.0%	0.126	0.159	0.077	-0.163	-0.001	0.004	0.009	0.009	100.0%
s		0.3%	0.033	0.028	0.026	0.190	0.001	0.003	0.009	0.006	0.3%
%RSD		0.3	25.940	17.840	33.730	116.600	59.270	76.510	103.700	67.040	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:01:53	0.009	0.014	0.028	0.020	0.120	0.093	100.0%	0.016	0.004	0.015
2	08:02:20	0.029	0.036	0.032	0.043	0.058	0.087	100.3%	0.008	0.011	0.021
3	08:02:47	0.009	0.020	0.031	0.033	0.120	0.039	99.7%	0.010	0.008	0.024
x		0.016	0.023	0.030	0.032	0.100	0.073	100.0%	0.011	0.008	0.020
s		0.011	0.012	0.002	0.011	0.036	0.030	0.3%	0.004	0.003	0.005
%RSD		72.620	50.170	6.617	35.580	36.170	40.840	0.3	37.210	42.280	23.820

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:01:53	0.011	0.010	99.0%
2	08:02:20	0.027	0.024	100.3%
3	08:02:47	0.013	0.019	100.7%
x		0.017	0.018	100.0%
s		0.009	0.007	0.9%
%RSD		51.640	41.600	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	99.5%	-0.010	-0.060	0.107	-0.557	-0.199	0.035	0.075	0.003	-0.017
2	08:08:13	100.3%	0.021	-0.063	0.014	-3.367	0.455	-0.000	0.029	-0.116	-0.004
3	08:08:40	100.1%	-0.011	0.123	-0.121	3.924	-0.256	-0.035	-0.104	0.114	0.021
x		100.0%	-0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	-0.000	-0.000
s		0.4%	0.018	0.106	0.115	3.677	0.395	0.035	0.093	0.115	0.019
%RSD		0.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	0.099	0.221	-0.637	1.299	-0.304	100.1%	-0.005	0.002	-0.001	-1.749
2	08:08:13	0.042	-0.742	0.723	0.006	-0.146	99.8%	0.009	0.007	0.002	-4.169
3	08:08:40	-0.141	0.522	-0.087	-1.305	0.451	100.0%	-0.005	-0.009	-0.001	5.918
x		0.000	-0.000	-0.000	-0.000	0.000	100.0%	-0.000	0.000	-0.000	0.000
s		0.125	0.660	0.684	1.302	0.398	0.2%	0.008	0.009	0.001	5.266
%RSD		0.000	0.000	0.000	0.000	0.000	0.2	0.000	0.000	0.000	0.000

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	-0.078	-0.006	-0.309	-0.833	-0.001	0.014	-0.020	-0.016	-0.031	0.030
2	08:08:13	0.057	0.008	-0.050	0.616	0.001	0.004	0.084	0.024	-0.001	0.001
3	08:08:40	0.021	-0.002	0.359	0.217	-0.000	-0.018	-0.064	-0.008	0.032	-0.030
x		0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000	0.000	-0.000	-0.000
s		0.070	0.007	0.337	0.749	0.001	0.016	0.076	0.021	0.032	0.030
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	0.066	0.003	-0.004	-0.056	-0.011	0.455	0.387	-0.007	0.682	-0.001
2	08:08:13	-0.000	-0.031	0.110	0.200	-0.073	-0.364	2.443	0.535	-0.022	0.001
3	08:08:40	-0.066	0.028	-0.105	-0.145	0.084	-0.092	-2.830	-0.529	-0.660	-0.000
x		-0.000	0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000
s		0.066	0.030	0.107	0.179	0.079	0.417	2.657	0.532	0.671	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	100.0%	-0.000	0.037	0.004	0.105	-0.003	-0.001	-0.004	0.000	99.7%
2	08:08:13	100.4%	-0.021	-0.029	-0.006	-0.076	-0.001	0.001	0.004	-0.001	99.8%
3	08:08:40	99.6%	0.021	-0.007	0.002	-0.029	0.004	-0.001	-0.000	0.001	100.5%
x		100.0%	-0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000	0.000	100.0%
s		0.4%	0.021	0.034	0.005	0.094	0.004	0.001	0.004	0.001	0.4%
%RSD		0.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:07:46	-0.004	0.006	0.007	0.004	-0.004	0.000	99.8%	0.002	0.001	0.002
2	08:08:13	-0.002	-0.003	-0.005	-0.002	-0.004	-0.003	100.2%	-0.002	0.000	-0.004
3	08:08:40	0.005	-0.003	-0.002	-0.003	0.007	0.003	100.0%	0.001	-0.001	0.002
x		0.000	-0.000	-0.000	-0.000	0.000	0.000	100.0%	-0.000	0.000	0.000
s		0.005	0.005	0.006	0.004	0.006	0.003	0.2%	0.002	0.001	0.004
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.2	0.000	0.000	0.000

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:07:46	0.002	-0.001	99.3%
2	08:08:13	-0.005	-0.004	100.0%
3	08:08:40	0.004	0.004	100.7%
x		-0.000	-0.000	100.0%
s		0.005	0.004	0.7%
%RSD		0.000	0.000	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	99.7%	0.196	9.956	10.320	-5.950	87.620	22.770	21.690	21.390	16.450
2	08:14:06	100.1%	0.124	11.810	9.309	-9.247	87.130	22.410	21.960	20.430	16.410
3	08:14:33	101.6%	0.137	9.289	9.657	-15.700	85.530	22.330	21.290	20.040	16.170
x		100.4%	0.152	10.350	9.762	-10.300	86.760	22.500	21.650	20.620	16.340
s		1.0%	0.038	1.304	0.513	4.960	1.090	0.232	0.333	0.693	0.151
%RSD		1.0	25.190	12.600	5.258	48.160	1.256	1.030	1.537	3.362	0.924
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	40.620	32.420	86.360	64.910	75.950	100.5%	2.194	2.009	0.396	21.000
2	08:14:06	40.510	30.860	86.480	83.190	84.500	100.3%	2.265	2.030	0.355	13.600
3	08:14:33	37.960	30.870	86.460	82.800	80.110	100.8%	2.255	2.002	0.413	-10.010
x		39.700	31.380	86.430	76.970	80.190	100.5%	2.238	2.013	0.388	8.200
s		1.509	0.898	0.060	10.450	4.277	0.2%	0.039	0.014	0.030	16.190
%RSD		3.800	2.862	0.069	13.570	5.334	0.2	1.729	0.714	7.603	197.500
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	7.585	2.148	9.532	10.190	2.021	2.004	2.482	0.403	0.361	4.239
2	08:14:06	8.227	2.104	9.248	8.395	1.968	2.032	1.972	0.407	0.406	3.802
3	08:14:33	8.253	2.157	8.936	8.596	1.984	2.040	1.901	0.386	0.446	4.174
x		8.022	2.136	9.239	9.062	1.991	2.025	2.119	0.399	0.404	4.072
s		0.379	0.028	0.298	0.986	0.027	0.019	0.317	0.011	0.042	0.236
%RSD		4.722	1.312	3.225	10.880	1.377	0.927	14.960	2.716	10.470	5.791
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	3.767	4.114	0.406	0.545	-0.130	-0.362	0.645	0.349	-1.560	0.001
2	08:14:06	3.891	3.996	0.396	0.110	0.022	0.175	3.167	0.499	1.378	0.006
3	08:14:33	3.664	4.341	0.576	0.483	-0.400	-0.073	1.809	0.443	-0.410	0.004
x		3.774	4.150	0.459	0.379	-0.169	-0.087	1.873	0.430	-0.198	0.004
s		0.114	0.175	0.101	0.235	0.214	0.269	1.262	0.076	1.480	0.002
%RSD		3.012	4.223	22.000	62.110	126.200	310.700	67.380	17.580	749.600	64.270
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	103.2%	3.913	4.048	4.067	-0.162	0.382	0.406	0.032	0.034	101.9%
2	08:14:06	102.6%	3.933	4.088	3.833	-0.409	0.376	0.392	0.021	0.043	102.8%
3	08:14:33	102.6%	4.008	3.976	4.067	0.123	0.407	0.371	0.050	0.035	102.4%
x		102.8%	3.951	4.037	3.989	-0.150	0.389	0.390	0.034	0.037	102.4%
s		0.4%	0.050	0.057	0.135	0.266	0.016	0.017	0.015	0.005	0.4%
%RSD		0.4	1.276	1.402	3.388	177.900	4.223	4.445	42.430	13.830	0.4
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:13:39	1.389	1.885	0.286	0.287	1.957	1.962	102.2%	0.185	0.198	0.388
2	08:14:06	1.310	1.916	0.279	0.306	1.995	1.921	102.7%	0.205	0.212	0.347
3	08:14:33	1.356	1.952	0.326	0.311	2.063	2.094	103.0%	0.179	0.207	0.375
x		1.351	1.917	0.297	0.301	2.005	1.992	102.6%	0.190	0.206	0.370
s		0.040	0.034	0.025	0.013	0.054	0.090	0.4%	0.014	0.007	0.021
%RSD		2.950	1.749	8.486	4.191	2.673	4.537	0.4	7.249	3.517	5.625
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	08:13:39	0.370	0.396	105.3%							
2	08:14:06	0.379	0.378	105.5%							
3	08:14:33	0.410	0.406	106.1%							
x		0.386	0.393	105.6%							
s		0.021	0.014	0.4%							
%RSD		5.455	3.679	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	102.7%	0.397	25.010	23.450	-25.370	219.600	56.190	54.240	53.790	40.020
2	08:20:01	101.1%	0.403	23.820	25.180	-19.030	216.600	57.420	53.300	52.430	39.470
3	08:20:28	100.4%	0.430	23.690	24.310	-22.840	218.600	56.990	54.920	53.660	40.740
x		101.4%	0.410	24.170	24.310	-22.410	218.300	56.870	54.150	53.300	40.080
s		1.2%	0.018	0.723	0.863	3.190	1.537	0.623	0.809	0.749	0.639
%RSD		1.2	4.351	2.991	3.548	14.230	0.704	1.096	1.494	1.405	1.595

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	99.990	29.240	210.700	201.900	200.500	101.8%	5.136	5.118	1.024	18.110
2	08:20:01	102.200	23.410	208.900	177.200	204.900	102.3%	5.230	4.980	0.909	51.450
3	08:20:28	104.800	20.830	210.000	219.700	202.800	101.5%	5.012	5.186	1.036	0.773
x		102.300	24.490	209.900	199.600	202.800	101.9%	5.126	5.095	0.990	23.440
s		2.430	4.308	0.875	21.330	2.180	0.4%	0.110	0.105	0.070	25.750
%RSD		2.375	17.590	0.417	10.690	1.075	0.4	2.137	2.058	7.093	109.900

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	20.380	5.213	22.590	21.890	4.906	5.285	5.447	1.035	1.045	10.130
2	08:20:01	21.680	5.111	22.900	21.500	5.053	5.155	6.069	0.983	1.001	9.788
3	08:20:28	21.420	5.201	22.860	21.520	4.979	5.205	5.513	1.053	0.995	10.300
x		21.160	5.175	22.780	21.640	4.979	5.215	5.676	1.024	1.013	10.070
s		0.690	0.056	0.169	0.217	0.073	0.065	0.342	0.036	0.028	0.263
%RSD		3.259	1.073	0.742	1.001	1.475	1.254	6.020	3.519	2.720	2.606

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	10.650	9.924	1.312	0.730	-0.147	0.130	5.283	1.247	-0.719	0.002
2	08:20:01	9.031	9.839	0.976	1.042	0.364	0.638	2.203	0.236	1.760	0.002
3	08:20:28	10.060	9.906	1.018	1.246	-0.366	0.623	4.850	0.963	0.615	-0.000
x		9.911	9.890	1.102	1.006	-0.050	0.464	4.112	0.815	0.552	0.001
s		0.817	0.045	0.183	0.260	0.374	0.289	1.668	0.522	1.240	0.001
%RSD		8.242	0.452	16.620	25.840	753.200	62.320	40.550	63.980	224.700	113.700

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	103.8%	10.130	9.763	9.948	-0.418	1.006	0.983	0.077	0.071	103.0%
2	08:20:01	103.1%	9.851	10.330	9.970	-0.110	0.939	0.991	0.061	0.068	104.4%
3	08:20:28	103.7%	9.726	10.350	9.959	-0.268	1.016	0.916	0.080	0.109	103.8%
x		103.5%	9.903	10.150	9.959	-0.266	0.987	0.963	0.073	0.083	103.7%
s		0.4%	0.207	0.332	0.011	0.154	0.042	0.041	0.010	0.023	0.7%
%RSD		0.4	2.095	3.273	0.110	58.000	4.239	4.245	13.670	27.330	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:19:34	3.457	4.898	0.785	0.859	4.923	4.960	103.7%	0.483	0.501	0.955
2	08:20:01	3.503	4.935	0.771	0.810	5.145	5.156	103.6%	0.513	0.520	0.934
3	08:20:28	3.481	4.916	0.802	0.799	5.116	5.136	104.4%	0.503	0.522	0.945
x		3.480	4.916	0.786	0.823	5.061	5.084	103.9%	0.500	0.514	0.945
s		0.023	0.018	0.015	0.032	0.121	0.108	0.4%	0.015	0.011	0.011
%RSD		0.671	0.369	1.945	3.841	2.384	2.127	0.4	3.018	2.199	1.132

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:19:34	0.955	0.994	108.0%
2	08:20:01	0.963	0.998	107.5%
3	08:20:28	1.005	1.022	108.2%
x		0.974	1.005	107.9%
s		0.027	0.015	0.3%
%RSD		2.774	1.513	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	103.7%	0.378	50.120	52.340	-19.040	439.200	470.500	439.800	423.900	40.060
2	08:25:58	101.6%	0.324	50.770	49.040	-16.500	438.700	463.800	433.500	414.100	40.150
3	08:26:25	102.4%	0.344	52.860	48.840	-13.480	443.500	460.600	442.400	421.600	39.810
x		102.6%	0.348	51.250	50.070	-16.340	440.500	465.000	438.600	419.900	40.010
s		1.1%	0.027	1.434	1.966	2.785	2.623	5.086	4.545	5.106	0.176
%RSD		1.0	7.795	2.798	3.926	17.040	0.596	1.094	1.036	1.216	0.440

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	97.370	-1.741	413.100	394.000	405.700	102.3%	4.960	4.834	4.794	99.560
2	08:25:58	101.300	-11.250	415.200	414.100	397.000	103.9%	5.227	4.965	4.740	68.750
3	08:26:25	98.530	-20.030	409.400	394.900	397.700	102.4%	5.360	4.991	4.983	89.410
x		99.080	-11.010	412.600	401.000	400.100	102.9%	5.182	4.930	4.839	85.910
s		2.041	9.145	2.928	11.390	4.844	0.9%	0.204	0.084	0.128	15.700
%RSD		2.060	83.090	0.710	2.839	1.211	0.9	3.933	1.704	2.639	18.270

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	55.900	5.178	57.840	56.990	0.975	4.945	5.307	5.147	5.218	10.580
2	08:25:58	52.810	5.070	55.530	54.010	1.027	5.032	4.716	4.802	5.385	10.330
3	08:26:25	54.560	5.103	57.090	53.050	1.022	5.126	4.861	4.951	5.075	10.350
x		54.420	5.117	56.820	54.680	1.008	5.034	4.961	4.967	5.226	10.420
s		1.546	0.055	1.176	2.056	0.029	0.090	0.308	0.173	0.155	0.137
%RSD		2.841	1.079	2.069	3.760	2.828	1.795	6.201	3.477	2.969	1.312

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	9.045	10.050	2.001	5.834	-0.454	0.263	23.790	5.559	-2.706	10.030
2	08:25:58	9.133	9.968	1.988	4.182	-0.105	0.121	20.900	4.706	-1.055	9.781
3	08:26:25	9.338	10.010	2.082	5.407	0.107	0.003	25.220	5.557	-0.477	10.090
x		9.172	10.010	2.024	5.141	-0.150	0.129	23.300	5.274	-1.413	9.968
s		0.151	0.041	0.051	0.858	0.283	0.130	2.202	0.492	1.157	0.164
%RSD		1.642	0.412	2.524	16.690	188.300	100.900	9.447	9.330	81.870	1.649

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	103.7%	10.030	10.160	9.645	-0.186	0.948	0.941	0.089	0.103	102.9%
2	08:25:58	105.4%	9.791	9.902	9.680	-0.334	0.954	0.955	0.044	0.084	104.6%
3	08:26:25	103.4%	10.150	10.290	10.110	0.267	0.971	0.971	0.062	0.138	102.9%
x		104.2%	9.992	10.120	9.813	-0.084	0.958	0.956	0.065	0.108	103.4%
s		1.1%	0.184	0.198	0.262	0.313	0.012	0.015	0.023	0.027	1.0%
%RSD		1.0	1.842	1.953	2.666	371.300	1.271	1.568	35.370	25.370	0.9

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:25:31	13.400	18.890	2.065	2.101	4.923	5.122	103.7%	0.489	0.523	0.976
2	08:25:58	13.550	19.130	2.017	2.104	4.855	4.963	103.7%	0.512	0.534	0.970
3	08:26:25	13.570	19.500	2.051	2.175	4.735	5.102	102.5%	0.495	0.492	0.987
x		13.510	19.170	2.044	2.127	4.838	5.062	103.3%	0.499	0.517	0.978
s		0.097	0.304	0.024	0.042	0.095	0.087	0.7%	0.012	0.022	0.009
%RSD		0.716	1.585	1.197	1.978	1.971	1.716	0.6	2.455	4.177	0.900

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:25:31	0.957	0.980	108.3%
2	08:25:58	0.993	0.989	108.5%
3	08:26:25	0.992	1.005	108.4%
x		0.981	0.991	108.4%
s		0.020	0.013	0.1%
%RSD		2.079	1.302	0.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	103.5%	0.638	98.850	100.300	-17.830	T 804.900	939.000	883.600	851.100	79.530
2	08:31:52	101.3%	1.019	105.300	106.000	-12.620	T 815.900	974.500	905.800	850.700	79.870
3	08:32:19	102.3%	0.715	106.600	101.500	-12.570	T 813.800	956.700	888.800	858.400	80.440
x		102.4%	0.791	103.600	102.600	-14.340	T 811.500	956.700	892.700	853.400	79.950
s		1.1%	0.201	4.153	3.017	3.023	T 5.788	17.750	11.610	4.328	0.463
%RSD		1.1	25.480	4.009	2.940	21.080	T 0.713	1.855	1.300	0.507	0.579

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	201.700	-42.820	796.900	813.800	815.500	102.5%	10.200	9.797	10.030	152.300
2	08:31:52	205.300	-43.140	807.500	787.500	807.100	101.6%	10.220	10.150	10.010	168.400
3	08:32:19	201.800	-46.740	805.900	792.500	816.900	101.6%	10.450	9.893	9.977	242.800
x		203.000	-44.230	803.400	798.000	813.200	101.9%	10.290	9.948	10.000	187.900
s		2.041	2.177	5.716	13.990	5.313	0.5%	0.136	0.184	0.026	48.290
%RSD		1.006	4.922	0.712	1.753	0.653	0.5	1.320	1.851	0.264	25.700

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	111.500	10.290	113.800	111.700	2.023	10.020	11.070	10.130	9.982	20.320
2	08:31:52	111.900	10.410	114.300	107.900	1.941	10.270	9.336	10.270	9.987	20.000
3	08:32:19	112.600	10.510	115.800	108.000	1.915	10.330	11.600	10.260	10.110	21.200
x		112.000	10.400	114.700	109.200	1.960	10.210	10.670	10.220	10.030	20.510
s		0.527	0.112	1.035	2.184	0.056	0.164	1.184	0.081	0.072	0.620
%RSD		0.471	1.072	0.903	2.000	2.876	1.607	11.100	0.794	0.715	3.024

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	19.590	19.910	4.314	9.525	0.099	-0.296	42.850	9.766	-2.866	19.900
2	08:31:52	19.730	20.240	4.311	9.925	0.457	0.447	45.490	10.160	-2.152	20.300
3	08:32:19	20.000	19.500	3.908	9.181	-0.194	0.633	46.760	10.260	0.195	20.070
x		19.770	19.880	4.178	9.543	0.121	0.261	45.040	10.060	-1.608	20.090
s		0.206	0.370	0.234	0.373	0.326	0.491	1.996	0.262	1.601	0.202
%RSD		1.041	1.859	5.589	3.904	270.200	188.100	4.432	2.602	99.610	1.005

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	102.3%	20.290	20.480	19.690	-0.028	2.021	1.880	0.110	0.224	101.5%
2	08:31:52	101.6%	20.450	20.950	20.220	0.377	1.929	1.949	0.145	0.203	101.7%
3	08:32:19	103.4%	20.440	20.370	19.900	1.238	1.998	1.914	0.119	0.181	101.8%
x		102.4%	20.400	20.600	19.940	0.529	1.983	1.914	0.125	0.203	101.7%
s		0.9%	0.091	0.308	0.266	0.647	0.048	0.035	0.018	0.021	0.1%
%RSD		0.9	0.447	1.492	1.334	122.200	2.412	1.807	14.610	10.560	0.1

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:25	27.550	38.930	4.267	4.386	9.826	9.757	101.1%	1.026	1.014	1.831
2	08:31:52	27.130	39.200	4.100	4.180	10.130	10.010	100.7%	1.012	1.000	1.902
3	08:32:19	27.580	39.680	4.086	4.225	10.100	9.894	101.2%	0.965	1.027	1.939
x		27.420	39.270	4.151	4.264	10.020	9.886	101.0%	1.001	1.014	1.891
s		0.253	0.383	0.100	0.109	0.169	0.125	0.3%	0.032	0.014	0.055
%RSD		0.921	0.974	2.415	2.544	1.686	1.267	0.3	3.194	1.342	2.914

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:31:25	1.922	1.951	104.3%
2	08:31:52	1.953	1.971	103.8%
3	08:32:19	1.899	2.000	104.3%
x		1.924	1.974	104.1%
s		0.027	0.025	0.3%
%RSD		1.406	1.258	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	103.8%	1.802	248.700	249.300	-11.200	T 2015.000	T 2077.000	2190.000	2084.000	193.600
2	08:37:49	102.9%	1.748	247.100	254.300	-15.640	T 2051.000	T 2109.000	2217.000	2122.000	196.300
3	08:38:16	101.0%	2.172	254.300	248.900	-9.101	T 2035.000	T 2119.000	2224.000	2099.000	198.300
x		102.6%	1.907	250.100	250.800	-11.980	T 2034.000	T 2102.000	2210.000	2102.000	196.100
s		1.4%	0.231	3.792	3.039	3.339	T 18.070	T 21.760	18.120	19.080	2.365
%RSD		1.4	12.100	1.517	1.211	27.870	T 0.889	T 1.035	0.820	0.908	1.206

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	520.900	-47.630	T 1819.000	2030.000	1983.000	104.4%	25.650	24.470	23.840	239.300
2	08:37:49	517.100	-43.300	T 1841.000	2060.000	2000.000	102.6%	26.380	24.700	24.440	448.300
3	08:38:16	521.900	-48.430	T 1818.000	1988.000	1991.000	102.7%	26.570	24.930	23.990	165.500
x		520.000	-46.450	T 1826.000	2026.000	1991.000	103.2%	26.200	24.700	24.090	284.400
s		2.519	2.757	T 13.290	36.020	8.453	1.0%	0.485	0.229	0.311	146.700
%RSD		0.484	5.935	T 0.728	1.778	0.424	0.9	1.852	0.927	1.292	51.580

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	277.200	24.890	280.400	270.600	4.833	24.450	25.840	24.500	24.440	51.810
2	08:37:49	283.200	25.410	289.500	275.100	4.997	24.970	26.680	24.840	25.030	51.330
3	08:38:16	280.300	25.830	286.300	265.900	4.794	24.730	25.220	25.130	24.990	50.520
x		280.200	25.380	285.400	270.500	4.875	24.720	25.910	24.820	24.820	51.220
s		2.965	0.469	4.639	4.593	0.108	0.261	0.733	0.316	0.327	0.651
%RSD		1.058	1.848	1.625	1.698	2.212	1.054	2.830	1.273	1.317	1.272

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	47.570	48.550	10.070	25.160	-0.194	0.259	109.500	24.690	-1.556	49.670
2	08:37:49	47.430	49.110	10.950	24.980	0.242	0.078	128.600	28.180	1.270	50.740
3	08:38:16	46.540	48.250	10.080	25.100	0.288	0.215	121.300	27.270	-2.656	49.840
x		47.180	48.640	10.370	25.080	0.112	0.184	119.800	26.710	-0.981	50.080
s		0.562	0.436	0.505	0.092	0.266	0.094	9.648	1.810	2.025	0.578
%RSD		1.191	0.896	4.873	0.367	237.800	51.360	8.052	6.777	206.500	1.155

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	102.6%	50.860	51.710	50.460	0.799	4.983	4.901	0.348	0.342	100.0%
2	08:37:49	100.8%	51.870	52.310	50.890	0.461	4.882	4.886	0.354	0.550	99.7%
3	08:38:16	102.6%	51.600	51.900	50.580	1.159	4.861	4.940	0.327	0.517	100.5%
x		102.0%	51.450	51.970	50.640	0.806	4.909	4.909	0.343	0.470	100.1%
s		1.0%	0.522	0.304	0.222	0.349	0.065	0.028	0.014	0.112	0.4%
%RSD		1.0	1.014	0.584	0.438	43.300	1.334	0.570	4.132	23.740	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:21	69.300	99.610	10.290	10.550	24.990	25.380	100.1%	2.429	2.552	4.675
2	08:37:49	69.630	99.930	10.220	10.270	25.090	24.760	100.8%	2.490	2.502	4.682
3	08:38:16	69.690	99.350	10.320	10.650	24.880	25.260	99.6%	2.547	2.489	4.676
x		69.540	99.630	10.270	10.490	24.990	25.130	100.1%	2.489	2.514	4.678
s		0.210	0.290	0.051	0.194	0.105	0.328	0.6%	0.059	0.034	0.004
%RSD		0.302	0.291	0.497	1.850	0.419	1.304	0.6	2.364	1.336	0.083

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:37:21	4.806	4.847	103.6%
2	08:37:49	4.633	4.846	104.7%
3	08:38:16	4.746	4.909	102.8%
x		4.729	4.868	103.7%
s		0.088	0.036	1.0%
%RSD		1.856	0.738	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	99.0%	244.400	244.000	252.000	-1.203	313.800	286.800	270.700	262.200	249.300
2	08:43:44	96.6%	254.900	260.400	248.700	0.068	327.400	287.400	269.300	262.500	252.300
3	08:44:11	97.2%	251.500	254.300	251.500	-10.620	339.800	286.600	272.800	266.100	253.500
x		97.6%	250.300	252.900	250.800	-3.917	327.000	286.900	271.000	263.600	251.700
s		1.3%	5.319	8.289	1.772	5.838	13.020	0.397	1.767	2.175	2.199
%RSD		1.3	2.125	3.277	0.707	149.000	3.982	0.138	0.652	0.825	0.874

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	260.900	-31.280	248.900	390.800	320.600	97.5%	252.800	251.500	250.500	2953.000
2	08:43:44	275.700	-36.060	254.600	389.400	323.000	96.0%	249.500	254.500	251.400	3147.000
3	08:44:11	267.200	-33.880	259.700	343.600	333.800	94.6%	258.800	259.100	255.900	929.200
x		267.900	-33.740	254.400	374.600	325.800	96.0%	253.700	255.000	252.600	2343.000
s		7.393	2.397	5.409	26.840	7.045	1.5%	4.708	3.841	2.874	1229.000
%RSD		2.759	7.104	2.127	7.165	2.163	1.5	1.856	1.506	1.138	52.430

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	385.700	263.900	281.200	267.100	253.300	253.700	248.700	250.800	251.700	254.700
2	08:43:44	381.200	266.500	285.900	271.600	250.900	251.900	247.700	253.100	252.300	255.200
3	08:44:11	392.600	269.600	288.800	280.900	257.500	255.300	257.000	254.300	257.200	252.000
x		386.500	266.700	285.300	273.200	253.900	253.600	251.100	252.700	253.700	254.000
s		5.706	2.853	3.822	7.073	3.341	1.736	5.065	1.776	3.022	1.750
%RSD		1.476	1.070	1.340	2.589	1.316	0.684	2.017	0.703	1.191	0.689

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	250.600	251.100	254.700	251.500	0.069	0.280	1180.000	256.700	-3.568	257.800
2	08:43:44	247.200	253.300	254.600	254.600	-0.217	-0.558	1173.000	254.600	-2.553	260.200
3	08:44:11	249.700	254.300	250.000	252.200	0.140	-0.008	1186.000	255.500	-2.087	258.600
x		249.200	252.900	253.100	252.700	-0.003	-0.095	1180.000	255.600	-2.736	258.900
s		1.744	1.643	2.675	1.632	0.189	0.426	6.720	1.077	0.757	1.225
%RSD		0.700	0.650	1.057	0.646	6821.000	445.900	0.570	0.421	27.680	0.473

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	98.3%	247.700	250.800	245.900	244.800	249.400	248.500	249.700	248.000	98.2%
2	08:43:44	96.8%	251.500	251.700	250.000	254.600	250.100	250.200	252.200	250.500	96.9%
3	08:44:11	97.2%	251.500	251.900	249.000	249.700	251.800	251.900	253.200	250.300	97.7%
x		97.4%	250.200	251.500	248.300	249.700	250.400	250.200	251.700	249.600	97.6%
s		0.8%	2.192	0.588	2.166	4.923	1.259	1.704	1.825	1.367	0.6%
%RSD		0.8	0.876	0.234	0.872	1.972	0.503	0.681	0.725	0.548	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:43:17	248.700	246.400	243.300	246.500	249.800	252.300	98.7%	244.700	267.600	243.900
2	08:43:44	251.200	249.200	247.400	249.200	253.000	249.800	99.0%	247.300	268.200	248.200
3	08:44:11	252.300	248.600	247.900	249.200	248.200	250.300	99.3%	250.600	270.000	247.600
x		250.700	248.100	246.200	248.300	250.300	250.800	99.0%	247.500	268.600	246.500
s		1.833	1.489	2.526	1.588	2.417	1.347	0.3%	2.954	1.267	2.342
%RSD		0.731	0.600	1.026	0.640	0.966	0.537	0.3	1.194	0.472	0.950

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:43:17	244.200	256.400	104.2%
2	08:43:44	245.900	258.100	103.7%
3	08:44:11	247.100	258.900	104.5%
x		245.700	257.800	104.1%
s		1.469	1.234	0.4%
%RSD		0.598	0.478	0.4

cal4 MW-12521 4/24/2020 08:48:46

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	94.1%	M 502.500	M 507.200	M 500.900	-7.253	633.500	572.200	547.600	532.400	M 506.300
2	08:49:39	94.3%	495.200	491.800	488.700	-7.451	639.200	571.100	526.800	517.400	M 503.300
3	08:50:06	92.7%	M 502.000	496.300	486.600	-6.280	648.100	560.000	529.400	515.700	497.700
x		93.7%	M 499.900	M 498.400	M 492.100	-6.995	640.300	567.800	534.600	521.800	M 502.400
s		0.9%	M 4.071	M 7.941	M 7.695	0.627	7.367	6.727	11.360	9.158	M 4.367
%RSD		0.9	M 0.814	M 1.593	M 1.564	8.962	1.151	1.185	2.126	1.755	M 0.869

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	530.800	-29.330	521.300	764.300	635.700	92.6%	499.200	M 509.800	M 501.700	2985.000
2	08:49:39	531.300	-38.040	519.500	739.700	641.100	92.3%	M 500.100	M 515.400	M 507.200	1392.000
3	08:50:06	528.500	-37.520	518.500	766.300	636.400	91.8%	M 500.100	T 467.300	M 501.000	3897.000
x		530.200	-34.970	519.800	756.800	637.700	92.2%	M 499.800	TM 497.500	M 503.300	2758.000
s		1.486	4.886	1.400	14.810	2.942	0.4%	M 0.519	TM 26.300	M 3.432	1268.000
%RSD		0.280	13.970	0.269	1.957	0.461	0.5	M 0.104	TM 5.287	M 0.682	45.980

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	763.500	T 495.500	T 513.900	546.200	T 467.300	M 502.100	M 500.700	M 501.500	M 502.000	499.200
2	08:49:39	764.900	T 492.100	T 501.200	535.400	T 457.800	493.400	497.800	499.500	497.400	497.200
3	08:50:06	759.900	T 487.300	T 501.500	543.200	M 505.700	499.100	499.700	494.900	495.000	497.000
x		762.800	T 491.600	T 505.500	541.600	TM 476.900	M 498.200	M 499.400	M 498.600	M 498.100	497.800
s		2.590	T 4.151	T 7.230	5.575	TM 25.380	M 4.446	M 1.500	M 3.393	M 3.550	1.236
%RSD		0.340	T 0.844	T 1.430	1.029	TM 5.322	M 0.892	M 0.300	M 0.680	M 0.713	0.248

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	M 500.900	499.400	497.800	498.400	0.939	-0.239	2366.000	M 506.800	-1.442	T 494.500
2	08:49:39	499.300	M 501.200	493.300	M 503.300	-0.380	0.332	2316.000	493.500	-2.601	T 494.800
3	08:50:06	M 501.900	499.600	488.300	494.200	-0.211	-0.365	2316.000	491.000	-0.842	T 497.400
x		M 500.700	M 500.100	493.200	M 498.600	0.116	-0.091	2333.000	M 497.100	-1.628	T 495.500
s		M 1.303	M 0.949	4.731	M 4.510	0.718	0.372	28.870	M 8.509	0.894	T 1.573
%RSD		M 0.260	M 0.190	0.959	M 0.904	619.100	410.300	1.238	M 1.712	54.920	T 0.318

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	94.6%	495.900	497.000	498.400	497.500	M 505.700	M 503.500	M 500.100	M 503.000	95.7%
2	08:49:39	93.7%	494.500	497.600	M 501.900	M 504.400	M 503.000	M 502.800	498.300	M 500.800	95.3%
3	08:50:06	93.0%	499.300	M 502.600	M 502.100	498.500	M 501.300	M 501.100	499.000	498.100	95.1%
x		93.8%	496.600	M 499.000	M 500.800	M 500.100	M 503.300	M 502.400	M 499.100	M 500.600	95.4%
s		0.8%	2.495	M 3.084	M 2.100	M 3.705	M 2.220	M 1.270	M 0.911	M 2.431	0.3%
%RSD		0.9	0.502	M 0.618	M 0.419	M 0.741	M 0.441	M 0.253	M 0.183	M 0.486	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:49:12	M 510.600	M 500.900	499.300	M 502.000	M 502.100	M 500.400	97.9%	M 500.400	T 488.900	M 503.300
2	08:49:39	M 504.300	M 501.900	M 502.100	M 500.600	M 502.300	497.700	97.9%	M 504.200	T 490.600	499.900
3	08:50:06	M 503.100	M 500.500	M 504.300	499.900	498.400	M 501.300	98.6%	499.000	T 492.600	M 502.000
x		M 506.000	M 501.100	M 501.900	M 500.800	M 500.900	M 499.800	98.1%	M 501.200	T 490.700	M 501.700
s		M 3.996	M 0.731	M 2.535	M 1.049	M 2.181	M 1.898	0.4%	M 2.688	T 1.850	M 1.694
%RSD		M 0.790	M 0.146	M 0.505	M 0.209	M 0.435	M 0.380	0.4	M 0.536	T 0.377	M 0.338

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:49:12	M 502.800	T 499.800	104.4%
2	08:49:39	M 501.700	TM 500.200	103.8%
3	08:50:06	M 501.900	T 499.600	104.6%
x		M 502.200	TM 499.900	104.3%
s		M 0.594	TM 0.316	0.4%
%RSD		M 0.118	TM 0.063	0.4

cal5 MW-12618 4/24/2020 08:54:41

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	88.8%	0.019	5.411	5.385	-14.180	T 50780.000	T 51360.000	T 51180.000	T 48670.000	0.882
2	08:55:34	87.6%	0.029	4.854	4.652	-19.720	T 50590.000	T 50760.000	T 50800.000	T 48940.000	0.959
3	08:56:01	88.0%	-0.016	4.483	4.318	-22.580	T 50950.000	T 50420.000	T 50190.000	T 49220.000	0.914
x		88.1%	0.011	4.916	4.785	-18.830	T 50770.000	T 50850.000	T 50730.000	T 48940.000	0.918
s		0.6%	0.024	0.467	0.545	4.269	T 180.600	T 474.600	T 499.900	T 277.100	0.039
%RSD		0.7	223.700	9.505	11.400	22.670	T 0.356	T 0.933	T 0.986	T 0.566	4.229

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	T 4439.000	-52.630	T 46710.000	49820.000	T 49760.000	88.3%	0.409	0.007	0.175	10.820
2	08:55:34	T 4477.000	-53.220	T 48110.000	50500.000	T 50370.000	88.0%	0.568	0.021	0.200	2.902
3	08:56:01	T 4485.000	-58.920	T 47850.000	50390.000	T 49830.000	87.6%	0.492	0.031	0.207	-4.994
x		T 4467.000	-54.920	T 47560.000	50240.000	T 49980.000	88.0%	0.489	0.020	0.194	2.911
s		T 25.010	3.473	T 746.300	365.800	T 334.700	0.4%	0.079	0.012	0.017	7.909
%RSD		T 0.560	6.323	T 1.569	0.728	T 0.670	0.4	16.200	62.090	8.786	271.700

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	T 49740.000	0.690	T 49880.000	T 49590.000	2.267	2.017	3.640	0.303	0.243	1.128
2	08:55:34	T 50450.000	0.704	T 50470.000	T 50530.000	2.336	2.020	2.780	0.345	0.176	1.038
3	08:56:01	T 50640.000	0.695	T 50820.000	T 50580.000	2.383	1.948	3.267	0.334	0.246	0.878
x		T 50280.000	0.696	T 50390.000	T 50230.000	2.329	1.995	3.229	0.327	0.221	1.015
s		T 473.600	0.007	T 473.200	T 561.200	0.058	0.041	0.431	0.022	0.040	0.127
%RSD		T 0.942	1.064	T 0.939	T 1.117	2.496	2.038	13.360	6.748	17.850	12.480

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	1.130	1.027	0.439	0.578	1.207	0.744	0.684	0.330	-1.361	0.410
2	08:55:34	1.110	1.118	0.417	0.908	1.731	-0.118	1.223	0.410	-1.085	0.428
3	08:56:01	0.909	1.030	0.497	0.217	1.749	-0.163	2.474	0.786	-1.877	0.415
x		1.049	1.058	0.451	0.568	1.562	0.154	1.460	0.509	-1.441	0.418
s		0.122	0.052	0.041	0.346	0.308	0.511	0.918	0.243	0.402	0.010
%RSD		11.620	4.915	9.135	60.960	19.690	331.800	62.850	47.850	27.910	2.297

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	90.1%	0.994	0.932	0.967	0.042	0.040	0.028	0.009	0.018	89.3%
2	08:55:34	89.9%	1.002	1.049	1.092	0.189	0.018	0.029	0.021	0.011	89.2%
3	08:56:01	90.4%	1.076	1.204	0.978	0.371	0.026	0.040	0.001	0.045	89.7%
x		90.1%	1.024	1.062	1.012	0.200	0.028	0.032	0.010	0.025	89.4%
s		0.3%	0.045	0.136	0.069	0.165	0.011	0.006	0.010	0.018	0.3%
%RSD		0.3	4.419	12.850	6.810	82.170	38.970	19.540	99.850	73.800	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:55:07	0.365	0.537	1.031	1.085	0.053	0.047	94.0%	0.031	0.032	0.028
2	08:55:34	0.478	0.615	1.077	1.132	0.085	0.040	93.6%	0.040	0.039	0.030
3	08:56:01	0.436	0.570	1.083	1.103	0.040	0.064	93.9%	0.032	0.043	0.039
x		0.426	0.574	1.063	1.107	0.059	0.050	93.9%	0.034	0.038	0.032
s		0.057	0.039	0.028	0.024	0.023	0.013	0.2%	0.005	0.005	0.006
%RSD		13.380	6.856	2.669	2.153	38.570	25.040	0.2	14.090	13.740	18.850

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	08:55:07	0.041	0.035	96.2%
2	08:55:34	0.044	0.042	96.8%
3	08:56:01	0.043	0.039	96.7%
x		0.043	0.039	96.6%
s		0.002	0.004	0.3%
%RSD		4.134	9.211	0.3

cal6 MW-12619 4/24/2020 09:00:35

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	84.7%	-0.034	2.289	2.157	-17.040	T 98870.000	T 99950.000	T 99950.000	T 95940.000	1.004
2	09:01:29	86.5%	0.011	1.769	1.965	-13.290	TM 100700.000	TM 100600.000	TM 100500.000	T 96670.000	1.051
3	09:01:56	86.3%	0.012	2.391	2.288	-16.700	T 99240.000	T 98180.000	T 98470.000	T 96350.000	1.006
x		85.8%	-0.004	2.150	2.137	-15.680	TM 99610.000	TM 99570.000	TM 99630.000	T 96320.000	1.020
s		1.0%	0.026	0.334	0.163	2.074	TM 982.000	TM 1254.000	TM 1038.000	T 366.100	0.027
%RSD		1.2	707.200	15.540	7.610	13.230	TM 0.986	TM 1.259	TM 1.041	T 0.380	2.615

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	T 9103.000	-74.470	T 90760.000	99720.000	TM 100300.000	86.4%	0.707	0.015	0.359	-15.710
2	09:01:29	T 9011.000	-74.970	T 92150.000	99910.000	T 99380.000	85.7%	0.762	-0.032	0.344	19.900
3	09:01:56	T 9122.000	-84.020	T 90420.000	M 100000.000	T 99460.000	87.7%	0.743	-0.004	0.369	-1.899
x		T 9078.000	-77.820	T 91110.000	M 99880.000	TM 99700.000	86.6%	0.737	-0.007	0.357	0.764
s		T 59.170	5.375	T 915.600	M 143.200	TM 484.400	1.0%	0.028	0.024	0.012	17.960
%RSD		T 0.652	6.907	T 1.005	M 0.143	TM 0.486	1.2	3.790	334.800	3.492	2350.000

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	T 99130.000	1.330	T 99020.000	T 99800.000	4.468	3.764	4.094	0.458	0.389	2.063
2	09:01:29	TM 100300.000	1.373	TM 100400.000	T 99930.000	4.593	3.688	3.967	0.582	0.278	2.208
3	09:01:56	TM 100100.000	1.451	T 99980.000	T 99730.000	4.537	3.680	4.630	0.558	0.354	2.111
x		TM 99860.000	1.385	TM 99810.000	T 99820.000	4.533	3.711	4.231	0.533	0.341	2.127
s		TM 641.200	0.062	TM 717.300	T 100.900	0.063	0.046	0.352	0.066	0.057	0.074
%RSD		TM 0.642	4.443	TM 0.719	T 0.101	1.390	1.246	8.317	12.350	16.650	3.462

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	1.720	1.945	0.588	0.765	2.072	0.108	3.735	0.830	0.086	0.817
2	09:01:29	2.425	2.206	0.598	0.095	3.638	0.033	1.679	0.215	1.173	0.809
3	09:01:56	2.089	1.840	0.421	0.485	3.765	-0.017	0.329	-0.081	1.138	0.814
x		2.078	1.997	0.536	0.448	3.158	0.041	1.914	0.322	0.799	0.813
s		0.352	0.189	0.099	0.336	0.943	0.063	1.715	0.465	0.617	0.004
%RSD		16.960	9.448	18.530	75.050	29.860	153.900	89.610	144.400	77.270	0.494

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	88.2%	0.199	0.181	0.196	-0.387	0.018	0.022	-0.005	0.014	85.6%
2	09:01:29	87.8%	0.387	0.292	0.247	-0.108	0.013	0.011	0.013	0.015	86.3%
3	09:01:56	87.9%	0.331	0.316	0.237	-0.192	0.009	0.023	-0.005	-0.004	87.8%
x		88.0%	0.305	0.263	0.227	-0.229	0.013	0.019	0.001	0.009	86.6%
s		0.2%	0.097	0.072	0.027	0.143	0.005	0.007	0.010	0.011	1.1%
%RSD		0.2	31.590	27.390	11.990	62.470	34.310	37.310	888.700	124.800	1.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:02	0.107	0.124	0.652	0.678	0.049	0.042	90.7%	0.007	0.017	0.005
2	09:01:29	0.103	0.146	0.737	0.660	0.022	0.056	91.1%	0.015	0.011	0.026
3	09:01:56	0.116	0.176	0.724	0.694	0.054	0.044	92.2%	0.014	0.012	0.026
x		0.109	0.148	0.704	0.677	0.042	0.047	91.4%	0.012	0.013	0.019
s		0.007	0.026	0.046	0.017	0.017	0.008	0.8%	0.004	0.003	0.012
%RSD		5.997	17.400	6.491	2.475	40.680	16.070	0.9	37.050	22.640	63.260

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:01:02	0.012	0.015	90.7%
2	09:01:29	0.022	0.020	90.8%
3	09:01:56	0.020	0.019	91.6%
x		0.018	0.018	91.1%
s		0.005	0.003	0.5%
%RSD		28.910	15.900	0.5

ICV MW12798 PREP 4/24/20 4/24/2020 09:06:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	90.3%	198.700	212.500	204.300	-4.093	T 41660.000	T 40530.000	T 40200.000	T 39260.000	199.000
2	09:07:23	88.5%	202.700	219.400	214.400	8.064	T 41420.000	T 41880.000	T 41740.000	T 39830.000	200.100
3	09:07:49	88.8%	201.300	215.900	206.700	-2.469	T 41430.000	T 41640.000	T 41370.000	T 39520.000	198.900
x		89.2%	100.456%	216.000	104.242%	0.501	T 103.762%	T 41350.000	T 41100.000	T 98.840%	99.659%
s		1.0%	n/a	3.461	n/a	6.600	T n/a	T 722.300	T 803.500	T n/a	n/a
%RSD		1.1	1.009	1.602	2.525	1318.000	T 0.331	T 1.747	T 1.955	T 0.720	0.352

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	T 2207.000	-78.650	T 36950.000	39990.000	T 40140.000	88.7%	207.100	206.900	196.400	1213.000
2	09:07:23	T 2286.000	-78.490	T 37010.000	40540.000	T 40520.000	87.5%	201.500	204.300	196.200	1880.000
3	09:07:49	T 2259.000	-84.050	T 36260.000	40270.000	T 40290.000	88.0%	205.100	202.400	196.300	1572.000
x		T 2251.000	-80.400	T 91.856%	40270.000	T 100.796%	88.1%	102.295%	102.252%	98.161%	1555.000
s		T 40.330	3.165	T n/a	278.000	T n/a	0.6%	n/a	n/a	n/a	333.700
%RSD		T 1.792	3.937	T 1.135	0.690	T 0.475	0.7	1.388	1.109	0.042	21.460

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	T 40000.000	204.700	T 40380.000	T 40500.000	192.900	191.900	190.600	188.500	188.200	197.400
2	09:07:23	T 40510.000	206.200	T 40600.000	T 40510.000	191.800	190.400	190.700	188.500	190.200	195.400
3	09:07:49	T 39790.000	203.100	T 40090.000	T 40420.000	193.300	191.100	187.500	189.100	188.500	199.700
x		T 40100.000	102.327%	T 100.889%	T 101.187%	96.338%	95.566%	189.600	188.700	94.473%	98.735%
s		T 372.600	n/a	T n/a	T n/a	n/a	n/a	1.859	0.388	n/a	n/a
%RSD		T 0.929	0.773	T 0.634	T 0.124	0.388	0.405	0.980	0.206	0.592	1.088

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	192.400	189.100	209.600	189.200	2.300	0.877	903.800	199.900	-1.600	203.000
2	09:07:23	192.100	193.300	204.200	191.300	1.697	0.191	881.800	192.500	-0.519	203.400
3	09:07:49	192.700	194.100	212.000	194.600	2.302	0.879	900.200	199.900	-2.066	204.200
x		192.400	192.200	104.301%	191.700	2.100	0.649	895.300	98.712%	-1.395	101.762%
s		0.292	2.698	n/a	2.753	0.348	0.396	11.830	n/a	0.793	n/a
%RSD		0.152	1.404	1.937	1.436	16.600	61.060	1.322	2.165	56.880	0.297

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	89.8%	203.600	204.400	200.500	197.400	188.700	186.400	196.200	196.100	88.2%
2	09:07:23	89.2%	202.600	205.600	200.800	200.000	187.300	187.000	197.300	195.100	88.5%
3	09:07:49	89.2%	205.400	209.100	203.100	200.000	190.600	189.000	199.700	197.700	87.2%
x		89.4%	101.928%	103.179%	100.752%	199.200	94.421%	187.500	98.882%	98.157%	88.0%
s		0.4%	n/a	n/a	n/a	1.480	n/a	1.364	n/a	n/a	0.7%
%RSD		0.4	0.687	1.174	0.707	0.743	0.887	0.728	0.909	0.655	0.8

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:06:55	200.100	200.300	202.100	197.200	201.400	196.300	92.6%	197.100	203.500	188.400
2	09:07:23	201.200	199.900	202.000	200.200	198.500	196.900	91.9%	195.900	205.200	191.200
3	09:07:49	202.400	201.100	205.100	201.800	202.800	199.100	91.6%	199.100	209.000	191.400
x		100.611%	100.227%	203.100	99.869%	100.466%	98.709%	92.0%	197.400	102.961%	190.300
s		n/a	n/a	1.769	n/a	n/a	n/a	0.5%	1.632	n/a	1.662
%RSD		0.572	0.319	0.871	1.163	1.087	0.740	0.6	0.827	1.358	0.873

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:06:55	187.000	196.000	93.7%
2	09:07:23	189.900	198.600	95.1%
3	09:07:49	190.600	199.400	94.4%
x		189.200	99.002%	94.4%
s		1.895	n/a	0.7%
%RSD		1.002	0.883	0.7

ICB IM9936-01 4/24/2020 09:12:21 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	98.5%	-0.026	1.075	0.609	0.757	11.170	0.338	0.634	0.589	0.023
2	09:13:15	98.3%	0.014	0.573	0.634	-3.983	9.341	0.440	0.727	0.409	0.007
3	09:13:43	98.5%	-0.002	1.076	0.869	-3.751	7.491	0.537	0.789	0.651	-0.015
x		98.5%	-0.005	0.908	0.704	-2.326	9.335	0.438	0.717	0.549	0.005
s		0.1%	0.020	0.290	0.143	2.672	1.840	0.099	0.078	0.126	0.019
%RSD		0.1	424.500	31.940	20.330	114.900	19.720	22.620	10.850	22.880	359.500
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	1.457	-72.730	12.070	1.364	-2.480	98.7%	-0.032	0.003	-0.012	-2.751
2	09:13:15	1.278	-72.810	10.310	-2.598	-4.698	98.4%	-0.032	0.009	-0.002	-5.057
3	09:13:43	1.547	-68.850	11.700	-1.279	-3.626	98.7%	-0.032	-0.006	-0.012	-0.745
x		1.427	-71.470	11.360	-0.837	-3.601	98.6%	-0.032	0.002	-0.009	-2.851
s		0.137	2.261	0.926	2.017	1.109	0.2%	0.000	0.007	0.006	2.158
%RSD		9.589	3.164	8.154	240.900	30.800	0.2	0.185	374.500	64.460	75.680
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	-0.084	0.021	-0.319	3.608	0.005	0.008	2.659	0.137	0.022	0.317
2	09:13:15	-0.328	0.018	-0.189	2.982	0.008	-0.003	1.793	0.141	-0.011	0.205
3	09:13:43	0.577	0.028	0.423	2.233	0.008	-0.014	1.678	0.091	-0.002	0.208
x		0.055	0.023	-0.029	2.941	0.007	-0.003	2.043	0.123	0.003	0.243
s		0.468	0.005	0.396	0.688	0.001	0.011	0.536	0.028	0.017	0.064
%RSD		856.300	22.130	1385.000	23.390	19.180	343.200	26.230	22.610	608.300	26.140
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	0.568	0.353	0.103	-0.160	0.088	-0.017	0.034	0.357	-2.652	0.004
2	09:13:15	0.297	0.323	-0.002	0.286	-0.003	-0.308	0.723	0.198	-0.350	0.001
3	09:13:43	0.092	0.197	-0.055	-0.046	-0.077	0.431	-1.885	0.007	-3.162	0.006
x		0.319	0.291	0.015	0.027	0.003	0.035	-0.376	0.187	-2.055	0.004
s		0.238	0.083	0.080	0.232	0.083	0.372	1.351	0.175	1.498	0.002
%RSD		74.680	28.370	521.000	868.300	3102.000	1065.000	359.400	93.390	72.930	59.790
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	98.4%	0.141	0.107	0.090	-0.068	0.141	0.178	-0.000	0.010	98.2%
2	09:13:15	98.7%	0.085	0.113	0.097	-0.679	0.161	0.163	-0.004	0.012	99.2%
3	09:13:43	99.4%	0.125	0.134	0.099	0.420	0.148	0.165	0.003	0.004	98.7%
x		98.8%	0.117	0.118	0.096	-0.109	0.150	0.169	-0.000	0.008	98.7%
s		0.5%	0.029	0.014	0.005	0.551	0.010	0.008	0.004	0.004	0.5%
%RSD		0.5	24.580	12.030	4.729	504.700	6.953	4.926	1170.000	48.840	0.5
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:49	0.039	0.071	0.187	0.203	-0.004	-0.006	98.2%	0.007	0.006	0.001
2	09:13:15	0.028	0.057	0.213	0.250	0.008	-0.003	99.0%	0.008	0.002	-0.009
3	09:13:43	0.024	0.057	0.218	0.193	0.002	0.013	99.8%	0.010	0.003	-0.006
x		0.030	0.061	0.206	0.215	0.002	0.001	99.0%	0.008	0.004	-0.005
s		0.008	0.008	0.017	0.030	0.006	0.010	0.8%	0.002	0.002	0.005
%RSD		25.920	13.550	8.125	14.070	290.900	886.800	0.8	20.920	54.320	107.400
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	09:12:49	-0.003	-0.002	103.9%							
2	09:13:15	0.005	0.001	105.3%							
3	09:13:43	-0.006	-0.002	106.3%							
x		-0.001	-0.001	105.2%							
s		0.006	0.002	1.2%							
%RSD		403.600	137.600	1.2							

ICSA MW12579 4/24/2020 09:18:15 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	83.3%	-0.006	1.464	1.078	671.100	TM 100400.000	TM 102000.000	TM 100600.000	T 95400.000	TM 88130.000
2	09:19:08	82.2%	-0.015	1.132	0.863	642.900	T 99950.000	TM 100800.000	TM 100100.000	T 97650.000	TM 90860.000
3	09:19:35	82.2%	0.004	0.967	0.900	647.400	TM 103700.000	TM 102900.000	TM 101300.000	T 98140.000	TM 89990.000
x		82.6%	-1.#IO%	1.188	1.#IO%	653.800	TM 101.339%	TM 101900.000	TM 100700.000	T 97.064%	TM 89.661%
s		0.6%	n/a	0.253	n/a	15.170	TM n/a	TM 1042.000	TM 589.400	T n/a	TM n/a
%RSD		0.7	174.500	21.310	12.080	2.321	TM 2.002	TM 1.023	TM 0.586	T 1.503	TM 1.559
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	10.870	T 22860.000	T 93520.000	99630.000	T 99270.000	82.7%	M 2096.000	-0.716	-1.040	770.500
2	09:19:08	12.290	T 22990.000	T 92970.000	99120.000	T 99680.000	82.6%	M 2116.000	-0.698	-1.113	807.700
3	09:19:35	11.710	T 23060.000	T 93350.000	99850.000	TM 100400.000	82.5%	M 2116.000	-0.761	-1.106	847.300
x		11.620	T 22970.000	T 93.283%	99540.000	TM 99.773%	82.6%	M 105.462%	-1.#IO%	-1.#IO%	808.500
s		0.718	T 104.200	T n/a	374.200	TM n/a	0.1%	M n/a	n/a	n/a	38.390
%RSD		6.172	T 0.454	T 0.305	0.376	TM 0.559	0.1	M 0.546	4.477	3.702	4.748
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	T 99900.000	0.140	T 99650.000	TM 100000.000	0.220	0.456	7.489	-1.259	-0.301	1.524
2	09:19:08	TM 100400.000	0.169	TM 100300.000	TM 101000.000	0.211	0.469	9.132	-1.168	-0.382	1.361
3	09:19:35	TM 101300.000	0.137	TM 100900.000	TM 100400.000	0.223	0.418	12.350	-0.959	-0.231	1.374
x		TM 100500.000	1.#IO%	TM 100300.000	TM 100.478%	1.#IO%	1.#IO%	9.658	-1.129	-1.#IO%	1.#IO%
s		TM 708.200	n/a	TM 643.300	TM n/a	n/a	n/a	2.473	0.154	n/a	n/a
%RSD		TM 0.704	11.850	TM 0.641	TM 0.507	2.662	5.943	25.610	13.630	24.750	6.345
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	1.390	0.709	-0.257	0.214	2.448	1.594	2.889	-1.244	14.310	0.921
2	09:19:08	1.567	0.642	-0.575	0.401	4.605	1.235	-1.706	-1.666	9.936	0.943
3	09:19:35	1.952	0.565	-0.329	0.636	5.127	3.104	0.117	-1.386	10.870	0.916
x		1.636	0.639	-1.#IO%	0.417	4.060	1.978	0.434	-1.#IO%	11.700	0.927
s		0.287	0.072	n/a	0.211	1.420	0.992	2.314	n/a	2.303	0.015
%RSD		17.570	11.260	43.140	50.730	34.980	50.150	533.800	14.990	19.670	1.573
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	86.7%	TM 2135.000	M 2104.000	TM 2140.000	-0.435	0.027	0.014	-6.758	-0.078	88.0%
2	09:19:08	87.5%	M 2124.000	M 2123.000	TM 2152.000	-1.738	0.016	0.025	-6.916	-0.120	88.0%
3	09:19:35	88.1%	TM 2139.000	M 2098.000	TM 2149.000	-1.391	0.023	0.026	-6.880	-0.087	89.6%
x		87.5%	TM 2133.000	M 105.423%	TM 2147.000	-1.188	1.#IO%	0.022	-6.851	-1.#IO%	88.5%
s		0.7%	TM 8.109	M n/a	TM 6.372	0.675	n/a	0.007	0.083	n/a	0.9%
%RSD		0.8	TM 0.380	M 0.624	TM 0.297	56.830	23.950	32.290	1.211	23.520	1.0
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:41	0.625	0.074	0.169	0.162	0.022	0.022	92.8%	0.015	0.010	0.072
2	09:19:08	0.579	0.100	0.186	0.159	0.079	0.022	93.4%	0.020	0.007	0.048
3	09:19:35	0.676	0.093	0.196	0.141	0.015	0.008	94.5%	0.011	0.007	0.051
x		1.#IO%	1.#IO%	0.184	1.#IO%	0.039	1.#IO%	93.6%	0.015	1.#IO%	0.057
s		n/a	n/a	0.013	n/a	0.035	n/a	0.8%	0.005	n/a	0.013
%RSD		7.770	14.920	7.255	7.055	91.110	47.810	0.9	30.270	24.190	22.540
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	09:18:41	0.054	0.066	94.2%							
2	09:19:08	0.058	0.056	95.5%							
3	09:19:35	0.056	0.053	96.4%							
x		0.056	1.#IO%	95.4%							
s		0.002	n/a	1.1%							
%RSD		3.425	12.020	1.2							

CCV MW12620 4/24/2020 09:24:10 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	86.2%	298.300	297.300	288.100	4.905	T 60310.000	T 60610.000	T 60080.000	T 58620.000	296.700
2	09:25:04	85.1%	300.800	296.400	287.500	7.544	T 61260.000	T 60180.000	T 59890.000	T 58570.000	294.900
3	09:25:32	84.5%	299.400	311.300	302.800	19.520	T 60910.000	T 61950.000	T 61040.000	T 58830.000	292.600
x		85.3%	99.833%	100.560%	97.588%	10.660	T 101.373%	T 60910.000	T 60340.000	T 97.792%	98.256%
s		0.8%	n/a	n/a	n/a	7.788	T n/a	T 925.700	T 620.400	T n/a	n/a
%RSD		1.0	0.428	2.766	2.962	73.080	T 0.788	T 1.520	T 1.028	T 0.236	0.697

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	T 2933.000	4.887	T 55370.000	59950.000	T 59660.000	86.0%	307.700	302.100	292.400	3393.000
2	09:25:04	T 2955.000	-5.627	T 56180.000	60290.000	T 59940.000	84.9%	306.700	304.900	293.900	3272.000
3	09:25:32	T 2929.000	-18.210	T 55170.000	60310.000	T 60550.000	84.7%	299.900	299.800	291.100	2734.000
x		T 2939.000	-6.317	T 92.622%	60180.000	T 100.083%	85.2%	101.595%	100.750%	97.487%	3133.000
s		T 13.940	11.560	T n/a	199.800	T n/a	0.7%	n/a	n/a	n/a	351.100
%RSD		T 0.474	183.100	T 0.961	0.332	T 0.752	0.8	1.389	0.848	0.472	11.210

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	T 60510.000	309.500	T 59860.000	T 59540.000	288.700	281.600	288.000	278.100	279.500	288.800
2	09:25:04	T 60930.000	309.500	T 60460.000	T 60660.000	293.800	286.600	283.100	279.100	281.300	286.900
3	09:25:32	T 60120.000	308.400	T 60640.000	T 60000.000	286.300	280.300	283.000	276.700	274.000	286.900
x		T 60520.000	103.043%	T 60320.000	T 100.111%	96.527%	94.278%	284.700	278.000	92.754%	95.841%
s		T 403.800	n/a	T 407.300	T n/a	n/a	n/a	2.836	1.233	n/a	n/a
%RSD		T 0.667	0.192	T 0.675	T 0.936	1.316	1.174	0.996	0.444	1.368	0.370

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	284.200	283.600	294.400	284.300	1.580	0.232	1363.000	294.400	-1.739	305.200
2	09:25:04	287.600	287.000	290.100	287.300	1.296	-0.047	1368.000	294.100	-1.669	306.600
3	09:25:32	287.100	283.600	291.900	290.500	1.945	0.229	1368.000	295.100	-1.313	309.500
x		286.300	284.700	97.373%	287.400	1.607	0.138	1366.000	98.185%	-1.574	102.368%
s		1.814	1.982	n/a	3.107	0.325	0.160	3.084	n/a	0.228	n/a
%RSD		0.633	0.696	0.745	1.081	20.220	116.100	0.226	0.181	14.500	0.716

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	88.4%	304.700	307.800	301.800	292.100	281.200	281.900	288.100	289.500	88.6%
2	09:25:04	87.5%	302.600	304.000	303.200	287.000	282.900	282.000	290.900	288.300	88.0%
3	09:25:32	86.2%	306.800	308.300	306.400	288.700	282.800	283.700	293.100	292.700	86.6%
x		87.4%	101.574%	102.226%	303.800	289.200	94.098%	282.500	290.700	96.713%	87.7%
s		1.1%	n/a	n/a	2.375	2.591	n/a	1.015	2.506	n/a	1.0%
%RSD		1.3	0.687	0.771	0.782	0.896	0.350	0.359	0.862	0.778	1.2

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:37	297.900	295.200	298.700	289.700	295.400	293.700	92.4%	293.800	T 288.900	T 259.900
2	09:25:04	297.100	293.800	296.900	294.500	297.300	295.500	91.6%	290.600	T 292.000	T 264.100
3	09:25:32	298.300	297.500	301.000	290.000	297.800	293.300	91.9%	298.400	T 288.100	286.400
x		99.261%	98.508%	298.800	97.124%	98.953%	98.060%	92.0%	294.300	T 96.562%	T 90.046%
s		n/a	n/a	2.021	n/a	n/a	n/a	0.4%	3.885	T n/a	T n/a
%RSD		0.198	0.636	0.676	0.917	0.428	0.389	0.5	1.320	T 0.720	T 5.283

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:24:37	284.000	291.600	94.8%
2	09:25:04	286.800	295.700	95.1%
3	09:25:32	284.000	299.400	93.9%
x		94.987%	98.534%	94.6%
s		n/a	n/a	0.6%
%RSD		0.568	1.315	0.6

CCB IM9936-01 4/24/2020 09:30:05 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	99.3%	-0.002	2.328	2.428	-5.796	14.520	1.202	1.262	0.846	0.012
2	09:30:59	100.4%	-0.011	2.203	1.735	-7.727	12.870	0.875	0.763	1.061	-0.023
3	09:31:26	100.5%	0.013	2.204	1.908	-8.334	11.500	0.978	0.961	1.248	-0.009
x		100.1%	-0.000	2.245	2.024	-7.286	12.960	1.018	0.995	1.052	-0.007
s		0.7%	0.012	0.072	0.361	1.325	1.513	0.167	0.252	0.201	0.017
%RSD		0.7	130500.000	3.213	17.830	18.190	11.670	16.420	25.260	19.130	254.100
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	0.522	-60.420	4.416	2.752	-1.195	97.6%	-0.017	0.013	-0.010	-5.006
2	09:30:59	0.525	-62.940	2.928	-0.630	-2.100	99.2%	-0.004	-0.002	-0.035	2.520
3	09:31:26	0.204	-63.010	2.218	-1.944	-4.529	99.1%	-0.004	-0.021	-0.026	14.120
x		0.417	-62.120	3.187	0.059	-2.608	98.6%	-0.009	-0.003	-0.024	3.877
s		0.184	1.478	1.122	2.423	1.724	0.9%	0.008	0.017	0.012	9.632
%RSD		44.210	2.378	35.190	4084.000	66.110	0.9	89.650	560.100	51.650	248.500
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	-0.724	0.028	0.289	3.432	0.012	0.001	2.243	0.119	-0.001	0.262
2	09:30:59	0.126	0.028	0.209	2.592	0.008	0.011	2.678	0.102	-0.006	0.181
3	09:31:26	1.271	0.038	0.673	2.571	0.002	0.004	2.612	0.086	0.018	0.164
x		0.225	0.031	0.391	2.865	0.008	0.005	2.511	0.102	0.004	0.202
s		1.001	0.006	0.248	0.491	0.005	0.005	0.234	0.017	0.013	0.053
%RSD		445.500	18.350	63.490	17.140	63.550	100.400	9.337	16.280	341.000	26.130
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	0.233	0.357	-0.074	0.061	-0.164	0.623	-0.179	-0.060	0.157	0.006
2	09:30:59	0.159	0.367	-0.018	-0.417	0.006	-0.165	-0.728	0.021	-1.329	0.003
3	09:31:26	-0.020	0.162	0.104	-0.091	-0.368	-0.673	-0.032	0.578	-4.315	0.005
x		0.124	0.295	0.004	-0.149	-0.175	-0.072	-0.313	0.180	-1.829	0.004
s		0.130	0.116	0.091	0.244	0.188	0.653	0.367	0.347	2.278	0.001
%RSD		105.100	39.150	2251.000	163.600	106.800	911.300	117.200	193.300	124.500	31.100
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	98.2%	0.316	0.483	0.388	0.367	0.039	0.053	0.014	0.014	97.6%
2	09:30:59	99.4%	0.401	0.400	0.391	-0.204	0.049	0.050	0.002	0.010	97.8%
3	09:31:26	99.5%	0.292	0.334	0.330	0.434	0.039	0.042	-0.005	0.007	97.6%
x		99.0%	0.336	0.405	0.370	0.199	0.042	0.048	0.004	0.010	97.6%
s		0.7%	0.057	0.074	0.034	0.350	0.005	0.006	0.010	0.004	0.1%
%RSD		0.7	16.960	18.370	9.244	176.300	12.610	11.390	257.900	36.140	0.1
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:32	0.118	0.148	0.396	0.404	0.008	-0.006	97.1%	0.009	0.011	0.008
2	09:30:59	0.099	0.138	0.364	0.360	0.008	0.000	97.7%	0.010	0.007	0.006
3	09:31:26	0.103	0.121	0.370	0.355	0.002	0.017	97.5%	0.008	0.009	0.006
x		0.107	0.136	0.377	0.373	0.006	0.004	97.4%	0.009	0.009	0.006
s		0.010	0.013	0.017	0.027	0.003	0.012	0.3%	0.001	0.002	0.001
%RSD		9.343	9.830	4.482	7.182	56.580	335.900	0.3	7.222	20.800	18.650
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	09:30:32	0.011	0.008	102.9%							
2	09:30:59	0.006	0.003	103.3%							
3	09:31:26	0.009	0.005	101.9%							
x		0.009	0.005	102.7%							
s		0.002	0.002	0.7%							
%RSD		25.260	46.950	0.7							

VQ51842-001 4/24/2020 09:35:55 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	104.0%	-0.019	1.795	1.420	-20.920	21.930	-0.605	-0.457	-0.420	0.673
2	09:36:50	103.3%	-0.027	0.556	1.107	-22.310	18.470	-0.555	-0.355	-0.544	0.653
3	09:37:17	101.5%	-0.003	1.615	1.106	-30.050	16.160	-0.527	-0.542	-0.398	0.770
x		102.9%	-0.016	1.322	1.211	-24.430	18.850	-0.562	-0.451	-0.454	0.699
s		1.3%	0.012	0.669	0.181	4.922	2.905	0.039	0.094	0.079	0.062
%RSD		1.3	74.050	50.620	14.930	20.150	15.410	7.012	20.750	17.390	8.936

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	2.117	T 46580.000	17.930	-0.723	-2.514	102.8%	0.021	-0.175	0.191	2746.000
2	09:36:50	1.611	T 46560.000	14.010	-1.337	-1.818	101.7%	0.022	-0.553	0.156	3022.000
3	09:37:17	2.092	T 47270.000	11.080	1.885	-2.897	101.4%	-0.019	-0.245	0.182	2886.000
x		1.940	T 46800.000	14.340	-0.059	-2.409	102.0%	0.008	-0.325	0.176	2884.000
s		0.285	T 402.500	3.439	1.711	0.547	0.7%	0.023	0.201	0.018	137.900
%RSD		14.710	T 0.860	23.980	2924.000	22.700	0.7	298.000	62.020	10.410	4.781

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	1.490	-0.019	2.700	1.917	-0.006	0.093	5.058	0.331	0.045	1.254
2	09:36:50	1.547	-0.027	2.448	1.544	-0.002	0.091	5.590	0.339	0.159	1.342
3	09:37:17	-0.112	-0.031	3.147	1.889	-0.005	0.144	5.361	0.321	0.092	1.534
x		0.975	-0.026	2.765	1.783	-0.005	0.109	5.336	0.330	0.099	1.376
s		0.942	0.006	0.354	0.208	0.002	0.030	0.267	0.009	0.057	0.143
%RSD		96.630	23.610	12.810	11.650	43.020	27.570	4.999	2.614	58.010	10.390

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	1.567	1.603	-0.344	0.469	8.314	9.260	-1.386	-0.273	-0.236	0.002
2	09:36:50	1.442	1.380	0.022	-0.167	8.263	8.489	-0.957	0.267	-3.580	0.001
3	09:37:17	1.612	1.476	-0.111	0.172	9.356	7.763	1.465	0.388	-0.522	0.002
x		1.540	1.486	-0.144	0.158	8.644	8.504	-0.292	0.127	-1.446	0.002
s		0.088	0.112	0.185	0.318	0.617	0.749	1.537	0.352	1.854	0.000
%RSD		5.735	7.528	128.300	201.400	7.132	8.802	525.700	276.100	128.200	28.890

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	103.0%	0.039	0.076	0.008	-0.342	0.007	0.009	0.007	0.002	102.7%
2	09:36:50	103.6%	0.032	0.072	0.047	-0.704	0.001	0.010	-0.000	0.005	102.2%
3	09:37:17	104.2%	0.071	0.111	0.029	-0.631	0.000	0.006	0.003	0.002	103.2%
x		103.6%	0.047	0.086	0.028	-0.559	0.003	0.009	0.003	0.003	102.7%
s		0.6%	0.021	0.021	0.020	0.192	0.003	0.002	0.004	0.002	0.5%
%RSD		0.6	44.880	24.650	70.450	34.270	121.500	29.080	108.600	49.860	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:23	0.097	0.168	0.136	0.117	-0.004	0.003	101.2%	0.010	0.003	0.029
2	09:36:50	0.110	0.182	0.137	0.122	0.018	-0.006	101.1%	0.003	0.000	0.029
3	09:37:17	0.081	0.164	0.128	0.123	0.002	-0.003	102.2%	0.008	0.001	0.007
x		0.096	0.171	0.133	0.121	0.005	-0.002	101.5%	0.007	0.001	0.022
s		0.015	0.009	0.005	0.004	0.011	0.005	0.6%	0.003	0.001	0.013
%RSD		15.350	5.537	3.714	3.031	211.400	209.900	0.6	48.630	81.260	59.860

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:36:23	0.024	0.026	104.1%
2	09:36:50	0.012	0.018	104.3%
3	09:37:17	0.013	0.017	105.6%
x		0.017	0.020	104.7%
s		0.007	0.005	0.8%
%RSD		40.690	25.920	0.7

VQ51842-002 4/24/2020 09:41:46 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	100.6%	96.600	99.550	92.800	-24.240	T 1036.000	T 1011.000	1053.000	1043.000	97.070
2	09:42:40	97.2%	97.280	96.440	97.890	-22.180	T 1019.000	T 1018.000	1073.000	1025.000	97.870
3	09:43:08	96.3%	96.730	102.200	101.700	-19.760	T 1021.000	1169.000	1084.000	1031.000	98.600
x		98.0%	96.872%	99.390	97.464%	-22.060	T 102.526%	T 1066.000	1070.000	103.270%	97.851%
s		2.3%	n/a	2.863	n/a	2.241	T n/a	T 89.400	15.640	n/a	n/a
%RSD		2.3	0.374	2.881	4.588	10.160	T 0.929	T 8.388	1.461	0.892	0.782

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	951.900	T 47050.000	979.800	1049.000	1014.000	97.3%	99.980	96.840	95.830	4283.000
2	09:42:40	976.300	T 47350.000	983.900	1095.000	975.900	96.5%	97.310	96.250	94.900	4427.000
3	09:43:08	975.500	T 48020.000	986.000	1022.000	1001.000	95.3%	101.100	96.000	96.140	4595.000
x		96.790%	T 47470.000	98.321%	1055.000	99.689%	96.4%	99.451%	96.366%	95.625%	4435.000
s		n/a	T 496.600	n/a	37.110	n/a	1.0%	n/a	n/a	n/a	156.400
%RSD		1.431	T 1.046	0.318	3.517	1.938	1.0	1.945	0.446	0.673	3.526

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	1107.000	102.000	T 1001.000	1063.000	96.770	97.720	104.400	98.810	100.500	104.700
2	09:42:40	1113.000	100.900	T 997.000	1051.000	96.220	96.160	100.800	98.170	98.110	102.600
3	09:43:08	1105.000	100.500	T 989.300	1047.000	96.470	97.730	103.500	97.690	98.430	102.400
x		1109.000	101.140%	T 995.800	105.374%	96.487%	97.203%	102.900	98.220	99.023%	103.220%
s		4.296	n/a	T 5.889	n/a	n/a	n/a	1.846	0.559	n/a	n/a
%RSD		0.388	0.790	T 0.591	0.758	0.289	0.932	1.795	0.570	1.334	1.223

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	101.900	101.000	98.870	97.470	7.795	6.968	444.700	96.370	-2.004	97.630
2	09:42:40	102.100	102.700	100.800	95.930	7.467	8.454	451.900	97.780	-1.704	98.630
3	09:43:08	102.700	100.700	101.800	96.730	7.938	9.269	482.600	103.800	1.137	98.170
x		102.200	101.500	100.508%	96.710	7.733	8.230	459.700	99.321%	-0.857	98.140
s		0.413	1.074	n/a	0.771	0.242	1.167	20.110	n/a	1.733	0.499
%RSD		0.404	1.059	1.494	0.797	3.125	14.180	4.375	3.981	202.200	0.508

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	99.5%	96.950	97.330	95.160	95.300	95.310	95.280	96.390	95.140	99.7%
2	09:42:40	98.4%	97.560	98.810	95.910	95.230	96.360	96.510	97.030	96.040	98.7%
3	09:43:08	98.0%	97.940	97.220	96.420	97.590	95.890	95.240	96.870	96.700	98.4%
x		98.6%	97.480	97.786%	95.830	96.040	95.858%	95.680	96.760	95.958%	98.9%
s		0.8%	0.499	n/a	0.633	1.340	n/a	0.726	0.330	n/a	0.7%
%RSD		0.8	0.512	0.907	0.660	1.396	0.549	0.759	0.341	0.816	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:13	96.500	94.770	93.920	96.030	97.600	96.870	100.3%	95.540	101.500	95.750
2	09:42:40	96.880	96.510	96.000	96.950	97.690	97.580	100.1%	96.830	103.200	96.560
3	09:43:08	97.240	97.390	95.990	97.410	96.830	98.830	99.8%	96.920	104.200	97.550
x		96.870	96.222%	95.300	96.797%	97.375%	97.760	100.0%	96.430	102.963%	96.620
s		0.369	n/a	1.198	n/a	n/a	0.992	0.3%	0.772	n/a	0.901
%RSD		0.381	1.388	1.257	0.727	0.483	1.014	0.3	0.801	1.317	0.932

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:42:13	95.390	99.400	106.4%
2	09:42:40	96.200	100.100	106.1%
3	09:43:08	97.920	101.400	107.0%
x		96.510	100.308%	106.5%
s		1.295	n/a	0.5%
%RSD		1.342	1.017	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	98.6%	-0.010	15.290	13.360	-32.310	T 12280.000	T 10860.000	T 10760.000	T 11410.000	T 276.500
2	09:48:33	98.2%	-0.010	15.220	13.640	-32.290	T 12520.000	T 11010.000	T 10820.000	T 11620.000	308.000
3	09:49:00	95.5%	-0.001	12.870	12.970	-34.800	T 12360.000	T 10860.000	T 10750.000	T 11470.000	T 282.600
x		97.4%	-0.007	14.460	13.330	-33.130	T 12390.000	T 10910.000	T 10780.000	T 11500.000	T 289.000
s		1.7%	0.005	1.376	0.336	1.442	T 122.400	T 89.630	T 38.940	T 107.700	T 16.710
%RSD		1.8	73.170	9.512	2.524	4.351	T 0.988	T 0.822	T 0.361	T 0.936	T 5.782

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	T 5136.000	T 43440.000	T 2632.000	M 115500.000	TM 111700.000	97.3%	7.094	0.832	0.665	3144.000
2	09:48:33	T 5026.000	T 42660.000	T 2587.000	M 116000.000	TM 114000.000	94.4%	5.442	1.066	0.725	3595.000
3	09:49:00	T 4997.000	T 42310.000	T 2621.000	M 114900.000	TM 113600.000	92.7%	7.462	1.043	0.732	4223.000
x		T 5053.000	T 42800.000	T 2614.000	M 115500.000	TM 113100.000	94.8%	6.666	0.981	0.707	3654.000
s		T 73.160	T 579.200	T 23.290	M 595.400	TM 1222.000	2.3%	1.076	0.129	0.037	542.100
%RSD		T 1.448	T 1.353	T 0.891	M 0.516	TM 1.080	2.4	16.140	13.130	5.254	14.830

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	291.100	29.360	317.300	456.500	0.267	1.385	4.982	0.904	0.864	2.280
2	09:48:33	292.700	29.280	T 287.700	454.200	0.241	1.251	4.741	0.984	0.880	2.053
3	09:49:00	291.900	29.860	T 289.500	443.800	0.238	1.351	6.135	0.939	0.800	1.993
x		291.900	29.500	T 298.200	451.500	0.249	1.329	5.286	0.942	0.848	2.109
s		0.833	0.316	T 16.610	6.796	0.016	0.070	0.745	0.040	0.042	0.151
%RSD		0.285	1.071	T 5.571	1.505	6.349	5.245	14.100	4.246	5.005	7.164

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	6.346	5.270	-0.122	0.007	28.220	26.740	-0.324	0.052	-0.944	T 469.400
2	09:48:33	5.908	4.941	0.525	0.084	27.150	27.410	2.142	0.561	-0.808	T 471.300
3	09:49:00	5.885	4.960	0.463	-0.051	26.020	28.430	-2.195	-0.464	-0.135	T 475.200
x		6.046	5.057	0.288	0.013	27.130	27.530	-0.126	0.050	-0.629	T 472.000
s		0.260	0.185	0.357	0.068	1.101	0.852	2.175	0.512	0.433	T 2.949
%RSD		4.295	3.656	123.700	502.700	4.057	3.095	1733.000	1030.000	68.870	T 0.625

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	100.9%	0.303	0.324	0.346	7.288	-0.003	0.005	0.010	0.021	99.4%
2	09:48:33	99.3%	0.315	0.350	0.312	7.726	-0.002	0.009	0.018	0.027	99.0%
3	09:49:00	96.6%	0.272	0.321	0.346	9.017	-0.001	0.003	0.014	0.011	98.2%
x		98.9%	0.297	0.332	0.335	8.010	-0.002	0.006	0.014	0.020	98.8%
s		2.2%	0.022	0.016	0.020	0.899	0.001	0.003	0.004	0.008	0.6%
%RSD		2.2	7.515	4.792	5.911	11.220	46.790	50.360	28.090	39.890	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:06	0.090	0.125	0.237	0.209	137.000	136.600	101.6%	0.030	0.017	0.221
2	09:48:33	0.100	0.136	0.217	0.223	136.600	136.300	100.0%	0.022	0.020	0.260
3	09:49:00	0.102	0.131	0.238	0.194	137.100	136.400	100.5%	0.019	0.016	0.256
x		0.097	0.131	0.231	0.208	136.900	136.400	100.7%	0.023	0.018	0.246
s		0.007	0.006	0.012	0.014	0.235	0.181	0.8%	0.006	0.002	0.022
%RSD		6.735	4.388	5.031	6.909	0.172	0.133	0.8	24.260	12.240	8.862

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:48:06	0.233	0.232	105.8%
2	09:48:33	0.230	0.239	105.4%
3	09:49:00	0.238	0.243	105.7%
x		0.233	0.238	105.6%
s		0.004	0.006	0.2%
%RSD		1.648	2.332	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	91.4%	0.000	62.250	56.570	10.810	T 31980.000	T 10210.000	T 10070.000	T 11510.000	113.500
2	09:54:24	91.2%	0.000	55.630	56.460	8.129	T 32690.000	T 10240.000	T 10340.000	T 11810.000	T 108.500
3	09:54:52	88.7%	0.001	58.820	61.030	12.230	T 32790.000	T 10420.000	T 10280.000	T 11670.000	112.500
x		90.4%	0.001	58.900	58.020	10.390	T 32490.000	T 10290.000	T 10230.000	T 11660.000	T 111.500
s		1.5%	0.001	3.311	2.610	2.084	T 442.000	T 115.500	T 138.600	T 149.500	T 2.636
%RSD		1.6	76.610	5.621	4.499	20.060	T 1.361	T 1.123	T 1.355	T 1.282	T 2.363

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	T 4368.000	T 49540.000	T 4123.000	56090.000	T 54980.000	87.6%	2.936	-0.358	0.661	10550.000
2	09:54:24	T 4299.000	T 49500.000	T 4125.000	56660.000	T 55930.000	85.4%	3.013	-0.076	0.744	10540.000
3	09:54:52	T 4337.000	T 49520.000	T 4179.000	57060.000	T 56670.000	85.0%	3.593	-0.223	0.703	10980.000
x		T 4335.000	T 49520.000	T 4143.000	56600.000	T 55860.000	86.0%	3.181	-0.219	0.703	10690.000
s		T 34.340	T 21.840	T 31.510	485.300	T 850.100	1.4%	0.359	0.141	0.042	250.700
%RSD		T 0.792	T 0.044	T 0.761	0.857	T 1.522	1.6	11.300	64.470	5.935	2.346

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	259.000	118.700	274.000	330.200	0.296	1.370	5.617	0.954	0.884	3.711
2	09:54:24	253.600	120.100	T 255.300	331.200	0.305	1.603	5.571	1.001	0.861	3.547
3	09:54:52	259.500	120.100	T 251.600	331.100	0.284	1.370	6.857	0.983	0.791	3.314
x		257.400	119.700	T 260.300	330.800	0.295	1.448	6.015	0.979	0.845	3.524
s		3.283	0.819	T 12.020	0.553	0.011	0.134	0.730	0.023	0.049	0.200
%RSD		1.276	0.684	T 4.617	0.167	3.583	9.275	12.130	2.393	5.765	5.671

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	5.737	4.611	0.856	0.454	59.870	64.910	0.699	0.075	0.432	342.700
2	09:54:24	5.568	4.179	1.096	0.465	61.200	59.080	-0.552	0.107	-1.825	339.700
3	09:54:52	5.190	4.631	0.825	-0.360	57.900	60.550	-0.256	-0.273	1.558	342.700
x		5.498	4.474	0.926	0.186	59.660	61.510	-0.036	-0.030	0.055	341.700
s		0.280	0.255	0.149	0.473	1.662	3.032	0.654	0.210	1.723	1.742
%RSD		5.097	5.708	16.060	254.100	2.785	4.928	1803.000	694.700	3115.000	0.510

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	90.1%	1.027	1.180	1.094	5.471	-0.004	0.002	-0.004	0.024	91.6%
2	09:54:24	89.9%	1.056	1.121	1.200	5.141	-0.003	0.001	0.025	0.023	89.9%
3	09:54:52	89.4%	0.971	1.123	1.087	5.334	0.001	0.002	0.004	0.012	89.8%
x		89.8%	1.018	1.142	1.127	5.315	-0.002	0.001	0.008	0.020	90.4%
s		0.4%	0.043	0.033	0.064	0.166	0.002	0.001	0.015	0.007	1.0%
%RSD		0.4	4.266	2.923	5.656	3.125	115.200	44.950	175.600	33.610	1.1

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:57	0.079	0.141	0.225	0.235	52.370	50.720	95.5%	0.001	0.000	0.143
2	09:54:24	0.139	0.184	0.229	0.225	53.500	51.560	95.4%	0.004	-0.004	0.154
3	09:54:52	0.121	0.148	0.249	0.212	52.500	51.650	95.6%	0.005	-0.001	0.156
x		0.113	0.158	0.234	0.224	52.790	51.310	95.5%	0.003	-0.002	0.151
s		0.031	0.023	0.013	0.011	0.619	0.511	0.1%	0.002	0.002	0.007
%RSD		27.390	14.680	5.607	5.093	1.173	0.997	0.1	73.140	132.600	4.531

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	09:53:57	0.164	0.169	102.3%
2	09:54:24	0.152	0.157	101.6%
3	09:54:52	0.172	0.166	102.6%
x		0.163	0.164	102.1%
s		0.010	0.006	0.5%
%RSD		6.118	3.774	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	88.5%	-0.025	28.490	26.130	-28.830	T 35130.000	T 14890.000	T 14810.000	T 16040.000	75.240
2	10:00:17	87.9%	-0.034	24.370	25.110	-26.290	T 35090.000	T 14960.000	T 14800.000	T 16160.000	75.350
3	10:00:44	87.5%	-0.007	24.660	25.000	-32.040	T 35180.000	T 15150.000	T 14990.000	T 16100.000	75.220
x		88.0%	-0.022	25.840	25.420	-29.050	T 35130.000	T 15000.000	T 14870.000	T 16100.000	75.270
s		0.5%	0.014	2.299	0.623	2.881	T 46.120	T 134.200	T 110.600	T 62.030	0.071
%RSD		0.6	62.180	8.900	2.453	9.918	T 0.131	T 0.895	T 0.744	T 0.385	0.094
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	T 3104.000	T 49570.000	T 1762.000	87670.000	T 85950.000	83.7%	1.804	0.116	0.455	8444.000
2	10:00:17	T 3138.000	T 49010.000	T 1762.000	88000.000	T 86510.000	83.3%	1.580	0.265	0.506	8531.000
3	10:00:44	T 3119.000	T 49280.000	T 1775.000	89140.000	T 88180.000	83.0%	1.886	0.002	0.457	9056.000
x		T 3120.000	T 49290.000	T 1766.000	88270.000	T 86880.000	83.3%	1.757	0.128	0.473	8677.000
s		T 17.080	T 280.400	T 7.871	771.000	T 1160.000	0.3%	0.159	0.132	0.029	331.400
%RSD		T 0.548	T 0.569	T 0.446	0.873	T 1.335	0.4	9.026	102.900	6.067	3.819
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	195.800	38.530	215.000	314.800	0.250	1.619	7.925	0.830	0.685	1.631
2	10:00:17	199.700	38.920	213.700	321.900	0.263	1.553	7.942	0.831	0.750	1.641
3	10:00:44	198.000	38.950	214.500	315.600	0.211	1.439	8.104	0.818	0.721	1.467
x		197.900	38.800	214.400	317.400	0.242	1.537	7.991	0.826	0.718	1.579
s		1.966	0.233	0.689	3.919	0.027	0.091	0.099	0.007	0.032	0.098
%RSD		0.994	0.601	0.322	1.235	11.170	5.924	1.233	0.866	4.499	6.201
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	5.144	3.237	1.161	0.063	40.830	40.850	2.219	0.684	-1.692	T 458.100
2	10:00:17	4.050	3.474	1.031	0.314	42.800	44.010	4.116	1.408	-4.286	T 461.800
3	10:00:44	4.752	3.649	1.376	-0.255	41.710	40.050	3.554	0.928	-1.423	T 464.800
x		4.649	3.453	1.189	0.041	41.780	41.640	3.297	1.007	-2.467	T 461.600
s		0.554	0.206	0.174	0.285	0.989	2.095	0.975	0.368	1.581	T 3.376
%RSD		11.920	5.981	14.670	700.100	2.368	5.032	29.570	36.600	64.080	T 0.731
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	88.1%	0.831	0.688	0.835	10.130	0.001	0.003	0.018	0.002	88.5%
2	10:00:17	87.7%	0.863	0.745	0.793	7.818	0.009	0.011	0.010	0.009	89.1%
3	10:00:44	88.1%	0.857	0.753	0.800	8.843	0.011	0.015	0.002	0.013	88.8%
x		88.0%	0.850	0.729	0.810	8.929	0.007	0.010	0.010	0.008	88.8%
s		0.2%	0.017	0.036	0.022	1.156	0.005	0.006	0.008	0.005	0.3%
%RSD		0.3	1.999	4.898	2.775	12.940	79.750	63.310	84.660	65.570	0.3
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:50	0.047	0.063	0.137	0.146	92.240	92.040	93.1%	0.010	0.001	0.230
2	10:00:17	0.043	0.071	0.138	0.120	93.140	91.370	93.5%	0.002	0.006	0.242
3	10:00:44	0.055	0.072	0.124	0.143	93.560	92.900	94.0%	-0.001	0.001	0.212
x		0.048	0.069	0.133	0.136	92.980	92.100	93.5%	0.004	0.003	0.228
s		0.006	0.005	0.008	0.014	0.670	0.764	0.4%	0.005	0.002	0.015
%RSD		13.080	6.760	5.827	10.470	0.721	0.830	0.5	140.700	89.370	6.530
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	09:59:50	0.194	0.222	99.0%							
2	10:00:17	0.191	0.222	100.4%							
3	10:00:44	0.197	0.220	100.0%							
x		0.194	0.221	99.8%							
s		0.003	0.001	0.7%							
%RSD		1.424	0.614	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	88.5%	0.010	15.870	15.920	-13.990	┬23040.000	┬10250.000	┬10340.000	┬10850.000	┬288.200
2	10:06:09	88.0%	-0.007	16.680	15.600	-14.020	┬23330.000	┬10260.000	┬10290.000	┬11030.000	┬292.900
3	10:06:37	86.0%	-0.016	14.500	15.620	-14.860	┬23440.000	┬10240.000	┬10140.000	┬10870.000	┬282.500
x		87.5%	-0.004	15.690	15.710	-14.290	┬23270.000	┬10250.000	┬10260.000	┬10920.000	┬287.900
s		1.3%	0.013	1.101	0.177	0.493	┬205.100	┬6.869	┬105.200	┬97.750	┬5.210
%RSD		1.5	317.900	7.019	1.128	3.448	┬0.881	┬0.067	┬1.026	┬0.895	┬1.810

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	┬2772.000	┬48390.000	┬2311.000	82420.000	┬81240.000	82.8%	┬2.267	0.700	0.721	7644.000
2	10:06:09	┬2765.000	┬48030.000	┬2270.000	82620.000	┬81750.000	81.6%	4.814	0.439	0.759	7516.000
3	10:06:37	┬2829.000	┬48400.000	┬2322.000	84200.000	┬82840.000	81.0%	5.954	0.656	0.667	7387.000
x		┬2789.000	┬48280.000	┬2301.000	83080.000	┬81940.000	81.8%	┬4.345	0.598	0.716	7516.000
s		┬35.450	┬213.300	┬27.550	975.800	┬816.600	0.9%	┬1.888	0.140	0.046	128.500
%RSD		┬1.271	┬0.442	┬1.197	1.174	┬0.997	1.1	┬43.450	23.380	6.455	1.710

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	319.100	91.000	344.500	432.300	0.295	1.900	7.533	1.395	1.200	4.270
2	10:06:09	314.800	91.790	340.900	429.300	0.347	1.920	7.264	1.399	1.241	4.457
3	10:06:37	317.400	91.710	345.000	444.400	0.329	1.893	8.646	1.355	0.949	4.221
x		317.100	91.500	343.400	435.300	0.324	1.904	7.814	1.383	1.130	4.316
s		2.150	0.438	2.239	7.987	0.026	0.014	0.733	0.024	0.158	0.125
%RSD		0.678	0.479	0.652	1.835	8.140	0.732	9.378	1.755	13.960	2.887

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	7.821	6.625	0.513	-0.129	40.390	43.310	2.054	0.326	0.759	┬402.000
2	10:06:09	6.896	6.882	0.298	-0.269	41.950	43.310	2.376	0.560	-0.517	┬406.300
3	10:06:37	7.925	7.563	0.129	-0.661	41.370	40.740	1.122	0.307	-0.695	┬411.400
x		7.547	7.024	0.313	-0.353	41.240	42.450	1.851	0.398	-0.151	┬406.500
s		0.566	0.485	0.193	0.276	0.790	1.482	0.651	0.141	0.793	┬4.691
%RSD		7.503	6.903	61.460	78.250	1.916	3.491	35.180	35.480	524.600	┬1.154

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	87.1%	0.714	0.657	0.562	6.568	-0.003	0.003	0.003	0.020	87.8%
2	10:06:09	86.7%	0.712	0.640	0.656	7.055	0.001	0.011	0.007	0.011	87.3%
3	10:06:37	85.6%	0.638	0.682	0.700	8.371	-0.000	0.004	-0.002	0.010	87.4%
x		86.5%	0.688	0.660	0.639	7.331	-0.001	0.006	0.002	0.014	87.5%
s		0.8%	0.043	0.021	0.071	0.933	0.002	0.004	0.004	0.006	0.3%
%RSD		0.9	6.285	3.182	11.050	12.720	222.100	71.320	190.900	41.470	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:05:41	0.050	0.078	0.122	0.141	127.700	126.000	91.8%	0.005	0.004	0.212
2	10:06:09	0.058	0.087	0.133	0.131	129.900	125.900	91.9%	0.000	0.003	0.262
3	10:06:37	0.067	0.059	0.127	0.126	129.600	127.200	91.9%	0.007	0.000	0.218
x		0.058	0.075	0.127	0.133	129.100	126.400	91.9%	0.004	0.002	0.231
s		0.008	0.014	0.005	0.008	1.224	0.730	0.0%	0.003	0.002	0.027
%RSD		14.540	18.920	4.164	5.863	0.949	0.578	0.1	84.400	88.110	11.900

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:05:41	0.218	0.236	98.1%
2	10:06:09	0.209	0.250	98.8%
3	10:06:37	0.225	0.242	98.2%
x		0.218	0.243	98.4%
s		0.008	0.007	0.4%
%RSD		3.562	2.974	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	87.1%	-0.016	26.180	25.890	-21.370	T41550.000	T15700.000	T15750.000	T17050.000	124.600
2	10:12:01	87.4%	-0.016	26.590	26.830	-24.170	T41620.000	T15680.000	T15520.000	T16910.000	T121.400
3	10:12:28	83.9%	-0.006	27.460	27.730	-18.360	T41560.000	T16000.000	T15810.000	T17110.000	123.200
x		86.1%	-0.013	26.740	26.810	-21.300	T41580.000	T15790.000	T15690.000	T17020.000	T123.100
s		1.9%	0.006	0.652	0.919	2.904	T38.720	T180.400	T152.800	T102.000	T1.625
%RSD		2.2	46.040	2.437	3.429	13.630	T0.093	T1.143	T0.974	T0.599	T1.320

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	T3179.000	T46560.000	T1653.000	77380.000	T75930.000	81.6%	2.614	0.154	0.650	8524.000
2	10:12:01	T3133.000	T46530.000	1825.000	77610.000	T76270.000	80.9%	2.535	0.423	0.636	8353.000
3	10:12:28	T3208.000	T46630.000	1776.000	76680.000	T75640.000	80.4%	2.326	0.056	0.628	8530.000
x		T3173.000	T46570.000	T1751.000	77220.000	T75950.000	81.0%	2.492	0.211	0.638	8469.000
s		T37.550	T47.890	T88.880	485.000	T315.200	0.6%	0.149	0.190	0.011	100.700
%RSD		T1.183	T0.103	T5.075	0.628	T0.415	0.7	5.977	90.170	1.780	1.189

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	327.600	89.120	356.100	433.500	0.297	1.710	7.871	0.978	0.966	1.973
2	10:12:01	331.900	90.880	360.600	433.100	0.287	1.756	7.941	1.018	0.776	1.926
3	10:12:28	335.600	90.530	354.500	439.000	0.326	1.646	7.473	1.022	0.717	1.974
x		331.700	90.180	357.100	435.200	0.303	1.704	7.762	1.006	0.820	1.957
s		3.988	0.934	3.197	3.288	0.020	0.055	0.252	0.024	0.130	0.028
%RSD		1.202	1.036	0.895	0.756	6.577	3.251	3.249	2.419	15.870	1.406

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	4.657	3.509	1.559	0.134	50.490	47.490	5.861	1.360	-0.895	T447.600
2	10:12:01	4.543	3.301	1.418	0.358	48.480	49.550	3.124	0.830	-1.433	T449.200
3	10:12:28	3.884	3.370	1.216	0.727	47.420	49.570	0.933	-0.021	1.561	T454.600
x		4.361	3.393	1.398	0.407	48.790	48.870	3.306	0.723	-0.256	T450.500
s		0.418	0.106	0.173	0.300	1.560	1.194	2.469	0.697	1.596	T3.687
%RSD		9.576	3.122	12.350	73.680	3.197	2.442	74.680	96.310	624.200	T0.818

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	84.6%	0.830	0.908	0.969	8.483	-0.000	0.001	-0.003	0.005	85.2%
2	10:12:01	84.7%	0.864	0.849	0.883	8.523	-0.003	-0.001	-0.003	0.006	86.0%
3	10:12:28	84.7%	0.798	1.133	0.833	7.021	-0.005	0.003	0.002	0.008	85.9%
x		84.6%	0.831	0.963	0.895	8.009	-0.003	0.001	-0.001	0.006	85.7%
s		0.0%	0.033	0.150	0.069	0.856	0.003	0.002	0.003	0.001	0.4%
%RSD		0.0	3.995	15.590	7.672	10.680	91.040	279.500	186.700	19.980	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:34	0.064	0.091	0.113	0.091	75.780	74.260	89.8%	-0.003	-0.000	0.341
2	10:12:01	0.038	0.080	0.133	0.120	75.730	74.470	90.3%	0.001	-0.002	0.377
3	10:12:28	0.041	0.073	0.168	0.129	74.600	74.270	90.5%	0.002	-0.003	0.328
x		0.048	0.081	0.138	0.113	75.370	74.340	90.2%	0.000	-0.002	0.349
s		0.015	0.009	0.028	0.020	0.670	0.121	0.4%	0.003	0.001	0.025
%RSD		30.350	11.460	20.070	17.700	0.889	0.163	0.4	1388.000	80.590	7.277

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:11:34	0.318	0.347	96.3%
2	10:12:01	0.345	0.360	96.8%
3	10:12:28	0.381	0.366	96.2%
x		0.348	0.358	96.4%
s		0.031	0.009	0.3%
%RSD		8.960	2.604	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	82.8%	96.360	110.500	108.200	-23.080	T 43030.000	T 16580.000	T 16590.000	T 18230.000	288.900
2	10:17:54	83.6%	95.660	110.100	109.900	-21.120	T 42980.000	T 16810.000	T 16850.000	T 18320.000	295.200
3	10:18:21	83.3%	96.480	106.600	109.500	-21.040	T 43480.000	T 16820.000	T 16970.000	T 18600.000	292.600
x		83.2%	96.170	109.100	109.200	-21.740	T 43170.000	T 16740.000	T 16800.000	T 18380.000	292.200
s		0.4%	0.446	2.170	0.900	1.155	T 276.000	T 136.900	T 190.300	T 193.900	3.145
%RSD		0.5	0.464	1.990	0.824	5.313	T 0.639	T 0.818	T 1.133	T 1.055	1.076

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	T 4111.000	T 46240.000	T 2559.000	79360.000	T 78250.000	77.8%	102.000	98.020	95.910	8965.000
2	10:17:54	T 4078.000	T 45920.000	T 2535.000	79180.000	T 78630.000	77.6%	104.800	98.250	94.530	8561.000
3	10:18:21	T 4032.000	T 45870.000	T 2534.000	79680.000	T 79160.000	76.7%	104.100	98.880	97.070	8089.000
x		T 4074.000	T 46010.000	T 2543.000	79410.000	T 78680.000	77.4%	103.600	98.380	95.840	8539.000
s		T 39.260	T 203.000	T 14.150	251.600	T 454.600	0.6%	1.475	0.443	1.270	438.400
%RSD		T 0.964	T 0.441	T 0.556	0.317	T 0.578	0.8	1.423	0.450	1.325	5.134

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	1472.000	194.200	T 1334.000	1524.000	95.820	94.500	101.600	93.170	95.580	93.540
2	10:17:54	1452.000	193.900	T 1344.000	1515.000	94.330	96.610	101.600	92.610	96.020	94.330
3	10:18:21	1470.000	197.100	T 1363.000	1539.000	95.060	94.330	101.800	93.120	95.950	93.600
x		1465.000	195.100	T 1347.000	1526.000	95.070	95.150	101.700	92.970	95.850	93.820
s		10.910	1.768	T 14.690	11.900	0.742	1.270	0.118	0.309	0.237	0.441
%RSD		0.745	0.907	T 1.090	0.780	0.780	1.335	0.116	0.332	0.248	0.470

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	98.060	98.500	99.860	97.200	46.670	47.020	455.600	97.200	-3.449	TM 549.000
2	10:17:54	100.100	96.540	97.850	96.240	47.330	47.030	435.300	92.590	0.237	TM 554.000
3	10:18:21	101.400	97.670	100.600	98.580	47.570	46.540	440.900	93.980	-0.886	TM 556.600
x		99.870	97.570	99.450	97.340	47.190	46.860	443.900	94.590	-1.366	TM 553.200
s		1.702	0.983	1.433	1.175	0.470	0.280	10.460	2.363	1.889	TM 3.819
%RSD		1.704	1.007	1.441	1.207	0.996	0.598	2.357	2.499	138.300	TM 0.690

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	82.0%	98.440	100.500	98.790	103.700	92.050	93.340	96.430	95.690	83.1%
2	10:17:54	81.6%	99.390	101.000	100.100	107.500	93.780	94.120	97.550	97.110	82.6%
3	10:18:21	81.7%	101.400	100.700	100.200	106.800	94.280	93.880	98.120	97.580	82.5%
x		81.7%	99.750	100.700	99.680	106.000	93.370	93.780	97.360	96.790	82.7%
s		0.2%	1.525	0.277	0.770	2.005	1.174	0.400	0.861	0.987	0.3%
%RSD		0.2	1.529	0.275	0.773	1.891	1.257	0.426	0.884	1.020	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:26	98.300	98.920	100.300	95.890	174.600	172.300	88.0%	98.320	104.300	98.840
2	10:17:54	99.550	98.200	99.810	96.440	176.800	172.100	88.1%	98.970	105.500	99.570
3	10:18:21	99.710	99.360	100.400	96.750	180.200	171.000	88.5%	98.810	105.400	98.640
x		99.190	98.830	100.200	96.360	177.200	171.800	88.2%	98.700	105.000	99.020
s		0.771	0.585	0.313	0.437	2.792	0.695	0.3%	0.337	0.649	0.491
%RSD		0.777	0.592	0.312	0.454	1.576	0.404	0.3	0.341	0.618	0.496

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:17:26	97.610	102.200	93.5%
2	10:17:54	99.060	102.700	93.8%
3	10:18:21	98.430	102.100	93.6%
x		98.370	102.300	93.6%
s		0.727	0.301	0.1%
%RSD		0.739	0.294	0.1

VD15032-010SD 4/24/2020 10:22:53

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	84.3%	96.220	109.400	108.400	-22.240	T 43580.000	T 16640.000	T 16640.000	T 18230.000	287.200
2	10:23:47	81.2%	101.000	108.300	109.500	-14.560	T 43250.000	T 16670.000	T 16680.000	T 18520.000	T 270.900
3	10:24:14	82.6%	98.590	109.100	110.600	-20.690	T 43580.000	T 16860.000	T 16740.000	T 18470.000	289.400
x		82.7%	98.610	108.900	109.500	-19.160	T 43470.000	T 16720.000	T 16690.000	T 18410.000	T 282.500
s		1.6%	2.401	0.570	1.127	4.059	T 189.400	T 118.800	T 52.540	T 150.400	T 10.110
%RSD		1.9	2.434	0.523	1.029	21.180	T 0.436	T 0.711	T 0.315	T 0.817	T 3.579

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	T 4009.000	T 43350.000	T 2564.000	80310.000	T 78350.000	77.3%	104.000	100.800	98.150	8239.000
2	10:23:47	T 4208.000	T 44380.000	T 2592.000	79890.000	T 77310.000	77.3%	105.300	99.070	96.850	8426.000
3	10:24:14	T 4037.000	T 42910.000	T 2497.000	78730.000	T 79510.000	76.8%	103.000	97.850	96.980	8845.000
x		T 4085.000	T 43550.000	T 2551.000	79650.000	T 78390.000	77.1%	104.100	99.250	97.330	8503.000
s		T 107.900	T 755.700	T 48.850	818.600	T 1102.000	0.3%	1.188	1.498	0.715	310.400
%RSD		T 2.641	T 1.735	T 1.915	1.028	T 1.406	0.4	1.141	1.509	0.735	3.650

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	1470.000	194.900	T 1361.000	1542.000	96.720	97.880	105.300	94.000	96.110	95.480
2	10:23:47	1480.000	198.200	T 1368.000	1549.000	97.050	97.470	103.600	94.370	96.700	96.520
3	10:24:14	1486.000	196.800	T 1355.000	1536.000	95.960	95.870	105.200	93.910	95.660	95.750
x		1479.000	196.600	T 1362.000	1543.000	96.580	97.070	104.700	94.090	96.150	95.920
s		8.102	1.663	T 6.348	6.074	0.562	1.059	0.963	0.243	0.523	0.540
%RSD		0.548	0.846	T 0.466	0.394	0.582	1.091	0.920	0.258	0.544	0.563

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	99.310	97.850	101.200	93.660	49.470	51.080	482.600	103.800	-2.054	TM 544.900
2	10:23:47	97.400	98.320	99.930	98.180	51.400	50.290	434.800	92.490	0.524	TM 554.600
3	10:24:14	99.490	98.700	100.500	98.550	49.090	49.180	452.000	95.700	2.014	TM 557.800
x		98.730	98.290	100.600	96.800	49.980	50.180	456.500	97.320	0.161	TM 552.400
s		1.156	0.426	0.661	2.722	1.237	0.954	24.220	5.810	2.058	TM 6.735
%RSD		1.171	0.434	0.657	2.812	2.476	1.902	5.306	5.971	1276.000	TM 1.219

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	82.2%	100.500	102.500	99.930	109.100	93.400	93.310	97.010	97.860	82.4%
2	10:23:47	81.6%	100.800	101.000	100.400	106.100	94.540	94.090	98.330	96.740	82.5%
3	10:24:14	80.9%	100.700	103.000	101.800	107.000	94.120	94.680	99.220	97.900	82.1%
x		81.6%	100.600	102.200	100.700	107.400	94.020	94.030	98.190	97.500	82.3%
s		0.6%	0.181	1.005	0.989	1.497	0.578	0.686	1.110	0.659	0.2%
%RSD		0.8	0.180	0.984	0.982	1.394	0.615	0.729	1.131	0.676	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	98.470	99.040	100.100	97.230	177.400	170.600	87.5%	99.370	105.200	98.330
2	10:23:47	99.030	99.350	100.000	97.890	176.200	173.600	87.1%	99.610	106.600	100.300
3	10:24:14	101.300	99.910	100.400	96.710	177.500	173.100	88.0%	99.620	105.300	99.300
x		99.610	99.430	100.200	97.280	177.000	172.400	87.5%	99.530	105.700	99.290
s		1.510	0.439	0.186	0.590	0.738	1.561	0.4%	0.143	0.796	0.963
%RSD		1.516	0.441	0.186	0.606	0.417	0.905	0.5	0.144	0.753	0.970

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:23:20	98.380	102.200	92.6%
2	10:23:47	100.000	103.500	92.5%
3	10:24:14	99.460	103.100	93.1%
x		99.290	102.900	92.7%
s		0.840	0.680	0.3%
%RSD		0.846	0.661	0.3

VD15032-010L(5) 4/24/2020 10:28:45

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	88.9%	-0.016	7.808	8.334	-12.020	T 8241.000	T 3414.000	3610.000	3644.000	25.260
2	10:29:39	89.2%	-0.008	8.140	7.343	-5.965	T 8204.000	T 3472.000	3690.000	3636.000	T 22.950
3	10:30:06	88.3%	-0.034	6.810	7.518	-11.860	T 8426.000	T 3513.000	3780.000	3824.000	25.780
x		88.8%	-0.019	7.586	7.732	-9.946	T 8290.000	T 3466.000	3693.000	3701.000	T 24.660
s		0.5%	0.014	0.692	0.529	3.448	T 119.000	T 49.330	85.110	106.300	T 1.503
%RSD		0.5	69.730	9.126	6.842	34.670	T 1.436	T 1.423	2.304	2.871	T 6.094

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	706.500	T 10160.000	350.800	15320.000	15520.000	84.2%	0.563	0.147	0.189	1810.000
2	10:29:39	692.400	10190.000	349.400	15410.000	15530.000	84.8%	0.461	-0.023	0.187	1840.000
3	10:30:06	702.100	10450.000	359.000	15640.000	16000.000	83.1%	0.538	-0.064	0.117	1912.000
x		700.300	T 10270.000	353.100	15460.000	15680.000	84.0%	0.521	0.020	0.164	1854.000
s		7.229	T 156.700	5.197	169.500	273.600	0.9%	0.053	0.112	0.041	52.460
%RSD		1.032	T 1.527	1.472	1.097	1.745	1.0	10.180	562.300	25.020	2.829

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	66.190	18.080	77.200	89.920	0.066	0.341	4.292	0.390	0.254	0.370
2	10:29:39	64.100	17.960	76.340	88.140	0.051	0.414	4.467	0.339	0.241	0.163
3	10:30:06	67.230	18.240	79.530	89.170	0.050	0.346	4.030	0.352	0.252	0.254
x		65.840	18.100	77.690	89.080	0.056	0.367	4.263	0.361	0.249	0.262
s		1.590	0.138	1.651	0.892	0.009	0.041	0.220	0.027	0.007	0.104
%RSD		2.414	0.762	2.125	1.002	16.170	11.170	5.156	7.352	2.808	39.620

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	0.361	0.615	0.067	0.600	10.190	10.490	0.732	0.080	0.516	91.240
2	10:29:39	0.931	0.415	0.525	0.129	8.656	10.820	1.541	0.625	-2.391	91.150
3	10:30:06	0.548	0.586	0.119	-0.219	10.260	8.899	-1.680	-0.093	-2.136	93.770
x		0.614	0.539	0.237	0.170	9.702	10.070	0.198	0.204	-1.337	92.050
s		0.290	0.108	0.251	0.411	0.906	1.029	1.676	0.374	1.610	1.485
%RSD		47.320	20.070	105.700	241.700	9.339	10.220	847.900	183.500	120.400	1.614

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	86.6%	0.154	0.200	0.124	0.790	-0.004	0.004	-0.004	0.003	87.5%
2	10:29:39	86.4%	0.145	0.310	0.197	1.253	-0.000	-0.000	-0.000	-0.003	88.0%
3	10:30:06	86.9%	0.077	0.156	0.127	1.630	0.001	-0.001	0.000	0.001	87.7%
x		86.6%	0.125	0.222	0.149	1.224	-0.001	0.001	-0.001	0.001	87.7%
s		0.2%	0.042	0.079	0.042	0.421	0.003	0.003	0.002	0.003	0.2%
%RSD		0.3	33.650	35.630	27.880	34.350	202.600	400.500	160.300	462.000	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:12	0.052	0.056	0.055	0.011	14.780	14.660	90.5%	0.021	0.015	0.063
2	10:29:39	0.037	0.062	0.032	0.033	13.920	15.220	90.6%	0.018	0.017	0.078
3	10:30:06	0.048	0.049	0.030	0.041	15.710	15.470	91.3%	0.016	0.009	0.061
x		0.046	0.056	0.039	0.028	14.800	15.120	90.8%	0.018	0.014	0.067
s		0.008	0.007	0.014	0.016	0.896	0.415	0.4%	0.002	0.004	0.009
%RSD		16.720	12.210	34.760	56.170	6.053	2.745	0.5	13.670	29.260	13.920

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:29:12	0.071	0.071	99.0%
2	10:29:39	0.079	0.076	98.9%
3	10:30:06	0.087	0.076	99.5%
x		0.079	0.074	99.1%
s		0.008	0.003	0.3%
%RSD		9.934	4.235	0.3

CCV MW12620 4/24/2020 10:34:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	83.7%	291.300	283.300	283.800	4.998	T 61520.000	T 59360.000	T 59220.000	T 58900.000	297.000
2	10:35:33	83.3%	294.500	294.800	297.200	11.450	T 60480.000	T 60090.000	T 60030.000	T 57940.000	293.400
3	10:36:00	82.1%	297.800	305.800	302.200	17.420	T 62110.000	T 61350.000	T 60920.000	T 59750.000	297.800
x		83.0%	98.176%	98.206%	98.132%	11.290	T 102.283%	T 60270.000	T 60050.000	T 98.105%	98.686%
s		0.8%	n/a	n/a	n/a	6.211	T n/a	T 1011.000	T 850.000	T n/a	n/a
%RSD		1.0	1.103	3.818	3.224	55.020	T 1.344	T 1.677	T 1.415	T 1.541	0.796

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	T 2844.000	362.000	T 55330.000	60480.000	T 59960.000	79.9%	300.800	301.800	291.900	2983.000
2	10:35:33	T 2851.000	355.400	T 55030.000	60030.000	T 59360.000	80.6%	299.200	300.700	288.300	3382.000
3	10:36:00	T 2880.000	358.700	T 56290.000	60910.000	T 61450.000	79.1%	299.400	299.900	292.200	3203.000
x		T 2858.000	358.700	T 92.585%	60480.000	T 100.428%	79.9%	99.932%	100.263%	96.934%	3189.000
s		T 19.010	3.287	T n/a	441.400	T n/a	0.7%	n/a	n/a	n/a	199.800
%RSD		T 0.665	0.916	T 1.187	0.730	T 1.789	0.9	0.303	0.311	0.754	6.264

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	T 59910.000	308.900	T 60510.000	T 59640.000	289.400	284.100	285.700	277.800	276.000	285.300
2	10:35:33	T 60210.000	306.800	T 59840.000	T 59310.000	284.400	277.300	282.300	272.900	275.600	289.500
3	10:36:00	T 60830.000	311.100	T 61100.000	T 60520.000	290.400	285.300	288.000	277.600	279.000	283.400
x		T 60320.000	102.984%	T 60490.000	T 99.703%	96.023%	94.072%	285.300	276.100	92.293%	95.357%
s		T 469.200	n/a	T 630.000	T n/a	n/a	n/a	2.876	2.816	n/a	n/a
%RSD		T 0.778	0.703	T 1.042	T 1.049	1.127	1.522	1.008	1.020	0.682	1.087

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	283.700	283.600	292.600	290.400	0.779	0.172	1363.000	295.100	-0.866	307.000
2	10:35:33	277.700	280.900	292.200	281.900	1.056	-0.046	1331.000	292.200	-2.911	305.800
3	10:36:00	276.100	289.200	295.800	282.500	1.259	0.324	1379.000	295.900	-3.441	306.600
x		279.200	284.600	97.846%	284.900	1.031	0.150	1358.000	98.132%	-2.406	102.156%
s		3.991	4.198	n/a	4.757	0.241	0.186	24.160	n/a	1.360	n/a
%RSD		1.430	1.475	0.661	1.669	23.360	123.900	1.779	0.666	56.500	0.186

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	80.9%	302.900	308.800	305.500	286.000	286.000	286.600	293.800	292.400	81.0%
2	10:35:33	81.9%	308.400	309.600	305.000	290.100	287.500	286.900	294.000	292.500	81.0%
3	10:36:00	81.6%	306.800	311.100	305.800	281.000	284.700	283.700	291.100	290.300	82.3%
x		81.5%	102.022%	103.277%	305.400	285.700	95.362%	285.700	293.000	97.246%	81.4%
s		0.5%	n/a	n/a	0.400	4.566	n/a	1.745	1.645	n/a	0.8%
%RSD		0.6	0.927	0.378	0.131	1.598	0.477	0.611	0.562	0.422	0.9

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:07	298.900	296.600	298.200	290.600	295.100	291.900	85.5%	294.100	T 297.300	T 265.500
2	10:35:33	300.200	299.100	298.900	288.500	303.900	292.800	87.0%	297.800	T 294.000	291.200
3	10:36:00	297.200	294.000	299.200	290.300	300.500	293.100	87.1%	297.400	T 293.500	T 267.100
x		99.600%	98.857%	298.700	96.601%	99.941%	97.532%	86.5%	296.400	T 98.308%	T 91.544%
s		n/a	n/a	0.525	n/a	n/a	n/a	0.9%	1.989	T n/a	T n/a
%RSD		0.503	0.859	0.176	0.396	1.481	0.208	1.1	0.671	T 0.696	T 5.243

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:35:07	293.900	302.300	91.0%
2	10:35:33	290.700	304.500	90.5%
3	10:36:00	293.300	302.500	91.3%
x		97.544%	101.036%	90.9%
s		n/a	n/a	0.4%
%RSD		0.573	0.410	0.5

CCB IM9936-01 4/24/2020 10:40:32 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	89.9%	0.010	3.249	2.445	6.307	-42.070	0.773	0.882	0.991	0.021
2	10:41:26	91.1%	-0.017	2.180	2.252	3.512	-43.330	0.628	0.947	0.592	-0.014
3	10:41:52	90.7%	-0.025	1.846	1.743	3.362	-42.470	0.491	0.894	0.363	0.014
x		90.6%	-0.011	2.425	2.147	4.394	-42.620	0.631	0.908	0.649	0.007
s		0.6%	0.018	0.733	0.362	1.659	0.643	0.141	0.035	0.318	0.018
%RSD		0.7	168.900	30.220	16.890	37.750	1.509	22.360	3.826	49.000	257.600

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	0.324	214.200	-14.270	1.264	-0.471	86.5%	-0.012	-0.021	0.001	24.540
2	10:41:26	0.143	206.200	-15.400	-0.250	-0.541	86.6%	-0.012	-0.023	-0.023	18.990
3	10:41:52	0.057	214.600	-16.650	-0.987	-1.218	86.0%	0.004	-0.027	-0.033	23.740
x		0.175	211.700	-15.440	0.009	-0.743	86.4%	-0.007	-0.024	-0.018	22.420
s		0.136	4.727	1.193	1.148	0.413	0.3%	0.009	0.003	0.017	3.000
%RSD		78.010	2.233	7.723	12250.000	55.520	0.4	144.200	13.200	93.660	13.380

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	0.189	0.036	-1.860	1.019	0.001	0.017	1.252	0.024	0.029	-0.164
2	10:41:26	-1.213	0.025	-1.457	1.582	0.013	-0.012	0.753	-0.006	-0.006	-0.110
3	10:41:52	-0.983	0.015	-1.577	2.100	0.011	-0.007	0.975	0.021	0.016	-0.211
x		-0.669	0.025	-1.631	1.567	0.008	-0.000	0.993	0.013	0.013	-0.161
s		0.752	0.011	0.207	0.541	0.006	0.016	0.250	0.017	0.018	0.051
%RSD		112.400	42.800	12.680	34.500	77.060	3471.000	25.180	127.900	134.900	31.390

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	-0.084	-0.093	-0.016	-0.231	-0.459	0.291	-1.748	0.190	-4.302	0.002
2	10:41:26	-0.109	-0.013	0.049	-0.357	-0.105	-0.084	0.986	0.376	-1.344	0.003
3	10:41:52	-0.032	-0.131	0.023	-0.905	-0.477	-0.131	-0.113	0.253	-2.167	0.001
x		-0.075	-0.079	0.019	-0.498	-0.347	0.025	-0.292	0.273	-2.604	0.002
s		0.039	0.060	0.033	0.358	0.210	0.231	1.376	0.095	1.527	0.001
%RSD		52.500	75.950	177.300	72.040	60.440	914.500	471.300	34.760	58.620	49.080

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	87.6%	0.130	0.203	0.257	0.647	-0.001	0.010	0.021	0.008	86.7%
2	10:41:26	86.3%	0.215	0.182	0.263	-0.025	0.010	0.006	0.004	0.008	87.8%
3	10:41:52	86.9%	0.197	0.141	0.219	-0.025	-0.003	0.016	0.004	0.010	87.5%
x		86.9%	0.180	0.175	0.247	0.199	0.002	0.011	0.010	0.009	87.4%
s		0.6%	0.045	0.032	0.024	0.388	0.007	0.005	0.010	0.001	0.6%
%RSD		0.7	24.680	18.130	9.737	195.200	405.200	47.300	103.900	10.260	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:59	0.101	0.138	0.361	0.350	0.003	0.005	89.9%	0.009	0.009	0.008
2	10:41:26	0.097	0.124	0.322	0.390	0.003	-0.002	89.9%	0.007	0.004	0.022
3	10:41:52	0.121	0.140	0.372	0.332	0.003	0.005	90.7%	0.010	0.003	0.012
x		0.106	0.134	0.352	0.357	0.003	0.002	90.2%	0.009	0.005	0.014
s		0.013	0.009	0.027	0.030	0.000	0.004	0.5%	0.001	0.003	0.007
%RSD		11.780	6.461	7.598	8.416	1.651	172.100	0.5	13.060	61.050	50.520

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:40:59	0.026	0.013	98.6%
2	10:41:26	0.021	0.017	98.8%
3	10:41:52	0.013	0.017	99.8%
x		0.020	0.016	99.0%
s		0.006	0.002	0.7%
%RSD		31.760	13.650	0.7

LR MW12519A 4/24/2020 10:46:24 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	78.0%	M 1001.000	M 2010.000	M 1980.000	13.200	TM 120300.000	TM 120900.000	TM 119300.000	TM 115400.000	TM 109500.000
2	10:47:19	78.5%	M 1003.000	M 1908.000	M 1904.000	2.651	TM 121000.000	TM 118200.000	TM 117400.000	TM 116900.000	TM 110000.000
3	10:47:46	77.2%	M 997.600	M 1996.000	M 1971.000	6.757	TM 122100.000	TM 120100.000	TM 120500.000	TM 116600.000	TM 109000.000
x		77.9%	M 100.074%	M 98.569%	M 97.582%	7.536	TM 100.961%	TM 119700.000	TM 119100.000	TM 96.909%	TM 91.256%
s		0.6%	M n/a	M n/a	M n/a	5.317	TM n/a	TM 1356.000	TM 1548.000	TM n/a	TM n/a
%RSD		0.8	M 0.281	M 2.793	M 2.143	70.550	TM 0.745	TM 1.132	TM 1.299	TM 0.673	TM 0.476

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	6.878	170.000	TM 110300.000	M 121000.000	TM 121500.000	77.1%	M 2039.000	TM 1866.000	TM 1836.000	44160.000
2	10:47:19	6.673	159.500	TM 110600.000	M 121400.000	TM 121700.000	76.9%	M 2012.000	TM 1871.000	TM 1839.000	47410.000
3	10:47:46	7.108	167.600	TM 110800.000	M 122600.000	TM 122000.000	76.4%	M 2021.000	TM 1846.000	TM 1843.000	50500.000
x		6.887	165.700	TM 92.154%	M 121600.000	TM 101.437%	76.8%	M 101.187%	TM 93.059%	TM 91.967%	47360.000
s		0.218	5.532	TM n/a	M 835.400	TM n/a	0.4%	M n/a	TM n/a	TM n/a	3170.000
%RSD		3.165	3.339	TM 0.220	M 0.687	TM 0.193	0.5	M 0.676	TM 0.714	TM 0.204	6.693

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	TM 120400.000	TM 1933.000	TM 119400.000	TM 119500.000	TM 1795.000	M 1875.000	M 1830.000	TM 1660.000	M 1841.000	M 1880.000
2	10:47:19	TM 121200.000	TM 1957.000	TM 120500.000	TM 120800.000	TM 1799.000	M 1877.000	M 1827.000	TM 1665.000	M 1851.000	M 1857.000
3	10:47:46	TM 121700.000	TM 1963.000	TM 120000.000	TM 119300.000	TM 1808.000	M 1899.000	M 1833.000	TM 1673.000	M 1865.000	M 1872.000
x		TM 121100.000	TM 97.557%	TM 120000.000	TM 99.900%	TM 90.038%	M 94.181%	M 1830.000	TM 1666.000	M 92.627%	M 93.488%
s		TM 634.300	TM n/a	TM 537.200	TM n/a	TM n/a	M n/a	M 2.560	TM 6.883	M n/a	M n/a
%RSD		TM 0.524	TM 0.823	TM 0.448	TM 0.650	TM 0.374	M 0.691	M 0.140	TM 0.413	M 0.656	M 0.607

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	M 2020.000	M 1991.000	M 1968.000	M 1815.000	2.626	0.351	8515.000	M 1854.000	12.700	TM 2027.000
2	10:47:19	M 2039.000	M 1999.000	M 1922.000	M 1835.000	2.166	0.472	8600.000	M 1844.000	13.940	TM 2030.000
3	10:47:46	M 2052.000	M 2014.000	M 1953.000	M 1834.000	4.104	0.253	8617.000	M 1855.000	8.958	TM 2048.000
x		M 2037.000	M 2001.000	M 97.374%	M 1828.000	2.965	0.359	8577.000	M 92.543%	11.870	TM 101.747%
s		M 16.230	M 11.660	M n/a	M 11.480	1.012	0.109	54.950	M n/a	2.593	TM n/a
%RSD		M 0.797	M 0.583	M 1.215	M 0.628	34.140	30.480	0.641	M 0.306	21.850	TM 0.544

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	78.8%	M 2184.000	M 2159.000	TM 2182.000	M 1910.000	280.700	278.700	M 1968.000	TM 1778.000	78.3%
2	10:47:19	78.6%	M 2131.000	M 2154.000	TM 2200.000	M 1900.000	278.400	277.500	M 1967.000	TM 1784.000	79.2%
3	10:47:46	78.8%	M 2164.000	M 2160.000	TM 2205.000	M 1936.000	278.700	282.100	M 1975.000	TM 1789.000	79.1%
x		78.7%	M 2160.000	M 107.879%	TM 2196.000	M 1915.000	279.300	279.400	M 1970.000	TM 89.181%	78.9%
s		0.1%	M 27.030	M n/a	TM 12.000	M 18.430	1.261	2.368	M 4.413	TM n/a	0.5%
%RSD		0.2	M 1.251	M 0.162	TM 0.547	M 0.963	0.452	0.848	M 0.224	TM 0.306	0.6

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:51	TM 1862.000	TM 1874.000	M 1043.000	M 1004.000	TM 10100.000	TM 9807.000	83.1%	TM 706.000	TM 748.100	TM 1729.000
2	10:47:19	TM 1861.000	TM 1874.000	M 1046.000	M 1013.000	TM 10040.000	TM 9826.000	83.3%	TM 704.400	TM 747.200	TM 1750.000
3	10:47:46	TM 1875.000	TM 1893.000	M 1050.000	M 1009.000	TM 10100.000	TM 9892.000	83.7%	TM 714.600	TM 752.400	TM 1737.000
x		TM 1866.000	TM 94.011%	M 1046.000	M 100.898%	TM 100.798%	TM 9842.000	83.4%	TM 708.400	TM 74.925%	TM 1739.000
s		TM 7.876	TM n/a	M 3.568	M n/a	TM n/a	TM 44.570	0.3%	TM 5.491	TM n/a	TM 10.600
%RSD		TM 0.422	TM 0.589	M 0.341	M 0.430	TM 0.374	TM 0.453	0.4	TM 0.775	TM 0.370	TM 0.610

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:46:51	TM 1723.000	TM 1842.000	84.3%
2	10:47:19	TM 1727.000	TM 1851.000	85.2%
3	10:47:46	TM 1730.000	TM 1848.000	84.8%
x		TM 1727.000	TM 92.349%	84.8%
s		TM 3.469	TM n/a	0.5%
%RSD		TM 0.201	TM 0.264	0.5

VD15032-010A 4/24/2020 10:52:19

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	90.5%	98.210	125.000	122.300	-22.520	T 41900.000	T 16420.000	T 16430.000	T 17960.000	T 209.900
2	10:53:12	89.9%	97.850	129.100	125.300	-15.300	T 41700.000	T 16590.000	T 16500.000	T 17500.000	T 211.000
3	10:53:39	89.7%	98.880	121.200	121.800	-15.030	T 42160.000	T 16500.000	T 16400.000	T 17600.000	225.800
x		90.0%	98.310	125.100	123.100	-17.620	T 41920.000	T 16500.000	T 16450.000	T 17680.000	T 215.600
s		0.4%	0.525	3.950	1.860	4.249	T 227.500	T 88.450	T 50.600	T 239.900	T 8.845
%RSD		0.4	0.534	3.158	1.511	24.120	T 0.543	T 0.536	T 0.308	T 1.357	T 4.103

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	T 4099.000	T 49950.000	T 2689.000	77880.000	T 77480.000	85.6%	106.700	99.620	97.620	5454.000
2	10:53:12	T 4049.000	T 50080.000	T 2666.000	77350.000	T 76270.000	86.7%	104.200	99.270	95.840	5106.000
3	10:53:39	T 4012.000	T 49120.000	T 2615.000	76880.000	T 75360.000	85.7%	105.600	98.950	95.760	6357.000
x		T 4053.000	T 49710.000	T 2657.000	77370.000	T 76370.000	86.0%	105.500	99.280	96.410	5639.000
s		T 43.820	T 521.700	T 37.770	502.300	T 1065.000	0.6%	1.264	0.332	1.047	645.800
%RSD		T 1.081	T 1.049	T 1.422	0.649	T 1.395	0.7	1.198	0.335	1.086	11.450

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	1454.000	194.300	T 1354.000	1516.000	96.240	98.450	98.330	96.650	96.110	97.900
2	10:53:12	1437.000	189.800	T 1316.000	1470.000	93.880	94.810	100.300	94.430	95.010	96.390
3	10:53:39	1442.000	192.300	T 1340.000	1491.000	95.570	95.910	97.110	94.770	94.830	96.710
x		1445.000	192.100	T 1337.000	1492.000	95.230	96.390	98.590	95.280	95.320	97.000
s		8.798	2.228	T 19.160	23.200	1.217	1.865	1.620	1.194	0.693	0.797
%RSD		0.609	1.159	T 1.433	1.555	1.278	1.935	1.643	1.253	0.727	0.822

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	103.100	97.370	103.100	99.500	48.970	47.860	460.600	100.200	-1.483	TM 542.200
2	10:53:12	98.480	98.800	102.000	97.820	49.070	47.040	455.600	98.380	-3.805	TM 542.800
3	10:53:39	97.400	97.720	102.400	97.030	46.370	50.020	444.300	96.280	-1.731	TM 545.200
x		99.670	97.960	102.500	98.120	48.140	48.310	453.500	98.300	-2.340	TM 543.400
s		3.040	0.743	0.555	1.262	1.533	1.536	8.360	1.975	1.275	TM 1.600
%RSD		3.050	0.758	0.542	1.286	3.184	3.180	1.843	2.009	54.510	TM 0.294

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	88.5%	103.200	103.700	101.900	108.600	94.490	94.870	97.570	96.260	88.1%
2	10:53:12	88.1%	102.500	103.700	103.700	105.600	94.280	94.180	98.120	96.390	88.9%
3	10:53:39	88.3%	103.400	104.600	101.500	105.800	95.950	94.840	98.470	96.700	88.3%
x		88.3%	103.000	104.000	102.300	106.700	94.910	94.630	98.060	96.450	88.4%
s		0.2%	0.461	0.512	1.184	1.683	0.906	0.389	0.454	0.222	0.4%
%RSD		0.2	0.448	0.492	1.157	1.578	0.955	0.411	0.463	0.230	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:52:45	103.800	104.400	90.810	88.740	177.500	171.400	92.7%	99.920	104.900	96.960
2	10:53:12	102.300	102.200	90.660	89.070	173.800	172.100	92.7%	99.640	105.600	97.960
3	10:53:39	103.500	102.200	91.650	89.530	176.600	171.500	93.1%	100.500	106.300	97.820
x		103.200	102.900	91.040	89.110	176.000	171.700	92.8%	100.000	105.600	97.580
s		0.814	1.295	0.534	0.398	1.923	0.422	0.2%	0.441	0.701	0.542
%RSD		0.789	1.258	0.587	0.447	1.093	0.246	0.3	0.441	0.664	0.556

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:52:45	96.960	100.800	97.4%
2	10:53:12	98.320	102.100	97.8%
3	10:53:39	98.440	101.600	97.9%
x		97.900	101.500	97.7%
s		0.823	0.614	0.3%
%RSD		0.841	0.605	0.3

VQ51844-001 4/24/2020 10:58:08 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	94.1%	-0.009	5.098	5.485	-20.570	-23.690	0.542	0.750	0.892	1.127
2	10:59:02	92.6%	0.026	5.170	4.917	-15.620	-24.490	0.510	0.889	0.539	1.081
3	10:59:29	92.2%	0.017	5.195	4.838	-18.130	-23.790	0.632	0.259	0.484	1.166
x		93.0%	0.011	5.154	5.080	-18.100	-23.990	0.561	0.633	0.638	1.125
s		1.0%	0.018	0.051	0.353	2.474	0.438	0.064	0.331	0.221	0.043
%RSD		1.1	160.400	0.984	6.943	13.670	1.824	11.340	52.350	34.620	3.807

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	1.970	T 50660.000	-3.037	7.896	3.614	87.7%	0.019	-0.477	0.585	5361.000
2	10:59:02	1.663	T 51630.000	-5.301	7.214	5.954	87.2%	0.083	-0.692	0.558	5621.000
3	10:59:29	1.658	T 51240.000	-5.463	2.728	3.907	87.1%	0.019	-0.499	0.617	5594.000
x		1.764	T 51180.000	-4.600	5.946	4.492	87.3%	0.040	-0.556	0.587	5525.000
s		0.179	T 486.800	1.356	2.807	1.275	0.3%	0.037	0.118	0.029	142.700
%RSD		10.140	T 0.951	29.480	47.220	28.390	0.4	91.000	21.240	5.028	2.583

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	2.254	-0.026	16.460	1.809	-0.002	0.106	5.549	0.297	0.058	4.414
2	10:59:02	2.820	-0.031	15.100	1.370	-0.004	0.087	5.196	0.251	0.131	3.958
3	10:59:29	1.366	-0.026	14.490	0.978	-0.002	0.144	6.285	0.297	0.035	3.786
x		2.147	-0.028	15.350	1.385	-0.003	0.112	5.677	0.282	0.074	4.053
s		0.733	0.003	1.006	0.416	0.001	0.029	0.555	0.026	0.050	0.325
%RSD		34.150	9.384	6.552	30.020	47.400	25.990	9.786	9.381	67.450	8.006

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	4.014	4.166	-0.017	-0.588	7.759	8.190	2.426	0.535	-0.144	0.004
2	10:59:02	4.040	3.789	0.292	-0.251	7.218	9.515	0.429	0.462	-2.886	0.007
3	10:59:29	4.150	4.270	0.431	-0.698	7.322	9.373	3.194	0.930	-1.911	0.006
x		4.068	4.075	0.235	-0.512	7.433	9.026	2.016	0.642	-1.647	0.006
s		0.072	0.253	0.229	0.233	0.287	0.727	1.427	0.252	1.390	0.001
%RSD		1.780	6.209	97.560	45.400	3.864	8.058	70.770	39.160	84.390	21.550

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	90.9%	0.299	0.344	0.305	0.520	0.000	0.001	-0.005	-0.000	91.1%
2	10:59:02	90.4%	0.276	0.347	0.300	-0.016	-0.002	0.005	0.003	-0.003	90.7%
3	10:59:29	91.0%	0.241	0.302	0.265	-0.227	-0.003	0.005	0.003	-0.004	91.2%
x		90.8%	0.272	0.331	0.290	0.093	-0.001	0.003	0.001	-0.002	91.0%
s		0.4%	0.029	0.025	0.022	0.385	0.002	0.002	0.005	0.002	0.3%
%RSD		0.4	10.750	7.517	7.600	416.200	123.400	71.370	812.200	79.640	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:36	1.284	1.826	0.431	0.372	0.009	0.004	93.5%	0.077	0.071	0.015
2	10:59:02	1.370	1.920	0.410	0.442	0.009	0.001	93.7%	0.080	0.070	0.020
3	10:59:29	1.240	1.893	0.433	0.432	0.015	0.008	93.7%	0.051	0.059	0.016
x		1.298	1.880	0.425	0.415	0.011	0.004	93.6%	0.069	0.067	0.017
s		0.066	0.048	0.012	0.038	0.004	0.003	0.1%	0.016	0.007	0.003
%RSD		5.098	2.568	2.931	9.036	33.050	80.660	0.1	22.600	9.777	18.020

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	10:58:36	0.016	0.025	102.6%
2	10:59:02	0.010	0.017	102.8%
3	10:59:29	0.017	0.015	103.4%
x		0.015	0.019	102.9%
s		0.004	0.005	0.4%
%RSD		28.000	26.830	0.4

VQ51844-002 4/24/2020 11:03:58 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	91.9%	95.510	105.100	102.100	-18.750	T 1001.000	1163.000	1064.000	1036.000	97.140
2	11:04:52	88.1%	95.790	110.400	103.400	-9.023	T 983.800	1150.000	1081.000	1044.000	97.500
3	11:05:19	87.7%	95.530	102.300	100.300	-16.680	T 987.700	1139.000	1052.000	1031.000	98.030
x		89.2%	95.609%	105.900	102.000	-14.820	T 99.070%	1151.000	1066.000	103.707%	97.557%
s		2.3%	n/a	4.099	1.563	5.123	T n/a	11.940	14.850	n/a	n/a
%RSD		2.6	0.162	3.870	1.532	34.580	T 0.886	1.037	1.393	0.623	0.462

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	893.700	T 50770.000	1018.000	995.200	1041.000	85.7%	99.570	97.400	97.120	5012.000
2	11:04:52	915.800	T 51150.000	973.400	1049.000	1024.000	84.2%	99.830	95.220	96.920	5465.000
3	11:05:19	906.400	T 50660.000	973.200	1039.000	1027.000	83.4%	97.200	95.750	94.530	5297.000
x		905.300	T 50860.000	98.813%	1028.000	103.079%	84.5%	98.868%	96.123%	96.187%	5258.000
s		11.130	T 253.400	n/a	28.870	n/a	1.2%	n/a	n/a	n/a	228.600
%RSD		1.229	T 0.498	2.601	2.808	0.901	1.4	1.463	1.182	1.499	4.348

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	1115.000	102.300	T 1003.000	1059.000	96.210	96.510	100.900	97.780	97.230	98.840
2	11:04:52	1114.000	101.900	T 999.600	1071.000	95.730	94.730	104.000	96.600	96.350	98.950
3	11:05:19	1114.000	101.800	T 992.900	1049.000	93.970	94.120	100.900	95.640	94.980	97.600
x		1114.000	102.009%	T 998.600	105.967%	95.303%	95.122%	102.000	96.672%	96.188%	98.464%
s		0.371	n/a	T 5.264	n/a	n/a	n/a	1.777	n/a	n/a	n/a
%RSD		0.033	0.285	T 0.527	1.036	1.239	1.304	1.743	1.109	1.179	0.765

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	100.200	98.930	100.500	101.400	7.120	7.498	476.800	101.400	-4.522	100.200
2	11:04:52	100.900	100.200	100.700	100.200	6.914	8.810	495.100	104.900	-3.385	99.780
3	11:05:19	100.600	99.990	97.220	98.420	7.452	7.846	459.100	96.630	-2.500	101.000
x		100.600	99.700	99.482%	100.000	7.162	8.051	477.000	100.984%	-3.469	100.300
s		0.350	0.675	n/a	1.492	0.272	0.679	18.020	n/a	1.014	0.644
%RSD		0.348	0.677	1.975	1.492	3.791	8.440	3.778	4.112	29.220	0.642

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	86.6%	98.220	96.170	97.520	98.560	97.100	96.180	98.320	98.260	88.8%
2	11:04:52	85.1%	96.810	98.000	98.690	104.800	96.280	96.800	99.040	98.600	87.5%
3	11:05:19	83.9%	97.780	97.410	99.010	101.200	96.620	96.460	98.380	99.100	86.8%
x		85.2%	97.600	97.190	98.410	101.500	96.668%	96.480	98.580	98.654%	87.7%
s		1.3%	0.724	0.929	0.783	3.128	n/a	0.310	0.402	n/a	1.0%
%RSD		1.6	0.742	0.956	0.795	3.081	0.429	0.322	0.407	0.433	1.1

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:04:25	99.970	98.770	96.220	93.310	99.900	96.800	94.5%	97.080	106.500	99.920
2	11:04:52	98.460	98.740	97.480	94.640	100.300	97.960	93.1%	96.760	107.600	100.500
3	11:05:19	99.860	99.340	97.650	93.980	100.400	99.110	93.1%	99.040	108.400	101.100
x		99.430	98.951%	97.110	93.978%	100.200	97.955%	93.6%	97.620	107.517%	100.500
s		0.839	n/a	0.782	n/a	0.270	n/a	0.8%	1.235	n/a	0.596
%RSD		0.844	0.344	0.806	0.712	0.269	1.178	0.9	1.265	0.899	0.593

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:04:25	99.890	103.900	103.5%
2	11:04:52	101.500	105.200	103.3%
3	11:05:19	100.900	105.100	102.0%
x		100.700	104.731%	102.9%
s		0.800	n/a	0.8%
%RSD		0.794	0.730	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	79.0%	0.116	61.390	63.490	-24.000	T 57180.000	T 12710.000	T 12900.000	T 14980.000	TM 5164.000
2	11:10:44	80.0%	0.164	57.640	61.770	-30.430	T 56630.000	T 12730.000	T 12870.000	T 15180.000	TM 5254.000
3	11:11:11	80.3%	0.202	61.740	62.570	-25.500	T 57640.000	T 13090.000	T 13000.000	T 15090.000	TM 5226.000
x		79.8%	0.160	60.260	62.610	-26.640	T 57150.000	T 12840.000	T 12920.000	T 15080.000	TM 5215.000
s		0.7%	0.043	2.270	0.863	3.360	T 510.300	T 216.700	T 72.710	T 101.200	TM 46.250
%RSD		0.9	26.880	3.768	1.379	12.610	T 0.893	T 1.687	T 0.563	T 0.671	TM 0.887

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	TM 12590.000	T 47390.000	T 5461.000	67030.000	T 66690.000	78.2%	T 80.730	8.969	10.140	1983.000
2	11:10:44	TM 12500.000	T 47410.000	T 5554.000	67900.000	T 67380.000	77.9%	78.040	8.813	10.270	2047.000
3	11:11:11	TM 12670.000	T 48070.000	T 5585.000	68090.000	T 66890.000	77.8%	75.150	8.716	10.590	1910.000
x		TM 12590.000	T 47620.000	T 5533.000	67670.000	T 66990.000	77.9%	T 77.980	8.833	10.330	1980.000
s		TM 83.180	T 388.100	T 64.230	566.600	T 354.800	0.2%	T 2.791	0.128	0.233	68.910
%RSD		TM 0.661	T 0.815	T 1.161	0.837	T 0.530	0.3	T 3.580	1.449	2.256	3.481

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	T 11260.000	187.400	T 11410.000	12480.000	1.421	4.198	12.500	54.760	56.030	M 1464.000
2	11:10:44	T 11300.000	188.500	T 11460.000	12350.000	1.356	4.021	11.920	54.230	57.170	M 1456.000
3	11:11:11	T 11250.000	189.000	T 11420.000	12420.000	1.369	4.408	12.550	54.150	56.830	M 1452.000
x		T 11270.000	188.300	T 11430.000	12410.000	1.382	4.209	12.320	54.380	56.680	M 1457.000
s		T 25.830	0.811	T 29.510	65.370	0.034	0.194	0.349	0.333	0.582	M 5.830
%RSD		T 0.229	0.431	T 0.258	0.527	2.481	4.604	2.834	0.612	1.027	M 0.400

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	M 1358.000	M 1408.000	6.952	-0.496	108.900	112.800	-1.540	-0.266	-0.617	202.800
2	11:10:44	M 1352.000	M 1401.000	7.241	-0.506	101.400	106.300	1.179	0.786	-3.893	203.500
3	11:11:11	M 1363.000	M 1422.000	7.116	0.154	102.400	104.700	3.662	1.142	-2.532	205.700
x		M 1358.000	M 1410.000	7.103	-0.283	104.200	107.900	1.100	0.554	-2.348	204.000
s		M 5.137	M 10.560	0.145	0.378	4.054	4.276	2.602	0.732	1.646	1.519
%RSD		M 0.378	M 0.749	2.035	133.900	3.889	3.962	236.500	132.100	70.120	0.745

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	85.1%	0.612	0.661	0.591	9.076	1.379	1.438	2.593	2.696	81.3%
2	11:10:44	85.6%	0.634	0.539	0.617	7.407	1.490	1.451	2.479	2.683	82.0%
3	11:11:11	85.4%	0.638	0.630	0.513	7.697	1.426	1.414	2.858	2.618	82.6%
x		85.4%	0.628	0.610	0.574	8.060	1.432	1.434	2.643	2.666	81.9%
s		0.2%	0.014	0.063	0.054	0.892	0.056	0.019	0.195	0.042	0.7%
%RSD		0.3	2.192	10.350	9.398	11.060	3.900	1.322	7.358	1.567	0.8

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:16	8.680	10.890	2.047	1.845	219.800	211.600	88.0%	0.099	0.095	362.400
2	11:10:44	8.642	11.020	1.994	1.725	216.700	211.800	88.9%	0.090	0.099	363.300
3	11:11:11	8.624	10.900	1.883	1.881	223.300	215.600	89.2%	0.100	0.077	366.100
x		8.648	10.930	1.975	1.817	219.900	213.000	88.7%	0.096	0.090	363.900
s		0.029	0.071	0.084	0.082	3.321	2.229	0.6%	0.006	0.012	1.897
%RSD		0.332	0.649	4.238	4.499	1.510	1.046	0.7	6.131	13.110	0.521

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:10:16	349.100	372.600	95.1%
2	11:10:44	347.800	373.200	95.7%
3	11:11:11	347.400	374.100	96.5%
x		348.100	373.300	95.7%
s		0.915	0.777	0.7%
%RSD		0.263	0.208	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	86.0%	0.150	8.911	9.694	-31.930	T 3952.000	T 1769.000	1869.000	2042.000	T 251.700
2	11:16:35	84.1%	0.088	9.432	10.590	-27.500	T 4016.000	T 1796.000	1937.000	2116.000	T 249.500
3	11:17:02	84.8%	0.217	9.565	10.600	-34.600	T 3949.000	T 1792.000	1924.000	2102.000	T 250.300
x		85.0%	0.152	9.303	10.300	-31.340	T 3972.000	T 1786.000	1910.000	2086.000	T 250.500
s		1.0%	0.065	0.346	0.521	3.588	T 37.640	T 14.380	36.230	39.240	T 1.098
%RSD		1.2	42.680	3.716	5.057	11.450	T 0.948	T 0.805	1.897	1.881	T 0.438

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	T 3616.000	T 47740.000	1314.000	2887.000	2828.000	81.9%	3.042	-0.032	0.887	5924.000
2	11:16:35	T 3689.000	T 49640.000	1334.000	2894.000	2838.000	79.9%	2.722	-0.454	0.882	6630.000
3	11:17:02	T 3719.000	T 49090.000	1299.000	2765.000	2838.000	81.4%	5.997	-0.482	0.908	6762.000
x		T 3675.000	T 48820.000	1316.000	2849.000	2835.000	81.1%	3.920	-0.323	0.893	6439.000
s		T 52.690	T 979.700	17.730	72.560	5.749	1.0%	1.806	0.252	0.014	450.800
%RSD		T 1.434	T 2.006	1.347	2.547	0.203	1.3	46.060	78.190	1.566	7.001

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	187.500	49.040	190.000	185.300	0.949	1.450	7.970	1.474	1.167	6.237
2	11:16:35	194.400	50.480	194.800	196.800	0.960	1.527	7.486	1.406	1.357	6.525
3	11:17:02	185.200	49.210	T 181.300	176.900	0.910	1.547	7.696	1.348	1.228	6.503
x		189.000	49.580	T 188.700	186.300	0.940	1.508	7.717	1.409	1.251	6.422
s		4.804	0.790	T 6.799	9.982	0.026	0.051	0.243	0.063	0.097	0.160
%RSD		2.542	1.593	T 3.603	5.357	2.749	3.405	3.150	4.466	7.749	2.496

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	8.832	8.233	-0.134	-0.289	14.150	15.600	0.562	0.138	-0.174	16.410
2	11:16:35	8.386	7.831	-0.331	-0.032	13.450	13.500	1.181	0.293	-0.370	16.700
3	11:17:02	8.843	7.947	-0.045	-0.303	12.410	14.360	0.035	0.468	-3.650	16.490
x		8.687	8.003	-0.170	-0.208	13.340	14.490	0.593	0.300	-1.398	16.530
s		0.261	0.207	0.147	0.153	0.879	1.056	0.574	0.165	1.953	0.153
%RSD		3.004	2.584	86.240	73.440	6.593	7.291	96.760	55.030	139.700	0.928

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	85.7%	-0.001	0.045	-0.012	-0.676	-0.002	0.009	0.133	0.168	85.3%
2	11:16:35	85.1%	-0.034	0.056	0.030	-0.015	-0.003	0.005	0.169	0.149	85.1%
3	11:17:02	85.5%	0.044	-0.002	0.001	0.142	-0.002	0.002	0.158	0.163	86.5%
x		85.4%	0.003	0.033	0.006	-0.183	-0.003	0.005	0.153	0.160	85.6%
s		0.3%	0.039	0.031	0.021	0.434	0.001	0.003	0.018	0.009	0.7%
%RSD		0.4	1264.000	92.320	331.200	237.200	22.550	64.210	11.890	5.936	0.8

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:08	0.365	0.516	0.208	0.119	75.270	71.660	90.6%	0.029	0.039	0.392
2	11:16:35	0.400	0.535	0.151	0.142	73.250	72.680	91.0%	0.024	0.034	0.387
3	11:17:02	0.390	0.490	0.174	0.152	74.260	73.330	90.9%	0.033	0.047	0.348
x		0.385	0.514	0.177	0.138	74.260	72.560	90.9%	0.029	0.040	0.376
s		0.018	0.022	0.029	0.017	1.007	0.842	0.2%	0.004	0.007	0.024
%RSD		4.696	4.364	16.170	12.130	1.356	1.160	0.2	15.480	16.370	6.425

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:16:08	0.375	0.396	100.2%
2	11:16:35	0.352	0.360	100.5%
3	11:17:02	0.334	0.354	101.7%
x		0.354	0.370	100.8%
s		0.021	0.022	0.8%
%RSD		5.837	6.082	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	86.6%	0.039	6.222	6.026	-9.162	┬6548.000	┬12980.000	┬12910.000	┬12670.000	┬36.030
2	11:22:27	86.5%	0.057	5.578	5.818	-15.510	┬6420.000	┬12990.000	┬13060.000	┬12690.000	41.320
3	11:22:54	84.2%	0.022	6.135	6.357	-13.650	┬6613.000	┬13190.000	┬12950.000	┬12540.000	38.470
x		85.8%	0.039	5.978	6.067	-12.770	┬6527.000	┬13050.000	┬12970.000	┬12640.000	┬38.610
s		1.4%	0.018	0.349	0.272	3.263	┬98.340	┬116.700	┬74.660	┬81.200	┬2.648
%RSD		1.6	44.530	5.841	4.486	25.540	┬1.507	┬0.894	┬0.576	┬0.643	┬6.860

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	┬3769.000	┬50680.000	┬1672.000	29460.000	┬29170.000	81.5%	1.126	-0.271	1.028	7407.000
2	11:22:27	┬3722.000	┬50240.000	1833.000	29710.000	┬29200.000	80.5%	0.900	-0.393	1.010	8265.000
3	11:22:54	┬3723.000	┬50500.000	1844.000	30340.000	┬29450.000	79.0%	1.478	-0.855	1.035	9108.000
x		┬3738.000	┬50480.000	┬1783.000	29840.000	┬29270.000	80.3%	1.168	-0.506	1.025	8260.000
s		┬26.680	┬218.500	┬96.380	457.300	┬155.200	1.3%	0.291	0.308	0.013	850.600
%RSD		┬0.714	┬0.433	┬5.407	1.532	┬0.530	1.6	24.940	60.870	1.262	10.300

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	54.930	15.250	63.130	89.270	0.095	0.756	5.533	2.619	2.365	8.545
2	11:22:27	52.780	15.330	60.660	84.550	0.118	0.730	5.965	2.588	2.716	8.212
3	11:22:54	54.700	15.850	61.950	87.100	0.110	0.818	7.731	2.641	2.964	8.258
x		54.130	15.480	61.920	86.980	0.108	0.768	6.410	2.616	2.682	8.338
s		1.182	0.326	1.234	2.361	0.012	0.045	1.165	0.027	0.301	0.180
%RSD		2.183	2.104	1.992	2.715	10.750	5.827	18.170	1.019	11.220	2.161

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	9.139	8.758	-0.336	1.099	13.170	13.270	4.571	1.199	-1.820	63.340
2	11:22:27	9.788	8.608	-0.136	-0.229	13.530	14.060	2.750	1.187	-4.729	63.580
3	11:22:54	9.007	8.566	0.268	1.000	12.940	12.290	4.708	1.183	-1.477	63.370
x		9.311	8.644	-0.068	0.624	13.210	13.210	4.010	1.190	-2.675	63.430
s		0.418	0.101	0.308	0.740	0.295	0.885	1.093	0.008	1.787	0.132
%RSD		4.493	1.168	453.400	118.700	2.230	6.705	27.260	0.679	66.790	0.208

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	86.3%	-0.074	-0.051	-0.081	1.190	-0.003	0.005	0.018	0.031	87.1%
2	11:22:27	85.8%	-0.060	-0.034	-0.078	0.464	-0.002	0.002	0.018	0.012	86.5%
3	11:22:54	85.6%	-0.036	-0.050	-0.038	0.845	-0.007	-0.001	0.010	0.026	86.0%
x		85.9%	-0.057	-0.045	-0.066	0.833	-0.004	0.002	0.015	0.023	86.5%
s		0.4%	0.020	0.009	0.024	0.363	0.002	0.003	0.005	0.010	0.5%
%RSD		0.4	34.340	21.100	36.230	43.590	53.600	177.100	32.870	43.830	0.6

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:00	0.257	0.314	0.079	0.073	18.920	18.780	92.1%	0.016	0.008	0.214
2	11:22:27	0.247	0.433	0.100	0.083	18.880	19.070	91.7%	0.007	0.012	0.205
3	11:22:54	0.269	0.370	0.090	0.094	19.670	18.870	92.5%	0.005	0.002	0.223
x		0.258	0.372	0.090	0.084	19.160	18.910	92.1%	0.009	0.008	0.214
s		0.011	0.060	0.010	0.011	0.440	0.147	0.4%	0.006	0.005	0.009
%RSD		4.343	16.000	11.410	12.610	2.297	0.777	0.5	63.070	65.940	4.222

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:22:00	0.203	0.211	100.0%
2	11:22:27	0.224	0.220	100.3%
3	11:22:54	0.198	0.220	100.5%
x		0.209	0.217	100.3%
s		0.014	0.005	0.2%
%RSD		6.654	2.473	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	83.4%	0.667	3.377	3.896	-83.660	T 12630.000	T 5461.000	T 5569.000	T 8066.000	TM 3298.000
2	11:28:18	82.6%	0.674	4.121	3.736	-87.540	T 12740.000	T 5491.000	6068.000	T 8281.000	TM 3379.000
3	11:28:45	81.9%	0.651	3.387	3.713	-81.570	T 13000.000	T 5555.000	6093.000	T 8183.000	TM 3420.000
x		82.6%	0.664	3.628	3.782	-84.250	T 12790.000	T 5502.000	T 5910.000	T 8176.000	TM 3366.000
s		0.8%	0.012	0.426	0.100	3.032	T 193.300	T 48.240	T 295.900	T 107.700	TM 62.370
%RSD		0.9	1.770	11.760	2.636	3.598	T 1.511	T 0.877	T 5.007	T 1.317	TM 1.853

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	TM 20520.000	T 41070.000	T 2095.000	15910.000	16000.000	78.4%	1.084	-0.950	5.209	12900.000
2	11:28:18	TM 20900.000	T 40880.000	T 2049.000	15590.000	16000.000	77.0%	1.232	-1.631	5.197	12940.000
3	11:28:45	TM 21050.000	T 41840.000	T 2077.000	16160.000	16270.000	75.4%	0.966	-1.346	5.339	13170.000
x		TM 20830.000	T 41260.000	T 2074.000	15890.000	16090.000	76.9%	1.094	-1.309	5.248	13000.000
s		TM 274.300	T 509.200	T 23.060	284.100	155.800	1.5%	0.133	0.342	0.079	143.800
%RSD		TM 1.317	T 1.234	T 1.112	1.788	0.968	2.0	12.170	26.150	1.504	1.106

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	29.130	TM 564.000	25.670	40.300	10.380	12.790	17.930	5.153	5.476	23.930
2	11:28:18	30.470	TM 573.400	25.270	42.430	10.630	13.110	17.780	5.266	5.519	23.400
3	11:28:45	30.930	TM 576.900	25.860	41.480	10.650	13.120	17.220	5.331	5.786	23.350
x		30.180	TM 571.400	25.600	41.400	10.550	13.010	17.640	5.250	5.594	23.560
s		0.935	TM 6.623	0.302	1.066	0.154	0.190	0.371	0.090	0.168	0.318
%RSD		3.098	TM 1.159	1.179	2.575	1.462	1.460	2.102	1.722	3.001	1.351

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	23.360	23.200	-0.088	0.061	12.370	12.440	1.640	0.563	-1.530	32.340
2	11:28:18	25.090	23.760	-0.310	-0.364	12.560	13.210	1.095	0.520	-2.070	31.980
3	11:28:45	22.370	24.240	0.053	0.026	12.950	14.610	2.709	0.908	-2.349	32.310
x		23.610	23.740	-0.115	-0.092	12.630	13.420	1.815	0.664	-1.983	32.210
s		1.379	0.519	0.183	0.236	0.292	1.101	0.821	0.213	0.417	0.199
%RSD		5.842	2.189	159.300	255.400	2.315	8.202	45.250	32.050	21.010	0.617

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	86.5%	-0.098	-0.080	-0.092	0.224	-0.003	0.003	0.113	0.127	84.2%
2	11:28:18	86.9%	-0.101	-0.057	-0.076	0.508	-0.007	0.005	0.154	0.103	83.7%
3	11:28:45	87.4%	-0.101	-0.064	-0.054	-0.085	-0.001	0.004	0.059	0.104	84.2%
x		87.0%	-0.100	-0.067	-0.074	0.216	-0.004	0.004	0.109	0.111	84.0%
s		0.5%	0.002	0.012	0.019	0.296	0.003	0.001	0.048	0.014	0.3%
%RSD		0.5	1.835	17.690	26.190	137.500	75.360	27.100	43.820	12.150	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:51	0.251	0.327	0.088	0.071	39.930	38.500	90.4%	0.124	0.139	2.117
2	11:28:18	0.268	0.323	0.098	0.070	40.360	39.180	90.6%	0.117	0.150	2.110
3	11:28:45	0.251	0.293	0.106	0.105	39.680	38.950	90.4%	0.140	0.134	2.093
x		0.257	0.314	0.097	0.082	39.990	38.880	90.5%	0.127	0.141	2.106
s		0.010	0.019	0.009	0.020	0.344	0.345	0.1%	0.012	0.008	0.013
%RSD		3.763	5.937	9.130	24.180	0.861	0.888	0.1	9.304	5.899	0.594

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:27:51	1.935	2.116	99.8%
2	11:28:18	2.017	2.102	100.2%
3	11:28:45	2.001	2.132	99.5%
x		1.984	2.117	99.8%
s		0.043	0.015	0.4%
%RSD		2.191	0.699	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	82.9%	98.220	46.170	47.150	-81.070	T 13870.000	T 6251.000	T 6240.000	T 9235.000	TM 3439.000
2	11:34:08	82.7%	96.910	45.180	47.630	-80.070	T 14070.000	T 6138.000	T 6207.000	T 9260.000	TM 3489.000
3	11:34:35	80.6%	96.430	45.180	47.380	-80.430	T 14000.000	T 6260.000	T 6204.000	T 9296.000	TM 3480.000
x		82.1%	97.190	45.510	47.390	-80.520	T 13980.000	T 6216.000	T 6217.000	T 9264.000	TM 3470.000
s		1.3%	0.922	0.572	0.242	0.509	T 102.300	T 68.090	T 19.920	T 30.730	TM 26.430
%RSD		1.5	0.949	1.256	0.511	0.633	T 0.732	T 1.095	T 0.321	T 0.332	TM 0.762

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	TM 22070.000	T 42050.000	T 3082.000	17290.000	17310.000	79.0%	101.500	95.550	101.900	14780.000
2	11:34:08	TM 21760.000	T 42510.000	T 3073.000	16830.000	17420.000	77.1%	103.500	97.850	103.800	14010.000
3	11:34:35	TM 22350.000	T 42260.000	T 3091.000	17320.000	17380.000	76.8%	101.000	97.760	101.100	14250.000
x		TM 22060.000	T 42270.000	T 3082.000	17150.000	17370.000	77.6%	102.000	97.050	102.300	14350.000
s		TM 297.500	T 229.200	T 8.810	275.200	54.970	1.2%	1.297	1.301	1.429	393.100
%RSD		TM 1.348	T 0.542	T 0.286	1.605	0.316	1.6	1.272	1.340	1.397	2.740

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	1162.000	TM 670.300	T 1044.000	1121.000	109.900	111.400	117.300	98.840	102.400	120.100
2	11:34:08	1179.000	TM 674.900	T 1071.000	1148.000	109.500	109.900	115.300	99.920	106.300	121.900
3	11:34:35	1184.000	TM 681.900	T 1070.000	1149.000	109.500	111.700	115.200	100.300	105.100	119.200
x		1175.000	TM 675.700	T 1062.000	1139.000	109.600	111.000	115.900	99.690	104.600	120.400
s		11.740	TM 5.835	T 15.630	16.060	0.273	0.951	1.205	0.762	2.021	1.361
%RSD		0.999	TM 0.864	T 1.472	1.409	0.249	0.856	1.039	0.765	1.932	1.130

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	119.800	119.300	97.700	95.300	12.300	12.550	439.900	97.960	-2.476	127.800
2	11:34:08	120.200	122.300	97.490	94.890	10.470	11.160	435.600	96.640	-1.366	129.500
3	11:34:35	121.600	120.200	98.350	96.140	11.630	11.240	451.500	99.480	2.314	130.000
x		120.500	120.600	97.850	95.440	11.470	11.650	442.300	98.030	-0.510	129.100
s		0.943	1.534	0.449	0.639	0.930	0.779	8.242	1.417	2.507	1.170
%RSD		0.782	1.272	0.459	0.669	8.110	6.684	1.863	1.446	492.000	0.907

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	89.0%	99.580	99.680	95.170	101.200	97.130	97.130	101.600	100.600	85.4%
2	11:34:08	88.4%	99.980	99.300	94.760	98.900	97.800	97.860	101.600	101.400	84.7%
3	11:34:35	88.5%	99.620	101.500	96.850	97.740	96.750	97.340	103.700	102.800	85.0%
x		88.6%	99.730	100.200	95.590	99.270	97.230	97.440	102.300	101.600	85.0%
s		0.3%	0.223	1.183	1.109	1.734	0.534	0.377	1.203	1.098	0.3%
%RSD		0.4	0.224	1.181	1.160	1.747	0.550	0.387	1.176	1.081	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:41	100.500	99.890	100.500	96.420	141.600	137.700	91.6%	99.530	109.300	105.600
2	11:34:08	102.900	101.000	101.400	98.310	142.700	138.900	91.2%	100.000	110.500	106.500
3	11:34:35	102.800	101.400	101.700	96.880	144.300	137.600	92.7%	99.530	109.900	106.100
x		102.100	100.800	101.200	97.200	142.900	138.100	91.9%	99.700	109.900	106.000
s		1.346	0.780	0.634	0.984	1.371	0.699	0.8%	0.293	0.595	0.435
%RSD		1.319	0.774	0.626	1.012	0.960	0.506	0.9	0.294	0.541	0.411

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:33:41	104.900	109.400	100.1%
2	11:34:08	106.500	110.100	101.2%
3	11:34:35	106.000	110.700	102.3%
x		105.800	110.000	101.2%
s		0.843	0.651	1.1%
%RSD		0.796	0.591	1.1

VD21024-003SD 4/24/2020 11:39:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	83.3%	92.870	43.830	45.320	-82.500	T 13490.000	T 6029.000	T 6055.000	T 9002.000	TM 3346.000
2	11:40:00	81.2%	94.380	44.690	45.690	-81.170	T 13810.000	T 6160.000	T 6214.000	T 9122.000	TM 3417.000
3	11:40:27	79.8%	94.680	46.650	47.130	-82.350	T 13820.000	T 6095.000	T 6259.000	T 9065.000	TM 3435.000
x		81.4%	93.980	45.060	46.050	-82.000	T 13700.000	T 6095.000	T 6176.000	T 9063.000	TM 3400.000
s		1.7%	0.973	1.445	0.956	0.729	T 187.000	T 65.920	T 107.200	T 59.760	TM 46.910
%RSD		2.1	1.035	3.206	2.076	0.888	T 1.365	T 1.082	T 1.736	T 0.659	TM 1.380

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	TM 21280.000	T 38830.000	T 2971.000	16460.000	16940.000	79.2%	100.100	93.600	100.100	12500.000
2	11:40:00	TM 21380.000	T 39570.000	T 3056.000	16800.000	16900.000	76.7%	98.540	95.510	101.100	12820.000
3	11:40:27	TM 22250.000	T 39940.000	T 3017.000	17060.000	16740.000	76.7%	100.400	96.070	101.700	12720.000
x		TM 21640.000	T 39450.000	T 3015.000	16770.000	16860.000	77.5%	99.680	95.060	101.000	12680.000
s		TM 528.800	T 565.400	T 42.320	300.100	106.600	1.5%	0.991	1.297	0.776	161.900
%RSD		TM 2.444	T 1.433	T 1.404	1.789	0.632	1.9	0.994	1.364	0.769	1.276

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	1127.000	TM 656.500	T 1018.000	1069.000	103.500	107.000	114.500	97.140	102.100	116.100
2	11:40:00	1154.000	TM 669.700	T 1036.000	1126.000	106.000	109.700	112.600	96.020	102.400	113.600
3	11:40:27	1153.000	TM 669.400	T 1049.000	1123.000	106.500	107.300	111.100	96.070	102.500	115.000
x		1145.000	TM 665.200	T 1034.000	1106.000	105.300	108.000	112.700	96.410	102.300	114.900
s		15.600	TM 7.549	T 15.630	31.850	1.581	1.498	1.697	0.632	0.194	1.274
%RSD		1.363	TM 1.135	T 1.511	2.879	1.502	1.388	1.506	0.656	0.190	1.109

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	116.500	115.200	92.670	90.580	10.520	10.020	417.400	92.980	-1.228	125.600
2	11:40:00	116.600	117.300	94.120	93.320	9.721	9.305	435.400	95.820	-0.917	125.800
3	11:40:27	116.600	119.700	95.660	90.770	10.610	10.860	420.300	93.140	-3.774	126.400
x		116.600	117.400	94.150	91.560	10.280	10.060	424.400	93.980	-1.973	125.900
s		0.087	2.235	1.494	1.529	0.490	0.776	9.646	1.592	1.568	0.411
%RSD		0.075	1.903	1.587	1.670	4.763	7.713	2.273	1.694	79.440	0.326

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	89.8%	96.040	97.630	92.890	96.970	94.110	94.680	96.480	97.780	85.9%
2	11:40:00	89.6%	95.290	96.330	93.000	99.870	94.510	94.380	100.200	98.370	86.2%
3	11:40:27	89.3%	96.850	98.000	94.130	96.940	95.770	95.090	98.710	100.100	85.8%
x		89.5%	96.060	97.320	93.340	97.930	94.800	94.720	98.450	98.740	86.0%
s		0.3%	0.779	0.876	0.689	1.680	0.863	0.356	1.858	1.201	0.2%
%RSD		0.3	0.811	0.900	0.739	1.716	0.910	0.376	1.888	1.216	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:39:33	99.330	98.450	98.820	95.070	140.600	135.400	92.4%	97.300	107.300	102.500
2	11:40:00	100.100	97.570	98.210	94.960	137.800	136.600	92.5%	97.330	106.900	103.100
3	11:40:27	100.200	98.400	99.310	93.960	140.700	134.400	93.9%	96.570	106.700	103.000
x		99.880	98.140	98.780	94.660	139.700	135.500	93.0%	97.070	107.000	102.900
s		0.471	0.495	0.547	0.607	1.649	1.092	0.8%	0.430	0.310	0.303
%RSD		0.472	0.504	0.554	0.641	1.181	0.806	0.9	0.443	0.290	0.294

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:39:33	102.900	106.400	101.0%
2	11:40:00	103.100	107.300	102.2%
3	11:40:27	101.600	106.700	103.5%
x		102.500	106.800	102.2%
s		0.805	0.466	1.3%
%RSD		0.786	0.436	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	85.4%	0.197	2.624	2.346	-37.070	T 2558.000	T 1471.000	1561.000	1785.000	M 743.300
2	11:45:54	83.6%	0.145	2.112	2.167	-34.800	T 2514.000	T 1468.000	1556.000	1745.000	M 737.400
3	11:46:21	84.3%	0.163	2.460	2.227	-37.990	T 2518.000	T 1514.000	1612.000	1786.000	M 752.300
x		84.4%	0.169	2.399	2.246	-36.620	T 2530.000	T 1484.000	1577.000	1772.000	M 744.300
s		0.9%	0.026	0.261	0.091	1.641	T 24.410	T 25.670	31.200	23.220	M 7.473
%RSD		1.1	15.590	10.890	4.049	4.482	T 0.965	T 1.729	1.979	1.310	M 1.004

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	T 4226.000	9645.000	434.400	3262.000	3200.000	80.7%	0.111	-0.508	1.096	3386.000
2	11:45:54	T 4261.000	9519.000	431.100	3179.000	3206.000	80.3%	0.336	-0.301	1.029	3358.000
3	11:46:21	T 4264.000	9715.000	431.100	3271.000	3217.000	79.6%	0.218	-0.408	1.048	3379.000
x		T 4250.000	9627.000	432.200	3237.000	3208.000	80.2%	0.222	-0.406	1.058	3374.000
s		T 21.470	99.160	1.910	50.460	8.420	0.6%	0.112	0.103	0.034	14.690
%RSD		T 0.505	1.030	0.442	1.559	0.263	0.7	50.700	25.440	3.252	0.435

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	3.624	122.300	6.429	6.931	2.069	2.626	7.958	1.324	1.113	4.725
2	11:45:54	4.530	121.600	5.195	4.510	2.086	2.934	7.612	1.307	1.153	4.740
3	11:46:21	3.043	120.200	5.275	6.378	2.088	2.705	7.531	1.294	1.349	4.599
x		3.732	121.400	5.633	5.940	2.081	2.755	7.700	1.308	1.205	4.688
s		0.749	1.096	0.691	1.269	0.011	0.160	0.227	0.015	0.126	0.077
%RSD		20.080	0.903	12.260	21.360	0.505	5.823	2.950	1.134	10.490	1.645

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	4.813	4.887	0.102	-0.185	3.020	3.263	1.053	0.549	-2.628	6.811
2	11:45:54	4.983	4.982	-0.364	-0.373	2.827	3.550	0.572	0.124	-0.167	6.677
3	11:46:21	6.049	5.052	0.084	-0.874	3.168	3.220	-1.060	-0.045	-1.512	6.838
x		5.281	4.974	-0.059	-0.477	3.005	3.345	0.189	0.209	-1.436	6.775
s		0.670	0.083	0.264	0.356	0.171	0.179	1.108	0.306	1.233	0.086
%RSD		12.680	1.674	446.600	74.660	5.701	5.365	587.400	146.100	85.850	1.272

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	86.6%	-0.006	-0.015	-0.045	-0.314	0.002	0.001	0.027	0.033	87.6%
2	11:45:54	85.9%	-0.020	0.028	-0.064	-0.547	0.004	0.006	0.005	0.024	87.9%
3	11:46:21	86.1%	-0.048	-0.030	-0.042	-0.218	-0.000	0.003	0.018	0.025	87.3%
x		86.2%	-0.025	-0.006	-0.050	-0.359	0.002	0.003	0.017	0.027	87.6%
s		0.4%	0.022	0.030	0.012	0.169	0.002	0.003	0.011	0.005	0.3%
%RSD		0.4	88.290	522.900	24.720	47.060	115.500	83.580	65.340	18.160	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:26	0.112	0.145	0.024	0.008	7.754	7.998	91.7%	0.047	0.051	0.430
2	11:45:54	0.128	0.151	0.027	0.034	7.599	7.827	92.4%	0.043	0.044	0.404
3	11:46:21	0.129	0.175	0.051	0.013	8.007	7.656	92.2%	0.039	0.033	0.438
x		0.123	0.157	0.034	0.018	7.787	7.827	92.1%	0.043	0.043	0.424
s		0.010	0.016	0.015	0.014	0.206	0.171	0.4%	0.004	0.009	0.018
%RSD		7.787	10.000	43.020	74.770	2.645	2.188	0.4	10.010	22.160	4.308

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:45:26	0.392	0.431	101.1%
2	11:45:54	0.365	0.404	102.7%
3	11:46:21	0.415	0.419	103.1%
x		0.391	0.418	102.3%
s		0.025	0.014	1.1%
%RSD		6.297	3.330	1.0

CCV MW12620 4/24/2020 11:50:54 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	78.4%	285.600	294.500	296.300	6.756	T 61160.000	T 61280.000	T 60140.000	T 58580.000	297.700
2	11:51:47	78.4%	287.000	303.700	295.400	3.490	T 61050.000	T 60700.000	T 59990.000	T 58150.000	294.000
3	11:52:14	78.1%	290.200	309.200	305.100	12.580	T 62380.000	T 62380.000	T 60990.000	T 58240.000	290.700
x		78.3%	95.868%	100.825%	99.643%	7.610	T 102.554%	T 61450.000	T 60370.000	T 97.211%	98.039%
s		0.2%	n/a	n/a	n/a	4.606	T n/a	T 854.700	T 539.300	T n/a	n/a
%RSD		0.2	0.832	2.457	1.782	60.520	T 1.195	T 1.391	T 0.893	T 0.390	1.183

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	T 2803.000	398.400	T 55710.000	60290.000	T 59830.000	75.7%	300.700	300.200	292.200	3241.000
2	11:51:47	T 2842.000	384.700	T 55960.000	60110.000	T 60500.000	75.6%	295.000	299.600	290.200	3202.000
3	11:52:14	T 2808.000	370.600	T 55560.000	61260.000	T 60180.000	75.7%	298.300	299.200	290.100	3720.000
x		T 2818.000	384.600	T 92.906%	60550.000	T 100.285%	75.7%	99.342%	99.890%	96.935%	3387.000
s		T 21.090	13.930	T n/a	618.400	T n/a	0.0%	n/a	n/a	n/a	288.300
%RSD		T 0.749	3.622	T 0.355	1.021	T 0.561	0.1	0.960	0.179	0.402	8.510

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	T 59730.000	307.900	T 60050.000	T 59610.000	288.400	279.700	283.800	271.400	275.200	283.700
2	11:51:47	T 60450.000	306.700	T 59870.000	T 60210.000	289.700	277.900	290.300	270.600	273.200	277.200
3	11:52:14	T 59450.000	309.300	T 60860.000	T 60310.000	290.600	283.100	285.700	271.100	277.900	279.300
x		T 59880.000	102.652%	T 60260.000	T 100.074%	96.519%	93.419%	286.600	271.000	91.810%	93.347%
s		T 514.200	n/a	T 527.700	T n/a	n/a	n/a	3.356	0.401	n/a	n/a
%RSD		T 0.859	0.433	T 0.876	T 0.632	0.375	0.947	1.171	0.148	0.870	1.189

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	284.400	284.500	284.700	291.600	1.209	1.020	1319.000	284.100	-3.621	305.100
2	11:51:47	279.800	283.900	282.300	292.400	0.536	-0.235	1339.000	283.600	-0.419	304.300
3	11:52:14	282.200	283.900	281.300	285.500	1.089	-0.194	1326.000	283.900	-2.779	305.000
x		282.100	284.100	94.270%	289.800	0.945	0.197	1328.000	94.618%	-2.273	101.605%
s		2.301	0.377	n/a	3.791	0.359	0.713	9.804	n/a	1.660	n/a
%RSD		0.816	0.133	0.620	1.308	38.020	361.400	0.738	0.085	73.030	0.160

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	80.1%	301.900	305.300	298.900	296.000	283.600	283.000	293.400	292.300	80.2%
2	11:51:47	79.6%	300.700	301.800	303.800	285.800	280.700	280.800	291.800	288.700	81.0%
3	11:52:14	80.4%	304.400	304.200	303.500	287.800	280.500	283.100	290.700	289.800	80.9%
x		80.0%	100.778%	101.254%	302.100	289.900	93.874%	282.300	292.000	96.748%	80.7%
s		0.4%	n/a	n/a	2.781	5.412	n/a	1.333	1.376	n/a	0.4%
%RSD		0.5	0.616	0.579	0.920	1.867	0.616	0.472	0.471	0.647	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:51:20	299.100	297.200	298.400	286.500	298.900	290.600	86.1%	293.900	T 295.200	293.000
2	11:51:47	297.000	294.200	296.600	284.800	295.800	288.800	87.0%	299.700	T 295.000	294.200
3	11:52:14	298.700	297.100	298.800	286.600	296.100	286.100	87.0%	295.800	T 297.700	T 265.700
x		99.423%	98.723%	298.000	95.334%	98.968%	96.175%	86.7%	296.500	T 98.655%	T 94.770%
s		n/a	n/a	1.179	n/a	n/a	n/a	0.5%	2.936	T n/a	T n/a
%RSD		0.385	0.574	0.396	0.355	0.577	0.791	0.6	0.990	T 0.515	T 5.659

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:51:20	293.100	309.800	91.7%
2	11:51:47	293.300	307.900	91.4%
3	11:52:14	294.700	301.700	92.2%
x		97.902%	102.154%	91.8%
s		n/a	n/a	0.4%
%RSD		0.303	1.373	0.4

CCB IM9936-01 4/24/2020 11:56:47 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	85.7%	0.021	2.775	2.918	-6.323	-39.140	2.484	3.049	2.492	0.045
2	11:57:42	82.9%	0.004	1.680	2.521	0.887	-39.560	1.650	1.978	1.209	-0.015
3	11:58:09	83.3%	0.004	2.727	2.552	8.393	-40.080	2.046	2.723	2.459	0.007
x		84.0%	0.010	2.394	2.664	0.986	-39.590	2.060	2.584	2.054	0.012
s		1.5%	0.010	0.619	0.221	7.358	0.470	0.417	0.549	0.731	0.030
%RSD		1.8	104.100	25.840	8.293	746.600	1.187	20.240	21.250	35.610	247.000

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	-0.938	248.000	-16.570	0.026	2.149	79.4%	-0.042	0.010	-0.038	17.910
2	11:57:42	-0.415	241.600	-16.960	0.041	1.876	79.0%	-0.007	0.008	-0.010	9.112
3	11:58:09	0.170	246.700	-18.850	-1.625	2.461	79.8%	-0.025	-0.006	-0.018	17.840
x		-0.394	245.400	-17.460	-0.519	2.162	79.4%	-0.025	0.004	-0.022	14.960
s		0.554	3.400	1.216	0.958	0.293	0.4%	0.018	0.009	0.014	5.060
%RSD		140.600	1.386	6.962	184.400	13.550	0.5	69.980	233.900	64.890	33.840

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	0.785	0.017	-1.231	3.557	0.028	0.004	2.711	0.057	0.024	-0.194
2	11:57:42	0.652	0.012	-2.098	0.581	0.006	0.004	2.679	0.113	0.006	-0.226
3	11:58:09	0.089	0.028	-2.097	2.226	0.009	0.004	2.651	0.065	-0.022	-0.280
x		0.509	0.019	-1.809	2.122	0.014	0.004	2.681	0.078	0.003	-0.234
s		0.370	0.008	0.500	1.491	0.012	0.000	0.030	0.030	0.023	0.044
%RSD		72.650	40.770	27.650	70.270	82.740	4.424	1.121	38.300	826.600	18.730

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	-0.124	-0.184	0.086	-0.002	-0.521	-0.218	0.011	0.475	-3.754	0.009
2	11:57:42	-0.178	-0.177	0.059	0.278	-0.518	-0.076	0.020	0.426	-3.469	0.006
3	11:58:09	-0.042	-0.089	0.163	-0.738	-0.078	0.514	3.067	1.085	-3.499	0.017
x		-0.115	-0.150	0.102	-0.154	-0.372	0.073	1.033	0.662	-3.574	0.010
s		0.068	0.053	0.054	0.525	0.255	0.388	1.761	0.367	0.157	0.005
%RSD		59.570	35.330	52.740	340.500	68.500	529.300	170.500	55.490	4.378	51.960

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	82.2%	0.226	0.313	0.192	1.036	0.007	0.024	0.005	0.013	83.6%
2	11:57:42	82.1%	0.229	0.145	0.196	0.701	0.004	0.008	0.018	0.018	85.0%
3	11:58:09	82.6%	0.122	0.192	0.150	-0.375	0.014	0.017	0.005	0.011	84.4%
x		82.3%	0.192	0.216	0.179	0.454	0.008	0.016	0.009	0.014	84.3%
s		0.3%	0.061	0.087	0.025	0.737	0.005	0.008	0.008	0.004	0.7%
%RSD		0.3	31.630	40.030	13.940	162.400	61.800	50.650	84.990	28.840	0.8

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:14	0.158	0.194	0.400	0.350	0.003	0.009	88.6%	0.013	0.020	0.017
2	11:57:42	0.159	0.180	0.377	0.382	0.029	0.013	88.2%	0.020	0.011	0.012
3	11:58:09	0.124	0.203	0.400	0.367	0.003	0.002	88.4%	0.012	0.012	0.031
x		0.147	0.193	0.392	0.366	0.012	0.008	88.4%	0.015	0.015	0.020
s		0.020	0.011	0.013	0.016	0.015	0.006	0.2%	0.004	0.005	0.010
%RSD		13.670	5.941	3.395	4.426	129.500	73.280	0.2	27.440	33.830	49.230

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	11:57:14	0.029	0.028	98.4%
2	11:57:42	0.022	0.022	97.8%
3	11:58:09	0.043	0.031	99.4%
x		0.031	0.027	98.5%
s		0.010	0.005	0.8%
%RSD		33.300	17.650	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	84.1%	95.050	46.430	48.520	-79.910	T 13860.000	T 6167.000	T 6250.000	T 9134.000	TM 3392.000
2	12:03:33	82.4%	95.660	50.320	49.490	-79.910	T 13730.000	T 6261.000	T 6277.000	T 9163.000	TM 3411.000
3	12:04:00	80.3%	98.020	45.170	49.010	-79.920	T 13680.000	T 6154.000	T 6200.000	T 9102.000	TM 3438.000
x		82.2%	96.240	47.310	49.010	-79.920	T 13760.000	T 6194.000	T 6242.000	T 9133.000	TM 3414.000
s		1.9%	1.571	2.686	0.484	0.007	T 94.140	T 58.430	T 39.180	T 30.670	TM 23.510
%RSD		2.3	1.632	5.678	0.988	0.008	T 0.684	T 0.943	T 0.628	T 0.336	TM 0.689

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	TM 21180.000	T 41460.000	T 3013.000	16830.000	16960.000	78.7%	100.300	94.750	100.400	12180.000
2	12:03:33	TM 21800.000	T 41970.000	T 2991.000	16610.000	17040.000	78.6%	99.020	96.090	100.800	11350.000
3	12:04:00	TM 22600.000	T 41550.000	T 3017.000	16630.000	16910.000	77.7%	101.300	96.530	101.000	11790.000
x		TM 21860.000	T 41660.000	T 3007.000	16690.000	16970.000	78.4%	100.200	95.790	100.700	11770.000
s		TM 710.400	T 274.500	T 13.850	124.300	67.190	0.5%	1.148	0.929	0.291	412.600
%RSD		TM 3.250	T 0.659	T 0.461	0.745	0.396	0.7	1.145	0.970	0.289	3.504

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	1166.000	TM 662.400	T 1043.000	1122.000	106.300	108.400	112.200	97.480	103.600	117.300
2	12:03:33	1165.000	TM 659.900	T 1043.000	1127.000	106.600	110.100	110.100	96.980	102.800	115.300
3	12:04:00	1159.000	TM 668.900	T 1054.000	1132.000	106.700	110.700	111.600	98.320	104.400	116.900
x		1163.000	TM 663.700	T 1047.000	1127.000	106.600	109.700	111.300	97.590	103.600	116.500
s		3.826	TM 4.630	T 6.190	5.014	0.204	1.156	1.097	0.677	0.791	1.048
%RSD		0.329	TM 0.698	T 0.592	0.445	0.192	1.053	0.986	0.694	0.764	0.899

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	117.000	117.300	95.970	89.460	13.830	11.900	446.300	99.320	-4.063	125.800
2	12:03:33	117.600	120.100	95.860	92.200	12.210	10.830	426.300	93.960	0.028	126.400
3	12:04:00	117.900	118.200	92.600	91.920	11.880	12.250	419.900	93.040	-4.102	126.400
x		117.500	118.500	94.810	91.190	12.640	11.660	430.800	95.440	-2.712	126.200
s		0.426	1.439	1.913	1.506	1.041	0.740	13.750	3.394	2.374	0.348
%RSD		0.362	1.214	2.018	1.651	8.236	6.350	3.191	3.556	87.510	0.276

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	89.6%	96.850	99.310	93.980	92.850	93.750	94.620	98.620	98.960	86.0%
2	12:03:33	90.4%	97.250	98.890	93.840	98.360	94.820	94.720	99.190	99.630	87.0%
3	12:04:00	90.7%	98.780	99.250	94.610	98.690	95.040	95.190	99.130	99.980	87.2%
x		90.2%	97.630	99.150	94.140	96.630	94.540	94.850	98.980	99.520	86.7%
s		0.6%	1.019	0.228	0.413	3.277	0.687	0.304	0.314	0.519	0.6%
%RSD		0.7	1.044	0.230	0.438	3.392	0.727	0.320	0.317	0.522	0.7

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:03:06	99.850	98.570	96.060	91.770	140.300	136.800	92.8%	98.290	107.200	102.500
2	12:03:33	101.400	99.010	95.630	92.960	139.000	135.100	93.7%	98.730	107.700	103.300
3	12:04:00	101.400	99.820	96.520	92.420	139.600	136.200	94.1%	98.850	108.200	103.000
x		100.900	99.130	96.070	92.380	139.600	136.000	93.5%	98.620	107.700	102.900
s		0.880	0.633	0.446	0.596	0.665	0.847	0.6%	0.294	0.533	0.422
%RSD		0.873	0.639	0.464	0.645	0.476	0.623	0.7	0.298	0.495	0.410

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:03:06	101.800	106.100	101.0%
2	12:03:33	103.300	107.500	102.5%
3	12:04:00	103.800	107.700	102.3%
x		103.000	107.100	102.0%
s		1.036	0.884	0.8%
%RSD		1.006	0.825	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	74.5%	0.284	9.490	10.730	-51.160	T 21820.000	T 24390.000	T 24170.000	T 28890.000	TM 1224.000
2	12:09:21	70.6%	0.190	11.790	10.840	-48.450	T 21440.000	T 23970.000	T 24020.000	T 28570.000	TM 1227.000
3	12:09:48	72.4%	0.195	10.680	10.660	-46.240	T 22250.000	T 24890.000	T 24520.000	T 29530.000	TM 1248.000
x		72.5%	0.223	10.650	10.750	-48.610	T 21840.000	T 24420.000	T 24240.000	T 29000.000	TM 1233.000
s		1.9%	0.053	1.148	0.093	2.468	T 402.400	T 460.200	T 259.000	T 488.900	TM 13.080
%RSD		2.7	23.820	10.780	0.868	5.077	T 1.843	T 1.885	T 1.069	T 1.686	TM 1.061

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	T 6622.000	T 44940.000	T 2331.000	86810.000	T 85650.000	70.2%	1.139	-0.967	2.480	8307.000
2	12:09:21	T 6833.000	T 45100.000	T 2316.000	85280.000	T 84500.000	69.2%	1.096	-0.487	2.345	7864.000
3	12:09:48	T 6675.000	T 45790.000	T 2362.000	87880.000	T 85790.000	67.4%	1.210	-0.928	2.355	8504.000
x		T 6710.000	T 45280.000	T 2337.000	86660.000	T 85320.000	69.0%	1.148	-0.794	2.393	8225.000
s		T 110.200	T 449.200	T 23.340	1310.000	T 709.000	1.4%	0.057	0.266	0.075	327.400
%RSD		T 1.642	T 0.992	T 0.999	1.512	T 0.831	2.1	4.981	33.530	3.136	3.980

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	115.100	TM 2319.000	120.500	212.700	18.620	10.410	15.510	1.016	1.093	6.807
2	12:09:21	114.900	TM 2329.000	118.300	207.100	18.580	10.470	16.150	1.074	1.076	6.884
3	12:09:48	114.800	TM 2374.000	121.600	207.500	18.900	10.940	16.790	1.065	1.175	6.736
x		114.900	TM 2341.000	120.100	209.100	18.700	10.610	16.150	1.052	1.114	6.809
s		0.119	TM 29.400	1.658	3.088	0.179	0.290	0.641	0.031	0.053	0.074
%RSD		0.103	TM 1.256	1.380	1.477	0.955	2.733	3.970	2.971	4.761	1.083

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	7.601	6.611	0.146	-0.158	13.570	14.510	3.291	1.273	-3.819	73.540
2	12:09:21	7.528	6.746	-0.296	0.059	12.360	13.450	0.632	0.537	-2.897	75.800
3	12:09:48	7.004	6.559	-0.292	0.126	13.600	13.520	4.342	1.248	-2.055	74.970
x		7.378	6.639	-0.147	0.009	13.180	13.830	2.755	1.019	-2.924	74.770
s		0.326	0.097	0.254	0.149	0.706	0.590	1.912	0.418	0.882	1.142
%RSD		4.419	1.457	172.300	1622.000	5.357	4.264	69.400	41.030	30.180	1.527

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	85.5%	0.098	0.078	0.073	1.155	-0.001	0.011	0.176	0.167	79.6%
2	12:09:21	83.8%	0.085	0.139	0.138	1.048	0.004	0.005	0.206	0.145	79.0%
3	12:09:48	84.3%	0.052	0.110	0.139	0.837	-0.002	-0.000	0.139	0.159	79.0%
x		84.5%	0.079	0.109	0.117	1.013	0.000	0.005	0.173	0.157	79.2%
s		0.8%	0.023	0.031	0.038	0.162	0.003	0.005	0.033	0.011	0.4%
%RSD		1.0	29.880	28.050	32.570	15.950	642.300	106.400	19.290	7.143	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:54	0.230	0.217	0.379	0.364	13.880	13.150	88.3%	0.085	0.073	0.032
2	12:09:21	0.257	0.280	0.411	0.356	14.050	13.130	87.3%	0.062	0.072	0.028
3	12:09:48	0.220	0.211	0.361	0.326	13.240	13.260	87.8%	0.077	0.080	0.032
x		0.236	0.236	0.384	0.349	13.720	13.180	87.8%	0.075	0.075	0.031
s		0.019	0.038	0.025	0.020	0.427	0.074	0.5%	0.012	0.004	0.002
%RSD		8.095	16.070	6.570	5.796	3.112	0.562	0.6	15.420	5.781	7.766

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:08:54	0.020	0.028	95.6%
2	12:09:21	0.027	0.029	95.4%
3	12:09:48	0.009	0.019	94.6%
x		0.019	0.025	95.2%
s		0.009	0.006	0.5%
%RSD		50.200	21.950	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	73.6%	0.127	10.650	10.730	-52.300	T 21870.000	T 23920.000	T 23900.000	T 28970.000	TM 1189.000
2	12:15:10	70.0%	0.192	8.797	9.675	-47.300	T 21660.000	T 24020.000	T 24020.000	T 29100.000	TM 1186.000
3	12:15:37	69.2%	0.171	10.940	10.800	-47.640	T 21260.000	T 24270.000	T 24090.000	T 27910.000	TM 1157.000
x		70.9%	0.163	10.130	10.400	-49.080	T 21600.000	T 24070.000	T 24000.000	T 28660.000	TM 1177.000
s		2.3%	0.033	1.164	0.629	2.797	T 313.500	T 182.300	T 96.390	T 652.400	TM 18.070
%RSD		3.3	20.250	11.490	6.050	5.700	T 1.452	T 0.757	T 0.402	T 2.276	TM 1.535

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	T 6469.000	T 44070.000	T 2313.000	86030.000	T 83520.000	67.2%	1.133	0.193	2.011	7553.000
2	12:15:10	T 6641.000	T 44110.000	T 2305.000	85570.000	T 84540.000	65.8%	1.031	-0.674	1.998	8055.000
3	12:15:37	T 6604.000	T 43550.000	T 2298.000	86100.000	T 84360.000	66.4%	1.478	-0.571	1.901	7931.000
x		T 6571.000	T 43910.000	T 2305.000	85900.000	T 84140.000	66.5%	1.214	-0.351	1.970	7846.000
s		T 90.890	T 310.800	T 7.602	288.800	T 544.500	0.7%	0.234	0.474	0.060	261.400
%RSD		T 1.383	T 0.708	T 0.330	0.336	T 0.647	1.0	19.300	135.000	3.043	3.331

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	100.600	TM 2344.000	105.800	194.600	19.040	10.470	16.870	0.694	0.810	6.877
2	12:15:10	103.300	TM 2371.000	108.000	199.800	18.980	10.540	17.650	0.964	0.870	6.769
3	12:15:37	98.720	TM 2319.000	104.800	197.000	18.690	10.010	18.620	0.772	0.734	6.628
x		100.900	TM 2345.000	106.200	197.200	18.900	10.340	17.710	0.810	0.805	6.758
s		2.305	TM 25.840	1.639	2.574	0.186	0.288	0.878	0.139	0.068	0.125
%RSD		2.285	TM 1.102	1.544	1.306	0.982	2.784	4.958	17.210	8.473	1.848

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	7.671	7.196	-0.591	-0.061	13.720	14.430	1.956	0.968	-3.927	74.500
2	12:15:10	7.646	6.990	0.393	0.438	12.930	12.970	6.877	1.881	-2.795	73.270
3	12:15:37	7.689	7.105	-0.300	-0.236	13.060	13.810	2.915	1.013	-2.734	74.610
x		7.669	7.097	-0.166	0.047	13.240	13.740	3.916	1.288	-3.152	74.130
s		0.021	0.103	0.505	0.350	0.427	0.737	2.609	0.515	0.672	0.747
%RSD		0.279	1.451	304.200	741.100	3.226	5.367	66.610	39.980	21.320	1.007

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	82.2%	-0.021	0.031	-0.037	1.790	-0.005	-0.001	0.142	0.134	77.5%
2	12:15:10	82.8%	0.050	-0.014	-0.038	2.500	-0.003	0.005	0.184	0.137	78.6%
3	12:15:37	81.5%	-0.039	0.019	-0.058	0.891	-0.008	0.002	0.197	0.120	77.2%
x		82.2%	-0.004	0.012	-0.045	1.727	-0.005	0.002	0.174	0.130	77.8%
s		0.6%	0.047	0.023	0.012	0.806	0.002	0.003	0.028	0.009	0.7%
%RSD		0.8	1288.000	193.800	26.510	46.700	44.140	157.200	16.320	6.860	1.0

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:43	0.178	0.187	0.173	0.175	13.320	13.330	86.5%	0.055	0.069	0.023
2	12:15:10	0.164	0.171	0.166	0.177	14.430	12.990	86.3%	0.056	0.060	0.018
3	12:15:37	0.181	0.207	0.170	0.163	13.900	13.550	86.4%	0.071	0.078	0.005
x		0.174	0.188	0.170	0.172	13.880	13.290	86.4%	0.061	0.069	0.015
s		0.009	0.018	0.003	0.007	0.554	0.286	0.1%	0.009	0.009	0.010
%RSD		5.304	9.672	1.895	4.268	3.994	2.151	0.1	14.460	13.360	62.030

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:14:43	0.022	0.017	94.4%
2	12:15:10	0.014	0.021	94.3%
3	12:15:37	0.027	0.016	95.2%
x		0.021	0.018	94.6%
s		0.006	0.003	0.5%
%RSD		30.820	15.980	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	76.3%	-0.003	7.617	8.552	-63.110	T 23450.000	T 30870.000	T 31370.000	T 39810.000	9.120
2	12:21:01	75.6%	0.008	8.096	8.370	-60.470	T 23460.000	T 30770.000	T 30850.000	T 39640.000	9.597
3	12:21:28	75.2%	0.029	8.245	7.938	-53.150	T 23500.000	T 31010.000	T 31390.000	T 40120.000	8.735
x		75.7%	0.011	7.986	8.287	-58.910	T 23470.000	T 30880.000	T 31200.000	T 39850.000	9.151
s		0.6%	0.016	0.329	0.315	5.156	T 25.510	T 122.300	T 309.400	T 241.200	0.432
%RSD		0.7	146.800	4.114	3.805	8.752	T 0.109	T 0.396	T 0.992	T 0.605	4.723

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	T 3319.000	T 41440.000	T 3312.000	M 139300.000	TM 137300.000	72.5%	0.378	-0.981	0.398	8800.000
2	12:21:01	T 3399.000	T 41730.000	T 3349.000	M 138600.000	TM 136300.000	72.7%	0.339	-0.918	0.372	8692.000
3	12:21:28	T 3313.000	T 42080.000	T 3354.000	M 140300.000	TM 138500.000	71.3%	0.289	-0.508	0.383	8577.000
x		T 3343.000	T 41750.000	T 3338.000	M 139400.000	TM 137400.000	72.2%	0.335	-0.802	0.384	8689.000
s		T 48.080	T 321.200	T 23.260	M 838.900	TM 1117.000	0.8%	0.045	0.257	0.013	111.400
%RSD		T 1.438	T 0.769	T 0.697	M 0.602	TM 0.813	1.1	13.390	31.980	3.428	1.281

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	6.987	TM 1634.000	18.510	176.800	3.018	2.791	8.410	0.319	0.423	0.764
2	12:21:01	5.724	TM 1640.000	17.900	174.100	3.039	2.933	7.393	0.353	0.343	0.946
3	12:21:28	5.931	TM 1679.000	18.070	170.500	3.110	2.767	7.445	0.384	0.369	0.864
x		6.214	TM 1651.000	18.160	173.800	3.056	2.830	7.749	0.352	0.378	0.858
s		0.678	TM 23.960	0.312	3.176	0.048	0.090	0.573	0.032	0.041	0.091
%RSD		10.900	TM 1.451	1.719	1.828	1.569	3.164	7.388	9.166	10.820	10.610

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	2.149	1.116	-0.316	-0.259	12.280	12.620	1.027	0.848	-4.655	103.100
2	12:21:01	2.500	1.249	-0.227	-0.284	12.350	12.400	-0.414	0.061	-1.145	103.100
3	12:21:28	1.980	1.128	0.508	-0.631	11.980	13.490	1.762	1.022	-4.699	102.200
x		2.210	1.164	-0.011	-0.391	12.200	12.840	0.791	0.644	-3.500	102.800
s		0.266	0.073	0.452	0.208	0.199	0.575	1.107	0.512	2.039	0.499
%RSD		12.010	6.287	3951.000	53.270	1.629	4.476	139.800	79.510	58.270	0.486

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	85.3%	0.115	0.083	0.073	2.921	-0.008	0.002	0.157	0.138	81.8%
2	12:21:01	86.0%	0.053	0.139	0.002	1.567	-0.003	-0.003	0.152	0.142	82.2%
3	12:21:28	86.8%	0.042	0.126	0.050	1.755	-0.007	-0.000	0.110	0.113	82.4%
x		86.0%	0.070	0.116	0.042	2.081	-0.006	-0.000	0.140	0.131	82.1%
s		0.8%	0.039	0.029	0.036	0.733	0.002	0.002	0.026	0.016	0.3%
%RSD		0.9	56.040	25.290	87.470	35.250	40.250	1071.000	18.370	12.070	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:34	0.146	0.129	0.118	0.065	21.560	21.540	87.5%	0.065	0.064	0.001
2	12:21:01	0.121	0.154	0.096	0.076	22.010	21.990	88.6%	0.051	0.063	-0.013
3	12:21:28	0.133	0.168	0.102	0.116	22.350	21.710	90.0%	0.052	0.064	-0.011
x		0.133	0.150	0.105	0.085	21.970	21.740	88.7%	0.056	0.064	-0.008
s		0.013	0.020	0.011	0.027	0.396	0.227	1.3%	0.008	0.000	0.008
%RSD		9.441	13.130	10.590	31.320	1.800	1.044	1.4	13.490	0.742	101.900

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:20:34	-0.013	-0.007	94.2%
2	12:21:01	-0.007	-0.010	96.1%
3	12:21:28	-0.002	-0.010	95.3%
x		-0.008	-0.009	95.2%
s		0.005	0.001	0.9%
%RSD		72.190	15.970	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	77.7%	-0.014	7.152	7.451	-67.910	T 26980.000	T 33630.000	T 34010.000	T 46060.000	5.713
2	12:26:51	75.4%	0.018	6.648	7.274	-66.740	T 27140.000	T 33520.000	T 34000.000	T 46530.000	5.451
3	12:27:18	75.0%	-0.013	7.147	7.290	-66.450	T 26830.000	T 33970.000	T 34610.000	T 46050.000	5.684
x		76.0%	-0.003	6.983	7.338	-67.030	T 26980.000	T 33700.000	T 34210.000	T 46210.000	5.616
s		1.4%	0.018	0.289	0.098	0.769	T 154.700	T 234.000	T 348.100	T 275.000	0.143
%RSD		1.9	623.200	4.144	1.340	1.147	T 0.573	T 0.694	T 1.018	T 0.595	2.552
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	T 3650.000	T 41060.000	T 3228.000	M 141100.000	TM 139300.000	73.1%	0.374	-1.109	0.647	9527.000
2	12:26:51	T 3781.000	T 41740.000	T 3290.000	M 143700.000	TM 142300.000	71.9%	0.382	-1.008	0.600	9533.000
3	12:27:18	T 3763.000	T 41440.000	T 3267.000	M 142800.000	TM 142000.000	72.2%	0.227	-0.903	0.585	9600.000
x		T 3732.000	T 41410.000	T 3262.000	M 142500.000	TM 141200.000	72.4%	0.328	-1.007	0.611	9553.000
s		T 71.150	T 342.800	T 31.570	M 1310.000	TM 1673.000	0.6%	0.087	0.103	0.033	40.550
%RSD		T 1.907	T 0.828	T 0.968	M 0.919	TM 1.185	0.9	26.640	10.210	5.337	0.424
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	7.468	TM 999.400	23.140	182.100	1.323	2.463	7.238	0.329	0.307	0.804
2	12:26:51	7.389	TM 1005.000	23.050	185.400	1.397	2.267	7.320	0.391	0.340	0.843
3	12:27:18	7.930	TM 1005.000	22.680	179.800	1.431	2.297	7.963	0.314	0.350	0.945
x		7.596	TM 1003.000	22.960	182.400	1.384	2.342	7.507	0.345	0.332	0.864
s		0.292	TM 3.387	0.244	2.859	0.055	0.106	0.397	0.041	0.022	0.073
%RSD		3.846	TM 0.338	1.064	1.567	4.007	4.505	5.292	11.980	6.743	8.437
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	1.200	1.132	-0.736	-0.462	19.500	18.090	1.225	0.401	-1.182	104.600
2	12:26:51	1.896	1.169	0.236	0.032	18.030	17.940	2.313	1.094	-4.584	105.000
3	12:27:18	1.725	0.957	-1.164	-0.511	17.930	18.880	-2.490	-0.499	-0.350	105.000
x		1.607	1.086	-0.555	-0.314	18.490	18.300	0.349	0.332	-2.039	104.800
s		0.363	0.113	0.718	0.300	0.880	0.500	2.519	0.799	2.243	0.209
%RSD		22.560	10.410	129.400	95.700	4.757	2.730	721.000	240.700	110.000	0.199
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	82.5%	0.088	0.002	0.015	1.912	-0.004	0.003	0.056	0.058	82.3%
2	12:26:51	83.4%	0.037	0.094	0.061	2.343	-0.004	0.002	0.042	0.060	81.8%
3	12:27:18	82.9%	0.112	0.078	0.039	2.253	-0.008	-0.000	0.091	0.085	83.3%
x		83.0%	0.079	0.058	0.039	2.169	-0.005	0.002	0.063	0.068	82.4%
s		0.5%	0.039	0.050	0.023	0.227	0.002	0.002	0.025	0.015	0.8%
%RSD		0.5	48.980	85.460	59.910	10.470	35.890	104.800	40.230	22.580	0.9
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:24	0.092	0.099	0.079	0.063	19.930	18.250	88.3%	0.065	0.062	-0.008
2	12:26:51	0.103	0.110	0.061	0.076	18.870	18.540	88.8%	0.073	0.064	-0.010
3	12:27:18	0.112	0.106	0.080	0.099	19.110	18.170	89.0%	0.062	0.065	-0.012
x		0.102	0.105	0.074	0.080	19.310	18.320	88.7%	0.067	0.063	-0.010
s		0.010	0.006	0.011	0.018	0.555	0.195	0.3%	0.006	0.002	0.002
%RSD		10.120	5.671	14.380	22.900	2.877	1.063	0.4	8.476	2.546	20.540
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	12:26:24	-0.015	-0.011	93.2%							
2	12:26:51	-0.017	-0.013	95.8%							
3	12:27:18	-0.011	-0.011	95.1%							
x		-0.014	-0.011	94.7%							
s		0.003	0.001	1.4%							
%RSD		20.820	11.200	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	77.0%	-0.003	7.080	6.899	-51.300	T 7325.000	T 20620.000	T 20660.000	T 24210.000	T 123.300
2	12:32:42	75.4%	0.018	7.256	6.823	-51.510	T 7417.000	T 20800.000	T 20590.000	T 24590.000	129.100
3	12:33:09	76.3%	0.038	6.144	6.974	-48.270	T 7366.000	T 20980.000	T 21030.000	T 24580.000	T 125.000
x		76.3%	0.018	6.827	6.898	-50.360	T 7369.000	T 20800.000	T 20760.000	T 24460.000	T 125.800
s		0.8%	0.021	0.597	0.076	1.812	T 45.910	T 180.700	T 232.300	T 213.800	T 2.996
%RSD		1.0	118.100	8.750	1.096	3.598	T 0.623	T 0.869	T 1.119	T 0.874	T 2.381

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	T 3754.000	T 43120.000	1698.000	56530.000	T 56000.000	72.1%	2.891	-0.823	1.305	9584.000
2	12:32:42	T 3858.000	T 44000.000	1732.000	57420.000	T 56470.000	71.5%	3.626	-0.404	1.307	9269.000
3	12:33:09	T 3768.000	T 43210.000	1727.000	57100.000	T 56180.000	71.8%	3.134	-0.433	1.263	9278.000
x		T 3793.000	T 43450.000	1719.000	57020.000	T 56220.000	71.8%	3.217	-0.553	1.292	9377.000
s		T 56.240	T 484.300	18.240	450.200	T 239.800	0.3%	0.375	0.234	0.025	179.300
%RSD		T 1.482	T 1.115	1.061	0.790	T 0.427	0.4	11.650	42.300	1.920	1.913

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	124.000	2.728	144.900	192.900	0.110	0.567	4.349	0.286	0.229	1.658
2	12:32:42	131.900	2.751	142.700	194.100	0.125	0.527	5.561	0.329	0.311	1.619
3	12:33:09	127.000	2.785	T 140.500	201.600	0.123	0.605	4.777	0.333	0.397	1.646
x		127.600	2.754	T 142.700	196.200	0.119	0.566	4.896	0.316	0.312	1.641
s		3.989	0.029	T 2.186	4.720	0.008	0.039	0.615	0.026	0.084	0.020
%RSD		3.125	1.037	T 1.532	2.406	6.759	6.879	12.550	8.281	26.960	1.218

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	2.312	2.494	-0.062	0.004	11.260	11.650	-0.333	0.076	-1.295	61.230
2	12:32:42	3.076	2.517	-0.147	-0.778	10.830	11.150	-1.809	-0.157	-1.893	61.150
3	12:33:09	3.486	2.620	0.212	0.056	8.880	10.290	-1.213	-0.329	0.430	62.130
x		2.958	2.544	0.001	-0.239	10.320	11.030	-1.118	-0.137	-0.919	61.510
s		0.596	0.067	0.188	0.467	1.267	0.686	0.743	0.204	1.206	0.544
%RSD		20.150	2.623	20300.000	195.500	12.270	6.220	66.440	148.800	131.300	0.885

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	80.4%	-0.126	-0.083	-0.130	0.766	0.027	0.023	0.001	0.009	81.7%
2	12:32:42	80.8%	-0.148	-0.106	-0.095	1.377	0.020	0.024	0.015	0.015	81.9%
3	12:33:09	80.5%	-0.103	-0.073	-0.084	1.298	0.020	0.030	0.001	0.004	82.5%
x		80.6%	-0.126	-0.087	-0.103	1.147	0.023	0.026	0.006	0.009	82.0%
s		0.2%	0.023	0.017	0.024	0.332	0.004	0.004	0.008	0.005	0.4%
%RSD		0.3	18.010	19.620	23.150	28.990	17.670	13.900	135.900	59.250	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:15	0.115	0.145	0.046	0.023	46.530	45.680	88.0%	0.004	-0.003	0.132
2	12:32:42	0.094	0.143	0.054	0.077	47.360	44.920	88.9%	0.004	-0.003	0.108
3	12:33:09	0.087	0.118	0.066	0.062	47.160	45.980	89.4%	0.003	-0.001	0.121
x		0.099	0.136	0.055	0.054	47.010	45.530	88.8%	0.003	-0.003	0.120
s		0.014	0.015	0.010	0.028	0.434	0.546	0.7%	0.001	0.001	0.012
%RSD		14.570	11.130	18.110	51.210	0.924	1.200	0.8	16.000	38.830	9.815

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:32:15	0.119	0.123	96.4%
2	12:32:42	0.123	0.117	96.5%
3	12:33:09	0.099	0.118	97.5%
x		0.114	0.119	96.8%
s		0.013	0.003	0.6%
%RSD		11.570	2.405	0.6

VQ51841-001 4/24/2020 12:37:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	83.8%	-0.015	1.095	1.096	-12.500	-38.070	0.160	0.171	-0.063	0.972
2	12:38:34	83.8%	-0.015	0.627	0.866	-8.064	-37.180	0.171	0.566	0.166	0.905
3	12:39:01	81.0%	-0.015	0.754	1.224	-12.020	-37.280	0.004	-0.027	0.031	0.810
x		82.9%	-0.015	0.826	1.062	-10.860	-37.510	0.111	0.237	0.045	0.896
s		1.6%	0.000	0.242	0.182	2.435	0.485	0.093	0.302	0.115	0.082
%RSD		1.9	2.442	29.270	17.100	22.420	1.293	83.800	127.500	258.700	9.109

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	0.982	T 45700.000	-22.720	1.742	6.420	78.2%	0.028	-0.362	0.303	7901.000
2	12:38:34	0.635	T 46110.000	-21.430	6.826	7.942	77.6%	-0.042	-0.773	0.339	8313.000
3	12:39:01	1.254	T 45980.000	-21.590	2.656	6.194	77.2%	0.065	-0.793	0.334	8388.000
x		0.957	T 45930.000	-21.910	3.741	6.852	77.7%	0.017	-0.642	0.325	8201.000
s		0.310	T 207.700	0.701	2.710	0.951	0.5%	0.055	0.243	0.020	262.200
%RSD		32.390	T 0.452	3.198	72.440	13.870	0.7	316.300	37.820	6.075	3.197

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	-0.431	-0.021	10.510	-2.584	-0.004	0.077	2.952	0.234	0.226	0.580
2	12:38:34	-0.507	-0.038	9.724	-0.738	-0.007	0.074	3.065	0.295	0.159	0.533
3	12:39:01	-0.148	-0.033	10.050	-2.447	-0.007	0.070	3.988	0.277	0.203	0.653
x		-0.362	-0.031	10.100	-1.923	-0.006	0.074	3.335	0.268	0.196	0.589
s		0.189	0.008	0.397	1.028	0.002	0.004	0.568	0.032	0.034	0.060
%RSD		52.190	27.220	3.934	53.490	28.670	5.264	17.050	11.780	17.300	10.270

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	1.205	0.762	-0.550	-0.705	7.414	8.594	-1.294	-0.138	-1.197	0.001
2	12:38:34	1.134	0.818	-0.066	-0.537	7.760	8.279	1.501	0.681	-3.052	-0.002
3	12:39:01	1.171	0.975	0.162	-0.417	6.859	8.123	-0.386	0.342	-3.565	0.002
x		1.170	0.852	-0.152	-0.553	7.344	8.332	-0.060	0.295	-2.605	0.000
s		0.035	0.111	0.364	0.144	0.455	0.240	1.426	0.412	1.246	0.002
%RSD		3.028	12.970	240.000	26.130	6.191	2.880	2392.000	139.600	47.820	430.400

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	85.6%	-0.161	-0.116	-0.135	-0.604	-0.008	-0.003	-0.003	-0.001	87.7%
2	12:38:34	85.1%	-0.128	-0.127	-0.163	0.383	-0.002	-0.000	-0.003	0.000	87.1%
3	12:39:01	84.5%	-0.141	-0.111	-0.132	-0.250	-0.006	-0.001	-0.003	-0.003	87.7%
x		85.1%	-0.143	-0.118	-0.143	-0.157	-0.005	-0.001	-0.003	-0.001	87.5%
s		0.6%	0.017	0.008	0.017	0.500	0.003	0.001	0.000	0.002	0.3%
%RSD		0.7	11.750	6.770	12.010	318.600	51.150	75.380	2.111	139.200	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:38:07	0.046	0.071	0.039	0.015	0.003	-0.006	91.0%	-0.002	-0.003	-0.002
2	12:38:34	0.054	0.101	0.032	0.047	-0.004	0.008	92.3%	-0.004	-0.006	0.006
3	12:39:01	0.089	0.078	0.046	0.019	-0.004	-0.003	92.5%	-0.003	-0.007	0.005
x		0.063	0.083	0.039	0.027	-0.002	-0.000	91.9%	-0.003	-0.005	0.003
s		0.023	0.016	0.007	0.017	0.004	0.007	0.8%	0.001	0.002	0.004
%RSD		36.510	18.790	18.350	64.470	232.500	8759.000	0.9	25.880	34.460	143.500

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:38:07	0.009	0.002	101.2%
2	12:38:34	-0.002	0.003	102.6%
3	12:39:01	0.006	0.003	103.3%
x		0.004	0.003	102.4%
s		0.005	0.000	1.1%
%RSD		122.500	14.100	1.0

VQ51841-002 4/24/2020 12:43:32 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	76.1%	93.510	102.200	103.100	-11.290	T 1013.000	1159.000	1082.000	1062.000	109.300
2	12:44:26	73.2%	95.640	112.100	106.300	-6.745	1126.000	1204.000	1105.000	1040.000	108.400
3	12:44:53	73.0%	91.870	107.200	106.500	-7.434	1127.000	1181.000	1100.000	1063.000	108.200
x		74.1%	93.673%	107.200	105.300	-8.491	T 108.887%	1181.000	1095.000	105.465%	108.645%
s		1.7%	n/a	4.941	1.875	2.452	T n/a	22.850	11.950	n/a	n/a
%RSD		2.3	2.020	4.609	1.781	28.870	T 6.027	1.935	1.091	1.245	0.514

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	885.800	T 48790.000	926.400	1019.000	1030.000	70.5%	98.290	96.270	97.020	9509.000
2	12:44:26	911.500	T 50230.000	952.600	1031.000	1052.000	68.6%	100.200	95.530	96.480	8606.000
3	12:44:53	890.800	T 49910.000	946.800	1057.000	1045.000	67.5%	102.400	98.590	97.580	7303.000
x		896.000	T 49640.000	94.192%	1036.000	104.244%	68.9%	100.280%	96.796%	97.029%	8473.000
s		13.660	T 752.900	n/a	19.740	n/a	1.5%	n/a	n/a	n/a	1109.000
%RSD		1.525	T 1.517	1.461	1.906	1.082	2.2	2.044	1.649	0.571	13.090

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	1131.000	104.400	T 1028.000	1081.000	97.220	95.930	101.100	94.900	98.230	92.060
2	12:44:26	1125.000	104.900	T 1021.000	1094.000	97.430	96.230	102.700	94.930	100.300	90.610
3	12:44:53	1160.000	106.300	T 1035.000	1095.000	98.400	98.050	99.840	95.150	101.800	90.940
x		1139.000	105.209%	T 1028.000	109.032%	97.684%	96.733%	101.200	94.995%	100.121%	91.201%
s		18.310	n/a	T 6.651	n/a	n/a	n/a	1.408	n/a	n/a	n/a
%RSD		1.608	0.961	T 0.647	0.715	0.647	1.186	1.391	0.144	1.803	0.835

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	99.140	97.900	93.330	96.840	6.186	7.731	477.300	97.280	-0.699	99.200
2	12:44:26	97.430	100.100	93.720	98.490	6.141	6.401	471.500	95.540	-2.140	100.600
3	12:44:53	96.160	100.200	90.810	98.270	6.718	5.348	472.400	95.280	-2.708	100.300
x		97.580	99.400	92.620%	97.860	6.349	6.493	473.800	96.034%	-1.849	100.000
s		1.494	1.300	n/a	0.898	0.321	1.194	3.120	n/a	1.035	0.721
%RSD		1.531	1.308	1.706	0.917	5.055	18.390	0.658	1.127	55.990	0.721

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	76.8%	92.700	94.160	95.470	101.000	94.090	94.680	96.680	97.200	80.8%
2	12:44:26	76.3%	92.850	97.090	96.490	97.450	94.790	94.610	99.360	98.290	80.5%
3	12:44:53	75.8%	93.680	94.080	96.910	100.200	95.180	95.550	99.470	97.960	80.4%
x		76.3%	93.070	95.110	96.290	99.550	94.688%	94.950	98.500	97.817%	80.6%
s		0.5%	0.529	1.712	0.741	1.853	n/a	0.527	1.581	n/a	0.2%
%RSD		0.7	0.569	1.800	0.769	1.861	0.581	0.555	1.605	0.571	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:59	97.640	96.800	97.310	92.470	97.970	96.210	87.2%	97.850	110.300	103.200
2	12:44:26	97.730	98.100	95.890	92.110	100.800	96.730	87.6%	96.580	109.100	103.000
3	12:44:53	97.990	96.850	96.850	93.210	99.160	97.030	86.9%	96.370	110.300	103.600
x		97.780	97.247%	96.680	92.596%	99.310	96.657%	87.2%	96.930	109.914%	103.300
s		0.183	n/a	0.723	n/a	1.432	n/a	0.3%	0.797	n/a	0.317
%RSD		0.187	0.757	0.747	0.602	1.442	0.427	0.4	0.822	0.614	0.307

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:43:59	103.900	107.600	98.1%
2	12:44:26	102.900	107.300	99.3%
3	12:44:53	105.200	108.500	98.9%
x		104.000	107.795%	98.8%
s		1.131	n/a	0.6%
%RSD		1.087	0.594	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	72.2%	0.010	43.570	42.800	421.800	T 71230.000	T 2009.000	2107.000	2143.000	128.000
2	12:50:19	70.5%	0.011	41.940	43.680	407.800	T 72750.000	T 2026.000	2130.000	2171.000	129.000
3	12:50:46	70.8%	0.033	45.760	45.230	410.500	T 71930.000	T 2027.000	2145.000	2167.000	129.300
x		71.2%	0.018	43.760	43.910	413.300	T 71970.000	T 2020.000	2128.000	2160.000	128.800
s		0.9%	0.013	1.921	1.232	7.441	T 760.800	T 10.100	19.020	15.020	0.671
%RSD		1.3	74.000	4.390	2.806	1.800	T 1.057	T 0.500	0.894	0.696	0.521

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	T 2778.000	T 50610.000	T 30120.000	14900.000	14810.000	67.0%	19.120	-0.367	0.984	8745.000
2	12:50:19	T 2827.000	T 50920.000	T 30570.000	14840.000	14890.000	66.5%	19.100	-0.434	1.021	9146.000
3	12:50:46	T 2798.000	T 50820.000	T 29990.000	14800.000	14940.000	66.2%	21.410	-1.045	1.079	9655.000
x		T 2801.000	T 50780.000	T 30230.000	14840.000	14880.000	66.6%	19.870	-0.615	1.028	9182.000
s		T 24.550	T 159.000	T 303.500	49.890	68.750	0.4%	1.328	0.374	0.047	456.200
%RSD		T 0.876	T 0.313	T 1.004	0.336	0.462	0.6	6.684	60.740	4.617	4.969

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	366.500	17.310	384.400	372.800	0.190	3.185	5.847	25.110	26.480	96.860
2	12:50:19	370.300	17.140	T 360.400	389.700	0.216	3.197	6.922	25.300	27.430	97.830
3	12:50:46	366.600	17.590	390.200	383.700	0.191	3.266	6.741	25.870	26.890	96.650
x		367.800	17.350	T 378.300	382.100	0.199	3.216	6.503	25.430	26.930	97.110
s		2.182	0.229	T 15.780	8.601	0.014	0.044	0.576	0.396	0.477	0.628
%RSD		0.593	1.318	T 4.171	2.251	7.286	1.363	8.851	1.557	1.770	0.647

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	98.610	103.100	0.593	0.746	59.200	63.040	2.064	0.684	-2.308	53.240
2	12:50:19	101.000	103.200	0.936	0.145	61.330	62.850	6.830	1.561	-1.669	54.530
3	12:50:46	101.600	105.400	0.570	0.203	62.280	62.060	3.276	1.085	-3.578	53.900
x		100.400	103.900	0.700	0.365	60.940	62.650	4.057	1.110	-2.518	53.890
s		1.580	1.315	0.205	0.331	1.582	0.520	2.477	0.439	0.972	0.643
%RSD		1.573	1.265	29.310	90.850	2.595	0.830	61.070	39.560	38.580	1.193

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	74.5%	1.077	1.282	1.237	0.915	0.062	0.074	0.138	0.135	77.1%
2	12:50:19	74.4%	1.142	1.213	1.437	0.755	0.071	0.050	0.117	0.105	77.9%
3	12:50:46	75.1%	1.295	1.369	1.234	0.696	0.042	0.058	0.112	0.110	77.9%
x		74.7%	1.171	1.288	1.303	0.789	0.058	0.061	0.122	0.117	77.7%
s		0.4%	0.112	0.078	0.116	0.114	0.015	0.012	0.014	0.016	0.5%
%RSD		0.5	9.547	6.088	8.909	14.390	25.820	19.990	11.280	13.830	0.6

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:52	0.497	0.702	0.499	0.461	18.040	17.300	84.9%	0.021	0.022	1.535
2	12:50:19	0.508	0.706	0.500	0.478	18.360	17.270	86.6%	0.019	0.014	1.517
3	12:50:46	0.494	0.680	0.457	0.402	18.760	17.600	87.1%	0.012	0.015	1.641
x		0.500	0.696	0.485	0.447	18.390	17.390	86.2%	0.017	0.017	1.564
s		0.007	0.014	0.024	0.040	0.358	0.182	1.1%	0.005	0.004	0.067
%RSD		1.473	1.952	5.009	8.859	1.948	1.046	1.3	28.710	23.900	4.273

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	12:49:52	1.573	1.626	105.2%
2	12:50:19	1.548	1.626	106.4%
3	12:50:46	1.616	1.650	106.2%
x		1.579	1.634	105.9%
s		0.035	0.014	0.7%
%RSD		2.193	0.836	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	74.3%	-0.013	48.200	53.130	382.100	T 36380.000	T 1348.000	1413.000	1431.000	73.550
2	12:56:11	72.0%	-0.034	51.210	54.470	369.200	T 36480.000	T 1361.000	1420.000	1446.000	73.360
3	12:56:38	71.7%	0.021	52.890	53.210	382.900	T 36280.000	T 1354.000	1434.000	1424.000	71.670
x		72.7%	-0.009	50.770	53.600	378.000	T 36380.000	T 1354.000	1423.000	1433.000	72.860
s		1.4%	0.028	2.375	0.754	7.696	T 104.100	T 6.354	10.460	11.090	1.034
%RSD		2.0	317.100	4.679	1.407	2.036	T 0.286	T 0.469	0.736	0.773	1.419
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	TM 14180.000	T 48060.000	T 2034.000	14270.000	14470.000	69.2%	458.300	-0.493	0.461	13300.000
2	12:56:11	TM 14570.000	T 48580.000	2228.000	14300.000	14390.000	68.1%	454.400	-0.659	0.415	13650.000
3	12:56:38	TM 14390.000	T 47920.000	T 2038.000	13990.000	14410.000	68.0%	462.300	-0.321	0.374	13580.000
x		TM 14380.000	T 48190.000	T 2100.000	14190.000	14430.000	68.4%	458.300	-0.491	0.416	13510.000
s		TM 195.700	T 348.900	T 110.800	170.200	44.280	0.7%	3.951	0.169	0.044	184.400
%RSD		TM 1.361	T 0.724	T 5.274	1.200	0.307	1.0	0.862	34.390	10.470	1.365
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	997.700	12.840	T 942.400	1016.000	0.097	3.320	7.121	1.417	1.442	25.210
2	12:56:11	1007.000	13.030	T 953.400	1025.000	0.134	3.406	7.500	1.415	1.756	24.400
3	12:56:38	1006.000	13.010	T 947.900	1024.000	0.102	3.287	8.739	1.560	1.518	24.210
x		1004.000	12.960	T 947.900	1022.000	0.111	3.338	7.787	1.464	1.572	24.610
s		5.166	0.103	T 5.498	5.066	0.020	0.061	0.847	0.083	0.164	0.529
%RSD		0.515	0.794	T 0.580	0.496	18.120	1.835	10.870	5.686	10.430	2.152
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	27.360	26.880	1.454	-0.548	34.220	35.080	1.821	0.732	-3.075	37.070
2	12:56:11	28.300	27.700	1.140	-0.425	32.710	34.640	-0.615	0.229	-3.062	37.440
3	12:56:38	26.960	27.910	1.842	-0.350	34.350	34.840	-2.473	-0.267	-2.170	37.360
x		27.540	27.500	1.479	-0.441	33.760	34.850	-0.422	0.231	-2.769	37.290
s		0.690	0.544	0.352	0.100	0.912	0.220	2.154	0.500	0.519	0.195
%RSD		2.506	1.979	23.780	22.580	2.702	0.630	509.900	216.100	18.730	0.523
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	76.5%	1.161	1.152	1.185	-0.366	-0.001	0.002	0.006	0.014	79.4%
2	12:56:11	76.5%	1.111	1.116	1.122	0.157	-0.004	0.002	0.035	0.015	79.1%
3	12:56:38	76.8%	1.044	1.105	1.113	-0.117	-0.008	-0.001	0.015	0.020	80.1%
x		76.6%	1.105	1.124	1.140	-0.108	-0.004	0.001	0.019	0.016	79.5%
s		0.2%	0.059	0.025	0.039	0.261	0.003	0.002	0.015	0.003	0.5%
%RSD		0.2	5.320	2.187	3.428	241.000	83.260	197.000	78.830	19.430	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:44	0.226	0.396	1.149	1.108	17.800	17.800	87.5%	0.011	0.007	0.065
2	12:56:11	0.287	0.363	1.187	1.059	18.310	17.380	88.6%	0.011	0.007	0.057
3	12:56:38	0.294	0.387	1.193	1.180	18.050	17.940	88.1%	0.000	0.007	0.090
x		0.269	0.382	1.176	1.116	18.050	17.710	88.1%	0.007	0.007	0.071
s		0.037	0.017	0.024	0.061	0.257	0.289	0.5%	0.006	0.000	0.017
%RSD		13.910	4.447	2.039	5.457	1.423	1.633	0.6	82.840	3.435	24.090
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:55:44	0.080	0.078	97.5%							
2	12:56:11	0.055	0.065	98.9%							
3	12:56:38	0.067	0.078	98.3%							
x		0.068	0.074	98.2%							
s		0.013	0.008	0.7%							
%RSD		18.680	10.660	0.7							

CCV MW12620 4/24/2020 13:01:12 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	75.0%	288.300	287.400	292.600	7.438	T 62180.000	T 61530.000	T 61010.000	T 58730.000	290.300
2	13:02:06	74.0%	289.500	302.300	297.700	5.697	T 62070.000	T 61420.000	T 61800.000	T 58460.000	292.600
3	13:02:34	75.3%	285.000	291.500	289.300	-4.701	T 63050.000	T 60740.000	T 60410.000	T 58890.000	288.700
x		74.8%	95.875%	97.917%	97.732%	2.812	T 104.055%	T 61230.000	T 61070.000	T 97.816%	96.845%
s		0.7%	n/a	n/a	n/a	6.564	T n/a	T 428.700	T 699.700	T n/a	n/a
%RSD		0.9	0.809	2.631	1.457	233.500	T 0.855	T 0.700	T 1.146	T 0.371	0.684

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	T 2740.000	544.800	T 55010.000	59900.000	T 59870.000	72.9%	298.700	295.400	286.500	4031.000
2	13:02:06	T 2806.000	532.600	T 55480.000	60220.000	T 59560.000	72.3%	300.800	301.300	288.900	3043.000
3	13:02:34	T 2760.000	507.700	T 55580.000	61010.000	T 60750.000	72.8%	302.100	298.600	290.100	2750.000
x		T 2769.000	528.400	T 92.258%	60380.000	T 100.099%	72.7%	100.184%	99.478%	96.165%	3275.000
s		T 34.120	18.950	T n/a	572.600	T n/a	0.3%	n/a	n/a	n/a	671.500
%RSD		T 1.232	3.587	T 0.552	0.948	T 1.026	0.4	0.562	0.983	0.625	20.500

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	T 60240.000	306.300	T 60130.000	T 59560.000	285.500	282.100	288.700	271.900	279.100	274.800
2	13:02:06	T 60150.000	310.800	T 61140.000	T 60520.000	291.200	282.200	279.200	269.000	278.700	274.100
3	13:02:34	T 60500.000	311.200	T 60980.000	T 60930.000	291.700	280.700	282.100	272.200	279.900	275.900
x		T 60300.000	103.139%	T 60750.000	T 100.559%	96.487%	93.890%	283.300	271.100	93.074%	91.650%
s		T 178.700	n/a	T 544.000	T n/a	n/a	n/a	4.858	1.797	n/a	n/a
%RSD		T 0.296	0.868	T 0.895	T 1.165	1.196	0.288	1.715	0.663	0.220	0.340

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	282.600	280.600	283.900	282.200	0.365	0.647	1322.000	282.400	-2.068	302.600
2	13:02:06	281.900	284.500	277.700	278.300	0.969	0.589	1294.000	275.800	-1.462	301.900
3	13:02:34	282.300	284.200	280.300	283.500	0.861	-0.492	1339.000	283.500	1.198	306.300
x		282.300	283.100	93.539%	281.300	0.732	0.248	1318.000	93.523%	-0.777	101.194%
s		0.353	2.152	n/a	2.726	0.322	0.642	22.350	n/a	1.738	n/a
%RSD		0.125	0.760	1.104	0.969	44.040	258.400	1.696	1.501	223.500	0.782

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	78.8%	297.200	299.300	297.300	300.600	280.600	282.200	294.600	294.400	79.2%
2	13:02:06	78.6%	301.000	300.100	301.100	293.300	282.300	284.700	294.300	292.300	79.2%
3	13:02:34	78.4%	302.200	301.300	301.900	296.100	283.000	282.300	294.900	295.000	79.4%
x		78.6%	100.058%	100.077%	300.100	296.700	93.996%	283.100	294.600	97.970%	79.2%
s		0.2%	n/a	n/a	2.439	3.664	n/a	1.395	0.292	n/a	0.1%
%RSD		0.3	0.868	0.331	0.813	1.235	0.439	0.493	0.099	0.490	0.2

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:38	300.300	295.600	296.700	285.000	297.400	288.800	85.6%	295.400	T 297.400	297.400
2	13:02:06	298.500	296.900	299.600	284.800	295.100	286.300	86.0%	297.200	T 300.500	297.300
3	13:02:34	301.200	298.700	301.900	286.400	301.000	287.800	87.0%	295.600	T 299.500	297.100
x		100.001%	99.020%	299.400	95.127%	99.284%	95.881%	86.2%	296.100	T 99.697%	99.092%
s		n/a	n/a	2.573	n/a	n/a	n/a	0.7%	1.014	T n/a	n/a
%RSD		0.455	0.525	0.859	0.305	0.994	0.437	0.9	0.343	T 0.531	0.052

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:01:38	297.200	311.800	91.6%
2	13:02:06	297.000	312.400	92.1%
3	13:02:34	297.900	312.200	93.4%
x		99.119%	104.047%	92.4%
s		n/a	n/a	0.9%
%RSD		0.163	0.098	1.0

CCB IM9936-01 4/24/2020 13:07:07 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	81.6%	0.005	2.115	2.443	-4.010	-46.700	1.978	2.794	1.613	-0.011
2	13:08:00	80.9%	0.034	2.511	2.417	4.624	-47.240	1.319	1.110	1.330	-0.007
3	13:08:27	82.6%	0.023	1.665	2.375	-4.113	-47.600	1.447	1.696	1.286	-0.003
x		81.7%	0.021	2.097	2.412	-1.166	-47.180	1.581	1.867	1.410	-0.007
s		0.8%	0.015	0.423	0.034	5.015	0.450	0.349	0.855	0.177	0.004
%RSD		1.0	72.600	20.190	1.426	430.000	0.954	22.100	45.810	12.570	55.730

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	0.733	344.600	-19.860	-1.571	0.778	77.2%	-0.024	0.012	-0.010	14.510
2	13:08:00	-0.197	332.500	-21.500	0.967	-1.838	77.1%	-0.024	0.007	-0.039	8.864
3	13:08:27	-0.704	340.500	-21.620	5.207	-1.212	77.0%	0.012	0.006	-0.002	12.780
x		-0.056	339.200	-20.990	1.534	-0.757	77.1%	-0.012	0.008	-0.017	12.050
s		0.728	6.140	0.985	3.424	1.366	0.1%	0.021	0.003	0.019	2.892
%RSD		1302.000	1.810	4.694	223.200	180.400	0.1	171.600	37.130	112.700	24.000

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	0.513	0.015	-0.381	1.350	0.008	0.028	1.049	-0.040	0.044	-0.188
2	13:08:00	0.546	0.001	-1.098	1.400	0.007	-0.014	1.175	0.005	0.021	-0.208
3	13:08:27	-0.375	-0.000	-0.907	-0.181	0.002	0.010	0.845	-0.019	0.021	-0.222
x		0.228	0.005	-0.795	0.856	0.006	0.008	1.023	-0.018	0.029	-0.206
s		0.522	0.008	0.371	0.898	0.003	0.021	0.167	0.023	0.013	0.017
%RSD		228.900	161.300	46.690	104.900	55.950	261.100	16.280	128.200	46.650	8.467

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	0.020	-0.181	0.015	-0.592	-0.593	-0.333	-1.598	0.011	-2.830	0.007
2	13:08:00	-0.147	-0.143	0.097	-0.544	0.033	0.852	0.757	0.500	-2.786	0.003
3	13:08:27	-0.119	-0.168	-0.020	-0.371	-0.115	-0.489	-0.991	0.096	-2.513	0.005
x		-0.082	-0.164	0.031	-0.502	-0.225	0.010	-0.611	0.202	-2.710	0.005
s		0.090	0.019	0.060	0.116	0.327	0.734	1.223	0.261	0.172	0.002
%RSD		109.300	11.670	194.300	23.060	145.500	7394.000	200.200	129.200	6.333	39.210

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	81.0%	0.479	0.430	0.360	0.067	0.012	0.015	0.013	0.016	82.8%
2	13:08:00	80.3%	0.496	0.427	0.325	0.234	0.007	0.011	-0.000	0.006	82.4%
3	13:08:27	80.5%	0.331	0.317	0.331	-0.240	0.013	0.014	0.004	0.006	82.8%
x		80.6%	0.435	0.392	0.339	0.020	0.011	0.013	0.006	0.010	82.7%
s		0.4%	0.090	0.065	0.019	0.240	0.004	0.002	0.007	0.006	0.2%
%RSD		0.5	20.780	16.490	5.560	1176.000	32.460	13.060	124.100	62.200	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:34	0.111	0.138	0.401	0.325	-0.004	-0.006	87.6%	0.005	0.016	0.020
2	13:08:00	0.127	0.157	0.413	0.370	0.017	0.002	88.5%	0.014	0.003	0.008
3	13:08:27	0.106	0.180	0.421	0.368	0.017	0.002	87.8%	0.008	0.006	0.014
x		0.115	0.158	0.412	0.354	0.010	-0.001	88.0%	0.009	0.008	0.014
s		0.011	0.021	0.010	0.025	0.012	0.004	0.4%	0.004	0.007	0.006
%RSD		9.365	13.210	2.487	7.157	119.300	514.200	0.5	49.150	84.080	41.320

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:07:34	0.017	0.021	98.9%
2	13:08:00	0.012	0.016	99.1%
3	13:08:27	0.018	0.016	99.6%
x		0.016	0.018	99.2%
s		0.003	0.003	0.3%
%RSD		20.610	16.800	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	73.1%	0.009	13.410	13.170	-13.370	T 15330.000	T 1342.000	1418.000	1443.000	M 556.400
2	13:13:51	71.3%	0.010	14.310	13.010	-14.660	T 15000.000	T 1358.000	1439.000	1445.000	M 558.600
3	13:14:18	71.0%	-0.012	12.360	12.110	-17.990	T 15000.000	T 1321.000	1394.000	1444.000	M 550.900
x		71.8%	0.002	13.360	12.760	-15.340	T 15110.000	T 1340.000	1417.000	1444.000	M 555.300
s		1.1%	0.012	0.976	0.575	2.386	T 192.100	T 18.600	22.400	0.867	M 3.983
%RSD		1.6	519.100	7.305	4.507	15.550	T 1.271	T 1.388	1.581	0.060	M 0.717

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	T 3936.000	T 48790.000	1742.000	14840.000	14900.000	68.2%	3.098	-0.387	4.567	5052.000
2	13:13:51	T 3986.000	T 49840.000	1721.000	14590.000	14700.000	68.4%	3.046	0.316	4.521	4929.000
3	13:14:18	T 3903.000	T 48670.000	1702.000	14720.000	14750.000	67.7%	3.163	0.608	4.624	4766.000
x		T 3942.000	T 49100.000	1722.000	14710.000	14780.000	68.1%	3.102	0.179	4.570	4916.000
s		T 41.570	T 643.100	20.360	126.400	101.600	0.4%	0.059	0.512	0.052	143.100
%RSD		T 1.055	T 1.310	1.182	0.859	0.688	0.6	1.893	286.100	1.130	2.912

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	965.000	12.200	T 888.400	954.600	0.183	2.632	4.649	19.340	20.420	43.920
2	13:13:51	930.900	12.080	T 881.400	933.600	0.183	2.388	5.311	19.010	19.800	43.340
3	13:14:18	938.100	12.230	T 875.100	948.500	0.142	2.363	4.957	19.080	19.870	43.190
x		944.700	12.170	T 881.600	945.500	0.169	2.461	4.972	19.140	20.030	43.480
s		18.010	0.082	T 6.634	10.820	0.024	0.149	0.331	0.173	0.340	0.385
%RSD		1.906	0.674	T 0.752	1.144	13.890	6.042	6.656	0.903	1.699	0.886

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	46.630	47.080	-0.129	-0.279	21.200	20.100	0.083	0.205	-1.768	39.410
2	13:13:51	45.740	46.660	-0.226	-0.765	22.680	20.080	0.423	0.387	-2.666	39.510
3	13:14:18	45.740	46.790	-0.237	-0.789	20.870	21.520	-1.142	0.219	-3.903	39.840
x		46.040	46.840	-0.197	-0.611	21.580	20.570	-0.212	0.270	-2.779	39.590
s		0.515	0.218	0.060	0.288	0.968	0.828	0.823	0.101	1.072	0.223
%RSD		1.120	0.464	30.210	47.140	4.487	4.025	388.300	37.310	38.570	0.563

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	75.4%	1.430	1.690	1.521	-0.022	0.002	0.019	0.033	0.056	79.1%
2	13:13:51	75.0%	1.645	1.509	1.584	-0.171	0.011	0.017	0.014	0.049	78.7%
3	13:14:18	75.2%	1.486	1.618	1.533	-0.131	0.006	0.014	0.019	0.025	78.9%
x		75.2%	1.520	1.606	1.546	-0.108	0.006	0.017	0.022	0.044	78.9%
s		0.2%	0.111	0.091	0.034	0.077	0.005	0.002	0.010	0.016	0.2%
%RSD		0.3	7.310	5.683	2.168	71.620	74.030	14.220	45.150	36.920	0.2

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:24	0.496	0.685	0.492	0.482	21.380	20.400	85.9%	0.004	0.005	1.478
2	13:13:51	0.482	0.721	0.562	0.496	21.570	20.630	86.1%	0.012	0.005	1.595
3	13:14:18	0.373	0.721	0.563	0.479	21.540	21.000	85.8%	0.007	-0.000	1.580
x		0.451	0.709	0.539	0.486	21.490	20.680	85.9%	0.007	0.003	1.551
s		0.067	0.021	0.041	0.009	0.104	0.303	0.1%	0.004	0.003	0.064
%RSD		14.980	2.928	7.557	1.801	0.486	1.468	0.2	54.450	90.280	4.104

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:13:24	1.504	1.558	97.5%
2	13:13:51	1.491	1.584	97.7%
3	13:14:18	1.554	1.614	97.3%
x		1.517	1.585	97.5%
s		0.033	0.028	0.2%
%RSD		2.195	1.772	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	70.3%	95.630	104.200	101.900	-12.100	T 16270.000	T 2302.000	2418.000	2502.000	M 690.800
2	13:19:40	70.4%	94.490	110.700	109.200	-8.003	T 16070.000	T 2334.000	2477.000	2520.000	M 690.300
3	13:20:08	68.9%	95.500	105.400	106.200	-15.660	T 16120.000	T 2351.000	2449.000	2480.000	M 689.400
x		69.9%	95.210	106.800	105.800	-11.920	T 16150.000	T 2329.000	2448.000	2501.000	M 690.200
s		0.8%	0.626	3.477	3.648	3.833	T 101.700	T 24.890	29.470	19.990	M 0.718
%RSD		1.2	0.658	3.256	3.448	32.150	T 0.629	T 1.069	1.204	0.799	M 0.104

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	T 4684.000	T 47890.000	T 2477.000	15630.000	15850.000	66.4%	102.100	95.940	100.400	6171.000
2	13:19:40	T 4651.000	T 48790.000	T 2448.000	15990.000	15950.000	65.8%	103.000	97.470	102.100	4887.000
3	13:20:08	T 4733.000	T 48610.000	T 2449.000	15690.000	15950.000	65.5%	104.800	96.910	100.500	5447.000
x		T 4689.000	T 48430.000	T 2458.000	15770.000	15920.000	65.9%	103.300	96.770	101.000	5502.000
s		T 41.360	T 477.500	T 16.360	190.500	57.190	0.5%	1.366	0.776	0.953	644.000
%RSD		T 0.882	T 0.986	T 0.665	1.208	0.359	0.7	1.323	0.802	0.944	11.710

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	2063.000	117.600	T 1876.000	2018.000	97.120	99.270	104.000	114.600	118.600	134.400
2	13:19:40	2067.000	116.800	T 1875.000	1997.000	96.620	98.870	100.100	112.800	118.800	134.000
3	13:20:08	2040.000	116.700	T 1888.000	2003.000	96.510	97.900	102.600	114.000	119.600	133.500
x		2056.000	117.000	T 1880.000	2006.000	96.750	98.680	102.200	113.800	119.000	134.000
s		14.660	0.529	T 6.988	10.850	0.325	0.707	1.957	0.920	0.535	0.435
%RSD		0.713	0.452	T 0.372	0.541	0.336	0.716	1.914	0.809	0.449	0.324

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	140.200	143.600	89.890	91.900	19.980	22.770	452.900	92.270	-0.342	139.700
2	13:19:40	141.000	144.300	90.730	96.330	21.120	19.850	448.500	90.740	-1.526	141.200
3	13:20:08	142.700	145.700	93.210	94.780	19.020	20.840	448.700	90.930	-3.155	139.500
x		141.300	144.500	91.270	94.340	20.040	21.150	450.000	91.310	-1.675	140.100
s		1.276	1.054	1.725	2.247	1.050	1.484	2.481	0.836	1.412	0.960
%RSD		0.903	0.729	1.889	2.382	5.240	7.017	0.551	0.915	84.340	0.685

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	73.5%	95.700	96.980	98.810	99.920	93.570	93.650	98.620	97.810	77.1%
2	13:19:40	72.7%	95.740	95.510	98.670	96.310	92.780	94.080	98.750	97.360	76.9%
3	13:20:08	73.3%	96.860	96.340	98.340	99.790	93.580	93.840	99.050	97.830	77.4%
x		73.2%	96.100	96.280	98.610	98.670	93.310	93.860	98.810	97.670	77.1%
s		0.5%	0.659	0.741	0.240	2.047	0.456	0.219	0.223	0.266	0.3%
%RSD		0.6	0.686	0.769	0.243	2.074	0.489	0.233	0.225	0.272	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	99.890	98.420	98.550	94.680	119.000	116.300	84.7%	95.890	108.800	104.900
2	13:19:40	100.900	98.110	99.890	93.870	123.700	116.100	85.3%	96.700	109.500	105.000
3	13:20:08	99.010	98.910	99.550	94.130	121.100	116.500	85.4%	96.600	109.000	104.300
x		99.920	98.480	99.330	94.230	121.300	116.300	85.1%	96.400	109.100	104.700
s		0.931	0.401	0.700	0.410	2.375	0.202	0.4%	0.444	0.352	0.390
%RSD		0.931	0.407	0.705	0.435	1.958	0.174	0.4	0.461	0.322	0.373

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:19:13	106.200	109.900	96.0%
2	13:19:40	104.900	109.200	96.6%
3	13:20:08	106.200	109.600	97.0%
x		105.800	109.500	96.5%
s		0.750	0.341	0.5%
%RSD		0.708	0.312	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	71.1%	96.460	100.700	101.000	-21.030	T 16140.000	T 2312.000	2472.000	2554.000	M 569.600
2	13:25:32	70.1%	94.520	114.700	107.700	-11.100	T 16090.000	T 2327.000	2483.000	2563.000	M 570.700
3	13:25:59	67.3%	96.160	108.300	112.100	-9.052	T 16440.000	T 2323.000	2428.000	2498.000	M 554.600
x		69.5%	95.720	107.900	106.900	-13.730	T 16230.000	T 2321.000	2461.000	2538.000	M 564.900
s		2.0%	1.045	7.012	5.566	6.405	T 186.400	T 8.157	29.080	35.630	M 8.966
%RSD		2.8	1.092	6.498	5.205	46.660	T 1.149	T 0.351	1.182	1.404	M 1.587

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	T 4748.000	T 48960.000	T 2434.000	16100.000	16100.000	66.2%	105.700	97.680	100.000	5437.000
2	13:25:32	T 4683.000	T 49630.000	T 2483.000	15780.000	16050.000	65.7%	104.400	96.670	100.400	5126.000
3	13:25:59	T 4877.000	T 50570.000	T 2530.000	16170.000	15890.000	64.9%	101.500	96.980	100.300	5789.000
x		T 4769.000	T 49720.000	T 2482.000	16010.000	16020.000	65.6%	103.900	97.110	100.200	5450.000
s		T 98.670	T 807.800	T 47.960	203.400	110.600	0.7%	2.102	0.521	0.185	331.800
%RSD		T 2.069	T 1.625	T 1.932	1.270	0.690	1.0	2.024	0.537	0.184	6.088

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	2037.000	116.900	T 1878.000	2031.000	96.830	99.270	100.900	113.000	119.100	135.300
2	13:25:32	2051.000	115.500	T 1879.000	2014.000	97.030	98.200	102.200	110.600	115.700	131.400
3	13:25:59	2061.000	117.000	T 1882.000	2036.000	96.700	98.280	100.300	112.000	116.900	134.400
x		2050.000	116.500	T 1880.000	2027.000	96.850	98.580	101.100	111.800	117.300	133.700
s		11.990	0.814	T 2.117	11.500	0.162	0.598	1.000	1.223	1.749	2.053
%RSD		0.585	0.699	T 0.113	0.567	0.167	0.607	0.988	1.093	1.492	1.536

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	143.900	145.600	93.190	93.760	24.980	23.250	467.700	95.760	-2.519	139.700
2	13:25:32	146.000	145.800	91.110	95.700	23.540	22.900	444.500	90.160	-2.197	139.900
3	13:25:59	146.400	146.600	91.010	95.940	23.670	22.440	434.400	88.440	-2.160	140.600
x		145.400	146.000	91.770	95.130	24.060	22.860	448.900	91.450	-2.292	140.100
s		1.320	0.530	1.227	1.197	0.795	0.408	17.110	3.830	0.198	0.441
%RSD		0.907	0.363	1.337	1.259	3.302	1.784	3.813	4.188	8.620	0.315

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	73.1%	96.200	97.850	99.970	99.490	94.230	94.020	97.650	98.460	76.6%
2	13:25:32	73.1%	96.070	98.610	98.920	98.120	92.840	93.050	98.140	97.870	77.2%
3	13:25:59	72.8%	97.520	96.370	99.560	100.600	93.590	93.790	99.370	98.260	76.4%
x		73.0%	96.600	97.610	99.480	99.400	93.550	93.620	98.390	98.200	76.7%
s		0.2%	0.805	1.136	0.525	1.244	0.692	0.509	0.884	0.297	0.4%
%RSD		0.3	0.834	1.163	0.527	1.251	0.740	0.544	0.899	0.303	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:05	100.500	99.800	99.680	94.540	120.900	117.000	84.0%	95.930	110.400	105.600
2	13:25:32	99.450	97.640	100.100	94.220	121.400	117.300	85.3%	97.750	110.400	105.500
3	13:25:59	100.200	98.660	99.440	93.970	123.300	117.300	84.8%	96.680	110.300	106.400
x		100.000	98.700	99.720	94.250	121.900	117.200	84.7%	96.780	110.400	105.900
s		0.530	1.078	0.306	0.286	1.282	0.185	0.6%	0.913	0.057	0.510
%RSD		0.530	1.092	0.307	0.304	1.052	0.158	0.7	0.944	0.052	0.481

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:25:05	105.400	110.000	96.1%
2	13:25:32	104.100	109.000	96.7%
3	13:25:59	106.100	110.200	96.6%
x		105.200	109.700	96.5%
s		1.029	0.655	0.3%
%RSD		0.978	0.597	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	77.9%	-0.014	4.057	3.679	-5.241	T 2964.000	317.300	303.100	289.500	112.200
2	13:31:24	77.4%	0.017	5.026	3.885	-7.793	T 3011.000	315.500	296.700	292.900	110.400
3	13:31:51	75.8%	0.008	4.633	3.887	-11.760	T 3022.000	323.500	316.000	299.600	114.700
x		77.0%	0.003	4.572	3.817	-8.264	T 2999.000	318.800	305.200	294.000	112.400
s		1.1%	0.016	0.487	0.120	3.284	T 30.590	4.225	9.837	5.120	2.168
%RSD		1.4	452.500	10.660	3.139	39.730	T 1.020	1.326	3.223	1.742	1.928

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	T 787.400	10430.000	324.100	3070.000	2946.000	73.5%	0.635	0.097	0.889	1383.000
2	13:31:24	868.600	10440.000	326.100	3087.000	2969.000	72.0%	0.784	-0.127	0.947	1600.000
3	13:31:51	883.500	10590.000	329.500	2968.000	2968.000	71.6%	0.557	0.074	0.899	1561.000
x		T 846.500	10490.000	326.600	3042.000	2961.000	72.4%	0.659	0.015	0.912	1515.000
s		T 51.720	90.530	2.760	64.220	12.720	1.0%	0.115	0.123	0.031	115.300
%RSD		T 6.110	0.863	0.845	2.111	0.429	1.4	17.490	845.700	3.399	7.613

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	186.300	2.359	197.800	187.800	0.039	0.541	1.886	3.961	4.169	9.022
2	13:31:24	188.300	2.405	197.800	191.300	0.025	0.568	0.946	3.845	4.269	8.917
3	13:31:51	192.600	2.467	197.500	186.800	0.026	0.496	2.255	4.130	3.996	9.133
x		189.100	2.410	197.700	188.600	0.030	0.535	1.696	3.979	4.145	9.024
s		3.179	0.054	0.174	2.355	0.008	0.036	0.675	0.143	0.139	0.108
%RSD		1.681	2.256	0.088	1.248	25.670	6.764	39.790	3.605	3.343	1.198

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	8.753	9.845	-0.142	-0.562	5.373	4.458	-2.580	-0.340	-1.722	8.068
2	13:31:24	9.694	9.783	0.113	-0.962	4.343	4.475	1.357	0.503	-1.982	8.130
3	13:31:51	9.308	10.380	-0.051	-0.105	4.394	3.536	1.670	0.611	-2.270	8.046
x		9.252	10.000	-0.027	-0.543	4.703	4.156	0.149	0.258	-1.991	8.081
s		0.473	0.328	0.129	0.429	0.580	0.537	2.369	0.521	0.274	0.044
%RSD		5.118	3.279	483.200	79.020	12.340	12.920	1591.000	201.700	13.780	0.540

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	78.0%	0.283	0.352	0.336	0.079	0.004	0.008	-0.000	0.028	80.9%
2	13:31:24	77.7%	0.286	0.387	0.308	-0.382	-0.001	0.009	0.004	0.005	80.9%
3	13:31:51	77.6%	0.290	0.391	0.350	-0.650	0.002	0.006	-0.000	0.010	80.2%
x		77.8%	0.287	0.377	0.331	-0.318	0.001	0.008	0.001	0.014	80.7%
s		0.2%	0.004	0.021	0.021	0.369	0.002	0.002	0.003	0.012	0.4%
%RSD		0.2	1.306	5.705	6.467	116.200	155.000	22.940	234.900	84.640	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:57	0.120	0.227	0.082	0.096	4.236	4.161	87.1%	0.043	0.049	0.311
2	13:31:24	0.107	0.216	0.078	0.071	4.508	4.128	87.5%	0.054	0.044	0.301
3	13:31:51	0.126	0.191	0.077	0.066	4.375	4.304	86.7%	0.034	0.043	0.298
x		0.118	0.211	0.079	0.078	4.373	4.198	87.1%	0.044	0.046	0.304
s		0.010	0.018	0.003	0.016	0.136	0.093	0.4%	0.010	0.003	0.007
%RSD		8.337	8.608	3.741	21.040	3.111	2.220	0.5	22.100	6.632	2.213

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:30:57	0.330	0.324	98.5%
2	13:31:24	0.289	0.311	98.6%
3	13:31:51	0.308	0.316	99.3%
x		0.309	0.317	98.8%
s		0.021	0.007	0.5%
%RSD		6.654	2.120	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	72.2%	0.010	26.650	24.580	-14.300	T 42070.000	T 5450.000	5687.000	6046.000	T 84.690
2	13:37:14	71.6%	-0.012	24.020	23.780	-20.390	T 43010.000	T 5281.000	5596.000	6082.000	84.780
3	13:37:41	70.8%	-0.012	22.310	25.040	-15.190	T 42750.000	T 5402.000	5761.000	6092.000	87.700
x		71.5%	-0.005	24.330	24.470	-16.630	T 42610.000	T 5377.000	5681.000	6073.000	T 85.730
s		0.7%	0.012	2.188	0.638	3.287	T 487.100	T 87.130	82.740	24.420	T 1.714
%RSD		1.0	258.500	8.993	2.609	19.770	T 1.143	T 1.620	1.456	0.402	T 2.000

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	TM 11080.000	T 49640.000	T 7032.000	18220.000	18700.000	69.3%	3.325	0.990	1.271	10810.000
2	13:37:14	TM 10920.000	T 49630.000	T 7054.000	18310.000	18710.000	68.0%	5.283	1.550	1.227	10920.000
3	13:37:41	TM 11230.000	T 50580.000	T 7100.000	18840.000	18990.000	67.6%	2.494	1.244	1.225	11510.000
x		TM 11080.000	T 49950.000	T 7062.000	18460.000	18800.000	68.3%	3.701	1.261	1.241	11080.000
s		TM 153.900	T 549.200	T 34.710	331.700	168.400	0.9%	1.432	0.280	0.026	376.700
%RSD		TM 1.389	T 1.099	T 0.491	1.797	0.896	1.4	38.690	22.230	2.073	3.400

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	93.910	5.380	94.260	108.100	0.086	1.502	3.291	3.158	3.346	13.470
2	13:37:14	96.770	5.479	95.320	115.500	0.098	1.623	3.567	3.110	3.574	12.840
3	13:37:41	99.580	5.495	97.990	115.700	0.118	1.743	3.224	3.230	3.447	12.860
x		96.750	5.451	95.860	113.100	0.101	1.623	3.361	3.166	3.456	13.060
s		2.835	0.062	1.918	4.307	0.016	0.121	0.182	0.060	0.114	0.358
%RSD		2.930	1.139	2.001	3.808	15.870	7.436	5.406	1.907	3.310	2.744

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	15.370	14.130	0.559	-0.233	62.700	63.370	1.009	0.512	-2.693	127.000
2	13:37:14	13.680	14.140	0.298	-0.351	62.590	60.750	-0.209	0.104	-1.440	126.200
3	13:37:41	15.240	14.800	0.069	-0.128	62.730	64.350	0.727	0.103	0.097	127.300
x		14.760	14.360	0.309	-0.237	62.670	62.820	0.509	0.240	-1.345	126.800
s		0.943	0.383	0.245	0.112	0.074	1.865	0.637	0.236	1.397	0.565
%RSD		6.385	2.665	79.380	46.990	0.118	2.969	125.200	98.520	103.900	0.446

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	75.2%	1.558	1.765	1.634	2.345	-0.006	0.004	-0.001	-0.003	78.4%
2	13:37:14	75.2%	1.682	1.600	1.600	2.000	0.002	0.005	-0.000	0.012	78.4%
3	13:37:41	75.3%	1.575	1.554	1.641	-0.095	0.002	0.004	-0.005	0.013	78.5%
x		75.2%	1.605	1.640	1.625	1.417	-0.001	0.004	-0.002	0.007	78.4%
s		0.1%	0.067	0.111	0.022	1.321	0.005	0.001	0.003	0.009	0.1%
%RSD		0.1	4.202	6.764	1.352	93.220	469.200	17.990	135.500	121.200	0.1

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:48	0.150	0.204	0.468	0.417	48.970	48.840	85.1%	0.026	0.021	0.231
2	13:37:14	0.132	0.183	0.473	0.487	51.040	48.310	86.2%	0.020	0.023	0.223
3	13:37:41	0.129	0.188	0.560	0.422	50.250	47.550	87.2%	0.016	0.019	0.212
x		0.137	0.192	0.500	0.442	50.090	48.230	86.2%	0.021	0.021	0.222
s		0.011	0.011	0.052	0.039	1.047	0.645	1.1%	0.005	0.002	0.010
%RSD		8.392	5.725	10.380	8.849	2.091	1.337	1.3	23.370	8.808	4.451

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:36:48	0.239	0.231	95.6%
2	13:37:14	0.184	0.221	96.8%
3	13:37:41	0.217	0.231	97.6%
x		0.213	0.227	96.7%
s		0.028	0.006	1.0%
%RSD		13.000	2.544	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	70.4%	0.022	385.900	430.700	55.660	T 47400.000	T 5502.000	T 5512.000	T 9732.000	T 282.200
2	13:43:06	68.7%	-0.011	379.800	430.700	63.560	T 46450.000	T 5330.000	5989.000	T 9405.000	T 268.500
3	13:43:33	68.1%	0.001	390.400	439.900	68.960	T 48260.000	T 5407.000	6028.000	T 9619.000	T 272.600
x		69.1%	0.004	385.400	433.800	62.730	T 47370.000	T 5413.000	T 5843.000	T 9585.000	T 274.400
s		1.2%	0.017	5.328	5.291	6.690	T 904.800	T 85.810	T 287.500	T 165.700	T 7.026
%RSD		1.8	445.300	1.383	1.220	10.670	T 1.910	T 1.585	T 4.920	T 1.728	T 2.560
Run	**Time**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	T 5303.000	T 39600.000	T 16020.000	M 112900.000	TM 111100.000	65.1%	13.340	2.638	2.994	5449.000
2	13:43:06	T 5341.000	T 39170.000	T 15660.000	M 112100.000	TM 112000.000	65.1%	13.110	2.783	2.729	5170.000
3	13:43:33	T 5294.000	T 39620.000	T 16030.000	M 115200.000	TM 113400.000	63.1%	17.250	3.163	2.861	5045.000
x		T 5313.000	T 39460.000	T 15900.000	M 113400.000	TM 112200.000	64.4%	14.570	2.861	2.861	5221.000
s		T 25.240	T 258.000	T 213.500	M 1614.000	TM 1168.000	1.2%	2.330	0.271	0.132	206.500
%RSD		T 0.475	T 0.654	T 1.342	M 1.423	TM 1.041	1.8	16.000	9.482	4.627	3.955
Run	**Time**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	2595.000	310.600	T 2408.000	2674.000	2.349	19.880	20.950	37.980	39.280	272.100
2	13:43:06	2540.000	306.000	T 2407.000	2657.000	2.215	19.750	22.720	37.520	38.340	271.900
3	13:43:33	2612.000	313.500	T 2457.000	2738.000	2.335	19.990	22.220	38.200	40.250	270.500
x		2582.000	310.000	T 2424.000	2689.000	2.300	19.870	21.960	37.900	39.290	271.500
s		37.700	3.769	T 28.450	42.680	0.074	0.122	0.914	0.348	0.958	0.893
%RSD		1.460	1.216	T 1.174	1.587	3.206	0.615	4.164	0.919	2.439	0.329
Run	**Time**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**	**82Kr**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	280.400	289.100	3.675	-0.143	1340.000	1340.000	6.800	2.083	-6.627	400.500
2	13:43:06	282.300	287.400	3.754	-0.117	1350.000	1336.000	6.912	1.720	-3.721	400.500
3	13:43:33	281.700	291.700	3.342	0.147	1357.000	1383.000	7.641	1.415	-0.148	400.000
x		281.400	289.400	3.590	-0.038	1349.000	1353.000	7.118	1.739	-3.499	400.300
s		0.991	2.133	0.219	0.161	8.619	26.200	0.457	0.335	3.245	0.301
%RSD		0.352	0.737	6.089	425.800	0.639	1.936	6.423	19.240	92.750	0.075
Run	**Time**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	72.8%	47.920	48.480	49.490	5.643	0.127	0.125	0.374	0.579	75.0%
2	13:43:06	72.1%	47.960	49.000	49.430	7.197	0.123	0.115	0.290	0.572	75.1%
3	13:43:33	72.1%	48.500	49.030	48.770	8.057	0.123	0.124	0.344	0.549	74.9%
x		72.3%	48.130	48.840	49.230	6.965	0.124	0.121	0.336	0.566	75.0%
s		0.4%	0.324	0.310	0.398	1.224	0.002	0.006	0.043	0.016	0.1%
%RSD		0.6	0.673	0.634	0.809	17.570	1.706	4.658	12.740	2.750	0.2
Run	**Time**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:38	0.795	0.892	19.780	18.580	107.100	103.800	84.3%	0.093	0.094	52.840
2	13:43:06	0.751	0.899	19.760	18.480	108.700	103.500	84.0%	0.088	0.109	52.950
3	13:43:33	0.794	0.889	19.690	18.170	109.200	102.900	84.2%	0.097	0.100	53.920
x		0.780	0.893	19.740	18.410	108.300	103.400	84.2%	0.093	0.101	53.240
s		0.025	0.005	0.046	0.213	1.121	0.471	0.1%	0.005	0.007	0.597
%RSD		3.265	0.553	0.231	1.157	1.034	0.455	0.1	4.927	7.168	1.121
Run	**Time**	**207Pb**	**208Pb**	**209Bi**							
		ppb	ppb	ppb							
1	13:42:38	50.920	53.550	92.6%							
2	13:43:06	50.530	53.480	92.8%							
3	13:43:33	51.750	54.450	92.9%							
x		51.070	53.820	92.7%							
s		0.623	0.541	0.2%							
%RSD		1.220	1.005	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	69.0%	-0.034	2.409	3.305	-86.300	T 43890.000	191.800	187.300	338.300	T 97.410
2	13:48:57	67.7%	-0.011	2.626	2.906	-86.350	T 44110.000	192.100	191.700	352.500	108.600
3	13:49:25	66.1%	-0.010	2.065	2.635	-85.820	T 43830.000	189.500	186.600	343.000	106.700
x		67.6%	-0.018	2.367	2.949	-86.160	T 43940.000	191.100	188.500	344.600	T 104.200
s		1.5%	0.014	0.283	0.337	0.293	T 146.300	1.419	2.724	7.233	T 5.993
%RSD		2.2	73.940	11.950	11.430	0.340	T 0.333	0.743	1.445	2.099	T 5.749

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	T 8608.000	T 40140.000	T 64760.000	M 197500.000	TM 194100.000	64.7%	0.943	1.778	26.530	5184.000
2	13:48:57	T 8864.000	T 41970.000	T 65560.000	M 199600.000	TM 196700.000	63.0%	1.541	1.878	27.810	5250.000
3	13:49:25	T 8835.000	T 40540.000	T 64190.000	M 194800.000	TM 194900.000	63.6%	1.221	1.846	26.560	5039.000
x		T 8769.000	T 40880.000	T 64840.000	M 197300.000	TM 195200.000	63.8%	1.235	1.834	26.960	5157.000
s		T 139.900	T 965.300	T 689.500	M 2404.000	TM 1334.000	0.9%	0.299	0.051	0.731	108.200
%RSD		T 1.595	T 2.361	T 1.063	M 1.218	TM 0.683	1.4	24.230	2.779	2.711	2.097

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	28.950	0.907	22.840	234.400	0.289	3.075	5.961	11.750	12.210	4.962
2	13:48:57	27.470	0.941	24.690	237.900	0.337	3.263	6.522	11.530	12.520	5.252
3	13:49:25	27.750	0.884	22.300	229.000	0.320	3.224	4.898	11.890	12.080	5.159
x		28.060	0.911	23.270	233.800	0.316	3.187	5.794	11.720	12.270	5.124
s		0.783	0.028	1.255	4.483	0.024	0.099	0.825	0.184	0.224	0.148
%RSD		2.790	3.108	5.394	1.917	7.683	3.119	14.240	1.567	1.829	2.886

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	10.040	8.285	-0.685	1.232	82.870	81.830	7.117	1.573	-1.214	TM 1404.000
2	13:48:57	9.746	8.770	0.133	1.367	82.680	79.700	10.470	2.643	-4.373	TM 1413.000
3	13:49:25	9.257	8.137	-0.096	1.375	77.060	81.690	5.551	1.674	-4.704	TM 1406.000
x		9.681	8.397	-0.216	1.325	80.870	81.080	7.713	1.963	-3.430	TM 1408.000
s		0.395	0.332	0.422	0.081	3.303	1.192	2.514	0.591	1.927	TM 4.896
%RSD		4.084	3.947	195.400	6.078	4.084	1.470	32.590	30.080	56.170	TM 0.348

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	73.0%	33.540	33.260	34.430	21.100	-0.003	-0.000	-0.104	0.002	75.8%
2	13:48:57	72.7%	33.770	34.390	34.700	21.290	0.003	0.002	-0.110	0.024	75.6%
3	13:49:25	72.9%	33.430	33.790	34.540	22.770	-0.004	-0.001	-0.094	0.009	76.0%
x		72.9%	33.580	33.810	34.560	21.720	-0.001	0.000	-0.103	0.012	75.8%
s		0.1%	0.174	0.565	0.138	0.916	0.004	0.002	0.008	0.011	0.2%
%RSD		0.2	0.519	1.670	0.398	4.217	333.700	489.500	7.737	97.020	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:30	0.479	0.698	0.122	0.118	175.300	169.600	84.2%	0.212	0.196	0.134
2	13:48:57	0.529	0.646	0.115	0.152	179.800	170.000	84.9%	0.187	0.204	0.111
3	13:49:25	0.483	0.737	0.131	0.130	179.100	170.500	85.1%	0.201	0.229	0.126
x		0.497	0.694	0.122	0.133	178.000	170.100	84.7%	0.200	0.209	0.124
s		0.028	0.045	0.008	0.017	2.432	0.451	0.4%	0.013	0.017	0.011
%RSD		5.600	6.554	6.507	12.870	1.366	0.265	0.5	6.314	8.283	9.111

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:48:30	0.137	0.135	91.6%
2	13:48:57	0.123	0.118	92.6%
3	13:49:25	0.126	0.123	92.8%
x		0.129	0.125	92.4%
s		0.008	0.009	0.7%
%RSD		5.829	6.836	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	71.1%	-0.023	87.270	84.900	231.200	T 99340.000	T 4786.000	5101.000	5150.000	T 88.370
2	13:54:49	70.4%	-0.012	80.330	86.130	240.500	TM 102700.000	T 4795.000	5012.000	5286.000	T 87.350
3	13:55:16	69.5%	-0.000	83.780	84.090	229.400	TM 100800.000	T 4762.000	5039.000	5189.000	94.260
x		70.3%	-0.012	83.790	85.040	233.700	TM 100900.000	T 4781.000	5051.000	5208.000	T 89.990
s		0.8%	0.012	3.471	1.029	5.917	TM 1666.000	T 17.400	45.540	70.270	T 3.731
%RSD		1.1	98.640	4.142	1.210	2.532	TM 1.650	T 0.364	0.902	1.349	T 4.146

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	T 2169.000	T 52040.000	T 12250.000	13230.000	13320.000	67.5%	9.961	-0.577	0.812	6029.000
2	13:54:49	T 2134.000	T 51020.000	T 12030.000	13400.000	13450.000	65.9%	7.422	-0.611	0.807	6412.000
3	13:55:16	T 2184.000	T 52480.000	T 12380.000	13380.000	13520.000	65.7%	9.674	-0.500	0.822	6781.000
x		T 2163.000	T 51850.000	T 12220.000	13340.000	13430.000	66.4%	9.019	-0.563	0.814	6408.000
s		T 25.630	T 748.000	T 179.700	93.130	100.200	1.0%	1.390	0.057	0.008	376.300
%RSD		T 1.185	T 1.443	T 1.471	0.698	0.746	1.5	15.420	10.080	0.936	5.872

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	898.600	23.310	T 853.500	899.000	0.179	5.728	7.634	34.980	36.750	231.600
2	13:54:49	917.400	23.760	T 877.600	936.300	0.160	5.946	7.837	35.150	37.550	231.000
3	13:55:16	909.700	23.390	T 886.200	917.600	0.180	6.052	9.274	35.880	36.550	231.300
x		908.600	23.490	T 872.400	917.600	0.173	5.909	8.248	35.330	36.950	231.300
s		9.467	0.241	T 16.930	18.640	0.011	0.166	0.894	0.478	0.527	0.294
%RSD		1.042	1.026	T 1.940	2.031	6.615	2.801	10.840	1.353	1.425	0.127

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	242.900	244.000	-0.157	-0.563	295.700	293.000	1.995	0.497	-1.119	105.400
2	13:54:49	239.700	246.100	0.105	-0.633	297.100	298.500	-1.069	0.126	-3.225	105.500
3	13:55:16	236.700	246.300	0.413	-0.107	302.300	296.100	-0.452	0.451	-4.795	104.700
x		239.800	245.500	0.120	-0.435	298.400	295.900	0.158	0.358	-3.046	105.200
s		3.085	1.323	0.285	0.286	3.463	2.733	1.621	0.202	1.845	0.450
%RSD		1.287	0.539	237.500	65.750	1.161	0.924	1024.000	56.460	60.560	0.428

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	75.1%	0.351	0.373	0.434	0.785	0.972	0.909	0.033	0.042	77.8%
2	13:54:49	74.4%	0.336	0.474	0.465	1.710	0.944	0.903	0.014	0.034	77.3%
3	13:55:16	74.7%	0.418	0.456	0.402	0.333	0.837	0.923	0.029	0.026	77.2%
x		74.7%	0.368	0.434	0.434	0.943	0.917	0.912	0.025	0.034	77.4%
s		0.3%	0.044	0.054	0.031	0.702	0.072	0.010	0.010	0.008	0.3%
%RSD		0.4	11.960	12.370	7.251	74.470	7.797	1.113	39.980	23.860	0.4

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:22	1.075	1.515	0.141	0.137	37.100	35.620	85.8%	0.001	-0.002	0.717
2	13:54:49	1.038	1.605	0.137	0.127	37.970	36.160	85.5%	-0.003	-0.003	0.750
3	13:55:16	1.101	1.540	0.180	0.138	38.800	36.450	85.8%	-0.001	-0.003	0.718
x		1.071	1.553	0.153	0.134	37.960	36.080	85.7%	-0.001	-0.003	0.728
s		0.032	0.046	0.024	0.006	0.850	0.420	0.2%	0.002	0.001	0.019
%RSD		2.987	2.981	15.820	4.439	2.239	1.164	0.2	161.500	35.960	2.572

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	13:54:22	0.703	0.724	95.1%
2	13:54:49	0.634	0.717	94.6%
3	13:55:16	0.677	0.706	96.2%
x		0.671	0.716	95.3%
s		0.034	0.009	0.9%
%RSD		5.124	1.206	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	74.8%	-0.003	10.810	11.350	1.555	605.100	753.100	707.800	717.200	T 446.700
2	14:00:40	73.0%	0.020	11.930	11.930	3.044	597.100	765.100	733.000	705.500	T 438.200
3	14:01:07	72.7%	-0.002	10.480	11.160	-2.395	579.100	744.000	701.000	704.900	T 432.400
x		73.5%	0.005	11.070	11.480	0.735	593.700	754.100	713.900	709.200	T 439.100
s		1.2%	0.013	0.756	0.400	2.811	13.340	10.610	16.890	6.940	T 7.203
%RSD		1.6	241.000	6.832	3.487	382.400	2.248	1.407	2.366	0.979	T 1.640

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	T 1216.000	T 50130.000	1134.000	3531.000	3473.000	69.9%	22.220	1.598	1.236	5155.000
2	14:00:40	T 1246.000	T 51140.000	1129.000	3499.000	3452.000	69.2%	19.710	1.678	1.185	4917.000
3	14:01:07	T 1233.000	T 50110.000	1110.000	3402.000	3418.000	69.4%	19.700	1.559	1.279	5053.000
x		T 1232.000	T 50460.000	1125.000	3477.000	3448.000	69.5%	20.540	1.612	1.233	5042.000
s		T 14.880	T 590.800	12.720	67.130	27.570	0.4%	1.451	0.061	0.047	119.100
%RSD		T 1.208	T 1.171	1.131	1.931	0.800	0.5	7.063	3.775	3.804	2.363

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	685.600	11.610	T 635.700	675.700	0.380	1.265	3.405	12.120	12.490	28.820
2	14:00:40	659.800	11.390	T 633.200	672.000	0.327	1.149	2.657	12.030	12.490	28.200
3	14:01:07	668.500	11.450	T 633.500	669.600	0.356	1.295	3.491	11.700	12.190	27.750
x		671.300	11.480	T 634.100	672.400	0.354	1.236	3.184	11.950	12.390	28.260
s		13.110	0.112	T 1.398	3.084	0.027	0.077	0.459	0.224	0.173	0.534
%RSD		1.953	0.976	T 0.220	0.459	7.484	6.231	14.410	1.871	1.398	1.890

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	30.620	30.470	0.421	-1.149	11.600	12.460	0.421	0.347	-2.311	14.770
2	14:00:40	30.180	29.930	-0.100	-0.859	12.660	12.820	-2.237	-0.316	-1.370	14.820
3	14:01:07	31.140	30.950	0.169	-0.164	14.240	12.930	1.991	0.808	-3.454	14.860
x		30.650	30.450	0.164	-0.724	12.830	12.730	0.058	0.280	-2.378	14.820
s		0.482	0.509	0.260	0.506	1.331	0.242	2.137	0.565	1.044	0.043
%RSD		1.574	1.674	159.200	69.880	10.370	1.904	3657.000	202.000	43.890	0.289

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	78.6%	0.900	0.920	0.833	0.668	0.024	0.024	0.095	0.113	81.7%
2	14:00:40	78.0%	0.820	0.786	0.780	0.187	0.016	0.023	0.082	0.084	80.9%
3	14:01:07	77.9%	0.709	0.886	0.770	-0.337	0.022	0.017	0.114	0.089	81.2%
x		78.2%	0.810	0.864	0.794	0.173	0.021	0.022	0.097	0.095	81.3%
s		0.4%	0.096	0.070	0.033	0.502	0.004	0.004	0.016	0.016	0.4%
%RSD		0.5	11.800	8.083	4.207	291.100	19.200	17.240	16.770	16.560	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:13	0.164	0.180	0.426	0.427	14.250	13.670	88.7%	0.003	-0.003	0.553
2	14:00:40	0.206	0.169	0.440	0.470	13.860	13.330	87.9%	0.003	-0.001	0.548
3	14:01:07	0.142	0.178	0.436	0.431	14.000	13.550	88.5%	0.003	0.002	0.537
x		0.171	0.176	0.434	0.443	14.030	13.520	88.4%	0.003	-0.001	0.546
s		0.032	0.006	0.007	0.024	0.197	0.171	0.4%	0.000	0.003	0.008
%RSD		18.960	3.320	1.617	5.338	1.405	1.262	0.5	2.008	312.200	1.506

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:00:13	0.553	0.546	101.1%
2	14:00:40	0.517	0.551	102.1%
3	14:01:07	0.530	0.537	102.1%
x		0.533	0.545	101.8%
s		0.018	0.007	0.6%
%RSD		3.354	1.326	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	70.2%	-0.000	42.330	42.460	395.600	T 72110.000	T 1967.000	2058.000	2112.000	128.300
2	14:06:31	68.6%	0.023	42.590	44.020	411.500	T 72960.000	T 2040.000	2157.000	2182.000	128.100
3	14:06:58	66.7%	0.025	41.780	44.430	419.600	T 72920.000	T 2022.000	2118.000	2153.000	127.600
x		68.5%	0.016	42.230	43.630	408.900	T 72660.000	T 2010.000	2111.000	2149.000	128.000
s		1.7%	0.014	0.411	1.039	12.200	T 484.300	T 38.340	49.650	35.380	0.357
%RSD		2.5	89.140	0.972	2.381	2.982	T 0.666	T 1.908	2.352	1.646	0.279

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	T 2732.000	T 54820.000	T 30850.000	14550.000	14640.000	65.3%	19.500	-0.326	1.058	7196.000
2	14:06:31	T 2761.000	T 54650.000	T 30730.000	14690.000	14940.000	63.9%	22.220	-0.744	0.958	7769.000
3	14:06:58	T 2853.000	T 55430.000	T 30670.000	14770.000	14890.000	64.2%	26.410	-0.170	0.902	7506.000
x		T 2782.000	T 54970.000	T 30750.000	14670.000	14820.000	64.4%	22.710	-0.413	0.973	7490.000
s		T 63.130	T 408.700	T 93.030	112.700	160.900	0.7%	3.482	0.297	0.079	287.000
%RSD		T 2.269	T 0.744	T 0.302	0.768	1.085	1.1	15.330	71.800	8.158	3.831

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	358.800	17.420	T 346.700	379.300	0.195	2.943	4.902	23.210	24.550	95.840
2	14:06:31	370.500	17.250	386.200	367.400	0.202	3.191	5.413	23.730	25.020	94.780
3	14:06:58	356.200	17.520	384.600	368.600	0.189	3.313	3.503	23.870	24.520	96.240
x		361.800	17.400	T 372.500	371.800	0.195	3.149	4.606	23.600	24.690	95.620
s		7.600	0.137	T 22.330	6.525	0.006	0.188	0.989	0.351	0.281	0.750
%RSD		2.100	0.787	T 5.995	1.755	3.229	5.982	21.470	1.487	1.140	0.784

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	97.640	102.200	0.695	0.612	65.970	66.990	2.815	0.814	-2.235	53.070
2	14:06:31	104.100	103.400	0.877	-0.024	70.270	72.420	1.232	0.565	-2.859	52.640
3	14:06:58	102.000	103.900	0.545	1.014	69.120	69.740	2.165	0.294	0.899	53.410
x		101.300	103.200	0.706	0.534	68.450	69.720	2.071	0.558	-1.398	53.040
s		3.309	0.862	0.166	0.523	2.224	2.715	0.795	0.260	2.014	0.388
%RSD		3.268	0.836	23.560	97.910	3.249	3.894	38.420	46.560	144.000	0.731

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	73.8%	1.088	1.179	1.187	0.393	0.053	0.059	0.089	0.105	77.1%
2	14:06:31	74.0%	1.124	1.207	1.137	1.048	0.034	0.056	0.070	0.089	77.2%
3	14:06:58	74.2%	1.011	1.102	1.114	0.437	0.054	0.052	0.105	0.114	77.0%
x		74.0%	1.075	1.163	1.146	0.626	0.047	0.056	0.088	0.102	77.1%
s		0.2%	0.057	0.054	0.037	0.366	0.011	0.004	0.017	0.012	0.1%
%RSD		0.3	5.348	4.672	3.262	58.500	24.230	6.631	19.720	12.130	0.2

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:04	0.379	0.532	0.307	0.268	17.550	17.320	85.7%	-0.003	-0.001	1.519
2	14:06:31	0.445	0.588	0.284	0.298	17.920	17.240	85.3%	-0.000	-0.003	1.570
3	14:06:58	0.404	0.521	0.331	0.248	18.790	17.160	85.9%	-0.003	-0.003	1.565
x		0.409	0.547	0.307	0.271	18.090	17.240	85.6%	-0.002	-0.003	1.551
s		0.033	0.036	0.024	0.025	0.637	0.078	0.3%	0.002	0.001	0.028
%RSD		8.090	6.538	7.716	9.307	3.522	0.455	0.3	79.920	46.110	1.831

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:06:04	1.521	1.575	104.7%
2	14:06:31	1.471	1.566	104.7%
3	14:06:58	1.526	1.575	106.7%
x		1.506	1.572	105.4%
s		0.030	0.006	1.2%
%RSD		2.004	0.354	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	75.9%	281.100	297.600	300.100	3.081	T 61850.000	T 61320.000	T 60290.000	T 57540.000	286.900
2	14:12:24	76.2%	280.500	296.500	302.500	1.741	T 64360.000	T 61610.000	T 61020.000	T 59330.000	291.700
3	14:12:51	75.6%	284.700	304.000	299.900	0.405	T 62730.000	T 62170.000	T 61420.000	T 58550.000	288.600
x		75.9%	94.028%	99.781%	100.272%	1.742	T 104.964%	T 61700.000	T 60910.000	T 97.456%	96.356%
s		0.3%	n/a	n/a	n/a	1.338	T n/a	T 433.400	T 569.200	T n/a	n/a
%RSD		0.3	0.800	1.346	0.480	76.790	T 2.021	T 0.702	T 0.934	T 1.531	0.835

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	T 2746.000	608.100	T 55650.000	59730.000	T 59310.000	73.6%	299.300	292.600	286.600	2619.000
2	14:12:24	T 2757.000	588.600	T 55910.000	61540.000	T 60610.000	72.8%	302.100	302.000	294.900	3066.000
3	14:12:51	T 2786.000	584.900	T 55660.000	60940.000	T 59610.000	73.7%	294.400	298.800	289.100	1505.000
x		T 2763.000	593.900	T 92.895%	60740.000	T 99.740%	73.4%	99.527%	99.268%	96.730%	2397.000
s		T 20.750	12.460	T n/a	919.200	T n/a	0.5%	n/a	n/a	n/a	803.800
%RSD		T 0.751	2.097	T 0.267	1.513	T 1.134	0.7	1.311	1.597	1.460	33.540

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	T 59960.000	307.000	T 60260.000	T 59680.000	285.200	282.800	278.800	270.400	275.600	275.600
2	14:12:24	T 60780.000	314.700	T 61360.000	T 60790.000	289.800	282.100	279.400	270.600	278.900	277.500
3	14:12:51	T 60490.000	306.000	T 59640.000	T 59100.000	284.000	274.300	279.000	270.500	272.800	276.300
x		T 60410.000	103.079%	T 60420.000	T 99.759%	95.452%	93.235%	279.100	270.500	91.919%	92.157%
s		T 415.900	n/a	T 868.700	T n/a	n/a	n/a	0.296	0.104	n/a	n/a
%RSD		T 0.688	1.549	T 1.438	T 1.431	1.075	1.691	0.106	0.038	1.122	0.346

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	278.900	283.000	284.400	286.200	1.849	2.042	1334.000	284.800	-2.588	301.700
2	14:12:24	285.600	282.000	281.000	284.500	1.902	1.147	1341.000	284.400	0.102	303.400
3	14:12:51	279.900	280.300	281.200	281.100	1.704	1.164	1321.000	283.200	-1.754	302.700
x		281.500	281.800	94.052%	283.900	1.818	1.451	1332.000	94.703%	-1.413	100.860%
s		3.632	1.367	n/a	2.600	0.103	0.512	10.010	n/a	1.377	n/a
%RSD		1.290	0.485	0.677	0.916	5.656	35.280	0.752	0.298	97.470	0.288

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	77.6%	297.300	299.400	297.500	289.400	281.900	280.600	293.900	291.100	78.4%
2	14:12:24	77.5%	298.400	300.900	301.800	281.800	283.900	283.900	291.500	291.500	78.6%
3	14:12:51	78.4%	304.200	304.300	299.400	297.400	284.800	283.800	292.100	291.700	78.7%
x		77.8%	99.987%	100.512%	299.500	289.500	94.506%	282.800	292.500	97.155%	78.6%
s		0.5%	n/a	n/a	2.148	7.820	n/a	1.871	1.209	n/a	0.2%
%RSD		0.6	1.232	0.829	0.717	2.701	0.511	0.662	0.413	0.102	0.2

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:57	297.700	292.400	295.700	280.900	293.100	287.300	85.2%	294.100	T 298.300	294.500
2	14:12:24	297.900	294.400	297.400	280.700	297.900	287.500	86.3%	294.000	T 297.400	295.200
3	14:12:51	299.000	297.800	300.800	285.800	297.300	289.100	85.8%	290.900	T 305.300	T 273.100
x		99.402%	98.284%	298.000	94.157%	98.700%	95.989%	85.7%	293.000	T 100.112%	T 95.876%
s		n/a	n/a	2.593	n/a	n/a	n/a	0.5%	1.825	T n/a	T n/a
%RSD		0.241	0.916	0.870	1.027	0.880	0.339	0.6	0.623	T 1.427	T 4.380

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:11:57	295.900	310.100	91.5%
2	14:12:24	295.500	309.800	92.6%
3	14:12:51	299.200	308.800	93.9%
x		98.949%	103.187%	92.6%
s		n/a	n/a	1.2%
%RSD		0.687	0.227	1.3

CCB IM9936-01 4/24/2020 14:17:22 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	81.8%	0.014	3.938	3.747	-8.544	-51.010	1.894	1.734	1.674	0.021
2	14:18:16	80.8%	-0.024	2.767	2.803	-1.574	-51.070	1.483	1.690	1.572	0.025
3	14:18:43	81.4%	-0.034	4.019	3.230	-3.197	-51.370	1.761	1.686	1.653	0.016
x		81.3%	-0.015	3.575	3.260	-4.438	-51.150	1.713	1.703	1.633	0.021
s		0.5%	0.026	0.701	0.473	3.647	0.192	0.210	0.026	0.054	0.004
%RSD		0.6	172.000	19.610	14.510	82.170	0.375	12.240	1.548	3.295	20.810

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	0.176	399.800	-20.900	0.983	-4.988	76.8%	-0.042	0.035	0.017	3.271
2	14:18:16	0.205	394.600	-21.230	0.949	-4.556	77.5%	-0.006	0.020	-0.007	-3.554
3	14:18:43	-0.149	397.900	-22.050	-0.747	-5.451	77.8%	-0.042	-0.023	-0.029	21.260
x		0.077	397.400	-21.390	0.395	-4.998	77.4%	-0.030	0.011	-0.006	6.993
s		0.197	2.609	0.591	0.989	0.448	0.5%	0.021	0.030	0.023	12.820
%RSD		254.100	0.656	2.763	250.500	8.959	0.7	68.270	281.600	373.200	183.300

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	-1.008	-0.009	-0.362	2.510	0.007	-0.018	-0.712	-0.049	0.010	-0.271
2	14:18:16	0.792	0.002	-0.803	2.453	0.005	-0.004	-0.612	-0.074	0.005	-0.229
3	14:18:43	0.889	-0.006	-0.699	1.707	0.013	0.014	0.102	-0.097	0.004	-0.258
x		0.224	-0.004	-0.621	2.223	0.008	-0.003	-0.407	-0.073	0.006	-0.252
s		1.068	0.005	0.231	0.448	0.004	0.016	0.444	0.024	0.003	0.022
%RSD		476.300	121.400	37.120	20.150	48.920	537.500	109.100	32.730	50.300	8.536

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	-0.120	-0.187	0.022	-0.623	0.402	0.876	0.107	0.188	-1.430	0.011
2	14:18:16	-0.093	-0.157	0.029	-0.501	0.256	1.291	1.249	0.281	-0.300	0.007
3	14:18:43	0.018	-0.231	-0.030	-0.718	0.064	0.469	-0.217	0.271	-2.593	0.011
x		-0.065	-0.192	0.007	-0.614	0.241	0.879	0.380	0.247	-1.441	0.010
s		0.073	0.037	0.032	0.109	0.169	0.411	0.770	0.051	1.146	0.003
%RSD		112.300	19.370	465.200	17.750	70.250	46.730	202.800	20.540	79.530	26.580

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	81.4%	0.303	0.331	0.386	-0.199	0.011	0.009	-0.005	0.005	83.4%
2	14:18:16	81.3%	0.431	0.272	0.359	-0.056	0.005	0.010	0.004	0.003	83.9%
3	14:18:43	81.7%	0.336	0.312	0.307	-0.114	0.004	0.010	0.013	0.011	83.6%
x		81.4%	0.357	0.305	0.350	-0.123	0.007	0.010	0.004	0.006	83.6%
s		0.2%	0.067	0.030	0.040	0.072	0.004	0.001	0.009	0.004	0.2%
%RSD		0.3	18.670	9.869	11.340	58.550	50.960	6.536	237.100	65.360	0.3

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:49	0.119	0.142	0.439	0.408	0.003	0.013	87.9%	0.021	0.006	0.024
2	14:18:16	0.105	0.132	0.416	0.386	0.016	0.002	89.1%	0.007	0.013	0.018
3	14:18:43	0.081	0.127	0.405	0.411	0.003	0.002	88.7%	0.010	0.006	0.006
x		0.102	0.134	0.420	0.402	0.007	0.005	88.6%	0.013	0.008	0.016
s		0.019	0.008	0.017	0.013	0.008	0.007	0.6%	0.007	0.004	0.009
%RSD		18.630	5.676	4.071	3.346	103.500	123.100	0.7	55.880	50.630	58.460

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:17:49	0.012	0.018	99.7%
2	14:18:16	0.018	0.016	100.3%
3	14:18:43	0.024	0.018	100.7%
x		0.018	0.017	100.3%
s		0.006	0.001	0.5%
%RSD		33.220	7.918	0.5

IS MW12794 4/24/2020 14:23:14

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	176.5%	-0.025	0.367	0.466	-76.140	-58.920	-0.908	-0.853	-0.774	1.138
2	14:24:08	163.1%	-0.015	0.423	0.469	-68.620	-59.370	-0.954	-0.809	-0.827	0.147
3	14:24:35	173.5%	-0.034	0.622	0.181	-73.950	-58.940	-1.037	-0.864	-0.820	0.122
x		171.0%	-0.025	0.471	0.372	-72.900	-59.080	-0.967	-0.842	-0.807	0.469
s		7.0%	0.010	0.134	0.165	3.870	0.256	0.065	0.029	0.028	0.580
%RSD		4.1	39.160	28.550	44.440	5.309	0.433	6.774	3.490	3.529	123.500

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	3.883	93.460	-50.110	-3.261	-10.440	162.9%	0.821	-0.024	-0.104	16.420
2	14:24:08	-0.783	96.080	-51.550	-2.477	-10.890	166.5%	-0.027	-0.022	-0.103	11.510
3	14:24:35	-2.793	89.430	-50.860	-2.479	-11.250	166.9%	-0.035	-0.031	-0.112	18.180
x		0.102	92.990	-50.840	-2.739	-10.860	165.4%	0.253	-0.026	-0.106	15.370
s		3.425	3.351	0.716	0.452	0.403	2.2%	0.492	0.005	0.005	3.461
%RSD		3349.000	3.604	1.409	16.490	3.711	1.3	194.300	18.710	4.695	22.520

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	52.550	-0.026	-19.600	-5.456	-0.005	-0.010	-1.575	-0.138	-0.032	-0.280
2	14:24:08	52.940	-0.012	-21.410	-6.340	-0.002	-0.011	-1.757	-0.157	-0.046	-0.332
3	14:24:35	49.590	-0.021	-21.380	-6.744	-0.004	-0.004	-1.392	-0.140	-0.014	-0.294
x		51.690	-0.020	-20.800	-6.180	-0.004	-0.008	-1.575	-0.145	-0.030	-0.302
s		1.833	0.007	1.035	0.659	0.002	0.004	0.182	0.011	0.016	0.026
%RSD		3.545	34.790	4.974	10.660	48.310	42.220	11.570	7.279	52.930	8.774

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	-0.170	-0.244	0.317	-2.316	-1.601	-1.882	13.580	1.684	9.217	-0.004
2	14:24:08	-0.185	-0.223	0.192	-2.167	-1.527	-2.072	13.070	1.139	12.410	-0.004
3	14:24:35	-0.263	-0.263	0.320	-1.797	-1.723	-1.641	15.300	1.749	11.630	-0.004
x		-0.206	-0.243	0.276	-2.093	-1.617	-1.865	13.980	1.524	11.090	-0.004
s		0.050	0.020	0.073	0.267	0.099	0.216	1.170	0.335	1.664	0.000
%RSD		24.250	8.122	26.460	12.770	6.134	11.580	8.367	21.990	15.010	4.842

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	173.0%	-0.045	-0.047	-0.043	0.025	-0.006	-0.003	-0.004	0.000	175.2%
2	14:24:08	177.6%	-0.157	-0.095	-0.131	-0.655	-0.005	-0.002	-0.003	-0.001	182.6%
3	14:24:35	177.5%	-0.180	-0.151	-0.155	-0.259	-0.005	-0.001	-0.003	-0.001	178.8%
x		176.1%	-0.127	-0.098	-0.110	-0.297	-0.005	-0.002	-0.003	-0.001	178.9%
s		2.6%	0.072	0.052	0.059	0.341	0.000	0.001	0.000	0.001	3.7%
%RSD		1.5	56.450	53.610	53.520	115.100	4.923	26.480	7.048	108.100	2.1

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:41	0.018	0.033	-0.001	-0.006	-0.001	-0.010	190.9%	0.004	0.002	-0.014
2	14:24:08	0.004	0.016	-0.008	-0.028	0.002	-0.008	195.4%	-0.004	-0.006	-0.013
3	14:24:35	0.007	0.003	-0.005	-0.020	-0.004	-0.010	193.1%	-0.005	-0.010	-0.018
x		0.010	0.017	-0.005	-0.018	-0.001	-0.009	193.1%	-0.002	-0.005	-0.015
s		0.007	0.015	0.004	0.011	0.003	0.001	2.2%	0.005	0.006	0.003
%RSD		73.460	89.220	73.040	63.240	507.500	10.840	1.2	290.600	132.900	17.540

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:23:41	-0.011	-0.011	205.9%
2	14:24:08	-0.014	-0.013	206.2%
3	14:24:35	-0.018	-0.018	202.3%
x		-0.014	-0.014	204.8%
s		0.003	0.004	2.2%
%RSD		22.740	26.400	1.1

RINSE 4/24/2020 14:29:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	86.1%	0.012	1.919	1.995	17.550	-52.620	0.044	0.650	0.232	1.241
2	14:30:02	86.3%	-0.025	1.312	2.150	25.560	-52.560	0.276	0.221	0.138	1.209
3	14:30:29	85.7%	-0.007	1.689	1.926	15.050	-52.680	0.201	0.100	0.219	1.214
x		86.0%	-0.007	1.640	2.024	19.390	-52.620	0.174	0.324	0.196	1.221
s		0.3%	0.018	0.306	0.115	5.492	0.062	0.119	0.289	0.051	0.017
%RSD		0.4	277.200	18.680	5.659	28.320	0.117	68.400	89.430	26.130	1.423

Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	0.770	241.600	-22.350	-2.463	-4.427	81.8%	0.008	0.005	0.013	12.150
2	14:30:02	0.206	235.900	-23.500	4.773	-4.211	81.2%	-0.043	0.016	0.024	-4.269
3	14:30:29	0.398	237.900	-22.810	1.529	-4.081	81.7%	-0.026	0.026	0.023	-11.020
x		0.458	238.400	-22.890	1.279	-4.240	81.6%	-0.020	0.016	0.020	-1.047
s		0.287	2.875	0.579	3.625	0.175	0.3%	0.026	0.010	0.006	11.920
%RSD		62.580	1.206	2.531	283.300	4.125	0.4	126.100	65.050	29.140	1139.000

Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	-0.439	-0.007	-0.321	0.081	0.004	0.038	-1.020	0.007	0.137	-0.129
2	14:30:02	0.109	0.011	0.576	-0.117	0.012	0.034	-0.653	0.039	0.157	-0.004
3	14:30:29	-0.643	0.012	-0.489	0.093	0.010	0.007	-1.219	0.063	0.090	-0.156
x		-0.324	0.005	-0.078	0.019	0.009	0.026	-0.964	0.037	0.128	-0.096
s		0.389	0.011	0.573	0.118	0.004	0.017	0.287	0.028	0.035	0.081
%RSD		119.900	192.400	733.800	628.100	45.170	63.280	29.800	77.270	27.190	84.280

Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	0.058	-0.124	0.002	-0.525	-0.378	0.342	0.082	0.088	-0.639	0.003
2	14:30:02	-0.128	-0.041	0.080	0.149	-0.125	0.935	-0.980	0.451	-5.225	0.004
3	14:30:29	-0.076	-0.108	0.010	-0.050	0.144	0.206	-0.525	0.212	-2.589	0.004
x		-0.049	-0.091	0.030	-0.142	-0.120	0.494	-0.474	0.250	-2.818	0.004
s		0.096	0.044	0.043	0.346	0.261	0.387	0.533	0.184	2.301	0.001
%RSD		197.400	48.710	141.000	244.100	217.500	78.340	112.300	73.580	81.670	15.180

Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	84.8%	-0.097	-0.017	-0.060	-0.034	-0.005	0.003	0.005	0.002	86.2%
2	14:30:02	84.3%	-0.070	-0.022	-0.062	0.122	-0.004	0.001	0.023	0.014	86.0%
3	14:30:29	85.7%	-0.084	-0.040	-0.062	-0.483	-0.001	-0.000	0.010	0.012	86.8%
x		84.9%	-0.083	-0.027	-0.061	-0.132	-0.004	0.001	0.013	0.010	86.3%
s		0.7%	0.014	0.012	0.001	0.314	0.002	0.002	0.009	0.007	0.4%
%RSD		0.9	16.280	44.870	1.370	238.700	58.480	148.700	73.150	71.240	0.5

Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:35	0.051	0.043	0.086	0.094	0.062	0.045	89.4%	0.007	0.005	0.001
2	14:30:02	0.036	0.050	0.123	0.090	0.075	0.093	89.8%	0.001	0.007	0.019
3	14:30:29	0.029	0.051	0.123	0.109	0.068	0.092	90.3%	0.002	0.003	0.022
x		0.039	0.048	0.111	0.098	0.068	0.077	89.9%	0.003	0.005	0.014
s		0.011	0.004	0.022	0.010	0.007	0.027	0.5%	0.003	0.002	0.012
%RSD		28.220	9.296	19.460	9.808	9.714	35.460	0.5	106.300	37.810	82.980

Run	Time	207Pb	208Pb	209Bi
		ppb	ppb	ppb
1	14:29:35	0.016	0.011	99.7%
2	14:30:02	0.015	0.019	100.1%
3	14:30:29	0.010	0.018	100.6%
x		0.014	0.016	100.1%
s		0.003	0.004	0.4%
%RSD		23.150	28.690	0.4

Performance Report

Raw Supportive Data

Analyst: WCM Level 2 Analyst: BNW Printed: 05/14/20 0946

Status: Level 2 review released

Matrix: Aqueous

Prep Batch: 51844

3005A Draper 2 - Total Recoverable Acid Digestion (ICP-MS) and 3005A

Start Date: 04/23/2020 1610

End Date: 04/23/2020 2110

Digestion Cup ID: 20-608

Ext Solvent: 1:1 HNO3/1:1 HCl

Reagents Vol. (mL): 1, 0.5

Hot Block ID: Hot Block # 11

Chem ID: IM 9923-001, IM 9922-01

Thermometer ID: 1134

Start Temperature (°C): 95

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51844-001	MB	PBW	1	6020B	50		0.0	50			PIPET ID 388
VQ51844-002	LCS	LCS	1	6020B	50	20-664 (3/17/21)	0.5	50			
VD18010-001	Sample	UST-2	1	6020B	50		0.0	50	10/14/2020 2359	04/30/2020	
VD21024-001	Sample	5W8B	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-002	Sample	5W5B	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-003	Sample	5W7B	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-003MS	MS	5W7BS	1	6020B	50	20-664 (3/17/21)	0.5	50			
VD21024-003MD	MSD	5W7BSD	1	6020B	50	20-664 (3/17/21)	0.5	50			
VD21024-004	Sample	5WC21	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-005	Sample	5WDUP	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-006	Sample	5WC22	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-007	Sample	5WC23	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	
VD21024-008	Sample	5W12A	1	6020B	50		0.0	50	10/17/2020 2359	05/01/2020	

(end of report) Total Samples: 9

Mercury

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD21024 **Method Type:** CVAA **SOW No.:**

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
VD21024-002	5W5B	
VD21024-003	5W7B	
VD21024-003S	5W7BS	Matrix Spike
VD21024-003SD	5W7BSD	Matrix Spike Duplicate
VD21024-004	5WC21	
VD21024-005	5WDUP	
VD21024-006	5WC22	
VD21024-007	5WC23	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic VenturesInorganic Ventu

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Mercury	1.927300	2.000000	96	90.0 - 110.0	CV	4/22/2020	11:53	HG6042220A
CCV1	Mercury	1.938700	2.000000	97	80.0 - 120.0	CV	4/22/2020	12:01	HG6042220A
CCV2	Mercury	1.925500	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:01	HG6042220A
CCV3	Mercury	1.921400	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:32	HG6042220A
CCV4	Mercury	1.933900	2.000000	97	80.0 - 120.0	CV	4/22/2020	14:02	HG6042220A
CCV5	Mercury	1.913100	2.000000	96	80.0 - 120.0	CV	4/22/2020	14:32	HG6042220A

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No:** **SAS No.:**

AA CRDL Standard Source:

ICP CRDL Standard Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV									
	Mercury	0.202200	0.200000	101	50 - 150	CV	4/22/2020	11:58	HG6042220A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** VD21024

Contract: RAAP HWMU5 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	0.008600	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	11:56	HG6042220A
CCB1	Mercury	0.006700	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	12:03	HG6042220A
CCB2	Mercury	0.009600	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	13:04	HG6042220A
CCB3	Mercury	0.010300	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	13:34	HG6042220A
CCB4	Mercury	0.008000	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	14:05	HG6042220A
CCB5	Mercury	0.010300	+/-0.200000	U	0.120000	0.200000	CV	4/22/2020	14:35	HG6042220A

9-IN

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ Mod. Ref. No.: _____ SDG No.: VD21024

Instrument Type: CV Instrument ID: Hg6 _____

Preparation Method: 7470A

Concentration Units (ug/L, mg/kg, or ug): UG/L

Analyte	Wavelength/Mass	MDL
Mercury	253.70	0.120000

Comments: _____

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD21024

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0 20HG0642	1.00	1138																X									
S01 20HG0643	1.00	1141																X									
S0220HG0644	1.00	1143																X									
S03 20HG0645	1.00	1146																X									
S04 20HG0646	1.00	1148																X									
S05 20HG0647	1.00	1151																X									
ICV1	1.00	1153																X									
ICB1	1.00	1156																X									
LLCCV 20HG0644	1.00	1158																X									
CCV1	1.00	1201																X									
CCB1	1.00	1203																X									
ZZZZZZ	1.00	1206																									
ZZZZZZ	1.00	1208																									
ZZZZZZ	1.00	1211																									
ZZZZZZ	1.00	1213																									
ZZZZZZ	1.00	1216																									
ZZZZZZ	1.00	1218																									
ZZZZZZ	1.00	1221																									
ZZZZZZ	1.00	1224																									
ZZZZZZ	1.00	1226																									
ZZZZZZ	1.00	1229																									
ZZZZZZ	1.00	1231																									
ZZZZZZ	1.00	1234																									
ZZZZZZ	1.00	1236																									
ZZZZZZ	1.00	1239																									
ZZZZZZ	1.00	1241																									
ZZZZZZ	1.00	1244																									
ZZZZZZ	1.00	1246																									
ZZZZZZ	1.00	1249																									
ZZZZZZ	1.00	1251																									
ZZZZZZ	1.00	1254																									
ZZZZZZ	1.00	1256																									
ZZZZZZ	1.00	1259																									
CCV2	1.00	1301																X									
CCB2	1.00	1304																X									
ZZZZZZ	1.00	1306																									

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU5

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD21024

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1309																										
ZZZZZZ	1.00	1312																										
VO51713-001	1.00	1314																X										
VO51713-002	1.00	1317																X										
ZZZZZZ	1.00	1319																										
ZZZZZZ	1.00	1322																										
ZZZZZZ	1.00	1324																										
ZZZZZZ	1.00	1327																										
ZZZZZZ	1.00	1329																										
CCV3	1.00	1332																X										
CCB3	1.00	1334																X										
ZZZZZZ	1.00	1337																										
ZZZZZZ	1.00	1339																										
ZZZZZZ	1.00	1342																										
ZZZZZZ	1.00	1344																										
ZZZZZZ	1.00	1347																										
ZZZZZZ	1.00	1349																										
ZZZZZZ	1.00	1352																										
ZZZZZZ	1.00	1355																										
VD21024-002	1.00	1357																X										
VD21024-003	1.00	1400																X										
CCV4	1.00	1402																X										
CCB4	1.00	1405																X										
VD21024-003S	1.00	1407																X										
VD21024-003SD	1.00	1410																X										
VD21024-004	1.00	1412																X										
VD21024-005	1.00	1415																X										
VD21024-006	1.00	1417																X										
VD21024-007	1.00	1420																X										
ZZZZZZ	1.00	1422																										
ZZZZZZ	1.00	1425																										
ZZZZZZ	1.00	1427																										
ZZZZZZ	1.00	1430																										
CCV5	1.00	1432																X										
CCB5	1.00	1435																X										
ZZZZZZ	1.00	1437																										

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU5

Lab Code: Case No.: SAS No.: SDG No.: VD21024

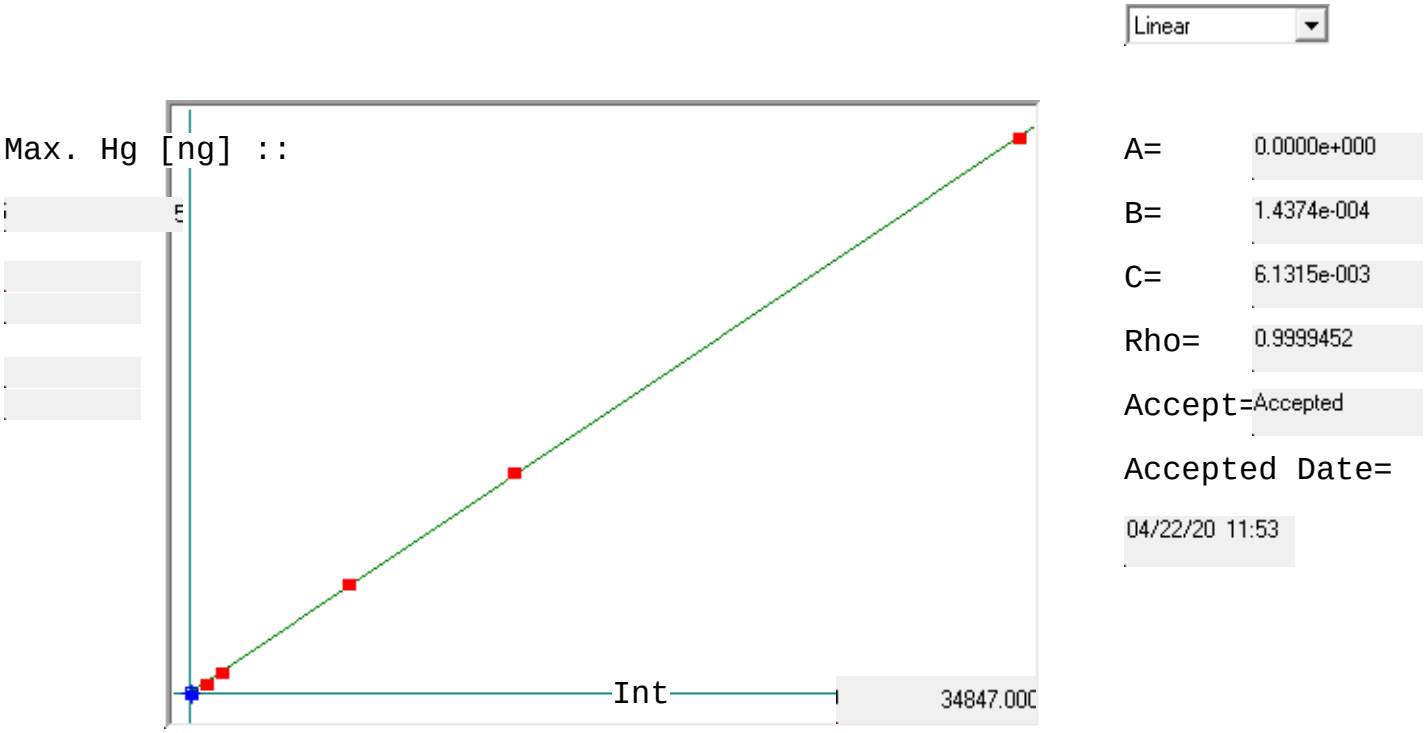
Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1440																								
ZZZZZZ	1.00	1443																								
ZZZZZZ	1.00	1445																								
ZZZZZZ	1.00	1448																								
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1453																								
ZZZZZZ	1.00	1455																								
ZZZZZZ	1.00	1458																								
ZZZZZZ	1.00	1500																								
ZZZZZZ	1.00	1503																								
ZZZZZZ	1.00	1505																								
ZZZZZZ	1.00	1508																								
ZZZZZZ	1.00	1510																								
ZZZZZZ	1.00	1513																								
ZZZZZZ	1.00	1515																								
ZZZZZZ	1.00	1518																								
ZZZZZZ	1.00	1520																								

Raw Sample Data

7470A/245.1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4
S0 20HG0642 04/23/20	0.000	0.019	0.019	87	0.000	87			
S01 20HG0643 04/23/20	0.100	0.111	0.011	733	0.0 %	733			
S0220HG0644 04/23/20	0.200	0.205	0.005	1387	0.0 %	1387			
S03 20HG0645 04/23/20	1.000	0.978	-0.022	6761	0.0 %	6761			
S04 20HG0646 04/23/20	2.000	1.971	-0.029	13673	0.0 %	13673			
S05 20HG0647 04/23/20	5.000	5.015	0.015	34847	0.0 %	34847			

HG6042220A

Method: 7470A/245.1 Operator: KSH2 Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
S0 20HG0642 04/23/20 - 1		-	PPB	87	22 Apr 2020 11:38:35
S01 20HG0643 04/23/20 - 1		-	PPB	733	22 Apr 2020 11:41:08
S0220HG0644 04/23/20 - 1		-	PPB	1387	22 Apr 2020 11:43:40
S03 20HG0645 04/23/20 - 1		-	PPB	6761	22 Apr 2020 11:46:12
S04 20HG0646 04/23/20 - 1		-	PPB	13673	22 Apr 2020 11:48:44
S05 20HG0647 04/23/20 - 1		-	PPB	34847	22 Apr 2020 11:51:15
ICV 20HG0648 04/23/20 - 1		96.4% 1.9273	PPB	13366	22 Apr 2020 11:53:45
ICB 20HG0642 04/23/20 - 1		0.0086	PPB	17	22 Apr 2020 11:56:16
LLCCV 20HG0644 04/23/20 - 1		101.1% 0.2022	PPB	1364	22 Apr 2020 11:58:49
CCV 20HG0646 04/23/20 - 1		96.9% 1.9387	PPB	13445	22 Apr 2020 12:01:21
CCB 20HG0642 04/23/20 - 1		0.0067	PPB	4	22 Apr 2020 12:03:51
SnCl2 - 1	IM9947-01	0.0579	PPB	360	22 Apr 2020 12:06:23
VQ51710001TC - 1	PBW	0.0572	PPB	355	22 Apr 2020 12:08:54
VQ51710002TC - 1	LCS	2.0156	PPB	13980	22 Apr 2020 12:11:25
VD14038001TC - 1	MAY_GYP-SB6 (2-3')	0.0631	PPB	396	22 Apr 2020 12:13:56
VD14038003TC - 1	MAY_GYP-SB6 (12-13')	0.0518	PPB	318	22 Apr 2020 12:16:27
VD14038005TC - 1	MAY_GYP-SB7 (2-3')	0.0267	PPB	143	22 Apr 2020 12:18:58
VD14038010TC - 1	MAY_GYP-SB7 (27-28')	0.0694	PPB	440	22 Apr 2020 12:21:29
VD17051001TC - 1	Rox_CPA_1BRL (3-5)	0.0505	PPB	309	22 Apr 2020 12:24:01
VD17051001MSTC - 1	Rox_CPA_1BRL (3-5)S	2.0576	PPB	14272	22 Apr 2020 12:26:33
VD17051001MDTC - 1	Rox_CPA_1BRL (3-5)SD	2.0277	PPB	14064	22 Apr 2020 12:29:05
CCV 20HG0646 04/23/20 - 1		95.7% 1.9140	PPB	13273	22 Apr 2020 12:31:37
CCB 20HG0642 04/23/20 - 1		0.0094	PPB	23	22 Apr 2020 12:34:08
VD17051003TC - 1	Rox_CPA_1BRL (13-15)	0.0769	PPB	492	22 Apr 2020 12:36:40
VD17051004TC - 1	Rox_CPA_1BRL (15-17)	0.0720	PPB	458	22 Apr 2020 12:39:13
VQ51711001 - 1	PBW	0.0564	PPB	350	22 Apr 2020 12:41:44
VQ51711002 - 1	LCS	1.9518	PPB	13536	22 Apr 2020 12:44:14
VD21066001 - 1	B20011	0.0543	PPB	335	22 Apr 2020 12:46:45
VD16047003 - 1	WW Pipe 001	0.0708	PPB	450	22 Apr 2020 12:49:16
VD17062007 - 1	WW-Pipe 002	0.0593	PPB	370	22 Apr 2020 12:51:47
VD17073003 - 1	WW Pipe 001	0.0695	PPB	441	22 Apr 2020 12:54:18
VD18013003 - 1	WW Pipe 001	0.1313	PPB	871	22 Apr 2020 12:56:49
VD21073001 - 1	Effluent	0.0618	PPB	387	22 Apr 2020 12:59:21
CCV 20HG0646 04/23/20 - 1		96.3% 1.9255	PPB	13353	22 Apr 2020 13:01:53
CCB 20HG0642 04/23/20 - 1		0.0096	PPB	24	22 Apr 2020 13:04:23
VD21073001S - 1	EffluentS	1.9509	PPB	13530	22 Apr 2020 13:06:55
VD21073001SD - 1	EffluentSD	2.0153	PPB	13978	22 Apr 2020 13:09:27
VD21062001 - 1	Effluent Pipe 1	0.0344	PPB	197	22 Apr 2020 13:12:00
VQ51713001 - 1	PBW	0.0435	PPB	260	22 Apr 2020 13:14:33
VQ51713002 - 1	LCS	1.9838	PPB	13759	22 Apr 2020 13:17:04
VD17087001 - 1	16C1	0.0280	PPB	152	22 Apr 2020 13:19:35
VD17087002 - 1	16MW8	0.0639	PPB	402	22 Apr 2020 13:22:07
VD17087003 - 1	16MW9	0.0323	PPB	182	22 Apr 2020 13:24:37
VD17087004 - 1	16WC1A	0.0347	PPB	199	22 Apr 2020 13:27:09
VD17087004S - 1	16WC1AS	1.7554	PPB	12170	22 Apr 2020 13:29:40
CCV 20HG0646 04/23/20 - 1		96.1% 1.9214	PPB	13325	22 Apr 2020 13:32:12
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 13:34:43
VD17087004SD - 1	16WC1ASD	1.7465	PPB	12108	22 Apr 2020 13:37:15
VD17087005 - 1	16WDUP	0.0173	PPB	78	22 Apr 2020 13:39:47
VD17087006 - 1	16WC1B	0.1703	PPB	1142	22 Apr 2020 13:42:20
VD17091001 - 1	16-2	0.0470	PPB	284	22 Apr 2020 13:44:52
VD17091002 - 1	16-3	0.0416	PPB	247	22 Apr 2020 13:47:25
VD17091003 - 1	~~16-4~~ 16-5 njt 5-11-20	0.0406	PPB	240	22 Apr 2020 13:49:58
VD17091004 - 1	16WC2B	0.0445	PPB	267	22 Apr 2020 13:52:29
VD17091005 - 1	16SPRING	0.0445	PPB	267	22 Apr 2020 13:55:00
VD21024002 - 1	5W5B	0.0510	PPB	312	22 Apr 2020 13:57:32
VD21024003 - 1	5W7B	0.0619	PPB	388	22 Apr 2020 14:00:03
CCV 20HG0646 04/23/20 - 1		96.7% 1.9339	PPB	13412	22 Apr 2020 14:02:35
CCB 20HG0642 04/23/20 - 1		0.0080	PPB	13	22 Apr 2020 14:05:05
VD21024003S - 1	5W7BS	1.9904	PPB	13805	22 Apr 2020 14:07:37
VD21024003SD - 1	5W7BSD	1.9160	PPB	13287	22 Apr 2020 14:10:09
VD21024004 - 1	5WC21	0.0330	PPB	187	22 Apr 2020 14:12:40
VD21024005 - 1	5WDUP	0.0435	PPB	260	22 Apr 2020 14:15:12
VD21024006 - 1	5WC22	0.0360	PPB	208	22 Apr 2020 14:17:44
VD21024007 - 1	5WC23	0.0327	PPB	185	22 Apr 2020 14:20:16
VQ51712001 - 1	PBW	0.0268	PPB	144	22 Apr 2020 14:22:49
VQ51712002 - 1	LCS	1.9969	PPB	13850	22 Apr 2020 14:25:21
VD15011019 - 1	MW-17	0.0158	PPB	67	22 Apr 2020 14:27:53
VD15011020 - 1	MW-18	0.0261	PPB	139	22 Apr 2020 14:30:24
CCV 20HG0646 04/23/20 - 1		95.7% 1.9131	PPB	13267	22 Apr 2020 14:32:56
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 14:35:26
VD15011021 - 1	MW-20	0.0181	PPB	83	22 Apr 2020 14:37:58
VD15011022 - 1	MW-21	0.0198	PPB	95	22 Apr 2020 14:40:30
VD15011023 - 1	MW-22	0.0186	PPB	87	22 Apr 2020 14:43:01
VD15011024 - 1	MW-23	0.0406	PPB	240	22 Apr 2020 14:45:33
VD15011025 - 1	MW-28	0.0234	PPB	120	22 Apr 2020 14:48:04
VD15011026 - 1	MW-26	0.0326	PPB	184	22 Apr 2020 14:50:36
VD15011027 - 1	MW-24	0.0194	PPB	92	22 Apr 2020 14:53:08
VD15011028 - 1	MW-27	0.0333	PPB	189	22 Apr 2020 14:55:40
VD15011029 - 1	MW-25	0.0192	PPB	91	22 Apr 2020 14:58:12

HG6042220A

Method: 7470A/245.1 Operator: KSH2 Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
VD15011030 - 1	MW-29	0.0218	PPB	109	22 Apr 2020 15:00:45
CCV 20HG0646 04/23/20 - 1		95.8% 1.9158	PPB	13286	22 Apr 2020 15:03:17
CCB 20HG0642 04/23/20 - 1		0.0100	PPB	27	22 Apr 2020 15:05:47
VD15011030S - 1	MW-29S	1.9860	PPB	13774	22 Apr 2020 15:08:19
VD15011030SD - 1	MW-29SD	1.9348	PPB	13418	22 Apr 2020 15:10:51
VD15011031 - 1	DUP	0.1884	PPB	1268	22 Apr 2020 15:13:22
VD15011032 - 1	EQ BLANK	0.0146	PPB	59	22 Apr 2020 15:15:54
CCV 20HG0646 04/23/20 - 1		95.4% 1.9076	PPB	13229	22 Apr 2020 15:18:26
CCB 20HG0642 04/23/20 - 1		0.0120	PPB	41	22 Apr 2020 15:20:56

Raw Supportive Data

Analyst: JMH Level 2 Analyst: KSH2 Printed: 05/13/20 1059

Status: Level 2 review released

Matrix: ERROR

Prep Batch: 51707

7470A-P - Mercury Preparation Linked: 7470A,245.1 and 7470A-P Draper

Start Date: 04/22/2020 0027

End Date: 04/22/2020 0227

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 11

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Start Temperature (°C): 93

Thermometer ID: 1134

End Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51707-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20HG0642	0.0	50			CAL 0
VQ51707-104	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	20HG0643	0.0	50			4/23/20
VQ51707-204	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	20HG0644	0.0	50			4/23/20
VQ51707-304	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	20HG0645	0.0	50			4/23/20
VQ51707-404	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20HG0646	0.0	50			4/23/20
VQ51707-504	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	20HG0647	0.0	50			4/23/20
VQ51707-604	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20HG0642	0.0	50			CCB
VQ51707-704	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20HG0646	0.0	50			CCV
VQ51707-804	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20HG0642	0.0	50			ICB
VQ51707-904	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20HG0648	0.0	50			ICV

(end of report) Total Samples: 0

Analyst: JMH Level 2 Analyst: NJT

Status: Level 2 review released

Matrix: Aqueous

Printed: 05/13/20 1059

Prep Batch: 51713

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 0029

End Date: 04/22/2020 0229

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 9

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Thermometer ID: 326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51713-001	MB	PBW	1	7470A	40.000		0.0	50			LCS/MS/MSD Pipet ID: 388
VQ51713-002	LCS	LCS	1	7470A	40.000	20HG0640 (4/23/20)	0.8	50			
VD17087-001	Sample	16C1	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-002	Sample	16MW8	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-003	Sample	16MW9	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-004	Sample	16WC1A	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-004MS	MS	16WC1AS	1	7470A	40.000	20HG0640 (4/23/20)	0.8	50			
VD17087-004MD	MSD	16WC1ASD	1	7470A	40.000	20HG0640 (4/23/20)	0.8	50			
VD17087-005	Sample	16WDUP	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-006	Sample	16WC1B	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17091-001	Sample	16-2	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-002	Sample	16-3	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-003	Sample	16-5	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	njt 5-11-20 changed client ID from 16-4 to 16-5
VD17091-004	Sample	16WC2B	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-005	Sample	16SPRING	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD21024-002	Sample	5W5B	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-003	Sample	5W7B	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-003MS	MS	5W7BS	1	7470A	40.000	20HG0640 (4/23/20)	0.8	50			
VD21024-003MD	MSD	5W7BSD	1	7470A	40.000	20HG0640 (4/23/20)	0.8	50			
VD21024-004	Sample	5WC21	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-005	Sample	5WDUP	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-006	Sample	5WC22	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-007	Sample	5WC23	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VQ51713-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			PB 51707

Analyst: JMH Level 2 Analyst: NJT

Status: Level 2 review released

Matrix: Aqueous

Printed: 05/13/20 1059

Prep Batch: 51713

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 0029

End Date: 04/22/2020 0229

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 9

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Thermometer ID: 326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments

(end of report)

Total Samples: 17

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike
Lancaster, PA 17601

Owner: EUROFINS SCIENTIFIC
Responsible Official: DUANE LUCKENBILL

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **June 15, 2019**
Expiration Date: **June 14, 2020**
Certificate # 10358

Denise M. Toney

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10358

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2019
Expiration Date: June 14, 2020

AIR

METHOD	ANALYTE	PRIMARY
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ
EPA TO-14A 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	BENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	VINYL CHLORIDE (CHLOROETHENE)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	BROMODICHLOROMETHANE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ

METHOD	ANALYTE	PRIMARY
EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	STYRENE	LA DEQ
EPA TO-14A 2nd Ed.	TOLUENE	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10358

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2019
Expiration Date: June 14, 2020

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ	EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ	EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ	EPA TO-15 2nd Ed	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ	EPA TO-15 2nd Ed	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ	EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ	EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ	EPA TO-15 2nd Ed	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ	EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ	EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ	EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ	EPA TO-15 2nd Ed	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ	EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ	EPA TO-15 2nd Ed	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ	EPA TO-15 2nd Ed.	PROPYLENE (PROPENE)	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ	EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ	EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ	EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ	EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE (CHLOROETHENE)	LA DEQ	EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ

Commonwealth of Virginia

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Eurofins Lancaster Laboratories Environmental, LLC
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Lancaster, PA 17601

Virginia Laboratory ID: 460182
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AIR

METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	LA DEQ

DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	IRON	PA
EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	ZINC	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRITE AS N	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES (TTHMS)	PA
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	THALLIUM	PA
EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 335.4 REV 1.0	CYANIDE	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLOROFORM	PA
EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 524.2 REV 4.1	VINYL CHLORIDE (CHLOROETHENE)	PA

Commonwealth of Virginia

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Eurofins Lancaster Laboratories Environmental, LLC
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DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA
EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	ATRAZINE	PA
EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	ENDRIN	PA
EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR	PA
EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA
EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA
EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
EPA 531.1 REV 3.1	OXAMYL	PA
SM 2120 B-2011	COLOR	PA
SM 2130 B-2011	TURBIDITY	PA
SM 2320 B-2011	ALKALINITY AS CACO3	PA
SM 2510 B-2011	CONDUCTIVITY	PA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-F⁻ C-2011	FLUORIDE	PA
SM 4500-H+ B-2011	PH	PA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	PA
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	PA
SM 5540 C-2011	SURFACTANTS - MBAS	PA

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	PA
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 1664 A	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA

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EPA 1666 A	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1666 A	ETHYL ACETATE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA
EPA 1666 A	METHYL FORMATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA
EPA 1666 A	N-HEPTANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 1666 A	XYLENE (TOTAL)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA

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EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA

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NON-POTABLE WATER

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EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA

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EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA
EPA 1671 A	DIETHYLAMINE	PA
EPA 1671 A	ETHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA
EPA 180.1 REV 2	TURBIDITY	PA
EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	ARSENIC	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA
EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	LEAD	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SELENIUM	PA
EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.7 REV 4.4	TIN	PA
EPA 200.7 REV 4.4	VANADIUM	PA
EPA 200.8 REV 5.4	ALUMINUM	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	MANGANESE	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	METHANOL	PA
EPA 1671 A	TRIETHYLAMINE	PA
EPA 200.2 REV 2.8	PREP: SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA

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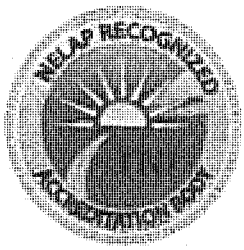
METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SILVER	PA
EPA 200.8 REV 5.4	VANADIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA
EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA
EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA
EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRITE AS N	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA
EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ARSENIC	PA
EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	CADMIUM	PA
EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COPPER	PA
EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SILVER	PA
EPA 6010 C	STRONTIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA
EPA 200.8 REV 5.4	ZINC	PA
EPA 200.8 REV 5.4 - EXTENDED	IRON	PA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TIN	PA
EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 335.4 REV 1.0	CYANIDE	PA
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 3620 C	PREP: FLORISIL CLEANUP	PA
EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	PA
EPA 5030 C	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 C	ANTIMONY	PA
EPA 6010 C	BARIUM	PA
EPA 6010 C	BORON	PA
EPA 6010 C	CALCIUM	PA
EPA 6010 C	COBALT	PA
EPA 6010 C	IRON	PA
EPA 6010 C	LITHIUM	PA
EPA 6010 C	MANGANESE	PA
EPA 6010 C	NICKEL	PA
EPA 6010 C	SELENIUM	PA
EPA 6010 C	SODIUM	PA
EPA 6010 C	THALLIUM	PA



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EPA 6010 C	TIN	PA
EPA 6010 C	VANADIUM	PA
EPA 6010 C - EXTENDED	SULFUR	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 6010 D	ANTIMONY	PA
EPA 6010 D	BARIUM	PA
EPA 6010 D	BORON	PA
EPA 6010 D	CALCIUM	PA
EPA 6010 D	COBALT	PA
EPA 6010 D	IRON	PA
EPA 6010 D	LITHIUM	PA
EPA 6010 D	MANGANESE	PA
EPA 6010 D	NICKEL	PA
EPA 6010 D	SELENIUM	PA
EPA 6010 D	SODIUM	PA
EPA 6010 D	THALLIUM	PA
EPA 6010 D	TITANIUM	PA
EPA 6010 D	ZINC	PA
EPA 6010 D - EXTENDED	THORIUM	PA
EPA 602	BENZENE	PA
EPA 602	TOLUENE	PA
EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CALCIUM	PA
EPA 6020 A	COBALT	PA
EPA 6020 A	IRON	PA
EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	NICKEL	PA
EPA 6020 A	SELENIUM	PA
EPA 6020 A	SODIUM	PA
EPA 6020 A	VANADIUM	PA
EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	URANIUM	PA
EPA 6020 B	ANTIMONY	PA
EPA 6020 B	BARIUM	PA
EPA 6020 B	CADMIUM	PA
EPA 6010 C	TITANIUM	PA
EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	THORIUM	PA
EPA 6010 D	ALUMINUM	PA
EPA 6010 D	ARSENIC	PA
EPA 6010 D	BERYLLIUM	PA
EPA 6010 D	CADMIUM	PA
EPA 6010 D	CHROMIUM	PA
EPA 6010 D	COPPER	PA
EPA 6010 D	LEAD	PA
EPA 6010 D	MAGNESIUM	PA
EPA 6010 D	MOLYBDENUM	PA
EPA 6010 D	POTASSIUM	PA
EPA 6010 D	SILVER	PA
EPA 6010 D	STRONTIUM	PA
EPA 6010 D	TIN	PA
EPA 6010 D	VANADIUM	PA
EPA 6010 D - EXTENDED	SULFUR	PA
EPA 6010 D - EXTENDED	ZIRCONIUM	PA
EPA 602	ETHYLBENZENE	PA
EPA 602	XYLENE (TOTAL)	PA
EPA 6020 A	ANTIMONY	PA
EPA 6020 A	BARIUM	PA
EPA 6020 A	CADMIUM	PA
EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COPPER	PA
EPA 6020 A	LEAD	PA
EPA 6020 A	MANGANESE	PA
EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SILVER	PA
EPA 6020 A	THALLIUM	PA
EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 6020 B	ALUMINUM	PA
EPA 6020 B	ARSENIC	PA
EPA 6020 B	BERYLLIUM	PA
EPA 6020 B	CALCIUM	PA

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EPA 6020 B	CHROMIUM	PA
EPA 6020 B	COPPER	PA
EPA 6020 B	LEAD	PA
EPA 6020 B	MANGANESE	PA
EPA 6020 B	NICKEL	PA
EPA 6020 B	SELENIUM	PA
EPA 6020 B	SODIUM	PA
EPA 6020 B	TIN	PA
EPA 6020 B	ZINC	PA
EPA 6020 B - EXTENDED	TITANIUM	PA
EPA 608.3	4,4'-DDD	PA
EPA 608.3	4,4'-DDT	PA
EPA 608.3	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	AROCLOR-1221 (PCB-1221)	PA
EPA 608.3	AROCLOR-1242 (PCB-1242)	PA
EPA 608.3	AROCLOR-1254 (PCB-1254)	PA
EPA 608.3	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	DELTA-BHC	PA
EPA 608.3	ENDOSULFAN I	PA
EPA 608.3	ENDOSULFAN SULFATE	PA
EPA 608.3	ENDRIN ALDEHYDE	PA
EPA 608.3	HEPTACHLOR	PA
EPA 608.3	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	DEMETON-O	PA
EPA 622	DIAZINON	PA
EPA 622	DISULFOTON	PA
EPA 622	FENSULFOTHION	PA
EPA 622	MERPHOS	PA
EPA 622	MEVINPHOS	PA
EPA 622	PHORATE	PA
EPA 624.1	1,1,1-TRICHLOROETHANE	PA
EPA 624.1	1,1,2-TRICHLOROETHANE	PA
EPA 6020 B	COBALT	PA
EPA 6020 B	IRON	PA
EPA 6020 B	MAGNESIUM	PA
EPA 6020 B	MOLYBDENUM	PA
EPA 6020 B	POTASSIUM	PA
EPA 6020 B	SILVER	PA
EPA 6020 B	THALLIUM	PA
EPA 6020 B	VANADIUM	PA
EPA 6020 B - EXTENDED	STRONTIUM	PA
EPA 6020 B - EXTENDED	URANIUM	PA
EPA 608.3	4,4'-DDE	PA
EPA 608.3	ALDRIN	PA
EPA 608.3	AROCLOR-1016 (PCB-1016)	PA
EPA 608.3	AROCLOR-1232 (PCB-1232)	PA
EPA 608.3	AROCLOR-1248 (PCB-1248)	PA
EPA 608.3	AROCLOR-1260 (PCB-1260)	PA
EPA 608.3	CHLORDANE, TOTAL	PA
EPA 608.3	DIELDRIN	PA
EPA 608.3	ENDOSULFAN II	PA
EPA 608.3	ENDRIN	PA
EPA 608.3	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	HEPTACHLOR EPOXIDE	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA
EPA 622	CHLORPYRIFOS	PA
EPA 622	DEMETON-S	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 622	ETHOPROP	PA
EPA 622	FENTHION	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 622	NALED	PA
EPA 622	STIROFOS (TETRACHLORVINPOS, GARDONA) (MIXED ISOMERS)	PA
EPA 624.1	1,1,2,2-TETRACHLOROETHANE	PA

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EPA 624.1	1,1-DICHLOROETHANE	PA	EPA 624.1	1,1-DICHLOROETHYLENE	PA
EPA 624.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA	EPA 624.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 624.1	1,2-DICHLOROPROPANE	PA	EPA 624.1	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 624.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 624.1	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 624.1	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 624.1	2-CHLOROETHYL VINYL ETHER	PA
EPA 624.1	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 624.1	ACETONE	PA
EPA 624.1	ACROLEIN (PROPENAL)	PA	EPA 624.1	ACRYLONITRILE	PA
EPA 624.1	BENZENE	PA	EPA 624.1	BROMODICHLOROMETHANE	PA
EPA 624.1	BROMOFORM	PA	EPA 624.1	CARBON TETRACHLORIDE	PA
EPA 624.1	CHLOROBENZENE	PA	EPA 624.1	CHLORODIBROMOMETHANE	PA
EPA 624.1	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 624.1	CHLOROFORM	PA
EPA 624.1	CIS-1,2-DICHLOROETHYLENE	PA	EPA 624.1	CIS-1,3-DICHLOROPROPENE	PA
EPA 624.1	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 624.1	ETHYL ACETATE	PA
EPA 624.1	ETHYLBENZENE	PA	EPA 624.1	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 624.1	M+P-XYLENE	PA	EPA 624.1	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624.1	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 624.1	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 624.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 624.1	O-XYLENE	PA
EPA 624.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 624.1	TOLUENE	PA
EPA 624.1	TRANS-1,2-DICHLOROETHENE	PA	EPA 624.1	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 624.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 624.1	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624.1	VINYL CHLORIDE (CHLOROETHENE)	PA	EPA 624.1	XYLENE (TOTAL)	PA
EPA 624.1 EXTENDED	ISOPROPYL ACETATE	PA	EPA 624.1 EXTENDED	N-HEXANE	PA
EPA 625.1	1,2,4-TRICHLOROBENZENE	PA	EPA 625.1	1,2-DIPHENYLHYDRAZINE	PA
EPA 625.1	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 625.1	2,3-DICHLOROANILINE	PA
EPA 625.1	2,4,6-TRICHLOROPHENOL	PA	EPA 625.1	2,4-DICHLOROPHENOL	PA
EPA 625.1	2,4-DIMETHYLPHENOL	PA	EPA 625.1	2,4-DINITROPHENOL	PA
EPA 625.1	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 625.1	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 625.1	2-CHLORONAPHTHALENE	PA	EPA 625.1	2-CHLOROPHENOL	PA
EPA 625.1	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 625.1	2-METHYLPHENOL (O-CRESOL)	PA

Commonwealth of Virginia

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Expiration Date: June 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 625.1	2-NITROPHENOL	PA
EPA 625.1	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 625.1	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625.1	ACENAPHTHENE	PA
EPA 625.1	ACETOPHENONE	PA
EPA 625.1	ANTHRACENE	PA
EPA 625.1	BENZO(A)ANTHRACENE	PA
EPA 625.1	BENZO(B)FLUORANTHENE	PA
EPA 625.1	BENZO(K)FLUORANTHENE	PA
EPA 625.1	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 625.1	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 625.1	CARBAZOLE	PA
EPA 625.1	DI-N-BUTYL PHTHALATE	PA
EPA 625.1	DIBENZO(A,H) ANTHRACENE	PA
EPA 625.1	DIMETHYL PHTHALATE	PA
EPA 625.1	FLUORANTHENE	PA
EPA 625.1	HEXACHLOROBENZENE	PA
EPA 625.1	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625.1	INDENO(1,2,3-CD) PYRENE	PA
EPA 625.1	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625.1	N-NITROSODIPHENYLAMINE	PA
EPA 625.1	NITROBENZENE	PA
EPA 625.1	PHENANTHRENE	PA
EPA 625.1	PYRENE	PA
EPA 625.1 EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA
EPA 625.1 EXTENDED	N-OCTADECANE	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8015 B	ETHANOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHANOL	PA

METHOD	ANALYTE	PRIMARY
EPA 625.1	3,3'-DICHLOROBENZIDINE	PA
EPA 625.1	4-CHLORO-3-METHYLPHENOL	PA
EPA 625.1	4-NITROPHENOL	PA
EPA 625.1	ACENAPHTHYLENE	PA
EPA 625.1	ANILINE	PA
EPA 625.1	BENZIDINE	PA
EPA 625.1	BENZO(A)PYRENE	PA
EPA 625.1	BENZO(G,H,I)PERYLENE	PA
EPA 625.1	BENZOIC ACID	PA
EPA 625.1	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625.1	BUTYL BENZYL PHTHALATE	PA
EPA 625.1	CHRYSENE	PA
EPA 625.1	DI-N-OCTYL PHTHALATE	PA
EPA 625.1	DIETHYL PHTHALATE	PA
EPA 625.1	DIPHENYL ETHER (DIPHENYL OXIDE)	PA
EPA 625.1	FLUORENE	PA
EPA 625.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625.1	HEXACHLOROETHANE	PA
EPA 625.1	ISOPHORONE	PA
EPA 625.1	N-NITROSODIMETHYLAMINE	PA
EPA 625.1	NAPHTHALENE	PA
EPA 625.1	PENTACHLOROPHENOL	PA
EPA 625.1	PHENOL	PA
EPA 625.1	PYRIDINE	PA
EPA 625.1 EXTENDED	N-DECANE	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHYLENE GLYCOL	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	METHANOL	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	O-XYLENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A - EXTENDED	KEPONE	PA
EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	CHLORDANE, TOTAL	PA
EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C - EXTENDED	PROPYLENE GLYCOL	PA
EPA 8021 B	BENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	TOLUENE	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	CHLORDANE, TOTAL	PA
EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	HEPTACHLOR	PA

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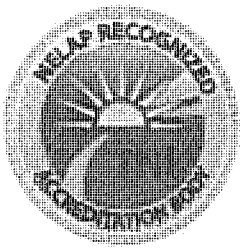
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHION	PA	EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FAMPHUR	PA	EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	FENTHION	PA	EPA 8141 A	MALATHION	PA
EPA 8141 A	MERPHOS	PA	EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	MEVINPHOS	PA	EPA 8141 A	NALED	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA	EPA 8141 A	PHORATE	PA
EPA 8141 A	RONNEL	PA	EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA	EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 A	TRICHLORONATE	PA	EPA 8141 B	ATRAZINE	PA
EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	CHLORPYRIFOS	PA	EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-O	PA	EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA



Commonwealth of Virginia

Department of General Services
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Scope of Accreditation

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Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PICLORAM	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	BENZENE	PA
EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8151 A	2,4-D	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-NITROPROPANE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 B	ACETONE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROFORM	PA

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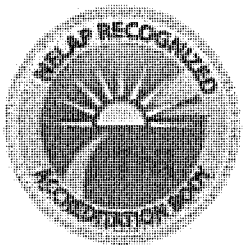
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLAMINE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	DHSOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	DIETHYL ETHER	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	N-HEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA



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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-NITROPROPANE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHYL ACETATE	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA

Scope of Accreditation

VELAP Certificate No.: 10358

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	M+P-XYLENE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,2,3-TRIMETHYLBENZENE	PA
EPA 8260 C - EXTENDED	1,3-BUTADIENE	PA
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 C - EXTENDED	N-HEXANE	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROETHANE	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	O-XYLENE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	PA
EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-HEPTANE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4-AMINOBIPHENYL	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ANILINE	PA
EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHRYSENE	PA

Commonwealth of Virginia

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Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DISULFOTON	PA
EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	KEPONE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHORATE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRIDINE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENOL	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PYRENE	PA
EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ANILINE	PA
EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 D	DISULFOTON	PA
EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	KEPONE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA

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Eurofins Lancaster Laboratories Environmental, LLC
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	N,N-DIMETHYLFORMAMIDE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	INDENE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8315 A	BENZALDEHYDE	PA
EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 A	NITROGLYCERIN	PA
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 B	TOTAL CYANIDE	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	CHLORIDE	PA
EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	SULFATE	PA
EPA 9066	TOTAL PHENOLICS	PA
OIA-1677-09	FREE CYANIDE	PA
RSK-175	ETHENE (ETHYLENE)	PA
SM 2120 B-2011	COLOR	PA
SM 2320 B-2011	ALKALINITY AS CACO3	PA
SM 2510 B-2011	CONDUCTIVITY	PA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 F-2011	RESIDUE-SETTLEABLE	PA
SM 3500-FE B-2011	IRON	PA
SM 4500-CN^- G-2011	AMENABLE CYANIDE	PA

METHOD	ANALYTE	PRIMARY
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9040 C	PH	PA
EPA 9056 A	BROMIDE	PA
EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRITE AS N	PA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	PA
OIA-1677-09	AMENABLE CYANIDE	PA
RSK-175	ETHANE	PA
RSK-175	METHANE	PA
SM 2310 B-2011	ACIDITY, AS CACO3	PA
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	PA
SM 2540 B-2011	RESIDUE-TOTAL (TS)	PA
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	PA
SM 3500-CR B-2011	CHROMIUM VI	PA
SM 4500-CL^- C-2011	CHLORIDE	PA
SM 4500-F^- B-2011	FLUORIDE	PA

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NON-POTABLE WATER

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SM 4500-F⁻ C-2011	FLUORIDE	PA
SM 4500-NH3 C-2011	AMMONIA AS N	PA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	PA
SM 4500-S2⁻ D-2011	SULFIDE	PA
SM 4500-SIO2 C-2011	SILICA AS SIO2	PA
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	PA
SM 5540 C-2011	SURFACTANTS - MBAS	PA
SM 4500-NH3 B-2011	AMMONIA AS N	PA
SM 4500-NH3 D-2011	AMMONIA AS N	PA
SM 4500-P F-2011	PHOSPHORUS, TOTAL	PA
SM 4500-S2⁻ F-2011	SULFIDE	PA
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	PA
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	PA

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA

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SOLID AND CHEMICAL MATERIALS

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EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,5'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA

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METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA
EPA 3620 C	PREP: FLORISIL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA
EPA 5035 A	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA
EPA 6010 C	ANTIMONY	PA
EPA 6010 C	BARIUM	PA
EPA 6010 C	BORON	PA
EPA 6010 C	CALCIUM	PA
EPA 6010 C	COBALT	PA
EPA 6010 C	IRON	PA
EPA 6010 C	LITHIUM	PA
EPA 6010 C	MANGANESE	PA
EPA 6010 C	NICKEL	PA
EPA 6010 C	SELENIUM	PA
EPA 6010 C	SODIUM	PA
EPA 6010 C	THALLIUM	PA
EPA 6010 C	TITANIUM	PA
EPA 6010 C	ZINC	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3550 C	PREP: ULTRASONIC EXTRACTION	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ARSENIC	PA
EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	CADMIUM	PA
EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COPPER	PA
EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SILVER	PA
EPA 6010 C	STRONTIUM	PA
EPA 6010 C	TIN	PA
EPA 6010 C	VANADIUM	PA

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METHOD	ANALYTE	PRIMARY
EPA 6010 C - EXTENDED	SULFUR	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 6010 D	ANTIMONY	PA
EPA 6010 D	BARIUM	PA
EPA 6010 D	BORON	PA
EPA 6010 D	CALCIUM	PA
EPA 6010 D	COBALT	PA
EPA 6010 D	IRON	PA
EPA 6010 D	LITHIUM	PA
EPA 6010 D	MANGANESE	PA
EPA 6010 D	NICKEL	PA
EPA 6010 D	SELENIUM	PA
EPA 6010 D	SILVER	PA
EPA 6010 D	STRONTIUM	PA
EPA 6010 D	TIN	PA
EPA 6010 D	VANADIUM	PA
EPA 6010 D - EXTENDED	SULFUR	PA
EPA 6010 D - EXTENDED	ZIRCONIUM	PA
EPA 6020 - EXTENDED	MOLYBDENUM	PA
EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CALCIUM	PA
EPA 6020 A	COBALT	PA
EPA 6020 A	IRON	PA
EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	NICKEL	PA
EPA 6020 A	SELENIUM	PA
EPA 6020 A	SODIUM	PA
EPA 6020 A	VANADIUM	PA
EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	URANIUM	PA
EPA 6020 B	ANTIMONY	PA
EPA 6020 B	BARIUM	PA
EPA 6020 B	CADMIUM	PA
EPA 6020 B	CHROMIUM	PA
EPA 6020 B	COPPER	PA
EPA 6010 C - EXTENDED	THORIUM	PA
EPA 6010 D	ALUMINUM	PA
EPA 6010 D	ARSENIC	PA
EPA 6010 D	BERYLLIUM	PA
EPA 6010 D	CADMIUM	PA
EPA 6010 D	CHROMIUM	PA
EPA 6010 D	COPPER	PA
EPA 6010 D	LEAD	PA
EPA 6010 D	MAGNESIUM	PA
EPA 6010 D	MOLYBDENUM	PA
EPA 6010 D	POTASSIUM	PA
EPA 6010 D	SILICA AS SIO2	PA
EPA 6010 D	SODIUM	PA
EPA 6010 D	THALLIUM	PA
EPA 6010 D	TITANIUM	PA
EPA 6010 D	ZINC	PA
EPA 6010 D - EXTENDED	THORIUM	PA
EPA 6020	BARIUM	PA
EPA 6020 - EXTENDED	URANIUM	PA
EPA 6020 A	ANTIMONY	PA
EPA 6020 A	BARIUM	PA
EPA 6020 A	CADMIUM	PA
EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COPPER	PA
EPA 6020 A	LEAD	PA
EPA 6020 A	MANGANESE	PA
EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SILVER	PA
EPA 6020 A	THALLIUM	PA
EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 6020 B	ALUMINUM	PA
EPA 6020 B	ARSENIC	PA
EPA 6020 B	BERYLLIUM	PA
EPA 6020 B	CALCIUM	PA
EPA 6020 B	COBALT	PA
EPA 6020 B	IRON	PA

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EPA 6020 B	LEAD	PA
EPA 6020 B	MANGANESE	PA
EPA 6020 B	NICKEL	PA
EPA 6020 B	SELENIUM	PA
EPA 6020 B	SODIUM	PA
EPA 6020 B	TIN	PA
EPA 6020 B	ZINC	PA
EPA 6020 B - EXTENDED	TITANIUM	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 7471 B	MERCURY	PA
EPA 8015 B	ETHANOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	METHANOL	PA
EPA 8021 B	BENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	TOLUENE	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	CHLORDANE, TOTAL	PA
EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 6020 B	MAGNESIUM	PA
EPA 6020 B	MOLYBDENUM	PA
EPA 6020 B	POTASSIUM	PA
EPA 6020 B	SILVER	PA
EPA 6020 B	THALLIUM	PA
EPA 6020 B	VANADIUM	PA
EPA 6020 B - EXTENDED	STRONTIUM	PA
EPA 6020 B - EXTENDED	URANIUM	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7471 A	MERCURY	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	O-XYLENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	METHOXYCHLOR	PA

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EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	CHLORDANE, TOTAL	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA	EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8081 B - EXTENDED	MIREX	PA	EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA	EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	ATRAZINE	PA	EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	CHLORPYRIFOS	PA	EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-O	PA	EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DIAZINON	PA	EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	DISULFOTON	PA	EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 A	ETHION	PA	EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FAMPHUR	PA	EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	FENTHION	PA	EPA 8141 A	MALATHION	PA
EPA 8141 A	MERPHOS	PA	EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	MEVINPHOS	PA	EPA 8141 A	NALED	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA	EPA 8141 A	PHORATE	PA
EPA 8141 A	RONNEL	PA	EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA			

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DIAZINON	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA
EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA
EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA
EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA

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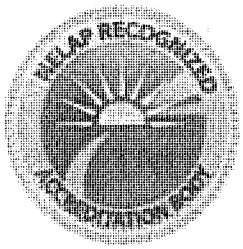
SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONE	PA
EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TOLUENE	PA



Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	BROMOFORM	PA	EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA	EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROFORM	PA	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	CYCLOHEXANE	PA	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHANOL	PA	EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL METHACRYLATE	PA	EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	ETHYLBENZENE	PA	EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TOLUENE	PA	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL ACETATE	PA	EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 C	XYLENE (TOTAL)	PA	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	1,2,3-TRIMETHYLBENZENE	PA	EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 C - EXTENDED	N-HEXANE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 C	1,2-DINITROBENZENE (1,2-DNB)	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 C	4-AMINOBIPHENYL	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANILINE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10358

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2019
Expiration Date: June 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DISULFOTON	PA
EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	KEPONE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHORATE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRIDINE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENOL	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PYRENE	PA
EPA 8270 C	SAFROLE	PA

Commonwealth of Virginia

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Scope of Accreditation

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Virginia Laboratory ID: 460182
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DINITROBENZENE (1,2-DNB)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYLAMINOAZOBENZENE	PA
EPA 8270 D	4-NITROANILINE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACENAPHTHYLENE	PA	EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANILINE	PA	EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	ARAMITE	PA	EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA	EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA	EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA	EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BENZYL ALCOHOL	PA	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA	EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	CHRYSENE	PA	EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA	EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIBENZOFURAN	PA	EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHOATE	PA	EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DIPHENYLAMINE	PA	EPA 8270 D	DISULFOTON	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA	EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORANTHENE	PA	EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA	EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISODRIN	PA	EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	ISOSAFROLE	PA	EPA 8270 D	KEPONE	PA
EPA 8270 D	METHAPYRILENE	PA	EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA	EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA	EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NAPHTHALENE	PA	EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	PA
EPA 8270 D - EXTENDED	N,N-DIMETHYLFORMAMIDE	PA
EPA 8270 D - EXTENDED	QUINOLINE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	INDENE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8330	NITROGLYCERIN	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 A	CYANIDE	PA
EPA 9045 C	PH	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	PA
EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 9095 B	FREE LIQUID	PA
EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA
EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9012 B	TOTAL CYANIDE	PA
EPA 9045 D	PH	PA
EPA 9060	TOTAL ORGANIC CARBON (TOC)	PA
EPA 9066	TOTAL PHENOLICS	PA
EPA 9081	CATION EXCHANGE CAPACITY	PA
SM 2540 G-2011	RESIDUE-TOTAL (TS)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10358

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2019
Expiration Date: June 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
SM 2540 G-2011	RESIDUE-VOLATILE	PA			

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460193
Shealy Environmental Services, Inc.

106 Vantage Point Drive
West Columbia, SC 29172

Owner: DAN WRIGHT
Responsible Official: DANIEL J. WRIGHT

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2019**
Expiration Date: **September 14, 2020**
Certificate # 10541

Denise M. Toney

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10541

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	FL
EPA 1631 E	MERCURY	FL
EPA 180.1 REV 2	TURBIDITY	FL
EPA 200.7 REV 4.4	ANTIMONY	FL
EPA 200.7 REV 4.4	BARIUM	FL
EPA 200.7 REV 4.4	BORON	FL
EPA 200.7 REV 4.4	CALCIUM	FL
EPA 200.7 REV 4.4	COBALT	FL
EPA 200.7 REV 4.4	IRON	FL
EPA 200.7 REV 4.4	MAGNESIUM	FL
EPA 200.7 REV 4.4	MOLYBDENUM	FL
EPA 200.7 REV 4.4	POTASSIUM	FL
EPA 200.7 REV 4.4	SILVER	FL
EPA 200.7 REV 4.4	THALLIUM	FL
EPA 200.7 REV 4.4	VANADIUM	FL
EPA 200.8 REV 5.4	ALUMINUM	FL
EPA 200.8 REV 5.4	ARSENIC	FL
EPA 200.8 REV 5.4	BERYLLIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL
EPA 200.8 REV 5.4	COPPER	FL
EPA 200.8 REV 5.4	MANGANESE	FL
EPA 200.8 REV 5.4	NICKEL	FL
EPA 200.8 REV 5.4	SILVER	FL
EPA 200.8 REV 5.4	VANADIUM	FL
EPA 245.1 REV 3	MERCURY	FL
EPA 300.0 REV 2.1	CHLORIDE	FL
EPA 300.0 REV 2.1	NITRATE AS N	FL
EPA 300.0 REV 2.1	SULFATE	FL
EPA 350.1 REV 2	AMMONIA AS N	FL
EPA 353.2 REV 2	NITRATE AS N	FL
EPA 353.2 REV 2	NITRITE AS N	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	FL
EPA 1664 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL
EPA 200.7 REV 4.4	ALUMINUM	FL
EPA 200.7 REV 4.4	ARSENIC	FL
EPA 200.7 REV 4.4	BERYLLIUM	FL
EPA 200.7 REV 4.4	CADMIUM	FL
EPA 200.7 REV 4.4	CHROMIUM	FL
EPA 200.7 REV 4.4	COPPER	FL
EPA 200.7 REV 4.4	LEAD	FL
EPA 200.7 REV 4.4	MANGANESE	FL
EPA 200.7 REV 4.4	NICKEL	FL
EPA 200.7 REV 4.4	SELENIUM	FL
EPA 200.7 REV 4.4	SODIUM	FL
EPA 200.7 REV 4.4	TIN	FL
EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	MOLYBDENUM	FL
EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	ZINC	FL
EPA 300.0 REV 2.1	BROMIDE	FL
EPA 300.0 REV 2.1	FLUORIDE	FL
EPA 300.0 REV 2.1	NITRITE AS N	FL
EPA 335.4 REV 1.0	CYANIDE	FL
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	FL
EPA 353.2 REV 2	NITRATE/NITRITE	FL
EPA 420.4 REV 1	TOTAL PHENOLICS	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10541

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6010 C	LEAD	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6010 D	ALUMINUM	FL
EPA 6010 D	ARSENIC	FL
EPA 6010 D	BERYLLIUM	FL
EPA 6010 D	CADMIUM	FL
EPA 6010 D	CHROMIUM	FL
EPA 6010 D	COPPER	FL
EPA 6010 D	LEAD	FL
EPA 6010 D	MANGANESE	FL
EPA 6010 D	NICKEL	FL
EPA 6010 D	SELENIUM	FL
EPA 6010 D	SODIUM	FL
EPA 6010 D	TIN	FL
EPA 6010 D	VANADIUM	FL
EPA 6020 A	ALUMINUM	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	BERYLLIUM	FL
EPA 6020 A	CALCIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	IRON	FL
EPA 6020 A	MAGNESIUM	FL
EPA 6020 A	NICKEL	FL
EPA 6020 A	SELENIUM	FL
EPA 6020 A	SODIUM	FL
EPA 6020 A	VANADIUM	FL
EPA 6020 A - EXTENDED	BORON	FL
EPA 6020 A - EXTENDED	TIN	FL
EPA 6020 B	ALUMINUM	FL
EPA 6020 B	ARSENIC	FL
EPA 6020 B	BERYLLIUM	FL
EPA 6020 B	CALCIUM	FL
EPA 6020 B	COBALT	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6010 D	ANTIMONY	FL
EPA 6010 D	BARIUM	FL
EPA 6010 D	BORON	FL
EPA 6010 D	CALCIUM	FL
EPA 6010 D	COBALT	FL
EPA 6010 D	IRON	FL
EPA 6010 D	MAGNESIUM	FL
EPA 6010 D	MOLYBDENUM	FL
EPA 6010 D	POTASSIUM	FL
EPA 6010 D	SILVER	FL
EPA 6010 D	THALLIUM	FL
EPA 6010 D	TITANIUM	FL
EPA 6010 D	ZINC	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	POTASSIUM	FL
EPA 6020 A	SILVER	FL
EPA 6020 A	THALLIUM	FL
EPA 6020 A	ZINC	FL
EPA 6020 A - EXTENDED	MOLYBDENUM	FL
EPA 6020 A - EXTENDED	TITANIUM	FL
EPA 6020 B	ANTIMONY	FL
EPA 6020 B	BARIUM	FL
EPA 6020 B	CADMIUM	FL
EPA 6020 B	CHROMIUM	FL
EPA 6020 B	COPPER	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6020 B	IRON	FL
EPA 6020 B	MAGNESIUM	FL
EPA 6020 B	NICKEL	FL
EPA 6020 B	SELENIUM	FL
EPA 6020 B	SODIUM	FL
EPA 6020 B	TIN	FL
EPA 6020 B	ZINC	FL
EPA 6020 B - EXTENDED	TITANIUM	FL
EPA 608.3	4,4'-DDE	FL
EPA 608.3	ALDRIN	FL
EPA 608.3	AROCLOR-1016 (PCB-1016)	FL
EPA 608.3	AROCLOR-1232 (PCB-1232)	FL
EPA 608.3	AROCLOR-1248 (PCB-1248)	FL
EPA 608.3	AROCLOR-1260 (PCB-1260)	FL
EPA 608.3	CHLORDANE, TOTAL	FL
EPA 608.3	DIELDRIN	FL
EPA 608.3	ENDOSULFAN II	FL
EPA 608.3	ENDRIN	FL
EPA 608.3	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	HEPTACHLOR EPOXIDE	FL
EPA 624.1	1,1,1-TRICHLOROETHANE	FL
EPA 624.1	1,1,2-TRICHLOROETHANE	FL
EPA 624.1	1,1-DICHLOROETHYLENE	FL
EPA 624.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624.1	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 624.1	2-CHLOROETHYL VINYL ETHER	FL
EPA 624.1	BROMODICHLOROMETHANE	FL
EPA 624.1	CARBON TETRACHLORIDE	FL
EPA 624.1	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 624.1	CIS-1,3-DICHLOROPROPENE	FL
EPA 624.1	METHYL BROMIDE (BROMOMETHANE)	FL

METHOD	ANALYTE	PRIMARY
EPA 6020 B	LEAD	FL
EPA 6020 B	MANGANESE	FL
EPA 6020 B	POTASSIUM	FL
EPA 6020 B	SILVER	FL
EPA 6020 B	THALLIUM	FL
EPA 6020 B	VANADIUM	FL
EPA 6020 B - EXTENDED	BORON	FL
EPA 608.3	4,4'-DDD	FL
EPA 608.3	4,4'-DDT	FL
EPA 608.3	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	AROCLOR-1221 (PCB-1221)	FL
EPA 608.3	AROCLOR-1242 (PCB-1242)	FL
EPA 608.3	AROCLOR-1254 (PCB-1254)	FL
EPA 608.3	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	DELTA-BHC	FL
EPA 608.3	ENDOSULFAN I	FL
EPA 608.3	ENDOSULFAN SULFATE	FL
EPA 608.3	ENDRIN ALDEHYDE	FL
EPA 608.3	HEPTACHLOR	FL
EPA 608.3	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 624.1	1,1,2,2-TETRACHLOROETHANE	FL
EPA 624.1	1,1-DICHLOROETHANE	FL
EPA 624.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 624.1	1,2-DICHLOROPROPANE	FL
EPA 624.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 624.1	BENZENE	FL
EPA 624.1	BROMOFORM	FL
EPA 624.1	CHLOROBENZENE	FL
EPA 624.1	CHLOROFORM	FL
EPA 624.1	ETHYLBENZENE	FL
EPA 624.1	METHYL CHLORIDE (CHLOROMETHANE)	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10541

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 624.1	TOLUENE	FL
EPA 624.1	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 624.1	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 624.1	XYLENE (TOTAL)	FL
EPA 625.1	2,4,6-TRICHLOROPHENOL	FL
EPA 625.1	2,4-DIMETHYLPHENOL	FL
EPA 625.1	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625.1	2-CHLORONAPHTHALENE	FL
EPA 625.1	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625.1	3,3'-DICHLOROBENZIDINE	FL
EPA 625.1	4-CHLORO-3-METHYLPHENOL	FL
EPA 625.1	4-NITROPHENOL	FL
EPA 625.1	ACENAPHTHYLENE	FL
EPA 625.1	BENZIDINE	FL
EPA 625.1	BENZO(A)PYRENE	FL
EPA 625.1	BENZO(G,H,I)PERYLENE	FL
EPA 625.1	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625.1	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625.1	CHRYSENE	FL
EPA 625.1	DI-N-OCTYL PHTHALATE	FL
EPA 625.1	DIETHYL PHTHALATE	FL
EPA 625.1	FLUORANTHENE	FL
EPA 625.1	HEXACHLOROBENZENE	FL
EPA 625.1	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625.1	INDENO(1,2,3-CD) PYRENE	FL
EPA 625.1	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625.1	N-NITROSODIPHENYLAMINE	FL
EPA 625.1	NITROBENZENE	FL
EPA 625.1	PHENANTHRENE	FL
EPA 625.1	PYRENE	FL
EPA 7470 A	MERCURY	FL
EPA 624.1	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624.1	TRANS-1,2-DICHLOROETHENE	FL
EPA 624.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624.1	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 625.1	1,2,4-TRICHLOROBENZENE	FL
EPA 625.1	2,4-DICHLOROPHENOL	FL
EPA 625.1	2,4-DINITROPHENOL	FL
EPA 625.1	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625.1	2-CHLOROPHENOL	FL
EPA 625.1	2-NITROPHENOL	FL
EPA 625.1	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 625.1	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625.1	ACENAPHTHENE	FL
EPA 625.1	ANTHRACENE	FL
EPA 625.1	BENZO(A)ANTHRACENE	FL
EPA 625.1	BENZO(B)FLUORANTHENE	FL
EPA 625.1	BENZO(K)FLUORANTHENE	FL
EPA 625.1	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625.1	BUTYL BENZYL PHTHALATE	FL
EPA 625.1	DI-N-BUTYL PHTHALATE	FL
EPA 625.1	DIBENZO(A,H) ANTHRACENE	FL
EPA 625.1	DIMETHYL PHTHALATE	FL
EPA 625.1	FLUORENE	FL
EPA 625.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 625.1	HEXACHLOROETHANE	FL
EPA 625.1	ISOPHORONE	FL
EPA 625.1	N-NITROSODIMETHYLAMINE	FL
EPA 625.1	NAPHTHALENE	FL
EPA 625.1	PENTACHLOROPHENOL	FL
EPA 625.1	PHENOL	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL

Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10541

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 B	CHLORDANE, TOTAL	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	DICAMBA	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL

Commonwealth of Virginia

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Virginia Laboratory ID: 460193
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Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8260 C	ETHYLBENZENE	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9040 C	PH	FL
EPA 9056 A	CHLORIDE	FL
EPA 9056 A	NITRATE AS N	FL
EPA 9056 A	SULFATE	FL
SM 2120 B-2011	COLOR	FL
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	FL
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	FL
SM 3500-CR B-2011	CHROMIUM VI	FL
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	FL
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND (COD)	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9012 B	TOTAL CYANIDE	FL
EPA 9056 A	BROMIDE	FL
EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRITE AS N	FL
EPA 9065	TOTAL PHENOLICS	FL
SM 2320 B-2011	ALKALINITY AS CACO3	FL
SM 2540 B-2011	RESIDUE-TOTAL (TS)	FL
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	FL
SM 4500-S2 F-2011	SULFIDE	FL
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	FL
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	FL

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6010 D	ALUMINUM	FL
EPA 6010 D	ARSENIC	FL
EPA 6010 D	BERYLLIUM	FL
EPA 6010 D	CADMIUM	FL
EPA 6010 D	CHROMIUM	FL
EPA 6010 D	COPPER	FL
EPA 6010 D	LEAD	FL
EPA 6010 D	MANGANESE	FL
EPA 6010 D	NICKEL	FL
EPA 6010 D	SELENIUM	FL
EPA 6010 D	SODIUM	FL
EPA 6010 D	TIN	FL
EPA 6010 D	VANADIUM	FL
EPA 6020 B	ALUMINUM	FL
EPA 6020 B	ARSENIC	FL
EPA 6020 B	BERYLLIUM	FL
EPA 6020 B	CALCIUM	FL
EPA 6020 B	COBALT	FL
EPA 6020 B	IRON	FL
EPA 6020 B	MAGNESIUM	FL
EPA 6020 B	NICKEL	FL
EPA 6020 B	SELENIUM	FL
EPA 6020 B	SODIUM	FL
EPA 6020 B	VANADIUM	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 6010 C	IRON	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6010 D	ANTIMONY	FL
EPA 6010 D	BARIUM	FL
EPA 6010 D	BORON	FL
EPA 6010 D	CALCIUM	FL
EPA 6010 D	COBALT	FL
EPA 6010 D	IRON	FL
EPA 6010 D	MAGNESIUM	FL
EPA 6010 D	MOLYBDENUM	FL
EPA 6010 D	POTASSIUM	FL
EPA 6010 D	SILVER	FL
EPA 6010 D	THALLIUM	FL
EPA 6010 D	TITANIUM	FL
EPA 6010 D	ZINC	FL
EPA 6020 B	ANTIMONY	FL
EPA 6020 B	BARIUM	FL
EPA 6020 B	CADMIUM	FL
EPA 6020 B	CHROMIUM	FL
EPA 6020 B	COPPER	FL
EPA 6020 B	LEAD	FL
EPA 6020 B	MANGANESE	FL
EPA 6020 B	POTASSIUM	FL
EPA 6020 B	SILVER	FL
EPA 6020 B	THALLIUM	FL
EPA 6020 B	ZINC	FL
EPA 7471 B	MERCURY	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL

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METHOD	ANALYTE	PRIMARY
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL

METHOD	ANALYTE	PRIMARY
EPA 8081 B	CHLORDANE, TOTAL	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL

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VELAP Certificate No.: 10541

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

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West Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9045 C	PH	FL
EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9045 D	PH	FL

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460175
Testamerica Laboratories, Inc. - Canton

4101 Shuffel Street N.W.
North Canton, OH 44720

Owner: TESTAMERICA LABORATORIES, INC.
Operator: RACHEL BRYDON JANNETTA
Responsible Official: RAYMOND RISDEN

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2019**
Expiration Date: **September 14, 2020**
Certificate # 10578

Denise M. Toney

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
ASTM D3987-06	PREP: SHAKE EXTRACTION OF SOLID WASTE WITH WATER	OR
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	OR
EPA 1630	METHYL MERCURY	OR
EPA 1664 A	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	OR
EPA 180.1 REV 2 (AS HACH 8195)	TURBIDITY	OR
EPA 200.7 REV 4.4	ANTIMONY	OR
EPA 200.7 REV 4.4	BARIUM	OR
EPA 200.7 REV 4.4	BORON	OR
EPA 200.7 REV 4.4	CALCIUM	OR
EPA 200.7 REV 4.4	COBALT	OR
EPA 200.7 REV 4.4	IRON	OR
EPA 200.7 REV 4.4	MAGNESIUM	OR
EPA 200.7 REV 4.4	MOLYBDENUM	OR
EPA 200.7 REV 4.4	POTASSIUM	OR
EPA 200.7 REV 4.4	SILICA AS SIO2	OR
EPA 200.7 REV 4.4	SODIUM	OR
EPA 200.7 REV 4.4	TIN	OR
EPA 200.7 REV 4.4	VANADIUM	OR
EPA 200.8 REV 5.4	ALUMINUM	OR
EPA 200.8 REV 5.4	ARSENIC	OR
EPA 200.8 REV 5.4	BERYLLIUM	OR
EPA 200.8 REV 5.4	CHROMIUM	OR
EPA 200.8 REV 5.4	COPPER	OR
EPA 200.8 REV 5.4	MANGANESE	OR
EPA 200.8 REV 5.4	NICKEL	OR
EPA 200.8 REV 5.4	SILVER	OR
EPA 200.8 REV 5.4	VANADIUM	OR
EPA 200.8 REV 5.4 - EXTENDED	BORON	OR
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	OR
EPA 200.8 REV 5.4 - EXTENDED	TIN	OR
EPA 245.1 REV 3	MERCURY	OR
EPA 300.0 REV 2.1	CHLORIDE	OR
EPA 300.0 REV 2.1	NITRATE AS N	OR
EPA 300.0 REV 2.1	SULFATE	OR

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	OR
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	OR
EPA 1631 E	MERCURY	OR
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	OR
EPA 200.7 REV 4.4	ALUMINUM	OR
EPA 200.7 REV 4.4	ARSENIC	OR
EPA 200.7 REV 4.4	BERYLLIUM	OR
EPA 200.7 REV 4.4	CADMIUM	OR
EPA 200.7 REV 4.4	CHROMIUM	OR
EPA 200.7 REV 4.4	COPPER	OR
EPA 200.7 REV 4.4	LEAD	OR
EPA 200.7 REV 4.4	MANGANESE	OR
EPA 200.7 REV 4.4	NICKEL	OR
EPA 200.7 REV 4.4	SELENIUM	OR
EPA 200.7 REV 4.4	SILVER	OR
EPA 200.7 REV 4.4	THALLIUM	OR
EPA 200.7 REV 4.4	TITANIUM	OR
EPA 200.7 REV 4.4	ZINC	OR
EPA 200.8 REV 5.4	ANTIMONY	OR
EPA 200.8 REV 5.4	BARIUM	OR
EPA 200.8 REV 5.4	CADMIUM	OR
EPA 200.8 REV 5.4	COBALT	OR
EPA 200.8 REV 5.4	LEAD	OR
EPA 200.8 REV 5.4	MOLYBDENUM	OR
EPA 200.8 REV 5.4	SELENIUM	OR
EPA 200.8 REV 5.4	THALLIUM	OR
EPA 200.8 REV 5.4	ZINC	OR
EPA 200.8 REV 5.4 - EXTENDED	IRON	OR
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	OR
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	OR
EPA 300.0 REV 2.1	BROMIDE	OR
EPA 300.0 REV 2.1	FLUORIDE	OR
EPA 300.0 REV 2.1	NITRITE AS N	OR

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	OR
EPA 335.4 REV 1.0	CYANIDE	OR
EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	OR
EPA 3620 B	PREP: FLORISIL CLEANUP	OR
EPA 365.3	PHOSPHORUS, TOTAL	OR
EPA 3660 B	PREP: SULFUR CLEANUP	OR
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	OR
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 6010 B	ALUMINUM	OR
EPA 6010 B	ARSENIC	OR
EPA 6010 B	BERYLLIUM	OR
EPA 6010 B	CADMIUM	OR
EPA 6010 B	CHROMIUM	OR
EPA 6010 B	COPPER	OR
EPA 6010 B	LEAD	OR
EPA 6010 B	MAGNESIUM	OR
EPA 6010 B	MOLYBDENUM	OR
EPA 6010 B	POTASSIUM	OR
EPA 6010 B	SILICA AS SIO2	OR
EPA 6010 B	SODIUM	OR
EPA 6010 B	THALLIUM	OR
EPA 6010 B	TITANIUM	OR
EPA 6010 B	ZINC	OR
EPA 6010 C	ALUMINUM	OR
EPA 6010 C	ARSENIC	OR
EPA 6010 C	BERYLLIUM	OR
EPA 6010 C	CADMIUM	OR
EPA 6010 C	CHROMIUM	OR
EPA 6010 C	COPPER	OR
EPA 6010 C	LEAD	OR
EPA 6010 C	MAGNESIUM	OR
EPA 6010 C	MOLYBDENUM	OR
EPA 6010 C	POTASSIUM	OR
EPA 6010 C	SILICA AS SIO2	OR
EPA 6010 C	SODIUM	OR

METHOD	ANALYTE	PRIMARY
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	OR
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	OR
EPA 353.2 REV 2	NITRATE/NITRITE	OR
EPA 365.3	ORTHOPHOSPHATE AS P	OR
EPA 3650 B	PREP: ACID BASE PARTITION CLEANUP	OR
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	OR
EPA 420.1 (AS HACH 8047)	TOTAL PHENOLICS	OR
EPA 5030 C	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 6010 B	ANTIMONY	OR
EPA 6010 B	BARIUM	OR
EPA 6010 B	BORON	OR
EPA 6010 B	CALCIUM	OR
EPA 6010 B	COBALT	OR
EPA 6010 B	IRON	OR
EPA 6010 B	LITHIUM	OR
EPA 6010 B	MANGANESE	OR
EPA 6010 B	NICKEL	OR
EPA 6010 B	SELENIUM	OR
EPA 6010 B	SILVER	OR
EPA 6010 B	STRONTIUM	OR
EPA 6010 B	TIN	OR
EPA 6010 B	VANADIUM	OR
EPA 6010 B - EXTENDED	SILICON	OR
EPA 6010 C	ANTIMONY	OR
EPA 6010 C	BARIUM	OR
EPA 6010 C	BORON	OR
EPA 6010 C	CALCIUM	OR
EPA 6010 C	COBALT	OR
EPA 6010 C	IRON	OR
EPA 6010 C	LITHIUM	OR
EPA 6010 C	MANGANESE	OR
EPA 6010 C	NICKEL	OR
EPA 6010 C	SELENIUM	OR
EPA 6010 C	SILVER	OR
EPA 6010 C	STRONTIUM	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6010 C	THALLIUM	OR
EPA 6010 C	TITANIUM	OR
EPA 6010 C	ZINC	OR
EPA 6010 D	ALUMINUM	OR
EPA 6010 D	ARSENIC	OR
EPA 6010 D	BERYLLIUM	OR
EPA 6010 D	CADMIUM	OR
EPA 6010 D	CHROMIUM	OR
EPA 6010 D	COPPER	OR
EPA 6010 D	LEAD	OR
EPA 6010 D	MAGNESIUM	OR
EPA 6010 D	MOLYBDENUM	OR
EPA 6010 D	POTASSIUM	OR
EPA 6010 D	SILICA AS SIO2	OR
EPA 6010 D	SODIUM	OR
EPA 6010 D	THALLIUM	OR
EPA 6010 D	TITANIUM	OR
EPA 6010 D	ZINC	OR
EPA 6020	ALUMINUM	OR
EPA 6020	ARSENIC	OR
EPA 6020	BERYLLIUM	OR
EPA 6020	CHROMIUM	OR
EPA 6020	COPPER	OR
EPA 6020	MANGANESE	OR
EPA 6020	SILVER	OR
EPA 6020	ZINC	OR
EPA 6020 - EXTENDED	CALCIUM	OR
EPA 6020 - EXTENDED	LITHIUM	OR
EPA 6020 - EXTENDED	MOLYBDENUM	OR
EPA 6020 - EXTENDED	SELENIUM	OR
EPA 6020 - EXTENDED	STRONTIUM	OR
EPA 6020 - EXTENDED	TITANIUM	OR
EPA 6020 A	ALUMINUM	OR
EPA 6020 A	ARSENIC	OR
EPA 6020 A	BERYLLIUM	OR
EPA 6020 A	CALCIUM	OR
EPA 6020 A	COBALT	OR
EPA 6020 A	IRON	OR
EPA 6020 A	MAGNESIUM	OR
EPA 6010 C	TIN	OR
EPA 6010 C	VANADIUM	OR
EPA 6010 C - EXTENDED	SILICON	OR
EPA 6010 D	ANTIMONY	OR
EPA 6010 D	BARIUM	OR
EPA 6010 D	BORON	OR
EPA 6010 D	CALCIUM	OR
EPA 6010 D	COBALT	OR
EPA 6010 D	IRON	OR
EPA 6010 D	LITHIUM	OR
EPA 6010 D	MANGANESE	OR
EPA 6010 D	NICKEL	OR
EPA 6010 D	SELENIUM	OR
EPA 6010 D	SILVER	OR
EPA 6010 D	STRONTIUM	OR
EPA 6010 D	TIN	OR
EPA 6010 D	VANADIUM	OR
EPA 6010 D - EXTENDED	SILICON	OR
EPA 6020	ANTIMONY	OR
EPA 6020	BARIUM	OR
EPA 6020	CADMIUM	OR
EPA 6020	COBALT	OR
EPA 6020	LEAD	OR
EPA 6020	NICKEL	OR
EPA 6020	THALLIUM	OR
EPA 6020 - EXTENDED	BORON	OR
EPA 6020 - EXTENDED	IRON	OR
EPA 6020 - EXTENDED	MAGNESIUM	OR
EPA 6020 - EXTENDED	POTASSIUM	OR
EPA 6020 - EXTENDED	SODIUM	OR
EPA 6020 - EXTENDED	TIN	OR
EPA 6020 - EXTENDED	VANADIUM	OR
EPA 6020 A	ANTIMONY	OR
EPA 6020 A	BARIUM	OR
EPA 6020 A	CADMIUM	OR
EPA 6020 A	CHROMIUM	OR
EPA 6020 A	COPPER	OR
EPA 6020 A	LEAD	OR
EPA 6020 A	MANGANESE	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 A	NICKEL	OR	EPA 6020 A	POTASSIUM	OR
EPA 6020 A	SELENIUM	OR	EPA 6020 A	SILVER	OR
EPA 6020 A	SODIUM	OR	EPA 6020 A	THALLIUM	OR
EPA 6020 A	VANADIUM	OR	EPA 6020 A	ZINC	OR
EPA 6020 A - EXTENDED	BORON	OR	EPA 6020 A - EXTENDED	LITHIUM	OR
EPA 6020 A - EXTENDED	MOLYBDENUM	OR	EPA 6020 A - EXTENDED	STRONTIUM	OR
EPA 6020 A - EXTENDED	TIN	OR	EPA 6020 A - EXTENDED	TITANIUM	OR
EPA 6020 B	ALUMINUM	OR	EPA 6020 B	ANTIMONY	OR
EPA 6020 B	ARSENIC	OR	EPA 6020 B	BARIUM	OR
EPA 6020 B	BERYLLIUM	OR	EPA 6020 B	CADMIUM	OR
EPA 6020 B	CALCIUM	OR	EPA 6020 B	CHROMIUM	OR
EPA 6020 B	COBALT	OR	EPA 6020 B	COPPER	OR
EPA 6020 B	IRON	OR	EPA 6020 B	LEAD	OR
EPA 6020 B	MAGNESIUM	OR	EPA 6020 B	MANGANESE	OR
EPA 6020 B	MOLYBDENUM	OR	EPA 6020 B	NICKEL	OR
EPA 6020 B	POTASSIUM	OR	EPA 6020 B	SELENIUM	OR
EPA 6020 B	SILVER	OR	EPA 6020 B	SODIUM	OR
EPA 6020 B	THALLIUM	OR	EPA 6020 B	TIN	OR
EPA 6020 B	VANADIUM	OR	EPA 6020 B	ZINC	OR
EPA 6020 B - EXTENDED	BORON	OR	EPA 6020 B - EXTENDED	LITHIUM	OR
EPA 6020 B - EXTENDED	STRONTIUM	OR	EPA 6020 B - EXTENDED	TITANIUM	OR
EPA 608.3	4,4'-DDD	OR	EPA 608.3	4,4'-DDE	OR
EPA 608.3	4,4'-DDT	OR	EPA 608.3	ALDRIN	OR
EPA 608.3	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR	EPA 608.3	AROCLOR-1016 (PCB-1016)	OR
EPA 608.3	AROCLOR-1221 (PCB-1221)	OR	EPA 608.3	AROCLOR-1232 (PCB-1232)	OR
EPA 608.3	AROCLOR-1242 (PCB-1242)	OR	EPA 608.3	AROCLOR-1248 (PCB-1248)	OR
EPA 608.3	AROCLOR-1254 (PCB-1254)	OR	EPA 608.3	AROCLOR-1260 (PCB-1260)	OR
EPA 608.3	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR	EPA 608.3	CHLORDANE, TOTAL	OR
EPA 608.3	DELTA-BHC	OR	EPA 608.3	DIELDRIN	OR
EPA 608.3	ENDOSULFAN I	OR	EPA 608.3	ENDOSULFAN II	OR
EPA 608.3	ENDOSULFAN SULFATE	OR	EPA 608.3	ENDRIN	OR
EPA 608.3	ENDRIN ALDEHYDE	OR	EPA 608.3	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 608.3	HEPTACHLOR	OR	EPA 608.3	HEPTACHLOR EPOXIDE	OR
EPA 608.3	TOXAPHENE (CHLORINATED CAMPHENE)	OR	EPA 624.1	1,1,1-TRICHLOROETHANE	OR
EPA 624.1	1,1,2,2-TETRACHLOROETHANE	OR	EPA 624.1	1,1,2-TRICHLOROETHANE	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 624.1	1,1-DICHLOROETHANE	OR	EPA 624.1	1,1-DICHLOROETHYLENE	OR
EPA 624.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR	EPA 624.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 624.1	1,2-DICHLOROPROPANE	OR	EPA 624.1	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 624.1	1,3-DICHLOROPROPENE	OR	EPA 624.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 624.1	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR	EPA 624.1	2-CHLOROETHYL VINYL ETHER	OR
EPA 624.1	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR	EPA 624.1	ACETONE	OR
EPA 624.1	ACROLEIN (PROPENAL)	OR	EPA 624.1	ACRYLONITRILE	OR
EPA 624.1	BENZENE	OR	EPA 624.1	BROMODICHLOROMETHANE	OR
EPA 624.1	BROMOFORM	OR	EPA 624.1	CARBON TETRACHLORIDE	OR
EPA 624.1	CHLOROBENZENE	OR	EPA 624.1	CHLORODIBROMOMETHANE	OR
EPA 624.1	CHLOROETHANE (ETHYL CHLORIDE)	OR	EPA 624.1	CHLOROFORM	OR
EPA 624.1	CIS-1,2-DICHLOROETHYLENE	OR	EPA 624.1	CIS-1,3-DICHLOROPROPENE	OR
EPA 624.1	ETHYLBENZENE	OR	EPA 624.1	METHYL BROMIDE (BROMOMETHANE)	OR
EPA 624.1	METHYL CHLORIDE (CHLOROMETHANE)	OR	EPA 624.1	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 624.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR	EPA 624.1	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 624.1	TOLUENE	OR	EPA 624.1	TRANS-1,2-DICHLOROETHENE	OR
EPA 624.1	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	OR	EPA 624.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 624.1	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 624.1	VINYL CHLORIDE (CHLOROETHENE)	OR
EPA 624.1	XYLENE (TOTAL)	OR	EPA 624.1 EXTENDED	N-HEXANE	OR
EPA 625.1	1,2,4-TRICHLOROBENZENE	OR	EPA 625.1	1,2-DIPHENYLHYDRAZINE	OR
EPA 625.1	2,2'-OXYBIS(1-CHLOROPROPANE)	OR	EPA 625.1	2,4,6-TRICHLOROPHENOL	OR
EPA 625.1	2,4-DICHLOROPHENOL	OR	EPA 625.1	2,4-DIMETHYLPHENOL	OR
EPA 625.1	2,4-DINITROPHENOL	OR	EPA 625.1	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 625.1	2,6-DINITROTOLUENE (2,6-DNT)	OR	EPA 625.1	2-CHLORONAPHTHALENE	OR
EPA 625.1	2-CHLOROPHENOL	OR	EPA 625.1	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR
EPA 625.1	2-METHYLPHENOL (O-CRESOL)	OR	EPA 625.1	2-NITROPHENOL	OR
EPA 625.1	3,3'-DICHLOROBENZIDINE	OR	EPA 625.1	4-BROMOPHENYL PHENYL ETHER (BDE-3)	OR
EPA 625.1	4-CHLORO-3-METHYLPHENOL	OR	EPA 625.1	4-CHLOROPHENYL PHENYLETHER	OR
EPA 625.1	4-NITROPHENOL	OR	EPA 625.1	ACENAPHTHENE	OR
EPA 625.1	ACENAPHTHYLENE	OR	EPA 625.1	ACETOPHENONE	OR
EPA 625.1	ANILINE	OR	EPA 625.1	ANTHRACENE	OR
EPA 625.1	BENZIDINE	OR	EPA 625.1	BENZO(A)ANTHRACENE	OR

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 625.1	BENZO(A)PYRENE	OR	EPA 625.1	BENZO(B)FLUORANTHENE	OR
EPA 625.1	BENZO(G,H,I)PERYLENE	OR	EPA 625.1	BENZO(K)FLUORANTHENE	OR
EPA 625.1	BENZOIC ACID	OR	EPA 625.1	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 625.1	BIS(2-CHLOROETHYL) ETHER	OR	EPA 625.1	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 625.1	BUTYL BENZYL PHTHALATE	OR	EPA 625.1	CARBAZOLE	OR
EPA 625.1	CHRYSENE	OR	EPA 625.1	DI-N-BUTYL PHTHALATE	OR
EPA 625.1	DI-N-OCTYL PHTHALATE	OR	EPA 625.1	DIBENZO(A,H) ANTHRACENE	OR
EPA 625.1	DIETHYL PHTHALATE	OR	EPA 625.1	DIMETHYL PHTHALATE	OR
EPA 625.1	FLUORANTHENE	OR	EPA 625.1	FLUORENE	OR
EPA 625.1	HEXACHLOROBENZENE	OR	EPA 625.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 625.1	HEXACHLOROCYCLOPENTADIENE	OR	EPA 625.1	HEXACHLOROETHANE	OR
EPA 625.1	INDENO(1,2,3-CD) PYRENE	OR	EPA 625.1	ISOPHORONE	OR
EPA 625.1	N-NITROSODI-N-PROPYLAMINE	OR	EPA 625.1	N-NITROSODIMETHYLAMINE	OR
EPA 625.1	N-NITROSODIPHENYLAMINE	OR	EPA 625.1	NAPHTHALENE	OR
EPA 625.1	NITROBENZENE	OR	EPA 625.1	PENTACHLOROPHENOL	OR
EPA 625.1	PHENANTHRENE	OR	EPA 625.1	PHENOL	OR
EPA 625.1	PYRENE	OR	EPA 625.1	PYRIDINE	OR
EPA 625.1 EXTENDED	N-DECANE	OR	EPA 625.1 EXTENDED	N-OCTADECANE	OR
EPA 7196 A	CHROMIUM VI	OR	EPA 7470 A	MERCURY	OR
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8081 A	4,4'-DDD	OR	EPA 8081 A	4,4'-DDE	OR
EPA 8081 A	4,4'-DDT	OR	EPA 8081 A	ALDRIN	OR
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR	EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	OR
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR	EPA 8081 A	CHLORDANE, TOTAL	OR
EPA 8081 A	CHLOROBENZILATE	OR	EPA 8081 A	DELTA-BHC	OR
EPA 8081 A	DIALLATE	OR	EPA 8081 A	DIELDRIN	OR
EPA 8081 A	ENDOSULFAN I	OR	EPA 8081 A	ENDOSULFAN II	OR
EPA 8081 A	ENDOSULFAN SULFATE	OR	EPA 8081 A	ENDRIN	OR
EPA 8081 A	ENDRIN ALDEHYDE	OR	EPA 8081 A	ENDRIN KETONE	OR
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR	EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	OR

Commonwealth of Virginia

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Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8081 A	HEPTACHLOR	OR
EPA 8081 A	HEXACHLOROBENZENE	OR
EPA 8081 A	METHOXYCHLOR	OR
EPA 8081 A - EXTENDED	KEPONE	OR
EPA 8081 B	4,4'-DDD	OR
EPA 8081 B	4,4'-DDT	OR
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	CHLOROBENZILATE	OR
EPA 8081 B	DIALLATE	OR
EPA 8081 B	ENDOSULFAN I	OR
EPA 8081 B	ENDOSULFAN SULFATE	OR
EPA 8081 B	ENDRIN ALDEHYDE	OR
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	HEPTACHLOR	OR
EPA 8081 B	HEXACHLOROBENZENE	OR
EPA 8081 B	METHOXYCHLOR	OR
EPA 8081 B - EXTENDED	KEPONE	OR
EPA 8082	AROCLOR-1016 (PCB-1016)	OR
EPA 8082	AROCLOR-1232 (PCB-1232)	OR
EPA 8082	AROCLOR-1248 (PCB-1248)	OR
EPA 8082	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8082 A	AROCLOR-1221 (PCB-1221)	OR
EPA 8082 A	AROCLOR-1242 (PCB-1242)	OR
EPA 8082 A	AROCLOR-1254 (PCB-1254)	OR
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8151 A	2,4,5-T	OR
EPA 8151 A	2,4-DB	OR
EPA 8151 A	DICAMBA	OR
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8151 A	MCPP	OR
EPA 8151 A	SILVEX (2,4,5-TP)	OR
EPA 8081 A	HEPTACHLOR EPOXIDE	OR
EPA 8081 A	ISODRIN	OR
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 A - EXTENDED	MIREX	OR
EPA 8081 B	4,4'-DDE	OR
EPA 8081 B	ALDRIN	OR
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	OR
EPA 8081 B	CHLORDANE, TOTAL	OR
EPA 8081 B	DELTA-BHC	OR
EPA 8081 B	DIELDRIN	OR
EPA 8081 B	ENDOSULFAN II	OR
EPA 8081 B	ENDRIN	OR
EPA 8081 B	ENDRIN KETONE	OR
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	OR
EPA 8081 B	HEPTACHLOR EPOXIDE	OR
EPA 8081 B	ISODRIN	OR
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 B - EXTENDED	MIREX	OR
EPA 8082	AROCLOR-1221 (PCB-1221)	OR
EPA 8082	AROCLOR-1242 (PCB-1242)	OR
EPA 8082	AROCLOR-1254 (PCB-1254)	OR
EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8082 A	AROCLOR-1016 (PCB-1016)	OR
EPA 8082 A	AROCLOR-1232 (PCB-1232)	OR
EPA 8082 A	AROCLOR-1248 (PCB-1248)	OR
EPA 8082 A	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8151 A	2,4-D	OR
EPA 8151 A	DALAPON	OR
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	OR
EPA 8151 A	MCPA	OR
EPA 8151 A	PENTACHLOROPHENOL	OR
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	OR

Commonwealth of Virginia

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Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,1,1-TRICHLOROETHANE	OR
EPA 8260 B	1,1,2-TRICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHYLENE	OR
EPA 8260 B	1,2,3-TRICHLOROBENZENE	OR
EPA 8260 B	1,2,4-TRICHLOROBENZENE	OR
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8260 B	1,2-DICHLOROPROPANE	OR
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	OR
EPA 8260 B	2,2-DICHLOROPROPANE	OR
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	OR
EPA 8260 B	2-HEXANONE	OR
EPA 8260 B	4-CHLOROTOLUENE	OR
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 B	ACETONITRILE	OR
EPA 8260 B	ACRYLONITRILE	OR
EPA 8260 B	BENZENE	OR
EPA 8260 B	BROMOBENZENE	OR
EPA 8260 B	BROMODICHLOROMETHANE	OR
EPA 8260 B	CARBON DISULFIDE	OR
EPA 8260 B	CHLOROBENZENE	OR
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	OR
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	OR
EPA 8260 B	ETHYL METHACRYLATE	OR
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR

METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROPROPENE	OR
EPA 8260 B	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 B	1,3-DICHLOROPROPANE	OR
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8260 B	1-CHLOROHEXANE	OR
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 B	2-CHLOROTOLUENE	OR
EPA 8260 B	2-NITROPROPANE	OR
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	OR
EPA 8260 B	ACETONE	OR
EPA 8260 B	ACROLEIN (PROPENAL)	OR
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 B	BENZYL CHLORIDE	OR
EPA 8260 B	BROMOCHLOROMETHANE	OR
EPA 8260 B	BROMOFORM	OR
EPA 8260 B	CARBON TETRACHLORIDE	OR
EPA 8260 B	CHLORODIBROMOMETHANE	OR
EPA 8260 B	CHLOROFORM	OR
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	OR
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 B	DIETHYL ETHER	OR
EPA 8260 B	ETHYL ACETATE	OR
EPA 8260 B	ETHYLBENZENE	OR
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	OR

Commonwealth of Virginia

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 B	M+P-XYLENE	OR
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	OR
EPA 8260 B	METHYL METHACRYLATE	OR
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 B	N-PROPYLBENZENE	OR
EPA 8260 B	O-XYLENE	OR
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 B	STYRENE	OR
EPA 8260 B	TERT-BUTYLBENZENE	OR
EPA 8260 B	TOLUENE	OR
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	OR
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	OR
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	OR
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR
EPA 8260 B - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8260 B - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 B - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	OR
EPA 8260 B - EXTENDED	N-HEPTANE	OR
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	OR
EPA 8260 B SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8260 C	1,1,1-TRICHLOROETHANE	OR
EPA 8260 C	1,1,2-TRICHLOROETHANE	OR
EPA 8260 C	1,1-DICHLOROETHYLENE	OR
EPA 8260 C	1,2,3-TRICHLOROBENZENE	OR
EPA 8260 B	ISOPROPYLBENZENE	OR
EPA 8260 B	METHACRYLONITRILE	OR
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 8260 B	N-BUTYLBENZENE	OR
EPA 8260 B	NAPHTHALENE	OR
EPA 8260 B	PENTACHLOROETHANE	OR
EPA 8260 B	SEC-BUTYLBENZENE	OR
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	OR
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 8260 B	TOTAL TRIHALOMETHANES (TTHMS)	OR
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	OR
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 8260 B	VINYL ACETATE	OR
EPA 8260 B	XYLENE (TOTAL)	OR
EPA 8260 B - EXTENDED	1,2,3-TRIMETHYLBENZENE	OR
EPA 8260 B - EXTENDED	1,3-BUTADIENE	OR
EPA 8260 B - EXTENDED	CYCLOHEXANE	OR
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR
EPA 8260 B - EXTENDED	ETHYL ACRYLATE	OR
EPA 8260 B - EXTENDED	METHYL ACETATE	OR
EPA 8260 B - EXTENDED	N-BUTYL-ACETATE	OR
EPA 8260 B - EXTENDED	N-HEXANE	OR
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1-DICHLOROETHANE	OR
EPA 8260 C	1,1-DICHLOROPROPENE	OR
EPA 8260 C	1,2,3-TRICHLOROPROPANE	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,2,4-TRICHLOROBENZENE	OR
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8260 C	1,2-DICHLOROPROPANE	OR
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	OR
EPA 8260 C	2,2-DICHLOROPROPANE	OR
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	OR
EPA 8260 C	2-HEXANONE	OR
EPA 8260 C	4-CHLOROTOLUENE	OR
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 C	ACETONITRILE	OR
EPA 8260 C	ACRYLONITRILE	OR
EPA 8260 C	BENZENE	OR
EPA 8260 C	BROMOBENZENE	OR
EPA 8260 C	BROMODICHLOROMETHANE	OR
EPA 8260 C	CARBON DISULFIDE	OR
EPA 8260 C	CHLOROBENZENE	OR
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 C	DIETHYL ETHER	OR
EPA 8260 C	ETHYL ACETATE	OR
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 C	M+P-XYLENE	OR
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 C	1,3-DICHLOROPROPANE	OR
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8260 C	1-CHLOROHEXANE	OR
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 C	2-CHLOROTOLUENE	OR
EPA 8260 C	2-NITROPROPANE	OR
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	OR
EPA 8260 C	ACETONE	OR
EPA 8260 C	ACROLEIN (PROPENAL)	OR
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 C	BENZYL CHLORIDE	OR
EPA 8260 C	BROMOCHLOROMETHANE	OR
EPA 8260 C	BROMOFORM	OR
EPA 8260 C	CARBON TETRACHLORIDE	OR
EPA 8260 C	CHLORODIBROMOMETHANE	OR
EPA 8260 C	CHLOROFORM	OR
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	OR
EPA 8260 C	CYCLOHEXANE	OR
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	OR
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	OR
EPA 8260 C	ETHYL METHACRYLATE	OR
EPA 8260 C	ETHYLBENZENE	OR
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	OR
EPA 8260 C	ISOPROPYLBENZENE	OR
EPA 8260 C	METHACRYLONITRILE	OR

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	OR	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 8260 C	METHYL METHACRYLATE	OR	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 8260 C	METHYLCYCLOHEXANE	OR	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 C	N-BUTYLBENZENE	OR	EPA 8260 C	N-PROPYLBENZENE	OR
EPA 8260 C	NAPHTHALENE	OR	EPA 8260 C	O-XYLENE	OR
EPA 8260 C	PENTACHLOROETHANE	OR	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 C	SEC-BUTYLBENZENE	OR	EPA 8260 C	STYRENE	OR
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	OR
EPA 8260 C	TERT-BUTYLBENZENE	OR	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 8260 C	TOLUENE	OR	EPA 8260 C	TOTAL TRIHALOMETHANES (TTHMS)	OR
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	OR
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	OR	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 8260 C	VINYL ACETATE	OR
EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	OR	EPA 8260 C	XYLENE (TOTAL)	OR
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR	EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8260 C - EXTENDED	1,3-BUTADIENE	OR	EPA 8260 C - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 C - EXTENDED	CIS & TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 C - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR	EPA 8260 C - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 C - EXTENDED	ETHYL ACRYLATE	OR	EPA 8260 C - EXTENDED	METHYL ACETATE	OR
EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	OR	EPA 8260 C - EXTENDED	N-HEPTANE	OR
EPA 8260 C - EXTENDED	N-HEXANE	OR	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	OR	EPA 8270 C	1,2,4-TRICHLOROBENZENE	OR
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	OR
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR	EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	OR	EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	OR	EPA 8270 C	1,4-NAPHTHOQUINONE	OR
EPA 8270 C	1,4-PHENYLENEDIAMINE	OR	EPA 8270 C	1-CHLORONAPHTHALENE	OR
EPA 8270 C	1-NAPHTHYLAMINE	OR	EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	OR
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	OR	EPA 8270 C	2,4,5-TRICHLOROPHENOL	OR
EPA 8270 C	2,4,6-TRICHLOROPHENOL	OR	EPA 8270 C	2,4-DICHLOROPHENOL	OR

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

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4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2,4-DIMETHYLPHENOL	OR	EPA 8270 C	2,4-DINITROPHENOL	OR
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	OR	EPA 8270 C	2,6-DICHLOROPHENOL	OR
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	OR	EPA 8270 C	2-ACETYLAMINOFLUORENE	OR
EPA 8270 C	2-CHLORONAPHTHALENE	OR	EPA 8270 C	2-CHLOROPHENOL	OR
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR	EPA 8270 C	2-METHYLNAPHTHALENE	OR
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	OR	EPA 8270 C	2-NAPHTHYLAMINE	OR
EPA 8270 C	2-NITROANILINE	OR	EPA 8270 C	2-NITROPHENOL	OR
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	OR	EPA 8270 C	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	OR	EPA 8270 C	3-METHYLCHOLANTHRENE	OR
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	OR	EPA 8270 C	3-NITROANILINE	OR
EPA 8270 C	4,4'-METHYLENEBIS-2-CHLOROANILINE	OR	EPA 8270 C	4-AMINOBIPHENYL	OR
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	OR	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 C	4-CHLOROANILINE	OR	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	OR	EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	OR
EPA 8270 C	4-NITROANILINE	OR	EPA 8270 C	4-NITROPHENOL	OR
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	OR	EPA 8270 C	5-NITRO-O-TOLUIDINE	OR
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	OR
EPA 8270 C	ACENAPHTHENE	OR	EPA 8270 C	ACENAPHTHYLENE	OR
EPA 8270 C	ACETOPHENONE	OR	EPA 8270 C	ANILINE	OR
EPA 8270 C	ANTHRACENE	OR	EPA 8270 C	ARAMITE	OR
EPA 8270 C	BENZIDINE	OR	EPA 8270 C	BENZO(A)ANTHRACENE	OR
EPA 8270 C	BENZO(A)PYRENE	OR	EPA 8270 C	BENZO(B)FLUORANTHENE	OR
EPA 8270 C	BENZO(G,H,I)PERYLENE	OR	EPA 8270 C	BENZO(K)FLUORANTHENE	OR
EPA 8270 C	BENZOIC ACID	OR	EPA 8270 C	BENZYL ALCOHOL	OR
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	OR	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	OR
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR	EPA 8270 C	BUTYL BENZYL PHTHALATE	OR
EPA 8270 C	CHLOROBENZILATE	OR	EPA 8270 C	CHRYSENE	OR
EPA 8270 C	CRESOLS, TOTAL	OR	EPA 8270 C	DI-N-BUTYL PHTHALATE	OR
EPA 8270 C	DI-N-OCTYL PHTHALATE	OR	EPA 8270 C	DIALLATE	OR
EPA 8270 C	DIBENZ(A, J) ACRIDINE	OR	EPA 8270 C	DIBENZO(A,E) PYRENE	OR
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	OR	EPA 8270 C	DIBENZOFURAN	OR
EPA 8270 C	DIETHYL PHTHALATE	OR	EPA 8270 C	DIMETHOATE	OR
EPA 8270 C	DIMETHYL PHTHALATE	OR	EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 C	DIPHENYLAMINE	OR	EPA 8270 C	DISULFOTON	OR
EPA 8270 C	ETHYL METHANESULFONATE	OR	EPA 8270 C	FAMPHUR	OR

Commonwealth of Virginia

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	FLUORANTHENE	OR	EPA 8270 C	FLUORENE	OR
EPA 8270 C	HEXACHLOROBENZENE	OR	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	OR	EPA 8270 C	HEXACHLOROETHANE	OR
EPA 8270 C	HEXACHLOROPROPENE	OR	EPA 8270 C	INDENO(1,2,3-CD) PYRENE	OR
EPA 8270 C	ISODRIN	OR	EPA 8270 C	ISOPHORONE	OR
EPA 8270 C	ISOSAFROLE	OR	EPA 8270 C	KEPONE	OR
EPA 8270 C	METHAPYRILENE	OR	EPA 8270 C	METHYL METHANESULFONATE	OR
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	OR	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	OR
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	OR	EPA 8270 C	N-NITROSODIETHYLAMINE	OR
EPA 8270 C	N-NITROSODIMETHYLAMINE	OR	EPA 8270 C	N-NITROSODIPHENYLAMINE	OR
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	OR	EPA 8270 C	N-NITROSOMORPHOLINE	OR
EPA 8270 C	N-NITROSOPIPERIDINE	OR	EPA 8270 C	N-NITROSOPYRROLIDINE	OR
EPA 8270 C	NAPHTHALENE	OR	EPA 8270 C	NITROBENZENE	OR
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	OR
EPA 8270 C	PARATHION (PARATHION - ETHYL)	OR	EPA 8270 C	PENTACHLOROBENZENE	OR
EPA 8270 C	PENTACHLORONITROBENZENE	OR	EPA 8270 C	PENTACHLOROPHENOL	OR
EPA 8270 C	PHENACETIN	OR	EPA 8270 C	PHENANTHRENE	OR
EPA 8270 C	PHENOL	OR	EPA 8270 C	PHORATE	OR
EPA 8270 C	PRONAMIDE (KERB)	OR	EPA 8270 C	PYRENE	OR
EPA 8270 C	PYRIDINE	OR	EPA 8270 C	SAFROLE	OR
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR	EPA 8270 C	THIONAZIN (ZINOPHOS)	OR
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	OR	EPA 8270 C - EXTENDED	1,1'-BIPHENYL (BZ-0)	OR
EPA 8270 C - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	OR	EPA 8270 C - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1,2,3-TRICHLOROBENZENE	OR	EPA 8270 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR	EPA 8270 C - EXTENDED	2-CHLOROANILINE	OR
EPA 8270 C - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR	EPA 8270 C - EXTENDED	6-METHYLCHRYSENE	OR
EPA 8270 C - EXTENDED	ACRYLAMIDE	OR	EPA 8270 C - EXTENDED	ATRAZINE	OR
EPA 8270 C - EXTENDED	AZOBENZENE	OR	EPA 8270 C - EXTENDED	BENZALDEHYDE	OR
EPA 8270 C - EXTENDED	CAPROLACTAM	OR	EPA 8270 C - EXTENDED	CARBAZOLE	OR
EPA 8270 C - EXTENDED	DIBENZ(A,H) ACRIDINE	OR	EPA 8270 C - EXTENDED	ETHYL METHACRYLATE	OR
EPA 8270 C - EXTENDED	INDENE	OR	EPA 8270 C - EXTENDED	N-DECANE	OR
EPA 8270 C - EXTENDED	N-HEXADECANE	OR	EPA 8270 C - EXTENDED	N-OCTADECANE	OR
EPA 8270 C - EXTENDED	PENTACHLOROETHANE	OR	EPA 8270 C - EXTENDED	QUINOLINE	OR
EPA 8270 C - EXTENDED	TRIBUTYL PHOSPHATE	OR	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	OR
EPA 8270 D	1,2,4-TRICHLOROBENZENE	OR	EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	OR
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	OR
EPA 8270 D	1,4-PHENYLENEDIAMINE	OR
EPA 8270 D	1-NAPHTHYLAMINE	OR
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	OR
EPA 8270 D	2,4,6-TRICHLOROPHENOL	OR
EPA 8270 D	2,4-DIMETHYLPHENOL	OR
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	OR
EPA 8270 D	2-CHLORONAPHTHALENE	OR
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	OR
EPA 8270 D	2-NITROANILINE	OR
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	OR
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	OR
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANIL INE	OR
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	OR
EPA 8270 D	4-CHLOROANILINE	OR
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	OR
EPA 8270 D	4-NITROANILINE	OR
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR
EPA 8270 D	ACENAPHTHENE	OR
EPA 8270 D	ACETOPHENONE	OR
EPA 8270 D	ANTHRACENE	OR
EPA 8270 D	BENZIDINE	OR
EPA 8270 D	BENZO(A)PYRENE	OR
EPA 8270 D	BENZO(G,H,I)PERYLENE	OR
EPA 8270 D	BENZOIC ACID	OR
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 8270 D	CHLOROBENZILATE	OR

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	OR
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8270 D	1,4-NAPHTHOQUINONE	OR
EPA 8270 D	1-CHLORONAPHTHALENE	OR
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	OR
EPA 8270 D	2,4,5-TRICHLOROPHENOL	OR
EPA 8270 D	2,4-DICHLOROPHENOL	OR
EPA 8270 D	2,4-DINITROPHENOL	OR
EPA 8270 D	2,6-DICHLOROPHENOL	OR
EPA 8270 D	2-ACETYLAMINOFLUORENE	OR
EPA 8270 D	2-CHLOROPHENOL	OR
EPA 8270 D	2-METHYLNAPHTHALENE	OR
EPA 8270 D	2-NAPHTHYLAMINE	OR
EPA 8270 D	2-NITROPHENOL	OR
EPA 8270 D	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 D	3-METHYLCHOLANTHRENE	OR
EPA 8270 D	3-NITROANILINE	OR
EPA 8270 D	4-AMINOBIPHENYL	OR
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	OR
EPA 8270 D	4-NITROPHENOL	OR
EPA 8270 D	5-NITRO-O-TOLUIDINE	OR
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	OR
EPA 8270 D	ACENAPHTHYLENE	OR
EPA 8270 D	ANILINE	OR
EPA 8270 D	ARAMITE	OR
EPA 8270 D	BENZO(A)ANTHRACENE	OR
EPA 8270 D	BENZO(B)FLUORANTHENE	OR
EPA 8270 D	BENZO(K)FLUORANTHENE	OR
EPA 8270 D	BENZYL ALCOHOL	OR
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	OR
EPA 8270 D	BUTYL BENZYL PHTHALATE	OR
EPA 8270 D	CHRYSENE	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	CRESOLS, TOTAL	OR	EPA 8270 D	DI-N-BUTYL PHTHALATE	OR
EPA 8270 D	DI-N-OCTYL PHTHALATE	OR	EPA 8270 D	DIALLATE	OR
EPA 8270 D	DIBENZ(A, J) ACRIDINE	OR	EPA 8270 D	DIBENZO(A,E) PYRENE	OR
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	OR	EPA 8270 D	DIBENZOFURAN	OR
EPA 8270 D	DIETHYL PHTHALATE	OR	EPA 8270 D	DIMETHOATE	OR
EPA 8270 D	DIMETHYL PHTHALATE	OR	EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 D	DIPHENYLAMINE	OR	EPA 8270 D	DISULFOTON	OR
EPA 8270 D	ETHYL METHANESULFONATE	OR	EPA 8270 D	FAMPHUR	OR
EPA 8270 D	FLUORANTHENE	OR	EPA 8270 D	FLUORENE	OR
EPA 8270 D	HEXACHLOROBENZENE	OR	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	OR	EPA 8270 D	HEXACHLOROETHANE	OR
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	OR	EPA 8270 D	ISODRIN	OR
EPA 8270 D	ISOPHORONE	OR	EPA 8270 D	ISOSAFROLE	OR
EPA 8270 D	KEPONE	OR	EPA 8270 D	METHAPYRILENE	OR
EPA 8270 D	METHYL METHANESULFONATE	OR	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	OR	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 D	N-NITROSODIETHYLAMINE	OR	EPA 8270 D	N-NITROSODIMETHYLAMINE	OR
EPA 8270 D	N-NITROSODIPHENYLAMINE	OR	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 D	N-NITROSOMORPHOLINE	OR	EPA 8270 D	N-NITROSOPIPERIDINE	OR
EPA 8270 D	N-NITROSOPYRROLIDINE	OR	EPA 8270 D	NAPHTHALENE	OR
EPA 8270 D	NITROBENZENE	OR	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	OR	EPA 8270 D	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 D	PENTACHLOROBENZENE	OR	EPA 8270 D	PENTACHLORONITROBENZENE	OR
EPA 8270 D	PENTACHLOROPHENOL	OR	EPA 8270 D	PHENACETIN	OR
EPA 8270 D	PHENANTHRENE	OR	EPA 8270 D	PHENOL	OR
EPA 8270 D	PHORATE	OR	EPA 8270 D	PRONAMIDE (KERB)	OR
EPA 8270 D	PYRENE	OR	EPA 8270 D	SAFROLE	OR
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR	EPA 8270 D	THIONAZIN (ZINOPHOS)	OR
EPA 8270 D	THIOPHENOL (BENZENETHIOL)	OR	EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	OR
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	OR	EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1,2,3-TRICHLOROBENZENE	OR	EPA 8270 D - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR	EPA 8270 D - EXTENDED	2-CHLOROANILINE	OR
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR	EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	OR
EPA 8270 D - EXTENDED	ACRYLAMIDE	OR	EPA 8270 D - EXTENDED	ATRAZINE	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D - EXTENDED	AZOBENZENE	OR	EPA 8270 D - EXTENDED	BENZALDEHYDE	OR
EPA 8270 D - EXTENDED	CAPROLACTAM	OR	EPA 8270 D - EXTENDED	CARBAZOLE	OR
EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	OR	EPA 8270 D - EXTENDED	INDENE	OR
EPA 8270 D - EXTENDED	N-DECANE	OR	EPA 8270 D - EXTENDED	N-HEXADECANE	OR
EPA 8270 D - EXTENDED	N-OCTADECANE	OR	EPA 8270 D - EXTENDED	PENTACHLOROETHANE	OR
EPA 8270 D - EXTENDED	PYRIDINE	OR	EPA 8270 D - EXTENDED	QUINOLINE	OR
EPA 8270 D - EXTENDED	TRIBUTYL PHOSPHATE	OR	EPA 8315 A	FORMALDEHYDE	OR
EPA 9012 A	AMENABLE CYANIDE	OR	EPA 9012 A	TOTAL CYANIDE	OR
EPA 9012 B	AMENABLE CYANIDE	OR	EPA 9012 B	TOTAL CYANIDE	OR
EPA 9030 B	PREP: SULFIDE	OR	EPA 9034	TOTAL SULFIDES	OR
EPA 9040 B	PH	OR	EPA 9040 C	PH	OR
EPA 9050 A	CONDUCTIVITY	OR	EPA 9056 A	BROMIDE	OR
EPA 9056 A	CHLORIDE	OR	EPA 9056 A	FLUORIDE	OR
EPA 9056 A	NITRATE AS N	OR	EPA 9056 A	NITRITE AS N	OR
EPA 9056 A	SULFATE	OR	EPA 9060	TOTAL ORGANIC CARBON (TOC)	OR
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	OR	EPA 9065	TOTAL PHENOLICS	OR
EPA 9095 B	FREE LIQUID	OR	RSK-175	ETHANE	OR
RSK-175	ETHENE (ETHYLENE)	OR	RSK-175	METHANE	OR
SM 2320 B-2011	ALKALINITY AS CACO3	OR	SM 2340 B-2011	TOTAL HARDNESS AS CACO3	OR
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	OR	SM 2510 B-2011	CONDUCTIVITY	OR
SM 2540 B-2011	RESIDUE-TOTAL (TS)	OR	SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	OR
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	OR	SM 2540 F-2011	RESIDUE-SETTLEABLE	OR
SM 3500-CR B-2011	CHROMIUM VI	OR	SM 3500-FE B-2011	IRON	OR
SM 4500-CN$^-$ C-2011	PREP: CYANIDE DISTILLATION	OR	SM 4500-CN$^-$ E-2011	CYANIDE	OR
SM 4500-CN$^-$ E-2011	TOTAL CYANIDE	OR	SM 4500-CN$^-$ G-2011	AMENABLE CYANIDE	OR
SM 4500-NH3 B-2011	AMMONIA AS N	OR	SM 4500-NH3 B-2011	KJELDAHL NITROGEN - TOTAL (TKN)	OR
SM 4500-NH3 C-2011	AMMONIA AS N	OR	SM 4500-NH3 C-2011	KJELDAHL NITROGEN - TOTAL (TKN)	OR
SM 4500-NH3 D-2011	AMMONIA AS N	OR	SM 4500-NORG C-2011	KJELDAHL NITROGEN - TOTAL (TKN)	OR
SM 4500-P B 5-2011	PREP: TOTAL PHOSPHORUS	OR	SM 4500-P E-2011	ORTHOPHOSPHATE AS P	OR
SM 4500-P E-2011	PHOSPHORUS, TOTAL	OR	SM 4500-S2$^-$ F-2011	SULFIDE	OR
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	OR	SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	OR
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND (COD)	OR	SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	OR
SM 5540 C-2011	SURFACTANTS - MBAS	OR			

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
ASTM D3987-06	PREP: SHAKE EXTRACTION OF SOLID WASTE WITH WATER	OR			

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METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	OR
EPA 1630	METHYL MERCURY	OR
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	OR
EPA 3540 C	PREP: SOXHLET EXTRACTION	OR
EPA 3550 B	PREP: ULTRASONIC EXTRACTION	OR
EPA 3580 A	PREP: WASTE DILUTION	OR
EPA 3650 B	PREP: ACID BASE PARTITION CLEANUP	OR
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	OR
EPA 5030 C	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 5035 A	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	OR
EPA 6010 B	ANTIMONY	OR
EPA 6010 B	BARIUM	OR
EPA 6010 B	BORON	OR
EPA 6010 B	CALCIUM	OR
EPA 6010 B	COBALT	OR
EPA 6010 B	IRON	OR
EPA 6010 B	LITHIUM	OR
EPA 6010 B	MANGANESE	OR
EPA 6010 B	NICKEL	OR
EPA 6010 B	SELENIUM	OR
EPA 6010 B	SILVER	OR
EPA 6010 B	STRONTIUM	OR
EPA 6010 B	TIN	OR
EPA 6010 B	VANADIUM	OR
EPA 6010 B - EXTENDED	SILICON	OR
EPA 6010 C	ANTIMONY	OR
EPA 6010 C	BARIUM	OR
EPA 6010 C	BORON	OR
EPA 6010 C	CALCIUM	OR
EPA 6010 C	COBALT	OR
EPA 6010 C	IRON	OR
EPA 6010 C	LITHIUM	OR
EPA 6010 C	MANGANESE	OR
EPA 6010 C	NICKEL	OR
EPA 6010 C	SELENIUM	OR
EPA 6010 C	SILVER	OR
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	OR
EPA 1631 E	MERCURY	OR
EPA 3060 A	PREP: HEXAVALENT CHROMIUM	OR
EPA 3546	PREP: MICROWAVE EXTRACTION	OR
EPA 3550 C	PREP: ULTRASONIC EXTRACTION	OR
EPA 3620 B	PREP: FLORISIL CLEANUP	OR
EPA 3660 B	PREP: SULFUR CLEANUP	OR
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	OR
EPA 6010 B	ALUMINUM	OR
EPA 6010 B	ARSENIC	OR
EPA 6010 B	BERYLLIUM	OR
EPA 6010 B	CADMIUM	OR
EPA 6010 B	CHROMIUM	OR
EPA 6010 B	COPPER	OR
EPA 6010 B	LEAD	OR
EPA 6010 B	MAGNESIUM	OR
EPA 6010 B	MOLYBDENUM	OR
EPA 6010 B	POTASSIUM	OR
EPA 6010 B	SILICA AS SIO2	OR
EPA 6010 B	SODIUM	OR
EPA 6010 B	THALLIUM	OR
EPA 6010 B	TITANIUM	OR
EPA 6010 B	ZINC	OR
EPA 6010 C	ALUMINUM	OR
EPA 6010 C	ARSENIC	OR
EPA 6010 C	BERYLLIUM	OR
EPA 6010 C	CADMIUM	OR
EPA 6010 C	CHROMIUM	OR
EPA 6010 C	COPPER	OR
EPA 6010 C	LEAD	OR
EPA 6010 C	MAGNESIUM	OR
EPA 6010 C	MOLYBDENUM	OR
EPA 6010 C	POTASSIUM	OR
EPA 6010 C	SILICA AS SIO2	OR
EPA 6010 C	SODIUM	OR

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METHOD	ANALYTE	PRIMARY
EPA 6010 C	STRONTIUM	OR
EPA 6010 C	TIN	OR
EPA 6010 C	VANADIUM	OR
EPA 6010 C - EXTENDED	SILICON	OR
EPA 6010 D	ANTIMONY	OR
EPA 6010 D	BARIUM	OR
EPA 6010 D	BORON	OR
EPA 6010 D	CALCIUM	OR
EPA 6010 D	COBALT	OR
EPA 6010 D	IRON	OR
EPA 6010 D	LITHIUM	OR
EPA 6010 D	MANGANESE	OR
EPA 6010 D	NICKEL	OR
EPA 6010 D	SELENIUM	OR
EPA 6010 D	SILVER	OR
EPA 6010 D	STRONTIUM	OR
EPA 6010 D	TIN	OR
EPA 6010 D	VANADIUM	OR
EPA 6010 D - EXTENDED	SILICON	OR
EPA 6020	ANTIMONY	OR
EPA 6020	BARIUM	OR
EPA 6020	CADMIUM	OR
EPA 6020	COBALT	OR
EPA 6020	LEAD	OR
EPA 6020	NICKEL	OR
EPA 6020	THALLIUM	OR
EPA 6020 - EXTENDED	BORON	OR
EPA 6020 - EXTENDED	IRON	OR
EPA 6020 - EXTENDED	MAGNESIUM	OR
EPA 6020 - EXTENDED	POTASSIUM	OR
EPA 6020 - EXTENDED	SODIUM	OR
EPA 6020 - EXTENDED	TIN	OR
EPA 6020 - EXTENDED	VANADIUM	OR
EPA 6020 A	ANTIMONY	OR
EPA 6020 A	BARIUM	OR
EPA 6020 A	CADMIUM	OR
EPA 6020 A	CHROMIUM	OR
EPA 6020 A	COPPER	OR
EPA 6020 A	LEAD	OR
EPA 6010 C	THALLIUM	OR
EPA 6010 C	TITANIUM	OR
EPA 6010 C	ZINC	OR
EPA 6010 D	ALUMINUM	OR
EPA 6010 D	ARSENIC	OR
EPA 6010 D	BERYLLIUM	OR
EPA 6010 D	CADMIUM	OR
EPA 6010 D	CHROMIUM	OR
EPA 6010 D	COPPER	OR
EPA 6010 D	LEAD	OR
EPA 6010 D	MAGNESIUM	OR
EPA 6010 D	MOLYBDENUM	OR
EPA 6010 D	POTASSIUM	OR
EPA 6010 D	SILICA AS SIO2	OR
EPA 6010 D	SODIUM	OR
EPA 6010 D	THALLIUM	OR
EPA 6010 D	TITANIUM	OR
EPA 6010 D	ZINC	OR
EPA 6020	ALUMINUM	OR
EPA 6020	ARSENIC	OR
EPA 6020	BERYLLIUM	OR
EPA 6020	CHROMIUM	OR
EPA 6020	COPPER	OR
EPA 6020	MANGANESE	OR
EPA 6020	SILVER	OR
EPA 6020	ZINC	OR
EPA 6020 - EXTENDED	CALCIUM	OR
EPA 6020 - EXTENDED	LITHIUM	OR
EPA 6020 - EXTENDED	MOLYBDENUM	OR
EPA 6020 - EXTENDED	SELENIUM	OR
EPA 6020 - EXTENDED	STRONTIUM	OR
EPA 6020 - EXTENDED	TITANIUM	OR
EPA 6020 A	ALUMINUM	OR
EPA 6020 A	ARSENIC	OR
EPA 6020 A	BERYLLIUM	OR
EPA 6020 A	CALCIUM	OR
EPA 6020 A	COBALT	OR
EPA 6020 A	IRON	OR
EPA 6020 A	MAGNESIUM	OR

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 A	MANGANESE	OR	EPA 6020 A	NICKEL	OR
EPA 6020 A	POTASSIUM	OR	EPA 6020 A	SELENIUM	OR
EPA 6020 A	SILVER	OR	EPA 6020 A	SODIUM	OR
EPA 6020 A	THALLIUM	OR	EPA 6020 A	VANADIUM	OR
EPA 6020 A	ZINC	OR	EPA 6020 A - EXTENDED	BORON	OR
EPA 6020 A - EXTENDED	LITHIUM	OR	EPA 6020 A - EXTENDED	MOLYBDENUM	OR
EPA 6020 A - EXTENDED	STRONTIUM	OR	EPA 6020 A - EXTENDED	TIN	OR
EPA 6020 A - EXTENDED	TITANIUM	OR	EPA 6020 B	ALUMINUM	OR
EPA 6020 B	ANTIMONY	OR	EPA 6020 B	ARSENIC	OR
EPA 6020 B	BARIUM	OR	EPA 6020 B	BERYLLIUM	OR
EPA 6020 B	CADMIUM	OR	EPA 6020 B	CALCIUM	OR
EPA 6020 B	CHROMIUM	OR	EPA 6020 B	COBALT	OR
EPA 6020 B	COPPER	OR	EPA 6020 B	IRON	OR
EPA 6020 B	LEAD	OR	EPA 6020 B	MAGNESIUM	OR
EPA 6020 B	MANGANESE	OR	EPA 6020 B	MOLYBDENUM	OR
EPA 6020 B	NICKEL	OR	EPA 6020 B	POTASSIUM	OR
EPA 6020 B	SELENIUM	OR	EPA 6020 B	SILVER	OR
EPA 6020 B	SODIUM	OR	EPA 6020 B	THALLIUM	OR
EPA 6020 B	TIN	OR	EPA 6020 B	VANADIUM	OR
EPA 6020 B	ZINC	OR	EPA 6020 B - EXTENDED	BORON	OR
EPA 6020 B - EXTENDED	LITHIUM	OR	EPA 6020 B - EXTENDED	STRONTIUM	OR
EPA 6020 B - EXTENDED	TITANIUM	OR	EPA 7196 A	CHROMIUM VI	OR
EPA 7470 A	MERCURY	OR	EPA 7471 A	MERCURY	OR
EPA 7471 B	MERCURY	OR	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8081 A	4,4'-DDD	OR
EPA 8081 A	4,4'-DDE	OR	EPA 8081 A	4,4'-DDT	OR
EPA 8081 A	ALDRIN	OR	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	OR	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	CHLORDANE, TOTAL	OR	EPA 8081 A	CHLOROBENZILATE	OR
EPA 8081 A	DELTA-BHC	OR	EPA 8081 A	DIALLATE	OR
EPA 8081 A	DIELDRIN	OR	EPA 8081 A	ENDOSULFAN I	OR
EPA 8081 A	ENDOSULFAN II	OR	EPA 8081 A	ENDOSULFAN SULFATE	OR
EPA 8081 A	ENDRIN	OR	EPA 8081 A	ENDRIN ALDEHYDE	OR

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EPA 8081 A	ENDRIN KETONE	OR
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	OR
EPA 8081 A	HEPTACHLOR EPOXIDE	OR
EPA 8081 A	ISODRIN	OR
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 A - EXTENDED	MIREX	OR
EPA 8081 B	4,4'-DDE	OR
EPA 8081 B	ALDRIN	OR
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	OR
EPA 8081 B	CHLORDANE, TOTAL	OR
EPA 8081 B	DELTA-BHC	OR
EPA 8081 B	DIELDRIN	OR
EPA 8081 B	ENDOSULFAN II	OR
EPA 8081 B	ENDRIN	OR
EPA 8081 B	ENDRIN KETONE	OR
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	OR
EPA 8081 B	HEPTACHLOR EPOXIDE	OR
EPA 8081 B	ISODRIN	OR
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 B - EXTENDED	MIREX	OR
EPA 8082	AROCLOR-1221 (PCB-1221)	OR
EPA 8082	AROCLOR-1242 (PCB-1242)	OR
EPA 8082	AROCLOR-1254 (PCB-1254)	OR
EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8082 A	AROCLOR-1016 (PCB-1016)	OR
EPA 8082 A	AROCLOR-1232 (PCB-1232)	OR
EPA 8082 A	AROCLOR-1248 (PCB-1248)	OR
EPA 8082 A	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8151 A	2,4-D	OR
EPA 8151 A	DALAPON	OR
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	HEPTACHLOR	OR
EPA 8081 A	HEXACHLOROBENZENE	OR
EPA 8081 A	METHOXYCHLOR	OR
EPA 8081 A - EXTENDED	KEPONE	OR
EPA 8081 B	4,4'-DDD	OR
EPA 8081 B	4,4'-DDT	OR
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	CHLOROBENZILATE	OR
EPA 8081 B	DIALLATE	OR
EPA 8081 B	ENDOSULFAN I	OR
EPA 8081 B	ENDOSULFAN SULFATE	OR
EPA 8081 B	ENDRIN ALDEHYDE	OR
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	HEPTACHLOR	OR
EPA 8081 B	HEXACHLOROBENZENE	OR
EPA 8081 B	METHOXYCHLOR	OR
EPA 8081 B - EXTENDED	KEPONE	OR
EPA 8082	AROCLOR-1016 (PCB-1016)	OR
EPA 8082	AROCLOR-1232 (PCB-1232)	OR
EPA 8082	AROCLOR-1248 (PCB-1248)	OR
EPA 8082	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8082 A	AROCLOR-1221 (PCB-1221)	OR
EPA 8082 A	AROCLOR-1242 (PCB-1242)	OR
EPA 8082 A	AROCLOR-1254 (PCB-1254)	OR
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8151 A	2,4,5-T	OR
EPA 8151 A	2,4-DB	OR
EPA 8151 A	DICAMBA	OR

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EPA 8151 A	DICHLOROPROP (DICHLORPROP)	OR
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8151 A	MCPA	OR
EPA 8151 A	MCPP	OR
EPA 8151 A	PENTACHLOROPHENOL	OR
EPA 8151 A	SILVEX (2,4,5-TP)	OR
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	OR
EPA 8260 B	1,1,1-TRICHLOROETHANE	OR
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 B	1,1,2-TRICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHYLENE	OR
EPA 8260 B	1,1-DICHLOROPROPENE	OR
EPA 8260 B	1,2,3-TRICHLOROBENZENE	OR
EPA 8260 B	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 B	1,2,4-TRICHLOROBENZENE	OR
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 B	1,2-DICHLOROPROPANE	OR
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8260 B	1,3-DICHLOROPROPANE	OR
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	OR
EPA 8260 B	1-CHLOROHEXANE	OR
EPA 8260 B	2,2-DICHLOROPROPANE	OR
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	OR
EPA 8260 B	2-CHLOROTOLUENE	OR
EPA 8260 B	2-HEXANONE	OR
EPA 8260 B	2-NITROPROPANE	OR
EPA 8260 B	4-CHLOROTOLUENE	OR
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	OR
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 B	ACETONE	OR
EPA 8260 B	ACETONITRILE	OR
EPA 8260 B	ACROLEIN (PROPENAL)	OR
EPA 8260 B	ACRYLONITRILE	OR
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 B	BENZENE	OR
EPA 8260 B	BENZYL CHLORIDE	OR
EPA 8260 B	BROMOBENZENE	OR
EPA 8260 B	BROMOCHLOROMETHANE	OR
EPA 8260 B	BROMODICHLOROMETHANE	OR
EPA 8260 B	BROMOFORM	OR
EPA 8260 B	CARBON DISULFIDE	OR
EPA 8260 B	CARBON TETRACHLORIDE	OR
EPA 8260 B	CHLOROBENZENE	OR
EPA 8260 B	CHLORODIBROMOMETHANE	OR
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 B	CHLOROFORM	OR
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 B	CIS & TRANS-1,2-DICHLOROETHENE	OR
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	OR
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	OR

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
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Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	DIETHYL ETHER	OR	EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	OR
EPA 8260 B	ETHYL ACETATE	OR	EPA 8260 B	ETHYL METHACRYLATE	OR
EPA 8260 B	ETHYLBENZENE	OR	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	OR	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 B	ISOPROPYLBENZENE	OR	EPA 8260 B	M+P-XYLENE	OR
EPA 8260 B	METHACRYLONITRILE	OR	EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	OR
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	OR	EPA 8260 B	METHYL METHACRYLATE	OR
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	OR	EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 B	N-BUTYLBENZENE	OR	EPA 8260 B	N-PROPYLBENZENE	OR
EPA 8260 B	NAPHTHALENE	OR	EPA 8260 B	O-XYLENE	OR
EPA 8260 B	PENTACHLOROETHANE	OR	EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 B	SEC-BUTYLBENZENE	OR	EPA 8260 B	STYRENE	OR
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	OR	EPA 8260 B	TERT-BUTYLBENZENE	OR
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	OR	EPA 8260 B	TOLUENE	OR
EPA 8260 B	TOTAL TRIHALOMETHANES (TTHMS)	OR	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	OR
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	OR	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	OR
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR
EPA 8260 B	VINYL ACETATE	OR	EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	OR
EPA 8260 B	XYLENE (TOTAL)	OR	EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR
EPA 8260 B - EXTENDED	1,2,3-TRIMETHYLBENZENE	OR	EPA 8260 B - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8260 B - EXTENDED	1,3-BUTADIENE	OR	EPA 8260 B - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 B - EXTENDED	CYCLOHEXANE	OR	EPA 8260 B - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR	EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR	EPA 8260 B - EXTENDED	METHYL ACETATE	OR
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	OR	EPA 8260 B - EXTENDED	N-BUTYL-ACETATE	OR
EPA 8260 B - EXTENDED	N-HEPTANE	OR	EPA 8260 B - EXTENDED	N-HEXANE	OR
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	OR	EPA 8260 C	1,1,1-TRICHLOROETHANE	OR
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	OR	EPA 8260 C	1,1,2-TRICHLOROETHANE	OR
EPA 8260 C	1,1-DICHLOROETHANE	OR	EPA 8260 C	1,1-DICHLOROETHYLENE	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,1-DICHLOROPROPENE	OR
EPA 8260 C	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 C	1,3-DICHLOROPROPANE	OR
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	OR
EPA 8260 C	2,2-DICHLOROPROPANE	OR
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	OR
EPA 8260 C	2-HEXANONE	OR
EPA 8260 C	4-CHLOROTOLUENE	OR
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 C	ACETONITRILE	OR
EPA 8260 C	ACRYLONITRILE	OR
EPA 8260 C	BENZENE	OR
EPA 8260 C	BROMOBENZENE	OR
EPA 8260 C	BROMODICHLOROMETHANE	OR
EPA 8260 C	CARBON DISULFIDE	OR
EPA 8260 C	CHLOROBENZENE	OR
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 C	DIETHYL ETHER	OR
EPA 8260 C	ETHYL ACETATE	OR
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 C	1,2,3-TRICHLOROBENZENE	OR
EPA 8260 C	1,2,4-TRICHLOROBENZENE	OR
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8260 C	1,2-DICHLOROPROPANE	OR
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8260 C	1-CHLOROHEXANE	OR
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 C	2-CHLOROTOLUENE	OR
EPA 8260 C	2-NITROPROPANE	OR
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	OR
EPA 8260 C	ACETONE	OR
EPA 8260 C	ACROLEIN (PROPENAL)	OR
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 C	BENZYL CHLORIDE	OR
EPA 8260 C	BROMOCHLOROMETHANE	OR
EPA 8260 C	BROMOFORM	OR
EPA 8260 C	CARBON TETRACHLORIDE	OR
EPA 8260 C	CHLORODIBROMOMETHANE	OR
EPA 8260 C	CHLOROFORM	OR
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	OR
EPA 8260 C	CYCLOHEXANE	OR
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	OR
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	OR
EPA 8260 C	ETHYL METHACRYLATE	OR
EPA 8260 C	ETHYLBENZENE	OR
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	OR
EPA 8260 C	ISOPROPYLBENZENE	OR

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	M+P-XYLENE	OR	EPA 8260 C	METHACRYLONITRILE	OR
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	OR	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 8260 C	METHYL METHACRYLATE	OR	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 8260 C	METHYLCYCLOHEXANE	OR	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 C	N-BUTYLBENZENE	OR	EPA 8260 C	N-PROPYLBENZENE	OR
EPA 8260 C	NAPHTHALENE	OR	EPA 8260 C	O-XYLENE	OR
EPA 8260 C	PENTACHLOROETHANE	OR	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 C	SEC-BUTYLBENZENE	OR	EPA 8260 C	STYRENE	OR
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	OR
EPA 8260 C	TERT-BUTYLBENZENE	OR	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 8260 C	TOLUENE	OR	EPA 8260 C	TOTAL TRIHALOMETHANES (TTHMS)	OR
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	OR
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	OR	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 8260 C	VINYL ACETATE	OR
EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	OR	EPA 8260 C	XYLENE (TOTAL)	OR
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR	EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8260 C - EXTENDED	1,3-BUTADIENE	OR	EPA 8260 C - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 C - EXTENDED	CIS & TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 C - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR	EPA 8260 C - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 C - EXTENDED	METHYL ACETATE	OR	EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	OR
EPA 8260 C - EXTENDED	N-HEPTANE	OR	EPA 8260 C - EXTENDED	N-HEXANE	OR
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	OR	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	OR
EPA 8270 C	1,2,4-TRICHLOROBENZENE	OR	EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	OR	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	OR
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR	EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	OR
EPA 8270 C	1,4-NAPHTHOQUINONE	OR	EPA 8270 C	1,4-PHENYLENEDIAMINE	OR
EPA 8270 C	1-CHLORONAPHTHALENE	OR	EPA 8270 C	1-NAPHTHYLAMINE	OR
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	OR	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	OR
EPA 8270 C	2,4,5-TRICHLOROPHENOL	OR			

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	2,4,6-TRICHLOROPHENOL	OR
EPA 8270 C	2,4-DIMETHYLPHENOL	OR
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	OR
EPA 8270 C	2-CHLORONAPHTHALENE	OR
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	OR
EPA 8270 C	2-NITROANILINE	OR
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	OR
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	OR
EPA 8270 C	4,4'-METHYLENEBIS-2-CHLOROANILINE	OR
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	OR
EPA 8270 C	4-CHLOROANILINE	OR
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	OR
EPA 8270 C	4-NITROANILINE	OR
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR
EPA 8270 C	ACENAPHTHENE	OR
EPA 8270 C	ACETOPHENONE	OR
EPA 8270 C	ANTHRACENE	OR
EPA 8270 C	BENZIDINE	OR
EPA 8270 C	BENZO(A)PYRENE	OR
EPA 8270 C	BENZO(G,H,I)PERYLENE	OR
EPA 8270 C	BENZOIC ACID	OR
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 8270 C	CHLOROBENZILATE	OR
EPA 8270 C	CRESOLS, TOTAL	OR
EPA 8270 C	DI-N-OCTYL PHTHALATE	OR
EPA 8270 C	DIBENZ(A, J) ACRIDINE	OR
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	OR
EPA 8270 C	DIETHYL PHTHALATE	OR
EPA 8270 C	DIMETHYL PHTHALATE	OR
EPA 8270 C	DIPHENYLAMINE	OR

METHOD	ANALYTE	PRIMARY
EPA 8270 C	2,4-DICHLOROPHENOL	OR
EPA 8270 C	2,4-DINITROPHENOL	OR
EPA 8270 C	2,6-DICHLOROPHENOL	OR
EPA 8270 C	2-ACETYLAMINOFLUORENE	OR
EPA 8270 C	2-CHLOROPHENOL	OR
EPA 8270 C	2-METHYLNAPHTHALENE	OR
EPA 8270 C	2-NAPHTHYLAMINE	OR
EPA 8270 C	2-NITROPHENOL	OR
EPA 8270 C	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 C	3-METHYLCHOLANTHRENE	OR
EPA 8270 C	3-NITROANILINE	OR
EPA 8270 C	4-AMINOBIPHENYL	OR
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	OR
EPA 8270 C	4-NITROPHENOL	OR
EPA 8270 C	5-NITRO-O-TOLUIDINE	OR
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	OR
EPA 8270 C	ACENAPHTHYLENE	OR
EPA 8270 C	ANILINE	OR
EPA 8270 C	ARAMITE	OR
EPA 8270 C	BENZO(A)ANTHRACENE	OR
EPA 8270 C	BENZO(B)FLUORANTHENE	OR
EPA 8270 C	BENZO(K)FLUORANTHENE	OR
EPA 8270 C	BENZYL ALCOHOL	OR
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	OR
EPA 8270 C	BUTYL BENZYL PHTHALATE	OR
EPA 8270 C	CHRYSENE	OR
EPA 8270 C	DI-N-BUTYL PHTHALATE	OR
EPA 8270 C	DIALLATE	OR
EPA 8270 C	DIBENZO(A,E) PYRENE	OR
EPA 8270 C	DIBENZOFURAN	OR
EPA 8270 C	DIMETHOATE	OR
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 C	DISULFOTON	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	ETHYL METHANESULFONATE	OR
EPA 8270 C	FLUORANTHENE	OR
EPA 8270 C	HEXACHLOROBENZENE	OR
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	OR
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	OR
EPA 8270 C	ISOPHORONE	OR
EPA 8270 C	KEPONE	OR
EPA 8270 C	METHYL METHANESULFONATE	OR
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	OR
EPA 8270 C	N-NITROSODIETHYLAMINE	OR
EPA 8270 C	N-NITROSODIPHENYLAMINE	OR
EPA 8270 C	N-NITROSOMORPHOLINE	OR
EPA 8270 C	N-NITROSOPYRROLIDINE	OR
EPA 8270 C	NITROBENZENE	OR
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	OR
EPA 8270 C	PENTACHLOROBENZENE	OR
EPA 8270 C	PENTACHLOROPHENOL	OR
EPA 8270 C	PHENANTHRENE	OR
EPA 8270 C	PHORATE	OR
EPA 8270 C	PYRENE	OR
EPA 8270 C	SAFROLE	OR
EPA 8270 C	THIONAZIN (ZINOPHOS)	OR
EPA 8270 C - EXTENDED	1,1'-BIPHENYL (BZ-0)	OR
EPA 8270 C - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 C - EXTENDED	2-CHLOROANILINE	OR
EPA 8270 C - EXTENDED	6-METHYLCHRYSENE	OR
EPA 8270 C - EXTENDED	ATRAZINE	OR
EPA 8270 C - EXTENDED	BENZALDEHYDE	OR
EPA 8270 C - EXTENDED	CARBAZOLE	OR
EPA 8270 C - EXTENDED	ETHYL METHACRYLATE	OR
EPA 8270 C - EXTENDED	N-DECANE	OR
EPA 8270 C - EXTENDED	N-OCTADECANE	OR
EPA 8270 C - EXTENDED	QUINOLINE	OR
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	OR
EPA 8270 C	FAMPHUR	OR
EPA 8270 C	FLUORENE	OR
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8270 C	HEXACHLOROETHANE	OR
EPA 8270 C	ISODRIN	OR
EPA 8270 C	ISOSAFROLE	OR
EPA 8270 C	METHAPYRILENE	OR
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 C	N-NITROSODIMETHYLAMINE	OR
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 C	N-NITROSOPIPERIDINE	OR
EPA 8270 C	NAPHTHALENE	OR
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 C	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 C	PENTACHLORONITROBENZENE	OR
EPA 8270 C	PHENACETIN	OR
EPA 8270 C	PHENOL	OR
EPA 8270 C	PRONAMIDE (KERB)	OR
EPA 8270 C	PYRIDINE	OR
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	OR
EPA 8270 C - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1,2,3-TRICHLOROBENZENE	OR
EPA 8270 C - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR
EPA 8270 C - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR
EPA 8270 C - EXTENDED	ACRYLAMIDE	OR
EPA 8270 C - EXTENDED	AZOBENZENE	OR
EPA 8270 C - EXTENDED	CAPROLACTAM	OR
EPA 8270 C - EXTENDED	DIBENZ(A,H) ACRIDINE	OR
EPA 8270 C - EXTENDED	INDENE	OR
EPA 8270 C - EXTENDED	N-HEXADECANE	OR
EPA 8270 C - EXTENDED	PENTACHLOROETHANE	OR
EPA 8270 C - EXTENDED	TRIBUTYL PHOSPHATE	OR
EPA 8270 D	1,2,4-TRICHLOROBENZENE	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	OR
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	OR
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	OR
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	OR
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	OR
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	OR
EPA 8270 D	1,4-NAPHTHOQUINONE	OR
EPA 8270 D	1,4-PHENYLENEDIAMINE	OR
EPA 8270 D	1-CHLORONAPHTHALENE	OR
EPA 8270 D	1-NAPHTHYLAMINE	OR
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	OR
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	OR
EPA 8270 D	2,4,5-TRICHLOROPHENOL	OR
EPA 8270 D	2,4,6-TRICHLOROPHENOL	OR
EPA 8270 D	2,4-DICHLOROPHENOL	OR
EPA 8270 D	2,4-DIMETHYLPHENOL	OR
EPA 8270 D	2,4-DINITROPHENOL	OR
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 8270 D	2,6-DICHLOROPHENOL	OR
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	OR
EPA 8270 D	2-ACETYLAMINOFLUORENE	OR
EPA 8270 D	2-CHLORONAPHTHALENE	OR
EPA 8270 D	2-CHLOROPHENOL	OR
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR
EPA 8270 D	2-METHYLNAPHTHALENE	OR
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	OR
EPA 8270 D	2-NAPHTHYLAMINE	OR
EPA 8270 D	2-NITROANILINE	OR
EPA 8270 D	2-NITROPHENOL	OR
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	OR
EPA 8270 D	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 D	3-METHYLCHOLANTHRENE	OR
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	OR
EPA 8270 D	3-NITROANILINE	OR
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANIL INE	OR
EPA 8270 D	4-AMINOBIPHENYL	OR
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	OR
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 D	4-CHLOROANILINE	OR
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	OR
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	OR
EPA 8270 D	4-NITROANILINE	OR
EPA 8270 D	4-NITROPHENOL	OR
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 D	5-NITRO-O-TOLUIDINE	OR
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	OR
EPA 8270 D	ACENAPHTHENE	OR
EPA 8270 D	ACENAPHTHYLENE	OR
EPA 8270 D	ACETOPHENONE	OR
EPA 8270 D	ANILINE	OR
EPA 8270 D	ANTHRACENE	OR
EPA 8270 D	ARAMITE	OR
EPA 8270 D	BENZIDINE	OR
EPA 8270 D	BENZO(A)ANTHRACENE	OR
EPA 8270 D	BENZO(A)PYRENE	OR
EPA 8270 D	BENZO(B)FLUORANTHENE	OR
EPA 8270 D	BENZO(G,H,I)PERYLENE	OR
EPA 8270 D	BENZO(K)FLUORANTHENE	OR
EPA 8270 D	BENZOIC ACID	OR
EPA 8270 D	BENZYL ALCOHOL	OR
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	OR
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 8270 D	BUTYL BENZYL PHTHALATE	OR

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	CHLOROBENZILATE	OR
EPA 8270 D	CRESOLS, TOTAL	OR
EPA 8270 D	DI-N-OCTYL PHTHALATE	OR
EPA 8270 D	DIBENZ(A, J) ACRIDINE	OR
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	OR
EPA 8270 D	DIETHYL PHTHALATE	OR
EPA 8270 D	DIMETHYL PHTHALATE	OR
EPA 8270 D	DIPHENYLAMINE	OR
EPA 8270 D	ETHYL METHANESULFONATE	OR
EPA 8270 D	FLUORANTHENE	OR
EPA 8270 D	HEXACHLOROBENZENE	OR
EPA 8270 D	HEXACHLOROETHANE	OR
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	OR
EPA 8270 D	ISOPHORONE	OR
EPA 8270 D	KEPONE	OR
EPA 8270 D	METHYL METHANESULFONATE	OR
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	OR
EPA 8270 D	N-NITROSODIETHYLAMINE	OR
EPA 8270 D	N-NITROSODIPHENYLAMINE	OR
EPA 8270 D	N-NITROSOMORPHOLINE	OR
EPA 8270 D	N-NITROSOPYRROLIDINE	OR
EPA 8270 D	NITROBENZENE	OR
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	OR
EPA 8270 D	PENTACHLOROBENZENE	OR
EPA 8270 D	PENTACHLOROPHENOL	OR
EPA 8270 D	PHENANTHRENE	OR
EPA 8270 D	PHORATE	OR
EPA 8270 D	PYRENE	OR
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR
EPA 8270 D	THIOPHENOL (BENZENETHIOL)	OR
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1,2,3-TRICHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR
EPA 8270 D	CHRYSENE	OR
EPA 8270 D	DI-N-BUTYL PHTHALATE	OR
EPA 8270 D	DIALLATE	OR
EPA 8270 D	DIBENZO(A,E) PYRENE	OR
EPA 8270 D	DIBENZOFURAN	OR
EPA 8270 D	DIMETHOATE	OR
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 D	DISULFOTON	OR
EPA 8270 D	FAMPHUR	OR
EPA 8270 D	FLUORENE	OR
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	OR
EPA 8270 D	HEXACHLOROPROPENE	OR
EPA 8270 D	ISODRIN	OR
EPA 8270 D	ISOSAFROLE	OR
EPA 8270 D	METHAPYRILENE	OR
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 D	N-NITROSODIMETHYLAMINE	OR
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 D	N-NITROSOPIPERIDINE	OR
EPA 8270 D	NAPHTHALENE	OR
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 D	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 D	PENTACHLORONITROBENZENE	OR
EPA 8270 D	PHENACETIN	OR
EPA 8270 D	PHENOL	OR
EPA 8270 D	PRONAMIDE (KERB)	OR
EPA 8270 D	SAFROLE	OR
EPA 8270 D	THIONAZIN (ZINOPHOS)	OR
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	OR
EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1,3,5-TRICHLOROBENZENE	OR
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 D - EXTENDED	2-CHLOROANILINE	OR
EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	OR

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10578

Testamerica Laboratories, Inc. - Canton
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D - EXTENDED	ACRYLAMIDE	OR
EPA 8270 D - EXTENDED	AZOBENZENE	OR
EPA 8270 D - EXTENDED	CAPROLACTAM	OR
EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	OR
EPA 8270 D - EXTENDED	N-DECANE	OR
EPA 8270 D - EXTENDED	N-OCTADECANE	OR
EPA 8270 D - EXTENDED	PYRIDINE	OR
EPA 8270 D - EXTENDED	TRIBUTYL PHOSPHATE	OR
EPA 9012 A	AMENABLE CYANIDE	OR
EPA 9012 B	AMENABLE CYANIDE	OR
EPA 9023	EXTRACTABLE ORGANIC HALIDES (EOX)	OR
EPA 9034	TOTAL SULFIDES	OR
EPA 9040 C	PH	OR
EPA 9045 D	PH	OR
EPA 9056 A	BROMIDE	OR
EPA 9056 A	FLUORIDE	OR
EPA 9056 A	NITRITE AS N	OR
EPA 9065	TOTAL PHENOLICS	OR
EPA 8270 D - EXTENDED	ATRAZINE	OR
EPA 8270 D - EXTENDED	BENZALDEHYDE	OR
EPA 8270 D - EXTENDED	CARBAZOLE	OR
EPA 8270 D - EXTENDED	INDENE	OR
EPA 8270 D - EXTENDED	N-HEXADECANE	OR
EPA 8270 D - EXTENDED	PENTACHLOROETHANE	OR
EPA 8270 D - EXTENDED	QUINOLINE	OR
EPA 8315 A	FORMALDEHYDE	OR
EPA 9012 A	CYANIDE	OR
EPA 9012 B	TOTAL CYANIDE	OR
EPA 9030 B	PREP: SULFIDE	OR
EPA 9040 B	PH	OR
EPA 9045 C	PH	OR
EPA 9050 A	CONDUCTIVITY	OR
EPA 9056 A	CHLORIDE	OR
EPA 9056 A	NITRATE AS N	OR
EPA 9056 A	SULFATE	OR
EPA 9095 B	FREE LIQUID	OR

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460187
Microbac Laboratories, Inc. - Marietta OH

158 Starlite Drive
Marietta, OH 45750

Owner: J. TREVOR BOYCE
Operator: LARRY M GWINN JR.
Responsible Official:

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2019**
Expiration Date: **September 14, 2020**
Certificate # 10579

Denise M. Toney

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10579

Microbac Laboratories, Inc. - Marietta OH
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	FL
EPA 160.4	RESIDUE-VOLATILE	FL
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	FL
EPA 200.7 REV 4.4	ALUMINUM	FL
EPA 200.7 REV 4.4	ARSENIC	FL
EPA 200.7 REV 4.4	BERYLLIUM	FL
EPA 200.7 REV 4.4	CADMIUM	FL
EPA 200.7 REV 4.4	CHROMIUM	FL
EPA 200.7 REV 4.4	COPPER	FL
EPA 200.7 REV 4.4	LEAD	FL
EPA 200.7 REV 4.4	MANGANESE	FL
EPA 200.7 REV 4.4	NICKEL	FL
EPA 200.7 REV 4.4	POTASSIUM	FL
EPA 200.7 REV 4.4	SILVER	FL
EPA 200.7 REV 4.4	THALLIUM	FL
EPA 200.7 REV 4.4	TITANIUM	FL
EPA 200.7 REV 4.4	VANADIUM	FL
EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL
EPA 200.8 REV 5.4	COPPER	FL
EPA 200.8 REV 5.4	MANGANESE	FL
EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	ZINC	FL
EPA 300.0 REV 2.1	BROMIDE	FL
EPA 300.0 REV 2.1	FLUORIDE	FL
EPA 300.0 REV 2.1	NITRITE AS N	FL
EPA 310.2	ALKALINITY AS CACO3	FL
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	FL
EPA 353.2 REV 2	NITRATE/NITRITE	FL
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	FL
EPA 6010 B	ANTIMONY	FL
EPA 6010 B	BARIUM	FL
EPA 6010 B	BORON	FL
EPA 6010 B	CALCIUM	FL

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	FL
EPA 1664 A	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL
EPA 180.1 REV 2	TURBIDITY	FL
EPA 200.7 REV 4.4	ANTIMONY	FL
EPA 200.7 REV 4.4	BARIUM	FL
EPA 200.7 REV 4.4	BORON	FL
EPA 200.7 REV 4.4	CALCIUM	FL
EPA 200.7 REV 4.4	COBALT	FL
EPA 200.7 REV 4.4	IRON	FL
EPA 200.7 REV 4.4	MAGNESIUM	FL
EPA 200.7 REV 4.4	MOLYBDENUM	FL
EPA 200.7 REV 4.4	PHOSPHORUS, TOTAL	FL
EPA 200.7 REV 4.4	SELENIUM	FL
EPA 200.7 REV 4.4	SODIUM	FL
EPA 200.7 REV 4.4	TIN	FL
EPA 200.7 REV 4.4	TOTAL HARDNESS AS CACO3	FL
EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ARSENIC	FL
EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	NICKEL	FL
EPA 200.8 REV 5.4	SILVER	FL
EPA 200.8 REV 5.4	VANADIUM	FL
EPA 245.1 REV 3	MERCURY	FL
EPA 300.0 REV 2.1	CHLORIDE	FL
EPA 300.0 REV 2.1	NITRATE AS N	FL
EPA 300.0 REV 2.1	SULFATE	FL
EPA 350.1 REV 2	AMMONIA AS N	FL
EPA 353.2 REV 2	NITRATE AS N	FL
EPA 365.4	PHOSPHORUS, TOTAL	FL
EPA 6010 B	ALUMINUM	FL
EPA 6010 B	ARSENIC	FL
EPA 6010 B	BERYLLIUM	FL
EPA 6010 B	CADMIUM	FL
EPA 6010 B	CHROMIUM	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10579

Microbac Laboratories, Inc. - Marietta OH
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6010 B	COBALT	FL
EPA 6010 B	IRON	FL
EPA 6010 B	LITHIUM	FL
EPA 6010 B	MANGANESE	FL
EPA 6010 B	NICKEL	FL
EPA 6010 B	POTASSIUM	FL
EPA 6010 B	SILICA AS SIO2	FL
EPA 6010 B	SODIUM	FL
EPA 6010 B	THALLIUM	FL
EPA 6010 B	TITANIUM	FL
EPA 6010 B	ZINC	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL
EPA 6010 C	LITHIUM	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILICA AS SIO2	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6020	ANTIMONY	FL
EPA 6020	BARIUM	FL
EPA 6020	CHROMIUM	FL
EPA 6020	COPPER	FL
EPA 6020	MANGANESE	FL
EPA 6020	SILVER	FL
EPA 6020	ZINC	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	NICKEL	FL
EPA 6020 A	SILVER	FL
EPA 6010 B	COPPER	FL
EPA 6010 B	LEAD	FL
EPA 6010 B	MAGNESIUM	FL
EPA 6010 B	MOLYBDENUM	FL
EPA 6010 B	PHOSPHORUS, TOTAL	FL
EPA 6010 B	SELENIUM	FL
EPA 6010 B	SILVER	FL
EPA 6010 B	STRONTIUM	FL
EPA 6010 B	TIN	FL
EPA 6010 B	VANADIUM	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	PHOSPHORUS, TOTAL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	STRONTIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6010 C - EXTENDED	SILICON	FL
EPA 6020	ARSENIC	FL
EPA 6020	CADMIUM	FL
EPA 6020	COBALT	FL
EPA 6020	LEAD	FL
EPA 6020	NICKEL	FL
EPA 6020	THALLIUM	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	SELENIUM	FL
EPA 6020 A	THALLIUM	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10579

Microbac Laboratories, Inc. - Marietta OH
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 A	VANADIUM	FL	EPA 6020 A	ZINC	FL
EPA 6020 A - EXTENDED	URANIUM	FL	EPA 608.3	4,4'-DDD	FL
EPA 608.3	4,4'-DDE	FL	EPA 608.3	4,4'-DDT	FL
EPA 608.3	ALDRIN	FL	EPA 608.3	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	AROCLOR-1016 (PCB-1016)	FL	EPA 608.3	AROCLOR-1221 (PCB-1221)	FL
EPA 608.3	AROCLOR-1232 (PCB-1232)	FL	EPA 608.3	AROCLOR-1242 (PCB-1242)	FL
EPA 608.3	AROCLOR-1248 (PCB-1248)	FL	EPA 608.3	AROCLOR-1254 (PCB-1254)	FL
EPA 608.3	AROCLOR-1260 (PCB-1260)	FL	EPA 608.3	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	DELTA-BHC	FL	EPA 608.3	DIELDRIN	FL
EPA 608.3	ENDOSULFAN I	FL	EPA 608.3	ENDOSULFAN II	FL
EPA 608.3	ENDOSULFAN SULFATE	FL	EPA 608.3	ENDRIN	FL
EPA 608.3	ENDRIN ALDEHYDE	FL	EPA 608.3	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608.3	HEPTACHLOR	FL	EPA 608.3	HEPTACHLOR EPOXIDE	FL
EPA 608.3	TOXAPHENE (CHLORINATED CAMPHENE)	FL	EPA 624.1	1,1,1-TRICHLOROETHANE	FL
EPA 624.1	1,1,2,2-TETRACHLOROETHANE	FL	EPA 624.1	1,1,2-TRICHLOROETHANE	FL
EPA 624.1	1,1-DICHLOROETHANE	FL	EPA 624.1	1,1-DICHLOROETHYLENE	FL
EPA 624.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL	EPA 624.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624.1	1,2-DICHLOROPROPANE	FL	EPA 624.1	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 624.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL	EPA 624.1	2-CHLOROETHYL VINYL ETHER	FL
EPA 624.1	ACROLEIN (PROPENAL)	FL	EPA 624.1	ACRYLONITRILE	FL
EPA 624.1	BENZENE	FL	EPA 624.1	BROMODICHLOROMETHANE	FL
EPA 624.1	BROMOFORM	FL	EPA 624.1	CARBON TETRACHLORIDE	FL
EPA 624.1	CHLOROBENZENE	FL	EPA 624.1	CHLORODIBROMOMETHANE	FL
EPA 624.1	CHLOROETHANE (ETHYL CHLORIDE)	FL	EPA 624.1	CHLOROFORM	FL
EPA 624.1	CIS-1,3-DICHLOROPROPENE	FL	EPA 624.1	ETHYLBENZENE	FL
EPA 624.1	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 624.1	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 624.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 624.1	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624.1	TOLUENE	FL	EPA 624.1	TRANS-1,2-DICHLOROETHENE	FL
EPA 624.1	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL	EPA 624.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624.1	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL			

Commonwealth of Virginia

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Scope of Accreditation

VELAP Certificate No.: 10579

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Effective Date: September 15, 2019
Expiration Date: September 14, 2020

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624.1	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 625.1	1,2,4-TRICHLOROBENZENE	FL
EPA 625.1	2,4,6-TRICHLOROPHENOL	FL
EPA 625.1	2,4-DIMETHYLPHENOL	FL
EPA 625.1	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625.1	2-CHLORONAPHTHALENE	FL
EPA 625.1	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625.1	3,3'-DICHLOROBENZIDINE	FL
EPA 625.1	4-CHLORO-3-METHYLPHENOL	FL
EPA 625.1	4-NITROPHENOL	FL
EPA 625.1	ACENAPHTHYLENE	FL
EPA 625.1	BENZIDINE	FL
EPA 625.1	BENZO(A)PYRENE	FL
EPA 625.1	BENZO(G,H,I)PERYLENE	FL
EPA 625.1	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625.1	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625.1	CHRYSENE	FL
EPA 625.1	DI-N-OCTYL PHTHALATE	FL
EPA 625.1	DIETHYL PHTHALATE	FL
EPA 625.1	FLUORANTHENE	FL
EPA 625.1	HEXACHLOROBENZENE	FL
EPA 625.1	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625.1	INDENO(1,2,3-CD) PYRENE	FL
EPA 625.1	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625.1	N-NITROSODIPHENYLAMINE	FL
EPA 625.1	NITROBENZENE	FL
EPA 625.1	PHENANTHRENE	FL
EPA 625.1	PYRENE	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 C	METHANOL	FL
EPA 624.1	XYLENE (TOTAL)	FL
EPA 625.1	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 625.1	2,4-DICHLOROPHENOL	FL
EPA 625.1	2,4-DINITROPHENOL	FL
EPA 625.1	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625.1	2-CHLOROPHENOL	FL
EPA 625.1	2-NITROPHENOL	FL
EPA 625.1	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 625.1	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625.1	ACENAPHTHENE	FL
EPA 625.1	ANTHRACENE	FL
EPA 625.1	BENZO(A)ANTHRACENE	FL
EPA 625.1	BENZO(B)FLUORANTHENE	FL
EPA 625.1	BENZO(K)FLUORANTHENE	FL
EPA 625.1	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625.1	BUTYL BENZYL PHTHALATE	FL
EPA 625.1	DI-N-BUTYL PHTHALATE	FL
EPA 625.1	DIBENZO(A,H) ANTHRACENE	FL
EPA 625.1	DIMETHYL PHTHALATE	FL
EPA 625.1	FLUORENE	FL
EPA 625.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 625.1	HEXACHLOROETHANE	FL
EPA 625.1	ISOPHORONE	FL
EPA 625.1	N-NITROSODIMETHYLAMINE	FL
EPA 625.1	NAPHTHALENE	FL
EPA 625.1	PENTACHLOROPHENOL	FL
EPA 625.1	PHENOL	FL
EPA 6850	PERCHLORATE	FL
EPA 7470 A	MERCURY	FL
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8015 B	ETHANOL	FL
EPA 8015 C	ETHANOL	FL
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8015 D	ETHANOL	FL
EPA 8015 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL
EPA 8081 A	4,4'-DDD	FL
EPA 8081 A	4,4'-DDT	FL
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	DELTA-BHC	FL
EPA 8081 A	ENDOSULFAN I	FL
EPA 8081 A	ENDOSULFAN SULFATE	FL
EPA 8081 A	ENDRIN ALDEHYDE	FL
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	HEPTACHLOR	FL
EPA 8081 A	METHOXYCHLOR	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082	AROCLOR-1016 (PCB-1016)	FL
EPA 8082	AROCLOR-1232 (PCB-1232)	FL
EPA 8082	AROCLOR-1248 (PCB-1248)	FL
EPA 8082	AROCLOR-1260 (PCB-1260)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 D	METHANOL	FL
EPA 8081 A	4,4'-DDE	FL
EPA 8081 A	ALDRIN	FL
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 A	CHLORDANE, TOTAL	FL
EPA 8081 A	DIELDRIN	FL
EPA 8081 A	ENDOSULFAN II	FL
EPA 8081 A	ENDRIN	FL
EPA 8081 A	ENDRIN KETONE	FL
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 A	HEPTACHLOR EPOXIDE	FL
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 B	CHLORDANE, TOTAL	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082	AROCLOR-1221 (PCB-1221)	FL
EPA 8082	AROCLOR-1242 (PCB-1242)	FL
EPA 8082	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL	EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL	EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4,5-T	FL	EPA 8151 A	2,4-D	FL
EPA 8151 A	2,4-DB	FL	EPA 8151 A	DALAPON	FL
EPA 8151 A	DICAMBA	FL	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8151 A	MCPA	FL
EPA 8151 A	MCPP	FL	EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL	EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL	EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL	EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL	EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	FL	EPA 8260 B	1-CHLOROHEXANE	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL	EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	2-HEXANONE	FL	EPA 8260 B	2-NITROPROPANE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL	EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	FL
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	FL	EPA 8260 B	ACETONE	FL
EPA 8260 B	ACETONITRILE	FL	EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ACRYLONITRILE	FL	EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BENZENE	FL	EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL	EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL	EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL	EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL	EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROFORM	FL			

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DIBROMOFLUOROMETHANE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL ACETATE	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	M+P-XYLENE	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	O-XYLENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 C	1,4-NAPHTHOQUINONE	FL
EPA 8270 C	1,4-PHENYLENEDIAMINE	FL
EPA 8270 C	1-NAPHTHYLAMINE	FL
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DICHLOROPHENOL	FL
EPA 8270 C	2,4-DIMETHYLPHENOL	FL
EPA 8270 C	2,4-DINITROPHENOL	FL
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2,6-DICHLOROPHENOL	FL	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 C	2-ACETYLAMINOFLUORENE	FL	EPA 8270 C	2-CHLORONAPHTHALENE	FL
EPA 8270 C	2-CHLOROPHENOL	FL	EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 C	2-METHYLNAPHTHALENE	FL	EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 C	2-NAPHTHYLAMINE	FL	EPA 8270 C	2-NITROANILINE	FL
EPA 8270 C	2-NITROPHENOL	FL	EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 C	3-METHYLCHOLANTHRENE	FL	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	FL
EPA 8270 C	3-NITROANILINE	FL	EPA 8270 C	4-AMINOBIPHENYL	FL
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 C	4-CHLOROANILINE	FL	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL	EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 C	4-NITROANILINE	FL	EPA 8270 C	4-NITROPHENOL	FL
EPA 8270 C	5-NITRO-O-TOLUIDINE	FL	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL	EPA 8270 C	ACENAPHTHENE	FL
EPA 8270 C	ACENAPHTHYLENE	FL	EPA 8270 C	ACETOPHENONE	FL
EPA 8270 C	ANILINE	FL	EPA 8270 C	ANTHRACENE	FL
EPA 8270 C	ARAMITE	FL	EPA 8270 C	BENZIDINE	FL
EPA 8270 C	BENZO(A)ANTHRACENE	FL	EPA 8270 C	BENZO(A)PYRENE	FL
EPA 8270 C	BENZO(B)FLUORANTHENE	FL	EPA 8270 C	BENZO(G,H,I)PERYLENE	FL
EPA 8270 C	BENZO(K)FLUORANTHENE	FL	EPA 8270 C	BENZOIC ACID	FL
EPA 8270 C	BENZYL ALCOHOL	FL	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 C	BUTYL BENZYL PHTHALATE	FL	EPA 8270 C	CHLOROBENZILATE	FL
EPA 8270 C	CHRYSENE	FL	EPA 8270 C	DI-N-BUTYL PHTHALATE	FL
EPA 8270 C	DI-N-OCTYL PHTHALATE	FL	EPA 8270 C	DIALLATE	FL
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL	EPA 8270 C	DIBENZOFURAN	FL
EPA 8270 C	DIETHYL PHTHALATE	FL	EPA 8270 C	DIMETHOATE	FL
EPA 8270 C	DIMETHYL PHTHALATE	FL	EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 C	DIPHENYLAMINE	FL	EPA 8270 C	DISULFOTON	FL
EPA 8270 C	ETHYL METHANESULFONATE	FL	EPA 8270 C	FAMPHUR	FL
EPA 8270 C	FLUORANTHENE	FL	EPA 8270 C	FLUORENE	FL
EPA 8270 C	HEXACHLOROBENZENE	FL	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL	EPA 8270 C	HEXACHLOROETHANE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	HEXACHLOROPHENE	FL
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 C	ISOPHORONE	FL
EPA 8270 C	KEPONE	FL
EPA 8270 C	METHAPYRILENE	FL
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 C	N-NITROSODIMETHYLAMINE	FL
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 C	N-NITROSOPIPERIDINE	FL
EPA 8270 C	NAPHTHALENE	FL
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 C	PENTACHLOROPHENOL	FL
EPA 8270 C	PHENANTHRENE	FL
EPA 8270 C	PHORATE	FL
EPA 8270 C	PYRENE	FL
EPA 8270 C	SAFROLE	FL
EPA 8270 C	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 C	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NAPHTHYLAMINE	FL
EPA 8270 C	HEXACHLOROPROPENE	FL
EPA 8270 C	ISODRIN	FL
EPA 8270 C	ISOSAFROLE	FL
EPA 8270 C	MALATHION	FL
EPA 8270 C	METHYL METHANESULFONATE	FL
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 C	N-NITROSODIETHYLAMINE	FL
EPA 8270 C	N-NITROSODIPHENYLAMINE	FL
EPA 8270 C	N-NITROSOMORPHOLINE	FL
EPA 8270 C	N-NITROSOPYRROLIDINE	FL
EPA 8270 C	NITROBENZENE	FL
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 C	PENTACHLORONITROBENZENE	FL
EPA 8270 C	PHENACETIN	FL
EPA 8270 C	PHENOL	FL
EPA 8270 C	PRONAMIDE (KERB)	FL
EPA 8270 C	PYRIDINE	FL
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 C	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	1-NAPHTHYLAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROANILINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-METHYLCHOLANTHRENE	FL
EPA 8270 D	4-AMINOBIPHENYL	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHOATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 D	DISULFOTON	FL
EPA 8270 D	FAMPHUR	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	MALATHION	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	ARAMITE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROPHENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	METHAPYRILENE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIETHYLAMINE	FL	EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	N-NITROSOMORPHOLINE	FL	EPA 8270 D	N-NITROSOPIPERIDINE	FL
EPA 8270 D	N-NITROSOPYRROLIDINE	FL	EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	NITROBENZENE	FL	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL	EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL	EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENACETIN	FL	EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PHENOL	FL	EPA 8270 D	PHORATE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL	EPA 8270 D	PYRENE	FL
EPA 8270 D	SAFROLE	FL	EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 D	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL	EPA 8270 D	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D	THIONAZIN (ZINOPHOS)	FL	EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL	EPA 8315 A	FORMALDEHYDE	FL
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL	EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL	EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	FL	EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 A	2-NITROTOLUENE	FL	EPA 8330 A	3-NITROTOLUENE	FL
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL	EPA 8330 A	4-NITROTOLUENE	FL
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNIT RAMINE (TETRYL)	FL	EPA 8330 A	NITROBENZENE	FL
EPA 8330 A	NITROGLYCERIN	FL	EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1 ,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL	EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	FL	EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	FL	EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL	EPA 8330 B	2-NITROTOLUENE	FL
EPA 8330 B	3-NITROTOLUENE	FL	EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 B	4-NITROTOLUENE	FL	EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNIT RAMINE (TETRYL)	FL
EPA 8330 B	NITROBENZENE	FL	EPA 8330 B	NITROGLYCERIN	FL
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1 ,3,5,7-TETRAZOCINE (HMX)	FL	EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 9056	BROMIDE	FL
EPA 9056	FLUORIDE	FL
EPA 9056	SULFATE	FL
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	FL
OVL HPLC07/HPLC-MS-MS	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
RSK-175	ETHENE (ETHYLENE)	FL
SM 2120 B-2011	COLOR	FL
SM 2320 B-2011	ALKALINITY AS CACO3	FL
SM 2540 B-2011	RESIDUE-TOTAL (TS)	FL
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	FL
SM 3500-CR B-2011	CHROMIUM VI	FL
SM 4500-CN^- E-2011	CYANIDE	FL
SM 4500-F^- C-2011	FLUORIDE	FL
SM 4500-$NO3^-$ F-2011	NITRATE AS N	FL
SM 4500-$S2^-$ F-2011	SULFIDE	FL
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	FL
SM 5540 C-2011	SURFACTANTS - MBAS	FL

METHOD	ANALYTE	PRIMARY
EPA 9014	AMENABLE CYANIDE	FL
EPA 9056	CHLORIDE	FL
EPA 9056	NITRITE AS N	FL
EPA 9056 A	NITRATE AS N	FL
HACH 8000	CHEMICAL OXYGEN DEMAND (COD)	FL
RSK-175	ETHANE	FL
RSK-175	METHANE	FL
SM 2310 B-2011	ACIDITY, AS CACO3	FL
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	FL
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	FL
SM 2540 F-2011	RESIDUE-SETTLEABLE	FL
SM 4500-CL^- E-2011	CHLORIDE	FL
SM 4500-CN^- G-2011	AMENABLE CYANIDE	FL
SM 4500-$NO2^-$ B-2011	NITRITE AS N	FL
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	FL
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	FL
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	FL

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 6010 B	ALUMINUM	FL
EPA 6010 B	ARSENIC	FL
EPA 6010 B	BERYLLIUM	FL
EPA 6010 B	CADMIUM	FL
EPA 6010 B	CHROMIUM	FL
EPA 6010 B	COPPER	FL
EPA 6010 B	LEAD	FL
EPA 6010 B	MAGNESIUM	FL
EPA 6010 B	MOLYBDENUM	FL
EPA 6010 B	PHOSPHORUS, TOTAL	FL
EPA 6010 B	SELENIUM	FL
EPA 6010 B	SODIUM	FL
EPA 6010 B	THALLIUM	FL

METHOD	ANALYTE	PRIMARY
EPA 1030	IGNITABILITY	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL
EPA 6010 B	ANTIMONY	FL
EPA 6010 B	BARIUM	FL
EPA 6010 B	BORON	FL
EPA 6010 B	CALCIUM	FL
EPA 6010 B	COBALT	FL
EPA 6010 B	IRON	FL
EPA 6010 B	LITHIUM	FL
EPA 6010 B	MANGANESE	FL
EPA 6010 B	NICKEL	FL
EPA 6010 B	POTASSIUM	FL
EPA 6010 B	SILVER	FL
EPA 6010 B	STRONTIUM	FL
EPA 6010 B	TIN	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6010 B	TITANIUM	FL
EPA 6010 B	ZINC	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL
EPA 6010 C	LITHIUM	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	STRONTIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6020	ANTIMONY	FL
EPA 6020	BARIUM	FL
EPA 6020	CHROMIUM	FL
EPA 6020	COPPER	FL
EPA 6020	MANGANESE	FL
EPA 6020	SILVER	FL
EPA 6020	ZINC	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	SELENIUM	FL
EPA 6020 A	THALLIUM	FL
EPA 6020 A	ZINC	FL
EPA 6850	PERCHLORATE	FL
EPA 7471 A	MERCURY	FL
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 B	ETHYLENE GLYCOL	FL
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL
EPA 8015 C	ETHYLENE GLYCOL	FL
EPA 6010 B	VANADIUM	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	PHOSPHORUS, TOTAL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6020	ARSENIC	FL
EPA 6020	CADMIUM	FL
EPA 6020	COBALT	FL
EPA 6020	LEAD	FL
EPA 6020	NICKEL	FL
EPA 6020	THALLIUM	FL
EPA 6020 - EXTENDED	URANIUM	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	NICKEL	FL
EPA 6020 A	SILVER	FL
EPA 6020 A	VANADIUM	FL
EPA 6020 A - EXTENDED	URANIUM	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 7471 B	MERCURY	FL
EPA 8015 B	ETHANOL	FL
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 C	ETHANOL	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8015 D	ETHANOL	FL	EPA 8015 D	METHANOL	FL
EPA 8081 A	4,4'-DDD	FL	EPA 8081 A	4,4'-DDE	FL
EPA 8081 A	4,4'-DDT	FL	EPA 8081 A	ALDRIN	FL
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 A	CHLORDANE, TOTAL	FL
EPA 8081 A	DELTA-BHC	FL	EPA 8081 A	DIELDRIN	FL
EPA 8081 A	ENDOSULFAN I	FL	EPA 8081 A	ENDOSULFAN II	FL
EPA 8081 A	ENDOSULFAN SULFATE	FL	EPA 8081 A	ENDRIN	FL
EPA 8081 A	ENDRIN ALDEHYDE	FL	EPA 8081 A	ENDRIN KETONE	FL
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 A	HEPTACHLOR	FL	EPA 8081 A	HEPTACHLOR EPOXIDE	FL
EPA 8081 A	METHOXYCHLOR	FL	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 B	4,4'-DDD	FL	EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	4,4'-DDT	FL	EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	CHLORDANE, TOTAL	FL
EPA 8081 B	DELTA-BHC	FL	EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN I	FL	EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL	EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL	EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR	FL	EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	METHOXYCHLOR	FL	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082	AROCLOR-1016 (PCB-1016)	FL	EPA 8082	AROCLOR-1221 (PCB-1221)	FL
EPA 8082	AROCLOR-1232 (PCB-1232)	FL	EPA 8082	AROCLOR-1242 (PCB-1242)	FL
EPA 8082	AROCLOR-1248 (PCB-1248)	FL	EPA 8082	AROCLOR-1254 (PCB-1254)	FL
EPA 8082	AROCLOR-1260 (PCB-1260)	FL	EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL	EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL	EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL	EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICAMBA	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	MCPP	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	DALAPON	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	MCPA	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-CHLOROHEXANE	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	2-NITROPROPANE	FL
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL

Commonwealth of Virginia

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Scope of Accreditation

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	DIBROMOFLUOROMETHANE	FL	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL	EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL ACETATE	FL	EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ETHYLBENZENE	FL	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL	EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	N-PROPYLBENZENE	FL	EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL	EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	STYRENE	FL	EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL	EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TOLUENE	FL	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL ACETATE	FL	EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8260 B	XYLENE (TOTAL)	FL	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL	EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL	EPA 8270 C	1,4-NAPHTHOQUINONE	FL
EPA 8270 C	1,4-PHENYLENEDIAMINE	FL	EPA 8270 C	1-NAPHTHYLAMINE	FL
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	FL	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL	EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DICHLOROPHENOL	FL	EPA 8270 C	2,4-DIMETHYLPHENOL	FL
EPA 8270 C	2,4-DINITROPHENOL	FL	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 C	2,6-DICHLOROPHENOL	FL	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 C	2-ACETYLAMINOFLUORENE	FL	EPA 8270 C	2-CHLORONAPHTHALENE	FL
EPA 8270 C	2-CHLOROPHENOL	FL			

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL	EPA 8270 C	2-METHYLNAPHTHALENE	FL
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL	EPA 8270 C	2-NAPHTHYLAMINE	FL
EPA 8270 C	2-NITROANILINE	FL	EPA 8270 C	2-NITROPHENOL	FL
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL	EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL	EPA 8270 C	3-METHYLCHOLANTHRENE	FL
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	FL	EPA 8270 C	3-NITROANILINE	FL
EPA 8270 C	4-AMINOBIPHENYL	FL	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL	EPA 8270 C	4-CHLOROANILINE	FL
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	FL	EPA 8270 C	4-NITROANILINE	FL
EPA 8270 C	4-NITROPHENOL	FL	EPA 8270 C	5-NITRO-O-TOLUIDINE	FL
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 C	ACENAPHTHENE	FL	EPA 8270 C	ACENAPHTHYLENE	FL
EPA 8270 C	ACETOPHENONE	FL	EPA 8270 C	ANILINE	FL
EPA 8270 C	ANTHRACENE	FL	EPA 8270 C	ARAMITE	FL
EPA 8270 C	BENZIDINE	FL	EPA 8270 C	BENZO(A)ANTHRACENE	FL
EPA 8270 C	BENZO(A)PYRENE	FL	EPA 8270 C	BENZO(B)FLUORANTHENE	FL
EPA 8270 C	BENZO(G,H,I)PERYLENE	FL	EPA 8270 C	BENZO(K)FLUORANTHENE	FL
EPA 8270 C	BENZOIC ACID	FL	EPA 8270 C	BENZYL ALCOHOL	FL
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL	EPA 8270 C	BUTYL BENZYL PHTHALATE	FL
EPA 8270 C	CHLOROBENZILATE	FL	EPA 8270 C	CHRYSENE	FL
EPA 8270 C	DI-N-BUTYL PHTHALATE	FL	EPA 8270 C	DI-N-OCTYL PHTHALATE	FL
EPA 8270 C	DIALLATE	FL	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 C	DIBENZOFURAN	FL	EPA 8270 C	DIETHYL PHTHALATE	FL
EPA 8270 C	DIMETHOATE	FL	EPA 8270 C	DIMETHYL PHTHALATE	FL
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8270 C	DIPHENYLAMINE	FL
EPA 8270 C	DISULFOTON	FL	EPA 8270 C	ETHYL METHANESULFONATE	FL
EPA 8270 C	FAMPHUR	FL	EPA 8270 C	FLUORANTHENE	FL
EPA 8270 C	FLUORENE	FL	EPA 8270 C	HEXACHLOROBENZENE	FL
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 C	HEXACHLOROETHANE	FL	EPA 8270 C	HEXACHLOROPHENE	FL
EPA 8270 C	HEXACHLOROPROPENE	FL	EPA 8270 C	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL	EPA 8270 C	ISODRIN	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	ISOPHORONE	FL	EPA 8270 C	ISOSAFROLE	FL
EPA 8270 C	KEPONE	FL	EPA 8270 C	MALATHION	FL
EPA 8270 C	METHAPYRILENE	FL	EPA 8270 C	METHYL METHANESULFONATE	FL
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL	EPA 8270 C	N-NITROSODIETHYLAMINE	FL
EPA 8270 C	N-NITROSODIMETHYLAMINE	FL	EPA 8270 C	N-NITROSODIPHENYLAMINE	FL
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL	EPA 8270 C	N-NITROSOMORPHOLINE	FL
EPA 8270 C	N-NITROSOPIPERIDINE	FL	EPA 8270 C	N-NITROSOPYRROLIDINE	FL
EPA 8270 C	NAPHTHALENE	FL	EPA 8270 C	NITROBENZENE	FL
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL	EPA 8270 C	PENTACHLOROBENZENE	FL
EPA 8270 C	PENTACHLORONITROBENZENE	FL	EPA 8270 C	PENTACHLOROPHENOL	FL
EPA 8270 C	PHENACETIN	FL	EPA 8270 C	PHENANTHRENE	FL
EPA 8270 C	PHENOL	FL	EPA 8270 C	PHORATE	FL
EPA 8270 C	PRONAMIDE (KERB)	FL	EPA 8270 C	PYRENE	FL
EPA 8270 C	PYRIDINE	FL	EPA 8270 C	SAFROLE	FL
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL	EPA 8270 C	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 C	TETRAETHYL PYROPHOSPHATE (TEPP)	FL	EPA 8270 C	THIONAZIN (ZINOPHOS)	FL
EPA 8270 C - EXTENDED	CARBAZOLE	FL	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL	EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL	EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL	EPA 8270 D	1-NAPHTHYLAMINE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL	EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL	EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL	EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NAPHTHYLAMINE	FL	EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	2-NITROPHENOL	FL	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	3-METHYLCHOLANTHRENE	FL
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-AMINOBIPHENYL	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	ARAMITE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	DIMETHOATE	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	DISULFOTON	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FAMPHUR	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	HEXACHLOROPHENE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	MALATHION	FL
EPA 8270 D	METHAPYRILENE	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIETHYLAMINE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	N-NITROSOMORPHOLINE	FL
EPA 8270 D	N-NITROSOPIPERIDINE	FL
EPA 8270 D	N-NITROSOPYRROLIDINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	PHORATE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 D	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 D	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 8270 D SIM	DIALLATE	FL
EPA 8270 D SIM	DIMETHOATE	FL
EPA 8270 D SIM	DISULFOTON	FL
EPA 8270 D SIM	FAMPHUR	FL
EPA 8270 D SIM	KEPONE	FL
EPA 8270 D SIM	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 D SIM	PHORATE	FL
EPA 8315 A	FORMALDEHYDE	FL
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 A	2-NITROTOLUENE	FL
EPA 8330 A	3-NITROTOLUENE	FL
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 A	4-NITROTOLUENE	FL
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 A	NITROBENZENE	FL
EPA 8330 A	NITROGLYCERIN	FL
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 B	2-NITROTOLUENE	FL
EPA 8330 B	3-NITROTOLUENE	FL
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 B	4-NITROTOLUENE	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 10579

Microbac Laboratories, Inc. - Marietta OH
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2019
Expiration Date: September 14, 2020

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 B	NITROGLYCERIN	FL
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	FL
EPA 9014	CYANIDE	FL
EPA 9034	TOTAL SULFIDES	FL
EPA 9045 D	PH	FL
EPA 9056	CHLORIDE	FL
EPA 9056	NITRITE AS N	FL
EPA 9056 A	BROMIDE	FL
EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRITE AS N	FL
EPA 9095 B	FREE LIQUID	FL
EPA 8330 B	NITROBENZENE	FL
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 9030 B	PREP: SULFIDE	FL
EPA 9040 C	PH	FL
EPA 9056	BROMIDE	FL
EPA 9056	FLUORIDE	FL
EPA 9056	SULFATE	FL
EPA 9056 A	CHLORIDE	FL
EPA 9056 A	NITRATE AS N	FL
EPA 9056 A	SULFATE	FL
SM 2540 G-2011	RESIDUE-VOLATILE	FL