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Data Validation Summary
Fourth Quarter 2017
Semiannual Compliance Groundwater Monitoring Event for HWMU 16 and
Corrective Action Semiannual Groundwater Monitoring Event for HWMU 5

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

Draper Aden Associates performed data validation of the analytical results for the Fourth Quarter 2017 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP) in Radford, Virginia. Groundwater monitoring activities were conducted in accordance with the *Final Hazardous Waste Management Post-Closure Care Permit* (Permit) for HWMUs 5 and 16 (original effective date October 4, 2002, reissued August 16, 2014, Class 1 Permit Modification dated September 12, 2014 and Class 1 Permit Modification dated December 1, 2016). The Fourth Quarter 2017 event served as the semiannual Corrective Action (CA) groundwater monitoring event for HWMU-5 and semiannual compliance monitoring for HWMU-16 conducted in accordance with the Permit. The following information summarizes the findings of the Fourth Quarter 2017 semiannual activities at each Unit.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected groundwater samples during October 9 through October 18, 2017.

Samples were submitted for laboratory analysis via courier to Shealy Environmental Services (Shealy), of West Columbia, South Carolina; or Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. A summary table of the required analyses and identification of the analyzing laboratory is provided below. Each laboratory is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, methods, and matrix as listed on each certificate of analysis, except if noted below.

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 as discussed below. The final certificate of analysis (revised to reflect project QLs) for this event was received on January 16, 2018.

Verification Events

No verification events were required.

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)	
	HWMU 5 / Laboratory	**HWMU 16 / Laboratory**
8260C Volatiles	RAE98 / ELLE	RAE95_V2 / ELLE
8270D Semivolatiles	NA	RAE95_V2 / ELLE
6020A Inorganics, total	RAE99_V2 / ELLE	SJ12043 / SHEALY
7470A Mercury, total	NA	SJ12043 / SHEALY

NA - Denotes analysis not applicable/analysis not required.

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chains of custody and permit required target analyte lists 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, except where noted below, were evaluated in 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 data validation as detailed in the attached data validation reports. For each HWMU, data validation reports and a summary table of data validation results are provided as an attachment.

Reporting of Results

HWMU-5 - results were reported to at or above the permit detection limit for the target analytes (constituents) (i.e., five volatile organics and cobalt, total) listed in Appendix J to Permit Attachment 2 of Module VI-Groundwater Corrective Action & Monitoring Program for Unit-5. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for antimony, lead, and zinc, where applicable.

HWMU 16 - For this event, point of compliance well and plume well results for HWMU 16 were reported to at or above the permit QL, except where noted.

All wells were analyzed for the constituents listed in the semiannual compliance monitoring lists (Attachment 3 Appendix E rev 12-1-2016 Class 1 Permit Modification) consisting of 12 inorganics, 20 volatile organics and three semivolatile organics. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for lead, and zinc. Additionally, tetrahydrofuran (volatile organic) was added to the semiannual compliance monitoring list, Attachment 3 Appendix E, and the groundwater protection standards list, Appendix G to Attachment 3). Other modification were made with the December 2016 Class Permit Modification, but not applicable to this semiannual event.

Additionally, a footnote presented in Appendix G of Permit Attachment 3 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 Fourth Quarter 2017, no constituents with GPSs equal to their respective QLs and greater than the applicable risk-based concentrations were detected. This applied to 2,4-dinitrotoluene and 2,6-dinitrotoluene.

Summary of Data Validation Results

The data validation results are summarized below and on the attached reports and table. Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. The chain of custody documentation was complete, except where noted below. The laboratory received the samples on ice and in good condition, with custody seals intact. Technical holding time and preservation criteria were met. The data set demonstrated the laboratory's ability to achieve the permit QL or DL, unless noted below.

SW-846 Method 8260C/5030C-Volatile Organic Analytes- 25 ml purge volume

Instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/blind field sample duplicate results, and target analyte identification and quantitation were met, except where noted below. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. A trip blank was analyzed for each day of sample collection. A blind field duplicate was collected and analyzed for the required target analytes. No target analytes were detected in the sample/field duplicate sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 5

- Sample/Blind Field Sample Duplicate results - 5WC21/5WDUP - Trichloroethene was reported above the QL in both the sample and blind field duplicate (3.0/3.0 μg/l). The relative percent difference (RPD) criteria were met.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – chloroethane (1.5/ 1.5 μg/l), 1,1-dichloroethane (3.6/3.7 μg/l) and diethyl ether (24/25 μg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- Samples 16C1 and 16MW9 were analyzed in dilution to obtain the final result for diethyl ether.
- 1,1-Dichloroethene, tetrahydrofuran and tetrachloroethane recovered high in the MS/MSD and/or LCS. These three analytes were not detected above the QL and no data qualification was needed. The remaining MS/MSD/LCS criteria were met.
- 16C1 and 16MW9 were diluted (1:2.5) for diethyl ether due to detections above the calibration range. These two dilutions were performed using a previously opened container with headspace. The diluted results were reported as the final results and the diethyl ether results for 16C1 and 16MW9 were validated and qualified as "J" due to this QC issue.
- The permit required QL is 12.5 μg/l for both diethyl ether and dimethyl ether. The laboratory reported the QL as 13 μg/l for diethyl ether and dimethyl ether due to the laboratory rounding policy. Draper Aden Associates revised the QL to 12.5 μg/l and no revision was requested.

SW-846 Method 8270D/3510C- Semivolatile Organic Analytes (HWMU16 only)

Instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/blind field sample duplicate results, and target analyte identification and quantitation criteria were met, except as noted below. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. A blind field duplicate was collected and analyzed for the required target analytes. No target analytes were detected in the sample/field duplicate sample unless noted below. No deviations from specific QA/QC criteria were identified during the data review process.

HWMU 16

- A footnote presented in Appendix G to Attachment 3, Groundwater Corrective Action Annual Monitoring List, of Permit Module V – *Groundwater Compliance Monitoring for Unit 16* indicates that verification is required for constituents detected at concentrations less than the Limit of Quantitation (LOQ)/QL if their associated groundwater protection standard (GPS) is based on the LOQ/QL. This footnote applies to 2,4-dinitrotoluene and 2,6-dinitrotoluene detected below the LOQ/QL only in compliance wells.

During Fourth Quarter 2017, results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were evaluated to the MDL. These two constituents were not detected at or above the MDL or QL and no additional evaluation was required.

SW-846 Method 6020A/3020A (Unit 5) / 6020A/3005A (Unit 16)–Inorganics-total

Calibration, blank, interference check sample, MS/MSD/DUP, LCS, internal standards, serial dilution, sample/field sample duplicate results, and target analyte quantitation were met, except where noted below or no data qualification was required. MS/MSD analyses were performed on project samples as noted on the chain of custody. No target analytes were detected in the sample/field duplicate

sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 5

- Sample/Blind Field Sample Duplicate results – 5WC21/5WDUP – Cobalt was reported above the QL in both the sample and blind field duplicate (66.7/67.4 µg/l). The RPD criteria were met.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – Barium (280/290 µg/l), and cobalt (5.9/5.9 µg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- The internal standard, SC45, recovered low in sample 16WC1B. Target analytes associated with this internal standard were validated and qualified as "J" if detected above the QL and "UJ" if not detected at or above the QL (see attached data validation table).

SW-846 Method 7470A– Mercury-total - (HWMU 16 only)

Calibration, blank, MS/MSD, LCS, sample/field sample duplicate results were within control limits. MS/MSD analyses were performed on project samples as noted on the chain of custody. Mercury was not detected in the sample/blind field duplicate sample. No deviations from specific QA/QC criteria were identified during the data review process.

A. QC DELIVERABLES PACKAGE – SAMPLE PAPERWORK:

1.	Was the chain of custody included in the data deliverable package?	☑ YES ☐ NO
2.	Was custody transfer between different parties dated and signed?	☑ YES ☐ NO
3.	Did the chain of custody document sampler signature, sample locations, date and time of sampling and analyses requested?	☑ YES ☐ NO
4.	Were the sample results included for each sample location?	☑ YES ☐ NO
5.	Did the laboratory report the required target analytes?	☑ YES ☐ NO

End of page

DATA EVALUATION FOR SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS

A. QC DELIVERABLES PACKAGE:

- ☑ VELAP accredited (matrix, method and analyte)

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ 14-day sample holding time, pH <2
- ☑ Samples received at ≤ 6ºC, zero headspace
- ☑ Preparation Method 5030C, 25 ml purge volume

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument performance check solution was analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or required QL
- ☑ No calibration standards were removed from curve that would negatively impact the data integrity
- ☑ Each target analyte %RSD ≤ 20%
- ☑ Correlation coefficient or coefficient of determination >0.99 for target analytes with ≥ 20% RSD
- ☑ Initial calibration verification analytes have % Difference/Drift within ± 30.0%

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to the method blank and sample analysis
- ☑ % Difference/Drift of target analytes within ± 20%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis
- ☑ Trip Blank-one per day of collection.

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others as allowed) were used and within the specified range
  - dibromofluoromethane (77-114%), 4-bromofluorobenzene (78-110%)
  - toluene-d_8 (77-110%), 1,2-dichloroethane-d_4 (74-113%)

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ MS/MSD and LCS analyzed; MS/MSD and LCS within range
- ☑ Project specific analytes -%R 70-130%, RPD ≤20
- ☑ Independent source (confirmed via email from B. Weyandt, ELLE to K. Olsen 1/9/2015)

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ The following internal standards (or others as allowed) were used
  -t-butyl alcohol-d_{10}, fluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
- ☑ Internal standard areas within ± 50% of last calibration verification
- ☑ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
- ☑ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
- ☑ Sample spectra versus laboratory standard spectra criteria were evaluated:
  -Characteristic ions maximized in the same scan or within one scan of each other
  -Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the QL
  -Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results are consistent with historical data. New detections evaluated as follows:
  - If analyte %RSD was 20% or less, use average relative response factor for quantitation.
  - If analyte %RSD was greater than 20%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order)
- ☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution
- ☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report)

L. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached data validation report
- ☑ Results reported at or above permit QL (HWMU16)
- ☑ Results reported at or above permit DL and QL (HWMU5)
- ☑ Results reported within instrument calibration range
- ☑ Sample/blind field duplicate RPD <20, where applicable

A. QC DELIVERABLES PACKAGE:

- ☑ VELAP accredited (matrix, method, target analytes)
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Holding time: 7-day sample collection to extraction / 40-day extraction to analysis
- ☑ Samples received at ≤6°C
- ☑ Extraction Method 3510C used

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument performance check solution analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of a minimum of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL
- ☑ No calibration standards were dropped to meet calibration criteria
- ☑ Each target analyte RSD ≤ 20%
- ☑ Correlation coefficient or coefficient of determination >0.99 for target analytes with ≥20 % RSD
- ☑ Initial calibration verification analytes have % Difference/Drift within ± 30.0%

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to the method blank and sample analysis
- ☑ Analytes have % Difference/Drift within ± 20.0%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others, as allowed) were used and within the specified range
  - phenol - d_6 (10-94%), - 2-fluorophenol (21-100%), - 2,4,6-tribromophenol (10-123%), nitrobenzene – d_5 (43-108%), - 2-fluorobiphenyl (43-116%), - terphenyl - d_{14} (33-141%)
- ☑ Two base/neutral or acid surrogates out of specification or any one base/neutral or acid extractable surrogate have a recovery of less than 10%, if so corrective action needed

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ MS/MSD and LCS analyzed with target analytes
- ☑ MS/MSD and LCS recovered at or above 45%, RPD <40

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ The following internal standards were used (or others as allowed)
  - -1,4-Dichlorobenzene-d_4, Naphthalene-d_8, Acenapththene-d_{10}, Phenanthrene-d_{10}, Pyrene-d_{10}, Perylene-d_{12}
- ☑ Internal standard areas within ± 50% of last calibration verification
- ☑ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
- ☑ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
- ☑ Sample spectra versus laboratory standard spectra criteria were evaluated:

Characteristic ions maximized in the same scan or within one scan of each other

- Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the permit QL
- Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
  -If analyte %RSD was 20% or less, use average relative response factor for quantitation.
  -If analyte %RSD was greater than 20%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order).
- ☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution.
- ☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report).

L. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached data validation report
- ☑ Results reported at or above permit QL (HWMU16) except 2,4-DNT and 2,6-DNT reviewed and validated to at or above DL.
- ☑ Results reported at or above permit DL and QL (HWMU5)

DATA EVALUATION FOR INORGANICS BY SW-846 METHOD 6020A (ICP/MS)

A. QC DELIVERABLES PACKAGE:

- ☑ Sample results included for sample locations
- ☑ Target analyte QLs reported at permit required QL
- ☑ Sample digestion method: 3005A (for Unit 16) and 3020A (for Unit 5)
- ☑ Electronic data file reviewed
- ☑ VELAP accredited (matrix, method, target analyte)

B. TECHNICAL HOLDING TIMES / PRESERVATION REVIEW CRITERIA:

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO3)

C. INSTRUMENT CALIBRATION/TUNE CRITERIA:

- ☑ Target analytes, 1 calibration blank and at least 1 standard or according to instrument manufacturer's procedure
- ☑ Instrument calibrated for every analytical sequence, r>0.998
- ☑ Instrument tuned prior to analysis:
  - (%RSD <5%),
  - Resolution < 0.9 amu full width at 10% peak height (or lower)
  - Mass calibration </=0.1 amu difference from true value

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ Standard analyzed at or below the QL (LLQC), digested, analyzed after MDL determination and as needed
- ☑ QL standard recovery 70-130%
- ☑ 10 sample frequency
- ☑ Use of calibration blank and check standard
- ☑ Recovery within 90-110% (ICV/CCV)
- ☑ LLICV prior to analysis and at a concentration at or below LOQ/QL
- ☑ LLCCV within 70-130% recovery

E. BLANK CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank
- ☑ Method/Other Lab Blanks (check only if analyzed)
- ☑ Interference free
- ☑ CCB 10 sample frequency

F. INTERFERENCE CHECK SAMPLES (ICS) CRITERIA:

- ☑ At beginning of batch or every 12 hours (80-120%)

G. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤ 20 between MS and MSD results or sample and duplicate results
- ☑ Control limit is ± QL when sample values are less than 5 times QL (sample duplicate).

H. MATRIX SPIKE (MS) CRITERIA:

- ☑ 75-125% recovery, all analytes
- ☑ All analytes, spiked prior to digestion
- ☑ One matrix spike per analytical batch
- ☑ No more than 20 samples per analytical batch

I. BLIND FIELD SAMPLE DUPLICATE CRITERIA:

- ☑ 20% RPD for concentrations > QL

J. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument linear range

K. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

☑ All target analytes, 1 LCS per 20 samples, (80-120% Recovery)

L. INTERNAL STANDARDS (IS) CRITERIA:

☑ IS intensities; 70-125% RI

M. SERIAL DILUTION CRITERIA:

☑ Similar matrix

☑ If concentration >10 times QL, %Difference must be within 10%

N. REPORTING:

☑ Detected analytes or results requiring validation are presented on the attached data validation report

☑ Results reported at or above permit QL (HWMU16)

☑ Results reported at or above permit DL and QL (HWMU5)

A. QC DELIVERABLES PACKAGE:

- ☑ Mercury QL reported at permit required QL
- ☑ Electronic data file reviewed
- ☑ VELAP accredited (matrix, method, target analytes)

B. TECHNICAL HOLDING TIME / PRESERVATION REVIEW CRITERIA:

- ☑ 28 day holding time, Adjust pH <2 w/ HNO_3

C. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 5 standards
- ☑ ICAL standards within 30% of true value
- ☑ Instrument calibrated for every analytical sequence, r>0.995
- ☑ ICAL standard analyzed at the permit QL
- ☑ QL standard (LLQC) analyzed at or less than the permit required QL (70-130%R)
- ☑ QL standard analyzed at beginning of run, following ICV/ICB

D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ 10 sample frequency for CCV; recovery within 85-115%

E. BLANK 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

F. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤ 20 between MS and MSD results or sample and duplicate results
- ☑ Control limit is ± QL when sample values are less than 5 times QL.

H. MATRIX SPIKE (MS) CRITERIA:

- ☑ 75-125% recovery
- ☑ MS spiked prior to digestion, One MS per analytical batch of 20 samples

H. FIELD SAMPLE DUPLICATE CRITERIA:

- ☑ Target analyte: mercury, Difference <10RPD

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ Recovery within 80-120% range. Independent source from calibration standards.

J. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument calibration range

K. REPORTING:

- ☑ Detected analytes reported to at or above the permit QL. When applicable, results requiring validation are presented on the attached data validation report.

LIMITATIONS:

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Comprehensive Data Validation Report
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Groundwater Monitoring Event:Fourth Quarter 2017

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Cobalt	5W8B	1	U	U		5	1	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5W5B	1	U	U		5	1	5	1	ug/L	Analyte not detected at or above the DL or QL.
	5W7B	1.4	J	1.4	J	5	1	5	1	ug/L	Result < QL.
	5WC21	66.7		66.7		5	1	5	1	ug/L	No action taken.
	5WC22	6.9		6.9		5	1	5	1	ug/L	No action taken.
	5WC23	2.1	J	2.1	J	5	1	5	1	ug/L	Result < QL.
	5WDUP	67.4		67.4		5	1	5	1	ug/L	No action taken.
	5W12A	1	U	U		5	1	5	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											
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.
	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.
	Trip Blank 2	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.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	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.
	Trip Blank 2	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.

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											
trans-1,2-Dichloroethene	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	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.
	Trip Blank 2	0.8	U	U		1	0.8	1	0.8	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	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3		3		1	0.2	1	0.177	ug/l	No action taken.
	5WC22	2.9		2.9		1	0.2	1	0.177	ug/l	No action taken.
	5WC23	3.1		3.1		1	0.2	1	0.177	ug/l	No action taken.
	5WDUP	3		3		1	0.2	1	0.177	ug/l	No action taken.
	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.
	Trip Blank 2	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.
	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.
	Trip Blank 2	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

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.

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: Fourth Quarter 2017

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: 6020A							
Laboratory: ELLE, Lancaster, PA							
Cobalt	5WC21	66.7		66.7		5	No action taken.
	5WDUP	67.4		67.4		5	No action taken.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Trichloroethene	5WC21	3		3		1	No action taken.
	5WDUP	3		3		1	No action taken.

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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Type I Data Package

Prepared for:

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

Project: RAAP - Radford, VA - HWMU-5
Groundwater Samples
Collected on 10/16/17-10/18/17

SDG# RAE99-V.2

GROUP	SAMPLE NUMBERS
1864854	9271983-9271993

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
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 **Date: 01/16/2018**

Dana M. Kauffman
Manager

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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Sample Reference List for SDG Number RAE99
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
9271983	5W8B	10/16/2017 09:25	10/19/2017 09:20
9271984	5W5B	10/16/2017 12:00	10/19/2017 09:20
9271985	5W7B	10/16/2017 11:05	10/19/2017 09:20
9271986	5W7B Matrix Spike	10/16/2017 11:05	10/19/2017 09:20
9271987	5W7B Matrix Spike Dup	10/16/2017 11:05	10/19/2017 09:20
9271988	5W7B Duplicate	10/16/2017 11:05	10/19/2017 09:20
9271989	5WC21	10/18/2017 11:15	10/19/2017 09:20
9271990	5WDUP	10/18/2017 11:20	10/19/2017 09:20
9271991	5WC22	10/18/2017 09:30	10/19/2017 09:20
9271992	5WC23	10/18/2017 10:20	10/19/2017 09:20
9271993	5W12A	10/16/2017 10:20	10/19/2017 09:20

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Sample pH Log

SDG: RAE99

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 #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
9271983	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:36:28PM	12665
9271984	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:37:53PM	12665
9271985	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:37:36PM	12665
9271986	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:39:54PM	12665
9271987	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:39:37PM	12665
9271989	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:38:39PM	12665
9271990	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:38:08PM	12665
9271991	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:39:19PM	12665
9271992	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:39:03PM	12665
9271993	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/19/2017 7:37:19PM	12665

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

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10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

06032 Cobalt

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, 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: November 30, 2017 13:10

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1864854
SDG: RAE99
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

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

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	10/16/2017 09:25	9271983
5W5B Grab Groundwater	10/16/2017 12:00	9271984
5W7B Grab Groundwater	10/16/2017 11:05	9271985
5W7B Matrix Spike Grab Groundwater	10/16/2017 11:05	9271986
5W7B Matrix Spike Dup Grab Groundwater	10/16/2017 11:05	9271987
5W7B Duplicate Grab Groundwater	10/16/2017 11:05	9271988
5WC21 Grab Groundwater	10/18/2017 11:15	9271989
5WDUP Grab Groundwater	10/18/2017 11:20	9271990
5WC22 Grab Groundwater	10/18/2017 09:30	9271991
5WC23 Grab Groundwater	10/18/2017 10:20	9271992
5W12A Grab Groundwater	10/16/2017 10:20	9271993

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 #: 1864854

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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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.

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Sample Description: **5W8B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 09:25
SDG#: RAE99-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271983
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	N.D.	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:00	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5W5B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 12:00
SDG#: RAE99-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271984
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	N.D.	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:02	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5W7B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE99-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271985
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0014 J	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 02:49	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

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Sample Description: **5W7B Matrix Spike Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE99-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271986
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.234	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 02:55	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

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Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE99-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271987
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.239	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 02:57	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5W7B Duplicate Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE99-03DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271988
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0013 J	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 02:53	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5WC21 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 11:15
SDG#: RAE99-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271989
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0667	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:08	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5WDUP Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 11:20
SDG#: RAE99-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271990
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0674	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:10	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5WC22 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 09:30
SDG#: RAE99-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271991
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0069	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:11	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5WC23 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 10:20
SDG#: RAE99-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271992
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0021 J	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:13	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Sample Description: **5W12A Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 10:20
SDG#: RAE99-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271993
ELLE Group #: 1864854
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	N.D.	0.0010	0.0050	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	172931063904A	10/24/2017 03:15	Sarah L Burt	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	172931063904	10/22/2017 22:00	Annamaria Kuhns	1

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

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1864854
Reported: 11/30/2017 13:10

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 mg/l	MDL** mg/l	LOQ mg/l
Batch number: 172931063904A	Sample number(s): 9271983-9271993		
Cobalt	N.D.	0.0010	0.0010

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 172931063904A	Sample number(s): 9271983-9271993								
Cobalt	0.250	0.243			97		80-120		

MS/MSD

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

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 172931063904A	Sample number(s): 9271983-9271993 UNSPK: 9271985									
Cobalt	0.00143	0.250	0.234	0.250	0.239	93	95	75-125	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 172931063904A	Sample number(s): 9271983-9271993 BKG: 9271985			
Cobalt	0.00143	0.00134	6 (1)	20

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1864854/9271983-93

CHAIN OF CUSTODY RECORD

OK JM 9/20/17

Laboratory: Eurofins Lancaster Laboratories Environmental LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager

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 2017- 2nd Semiannual Groundwater Corrective Action **Event:** Monitoring Event **DAA JN:** B03204-17A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES HAS: 12.75Y-02X-Y0-5549-3465 **Carrier:** **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 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on Ice: YES

Box 4 - Sample Type	G	G
Box 3 - Filtered/Unfiltered	U	U
Required pH of Sample	<2	<2
Box 2 - Preservative	A	B
Box 5 - Sample Container Type	3-40ml V	1-500ml P

Sample ID	Date: 2017	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge Appendix J Analyte List	Cobalt only-Total 6020A /3020A (appendix J)
5W8B	10/16	0925	GW	4	X	X
5W5B	10/16	1200	GW	4	X	X
5W7B	10/16	1105	GW	4	X	X
5WC21	10/18	1115	GW	4	X	X
5WDUP	10/18	1120	GW	4	X	X
5WC22	10/18	0930	GW	4	X	X
5WC23	10/18	1020	GW	4	X	X
5W12A	10/16	1020	GW	4	X	X
Trip Blank 1	10/16	—	T	2	X	
Trip Blank 2	10/16	—	T	2	X	

GENERAL NOTES:
1. See attached analyte list.
2. Report Results to MDL with "J" Flags.
3. 1 trip blank per day of sampling. Delete Trip blank 2 if not required.

Cobalt QL = 5ug/L
DL = 1ug/L
} dra 9/20/17

USE FOR QC

Sample time is 1020

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition ✓ Yes ___ No Custody Seal Intact ✓ Yes ___ No Temperature upon arrival 0.7/0.9 Received on Ice ✓ Yes ___ No
Describe problems, if any:

Sampler Name (Print): Ken Cacklin-acting	Date: 10/16/17	#1 Relinquished by (Signature):	Date: 10/18/17	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ky-Tran Vo	Date: 10/16/17	#1 Received by (Signature):	Date: 10/19/17	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name: ELLE	Time: 920	Company Name:	Time:	

JM 1/2

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Sample Administration Receipt Documentation Log

Doc Log ID: 198034

Group Number(s): 1864854

Client: Draper Aden Associates

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/19/2017 9:20
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	VA		

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	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	12
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wyatt Shiffler (12792) at 10:49 on 10/19/2017

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	0.9	DT	Wet	Y	Bagged	N
2	DT131	0.7	DT	Wet	Y	Bagged	N
3	DT131	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
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	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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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
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.
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.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE99

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9271983	5W8B	X		1	
9271984	5W5B	X		1	
9271985	5W7B	X		1	Background/Unspiked
9271986	5W7B Matrix Spike	X		1	Matrix Spike
9271987	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9271988	5W7B Duplicate	X		1	Duplicate
9271989	5WC21	X		1	
9271990	5WDUP	X		1	Field Duplicate Sample
9271991	5WC22	X		1	
9271992	5WC23	X		1	
9271993	5W12A	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.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE99

ICP Metals

Fraction: Metals in Liquid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271983 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271984 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271985BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.4			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271986MS % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	234			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271987MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	239			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271988DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.3			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271989 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	66.7			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271990 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	67.4			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271991 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	6.9			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271992 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	2.1			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9271993 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/19/2017

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAE99
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Cobalt	172931063904	9271983
		9271984
		9271985BKG
		9271986MS
		9271987MSD
		9271988DUP
		9271989
		9271990
		9271991
		9271992
		9271993
		P29363DB
		P29363DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE99

Method: MS
Run Name: 1729703E05
Calibration Date(s): 10/24/2017
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59	500.0	496.64	99.3	250.0	245.92	98.4	250.0	254.63	101.9

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE99

Method: MS
Run Name: 1729703E05
Calibration Date(s): 10/24/2017
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59				250.0	244.51	97.8			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAE99

Method: MS
Run Name: 1729703E05
Calibration Date(s): 10/24/2017
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Cobalt	59	1.0	1.02	102.0	1.03	103.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAE99

Method: MS
Run Name: 1729703E05
Calibration Date(s): 10/24/2017
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59	0.12	U	0.12	U	0.12	U	0.12	U	59	1.000	U	172931063904A

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE99

Instrument ID: 19204
Run Name: 1729703E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	94231	94.2	95656.6	95.7
Calcium	44	300000	300000	248609	82.9	252357.9	84.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		186.1	90.8
Iron	57	250000	250000	218346	87.3	223590.4	89.4
Magnesium	24	100000	100000	90575	90.6	91800.0	91.8
Molybdenum	98	2000	2000	2010	100.5	2088.5	104.4
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	94503	94.5	95749.6	95.7
Sodium	23	250000	250000	221360	88.5	226588.6	90.6
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	1861	93.1	1859.8	93.0

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE99

Instrument ID: 19204
Run Name: 1729703E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	100132	100.1	104716.9	104.7
Calcium	44	300000	300000	261240	87.1	274761.6	91.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		192.6	94.0
Iron	57	250000	250000	229734	91.9	241153.9	96.5
Magnesium	24	100000	100000	95710	95.7	99539.9	99.5
Molybdenum	98	2000	2000	2173	108.7	2192.8	109.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	100786	100.8	105281.1	105.3
Sodium	23	250000	250000	234525	93.8	244081.7	97.6
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	1955	97.8	2034.9	101.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9271985BKG Matrix Spike Lab Sample ID: 9271986MS Matrix Spike Duplicate Lab Sample ID: 9271987MSD
Batch Number(s): 172931063904

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Cobalt	59	1.4260		234.0940		238.5280		250.0000	250.0000	UG/L	93		95		2		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.
If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9271985BKG Duplicate Lab Sample ID: 9271988DUP
Batch Number(s): 172931063904
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Cobalt	59	1.0	1.4260		1.3380		6		MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAE99
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Cobalt	59	172931063904	UG/L	250.000	242.703		80 - 120	97	MS	Yes

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAE99
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9271985BKG Serial Dilution Lab Sample ID: 9271985L
Batch Number(s): 172931063904
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Cobalt	59	1.4260		5.0000	U	100		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Method: MS
Instrument ID: 19204
Date: 10/2017

Analyte	MASS (amu)	Background	IDL (UG/L)
Cobalt	59		0.12

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAE99
Matrix: WATER

Method: MS
Date: 04/2016

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Cobalt	59		1.0	1.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 172931063904

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9271983	10/22/2017	50.00	50
9271984	10/22/2017	50.00	50
9271989	10/22/2017	50.00	50
9271990	10/22/2017	50.00	50
9271991	10/22/2017	50.00	50
9271992	10/22/2017	50.00	50
9271993	10/22/2017	50.00	50
9271985BKG	10/22/2017	50.00	50
9271988DUP	10/22/2017	50.00	50
9271987MSD	10/22/2017	50.00	50
9271986MS	10/22/2017	50.00	50
P29363DB	10/22/2017	50.00	50
P29363DQ	10/22/2017	1.00	1

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE99

Method: MS
Instrument ID: 19204
Run Name: 1729703E05

Run Start Date: 10/24/2017
Run End Date: 10/24/2017

Lab Sample ID	D/F	Time	Analytes
			CO
S0	1.00	02:25	X
S	1.00	02:27	X
CCS	1.00	02:29	X
ICV	1.00	02:31	X
ICB	1.00	02:33	X
LLC	1.00	02:35	X
ICSA	1.00	02:37	X
ICSAB	1.00	02:38	X
ZZZZZZ	1.00	02:40	
CCV	1.00	02:42	X
CCB	1.00	02:44	X
P29363DB	1.00	02:46	X
P29363DQ	1.00	02:48	X
9271985BKG	1.00	02:49	X
9271985A	1.00	02:51	
9271988DUP	1.00	02:53	X
9271986MS	1.00	02:55	X
9271987MSD	1.00	02:57	X
9271985L	5.00	02:59	X
9271983	1.00	03:00	X
9271984	1.00	03:02	X
CCV	1.00	03:04	X
CCB	1.00	03:06	X
9271989	1.00	03:08	X
9271990	1.00	03:10	X
9271991	1.00	03:11	X
9271992	1.00	03:13	X
9271993	1.00	03:15	X
LLC	1.00	03:17	X
ICSA	1.00	03:19	X
ICSAB	1.00	03:21	X
ZZZZZZ	1.00	03:22	
CCV	1.00	03:24	X
CCB	1.00	03:26	X

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE99

Instrument ID: 19204
Run Name: 1729703E05

Start Date: 10/24/2017
End Date: 10/24/2017

Standard	Elements Applies to	Standard	Elements Applies to
IN-1-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	02:25	100													
S	02:27	102													
CCS	02:29	107													
ICV	02:31	102													
ICB	02:33	104													
LLC	02:35	108													
ICSA	02:37	97													
ICSAB	02:38	94													
ZZZZZZ	02:40														
CCV	02:42	105													
CCB	02:44	105													
P29363DB	02:46	104													
P29363DQ	02:48	108													
9271985BKG	02:49	104													
9271985A	02:51	104													
9271988DUP	02:53	108													
9271986MS	02:55	113													
9271987MSD	02:57	111													
9271985L	02:59	113													
9271983	03:00	115													
9271984	03:02	110													
CCV	03:04	105													
CCB	03:06	106													
9271989	03:08	106													
9271990	03:10	106													
9271991	03:11	108													
9271992	03:13	110													
9271993	03:15	110													
LLC	03:17	106													
ICSA	03:19	91													
ICSAB	03:21	91													
ZZZZZZ	03:22														
CCV	03:24	106													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE99

Instrument ID: 19204 Start Date: 10/24/2017
Run Name: 1729703E05 End Date: 10/24/2017

Standard	Elements Applies to	Standard	Elements Applies to
IN-1-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
CCB	03:26	105													

LEGEND:	
BKG = Background	MS = Matrix Spike
DUP = Duplicate	MSD = Matrix Spike Duplicate
L = Serial Dilution	A = Post Digest Spike
B = Blank	
Q = Laboratory Control Sample	
Y = Laboratory Control Sample Duplicate	
FLAG:	
R = Internal Standard Relative Intensity OOS	

INTERNAL STANDARD ELEMENTS:	
BE = Beryllium	LI = Lithium
BI = Bismuth	SC = Scandium
GE = Germanium	TB = Terbium
HO = Holmium	Y = Yttrium
IN = Indium	

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 17J24C00.E05

Run Name: 1729703E05

Analyst: 12050

Reviewed By: Sarah L Burt

Reviewed Date: 10/24/2017 04:07

Verified By: Deborah A Krady

Verified Date: 11/17/2017 11:43

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208
	U	238

Run Name: 1729703E05 Date/Time: 10/24/2017 2:25:59
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	24553.52000	0.000	3.16813	5.69105	-8.85918
MG	24	0.00000	90.00000	0.000	0.53920	0.42802	-0.96721
AL	27	0.00000	53.34000	0.000	-0.31242	-2.45418	2.76660
K	39	0.00000	6227.97000	0.000	2.36915	12.65724	-15.02639
CA	44	0.00000	13.33000	0.000	9.59593	-7.75493	-1.84100
SC-1	45	33889.27000	0.00000	0.000	34564.10000	33301.24000	33802.46000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	10.00000	0.000	-0.01507	-0.01507	0.03014
CR	52	0.00000	133.34000	0.000	0.00437	0.04578	-0.05015
MN	55	0.00000	23.33000	0.000	-0.04380	-0.00987	0.05366
FE	57	0.00000	66.67000	0.000	-2.43187	-1.69777	4.12964
CO	59	0.00000	6.67000	0.000	-0.00429	0.00221	0.00208
NI	60	0.00000	23.33000	0.000	-0.00849	0.03941	-0.03093
CU	63	0.00000	296.68000	0.000	0.08030	-0.03412	-0.04617
ZN	66	0.00000	40.00000	0.000	-0.22566	0.15424	0.07142
GE-1	72	97539.92000	0.00000	0.000	101819.80000	94761.89000	96038.06000
AS	75	0.00000	2.00000	0.000	-0.00046	0.02494	-0.02448
SR	88	0.00000	10.00000	0.000	0.03651	0.00071	-0.03721
MO	98	0.00000	26.67000	0.000	-0.01950	0.00433	0.01517
AG	107	0.00000	10.00000	0.000	0.00561	0.00011	-0.00572
CD	111	0.00000	2.00000	0.000	0.01052	0.00020	-0.01073
IN-1	115	34276.78000	0.00000	0.000	34704.03000	33732.29000	34394.03000
SN	120	0.00000	50.00000	0.000	-0.04433	0.04512	-0.00079
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-1	159	161485.07000	0.00000	0.000	166922.52000	155530.97000	162001.72000
TL	203	0.00000	10.00000	0.000	0.00783	0.00015	-0.00798
PB	208	0.00000	50.00000	0.000	-0.00767	0.00010	0.00757
BI-1	209	120546.59000	0.00000	0.000	122446.77000	119142.68000	120050.32000
U	238	0.00000	20.00000	0.000	-0.00007	0.00005	0.00002

Run Name: 1729703E05 Date/Time: 10/24/2017 2:27:50
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	33317.94000	0.00000	0.000	32088.90000	33681.98000	34182.95000
AL	27	10000.00000	131575.70000	3.600	10277.85063	10123.23280	9598.91656
CA	44	10000.00000	16664.85000	4.100	10444.59481	9926.55363	9628.85156
CR	52	1000.00000	847934.28000	3.200	1034.21565	996.10148	969.68287
FE	57	10000.00000	151198.27000	2.900	10321.96356	9906.08059	9771.95585
K	39	10000.00000	282798.06000	3.500	10362.84270	9970.90420	9666.25310
MG	24	10000.00000	505962.91000	3.100	10358.70863	9839.29963	9801.99174
MN	55	1000.00000	305430.85000	3.700	1038.99604	994.49616	966.50780
NA	23	10000.00000	1164155.53000	4.100	10458.43919	9873.88248	9667.67833
TI	47	1000.00000	14142.67000	4.600	1052.90423	981.43603	965.65974
V	51	1000.00000	653702.28000	3.300	1038.28105	979.48488	982.23407
IN-1	115	34830.93000	0.00000	0.000	34500.87000	34554.53000	35437.38000
AG	107	100.00000	177110.04000	1.000	100.48808	98.88786	100.62406
AS	75	1000.00000	83565.62000	1.200	1003.36234	1009.55912	987.07853
BA	137	1000.00000	124337.39000	2.800	1027.68111	1000.45065	971.86824
CD	111	100.00000	18890.32000	2.600	101.64759	101.30795	97.04446
CO	59	1000.00000	1587916.59000	1.700	1018.24925	997.41617	984.33458
CU	63	1000.00000	1252829.15000	1.300	1009.92840	1004.24035	985.83125
MO	98	100.00000	87882.46000	3.700	103.70485	99.90414	96.39102
NI	60	1000.00000	443163.13000	1.700	1016.10662	1001.95656	981.93682
SB	121	100.00000	39423.00000	2.700	102.89423	99.50496	97.60080
SN	120	100.00000	47189.04000	2.000	101.57540	100.64494	97.77966
SR	88	100.00000	27235.44000	2.300	102.60317	98.77310	98.62373
ZN	66	1000.00000	136689.55000	2.200	986.98880	1025.44032	987.57088
BI-1	209	123843.77000	0.00000	0.000	122497.11000	123141.23000	125892.97000
PB	208	100.00000	408756.68000	2.100	101.79267	100.53116	97.67616
TL	203	100.00000	127955.82000	1.900	101.19148	101.01896	97.78955
U	238	100.00000	463103.59000	2.300	101.48063	101.12579	97.39358
GE-1	72	97368.62000	0.00000	0.000	97757.56000	97003.90000	97344.40000
TB-1	159	166231.32000	0.00000	0.000	169031.76000	166526.93000	163135.28000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:29:40
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35652.50000	0.00000	0.000	33902.35000	36076.52000	36978.64000
AL	27	2.17000	86.67000	29.200	1.99926	1.63995	2.87151
CA	44	7.68700	26.67000	224.600	27.62414	-2.21378	-2.34896
CR	52	0.45900	556.70000	7.800	0.44768	0.49847	0.42943
FE	57	-0.23400	66.67000	0.000	-0.44498	-0.67935	0.42224
K	39	-3.45300	6448.05000	0.000	0.69702	-5.66700	-5.38783
MG	24	2.13900	210.01000	18.900	2.52520	1.72047	2.16987
MN	55	0.00600	26.67000	293.600	0.02113	-0.01490	0.01310
NA	23	4.39100	26316.12000	328.900	20.90256	-1.85985	-5.87012
TI	47	0.44900	6.67000	86.700	0.69419	0.65235	0.00000
V	51	0.13000	100.00000	66.800	0.22532	0.05552	0.10890
IN-1	115	36542.09000	0.00000	0.000	36849.79000	36378.32000	36398.15000
AG	107	0.02700	60.00000	88.800	0.01563	0.05376	0.01049
AS	75	0.18800	18.67000	38.000	0.26958	0.13591	0.15873
BA	137	0.20300	26.67000	141.600	0.53201	0.07699	0.00000
CD	111	0.00300	2.67000	431.000	0.00929	-0.01073	0.00953
CO	59	0.12000	206.68000	26.800	0.15642	0.09820	0.10417
CU	63	0.01600	336.68000	425.700	0.08427	0.01203	-0.04922
MO	98	0.06700	90.00000	29.100	0.04437	0.07803	0.07797
NI	60	0.13300	86.67000	25.600	0.09551	0.16225	0.14054
SB	121	0.38700	160.01000	11.900	0.43150	0.38853	0.33978
SN	120	0.16100	133.34000	114.200	0.13239	-0.00665	0.35866
SR	88	-0.03700	0.00000	0.000	-0.03721	-0.03721	-0.03721
ZN	66	0.11900	60.00000	56.200	0.18505	0.05121	0.12104
BI-1	209	126046.47000	0.00000	0.000	127190.98000	126285.34000	124663.09000
PB	208	0.01100	100.00000	44.100	0.00644	0.01137	0.01655
TL	203	0.05100	76.67000	38.300	0.03007	0.06866	0.05413
U	238	0.01700	103.34000	30.700	0.01238	0.02309	0.01701
GE-1	72	100805.02000	0.00000	0.000	100683.67000	101962.06000	99769.33000
TB-1	159	171678.82000	0.00000	0.000	173011.74000	169911.85000	172112.87000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:31:30
Tube Number: 4
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34971.12000	0.00000	0.000	35435.29000	33672.15000	35805.92000
AL	27	4923.56800	68025.82000	3.000	4820.86338	5092.34397	4857.49535
CA	44	4874.58100	8535.67000	6.200	5104.87273	4986.44307	4532.42805
CR	52	490.71700	436935.76000	1.900	488.48809	501.10598	482.55807
FE	57	4734.15700	75163.86000	3.100	4682.87430	4900.68502	4618.91044
K	39	4918.21900	149257.35000	3.400	4890.42253	5097.85925	4766.37532
MG	24	4840.45700	257173.61000	2.100	4842.45556	4940.00279	4738.91284
MN	55	481.12000	154303.90000	2.100	477.48488	492.56855	473.30539
NA	23	4669.21400	584224.80000	2.800	4660.31717	4803.82108	4543.50488
TI	47	478.08700	7101.72000	2.200	467.01350	487.96770	479.27856
V	51	490.63100	336744.24000	2.000	491.15468	500.36865	480.37057
IN-1	115	35047.17000	0.00000	0.000	34945.73000	34582.56000	35613.23000
AG	107	51.65600	92057.58000	0.400	51.82795	51.45658	51.68309
AS	75	513.45900	43179.97000	1.800	523.87155	506.37193	510.13325
BA	137	502.74100	62911.16000	1.200	509.46106	500.26436	498.49811
CD	111	50.01100	9508.00000	2.700	51.43001	49.86845	48.73577
CO	59	496.63500	793528.51000	1.300	497.96144	502.09607	489.84847
CU	63	501.36500	632126.53000	2.400	510.27587	505.92961	487.88956
MO	98	50.73300	44872.21000	4.900	52.80052	51.44837	47.94943
NI	60	516.65300	230382.16000	2.700	528.19053	520.51116	501.25714
SB	121	52.84300	20960.19000	3.000	52.78737	54.44089	51.30124
SN	120	50.73700	24114.40000	2.800	51.15326	51.92647	49.13277
SR	88	48.99900	13435.63000	4.600	51.48881	47.10642	48.40164
ZN	66	510.26800	70205.07000	1.800	520.75719	505.87925	504.16621
BI-1	209	127464.93000	0.00000	0.000	128916.07000	125923.40000	127555.32000
PB	208	49.44100	208059.85000	0.700	49.19576	49.83380	49.29268
TL	203	49.90400	65735.77000	0.800	49.58063	50.32659	49.80500
U	238	50.26800	239642.70000	1.500	49.39154	50.58387	50.82944
GE-1	72	99168.94000	0.00000	0.000	99356.22000	98924.38000	99226.21000
TB-1	159	172001.68000	0.00000	0.000	175435.74000	170810.56000	169758.73000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:33:20
Tube Number: 5
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34299.78000	0.00000	0.000	34293.19000	34022.38000	34583.78000
AL	27	2.42900	86.67000	224.100	8.57592	0.48999	-1.77855
CA	44	1.97400	16.67000	453.600	-7.75493	9.87219	3.80572
CR	52	0.39100	476.69000	14.000	0.33775	0.38783	0.44717
FE	57	-0.69500	56.67000	0.000	0.79549	0.18883	-3.07001
K	39	-0.52400	6291.32000	0.000	3.78711	-12.82318	7.46463
MG	24	0.49000	116.67000	94.900	0.55706	-0.00497	0.91852
MN	55	0.03000	33.33000	239.100	-0.01176	-0.01125	0.11379
NA	23	-0.48500	24793.99000	0.000	-5.45136	2.80744	1.18802
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.06400	53.33000	47.500	0.07405	0.02984	0.08802
IN-1	115	35486.89000	0.00000	0.000	34575.05000	35807.54000	36078.09000
AG	107	0.00500	20.00000	177.500	-0.00003	-0.00023	0.01608
AS	75	0.14000	14.00000	15.000	0.12017	0.16175	0.13725
BA	137	0.07800	10.00000	99.700	0.00000	0.07821	0.15525
CD	111	0.00000	2.00000	0.000	-0.01073	0.02016	-0.01073
CO	59	0.04600	80.00000	70.400	0.07817	0.04471	0.01394
CU	63	-0.04100	253.35000	0.000	0.01716	-0.06936	-0.07064
MO	98	0.01400	40.00000	87.500	0.02639	0.01335	0.00204
NI	60	0.05000	46.67000	91.700	0.03714	0.09985	0.01157
SB	121	0.21600	86.67000	30.800	0.28103	0.14801	0.22035
SN	120	-0.00300	50.00000	0.000	0.08411	-0.10819	0.01467
SR	88	-0.01300	6.67000	0.000	-0.00022	-0.00149	-0.03721
ZN	66	-0.05800	33.33000	0.000	0.06948	-0.15674	-0.08717
BI-1	209	122966.27000	0.00000	0.000	121366.50000	124351.38000	123180.94000
PB	208	0.01900	126.67000	5.900	0.01734	0.01905	0.01936
TL	203	0.07600	106.67000	30.700	0.07176	0.10099	0.05487
U	238	0.00600	46.67000	57.500	0.00658	0.00846	0.00208
GE-1	72	98616.77000	0.00000	0.000	97427.20000	98261.63000	100161.49000
TB-1	159	168529.60000	0.00000	0.000	168970.93000	169758.47000	166859.39000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:35:09
Tube Number: 6
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34620.41000	0.00000	0.000	34894.04000	32710.15000	36257.03000
AL	27	198.45300	2760.33000	8.800	201.36833	214.30563	179.68424
CA	44	387.81000	683.37000	14.000	330.26926	438.40346	394.75758
CR	52	4.10200	3757.21000	5.700	3.90874	4.03597	4.36273
FE	57	191.75100	3073.73000	10.100	204.67496	201.11126	169.46638
K	39	375.33300	17158.64000	1.300	370.87995	380.58129	374.53868
MG	24	194.05700	10266.53000	11.900	174.85498	219.66479	187.64996
MN	55	4.01400	1296.76000	5.900	4.14234	4.15727	3.74321
NA	23	390.16100	71193.66000	9.800	372.45510	433.85668	364.17228
TI	47	33.33300	490.03000	2.300	33.72489	33.81807	32.45709
V	51	1.02300	706.71000	12.300	1.16732	0.93481	0.96834
IN-1	115	36899.27000	0.00000	0.000	37589.37000	36377.56000	36730.87000
AG	107	1.01500	1916.85000	12.500	1.06703	0.87023	1.10818
AS	75	3.84900	342.68000	10.500	3.45712	3.82515	4.26468
BA	137	3.79800	500.03000	21.200	3.27847	3.38760	4.72762
CD	111	0.98000	198.00000	9.600	0.87208	1.04339	1.02322
CO	59	1.02400	1730.15000	2.400	1.01102	1.00866	1.05267
CU	63	4.04400	5681.09000	6.400	3.79194	4.30853	4.03007
MO	98	1.02700	983.40000	18.500	0.82317	1.20029	1.05897
NI	60	4.12700	1960.19000	14.600	3.66797	4.80750	3.90477
SB	121	1.95500	816.72000	8.200	1.95059	1.79698	2.11640
SN	120	4.14700	2126.87000	7.000	4.45193	3.87260	4.11595
SR	88	1.92500	566.71000	13.200	2.20898	1.72111	1.84353
ZN	66	30.31400	4430.75000	6.400	28.86120	29.55220	32.52749
BI-1	209	125502.10000	0.00000	0.000	124712.79000	125971.30000	125822.22000
PB	208	2.11400	8811.28000	2.700	2.11810	2.16898	2.05598
TL	203	0.84800	1110.09000	10.100	0.81463	0.94473	0.78431
U	238	1.07300	5057.65000	2.600	1.06558	1.10373	1.04978
GE-1	72	101019.16000	0.00000	0.000	99617.58000	103439.51000	100000.40000
TB-1	159	169729.03000	0.00000	0.000	167922.09000	169696.76000	171568.24000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:37:00
Tube Number: 7
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	33378.17000	0.00000	0.000	32419.64000	34142.81000	33572.06000
AL	27	94230.60500	1242082.64000	1.800	96206.94163	93392.95127	93091.92147
CA	44	248609.39900	414991.03000	1.700	253328.82082	245088.94588	247410.42984
CR	52	1.22500	1170.08000	16.400	1.45651	1.12211	1.09702
FE	57	218345.53500	3306524.64000	2.600	224587.23132	213646.51655	216802.85629
K	39	94502.57400	2626656.68000	1.700	96309.76094	93101.49961	94096.46081
MG	24	90575.36700	4592093.58000	1.800	91987.00610	88801.94456	90937.15110
MN	55	3.74800	1170.09000	9.500	3.72446	3.40495	4.11357
NA	23	221360.47400	25319554.62000	2.100	226589.21924	219048.94409	218443.25925
TI	47	1860.74600	26373.13000	3.700	1933.15743	1794.87519	1854.20536
V	51	0.05100	43.33000	20.700	0.06349	0.04460	0.04562
IN-1	115	33148.78000	0.00000	0.000	34164.23000	33994.33000	31287.77000
AG	107	0.32700	560.03000	8.800	0.35124	0.29516	0.33376
AS	75	0.35800	30.00000	47.600	0.19510	0.34332	0.53499
BA	137	0.97100	113.34000	44.600	0.57383	0.90623	1.43227
CD	111	0.17300	33.33000	24.900	0.17274	0.21705	0.13069
CO	59	1.04300	1576.80000	10.900	0.98440	0.96999	1.17344
CU	63	0.93000	1396.78000	5.800	0.92371	0.98680	0.87963
MO	98	2009.89700	1678616.75000	4.600	1933.52694	1982.31924	2113.84417
NI	60	0.94600	423.35000	14.500	1.07341	0.96346	0.80025
SB	121	1.06400	400.02000	10.300	1.18942	1.01345	0.98816
SN	120	0.11000	96.67000	70.300	0.06480	0.06567	0.19879
SR	88	9.35700	2426.93000	9.600	8.94991	8.73135	10.38962
ZN	66	2.10200	313.35000	13.500	2.38669	2.10014	1.81893
BI-1	209	112449.78000	0.00000	0.000	110559.22000	114165.30000	112624.83000
PB	208	0.19300	763.37000	6.800	0.20387	0.19703	0.17838
TL	203	0.15500	190.01000	9.400	0.14084	0.17005	0.15530
U	238	0.05200	236.68000	4.200	0.05361	0.04943	0.05254
GE-1	72	93853.55000	0.00000	0.000	93214.23000	93223.57000	95122.84000
TB-1	159	158873.16000	0.00000	0.000	156158.06000	159416.90000	161044.52000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:38:50
Tube Number: 8
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	33531.79000	0.00000	0.000	32639.94000	33902.70000	34052.74000
AL	27	95656.59400	1266635.29000	2.100	97991.85462	94734.06779	94243.86101
CA	44	252357.86200	423194.18000	1.900	257537.79665	251234.58519	248301.20509
CR	52	182.49900	155888.61000	3.100	188.26333	182.23965	176.99529
FE	57	223590.35400	3401932.24000	2.200	229128.93453	221516.75993	220125.36884
K	39	95749.58800	2673304.65000	2.400	98416.32373	94514.74236	94317.69837
MG	24	91800.01800	4675387.74000	2.200	94141.00662	90485.54592	90773.50221
MN	55	183.33500	56388.74000	3.600	190.52292	181.81302	177.66984
NA	23	226588.64200	26034896.28000	2.500	233055.26777	224073.62995	222637.02761
TI	47	1859.77100	26493.33000	3.400	1876.80802	1911.87914	1790.62704
V	51	185.43300	122052.24000	2.000	189.52817	184.52181	182.24796
IN-1	115	32390.65000	0.00000	0.000	32250.07000	32631.48000	32290.41000
AG	107	46.91300	77263.14000	1.600	46.94974	46.12849	47.66097
AS	75	99.72200	7751.06000	3.200	102.45384	96.27273	100.44048
BA	137	0.74800	86.67000	40.000	0.78157	1.02991	0.43366
CD	111	91.22700	16028.80000	1.600	92.30814	89.51017	91.86127
CO	59	186.05900	274795.29000	0.400	185.93147	186.93981	185.30468
CU	63	187.17400	218325.70000	0.600	185.96188	187.67843	187.88256
MO	98	2088.51400	1706906.33000	0.200	2088.36424	2091.96146	2085.21729
NI	60	190.32100	78471.49000	2.000	187.66818	194.73717	188.55741
SB	121	1.08100	396.69000	20.300	0.90392	1.32650	1.01221
SN	120	0.07400	80.00000	52.500	0.02926	0.09557	0.09772
SR	88	9.82200	2496.92000	4.700	9.32459	10.23459	9.90724
ZN	66	95.28900	12147.83000	0.700	94.96620	94.86869	96.03090
BI-1	209	111064.51000	0.00000	0.000	110914.98000	111979.20000	110299.35000
PB	208	0.17100	673.37000	18.900	0.16220	0.14430	0.20713
TL	203	0.12300	150.01000	7.900	0.12291	0.11302	0.13242
U	238	0.04700	213.34000	28.300	0.03173	0.05287	0.05617
GE-1	72	93277.62000	0.00000	0.000	90429.86000	95868.42000	93534.58000
TB-1	159	156927.95000	0.00000	0.000	152292.60000	157095.29000	161395.97000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:40:41
Tube Number: 9
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35258.34000	0.00000	0.000	35555.68000	34814.14000	35405.21000
AL	27	17.55200	300.02000	28.000	15.25110	14.20553	23.19822
CA	44	41.54800	86.67000	53.300	25.97902	66.89786	31.76861
CR	52	0.32400	430.02000	10.700	0.28712	0.33037	0.35556
FE	57	42.44100	746.71000	43.300	23.54086	60.20969	43.57395
K	39	4.13300	6601.46000	89.500	-0.13818	6.29836	6.24027
MG	24	18.18100	1066.75000	13.800	15.28555	19.80772	19.44826
MN	55	0.05000	40.00000	334.700	-0.07533	0.23778	-0.01376
NA	23	71.18800	34129.02000	20.400	58.37724	86.98140	68.20571
TI	47	1.57700	23.33000	173.200	0.00000	4.73204	0.00000
V	51	0.04300	40.00000	32.900	0.04223	0.02882	0.05686
IN-1	115	36308.92000	0.00000	0.000	36720.27000	35156.01000	37050.48000
AG	107	0.00700	23.33000	41.800	0.00499	0.00547	0.01020
AS	75	0.05900	7.33000	109.800	0.13442	0.02294	0.02052
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00100	2.00000	0.000	-0.00069	-0.01073	0.00918
CO	59	0.03800	70.00000	46.100	0.05543	0.02066	0.03714
CU	63	-0.08400	203.34000	0.000	-0.11147	-0.05038	-0.09010
MO	98	0.78200	743.38000	15.800	0.64908	0.89356	0.80350
NI	60	0.06300	53.33000	126.700	-0.01097	0.14741	0.05228
SB	121	0.01600	6.67000	86.700	0.02406	0.02513	0.00000
SN	120	0.01400	60.00000	257.100	-0.02771	0.03891	0.03139
SR	88	-0.02600	3.33000	0.000	-0.03721	-0.03721	-0.00269
ZN	66	-0.29900	0.00000	0.000	-0.29910	-0.29910	-0.29910
BI-1	209	124240.51000	0.00000	0.000	125772.77000	123937.93000	123010.82000
PB	208	0.00000	53.33000	1369.400	-0.00298	-0.00284	0.00709
TL	203	0.00000	10.00000	0.000	0.00741	-0.00798	-0.00011
U	238	0.00100	26.67000	254.000	0.00194	0.00419	-0.00226
GE-1	72	101522.16000	0.00000	0.000	100694.42000	101186.80000	102685.27000
TB-1	159	168971.61000	0.00000	0.000	168740.45000	170365.99000	167808.38000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:42:30
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35138.38000	0.00000	0.000	35656.63000	34062.70000	35695.80000
AL	27	2499.38300	34706.91000	6.400	2417.99526	2684.71729	2395.43626
CA	44	2319.39500	4083.95000	9.300	2246.35723	2563.16998	2148.65699
CR	52	245.65300	219883.09000	2.500	248.88745	249.40678	238.66446
FE	57	2440.99900	38986.76000	2.700	2455.14472	2497.65493	2370.19816
K	39	2485.38200	78998.06000	2.800	2439.18386	2566.15211	2450.80908
MG	24	2437.70200	130168.48000	2.900	2391.27876	2519.85451	2401.97284
MN	55	245.83000	79227.45000	3.200	245.46983	253.81012	238.20879
NA	23	2371.27200	310729.68000	1.700	2353.83490	2416.92335	2343.05728
TI	47	238.97100	3567.17000	1.800	234.34393	242.54615	240.02253
V	51	245.07600	169028.11000	3.500	249.67124	250.37859	235.17709
IN-1	115	35930.49000	0.00000	0.000	36743.87000	35376.05000	35671.56000
AG	107	24.76000	45216.46000	4.400	23.50739	25.34741	25.42479
AS	75	248.65000	21434.24000	1.800	243.85409	249.46139	252.63576
BA	137	248.93500	31921.04000	3.800	238.57036	256.99124	251.24385
CD	111	24.65000	4805.36000	1.600	24.20657	24.87189	24.87253
CO	59	245.91900	402808.17000	1.600	241.39814	247.44315	248.91551
CU	63	248.70100	321646.73000	1.100	246.13539	251.59851	248.37059
MO	98	24.54000	22278.17000	0.800	24.76222	24.38577	24.47282
NI	60	249.21700	113969.09000	0.700	249.16791	247.45083	251.03196
SB	121	25.44900	10353.47000	1.700	25.85227	25.50213	24.99381
SN	120	24.78200	12101.39000	2.700	24.00828	25.17038	25.16824
SR	88	25.39700	7141.68000	4.100	24.51210	25.13593	26.54175
ZN	66	256.66100	36224.10000	0.600	256.27201	258.46389	255.24809
BI-1	209	125472.50000	0.00000	0.000	128592.54000	122888.67000	124936.29000
PB	208	25.17500	104305.48000	0.800	24.93658	25.29635	25.29184
TL	203	24.79800	32159.74000	0.900	24.80054	25.02099	24.57199
U	238	25.05800	117609.47000	0.600	25.08829	25.19654	24.88895
GE-1	72	101106.84000	0.00000	0.000	102695.82000	98170.25000	102454.44000
TB-1	159	169057.55000	0.00000	0.000	170717.60000	167100.68000	169354.37000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:44:20
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34366.74000	0.00000	0.000	34163.21000	33932.63000	35004.38000
AL	27	7.38000	153.34000	91.400	13.81090	7.96321	0.36474
CA	44	5.91200	23.33000	318.000	27.35399	-1.86368	-7.75493
CR	52	0.29400	393.36000	29.900	0.24765	0.23881	0.39506
FE	57	9.82000	220.01000	58.600	13.71358	12.53773	3.20866
K	39	6.04600	6484.72000	297.800	21.20461	10.78597	-13.85338
MG	24	5.07600	356.68000	42.400	6.92389	2.71535	5.58738
MN	55	-0.02200	16.67000	0.000	-0.04342	0.05317	-0.07533
NA	23	28.54800	28255.49000	19.300	25.11896	34.91389	25.61212
TI	47	0.69000	10.00000	99.800	1.37777	0.69357	0.00000
V	51	0.06900	56.67000	42.700	0.05948	0.04497	0.10134
IN-1	115	35867.85000	0.00000	0.000	36028.12000	35316.91000	36258.52000
AG	107	0.01800	43.33000	35.600	0.01066	0.02212	0.02140
AS	75	0.06900	8.00000	89.500	-0.00134	0.09353	0.11345
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00400	1.33000	0.000	-0.01073	-0.01073	0.00961
CO	59	0.02200	43.33000	69.000	0.03832	0.02055	0.00780
CU	63	-0.08200	203.34000	0.000	-0.04726	-0.07486	-0.12517
MO	98	0.10100	120.00000	77.900	0.18910	0.03641	0.07839
NI	60	0.09200	66.67000	191.800	0.29525	-0.00927	-0.01043
SB	121	0.10700	43.33000	34.500	0.07355	0.10005	0.14617
SN	120	-0.00500	50.00000	0.000	0.03535	-0.04543	-0.00631
SR	88	-0.02500	3.33000	0.000	-0.00171	-0.03721	-0.03721
ZN	66	-0.15800	20.00000	0.000	-0.08687	-0.29910	-0.08822
BI-1	209	122176.65000	0.00000	0.000	122746.76000	122011.91000	121771.29000
PB	208	0.00100	53.33000	836.800	-0.00521	0.00228	0.00480
TL	203	0.05500	80.00000	14.200	0.05510	0.06341	0.04766
U	238	0.00600	46.67000	108.700	0.01299	0.00214	0.00215
GE-1	72	100353.15000	0.00000	0.000	100906.50000	101298.30000	98854.66000
TB-1	159	168754.92000	0.00000	0.000	168900.08000	169430.08000	167934.59000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:46:12
Tube Number: 12 Batch: 172931063904A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34770.83000	0.00000	0.000	35445.63000	35385.34000	33481.53000
AL	27	5.47200	130.01000	80.500	1.73916	10.33487	4.34346
CA	44	17.24500	43.33000	40.700	20.44397	9.19324	22.09818
CR	52	0.26300	370.02000	6.300	0.27741	0.24485	0.26757
FE	57	6.83900	176.68000	24.300	5.60151	8.73156	6.18494
K	39	5.36800	6541.44000	286.100	13.45237	-12.34141	14.99279
MG	24	1.29900	160.01000	82.200	1.59648	0.11397	2.18572
MN	55	0.05000	40.00000	122.900	0.10919	-0.01372	0.05490
NA	23	17.16400	27220.74000	36.300	13.83423	13.30750	24.34901
TI	47	0.22200	3.33000	173.200	0.00000	0.66509	0.00000
V	51	0.01400	20.00000	101.300	-0.00070	0.02811	0.01536
IN-1	115	35577.14000	0.00000	0.000	35546.88000	36900.36000	34284.19000
AG	107	0.00400	16.67000	233.800	0.01088	-0.00572	0.00575
AS	75	-0.00100	2.00000	0.000	0.02242	-0.00189	-0.02448
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.01100	0.00000	0.000	-0.01073	-0.01073	-0.01073
CO	59	0.00400	13.33000	97.100	0.00188	0.00165	0.00850
CU	63	0.05700	380.02000	73.400	0.10398	0.02354	0.04366
MO	98	0.01700	43.33000	199.600	0.04713	0.02278	-0.01936
NI	60	-0.03900	6.67000	0.000	-0.05378	-0.03248	-0.03085
SB	121	0.05800	23.33000	88.100	0.00000	0.09575	0.07729
SN	120	-0.03200	36.67000	0.000	-0.02506	-0.04813	-0.02200
SR	88	-0.03700	0.00000	0.000	-0.03721	-0.03721	-0.03721
ZN	66	0.05900	50.00000	111.000	-0.01230	0.11532	0.07260
BI-1	209	127857.84000	0.00000	0.000	129391.45000	128391.38000	125790.68000
PB	208	0.01500	116.67000	53.200	0.02250	0.01570	0.00665
TL	203	0.01200	26.67000	94.600	-0.00050	0.02217	0.01510
U	238	0.00000	20.00000	0.000	0.00176	-0.00027	-0.00231
GE-1	72	100523.18000	0.00000	0.000	98380.84000	102786.73000	100401.97000
TB-1	159	170698.52000	0.00000	0.000	168647.40000	173387.44000	170060.72000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:48:02
Tube Number: 13 Batch: 172931063904A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35375.46000	0.00000	0.000	35154.82000	36227.31000	34744.26000
AL	27	2013.96400	28185.78000	3.000	2033.45394	1947.24604	2061.19089
CA	44	3876.52900	6871.57000	6.000	4144.32060	3717.82286	3767.44295
CR	52	49.36400	44596.02000	1.900	48.94720	48.68899	50.45643
FE	57	954.52000	15397.11000	0.500	956.83157	958.20507	948.52378
K	39	10080.83700	302744.28000	2.700	10220.91468	9766.14312	10255.45392
MG	24	1987.46700	106879.38000	2.400	1993.17871	1938.15389	2031.06857
MN	55	50.32600	16361.21000	3.500	51.64000	51.04226	48.29445
NA	23	9926.90200	1227953.50000	1.900	9970.11165	9723.22797	10087.36635
TI	47	257.56100	3870.57000	1.900	261.79607	252.09618	258.79062
V	51	48.88100	33952.69000	1.700	48.94438	48.03028	49.66919
IN-1	115	36925.66000	0.00000	0.000	35828.30000	38325.55000	36623.14000
AG	107	49.83300	93499.42000	3.300	51.52782	48.22149	49.75112
AS	75	10.25300	909.36000	6.700	11.02676	9.69770	10.03583
BA	137	49.27000	6491.52000	3.800	49.72650	47.21683	50.86547
CD	111	4.81800	968.04000	5.800	4.49695	4.96331	4.99317
CO	59	242.70300	408213.29000	4.500	253.43964	231.47500	243.19520
CU	63	50.36900	67152.71000	3.800	52.31349	48.45199	50.34213
MO	98	50.13500	46703.29000	3.300	51.54268	48.31779	50.54318
NI	60	51.69200	24290.48000	4.300	53.92157	49.52213	51.63303
SB	121	5.79000	2420.27000	1.500	5.86842	5.80873	5.69277
SN	120	50.17700	25125.75000	1.800	51.23231	49.58550	49.71427
SR	88	40.59000	11721.03000	4.600	42.68042	40.06347	39.02707
ZN	66	517.21700	74960.72000	1.100	523.27474	512.19662	516.17849
BI-1	209	128032.16000	0.00000	0.000	128239.96000	125903.92000	129952.61000
PB	208	15.46600	65401.64000	1.900	15.59470	15.66760	15.13454
TL	203	1.93400	2570.30000	9.600	2.12794	1.76011	1.91358
U	238	0.00000	23.33000	1195.000	-0.00235	-0.00231	0.00585
GE-1	72	100660.72000	0.00000	0.000	102715.76000	100775.19000	98491.22000
TB-1	159	171688.08000	0.00000	0.000	174883.92000	170363.30000	169817.03000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:49:53
Tube Number: 14 Batch: 172931063904A
Sample Number: **9271985** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36514.17000	0.00000	0.000	35836.42000	36226.90000	37479.20000
AL	27	276.79700	4047.27000	6.700	272.28089	297.26363	260.84624
CA	44	5727.25300	10473.43000	2.300	5689.49333	5871.04852	5621.21714
CR	52	1.11200	1176.75000	10.000	1.23714	1.02698	1.07134
FE	57	53.17200	953.40000	16.800	60.21256	43.09524	56.20725
K	39	784.70700	30509.57000	3.600	804.51826	797.44015	752.16242
MG	24	3298.04200	183016.62000	1.700	3337.09637	3321.96756	3235.06178
MN	55	33.82400	11347.31000	4.500	35.16092	34.11926	32.19084
NA	23	6996.20400	901032.07000	2.300	7083.19447	7091.53344	6813.88370
TI	47	0.21700	3.33000	173.200	0.00000	0.64964	0.00000
V	51	0.06500	56.67000	71.400	0.09863	0.08335	0.01211
IN-1	115	35736.56000	0.00000	0.000	35455.38000	36037.06000	35717.25000
AG	107	0.00900	26.67000	128.800	0.02201	0.00519	-0.00022
AS	75	0.14600	14.67000	77.600	0.09307	0.27621	0.06887
BA	137	47.69800	6088.01000	6.200	46.37728	51.07045	45.64480
CD	111	0.00600	3.33000	333.500	-0.01073	-0.00050	0.03057
CO	59	1.42600	2330.23000	3.700	1.39383	1.48692	1.39587
CU	63	1.23500	1896.85000	22.200	0.94406	1.27222	1.48821
MO	98	0.03200	56.67000	54.400	0.04733	0.01307	0.03566
NI	60	0.79700	386.69000	22.800	0.83288	0.60047	0.95842
SB	121	0.04100	16.67000	92.000	0.07474	0.04902	0.00000
SN	120	0.19600	146.67000	61.900	0.26689	0.05581	0.26414
SR	88	18.40500	5150.96000	4.600	19.19643	17.50119	18.51827
ZN	66	8.85800	1283.43000	8.300	9.47790	8.04698	9.04936
BI-1	209	125745.07000	0.00000	0.000	127041.31000	126296.19000	123897.70000
PB	208	0.97900	4117.03000	3.700	1.01766	0.94457	0.97532
TL	203	0.03600	56.67000	23.800	0.04535	0.03034	0.03108
U	238	0.02900	156.67000	52.800	0.01871	0.04637	0.02146
GE-1	72	102930.18000	0.00000	0.000	104807.10000	102103.13000	101880.32000
TB-1	159	170619.12000	0.00000	0.000	172510.37000	171364.76000	167982.22000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:51:43
Tube Number: 15 Batch: 172931063904A
Sample Number: **9271985** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35555.70000	0.00000	0.000	36136.63000	35495.61000	35034.85000
AL	27	495.16600	7004.93000	8.000	463.40038	482.54756	539.55012
CA	44	6333.53600	11273.98000	4.200	6040.74985	6409.18042	6550.67731
CR	52	5.01900	4680.79000	7.500	4.60605	5.10153	5.35002
FE	57	256.15100	4204.02000	1.200	257.85910	252.66140	257.93110
K	39	1164.52700	40936.49000	2.900	1146.65743	1143.84044	1203.08389
MG	24	3536.98600	191114.41000	2.700	3435.87410	3553.23524	3621.84928
MN	55	38.66000	12638.20000	3.100	39.51727	39.18721	37.27529
NA	23	7517.08600	940931.16000	1.900	7357.53968	7580.33375	7613.38398
TI	47	36.84700	556.70000	22.800	41.03233	27.18542	42.32205
V	51	1.00700	713.37000	17.500	1.11256	0.80289	1.10441
IN-1	115	35694.53000	0.00000	0.000	35257.90000	36369.43000	35456.26000
AG	107	0.92000	1680.15000	2.300	0.92038	0.94075	0.89855
AS	75	4.24000	365.34000	3.600	4.06560	4.35314	4.30132
BA	137	54.77400	6981.69000	1.100	54.10622	55.22625	54.98874
CD	111	0.95000	186.00000	11.800	1.06641	0.94225	0.84200
CO	59	2.30800	3763.89000	9.700	2.06740	2.34790	2.50745
CU	63	5.55400	7438.48000	2.900	5.70753	5.57151	5.38387
MO	98	1.11200	1030.08000	9.400	1.13823	1.20059	0.99752
NI	60	4.54800	2090.21000	3.700	4.67205	4.61409	4.35742
SB	121	1.98100	800.05000	5.600	1.97933	1.87027	2.09283
SN	120	3.78400	1880.17000	3.000	3.91518	3.73130	3.70519
SR	88	20.40200	5701.15000	4.600	20.42949	19.45194	21.32543
ZN	66	39.56000	5581.07000	2.100	40.04488	38.60136	40.03497
BI-1	209	125906.42000	0.00000	0.000	125379.17000	126203.84000	126136.24000
PB	208	2.99600	12502.44000	4.600	2.99624	3.13269	2.85808
TL	203	1.01200	1326.76000	6.900	0.99552	1.08867	0.95114
U	238	0.98800	4674.20000	5.500	0.99590	1.03811	0.93054
GE-1	72	103010.04000	0.00000	0.000	102846.25000	101306.72000	104877.14000
TB-1	159	171836.39000	0.00000	0.000	172849.49000	171719.39000	170940.29000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:53:34
Tube Number: 16 Batch: 172931063904A
Sample Number: **9271988** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36958.59000	0.00000	0.000	36798.46000	37910.47000	36166.83000
AL	27	281.29900	4160.62000	11.100	313.91507	251.82357	278.15755
CA	44	5770.34400	10676.89000	4.300	5980.82531	5499.16199	5831.04473
CR	52	0.91200	1006.74000	21.800	0.96595	1.07811	0.69230
FE	57	20.58300	416.69000	27.200	22.59912	14.25327	24.89777
K	39	748.41700	29778.39000	0.500	751.16030	744.26914	749.82293
MG	24	3225.26900	181124.63000	2.800	3230.66163	3131.23193	3313.91286
MN	55	35.82400	12167.85000	3.000	36.87825	34.72956	35.86492
NA	23	6923.86600	902856.45000	2.100	6940.53811	6772.51683	7058.54443
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09600	80.00000	66.900	0.16488	0.03867	0.08351
IN-1	115	37183.76000	0.00000	0.000	36869.97000	36860.10000	37821.21000
AG	107	0.01000	30.00000	155.600	0.01028	0.02629	-0.00572
AS	75	0.10300	11.33000	26.300	0.08856	0.13382	0.08572
BA	137	45.22700	6004.65000	4.600	43.15378	47.34589	45.18010
CD	111	-0.00100	2.00000	0.000	-0.00073	0.00928	-0.01073
CO	59	1.33800	2273.56000	8.200	1.37590	1.42386	1.21358
CU	63	1.20500	1933.51000	14.500	1.35118	1.01210	1.25235
MO	98	-0.01700	13.33000	0.000	-0.03092	0.00134	-0.02044
NI	60	0.65900	336.68000	30.200	0.64963	0.86305	0.46571
SB	121	0.01600	6.67000	86.600	0.00000	0.02396	0.02336
SN	120	0.08400	96.67000	95.000	-0.00800	0.13234	0.12623
SR	88	17.20200	5010.90000	3.800	17.90331	16.58898	17.11353
ZN	66	8.49000	1283.43000	13.500	7.23617	8.75965	9.47288
BI-1	209	131733.72000	0.00000	0.000	131447.18000	131074.70000	132679.29000
PB	208	1.01900	4487.11000	3.500	0.98083	1.02526	1.05153
TL	203	0.05100	80.00000	65.600	0.02147	0.04371	0.08685
U	238	0.02700	156.67000	28.400	0.03625	0.02412	0.02176
GE-1	72	103440.22000	0.00000	0.000	101439.69000	104515.32000	104365.65000
TB-1	159	175595.30000	0.00000	0.000	174771.19000	175577.32000	176437.38000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:55:23
Tube Number: 17 Batch: 172931063904A
Sample Number: **9271986** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36955.04000	0.00000	0.000	37639.57000	36457.45000	36768.10000
AL	27	2246.13800	32847.03000	0.600	2250.00783	2231.90114	2256.50572
CA	44	9408.42800	17398.97000	4.500	9020.25270	9867.37293	9337.65941
CR	52	48.79100	46052.73000	2.100	48.38287	49.93598	48.05560
FE	57	974.67100	16421.33000	1.700	977.75127	989.02096	957.24050
K	39	10589.51300	331922.71000	2.300	10305.55786	10719.84246	10743.13861
MG	24	5143.74000	288838.77000	2.100	5022.90335	5230.63406	5177.68344
MN	55	82.86700	28112.75000	2.200	81.37006	84.87978	82.35098
NA	23	16388.65200	2100559.71000	1.600	16091.22754	16573.71527	16501.01467
TI	47	251.38300	3943.94000	9.300	233.25534	277.62694	243.26703
V	51	48.12400	34937.81000	2.800	49.46770	46.81700	48.08630
IN-1	115	38751.38000	0.00000	0.000	38643.94000	39272.99000	38337.22000
AG	107	47.00000	92606.47000	0.900	47.32731	46.50838	47.16446
AS	75	9.38000	874.70000	4.600	9.46661	9.76030	8.91201
BA	137	91.53300	12665.20000	0.200	91.35200	91.67442	91.57114
CD	111	4.59000	967.37000	3.700	4.63604	4.73065	4.40392
CO	59	234.09400	413579.29000	1.500	236.25905	230.14515	235.87675
CU	63	49.42000	69210.60000	0.300	49.60379	49.38098	49.27478
MO	98	46.65800	45644.23000	1.700	46.40777	45.99760	47.56761
NI	60	48.14100	23763.34000	1.500	47.52565	47.96583	48.93239
SB	121	5.80400	2546.95000	9.300	6.35537	5.78104	5.27691
SN	120	47.54900	24998.95000	1.600	48.37245	47.46383	46.81110
SR	88	51.58100	15634.08000	2.800	50.79813	50.66863	53.27528
ZN	66	494.61000	75242.02000	1.000	494.13037	489.80509	499.89364
BI-1	209	130358.72000	0.00000	0.000	129713.58000	130196.85000	131165.73000
PB	208	15.92700	68586.98000	0.900	16.08458	15.89364	15.80423
TL	203	2.09800	2837.03000	6.200	1.99174	2.05865	2.24270
U	238	0.03000	166.67000	66.600	0.00793	0.03458	0.04653
GE-1	72	104927.97000	0.00000	0.000	103881.35000	108549.48000	102353.09000
TB-1	159	174505.11000	0.00000	0.000	176085.29000	174812.24000	172617.81000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:57:12
Tube Number: 18 Batch: 172931063904A
Sample Number: **9271987** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36604.35000	0.00000	0.000	36687.70000	36597.75000	36527.60000
AL	27	2275.53100	32960.43000	2.600	2318.82952	2299.57648	2208.18683
CA	44	9861.62300	18072.90000	4.800	10377.99995	9758.41946	9448.45022
CR	52	49.49000	46273.49000	1.400	50.17928	49.48557	48.80448
FE	57	990.31700	16524.79000	4.800	964.76146	961.10953	1045.08092
K	39	10723.19300	332912.16000	1.300	10584.37532	10723.13492	10862.06880
MG	24	5182.82900	288335.60000	1.600	5112.66972	5273.03858	5162.77975
MN	55	84.46200	28386.42000	2.600	82.47162	84.07658	86.83816
NA	23	16653.18200	2114141.95000	1.000	16552.52553	16839.77019	16567.25121
TI	47	234.48300	3647.17000	3.200	243.15546	230.24819	230.04479
V	51	49.30200	35442.15000	1.600	48.42860	49.52341	49.95434
IN-1	115	38010.65000	0.00000	0.000	37772.83000	39095.44000	37163.68000
AG	107	48.48100	93680.61000	1.600	48.89082	47.61122	48.94181
AS	75	10.11400	924.03000	4.000	10.14890	9.69813	10.49509
BA	137	93.69500	12711.91000	2.200	94.94377	91.30112	94.84013
CD	111	4.58700	947.36000	4.400	4.55774	4.40319	4.80128
CO	59	238.52800	413277.59000	2.000	242.06423	233.12412	240.39452
CU	63	50.61300	69484.67000	3.900	52.48960	48.57115	50.77771
MO	98	48.73700	46747.02000	3.200	48.46794	47.32478	50.41714
NI	60	49.24900	23826.65000	4.800	50.12269	46.57299	51.05116
SB	121	5.62000	2416.95000	4.200	5.84701	5.37800	5.63378
SN	120	47.75300	24618.40000	2.000	48.54995	46.69648	48.01372
SR	88	55.17100	16404.95000	2.300	56.61519	54.73121	54.16647
ZN	66	505.08800	75359.44000	1.500	512.71759	497.53140	505.01540
BI-1	209	134171.72000	0.00000	0.000	133493.98000	134017.55000	135003.63000
PB	208	15.27500	67702.02000	2.500	15.71011	15.09627	15.01974
TL	203	1.97100	2743.67000	10.500	1.80460	2.20198	1.90623
U	238	0.02100	126.67000	23.500	0.01559	0.02150	0.02527
GE-1	72	105692.75000	0.00000	0.000	106114.26000	105672.58000	105291.42000
TB-1	159	181993.83000	0.00000	0.000	180227.28000	183087.03000	182667.18000

Run Name: 1729703E05 Date/Time: 10/24/2017 2:59:01
Tube Number: 19 Batch: 172931063904A
Sample Number: **9271985** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	37539.76000	0.00000	0.000	38992.55000	37098.78000	36527.94000
AL	27	51.94800	830.05000	11.900	53.16354	57.44504	45.23536
CA	44	1138.82700	2150.20000	7.600	1048.45070	1220.93436	1147.09471
CR	52	0.30300	436.69000	17.500	0.28846	0.25815	0.36137
FE	57	7.81500	206.68000	33.300	6.95690	5.75219	10.73513
K	39	127.84600	10870.28000	20.000	99.24716	135.73397	148.55587
MG	24	621.81200	35541.22000	3.000	600.09300	632.94509	632.39677
MN	55	6.54100	2276.90000	3.800	6.35522	6.44833	6.81892
NA	23	1335.30000	198678.85000	4.900	1259.78386	1370.67196	1375.44430
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04300	43.33000	62.000	0.06331	0.05358	0.01282
IN-1	115	38877.14000	0.00000	0.000	38933.79000	39214.94000	38482.70000
AG	107	0.00900	30.00000	192.100	0.02964	-0.00572	0.00450
AS	75	0.04000	6.00000	92.000	0.01834	0.08180	0.01884
BA	137	8.79500	1220.09000	9.800	8.56058	8.07071	9.75271
CD	111	-0.00800	0.67000	0.000	-0.01073	-0.00132	-0.01073
CO	59	0.27000	486.70000	17.100	0.32245	0.25299	0.23508
CU	63	0.17400	580.03000	33.600	0.13832	0.24197	0.14276
MO	98	0.00600	36.67000	396.500	-0.02074	0.02972	0.01028
NI	60	0.22900	140.00000	72.100	0.41050	0.08651	0.19128
SB	121	0.04500	20.00000	50.000	0.06806	0.02253	0.04591
SN	120	-0.01300	50.00000	0.000	0.00566	0.02368	-0.06979
SR	88	3.68100	1130.08000	2.200	3.77430	3.61652	3.65277
ZN	66	1.75800	313.35000	25.400	1.73029	1.32579	2.21776
BI-1	209	136112.63000	0.00000	0.000	135954.76000	137307.21000	135075.92000
PB	208	0.18900	906.72000	7.500	0.18572	0.17715	0.20495
TL	203	0.01100	26.67000	38.400	0.01338	0.00612	0.01352
U	238	0.00300	40.00000	1.900	0.00343	0.00335	0.00348
GE-1	72	105230.54000	0.00000	0.000	103543.28000	106898.21000	105250.14000
TB-1	159	179605.00000	0.00000	0.000	179361.17000	180489.18000	178964.65000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:00:52
Tube Number: 20 Batch: 172931063904A
Sample Number: **9271983** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	37903.70000	0.00000	0.000	36567.48000	38571.64000	38571.98000
AL	27	114.19200	1763.49000	16.800	135.88581	99.73529	106.95534
CA	44	1561.58800	2980.36000	8.900	1419.22766	1697.57926	1567.95618
CR	52	0.73600	860.05000	7.900	0.69377	0.71076	0.80240
FE	57	31.80500	623.37000	23.000	26.98736	28.21534	40.21162
K	39	1522.52100	54910.21000	2.200	1548.90330	1484.46060	1534.19776
MG	24	1551.75800	89415.18000	2.900	1600.22429	1509.96611	1545.08360
MN	55	39.84800	13862.49000	7.000	43.04884	38.51645	37.97924
NA	23	3194.76000	441919.84000	3.000	3304.30744	3129.65313	3150.32015
TI	47	0.21500	3.33000	173.200	0.64359	0.00000	0.00000
V	51	0.10600	90.00000	35.800	0.13815	0.06416	0.11698
IN-1	115	39281.93000	0.00000	0.000	40307.21000	39566.59000	37972.00000
AG	107	-0.00100	10.00000	0.000	-0.00084	-0.00075	-0.00054
AS	75	0.11600	13.33000	83.000	0.22368	0.03872	0.08528
BA	137	77.76300	10913.92000	5.800	76.80519	82.70533	73.77930
CD	111	0.01500	5.33000	150.100	-0.01073	0.02655	0.02811
CO	59	0.80100	1440.12000	6.000	0.74665	0.81615	0.83905
CU	63	0.06200	426.69000	70.500	0.02884	0.11119	0.04539
MO	98	0.00900	40.00000	101.000	0.00841	0.01916	0.00039
NI	60	1.26700	660.04000	3.700	1.21362	1.29693	1.29156
SB	121	0.03100	13.33000	116.100	0.00000	0.02233	0.06979
SN	120	0.00600	60.00000	1180.000	-0.05320	-0.01483	0.08637
SR	88	9.46200	2913.68000	6.200	8.81823	9.59836	9.96920
ZN	66	2.55400	440.02000	3.400	2.60975	2.59971	2.45297
BI-1	209	134077.39000	0.00000	0.000	135165.22000	132647.63000	134419.31000
PB	208	0.08800	446.69000	20.000	0.07480	0.10844	0.08205
TL	203	0.00900	23.33000	124.200	0.00634	-0.00068	0.02082
U	238	0.00800	60.00000	91.900	0.01139	0.01169	-0.00046
GE-1	72	106206.19000	0.00000	0.000	106768.89000	106919.84000	104929.83000
TB-1	159	181370.51000	0.00000	0.000	180197.07000	183139.59000	180774.86000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:02:43
Tube Number: 21 Batch: 172931063904A
Sample Number: **9271984** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36644.43000	0.00000	0.000	37319.14000	35916.35000	36697.79000
AL	27	16.14000	290.02000	40.100	8.91502	21.40249	18.10202
CA	44	33687.14500	61758.61000	0.900	33443.37659	34034.90774	33583.15214
CR	52	0.76700	860.06000	18.000	0.88716	0.79662	0.61584
FE	57	22.45500	446.69000	22.100	28.12738	18.96693	20.27161
K	39	2582.06100	85349.59000	1.600	2535.72068	2619.45980	2591.00322
MG	24	15020.14500	836174.70000	1.700	14741.95094	15244.77394	15073.71033
MN	55	118.99700	40018.68000	2.000	117.56869	121.70600	117.71522
NA	23	7733.43300	996580.35000	4.000	7492.98324	8086.73552	7620.57918
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09200	76.67000	74.700	0.13507	0.12674	0.01269
IN-1	115	37780.57000	0.00000	0.000	37380.28000	37450.20000	38511.23000
AG	107	0.01700	43.33000	89.100	0.02585	-0.00047	0.02492
AS	75	0.05700	7.33000	82.500	0.04242	0.10906	0.01881
BA	137	26.13000	3527.18000	7.400	23.97837	26.70137	27.71127
CD	111	0.02800	8.00000	32.500	0.02873	0.01881	0.03714
CO	59	0.13000	230.01000	26.300	0.16586	0.12455	0.09822
CU	63	0.84400	1470.11000	21.600	0.89797	0.99237	0.64070
MO	98	-0.01300	16.67000	0.000	0.02209	-0.03092	-0.03092
NI	60	0.92000	466.70000	30.900	0.95543	1.18440	0.61968
SB	121	0.05500	23.33000	89.200	0.09452	0.07076	0.00000
SN	120	0.11400	113.34000	56.700	0.06968	0.18773	0.08364
SR	88	65.01700	19214.38000	1.500	65.73904	63.90739	65.40334
ZN	66	7.24000	1116.75000	15.100	8.49716	6.50692	6.71656
BI-1	209	125922.97000	0.00000	0.000	123957.80000	125800.77000	128010.35000
PB	208	0.38100	1633.43000	8.400	0.37844	0.41366	0.34950
TL	203	0.00200	13.33000	741.100	0.02325	-0.00798	-0.00798
U	238	0.01700	100.00000	100.300	0.03655	0.00832	0.00601
GE-1	72	104515.19000	0.00000	0.000	104615.62000	104555.03000	104374.91000
TB-1	159	172810.67000	0.00000	0.000	172204.41000	171920.19000	174307.42000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:04:31
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34974.61000	0.00000	0.000	34293.39000	35114.72000	35515.71000
AL	27	2586.16100	35775.72000	2.700	2655.53885	2517.46804	2585.47595
CA	44	2644.50300	4640.78000	4.100	2656.66669	2531.68974	2745.15153
CR	52	257.69500	229559.62000	3.000	264.60127	258.95646	249.52719
FE	57	2553.31000	40593.30000	2.000	2596.04178	2566.03912	2497.84958
K	39	2627.52200	82787.28000	1.300	2664.70879	2601.72424	2616.13226
MG	24	2508.86800	133356.16000	3.600	2613.01331	2457.24621	2456.34350
MN	55	255.93300	82117.20000	2.700	261.01353	258.70863	248.07800
NA	23	2466.35500	320698.05000	1.600	2511.46569	2451.56553	2436.03413
TI	47	271.66000	4033.94000	6.700	291.70955	266.78924	256.48259
V	51	252.87900	173643.10000	1.300	253.56180	255.83434	249.24099
IN-1	115	35943.72000	0.00000	0.000	36554.62000	36947.33000	34329.20000
AG	107	25.27700	46148.96000	4.500	24.76751	24.48805	26.57426
AS	75	266.52700	22968.81000	3.500	266.39532	257.39702	275.78862
BA	137	260.41600	33370.91000	5.900	252.08428	251.00497	278.15793
CD	111	26.52200	5168.14000	3.600	26.23888	25.74028	27.58604
CO	59	254.63300	416837.48000	4.400	249.80885	246.65047	267.43982
CU	63	254.63200	329164.16000	3.600	251.42135	247.47593	264.99787
MO	98	25.98900	23586.66000	2.000	26.00885	25.46357	26.49460
NI	60	263.03600	120213.88000	3.700	260.52564	254.76058	273.82169
SB	121	26.55500	10797.16000	5.500	27.50933	24.87243	27.28465
SN	120	26.46100	12912.06000	4.400	25.71061	25.85666	27.81495
SR	88	25.95800	7285.10000	10.500	23.97420	24.82741	29.07227
ZN	66	265.07800	37389.87000	4.100	266.19366	253.68307	275.35664
BI-1	209	123629.51000	0.00000	0.000	123707.69000	123979.18000	123201.65000
PB	208	25.72300	105021.20000	0.500	25.87779	25.64463	25.64575
TL	203	25.90700	33105.08000	3.500	24.94132	26.04480	26.73625
U	238	25.66500	118693.07000	0.500	25.58067	25.82717	25.58777
GE-1	72	100335.58000	0.00000	0.000	101870.59000	101871.12000	97265.03000
TB-1	159	168641.86000	0.00000	0.000	168588.20000	170033.92000	167303.47000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:06:21
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35706.03000	0.00000	0.000	36256.98000	35244.89000	35616.21000
AL	27	1.22700	73.33000	121.700	1.61130	2.49000	-0.42060
CA	44	10.96700	33.33000	60.800	3.27222	14.93268	14.69615
CR	52	0.26600	383.35000	41.700	0.36522	0.14615	0.28637
FE	57	-0.46100	63.34000	0.000	2.94833	-1.84371	-2.48836
K	39	5.65000	6728.16000	207.900	-7.40314	8.98325	15.37036
MG	24	2.30300	220.01000	48.900	2.61087	1.05529	3.24365
MN	55	0.04600	40.00000	197.200	0.04493	-0.04440	0.13891
NA	23	17.42000	27995.18000	33.900	14.03482	24.24154	13.98497
TI	47	0.21600	3.33000	173.200	0.64910	0.00000	0.00000
V	51	0.03700	36.67000	59.300	0.01303	0.04274	0.05643
IN-1	115	36458.68000	0.00000	0.000	35897.64000	37620.40000	35858.00000
AG	107	0.00900	26.67000	96.600	0.01072	-0.00049	0.01622
AS	75	0.08200	9.33000	42.600	0.11484	0.08630	0.04526
BA	137	0.02600	3.33000	173.200	0.07802	0.00000	0.00000
CD	111	0.00900	4.00000	213.400	0.00982	0.02848	-0.01073
CO	59	0.04600	83.33000	21.000	0.05680	0.04235	0.03852
CU	63	-0.02500	280.02000	0.000	0.06965	-0.09977	-0.04634
MO	98	-0.02400	6.67000	0.000	-0.01988	-0.02039	-0.03092
NI	60	0.04000	43.33000	138.500	0.09947	-0.01200	0.03389
SB	121	0.13800	56.67000	37.900	0.19688	0.11740	0.09854
SN	120	0.04100	73.33000	110.500	0.05645	-0.01000	0.07723
SR	88	0.00900	13.33000	436.900	0.03405	0.03079	-0.03721
ZN	66	0.00100	43.33000	15399.600	-0.15710	0.17514	-0.01479
BI-1	209	120833.79000	0.00000	0.000	122154.09000	121195.04000	119152.24000
PB	208	0.00400	66.67000	173.700	0.01218	-0.00012	0.00010
TL	203	0.02900	46.67000	102.700	0.00787	0.06390	0.01639
U	238	0.00100	26.67000	356.600	0.00432	0.00439	-0.00444
GE-1	72	102933.58000	0.00000	0.000	103459.83000	100674.37000	104666.53000
TB-1	159	166764.64000	0.00000	0.000	166769.84000	170053.92000	163470.16000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:08:14
Tube Number: 24 Batch: 172931063904A
Sample Number: **9271989** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36083.31000	0.00000	0.000	35365.21000	35705.62000	37179.09000
AL	27	4588.38000	65432.94000	3.800	4524.35245	4783.58260	4457.20527
CA	44	45914.77200	82835.81000	3.800	46937.28408	46900.49191	43906.54106
CR	52	3.47100	3327.09000	7.200	3.57691	3.65137	3.18357
FE	57	470.36400	7781.97000	6.300	466.11922	443.11295	501.85994
K	39	2230.75100	73498.39000	3.500	2212.02411	2316.72300	2163.50637
MG	24	21408.98300	1173411.13000	2.000	21589.77691	21706.76990	20930.40168
MN	55	5481.68000	1813807.37000	2.300	5579.85391	5527.45647	5337.72888
NA	23	18948.40000	2366889.65000	1.900	19164.48760	19153.45733	18527.25644
TI	47	3.02100	46.67000	41.800	1.99641	2.63651	4.43103
V	51	0.59000	430.03000	18.000	0.47463	0.61261	0.68366
IN-1	115	36235.02000	0.00000	0.000	35045.60000	36699.65000	36959.82000
AG	107	0.00500	20.00000	110.000	0.01111	0.00500	-0.00040
AS	75	1.18400	104.67000	22.400	1.42638	1.22472	0.90018
BA	137	12.89800	1666.81000	11.900	13.98623	11.14237	13.56473
CD	111	0.52300	104.67000	7.800	0.56793	0.51171	0.48808
CO	59	66.71000	110162.43000	3.000	68.96417	65.21187	65.95344
CU	63	3.65300	5067.57000	7.200	3.95764	3.51835	3.48434
MO	98	-0.00500	23.33000	0.000	-0.00830	0.01228	-0.02020
NI	60	32.96000	15223.55000	0.900	32.79005	32.78827	33.30217
SB	121	0.05600	23.33000	63.800	0.02521	0.04814	0.09560
SN	120	0.02200	63.33000	163.100	0.06045	0.01259	-0.00825
SR	88	65.42000	18537.00000	2.500	66.61402	63.57429	66.07148
ZN	66	30.85000	4434.06000	7.300	28.35868	32.76376	31.42700
BI-1	209	125876.32000	0.00000	0.000	124772.90000	125399.90000	127456.16000
PB	208	0.16400	733.37000	15.200	0.13550	0.17341	0.18230
TL	203	0.13800	190.01000	44.600	0.07734	0.20040	0.13630
U	238	0.31000	1480.13000	10.500	0.27416	0.31755	0.33753
GE-1	72	103026.99000	0.00000	0.000	102533.29000	103540.06000	103007.61000
TB-1	159	178006.42000	0.00000	0.000	177235.51000	178045.29000	178738.45000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:10:04
Tube Number: 25 Batch: 172931063904A
Sample Number: **9271990** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35044.57000	0.00000	0.000	34603.82000	34263.02000	36266.87000
AL	27	4805.21900	66506.90000	5.000	4848.66344	5019.30203	4547.69050
CA	44	47647.29300	83501.95000	3.100	49136.52751	47608.95633	46196.39400
CR	52	3.43300	3197.05000	7.700	3.45471	3.68547	3.15920
FE	57	446.68400	7175.01000	1.100	440.79685	449.08708	450.16781
K	39	2250.90500	71965.58000	2.300	2286.49754	2273.38422	2192.83286
MG	24	21962.96900	1168750.27000	3.300	22464.57327	22291.27870	21133.05574
MN	55	5677.26400	1824072.73000	3.000	5735.72963	5812.75801	5483.30468
NA	23	19710.66400	2389590.22000	3.100	20157.57663	19959.44587	19014.96924
TI	47	4.71300	70.00000	58.600	2.04034	7.55635	4.54249
V	51	0.55400	393.35000	25.100	0.58844	0.40118	0.67313
IN-1	115	36265.30000	0.00000	0.000	36730.41000	35696.94000	36368.56000
AG	107	0.00300	16.67000	188.400	-0.00037	-0.00021	0.01050
AS	75	1.09400	97.33000	9.100	1.17828	1.11970	0.98397
BA	137	13.88500	1796.83000	10.200	12.27698	14.43705	14.94074
CD	111	0.42900	86.67000	29.000	0.56146	0.41276	0.31370
CO	59	67.42200	111483.28000	1.800	67.80054	68.41552	66.04910
CU	63	3.68400	5117.57000	5.100	3.48487	3.70960	3.85847
MO	98	0.00200	30.00000	956.100	-0.00934	0.02459	-0.00913
NI	60	33.17800	15337.05000	1.100	33.42488	32.74166	33.36884
SB	121	0.01600	6.67000	86.600	0.02405	0.02475	0.00000
SN	120	-0.03400	36.67000	0.000	0.01249	-0.08749	-0.02694
SR	88	65.46000	18560.37000	4.800	63.52120	69.09201	63.76670
ZN	66	30.74600	4417.40000	1.000	30.51479	30.62130	31.10176
BI-1	209	122056.53000	0.00000	0.000	120924.48000	122234.21000	123010.91000
PB	208	0.16400	713.37000	5.800	0.17028	0.15345	0.16964
TL	203	0.13200	176.68000	9.600	0.13609	0.14246	0.11791
U	238	0.31100	1440.13000	8.600	0.30072	0.29089	0.34120
GE-1	72	101066.34000	0.00000	0.000	101236.60000	100191.72000	101770.71000
TB-1	159	170471.81000	0.00000	0.000	169194.72000	168103.81000	174116.91000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:11:56
Tube Number: 26 Batch: 172931063904A
Sample Number: **9271991** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35839.47000	0.00000	0.000	35575.71000	36497.30000	35445.40000
AL	27	29.02500	466.69000	26.800	38.01322	24.46606	24.59586
CA	44	109116.38700	195627.43000	1.000	108556.68004	108473.80491	110318.67506
CR	52	0.27200	390.02000	8.200	0.25375	0.29724	0.26633
FE	57	97.58800	1656.81000	12.800	111.47361	87.41947	93.87148
K	39	3432.37000	108808.88000	1.200	3405.92489	3412.49942	3478.68606
MG	24	34949.60500	1902914.71000	1.400	35318.14942	34391.22302	35139.44238
MN	55	2615.92300	859924.00000	1.900	2651.78327	2559.86319	2636.12135
NA	23	20420.56300	2531859.44000	2.100	20756.84031	19949.95447	20554.89505
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.25500	190.01000	8.800	0.27128	0.26405	0.22923
IN-1	115	37187.25000	0.00000	0.000	37240.76000	37040.30000	37280.69000
AG	107	0.00500	20.00000	109.400	-0.00044	0.01021	0.00483
AS	75	0.16300	16.67000	76.200	0.22173	0.24557	0.02024
BA	137	27.53600	3657.20000	10.500	28.28025	24.34968	29.97883
CD	111	0.18800	40.00000	24.500	0.13779	0.22818	0.19697
CO	59	6.91200	11727.53000	3.600	7.13025	6.64146	6.96358
CU	63	0.00900	333.35000	452.200	0.05100	-0.03001	0.00594
MO	98	0.10100	123.34000	47.800	0.15001	0.09749	0.05413
NI	60	4.21600	2020.18000	6.900	3.95606	4.52950	4.16259
SB	121	0.00800	3.33000	173.200	0.00000	0.00000	0.02369
SN	120	-0.03500	36.67000	0.000	-0.04868	-0.06830	0.01071
SR	88	109.30700	31786.27000	1.900	107.12722	111.13336	109.65907
ZN	66	0.13500	63.33000	105.900	0.24841	0.18256	-0.02564
BI-1	209	124071.85000	0.00000	0.000	123987.62000	124653.47000	123574.47000
PB	208	0.01100	96.67000	89.100	0.00204	0.02141	0.00945
TL	203	0.04400	66.67000	26.900	0.05447	0.04637	0.03118
U	238	0.54200	2536.98000	14.900	0.51318	0.48038	0.63393
GE-1	72	103258.64000	0.00000	0.000	103298.05000	103298.96000	103178.92000
TB-1	159	170728.28000	0.00000	0.000	172000.13000	169366.77000	170817.93000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:13:45
Tube Number: 27 Batch: 172931063904A
Sample Number: **9271992** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	37819.79000	0.00000	0.000	38110.57000	37829.70000	37519.10000
AL	27	33.26000	556.70000	17.300	39.20614	32.83396	27.74068
CA	44	109738.97100	207615.99000	1.400	109076.43195	108697.94378	111442.53801
CR	52	0.31200	450.02000	10.500	0.32963	0.33324	0.27446
FE	57	118.44600	2106.89000	10.300	104.35002	125.54246	125.44447
K	39	3257.98600	109338.73000	1.700	3195.18352	3275.56529	3303.20890
MG	24	34808.32500	2000115.70000	1.400	34601.28164	34470.11393	35353.57973
MN	55	1897.41200	658282.98000	1.500	1879.40964	1883.19564	1929.63179
NA	23	20292.58800	2655608.71000	0.900	20160.49946	20213.21954	20504.04454
TI	47	0.41500	6.67000	86.600	0.61753	0.00000	0.62727
V	51	0.35800	276.68000	16.200	0.29233	0.40232	0.37863
IN-1	115	37638.34000	0.00000	0.000	38964.18000	36188.83000	37762.00000
AG	107	0.00000	10.00000	0.000	-0.00067	-0.00029	-0.00051
AS	75	0.08000	9.33000	62.900	0.06109	0.13675	0.04174
BA	137	18.77200	2520.28000	5.400	17.61167	19.27211	19.43337
CD	111	0.14900	32.67000	18.100	0.17853	0.14210	0.12597
CO	59	2.14900	3690.51000	6.800	1.98292	2.25657	2.20885
CU	63	0.09400	450.03000	91.200	-0.00471	0.13631	0.15007
MO	98	0.12200	146.67000	50.600	0.19287	0.07860	0.09503
NI	60	2.04800	1006.74000	0.900	2.06415	2.05281	2.02750
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SN	120	0.12900	123.39000	170.600	0.36610	-0.06736	0.08747
SR	88	104.67500	30757.90000	6.900	98.27690	112.47472	103.27248
ZN	66	0.31200	90.00000	46.000	0.15878	0.33475	0.44333
BI-1	209	126412.66000	0.00000	0.000	126134.45000	126153.02000	126950.51000
PB	208	0.04300	233.34000	30.300	0.04983	0.02821	0.05182
TL	203	0.03500	56.67000	25.200	0.03039	0.04572	0.03014
U	238	0.50400	2403.61000	15.400	0.46408	0.59333	0.45475
GE-1	72	104687.05000	0.00000	0.000	101721.14000	106436.12000	105903.90000
TB-1	159	177988.38000	0.00000	0.000	177529.12000	178238.71000	178197.32000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:15:35
Tube Number: 28 Batch: 172931063904A
Sample Number: **9271993** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	36577.81000	0.00000	0.000	37479.71000	36537.60000	35716.12000
AL	27	14.67400	270.02000	35.800	19.66782	9.19073	15.16474
CA	44	57647.44900	105448.41000	3.900	56876.88363	55911.30725	60154.15672
CR	52	1.09100	1160.08000	3.200	1.07134	1.07067	1.13185
FE	57	49.32600	890.06000	7.800	45.03649	50.53186	52.41027
K	39	1992.02500	67230.93000	4.500	1898.78820	1998.05505	2079.23128
MG	24	27082.87900	1504613.68000	2.500	26325.58177	27279.08487	27643.97127
MN	55	0.93100	336.68000	20.800	0.76814	0.87939	1.14555
NA	23	7574.27000	974976.52000	3.800	7278.34493	7848.10215	7596.36295
TI	47	0.43900	6.67000	173.200	0.00000	0.00000	1.31787
V	51	0.17100	133.34000	42.000	0.09365	0.23586	0.18459
IN-1	115	37638.16000	0.00000	0.000	37792.07000	37481.19000	37641.23000
AG	107	0.01200	33.33000	68.700	0.00989	0.02052	0.00473
AS	75	0.07200	8.67000	47.800	0.06374	0.10895	0.04195
BA	137	50.98200	6851.64000	2.500	50.25622	50.22414	52.46634
CD	111	-0.00400	1.33000	0.000	0.00879	-0.01073	-0.01073
CO	59	0.03400	66.67000	83.200	0.04794	0.00156	0.05397
CU	63	-0.04300	266.68000	0.000	-0.01212	-0.03248	-0.08507
MO	98	-0.01700	13.33000	0.000	0.00054	-0.02035	-0.03092
NI	60	0.20400	123.34000	30.000	0.13338	0.23979	0.23854
SB	121	0.02400	10.00000	99.900	0.00000	0.02357	0.04693
SN	120	-0.04300	33.33000	0.000	-0.04954	-0.02935	-0.04931
SR	88	67.92500	19995.35000	2.900	66.10703	69.97011	67.69926
ZN	66	0.76100	156.68000	26.700	0.98233	0.72096	0.58120
BI-1	209	127891.66000	0.00000	0.000	125206.58000	129804.78000	128663.61000
PB	208	0.00700	83.33000	72.900	0.01158	0.00139	0.00857
TL	203	0.01200	26.67000	36.700	0.01521	0.01439	0.00707
U	238	0.12500	616.70000	15.900	0.13010	0.10268	0.14104
GE-1	72	104626.77000	0.00000	0.000	105552.35000	105220.45000	103107.51000
TB-1	159	175975.82000	0.00000	0.000	176537.89000	179923.45000	171466.13000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:17:24
Tube Number: 29
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34263.46000	0.00000	0.000	34764.56000	33992.59000	34033.24000
AL	27	197.33900	2723.62000	4.800	186.83773	200.10808	205.07210
CA	44	393.44900	686.71000	18.900	320.03344	468.62397	391.68926
CR	52	4.28400	3870.56000	7.000	3.94650	4.52495	4.38085
FE	57	202.57900	3217.08000	6.600	194.67417	217.99422	195.06791
K	39	443.87400	18933.75000	4.700	428.51703	435.47599	467.62762
MG	24	217.49400	11413.95000	2.300	219.27626	211.89345	221.31121
MN	55	3.91100	1253.43000	5.300	4.12666	3.70900	3.89666
NA	23	410.89800	73037.00000	2.500	407.01117	422.34993	403.33345
TI	47	29.26600	426.69000	35.500	34.52747	17.30927	35.96092
V	51	1.04000	710.04000	17.200	1.09846	0.83904	1.18226
IN-1	115	36226.93000	0.00000	0.000	36811.90000	35667.91000	36200.98000
AG	107	1.00500	1860.18000	9.800	0.89198	1.04760	1.07557
AS	75	3.87800	339.34000	15.400	3.73444	3.36424	4.53469
BA	137	4.12200	533.36000	13.000	3.95634	3.69056	4.71938
CD	111	1.04800	208.00000	1.400	1.03096	1.05403	1.05872
CO	59	1.02900	1706.81000	14.100	1.15164	1.06571	0.86819
CU	63	4.11800	5674.46000	7.800	3.74866	4.31330	4.29237
MO	98	0.93700	883.39000	11.300	0.86274	1.05810	0.88878
NI	60	4.24000	1976.85000	13.600	3.57576	4.55162	4.59235
SB	121	1.96800	806.72000	14.600	1.75180	1.85750	2.29380
SN	120	4.09800	2063.53000	5.500	4.28729	3.84826	4.15735
SR	88	1.97300	570.03000	17.600	2.11735	1.57677	2.22442
ZN	66	30.75800	4410.69000	8.900	28.71479	33.86263	29.69767
BI-1	209	121263.32000	0.00000	0.000	122747.15000	123212.35000	117830.46000
PB	208	2.09800	8447.88000	1.300	2.07077	2.09733	2.12683
TL	203	1.03400	1303.43000	13.500	1.07224	0.87964	1.15017
U	238	1.05300	4797.59000	9.000	1.15900	0.97660	1.02367
GE-1	72	102960.64000	0.00000	0.000	102817.22000	103721.72000	102342.97000
TB-1	159	166003.56000	0.00000	0.000	168570.45000	163749.05000	165691.19000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:19:12
Tube Number: 30
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	32493.25000	0.00000	0.000	32099.37000	32960.87000	32419.52000
AL	27	100132.38300	1285055.61000	1.800	101446.37040	98103.68659	100847.09145
CA	44	261240.47700	424614.33000	0.800	262217.69547	258898.21271	262605.52165
CR	52	1.24800	1160.08000	9.200	1.36247	1.13216	1.25057
FE	57	229734.01400	3387940.05000	1.200	231359.89382	226554.86714	231287.28207
K	39	100786.01700	2727147.46000	1.500	101457.23802	99056.72530	101844.08702
MG	24	95710.27500	4724339.10000	1.900	97191.86345	93621.00388	96317.95739
MN	55	3.48400	1060.08000	12.900	3.55858	3.00053	3.89259
NA	23	234525.25400	26117142.94000	2.000	237104.67819	229128.60426	237342.47924
TI	47	1955.36700	26997.65000	1.100	1966.44985	1970.09388	1929.55813
V	51	0.02200	23.33000	111.400	0.01667	0.00038	0.04777
IN-1	115	31332.43000	0.00000	0.000	31108.34000	31579.79000	31309.15000
AG	107	0.38600	623.37000	23.600	0.33571	0.33062	0.49059
AS	75	0.30400	24.67000	27.200	0.32385	0.21307	0.37487
BA	137	0.92400	103.33000	15.100	0.90028	0.79815	1.07341
CD	111	0.18900	34.00000	17.000	0.20262	0.15273	0.21303
CO	59	1.03200	1480.12000	14.700	1.19436	1.00974	0.89241
CU	63	0.87200	1253.43000	10.800	0.92184	0.93092	0.76340
MO	98	2172.98000	1717801.80000	1.300	2204.75751	2150.56895	2163.61375
NI	60	1.17600	490.03000	9.900	1.31048	1.11591	1.10093
SB	121	1.36300	483.36000	2.400	1.33463	1.39865	1.35428
SN	120	0.03400	60.00000	213.400	0.10555	-0.03801	0.03339
SR	88	9.64000	2370.26000	3.100	9.95628	9.60435	9.36084
ZN	66	1.84200	263.35000	21.800	1.91308	2.20296	1.41047
BI-1	209	107670.86000	0.00000	0.000	107177.21000	106794.72000	109040.64000
PB	208	0.22600	846.71000	13.500	0.25310	0.23136	0.19299
TL	203	0.15600	183.34000	33.900	0.10941	0.14608	0.21391
U	238	0.06100	263.34000	7.300	0.06043	0.06567	0.05687
GE-1	72	90777.95000	0.00000	0.000	89063.08000	91645.95000	91624.83000
TB-1	159	150389.18000	0.00000	0.000	149991.93000	150496.69000	150678.91000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:21:01
Tube Number: 31
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	31484.96000	0.00000	0.000	31688.47000	31358.00000	31408.42000
AL	27	104716.87200	1302349.04000	1.200	103582.39896	104496.43234	106071.78599
CA	44	274761.55600	432732.50000	1.700	269648.35158	278303.36041	276332.95735
CR	52	195.74300	157045.28000	1.700	191.89731	197.43409	197.89746
FE	57	241153.92500	3446217.56000	1.300	238262.16501	240839.64701	244359.96319
K	39	105281.06100	2760321.32000	1.400	103739.82112	105420.19928	106683.16378
MG	24	99539.86800	4761502.22000	1.200	98117.64731	100224.06698	100277.88946
MN	55	198.86900	57459.06000	1.300	195.93999	199.95289	200.71279
NA	23	244081.70700	26340560.44000	0.800	241916.64197	244774.92667	245553.55219
TI	47	2034.86900	27221.24000	2.900	1989.69894	2012.15588	2102.75095
V	51	197.54500	122112.46000	2.600	191.65799	199.87254	201.10407
IN-1	115	31188.31000	0.00000	0.000	30537.87000	31508.42000	31518.64000
AG	107	48.64100	77115.55000	3.200	50.11232	46.99500	48.81605
AS	75	104.79100	7841.09000	2.900	108.03556	102.06033	104.27621
BA	137	1.32300	146.67000	49.700	1.92599	1.42224	0.62199
CD	111	96.51000	16330.41000	1.800	95.59905	95.39468	98.53708
CO	59	192.55800	273839.66000	0.700	192.08691	191.53246	194.05399
CU	63	193.27900	217024.86000	2.100	196.90215	188.91079	194.02543
MO	98	2192.76800	1725399.25000	0.900	2214.30919	2190.98605	2173.00989
NI	60	192.88700	76580.58000	2.300	190.49406	190.10743	198.06024
SB	121	1.29400	456.69000	6.400	1.38849	1.26161	1.23318
SN	120	0.09800	86.67000	140.900	0.18211	0.17317	-0.06131
SR	88	10.58700	2590.30000	3.700	10.60378	10.96622	10.19141
ZN	66	95.36800	11710.94000	4.500	92.12371	93.72782	100.25184
BI-1	209	106731.95000	0.00000	0.000	104147.38000	107307.90000	108740.56000
PB	208	0.24000	890.05000	13.500	0.23465	0.21043	0.27436
TL	203	0.11000	130.01000	15.100	0.09425	0.12731	0.10773
U	238	0.05500	236.68000	15.300	0.04948	0.05038	0.06441
GE-1	72	90399.48000	0.00000	0.000	89052.81000	89866.72000	92278.92000
TB-1	159	152865.87000	0.00000	0.000	151496.90000	152829.55000	154271.17000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:22:50
Tube Number: 32
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	34573.48000	0.00000	0.000	34052.83000	35194.48000	34473.13000
AL	27	15.63700	270.02000	103.000	7.92108	34.15212	4.83856
CA	44	51.70200	103.34000	52.900	33.33825	83.13118	38.63612
CR	52	0.33700	433.36000	12.700	0.29508	0.38093	0.33517
FE	57	45.14900	783.41000	91.200	20.88960	92.69685	21.86014
K	39	20.34300	6944.94000	110.900	15.62464	44.88865	0.51703
MG	24	22.26200	1270.16000	76.200	13.33087	41.83501	11.61965
MN	55	0.09100	53.33000	136.600	-0.04332	0.20342	0.11439
NA	23	85.69800	35235.61000	44.800	76.81648	127.76147	52.51561
TI	47	1.58200	23.33000	48.800	0.69112	2.00610	2.04808
V	51	0.01900	23.33000	191.100	0.01485	0.05729	-0.01507
IN-1	115	34842.74000	0.00000	0.000	34725.57000	34866.10000	34936.54000
AG	107	0.00700	23.33000	116.200	0.01693	-0.00008	0.00554
AS	75	0.00700	2.67000	186.000	-0.00048	0.02333	-0.00062
BA	137	0.02700	3.33000	173.200	0.08065	0.00000	0.00000
CD	111	0.01000	4.00000	175.400	0.02113	0.02100	-0.01073
CO	59	0.01300	26.67000	126.600	0.01465	0.02716	-0.00429
CU	63	0.00200	303.35000	2056.900	0.04807	-0.02487	-0.01735
MO	98	0.90500	823.39000	50.100	0.53977	1.41283	0.76324
NI	60	-0.01600	16.67000	0.000	-0.00851	-0.00870	-0.03128
SB	121	0.02500	10.00000	99.900	0.00000	0.02533	0.05057
SN	120	0.01200	56.67000	709.900	0.06201	0.06132	-0.08704
SR	88	-0.01300	6.67000	0.000	-0.00038	-0.00053	-0.03721
ZN	66	-0.25000	6.67000	0.000	-0.15231	-0.29910	-0.29910
BI-1	209	120134.89000	0.00000	0.000	119504.10000	119574.18000	121326.40000
PB	208	-0.00800	20.00000	0.000	-0.00248	-0.01008	-0.01012
TL	203	-0.00300	6.67000	0.000	-0.00798	-0.00798	0.00798
U	238	-0.00300	6.67000	0.000	-0.00220	-0.00444	-0.00223
GE-1	72	98371.87000	0.00000	0.000	97776.88000	99891.12000	97447.62000
TB-1	159	165493.23000	0.00000	0.000	164142.52000	167083.10000	165254.06000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:24:39
Tube Number: 33
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35067.92000	0.00000	0.000	36036.49000	34453.14000	34714.13000
AL	27	2516.14700	34890.36000	4.000	2431.87126	2628.44755	2488.12306
CA	44	2573.23400	4527.39000	5.600	2588.83011	2708.13138	2422.74110
CR	52	248.14400	221644.62000	2.200	242.39464	252.96934	249.06866
FE	57	2425.91200	38669.11000	3.100	2375.91260	2511.57498	2390.24833
K	39	2526.99100	80042.27000	4.000	2419.17541	2616.30074	2545.49794
MG	24	2484.42700	132416.68000	2.200	2423.04582	2530.64488	2499.59095
MN	55	248.19300	79850.00000	1.500	244.24735	251.37844	248.95189
NA	23	2428.74800	317040.21000	2.000	2404.32644	2484.08437	2397.83460
TI	47	245.08200	3650.49000	2.400	238.40512	248.67764	248.16393
V	51	247.47500	170332.41000	2.800	241.30041	254.95518	246.16815
IN-1	115	36348.87000	0.00000	0.000	36328.63000	36554.31000	36163.66000
AG	107	24.83100	45898.38000	1.800	24.40587	24.80536	25.28066
AS	75	251.48700	21934.82000	1.700	247.72142	250.78029	255.95836
BA	137	249.81700	32421.84000	1.300	250.64132	246.17440	252.63392
CD	111	25.16500	4963.41000	2.500	24.79811	24.80638	25.89037
CO	59	244.50600	405227.32000	1.000	246.76123	241.83640	244.91915
CU	63	246.35400	322376.38000	1.500	249.77737	246.98484	242.29923
MO	98	25.22900	23166.05000	0.600	25.23137	25.06437	25.39051
NI	60	247.89400	114665.82000	4.100	251.49861	236.53273	255.64981
SB	121	24.65100	10146.68000	7.300	24.46871	26.54217	22.94299
SN	120	24.05900	11891.30000	4.100	22.96116	24.84114	24.37474
SR	88	26.01400	7401.82000	3.600	26.65990	24.95477	26.42776
ZN	66	254.26700	36304.46000	2.300	248.23568	254.45646	260.10858
BI-1	209	124742.90000	0.00000	0.000	128220.89000	123613.76000	122394.04000
PB	208	25.23300	103949.54000	0.100	25.19896	25.27049	25.23019
TL	203	24.75800	31905.89000	3.200	23.84383	25.16451	25.26474
U	238	25.64500	119618.83000	2.500	24.91766	26.07722	25.93906
GE-1	72	99537.63000	0.00000	0.000	99970.14000	99316.05000	99326.70000
TB-1	159	164749.36000	0.00000	0.000	168697.99000	165455.88000	160094.22000

Run Name: 1729703E05 Date/Time: 10/24/2017 3:26:28
Tube Number: 34
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	35759.54000	0.00000	0.000	35636.09000	36096.86000	35545.67000
AL	27	4.77300	123.34000	68.200	4.55024	1.63608	8.13369
CA	44	1.53200	16.67000	553.300	-7.75493	8.85917	3.49289
CR	52	0.30700	420.02000	23.700	0.23102	0.31314	0.37563
FE	57	6.12300	170.01000	43.300	8.02131	7.25312	3.09364
K	39	-15.03700	6124.62000	0.000	-14.14759	-25.12980	-5.83436
MG	24	4.26500	326.68000	7.900	3.97965	4.63609	4.17956
MN	55	-0.04500	10.00000	0.000	0.01643	-0.07533	-0.07533
NA	23	29.22400	29487.73000	12.600	33.31207	28.15880	26.19969
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	40.00000	67.100	0.04210	0.06959	0.01359
IN-1	115	35978.17000	0.00000	0.000	35306.88000	36759.37000	35868.26000
AG	107	0.00500	20.00000	107.400	0.01099	-0.00037	0.00525
AS	75	0.04500	6.00000	48.600	0.02274	0.06622	0.04524
BA	137	0.02500	3.33000	173.200	0.00000	0.07619	0.00000
CD	111	-0.00700	0.67000	0.000	-0.01073	-0.01073	-0.00045
CO	59	0.01800	36.67000	52.600	0.02055	0.00764	0.02628
CU	63	-0.07500	213.34000	0.000	-0.06694	-0.11161	-0.04640
MO	98	0.10500	123.34000	66.100	0.18237	0.08769	0.04643
NI	60	0.01100	30.00000	588.900	-0.05378	0.07450	0.01195
SB	121	0.10700	43.33000	59.500	0.17513	0.09612	0.04925
SN	120	0.00800	56.67000	1470.600	-0.08726	-0.02780	0.13899
SR	88	-0.03700	0.00000	0.000	-0.03721	-0.03721	-0.03721
ZN	66	-0.18000	16.67000	0.000	-0.15472	-0.29910	-0.08593
BI-1	209	124519.19000	0.00000	0.000	123685.18000	125662.52000	124209.87000
PB	208	0.00500	73.33000	208.900	0.00453	0.01631	-0.00530
TL	203	0.03300	53.33000	57.500	0.03115	0.05363	0.01540
U	238	0.00100	23.33000	951.800	-0.00444	-0.00018	0.00633
GE-1	72	100443.10000	0.00000	0.000	100996.21000	99939.16000	100393.93000
TB-1	159	170699.05000	0.00000	0.000	171122.13000	169648.24000	171326.79000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

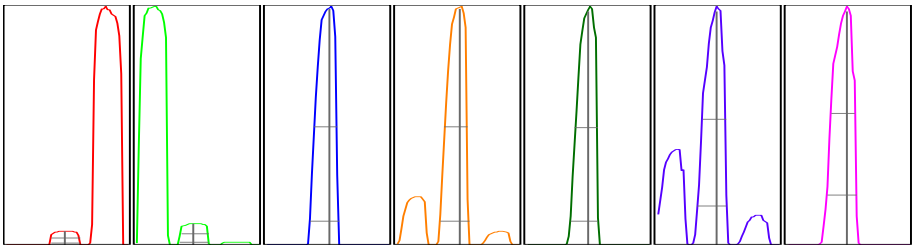
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		24902	24902.11			NaN	-	
24		43800	43800.29			NaN	-	
103		92033	92033.36			NaN	-	
115		90856	90855.67			NaN	-	
140		93943	93943.48			NaN	-	
208		43650	43650.09			NaN	-	
238		93210	93209.68			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	2.03	5.00				
24	0.86	5.00				
103	0.80	5.00				
115	0.35	5.00				
140	0.74	5.00				
208	0.52	5.00				
238	1.05	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	25562	25220	24848	24606	24274
24	43459	44434	43643	43806	43659
103	90993	92858	92176	91635	92505
115	91009	90759	90343	91034	91132
140	92888	93897	94321	93847	94764
208	43513	43597	43490	43605	44046
238	91836	92705	93562	94412	93535

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	3773.20	5.95	5.9 - 6.1		0.68	0.738	0.900	
24	6774.98	23.90	23.9 - 24.1		0.66	0.735	0.900	
103	17100.63	103.05	102.9 - 103.1		0.55	0.689	0.900	
115	17067.23	115.05	114.9 - 115.1		0.55	0.687	0.900	
140	17986.29	140.00	139.9 - 140.1		0.54	0.669	0.900	
208	8120.94	207.95	207.9 - 208.1		0.55	0.703	0.900	
238	16730.74	237.95	237.9 - 238.1		0.58	0.712	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1	0.0 V	Omega Lens	6.1 V	Deflect	16.8 V			
Extract 2	-160.0 V	Cell Entrance	-30 V	Plate Bias	-40 V			

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
Omega Bias		-75 V				Cell Exit	-50 V	

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 17 293 10639 04

Start Time: 10/22/17 22:00 **End Time:** 10/23/17 2:00 **Hot Block:** 15

Pipette ID: S/500

Reflux Cap Lot#: 1705110-7234MK

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	175151	3.00
ICP/MS Spike	1724801#2	0.50
LCS ICP/MS Spike	1724801#2	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1707186		
2)	LCSW	.							1707186		
3)	9271983	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
4)	9271984	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
5)	**9271985U**	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
6)	**9271986R**	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
7)	**9271987M**	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
8)	**9271988D**	10/31/17 09:20	WW	N8				008A	1707186		
9)	9271989	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
10)	9271990FD	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
11)	9271991	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
12)	9271992	10/31/17 09:20	WW	N8				008A	1707186	E01364/	
13)	9271993	10/31/17 09:20	WW	N8				008A	1707186	E01364/	

Prep Employee:862 D/I _____

10/23/2017

v 1.1.0

Batch# 17 293 1063 904

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		10/20/17 14:52	862
2)	Sample Vol		10/21/17 17:59	1364
3)	Final Vol	CLEAR	10/21/17 17:59	1364
4)	Trial		10/21/17 17:59	1364
5)	Trial		10/21/17 17:59	1364
6)	Upload Prep	US19PCC0669	10/23/17 2:22	862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 17 293 1063 904

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9271983	10/31/17	N8	R9901	RAE99-01	50.0000	50.0000	1
9271984	10/31/17	N8	R9902	RAE99-02	50.0000	50.0000	1
9271985U	10/31/17	N8	R9903	RAE99-03BKG	50.0000	50.0000	1
9271986R	10/31/17	N8	R9903	RAE99-03MS	50.0000	50.0000	1
9271987M	10/31/17	N8	R9903	RAE99-03MSD	50.0000	50.0000	1
9271988D	10/31/17	N8	R9903	RAE99-03DUP	50.0000	50.0000	1
9271989	10/31/17	N8	R9904	RAE99-04	50.0000	50.0000	1
9271990FD	10/31/17	N8	R9905	RAE99-05FD	50.0000	50.0000	1
9271991	10/31/17	N8	R9906	RAE99-06	50.0000	50.0000	1
9271992	10/31/17	N8	R9907	RAE99-07	50.0000	50.0000	1
9271993	10/31/17	N8	R9908	RAE99-08*	50.0000	50.0000	1

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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 10/16/17-10/18/17

SDG# RAE98

GROUP	SAMPLE NUMBERS
1864852	9271970-9271981

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
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: 11/13/2017

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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Sample Reference List for SDG Number RAE98
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
9271970	5W8B	10/16/2017 09:25	10/19/2017 09:20
9271971	5W5B	10/16/2017 12:00	10/19/2017 09:20
9271972	5W7B	10/16/2017 11:05	10/19/2017 09:20
9271973	5W7B Matrix Spike	10/16/2017 11:05	10/19/2017 09:20
9271974	5W7B Matrix Spike Dup	10/16/2017 11:05	10/19/2017 09:20
9271975	5WC21	10/18/2017 11:15	10/19/2017 09:20
9271976	5WDUP	10/18/2017 11:20	10/19/2017 09:20
9271977	5WC22	10/18/2017 09:30	10/19/2017 09:20
9271978	5WC23	10/18/2017 10:20	10/19/2017 09:20
9271979	5W12A	10/16/2017 10:20	10/19/2017 09:20
9271980	Trip Blank 1	10/16/2017 00:00	10/19/2017 09:20
9271981	Trip Blank 2	10/16/2017 00:00	10/19/2017 09:20

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Sample pH Log

SDG: RAE98

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 #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
9271970	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:17PM	2648
9271971	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271972	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271973	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271974	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271975	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271976	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271977	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271978	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271979	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271980	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:15PM	2648
9271981	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/27/2017 1:08:16PM	2648

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

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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

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.

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: October 31, 2017 15:36

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1864852
SDG: RAE98
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

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

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	10/16/2017 09:25	9271970
5W5B Grab Groundwater	10/16/2017 12:00	9271971
5W7B Grab Groundwater	10/16/2017 11:05	9271972
5W7B Matrix Spike Grab Groundwater	10/16/2017 11:05	9271973
5W7B Matrix Spike Dup Grab Groundwater	10/16/2017 11:05	9271974
5WC21 Grab Groundwater	10/18/2017 11:15	9271975
5WDUP Grab Groundwater	10/18/2017 11:20	9271976
5WC22 Grab Groundwater	10/18/2017 09:30	9271977
5WC23 Grab Groundwater	10/18/2017 10:20	9271978
5W12A Grab Groundwater	10/16/2017 10:20	9271979
Trip Blank 1 Water	10/16/2017	9271980
Trip Blank 2 Water	10/16/2017	9271981

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 #: 1864852

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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 9271978

A positive result for residual chlorine was detected in the sample container used for analysis.

Sample Description: **5W8B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 09:25
SDG#: RAE98-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271970
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 04:15	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 04:15	Matthew S Krause	1

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

Sample Description: **5W5B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 12:00
SDG#: RAE98-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271971
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 04:35	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 04:35	Matthew S Krause	1

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

Sample Description: **5W7B Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE98-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271972
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 03:14	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 03:14	Matthew S Krause	1

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

Sample Description: **5W7B Matrix Spike Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE98-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271973
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	5.9	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	5.7	0.8	1.0	1
11996	Trichloroethene	79-01-6	5.8	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	5.1	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 03:35	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 03:35	Matthew S Krause	1

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

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 11:05
SDG#: RAE98-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271974
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	5.9	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.7	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.8	0.8	1.0	1
11996	Trichloroethene	79-01-6	5.8	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	5.1	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 03:55	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 03:55	Matthew S Krause	1

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

Sample Description: **5WC21 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 11:15
SDG#: RAE98-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271975
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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	3.0	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 04:56	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 04:56	Matthew S Krause	1

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

Sample Description: **5WDUP Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 11:20
SDG#: RAE98-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271976
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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	3.0	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 05:16	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 05:16	Matthew S Krause	1

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

Sample Description: **5WC22 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 09:30
SDG#: RAE98-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271977
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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	2.9	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 05:36	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 05:36	Matthew S Krause	1

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

Sample Description: **5WC23 Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/18/2017 10:20
SDG#: RAE98-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271978
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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	3.1	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

A positive result for residual chlorine was detected in the sample container used for analysis.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 05:57	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 05:57	Matthew S Krause	1

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

Sample Description: **5W12A Grab Groundwater**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017 10:20
SDG#: RAE98-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271979
ELLE Group #: 1864852
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 06:17	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 06:17	Matthew S Krause	1

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

Sample Description: **Trip Blank 1 Water**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017
SDG#: RAE98-09TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271980
ELLE Group #: 1864852
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 02:34	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 02:34	Matthew S Krause	1

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

Sample Description: **Trip Blank 2 Water**
2017 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

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

Submittal Date/Time: 10/19/2017 09:20
Collection Date/Time: 10/16/2017
SDG#: RAE98-10TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9271981
ELLE Group #: 1864852
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**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

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	1	H172996AA	10/27/2017 02:54	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172996AA	10/27/2017 02:54	Matthew S Krause	1

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

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1864852
Reported: 10/31/2017 15:36

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: H172996AA	Sample number(s): 9271970-9271981		
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
Trichloroethene	N.D.	0.2	1.0
Vinyl Chloride	N.D.	0.1	1.0

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: H172996AA	Sample number(s): 9271970-9271981								
1,1-Dichloroethene	5.00	5.39			108		76-120		
cis-1,2-Dichloroethene	5.00	5.54			111		80-120		
trans-1,2-Dichloroethene	5.00	5.47			109		80-120		
Trichloroethene	5.00	5.48			110		80-120		
Vinyl Chloride	5.00	4.75			95		63-133		

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: H172996AA	Sample number(s): 9271970-9271981 UNSPK: 9271972									
1,1-Dichloroethene	N.D.	5.00	5.86	5.00	5.86	117	117	76-120	0	30
cis-1,2-Dichloroethene	N.D.	5.00	5.56	5.00	5.74	111	115	80-120	3	30
trans-1,2-Dichloroethene	N.D.	5.00	5.70	5.00	5.80	114	116	80-120	2	30
Trichloroethene	N.D.	5.00	5.76	5.00	5.80	115	116	80-120	1	30
Vinyl Chloride	N.D.	5.00	5.08	5.00	5.07	102	101	63-133	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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1864852
Reported: 10/31/2017 15:36

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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: RAAP Unit 5 "J" list
Batch number: H172996AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9271970	100	97	98	93
9271971	100	102	99	94
9271972	101	98	98	93
9271973	100	101	97	96
9271974	99	97	97	98
9271975	100	97	100	92
9271976	102	100	99	94
9271977	99	97	99	92
9271978	99	96	100	92
9271979	99	100	100	92
9271980	99	98	99	92
9271981	99	101	100	94
Blank	100	99	99	94
LCS	103	104	96	98
MS	100	101	97	96
MSD	99	97	97	98
Limits:	80-120	80-120	80-120	80-120

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1864852/9271970-81

CHAIN OF CUSTODY RECORD

JCSW 9/20/17

Laboratory: Eurofins Lancaster Laboratories Environmental LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager

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 2017- 2nd Semiannual Groundwater Corrective Action **Event:** Monitoring Event **DAA JN:** B03204-17A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS: **Carrier:** 1Z-75Y-02X-Y0-5549- **Tracking Number:** 3465		

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	<2						
Box 2 - Preservative					A	B						
Box 5 - Sample Container Type					3-40ml V	1-500ml P						
Sample ID	**Date: 2017**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260C/5030C 25 ml purge Appendix J Analyte List**	**Cobalt only-Total 6020A /3020A (appendix J)**						
5W8B	10/16	0925	GW	4	X	X						
5W5B	10/16	1200	GW	4	X	X						
5W7B	10/16	1105	GW	4	X	X						
5WC21	10/18	1115	GW	4	X	X						
5WDUP	10/18	1120	GW	4	X	X						
5WC22	10/18	0930	GW	4	X	X						
5WC23	10/18	1020	GW	4	X	X						
5W12A	10/16	1020	GW	4	X	X						
Trip Blank 1	10/16	—	T	2	X							
Trip Blank 2	10/16	—	T	2	X							

GENERAL NOTES:

1. See attached analyte list.
2. Report Results to MDL with "J" Flags. 3. 1 trip blank per day of sampling.

Delete Trip blank 2 if not required.

Cobalt QL = 5ug/L
DL = 1ug/L
} dra 9/20/17

USE FOR QC

Sample time is 1020

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.7/0.9 Received on Ice ✓ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Ken Catlington	Date: 10/16/17	#1 Relinquished by (Signature):	Date: 10/18/17	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ky-Tran Vo	Date: 10/16/17	#1 Received by (Signature):	Date: 10/19/17	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name: ELLE	Time: 920	Company Name:	Time:	

dra 9/19/17 1/2

1864852

Analyst 2/2

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

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Sample Administration Receipt Documentation Log

Doc Log ID: 198034

Group Number(s): 1864852

Client: Draper Aden Associates

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/19/2017 9:20
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	VA		

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	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	12
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wyatt Shiffler (12792) at 10:49 on 10/19/2017

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	0.9	DT	Wet	Y	Bagged	N
2	DT131	0.7	DT	Wet	Y	Bagged	N
3	DT131	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
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	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	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
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.
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: RAE98

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9271970	5W8B	X		1	
9271971	5W5B	X		1	
9271972	5W7B	X		1	Unspiked
9271973	5W7B Matrix Spike	X		1	Matrix Spike
9271974	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9271975	5WC21	X		1	
9271976	5WDUP	X		1	Field Duplicate Sample
9271977	5WC22	X		1	
9271978	5WC23	X		1	
9271979	5W12A	X		1	
9271980	Trip Blank 1	X		1	Trip Blank
9271981	Trip Blank 2	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:

(Sample number(s): 9271978: Analysis: 11996)
A positive result for residual chlorine was detected in the sample container used for analysis.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE98

GC/MS Volatiles

Fraction: Volatiles by GC/MS

No additional 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: RAE98

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
RAAP Unit 5 "J" list	H172996AA	VBLKH19	10/26/2017 21:33:00
		LCSH19	10/26/2017 20:52:00
		9271970	10/27/2017 04:15:00
		9271971	10/27/2017 04:35:00
		9271972 UNSPK	10/27/2017 03:14:00
		9271973 MS	10/27/2017 03:35:00
		9271974 MSD	10/27/2017 03:55:00
		9271975	10/27/2017 04:56:00
		9271976	10/27/2017 05:16:00
		9271977	10/27/2017 05:36:00
		9271978	10/27/2017 05:57:00
		9271979	10/27/2017 06:17:00
		9271980	10/27/2017 02:34:00
		9271981	10/27/2017 02:54:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAE98
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H172996AA / VBLKH19 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	10/26/17	N.D.	ug/l	0.1	1.0
1,1-Dichloroethene	10/26/17	N.D.	ug/l	0.4	1.0
trans-1,2-Dichloroethene	10/26/17	N.D.	ug/l	0.8	1.0
cis-1,2-Dichloroethene	10/26/17	N.D.	ug/l	0.1	1.0
Trichloroethene	10/26/17	N.D.	ug/l	0.2	1.0

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAE98
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H172996AA	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
VBLKH19	99	80 - 120	94	80 - 120	100	80 - 120	99	80 - 120
LCSH19	104	80 - 120	98	80 - 120	103	80 - 120	96	80 - 120
9271970	97	80 - 120	93	80 - 120	100	80 - 120	98	80 - 120
9271971	102	80 - 120	94	80 - 120	100	80 - 120	99	80 - 120
9271972 UNSPK	98	80 - 120	93	80 - 120	101	80 - 120	98	80 - 120
9271973 MS	101	80 - 120	96	80 - 120	100	80 - 120	97	80 - 120
9271974 MSD	97	80 - 120	98	80 - 120	99	80 - 120	97	80 - 120
9271975	97	80 - 120	92	80 - 120	100	80 - 120	100	80 - 120
9271976	100	80 - 120	94	80 - 120	102	80 - 120	99	80 - 120
9271977	97	80 - 120	92	80 - 120	99	80 - 120	99	80 - 120
9271978	96	80 - 120	92	80 - 120	99	80 - 120	100	80 - 120
9271979	100	80 - 120	92	80 - 120	99	80 - 120	100	80 - 120
9271980	98	80 - 120	92	80 - 120	99	80 - 120	99	80 - 120
9271981	101	80 - 120	94	80 - 120	99	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9271972 MS: 9271973 MSD: 9271974 **Analyte**	Batch: **H172996AA** (Sample number(s): 9271970-9271981)								
	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**
Vinyl Chloride	5.00	N.D.	5.08	5.07	102	101	63-133	0	30
1,1-Dichloroethene	5.00	N.D.	5.86	5.86	117	117	76-120	0	30
trans-1,2-Dichloroethene	5.00	N.D.	5.70	5.80	114	116	80-120	2	30
cis-1,2-Dichloroethene	5.00	N.D.	5.56	5.74	111	115	80-120	3	30
Trichloroethene	5.00	N.D.	5.76	5.80	115	116	80-120	1	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: RAE98
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH19	Batch: **H172996AA** (Sample number(s): 9271970-9271981)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	5.00	4.75	NA	95	NA	63-133	NA	NA
1,1-Dichloroethene	5.00	5.39	NA	108	NA	76-120	NA	NA
trans-1,2-Dichloroethene	5.00	5.47	NA	109	NA	80-120	NA	NA
cis-1,2-Dichloroethene	5.00	5.54	NA	111	NA	80-120	NA	NA
Trichloroethene	5.00	5.48	NA	110	NA	80-120	NA	NA

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE98___

Lab File ID: hc16t01.d BFB Injection Date: 10/16/17

Instrument ID: HP19094 BFB Injection Time: 10:07

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	22.28
75	30.0 - 60.0% of mass 95	52.78
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.42
173	Less than 2.0% of mass 174	0.87 (0.95)1
174	Greater than 50.0% of mass 95	90.93
175	5.0 - 9.0% of mass 174	6.63 (7.29)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.78 (99.83)1
177	5.0 - 9.0% of mass 176	6.25 (6.89)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	hc16i01.d	10/16/17	10:43
02	VSTD10	hc16i02.d	10/16/17	11:03
03	VSTD5	hc16i03.d	10/16/17	11:23
04	VSTD2	hc16i04.d	10/16/17	11:44
05	VSTD1	hc16i05.d	10/16/17	12:04
06	VSTD.5	hc16i06.d	10/16/17	12:24
07	VSTD.2	hc16i07.d	10/16/17	12:45
08	MDL0.1 - MDL0.1	hc16m01.d	10/16/17	13:05
09	MDL0.4 - MDL0.4	hc16m02.d	10/16/17	13:28
10	LCSHLG	hc16v01.d	10/16/17	13:48

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE98___

Lab File ID: hc26t10.d BFB Injection Date: 10/26/17

Instrument ID: HP19094 BFB Injection Time: 19:51

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	22.91
75	30.0 - 60.0% of mass 95	53.85
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.86
173	Less than 2.0% of mass 174	1.00 (1.17)1
174	Greater than 50.0% of mass 95	84.80
175	5.0 - 9.0% of mass 174	6.69 (7.88)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.76 (98.77)1
177	5.0 - 9.0% of mass 176	4.85 (5.79)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	hc26c10.d	10/26/17	20:32
02	LCSH18	hc26s71.d	10/26/17	20:52
03	LCSH19	hc26s85.d	10/26/17	20:52
04	VBLKH18	hc26b71.d	10/26/17	21:33
05	VBLKH19	hc26b85.d	10/26/17	21:33
06	9264010	hc26s72.d	10/26/17	22:06
07	9268887	hc26s73.d	10/26/17	22:50
08	9272373	hc26s74.d	10/26/17	23:11
09	9268879	hc26s75.d	10/26/17	23:31
10	9268880MS	hc26s76.d	10/26/17	23:51
11	9268881MSD	hc26s77.d	10/27/17	00:12
12	9268877	hc26s78.d	10/27/17	00:32
13	9272367	hc26s79.d	10/27/17	00:52
14	9272369	hc26s80.d	10/27/17	01:13
15	9272371	hc26s82.d	10/27/17	01:53
16	9271980	hc26s86.d	10/27/17	02:34
17	9271981	hc26s87.d	10/27/17	02:54
18	9271972	hc26s88.d	10/27/17	03:14
19	9271973MS	hc26s89.d	10/27/17	03:35
20	9271974MSD	hc26s90.d	10/27/17	03:55
21	9271970	hc26s91.d	10/27/17	04:15
22	9271971	hc26s92.d	10/27/17	04:35

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE98___

Lab File ID: hc26t10.d BFB Injection Date: 10/26/17

Instrument ID: HP19094 BFB Injection Time: 19:51

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	22.91
75	30.0 - 60.0% of mass 95	53.85
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.86
173	Less than 2.0% of mass 174	1.00 (1.17)1
174	Greater than 50.0% of mass 95	84.80
175	5.0 - 9.0% of mass 174	6.69 (7.88)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.76 (98.77)1
177	5.0 - 9.0% of mass 176	4.85 (5.79)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	9271975	hc26s93.d	10/27/17	04:56
24	9271976	hc26s94.d	10/27/17	05:16
25	9271977	hc26s95.d	10/27/17	05:36
26	9271978	hc26s96.d	10/27/17	05:57
27	9271979	hc26s97.d	10/27/17	06:17

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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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.4090	0.4210	0.4834	0.4645	0.4323	0.4378	0.4309	0.4399	6	AVG #
Chloromethane	#0.4971	0.4307	0.4454	0.4305	0.4241	0.4059	0.4068	0.4343	7	AVG #
Vinyl Chloride	#0.4058	0.3891	0.4125	0.4058	0.4017	0.3883	0.3913	0.3992	2	AVG #
1,3-Butadiene	0.4444	0.3893	0.3920	0.3572	0.3528	0.3481	0.3572	0.3773	9	AVG
Bromomethane	#0.2999	0.2732	0.2762	0.2685	0.2672	0.2544	0.2612	0.2715	5	AVG #
Chloroethane	#0.2439	0.2241	0.2385	0.2291	0.2239	0.2153	0.2160	0.2273	5	AVG #
Dichlorofluoromethane	0.7992	0.6636	0.6712	0.6544	0.6419	0.6110	0.6171	0.6655	9	AVG
Trichlorofluoromethane	#0.5200	0.5004	0.5548	0.5176	0.5443	0.5400	0.5453	0.5317	4	AVG #
Ethyl ether	0.1614	0.1724	0.1652	0.1668	0.1759	0.1722	0.1742	0.1697	3	AVG
Freon 123a	0.3509	0.3321	0.3521	0.3193	0.3236	0.3258	0.3250	0.3327	4	AVG
Acrolein	3.2141	3.2155	3.2418	2.9199	3.1235	3.0816	3.1927	3.1413	4	AVG
1,1-Dichloroethene	#0.2079	0.2099	0.2227	0.2065	0.2132	0.2141	0.2149	0.2128	3	AVG #
Freon 113	#0.2196	0.2232	0.2512	0.2335	0.2372	0.2450	0.2486	0.2369	5	AVG #
Acetone	#4.3528	4.5802	4.3105	3.6738	3.7099	3.7669	3.7648	4.0227	9	AVG #
Methyl Iodide	0.4309	0.4215	0.4380	0.4090	0.4180	0.4245	0.4247	0.4238	2	AVG
Carbon Disulfide	#0.7644	0.6804	0.6997	0.6480	0.6496	0.6622	0.6617	0.6809	6	AVG #
Allyl Chloride	0.5407	0.4659	0.4751	0.4597	0.4853	0.4769	0.4752	0.4827	6	AVG
Methyl Acetate	#12.044	11.947	12.801	12.024	11.904	11.541	12.511	12.110	3	AVG #
Methylene Chloride	#0.2743	0.2557	0.2453	0.2291	0.2306	0.2313	0.2326	0.2427	7	AVG #
t-Butyl Alcohol	1.3880	1.5195	1.3492	1.2412	1.3253	1.3937	1.3186	1.3622	6	AVG
Acrylonitrile	3.8031	5.1901	5.1382	4.7118	5.1879	5.1548	5.3588	4.9350	11	AVG
trans-1,2-Dichloroethene	#0.2473	0.2412	0.2509	0.2304	0.2343	0.2395	0.2400	0.2405	3	AVG #
Methyl Tertiary Butyl Ether	#0.5019	0.5335	0.5399	0.5015	0.5290	0.5350	0.5371	0.5254	3	AVG #
n-Hexane	0.3967	0.4123	0.4484	0.4230	0.4195	0.4341	0.4395	0.4248	4	AVG
1,1-Dichloroethane	#0.4964	0.4824	0.5197	0.4778	0.4965	0.4891	0.5016	0.4948	3	AVG #
di-Isopropyl Ether	0.9254	0.9340	0.9769	0.8975	0.9283	0.9310	0.9439	0.9338	3	AVG
2-Chloro-1,3-Butadiene	0.4405	0.4617	0.4801	0.4510	0.4640	0.4750	0.4770	0.4642	3	AVG
Ethyl t-butyl ether	0.7166	0.7477	0.7868	0.7201	0.7483	0.7609	0.7643	0.7492	3	AVG
cis-1,2-Dichloroethene	#0.2773	0.2776	0.2836	0.2668	0.2718	0.2718	0.2765	0.2751	2	AVG #
2,2-Dichloropropane	0.4198	0.4151	0.4347	0.3989	0.4137	0.4203	0.4228	0.4179	3	AVG
2-Butanone	#8.7404	8.3266	8.0741	7.2064	7.6637	7.5055	7.7949	7.9017	7	AVG #
Propionitrile	1.6689	1.8130	1.7986	1.6967	1.9183	1.9116	1.9504	1.8225	6	AVG
Methacrylonitrile	6.2440	6.7500	6.6909	6.4500	6.6757	6.5917	6.9592	6.6231	3	AVG
Bromochloromethane	0.1120	0.1057	0.1064	0.1028	0.1102	0.1085	0.1116	0.1082	3	AVG
Tetrahydrofuran	1.7961	1.8609	1.8609	1.6717	1.7862	1.7444	1.8242	1.7920	4	AVG
Chloroform	#0.4639	0.4874	0.5001	0.4515	0.4769	0.4790	0.4860	0.4778	3	AVG #
1,1,1-Trichloroethane	#0.4139	0.4332	0.4506	0.4246	0.4225	0.4354	0.4358	0.4308	3	AVG #
Cyclohexane	#0.5226	0.5358	0.5473	0.5108	0.5116	0.5257	0.5323	0.5266	2	AVG #
Cyclohexane(2)	#0.3872	0.3853	0.4179	0.4557	0.3860	0.3972	0.4050	0.4049	6	AVG #
Cyclohexane(3)	#0.1489	0.1506	0.1564	0.1436	0.1486	0.1500	0.1528	0.1501	3	AVG #
1,1-Dichloropropene	0.3552	0.3757	0.3927	0.3750	0.3849	0.3891	0.3946	0.3810	4	AVG
Carbon Tetrachloride	#0.3593	0.3560	0.3962	0.3670	0.3754	0.3869	0.3933	0.3763	4	AVG #
Isobutyl Alcohol	0.5972	0.6961	0.5163	0.4728	0.5228	0.5207	0.5298	0.5508	13	AVG
Benzene	#1.0358	1.0520	1.0828	1.0047	1.0293	1.0378	1.0527	1.0421	2	AVG #
1,2-Dichloroethane	#0.3052	0.2902	0.2970	0.2750	0.2864	0.2915	0.2951	0.2915	3	AVG #
t-Amyl methyl ether	0.5806	0.6026	0.6318	0.5857	0.6133	0.6174	0.6252	0.6081	3	AVG
n-Heptane	0.5501	0.4972	0.5035	0.4807	0.4853	0.5087	0.5247	0.5072	5	AVG
n-Butanol	0.3792	0.3727	0.4103	0.3836	0.4296	0.4277	0.4333	0.4052	6	AVG
Trichloroethene	#0.2852	0.2784	0.2898	0.2652	0.2740	0.2783	0.2833	0.2792	3	AVG #
Methylcyclohexane	#0.4212	0.4437	0.4903	0.4843	0.5018	0.4987	0.5192	0.4799	7	AVG #
1,2-Dichloropropane	#0.2555	0.2596	0.2815	0.2602	0.2744	0.2774	0.2846	0.2704	4	AVG #
Methyl Methacrylate	12.891	12.336	13.516	12.449	13.625	13.266	14.031	13.159	5	AVG

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

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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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1116	0.1158	0.1170	0.1068	0.1125	0.1131	0.1152	0.1132	3	AVG
1,4-Dioxane		0.0545	0.0986	0.0925	0.0969	0.0999	0.0999	0.0904	20	AVG
Bromodichloromethane	#0.3074	0.3252	0.3262	0.3121	0.3287	0.3377	0.3483	0.3265	4	AVG #
2-Nitropropane	5.1217	4.4971	4.2223	3.9342	4.3677	4.4296	4.8351	4.4868	9	AVG
cis-1,3-Dichloropropene	#0.3482	0.3687	0.3876	0.3646	0.3850	0.3927	0.4064	0.3790	5	AVG #
4-Methyl-2-Pentanone	#19.072	19.534	19.605	18.334	19.627	19.123	20.227	19.360	3	AVG #
Toluene	#0.9256	0.9914	1.0147	0.9180	0.9349	0.9328	0.9300	0.9496	4	AVG #
trans-1,3-Dichloropropene	#0.4163	0.4305	0.4445	0.4078	0.4423	0.4447	0.4502	0.4337	4	AVG #
Ethyl Methacrylate	0.2904	0.3312	0.3464	0.3144	0.3290	0.3293	0.3276	0.3240	5	AVG
1,1,2-Trichloroethane	#0.2279	0.2229	0.2359	0.2165	0.2163	0.2168	0.2158	0.2217	3	AVG #
Tetrachloroethene	#0.4434	0.4465	0.4723	0.4351	0.4396	0.4445	0.4383	0.4457	3	AVG #
1,3-Dichloropropane	0.3926	0.3927	0.4162	0.3879	0.3938	0.3887	0.3879	0.3943	3	AVG
2-Hexanone	#15.479	14.432	14.077	12.812	13.752	13.312	13.784	13.949	6	AVG #
Dibromochloromethane	#0.2615	0.2951	0.3002	0.2807	0.2912	0.2967	0.3015	0.2896	5	AVG #
1,2-Dibromoethane	#0.2038	0.2025	0.2270	0.2029	0.2107	0.2095	0.2103	0.2095	4	AVG #
Chlorobenzene	#1.0029	1.0289	1.0784	0.9730	0.9963	1.0005	1.0041	1.0120	3	AVG #
1,1,1,2-Tetrachloroethane	0.3374	0.3519	0.3754	0.3418	0.3553	0.3633	0.3697	0.3564	4	AVG
Ethylbenzene	#1.9021	1.9244	1.9952	1.8532	1.8878	1.8934	1.9122	1.9098	2	AVG #
m+p-Xylene	#0.7123	0.7346	0.7451	0.6974	0.7126	0.7143	0.7211	0.7196	2	AVG #
o-Xylene	#0.6903	0.6912	0.7369	0.6825	0.7015	0.7042	0.7192	0.7037	3	AVG #
Styrene	#1.0366	1.0788	1.1413	1.0554	1.1066	1.1217	1.1543	1.0992	4	AVG #
Bromoform	#0.1244	0.1521	0.1616	0.1511	0.1640	0.1700	0.1768	0.1571	11	AVG #
Isopropylbenzene	#1.8079	1.9015	1.9982	1.8378	1.8763	1.8998	1.9031	1.8892	3	AVG #
1,1,2,2-Tetrachloroethane	#0.6179	0.6740	0.6409	0.6074	0.6036	0.5941	0.5785	0.6166	5	AVG #
Bromobenzene	1.0267	1.0166	1.0449	0.9400	0.9303	0.9251	0.9244	0.9726	6	AVG
trans-1,4-Dichloro-2-butene	4.5451	5.6704	5.7014	5.7220	6.4303	6.5434	7.3125	5.9893	15	AVG
1,2,3-Trichloropropane	0.1600	0.1717	0.1567	0.1561	0.1572	0.1515	0.1473	0.1572	5	AVG
n-Propylbenzene	5.2642	5.5542	5.7608	5.2855	5.2076	5.1687	4.9687	5.3157	5	AVG
2-Chlorotoluene	1.0141	1.0577	1.0732	0.9785	0.9617	0.9565	0.9317	0.9962	5	AVG
1,3,5-Trimethylbenzene	3.6517	3.7686	3.9738	3.6396	3.6271	3.5885	3.5337	3.6833	4	AVG
4-Chlorotoluene	1.0406	1.0810	1.0817	0.9937	0.9707	0.9714	0.9583	1.0139	5	AVG
tert-Butylbenzene	0.8051	0.7908	0.8541	0.7825	0.7545	0.7529	0.7420	0.7831	5	AVG
Pentachloroethane	0.5740	0.6117	0.6009	0.6013	0.6264	0.6238	0.6271	0.6093	3	AVG
1,2,4-Trimethylbenzene	3.7500	3.7572	3.9170	3.6359	3.6182	3.6546	3.5639	3.6995	3	AVG
sec-Butylbenzene	4.7476	4.9401	5.1387	4.6991	4.6498	4.6584	4.5520	4.7694	4	AVG
1,3-Dichlorobenzene	#1.8493	1.9809	2.0171	1.8403	1.8512	1.8470	1.8711	1.8938	4	AVG #
p-Isopropyltoluene	3.7667	4.0133	4.2496	3.9452	3.9351	3.9819	3.9632	3.9793	4	AVG
1,4-Dichlorobenzene	#2.1972	2.1005	2.1242	1.8963	1.8421	1.8238	1.8209	1.9721	8	AVG #
1,2,3-Trimethylbenzene	1.6397	1.6386	1.5874	1.5493	1.5513	1.5192	1.5019	1.5696	3	AVG
Benzyl Chloride	0.1846	0.2119	0.2168	0.2157	0.2313	0.2370	0.2413	0.2198	9	AVG
n-Butylbenzene	1.9046	1.8895	2.0348	1.9508	2.0422	2.0743	2.0691	1.9950	4	AVG
1,2-Dichlorobenzene	#1.7096	1.7652	1.8061	1.6605	1.6335	1.6332	1.6053	1.6876	4	AVG #
1,2-Dibromo-3-chloropropane	#2.9397	2.6266	2.8881	2.5311	3.0532	3.0285	3.2164	2.8977	8	AVG #
1,3,5-Trichlorobenzene	1.4297	1.4306	1.4806	1.3648	1.3622	1.3789	1.3788	1.4037	3	AVG
1,2,4-Trichlorobenzene	#1.2781	1.1706	1.2265	1.1159	1.1032	1.1117	1.0875	1.1562	6	AVG #
Hexachlorobutadiene	0.5358	0.5286	0.5708	0.5304	0.5351	0.5534	0.5645	0.5455	3	AVG
Naphthalene	2.2982	2.0601	2.0764	1.8316	1.7049	1.6640	1.5336	1.8813	14	AVG
1,2,3-Trichlorobenzene	1.2244	1.0195	1.0472	0.9500	0.8687	0.8827	0.8212	0.9734	14	AVG
Dibromofluoromethane	0.2394	0.2355	0.2397	0.2416	0.2440	0.2442	0.2459	0.2415	1	AVG
Dibromofluoromethane(2)	0.2446	0.2429	0.2449	0.2479	0.2498	0.2525	0.2531	0.2480	2	AVG
1,2-Dichloroethane-d4	0.0376	0.0376	0.0374	0.0371	0.0394	0.0374	0.0383	0.0378	2	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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(2)	0.2016	0.2024	0.2028	0.2036	0.2100	0.2122	0.2157	0.2069	3	AVG
1,2-Dichloroethane-d4(3)	0.0237	0.0237	0.0232	0.0235	0.0236	0.0245	0.0243	0.0238	2	AVG
Toluene-d8	1.4656	1.4758	1.4802	1.4697	1.4486	1.4367	1.3962	1.4533	2	AVG
Toluene-d8(2)	0.9284	0.9359	0.9367	0.9349	0.9184	0.9023	0.8832	0.9200	2	AVG
4-Bromofluorobenzene	0.4298	0.4318	0.4405	0.4302	0.4473	0.4550	0.4555	0.4414	3	AVG
4-Bromofluorobenzene(2)	0.3788	0.3799	0.3859	0.3818	0.3930	0.3986	0.3996	0.3882	2	AVG

Average %RSD 5

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/17oct16a.b/hc16i01.d	VSTD025
/chem2/HP19094.i/17oct16a.b/hc16i02.d	VSTD010
/chem2/HP19094.i/17oct16a.b/hc16i03.d	VSTD005
/chem2/HP19094.i/17oct16a.b/hc16i04.d	VSTD002
/chem2/HP19094.i/17oct16a.b/hc16i05.d	VSTD001
/chem2/HP19094.i/17oct16a.b/hc16i06.d	VSTD0.5
/chem2/HP19094.i/17oct16a.b/hc16i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hc16i01.d	hc16i02.d	hc16i03.d	hc16i04.d	hc16i05.d	hc16i06.d	hc16i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	89021	93229	89047	86653	86008	83112	79685	86679	5	Yes
Fluorobenzene	2281153	2332021	2294767	2226720	2205975	2183030	2168662	2241761	3	Yes
Chlorobenzene-d5	1641394	1624059	1577860	1510352	1471876	1459268	1470758	1536510	5	Yes
1,4-Dichlorobenzene-d4	759767	729300	696589	632606	609642	599945	602005	661408	10	Yes

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

RT Summary

File ID:

Internal Standard Name	hc16i01.d	hc16i02.d	hc16i03.d	hc16i04.d	hc16i05.d	hc16i06.d	hc16i07.d	Avg. RT
t-Butyl Alcohol-d10	4.245	4.251	4.245	4.257	4.257	4.269	4.263	4.255
Fluorobenzene	7.787	7.787	7.787	7.787	7.787	7.787	7.787	7.787
Chlorobenzene-d5	11.250	11.250	11.250	11.250	11.250	11.250	11.250	11.250
1,4-Dichlorobenzene-d4	13.133	13.133	13.133	13.133	13.133	13.133	13.133	13.133

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

Report generated on 10/16/2017 at 13:53.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 ICV Date: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4399	0.3791	4.31	5	-14	#
# Chloromethane	0.4343	0.3893	4.48	5	-10	#
# Vinyl Chloride	0.3992	0.3707	4.64	5	-7	#
1,3-Butadiene	0.3773	0.3860	5.12	5	2	
# Bromomethane	0.2715	0.2597	4.78	5	-4	#
# Chloroethane	0.2273	0.2103	4.63	5	-7	#
Dichlorofluoromethane	0.6655	0.6148	4.62	5	-8	
# Trichlorofluoromethane	0.5317	0.5256	4.94	5	-1	#
Ethyl ether	0.1697	0.1663	4.90	5	-2	
Freon 123a	0.3327	0.3317	4.98	5	0	
Acrolein	3.1413	3.3261	39.71	37.5	6	
# 1,1-Dichloroethene	0.2128	0.2262	5.32	5	6	#
# Freon 113	0.2369	0.2447	5.16	5	3	#
# Acetone	4.0227	4.0626	37.87	37.5	1	#
Methyl Iodide	0.4238	0.4155	4.90	5	-2	
# Carbon Disulfide	0.6809	0.6541	4.80	5	-4	#
Allyl Chloride	0.4827	0.4539	4.70	5	-6	
# Methyl Acetate	12.1100	12.4342	5.13	5	3	#
# Methylene Chloride	0.2427	0.2443	5.03	5	1	#
t-Butyl Alcohol	1.3622	1.5142	55.58	50	11	
Acrylonitrile	4.9350	5.6167	28.45	25	14	
# trans-1,2-Dichloroethene	0.2405	0.2517	5.23	5	5	#
# Methyl Tertiary Butyl Ether	0.5254	0.5368	5.11	5	2	#
n-Hexane	0.4248	0.4227	4.98	5	0	
# 1,1-Dichloroethane	0.4948	0.5089	5.14	5	3	#
di-Isopropyl Ether	0.9338	0.9645	5.16	5	3	
2-Chloro-1,3-Butadiene	0.4642	0.4659	5.02	5	0	
Ethyl t-butyl ether	0.7492	0.7611	5.08	5	2	
# cis-1,2-Dichloroethene	0.2751	0.2890	5.25	5	5	#
2,2-Dichloropropane	0.4179	0.4320	5.17	5	3	
# 2-Butanone	7.9017	8.2797	39.29	37.5	5	#
Propionitrile	1.8225	1.9930	41.01	37.5	9	
Methacrylonitrile	6.6231	7.5569	42.79	37.5	14	
Bromochloromethane	0.1082	0.1066	4.93	5	-1	
Tetrahydrofuran	1.7920	1.9677	27.45	25	10	
# Chloroform	0.4778	0.4911	5.14	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: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4308	0.4387	5.09	5	2	#
# Cyclohexane	0.5266	0.5011	4.76	5	-5	#
1,1-Dichloropropene	0.3810	0.3888	5.10	5	2	
# Carbon Tetrachloride	0.3763	0.3880	5.16	5	3	#
Isobutyl Alcohol	0.5508	0.5433	123.30	125	-1	
# Benzene	1.0421	1.0693	5.13	5	3	#
# 1,2-Dichloroethane	0.2915	0.2915	5.00	5	0	#
t-Amyl methyl ether	0.6081	0.6192	5.09	5	2	
n-Heptane	0.5072	0.5111	5.04	5	1	
n-Butanol	0.4052	0.4279	264.01	250	6	
# Trichloroethene	0.2792	0.2842	5.09	5	2	#
# Methylcyclohexane	0.4799	0.4922	5.13	5	3	#
# 1,2-Dichloropropane	0.2704	0.2861	5.29	5	6	#
Methyl Methacrylate	13.159	15.2484	5.79	5	16	
Dibromomethane	0.1132	0.1162	5.14	5	3	
1,4-Dioxane	0.0904	0.1132	156.52	125	25	
# Bromodichloromethane	0.3265	0.3406	5.21	5	4	#
2-Nitropropane	4.4868	4.6571	5.19	5	4	
# cis-1,3-Dichloropropene	0.3790	0.3941	5.20	5	4	#
# 4-Methyl-2-Pentanone	19.360	22.0030	28.41	25	14	#
# Toluene	0.9496	0.9624	5.07	5	1	#
# trans-1,3-Dichloropropene	0.4337	0.4322	4.98	5	0	#
Ethyl Methacrylate	0.3240	0.3346	5.16	5	3	
# 1,1,2-Trichloroethane	0.2217	0.2307	5.20	5	4	#
# Tetrachloroethene	0.4457	0.4602	5.16	5	3	#
1,3-Dichloropropane	0.3943	0.4041	5.12	5	2	
# 2-Hexanone	13.949	14.9931	26.87	25	7	#
# Dibromochloromethane	0.2896	0.2951	5.10	5	2	#
# 1,2-Dibromoethane	0.2095	0.2142	5.11	5	2	#
# Chlorobenzene	1.0120	1.0327	5.10	5	2	#
1,1,1,2-Tetrachloroethane	0.3564	0.3675	5.16	5	3	
# Ethylbenzene	1.9098	1.9476	5.10	5	2	#
# m+p-Xylene	0.7196	0.7373	10.25	10	2	#
# o-Xylene	0.7037	0.7099	5.04	5	1	#
# Styrene	1.0992	1.1491	5.23	5	5	#
# Bromoform	0.1571	0.1582	5.03	5	1	#

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: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Isopropylbenzene	1.8892	1.9529	5.17	5	3	#
# 1,1,2,2-Tetrachloroethane	0.6166	0.5804	4.71	5	-6	#
Bromobenzene	0.9726	0.9258	4.76	5	-5	
trans-1,4-Dichloro-2-butene	5.9893	7.5268	31.42	25	26	
1,2,3-Trichloropropane	0.1572	0.1569	4.99	5	0	
n-Propylbenzene	5.3157	5.2009	4.89	5	-2	
2-Chlorotoluene	0.9962	0.9717	4.88	5	-2	
1,3,5-Trimethylbenzene	3.6833	3.5742	4.85	5	-3	
4-Chlorotoluene	1.0139	0.9492	4.68	5	-6	
tert-Butylbenzene	0.7831	0.7552	4.82	5	-4	
Pentachloroethane	0.6093	0.5803	4.76	5	-5	
1,2,4-Trimethylbenzene	3.6995	3.6057	4.87	5	-3	
sec-Butylbenzene	4.7694	4.7358	4.96	5	-1	
# 1,3-Dichlorobenzene	1.8938	1.8270	4.82	5	-4	#
p-Isopropyltoluene	3.9793	3.9998	5.03	5	1	
# 1,4-Dichlorobenzene	1.9721	1.8340	4.65	5	-7	#
1,2,3-Trimethylbenzene	1.5696	1.4958	4.76	5	-5	
Benzyl Chloride	0.2198	0.2226	5.06	5	1	
n-Butylbenzene	1.9950	2.0262	5.08	5	2	
# 1,2-Dichlorobenzene	1.6876	1.6284	4.82	5	-4	#
# 1,2-Dibromo-3-chloropropane	2.8977	3.3514	5.78	5	16	#
1,3,5-Trichlorobenzene	1.4037	1.3760	4.90	5	-2	
# 1,2,4-Trichlorobenzene	1.1562	1.0485	4.53	5	-9	#
Hexachlorobutadiene	0.5455	0.5615	5.15	5	3	
Naphthalene	1.8813	1.5490	4.12	5	-18	
1,2,3-Trichlorobenzene	0.9734	0.8237	4.23	5	-15	
			Average %Drift		5	

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

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/17oct16a.b/hc16i07.d
/chem2/HP19094.i/17oct16a.b/hc16i06.d
/chem2/HP19094.i/17oct16a.b/hc16i05.d
/chem2/HP19094.i/17oct16a.b/hc16i04.d
/chem2/HP19094.i/17oct16a.b/hc16i03.d
/chem2/HP19094.i/17oct16a.b/hc16i02.d
/chem2/HP19094.i/17oct16a.b/hc16i01.d

File /chem2/HP19094.i/17oct16a.b/hc16i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/17oct26b.b/hc26c10.d

RT Summary

Internal Standard Name	File ID: hc26c10.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.245	4.251	Yes
Fluorobenzene	7.787	7.787	Yes
Chlorobenzene-d5	11.250	11.250	Yes
1,4-Dichlorobenzene-d4	13.133	13.133	Yes

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

Area Summary

Internal Standard Name	File ID: hc26c10.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	79921	93229	46614	186458	Yes
Fluorobenzene	2456542	2332021	1166010	4664042	Yes
Chlorobenzene-d5	1833496	1624059	812030	3248118	Yes
1,4-Dichlorobenzene-d4	845191	729300	364650	1458600	Yes

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

Comments: _____

report generated on 10/26/2017 at 20:55

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 Calibration Date: 10/26/17 Time: 20:32

Lab File ID: hc26c10.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4399	0.5133	11.67	10	17	#
# Chloromethane	0.4343	0.4510	10.38	10	4	#
# Vinyl Chloride	0.3992	0.4505	11.28	10	13	#
1,3-Butadiene	0.3773	0.8985	23.81	10	138	<-
# Bromomethane	0.2715	0.3073	11.32	10	13	#
# Chloroethane	0.2273	0.2627	11.56	10	16	#
Dichlorofluoromethane	0.6655	0.7203	10.82	10	8	
# Trichlorofluoromethane	0.5317	0.5792	10.89	10	9	#
Ethyl ether	0.1697	0.1758	10.36	10	4	
Freon 123a	0.3327	0.3622	10.89	10	9	
Acrolein	3.1413	2.2379	356.21	500	-29	<-
# 1,1-Dichloroethene	0.2128	0.2406	11.31	10	13	#
# Freon 113	0.2369	0.2859	12.07	10	21	#<-
# Acetone	4.0227	4.2380	105.35	100	5	#
Methyl Iodide	0.4238	0.4869	11.49	10	15	
# Carbon Disulfide	0.6809	0.6762	9.93	10	-1	#
Allyl Chloride	0.4827	0.4143	8.58	10	-14	
# Methyl Acetate	12.1100	13.5314	11.17	10	12	#
# Methylene Chloride	0.2427	0.2579	10.63	10	6	#
t-Butyl Alcohol	1.3622	1.2172	178.71	200	-11	
Acrylonitrile	4.9350	6.0974	61.78	50	24	<-
# trans-1,2-Dichloroethene	0.2405	0.2748	11.42	10	14	#
# Methyl Tertiary Butyl Ether	0.5254	0.5739	10.92	10	9	#
n-Hexane	0.4248	0.4525	10.65	10	7	
# 1,1-Dichloroethane	0.4948	0.5420	10.95	10	10	#
di-Isopropyl Ether	0.9338	0.9563	10.24	10	2	
2-Chloro-1,3-Butadiene	0.4642	0.5168	11.13	10	11	
Ethyl t-butyl ether	0.7492	0.7962	10.63	10	6	
# cis-1,2-Dichloroethene	0.2751	0.3162	11.49	10	15	#
2,2-Dichloropropane	0.4179	0.4437	10.62	10	6	
# 2-Butanone	7.9017	8.9429	113.18	100	13	#
Propionitrile	1.8225	2.2120	242.74	200	21	<-
Methacrylonitrile	6.6231	8.6189	130.13	100	30	<-
Bromochloromethane	0.1082	0.1233	11.40	10	14	
Tetrahydrofuran	1.7920	2.2370	124.83	100	25	<-
# Chloroform	0.4778	0.5613	11.75	10	17	#

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: 10/26/17 Time: 20:32

Lab File ID: hc26c10.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4308	0.4947	11.48	10	15	#
# Cyclohexane	0.5266	0.5658	10.75	10	7	#
# Cyclohexane(2)	0.4049	0.4543	11.22	10	12	#
# Cyclohexane(3)	0.1501	0.1659	11.05	10	10	#
1,1-Dichloropropene	0.3810	0.4395	11.53	10	15	
# Carbon Tetrachloride	0.3763	0.4344	11.54	10	15	#
Isobutyl Alcohol	0.5508	0.5119	464.65	500	-7	
# Benzene	1.0421	1.1905	11.42	10	14	#
# 1,2-Dichloroethane	0.2915	0.3392	11.64	10	16	#
t-Amyl methyl ether	0.6081	0.6616	10.88	10	9	
n-Heptane	0.5072	0.5160	10.17	10	2	
n-Butanol	0.4052	0.3843	948.46	1000	-5	
# Trichloroethene	0.2792	0.3342	11.97	10	20	#
# Methylcyclohexane	0.4799	0.5455	11.37	10	14	#
# 1,2-Dichloropropane	0.2704	0.3045	11.26	10	13	#
Methyl Methacrylate	13.1590	17.3357	13.17	10	32	<-
Dibromomethane	0.1132	0.1339	11.83	10	18	
1,4-Dioxane	0.0904	0.0913	504.97	500	1	
# Bromodichloromethane	0.3265	0.3737	11.44	10	14	#
2-Nitropropane	4.4868	6.0617	135.10	100	35	<-
# cis-1,3-Dichloropropene	0.3790	0.4018	10.60	10	6	#
# 4-Methyl-2-Pentanone	19.3600	24.5173	126.64	100	27	#<-
# Toluene	0.9496	1.0344	10.89	10	9	#
# trans-1,3-Dichloropropene	0.4337	0.4132	9.53	10	-5	#
Ethyl Methacrylate	0.3240	0.3249	10.03	10	0	
# 1,1,2-Trichloroethane	0.2217	0.2379	10.73	10	7	#
# Tetrachloroethene	0.4457	0.5129	11.51	10	15	#
1,3-Dichloropropane	0.3943	0.4183	10.61	10	6	
# 2-Hexanone	13.9490	16.9032	121.17	100	21	#<-
# Dibromochloromethane	0.2896	0.2967	10.25	10	2	#
# 1,2-Dibromoethane	0.2095	0.2281	10.89	10	9	#
# Chlorobenzene	1.0120	1.1207	11.07	10	11	#
1,1,1,2-Tetrachloroethane	0.3564	0.3945	11.07	10	11	
# Ethylbenzene	1.9098	2.1230	11.12	10	11	#
# m+p-Xylene	0.7196	0.8051	22.38	20	12	#
# o-Xylene	0.7037	0.7896	11.22	10	12	#

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: 10/26/17 Time: 20:32

Lab File ID: hc26c10.d Init. Calib. Date(s): 10/16/17 10/16/17

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

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Styrene	1.0992	1.2472	11.35	10	13	#
#	Bromoform	0.1571	0.1551	9.87	10	-1	#
#	Isopropylbenzene	1.8892	2.1556	11.41	10	14	#
#	1,1,2,2-Tetrachloroethane	0.6166	0.6190	10.04	10	0	#
	Bromobenzene	0.9726	1.0358	10.65	10	7	
	trans-1,4-Dichloro-2-butene	5.9893	4.8172	80.43	100	-20	
	1,2,3-Trichloropropane	0.1572	0.1646	10.47	10	5	
	n-Propylbenzene	5.3157	5.6453	10.62	10	6	
	2-Chlorotoluene	0.9962	1.0721	10.76	10	8	
	1,3,5-Trimethylbenzene	3.6833	3.9848	10.82	10	8	
	4-Chlorotoluene	1.0139	1.0862	10.71	10	7	
	tert-Butylbenzene	0.7831	0.8908	11.37	10	14	
	Pentachloroethane	0.6093	0.6157	10.11	10	1	
	1,2,4-Trimethylbenzene	3.6995	3.9855	10.77	10	8	
	sec-Butylbenzene	4.7694	5.1646	10.83	10	8	
#	1,3-Dichlorobenzene	1.8938	2.0919	11.05	10	10	#
	p-Isopropyltoluene	3.9793	4.4336	11.14	10	11	
#	1,4-Dichlorobenzene	1.9721	2.0489	10.39	10	4	#
	1,2,3-Trimethylbenzene	1.5696	1.6334	10.41	10	4	
	Benzyl Chloride	0.2198	0.2203	10.02	10	0	
	n-Butylbenzene	1.9950	2.2336	11.20	10	12	
#	1,2-Dichlorobenzene	1.6876	1.8458	10.94	10	9	#
#	1,2-Dibromo-3-chloropropane	2.8977	4.0315	13.91	10	39	#<-
	1,3,5-Trichlorobenzene	1.4037	1.5110	10.76	10	8	
#	1,2,4-Trichlorobenzene	1.1562	1.1906	10.30	10	3	#
	Hexachlorobutadiene	0.5455	0.5619	10.30	10	3	
	Naphthalene	1.8813	1.6895	8.98	10	-10	
	1,2,3-Trichlorobenzene	0.9734	0.9090	9.34	10	-7	
	Dibromofluoromethane	0.2415	0.2466	10.21	10	2	
	Dibromofluoromethane(2)	0.2480	0.2542	10.25	10	3	
	1,2-Dichloroethane-d4	0.0378	0.0380	10.05	10	0	
	1,2-Dichloroethane-d4(2)	0.2069	0.2137	10.33	10	3	
	1,2-Dichloroethane-d4(3)	0.0238	0.0243	10.21	10	2	
	Toluene-d8	1.4533	1.3727	9.45	10	-6	
	Toluene-d8(2)	0.9200	0.8740	9.50	10	-5	

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: 10/26/17 Time: 20:32

Lab File ID: hc26c10.d Init. Calib. Date(s): 10/16/17 10/16/17

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

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene	0.4414	0.4376	9.91	10	-1
4-Bromofluorobenzene(2)	0.3882	0.4036	10.40	10	4

Average %Drift 12

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.:_____ SDG No.:_RAE98___

Lab File ID (Standard): hc26c10.d Date Analyzed: 10/26/17

Instrument ID: HP19094 Time Analyzed: 20:32

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	79921	4.245	2456542	7.787	1833496	11.250	845191	13.133
UPPER LIMIT	159842	4.745	4913084	8.287	3666992	11.750	1690382	13.633
LOWER LIMIT	39960	3.745	1228271	7.287	916748	10.750	422596	12.633
LAB SAMPLE ID								
01 LCSH18	77329	4.287	2487376	7.787	1791490	11.249	812148	13.133
02 LCSH19	77329	4.287	2487376	7.787	1791490	11.249	812148	13.133
03 VBLKH18	58289	4.245	2326981	7.787	1614714	11.250	659584	13.133
04 VBLKH19	58289	4.245	2326981	7.787	1614714	11.250	659584	13.133
05 9264010	54765	4.275	2473619	7.781	1669909	11.250	684561	13.139
06 9268887	41681	4.306	2265055	7.787	1557597	11.250	632527	13.140
07 9272373	62345	4.227	2275604	7.787	1548810	11.250	621851	13.140
08 9268879	68481	4.239	2303473	7.787	1574818	11.249	650708	13.139
09 9268880MS	63058	4.226	2412447	7.781	1716154	11.249	765360	13.133
10 9268881MSD	82654	4.251	2516575	7.787	1808360	11.250	820585	13.133
11 9268877	75498	4.257	2344702	7.787	1643051	11.250	679794	13.139
12 9272367	77136	4.227	2386559	7.787	1662751	11.250	660471	13.133
13 9272369	73235	4.220	2294021	7.781	1598282	11.250	652106	13.139
14 9272371	73997	4.245	2252790	7.787	1550520	11.249	637287	13.139
15 9271980	81754	4.257	2221477	7.787	1525947	11.250	618673	13.139
16 9271981	76228	4.275	2258160	7.787	1542166	11.250	634375	13.139
17 9271972	77387	4.275	2303550	7.787	1614365	11.249	664824	13.139
18 9271973MS	72866	4.238	2417187	7.787	1730810	11.249	771315	13.133
19 9271974MSD	68498	4.232	2438596	7.787	1735182	11.250	768095	13.133
20 9271970	66028	4.269	2389729	7.781	1661334	11.250	669407	13.139
21 9271971	72730	4.281	2306225	7.787	1600721	11.250	648506	13.133
22 9271975	79514	4.239	2306327	7.787	1590294	11.250	644963	13.133

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE98___

Lab File ID (Standard): hc26c10.d Date Analyzed: 10/26/17

Instrument ID: HP19094 Time Analyzed: 20:32

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	79921	4.245	2456542	7.787	1833496	11.250	845191	13.133
UPPER LIMIT	159842	4.745	4913084	8.287	3666992	11.750	1690382	13.633
LOWER LIMIT	39960	3.745	1228271	7.287	916748	10.750	422596	12.633
LAB SAMPLE ID								
23 9271976	70120	4.251	2256870	7.787	1562224	11.250	652499	13.140
24 9271977	56297	4.269	2311035	7.787	1582200	11.250	631433	13.140
25 9271978	50013	4.306	2236600	7.787	1533711	11.249	608252	13.139
26 9271979	71787	4.263	2288145	7.787	1557359	11.250	628032	13.139

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

Fraction: Volatiles by GC/MS

11996: RAAP Unit 5 "J" list Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.1	1.0	ug/l
1,1-Dichloroethene	0.4	1.0	ug/l
trans-1,2-Dichloroethene	0.8	1.0	ug/l
cis-1,2-Dichloroethene	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s91.d Injection date and time: **27-OCT-2017 04:15**
Data file Sample Info. Line: R9801;9271970;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 11:43 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.269	(-0.024)	440	65	66028	(-17)	50.00	
63) Fluorobenzene	7.781	(0.006)	1016	96	2389729	(-3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1661334	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	669407	(-21)	10.00	

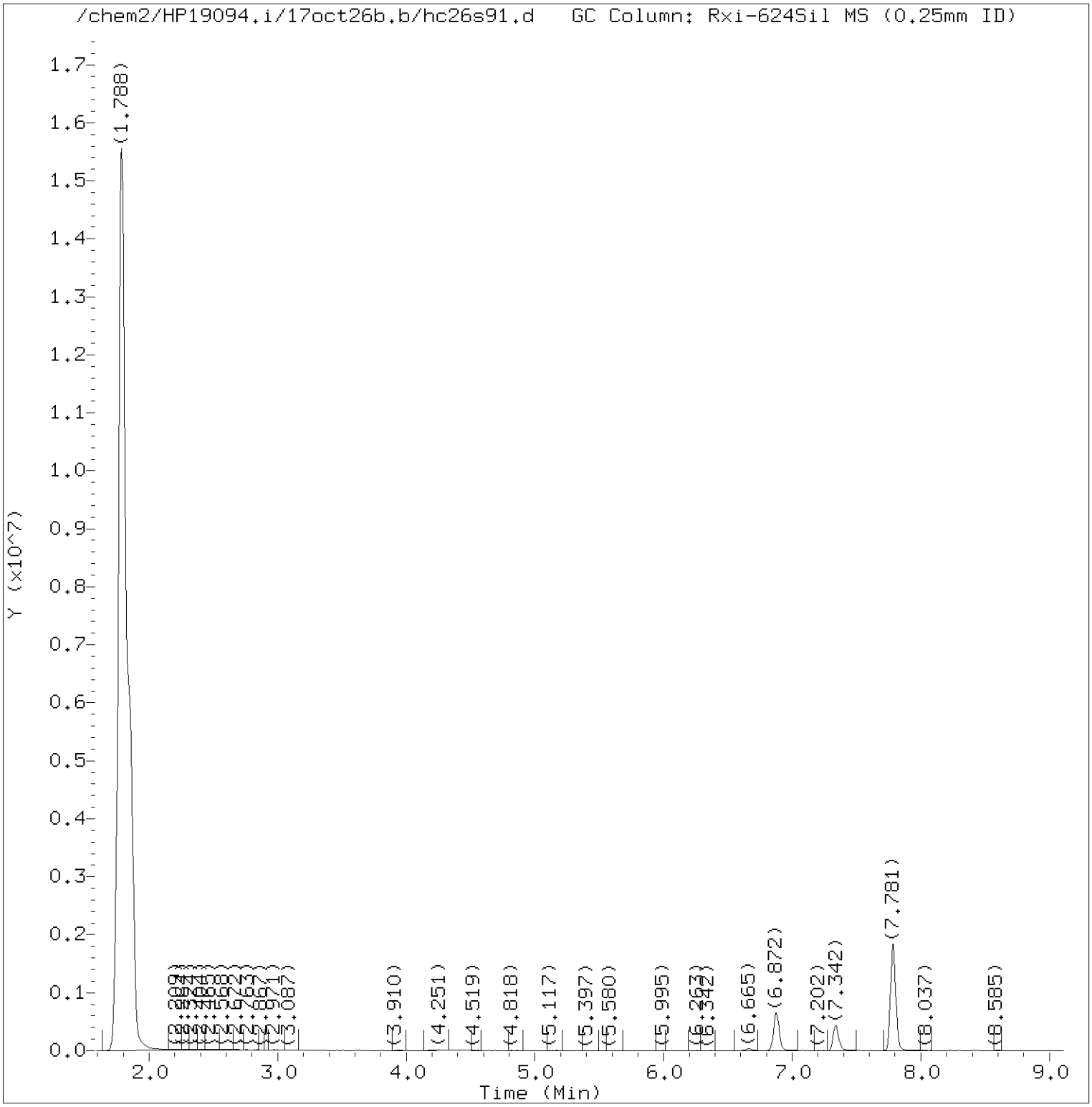
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.000)	113	578302	10.021	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(-0.001)	102	87384	9.669	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2362957	9.787	98%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	679119	9.260	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

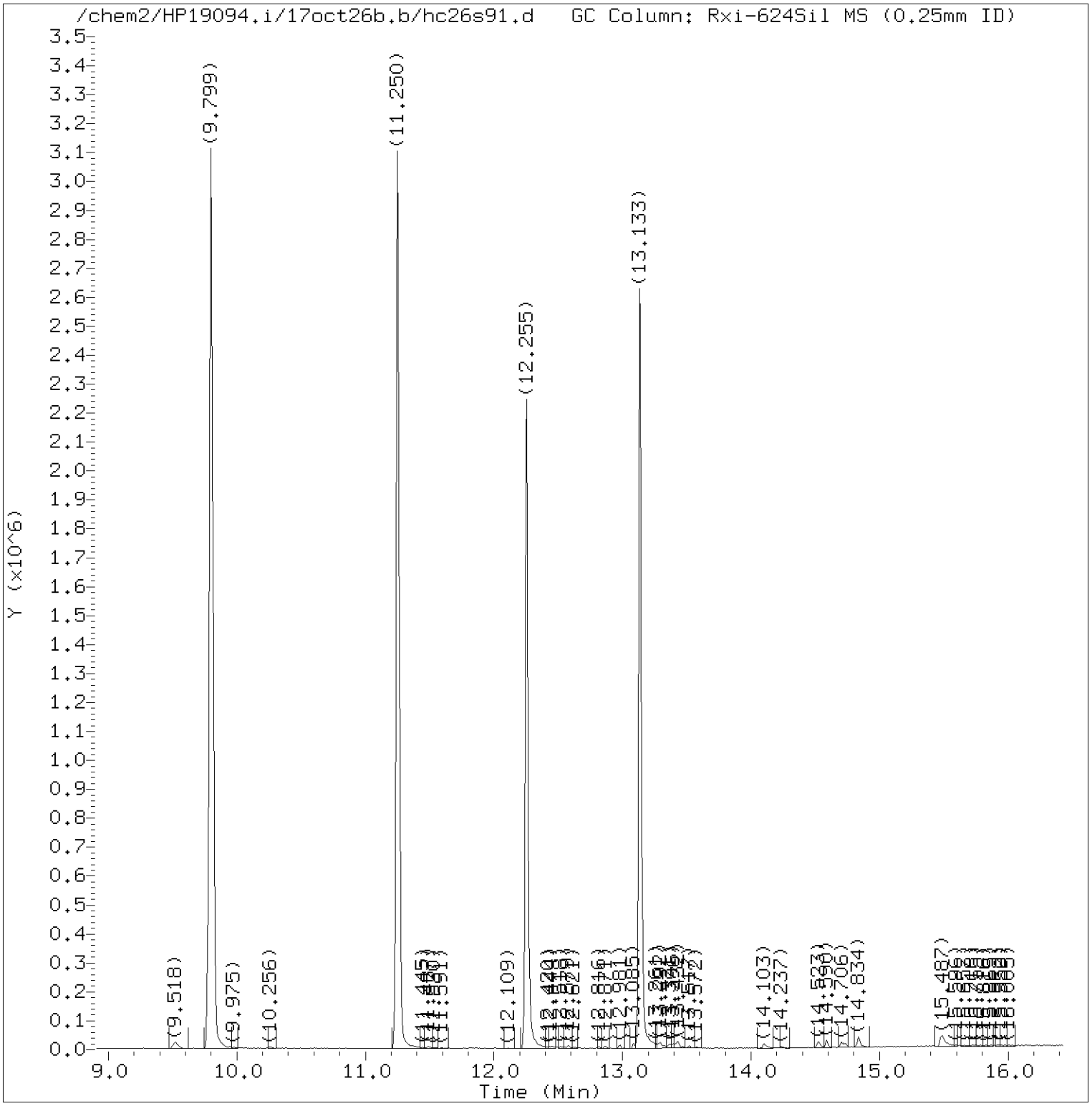
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s91.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:15 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 11:43 kas02648

Sample Name: R9801 Lab Sample ID: 9271970

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s91.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:15 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 11:43 kas02648

Sample Name: R9801 Lab Sample ID: 9271970

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s91.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:15 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 11:43 kas02648

Sample Name: R9801 Lab Sample ID: 9271970

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	66028	50.000
50)$Dibromofluoromethane	(2)	6.872	113	578302	10.021
57)$1,2-Dichloroethane-d4	(2)	7.342	102	87384	9.669
63)*Fluorobenzene	(2)	7.781	96	2389729	10.000
82)$Toluene-d8	(3)	9.799	98	2362957	9.787
97)*Chlorobenzene-d5	(3)	11.250	117	1661334	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	679119	9.260
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	669407	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

R9802 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9271971

Data file: /chem2/HP19094.i/17oct26b.b/hc26s92.d Injection date and time: **27-OCT-2017 04:35**
Data file Sample Info. Line: R9802;9271971;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 04:53 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.281	(-0.037)	442	65	72730	(-9)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2306225	(-6)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1600721	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	648506	(-23)	10.00	

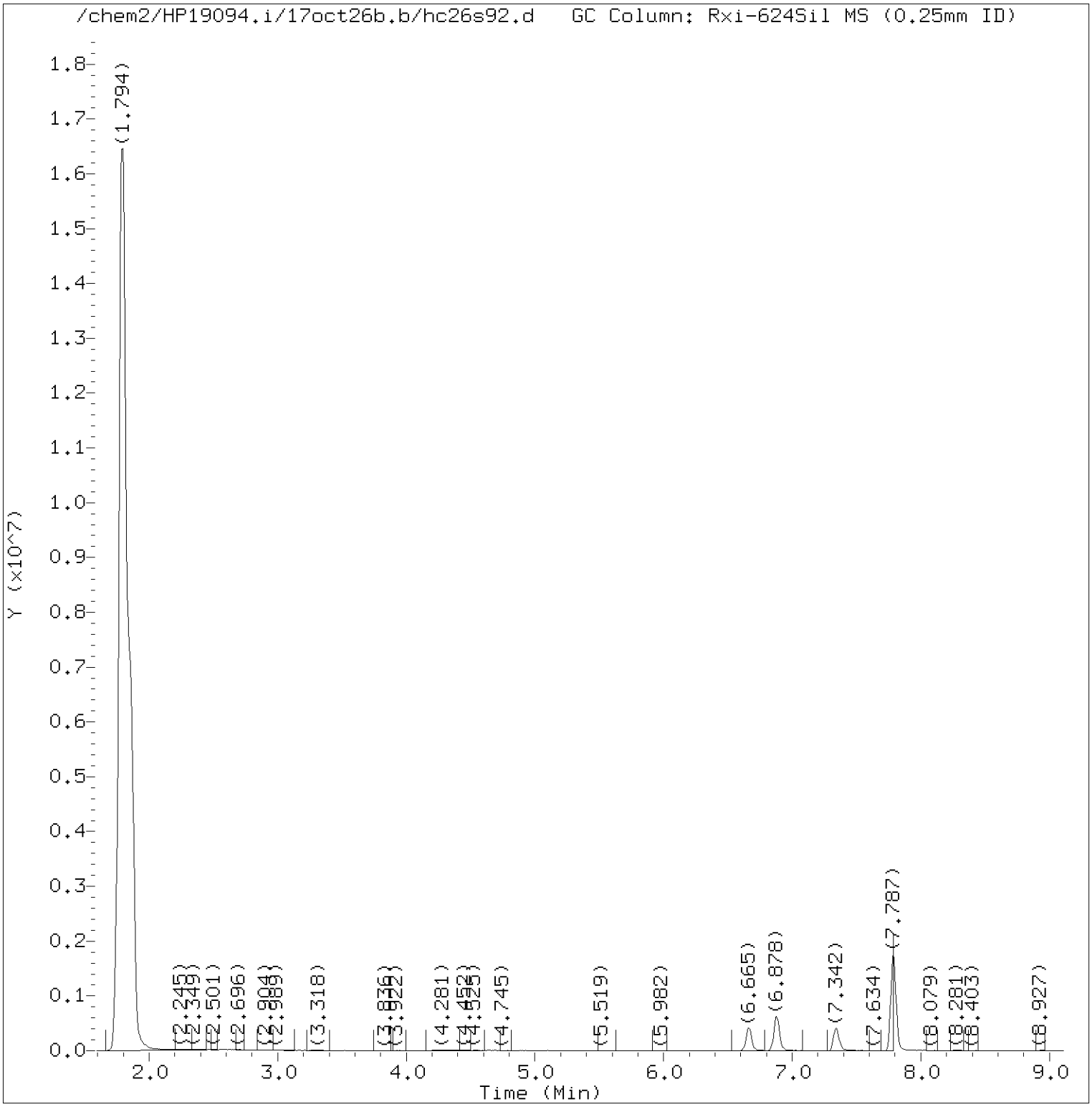
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	556385	9.990	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.001)	102	88615	10.161	102%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2302279	9.897	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	661996	9.368	94%		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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

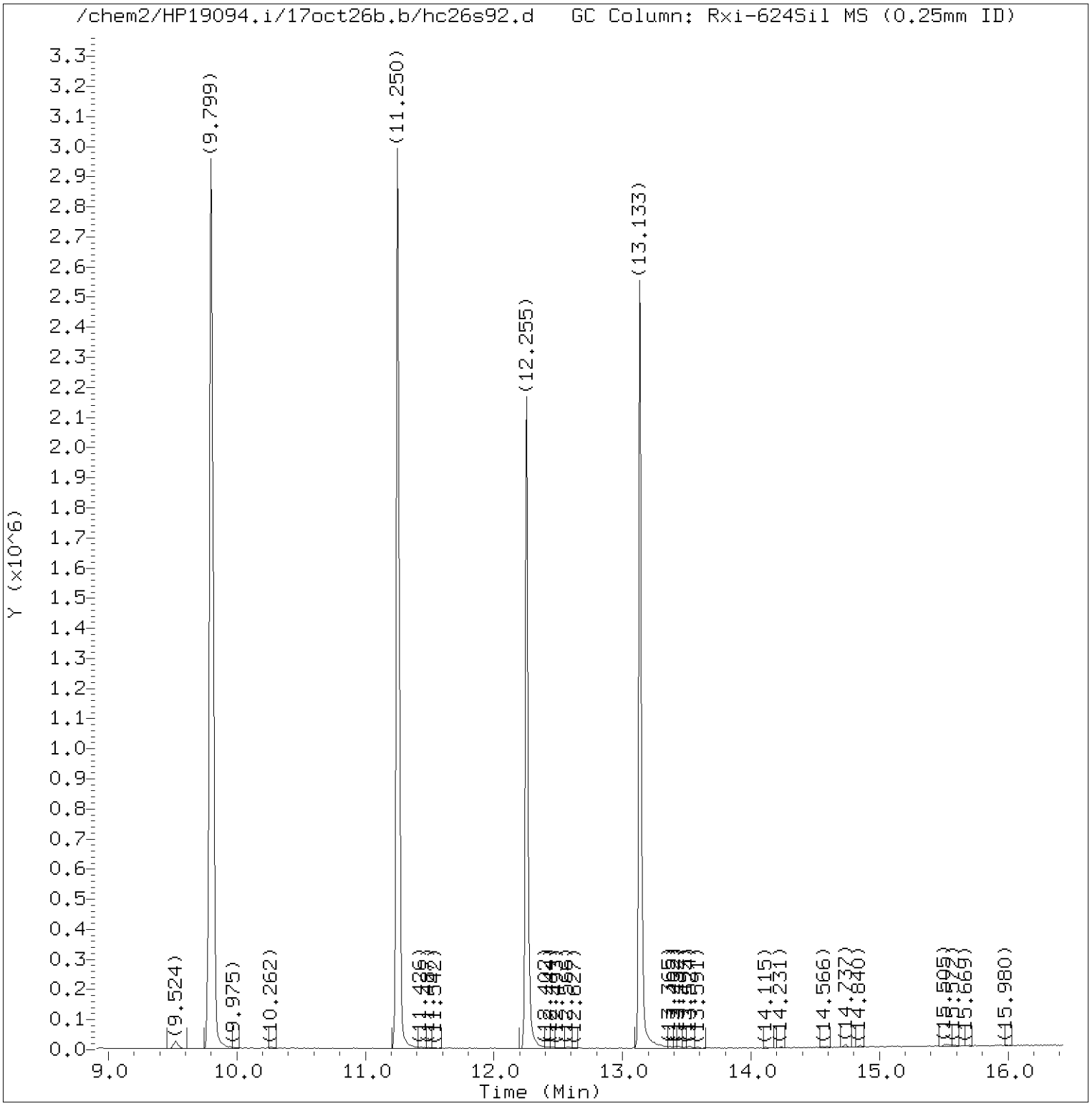
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s92.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:53 Automation

Sample Name: R9802 Lab Sample ID: 9271971

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s92.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:53 Automation

Sample Name: R9802 Lab Sample ID: 9271971

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s92.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:53 Automation

Sample Name: R9802 Lab Sample ID: 9271971

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.281	65	72730	50.000
50)$Dibromofluoromethane	(2)	6.878	113	556385	9.990
57)$1,2-Dichloroethane-d4	(2)	7.348	102	88615	10.161
63)*Fluorobenzene	(2)	7.787	96	2306225	10.000
82)$Toluene-d8	(3)	9.799	98	2302279	9.897
97)*Chlorobenzene-d5	(3)	11.250	117	1600721	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	661996	9.368
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	648506	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s88.d Injection date and time: **27-OCT-2017 03:14**
Data file Sample Info. Line: R9803;9271972;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 03:32 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.275	(-0.030)	441	65	77387	(-3)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2303550	(-6)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1614365	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	664824	(-21)	10.00	

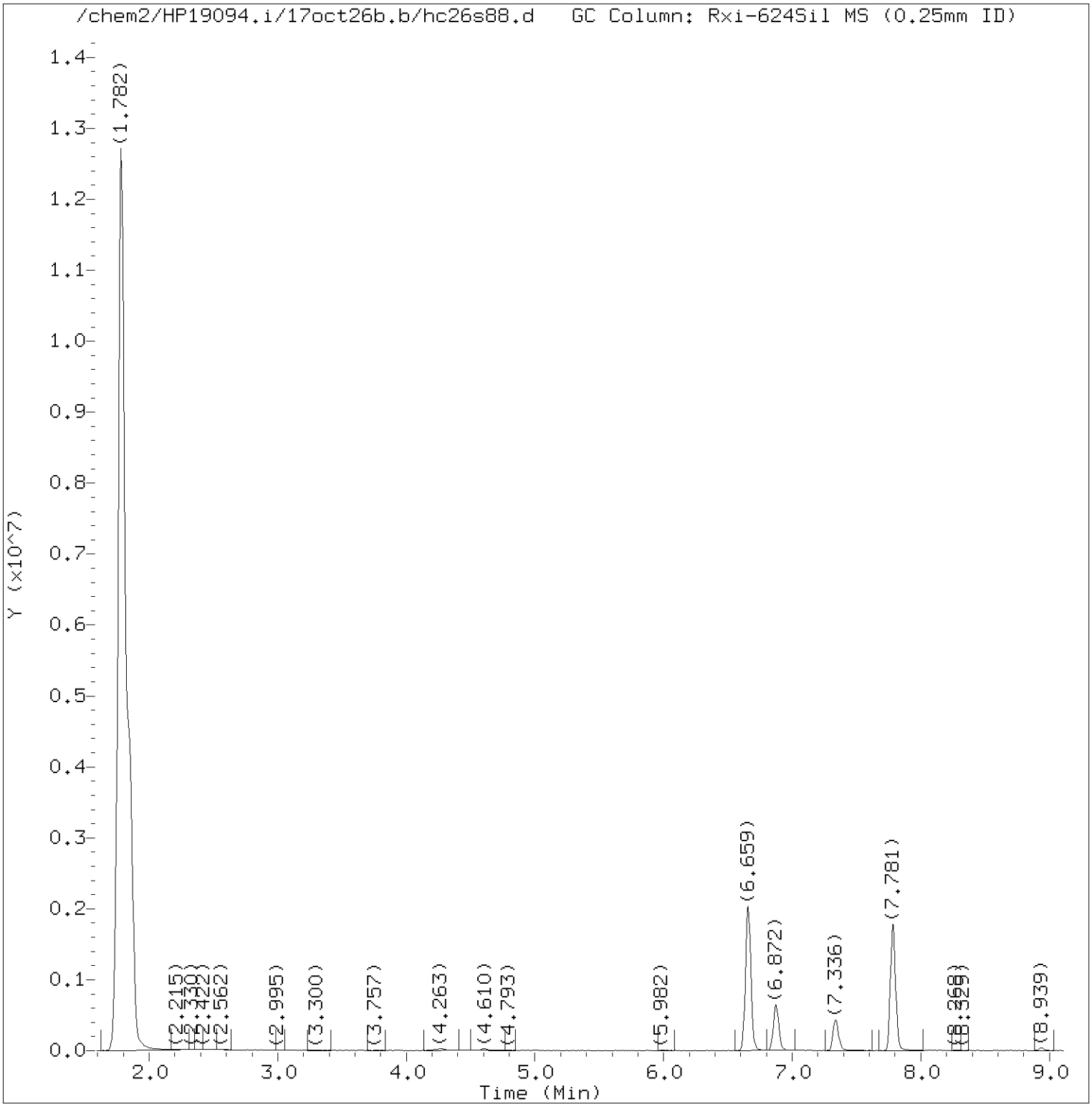
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	559877	10.065	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.001)	102	85370	9.800	98%		80 - 120
82) Toluene-d8	(3)	9.798	(0.000)	98	2303049	9.816	98%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	664582	9.325	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

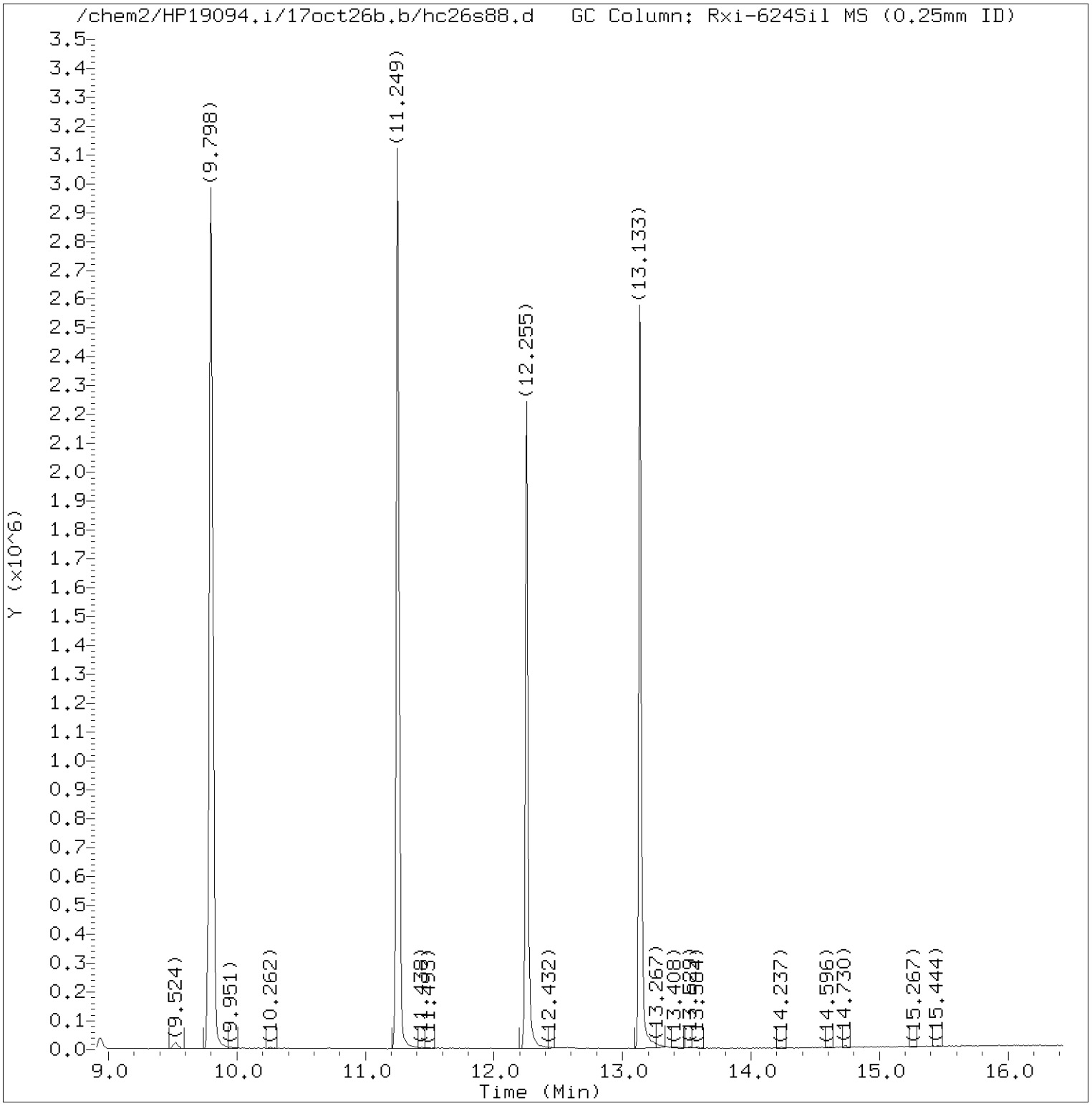
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s88.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:14 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:32 Automation

Sample Name: R9803 Lab Sample ID: 9271972

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s88.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:14 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:32 Automation

Sample Name: R9803 Lab Sample ID: 9271972

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s88.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:14 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:32 Automation

Sample Name: R9803 Lab Sample ID: 9271972

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	77387	50.000
50)$Dibromofluoromethane	(2)	6.878	113	559877	10.065
57)$1,2-Dichloroethane-d4	(2)	7.336	102	85370	9.800
63)*Fluorobenzene	(2)	7.787	96	2303550	10.000
82)$Toluene-d8	(3)	9.798	98	2303049	9.816
97)*Chlorobenzene-d5	(3)	11.249	117	1614365	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	664582	9.325
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	664824	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s93.d Injection date and time: **27-OCT-2017 04:56**
Data file Sample Info. Line: R9804;9271975;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 05:14 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.239	(0.006)	435	65	79514	(-1)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2306327	(-6)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1590294	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	644963	(-24)	10.00	

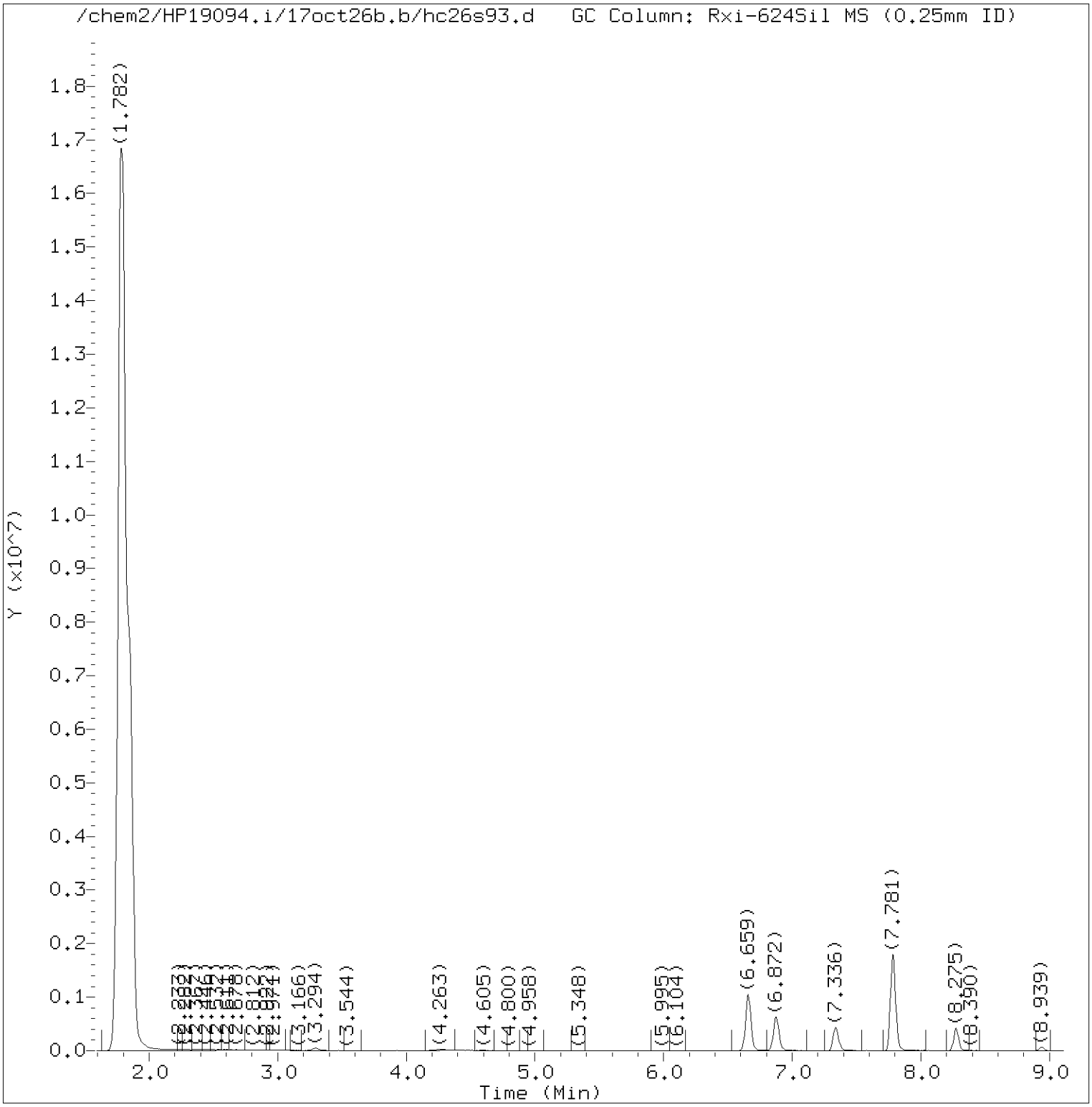
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.001)	113	558712	10.032	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.001)	102	84724	9.714	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2301604	9.959	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	647447	9.222	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.274	(-0.000)	95	192609	2.991	2.99			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

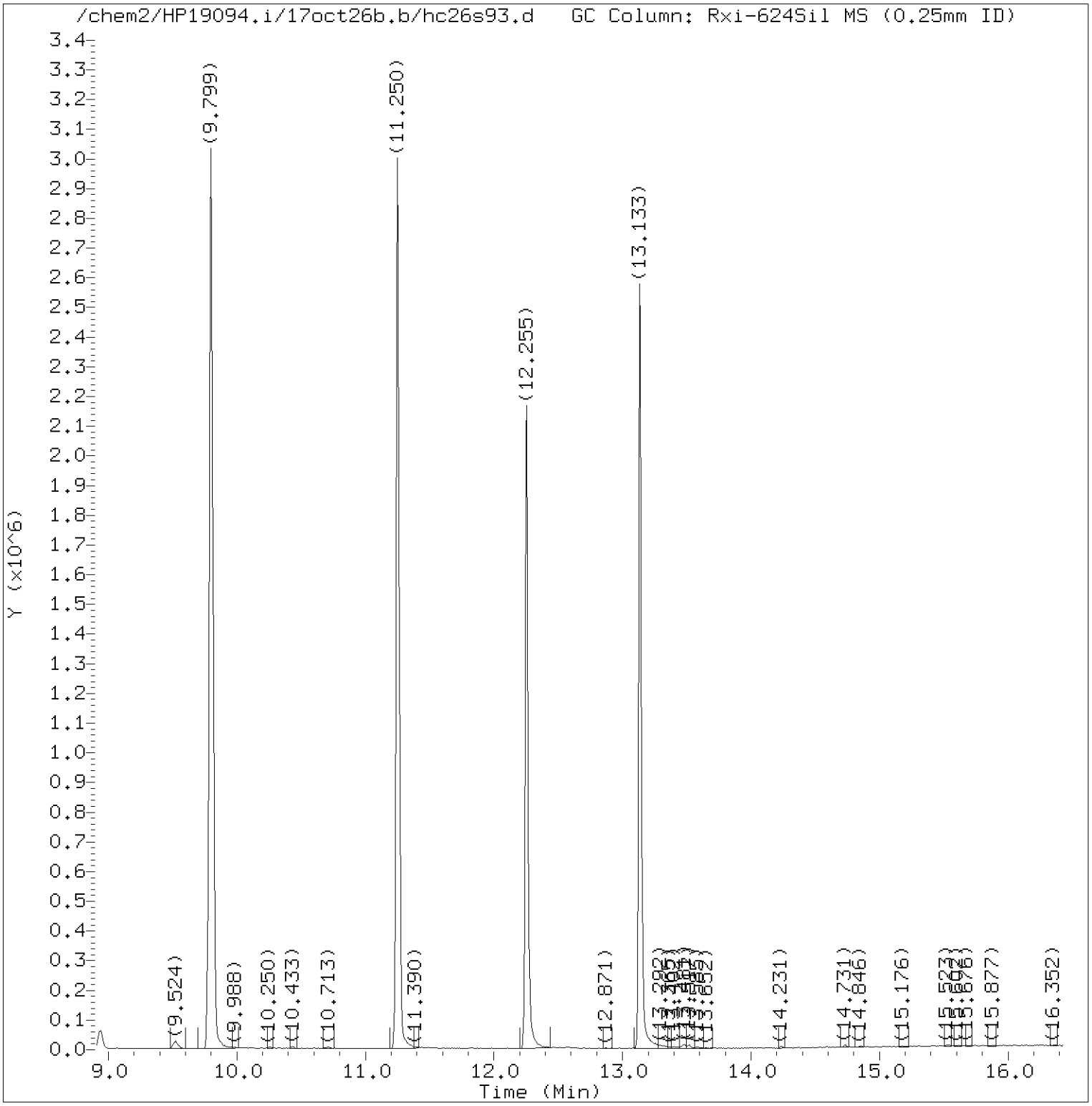
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s93.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:56 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:14 Automation

Sample Name: R9804 Lab Sample ID: 9271975

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s93.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:56 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:14 Automation

Sample Name: R9804 Lab Sample ID: 9271975

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s93.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:56 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:14 Automation

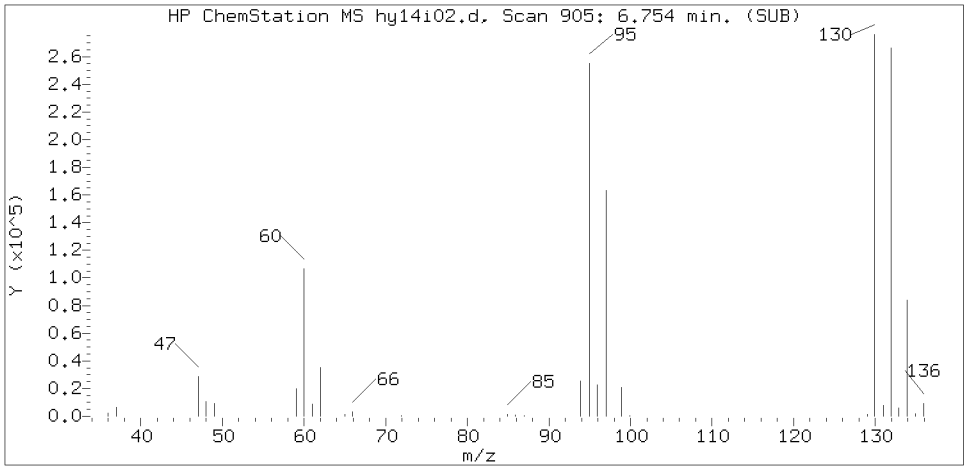
Sample Name: R9804 Lab Sample ID: 9271975

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.239	65	79514	50.000
50)$Dibromofluoromethane	(2)	6.872	113	558712	10.032
57)$1,2-Dichloroethane-d4	(2)	7.336	102	84724	9.714
63)*Fluorobenzene	(2)	7.787	96	2306327	10.000
67) Trichloroethene	(2)	8.275	95	192609	2.991
82)$Toluene-d8	(3)	9.799	98	2301604	9.959
97)*Chlorobenzene-d5	(3)	11.250	117	1590294	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	647447	9.222
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	644963	10.000

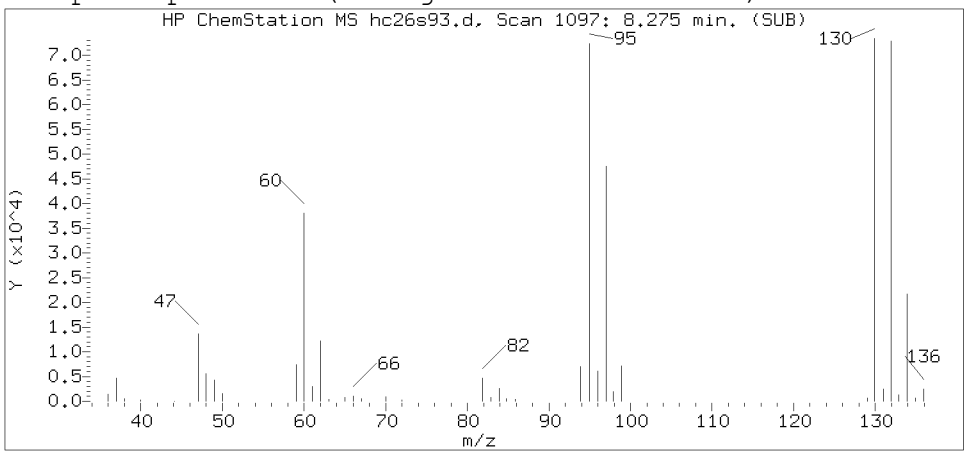
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

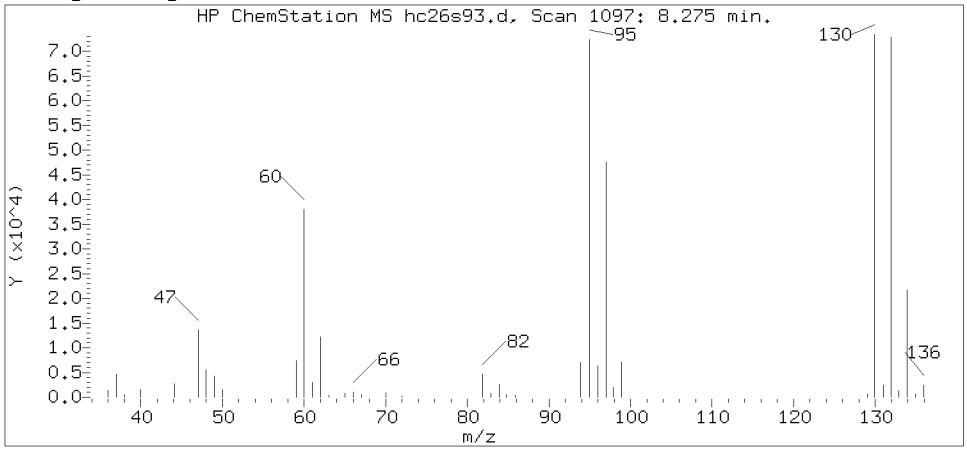
Reference Standard Spectrum for Trichloroethene

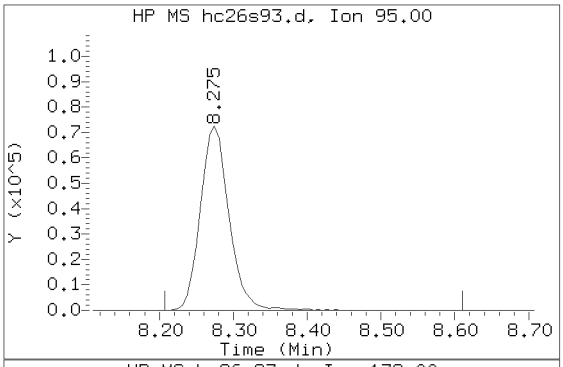


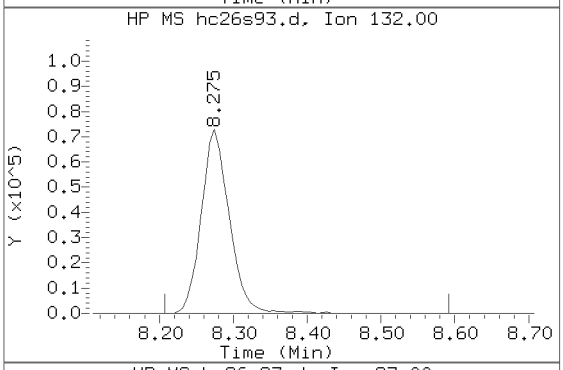
Sample Spectrum (Background Subtracted)

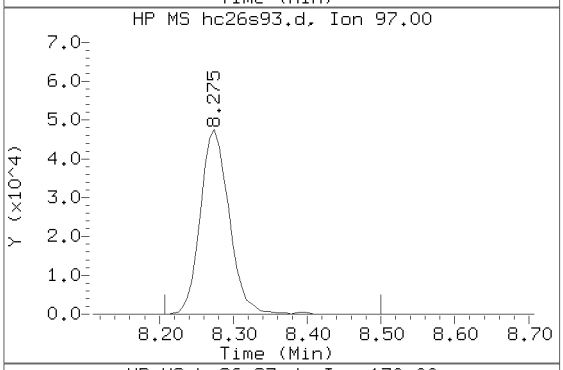


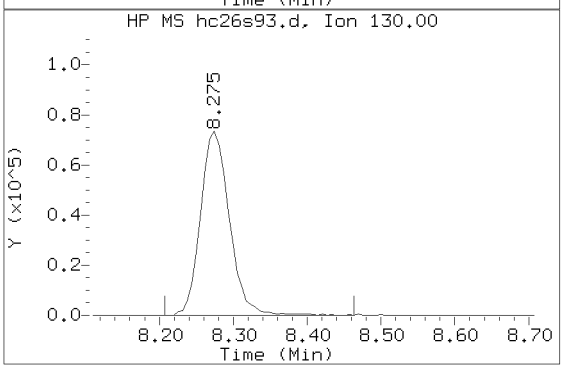
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct26b.b/hc26s93.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 04:56 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:14 Automation

Sample Name: R9804 Lab Sample ID: 9271975

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.275
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 192609
On-Column Amount (ng) : 2.9915

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

R9805 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9271976

Data file: /chem2/HP19094.i/17oct26b.b/hc26s94.d Injection date and time: **27-OCT-2017 05:16**
Data file Sample Info. Line: R9805;9271976;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 05:34 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.251	(-0.006)	437	65	70120	(-12)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2256870	(-8)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1562224	(-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140	(-0.006)	1895	152	652499	(-23)	10.00	

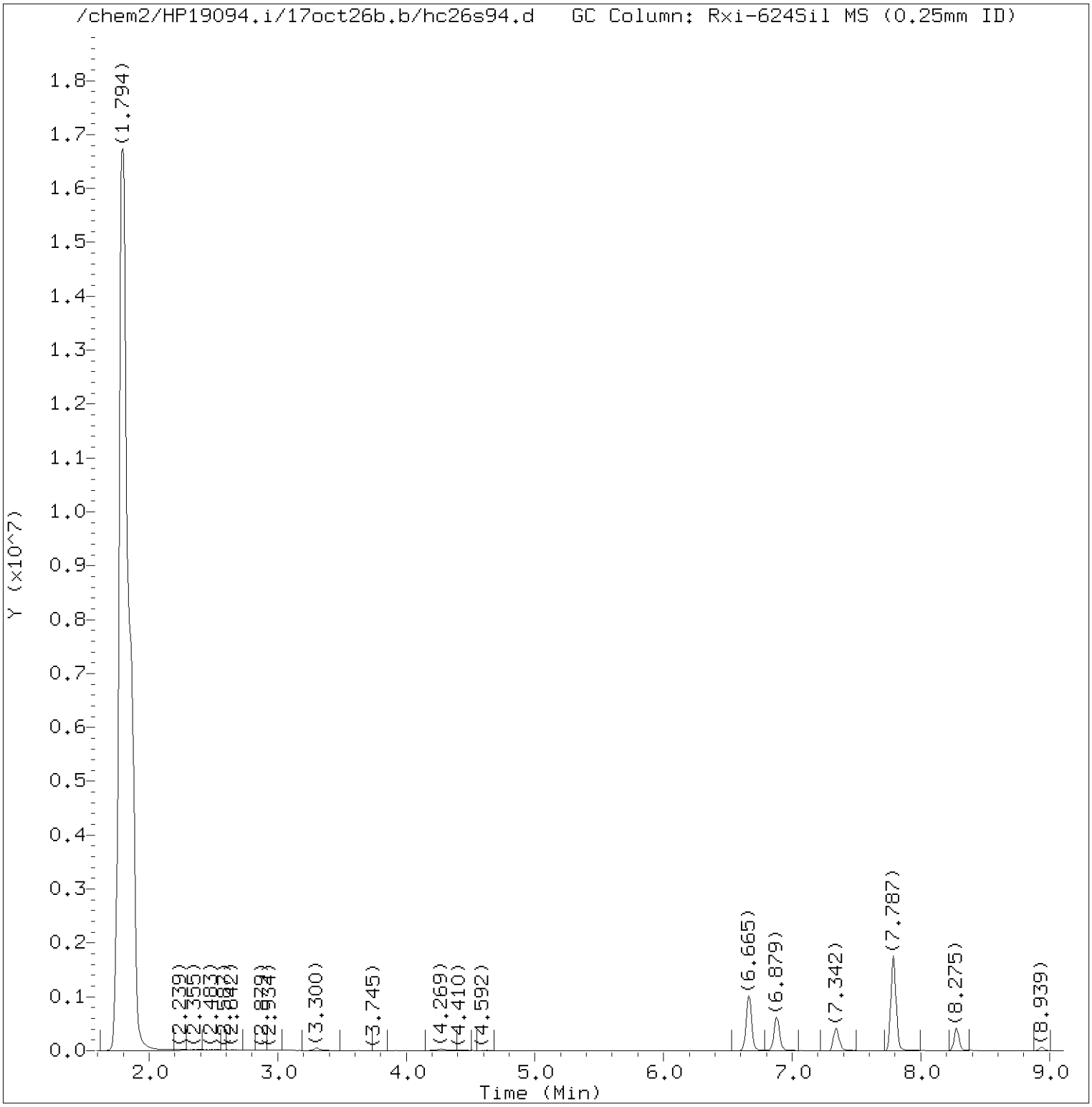
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	553388	10.154	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	85111	9.972	100%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2239999	9.866	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	648344	9.401	94%		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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.275	(0.000)	95	190798	3.028	3.03			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

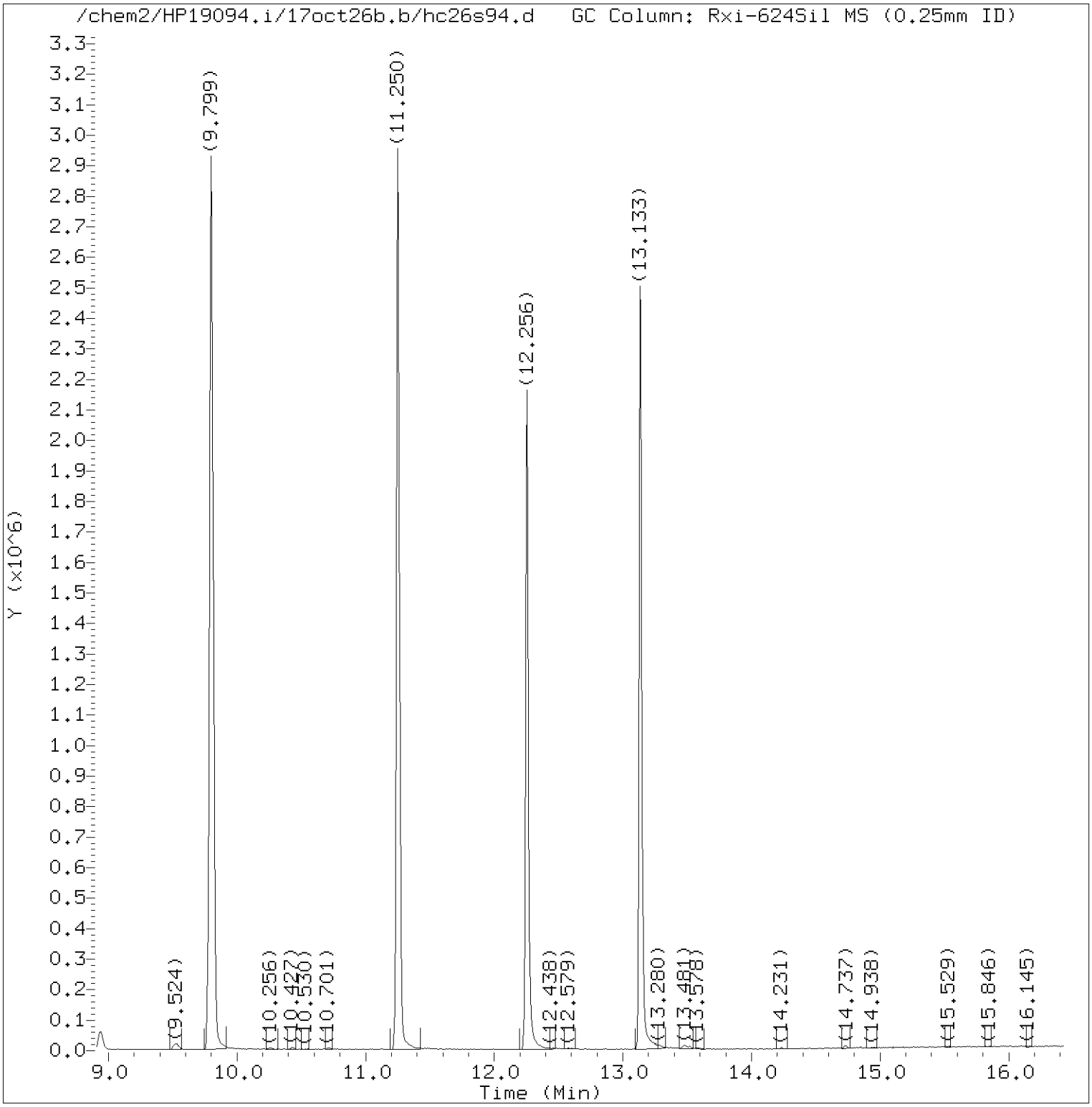
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s94.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:16 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:34 Automation

Sample Name: R9805 Lab Sample ID: 9271976

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s94.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:16 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:34 Automation

Sample Name: R9805 Lab Sample ID: 9271976

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s94.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:16 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:34 Automation

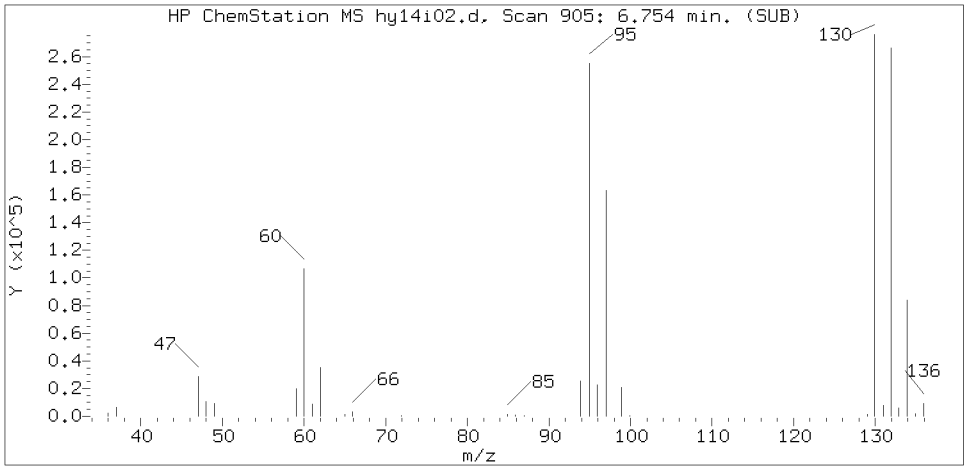
Sample Name: R9805 Lab Sample ID: 9271976

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.251	65	70120	50.000
50)$Dibromofluoromethane	(2)	6.879	113	553388	10.154
57)$1,2-Dichloroethane-d4	(2)	7.342	102	85111	9.972
63)*Fluorobenzene	(2)	7.787	96	2256870	10.000
67) Trichloroethene	(2)	8.275	95	190798	3.028
82)$Toluene-d8	(3)	9.799	98	2239999	9.866
97)*Chlorobenzene-d5	(3)	11.250	117	1562224	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	648344	9.401
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	652499	10.000

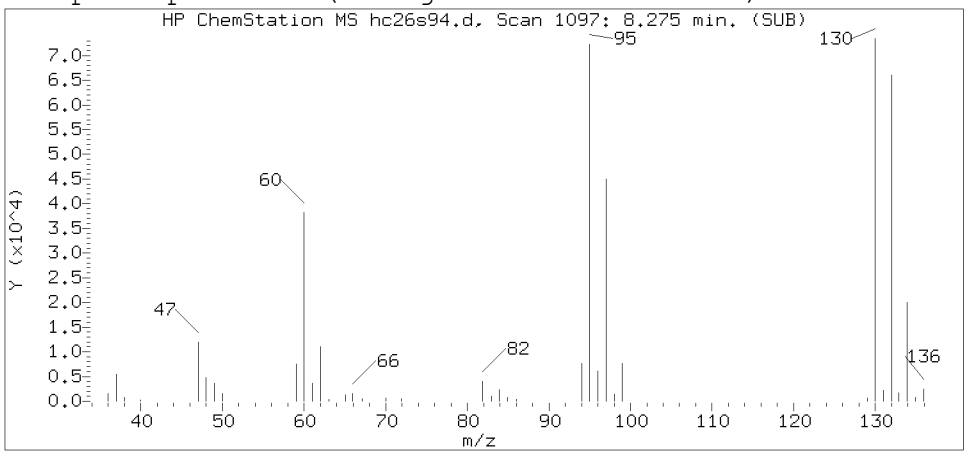
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

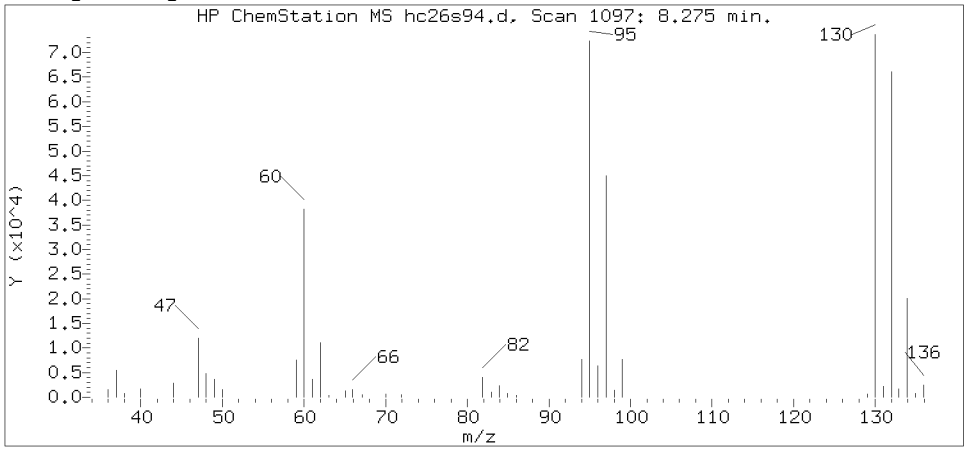
Reference Standard Spectrum for Trichloroethene

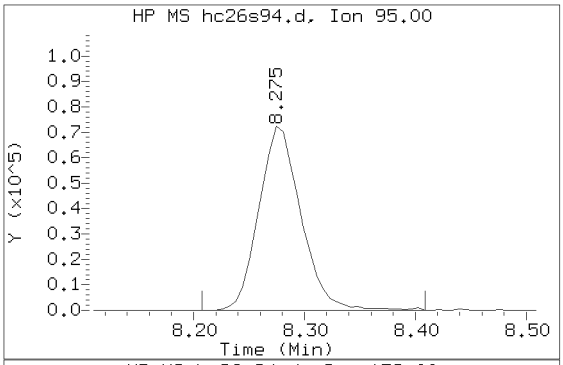


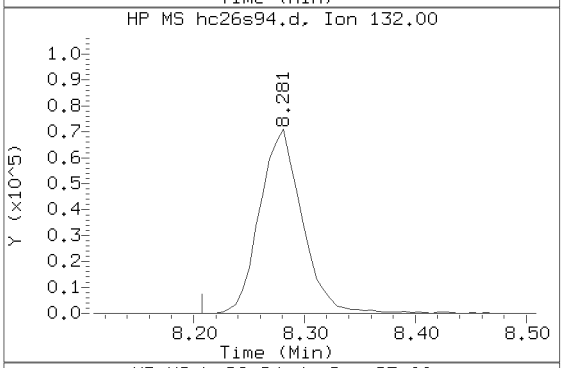
Sample Spectrum (Background Subtracted)

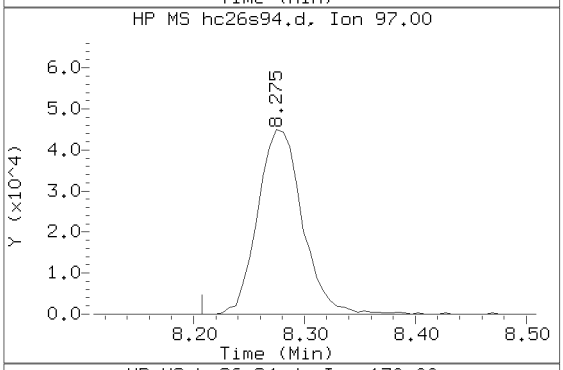


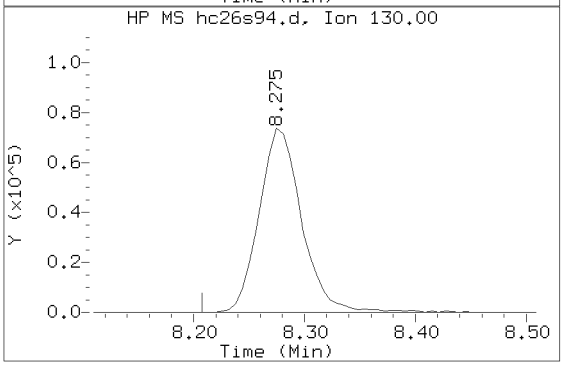
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct26b.b/hc26s94.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:16 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:34 Automation

Sample Name: R9805 Lab Sample ID: 9271976

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1097
Retention Time (minutes)	: 8.275
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 190798
On-Column Amount (ng)	: 3.0283

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s95.d Injection date and time: **27-OCT-2017 05:36**
Data file Sample Info. Line: R9806;9271977;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 05:54 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.269	(-0.024)	440	65	56297	(-30)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2311035	(-6)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1582200	(-14)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140	(-0.006)	1895	152	631433	(-25)	10.00	

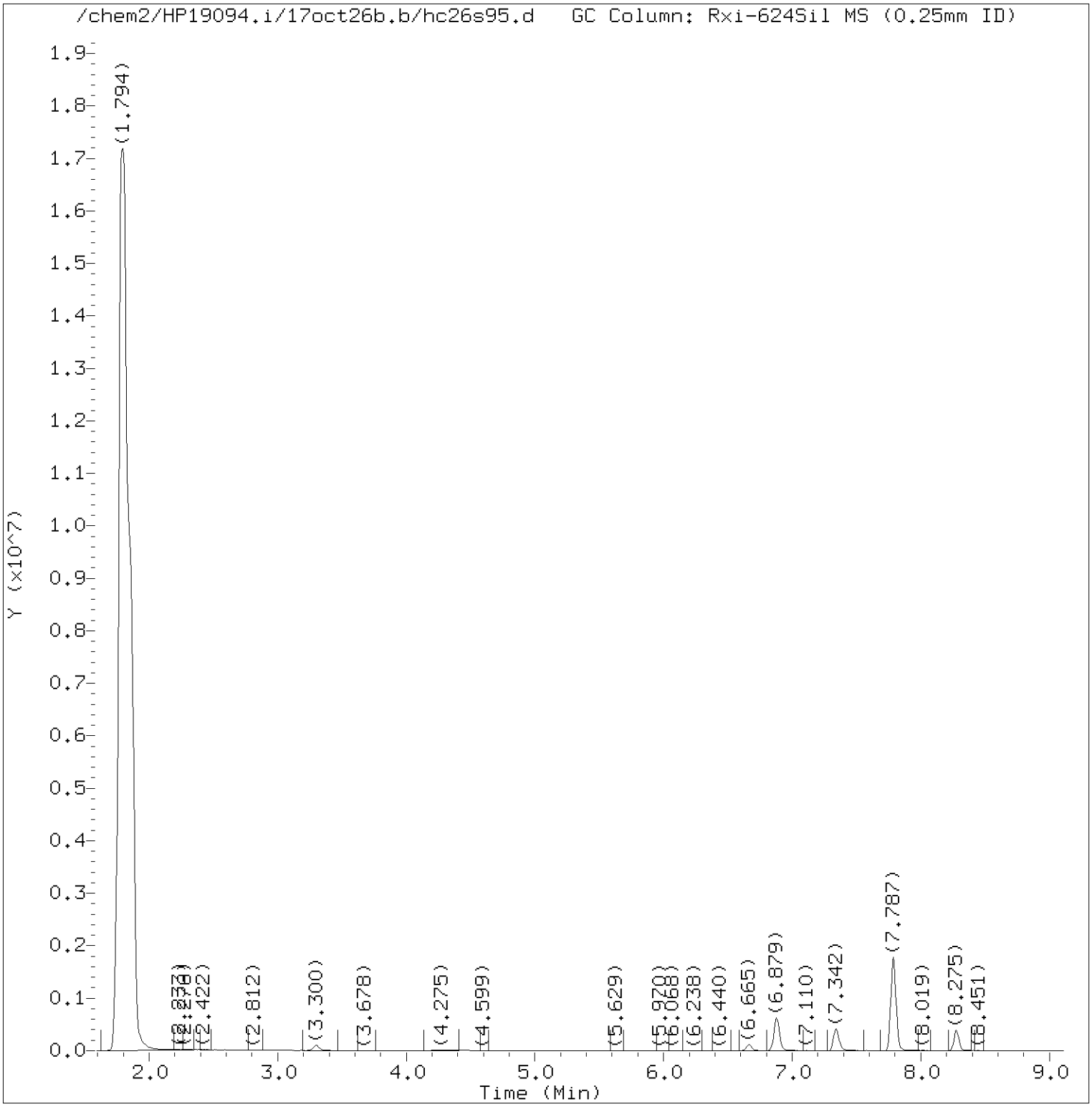
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	553751	9.923	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	84693	9.691	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2280021	9.916	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	644922	9.233	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.275	(0.000)	95	185417	2.874	2.87			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

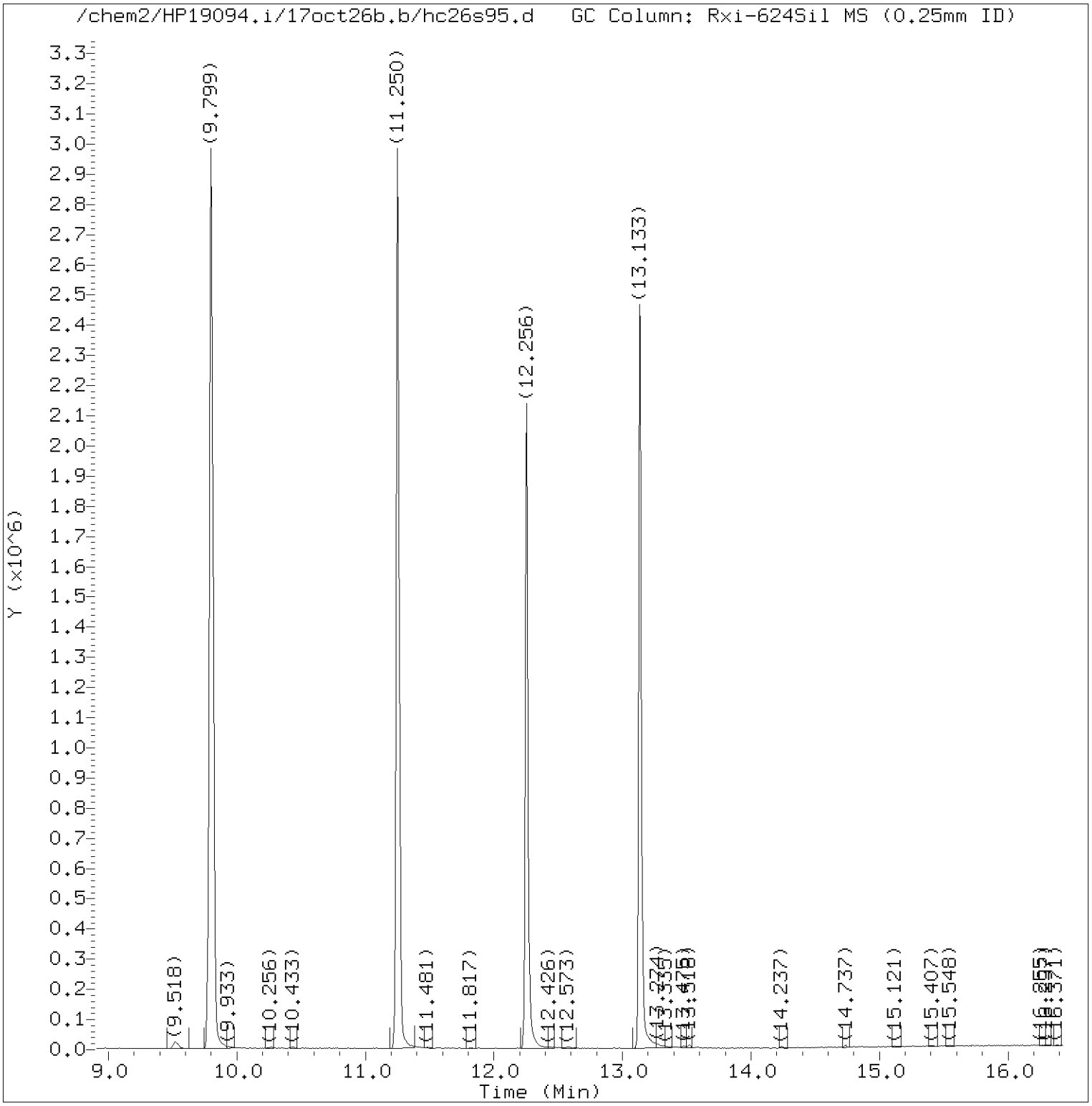
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s95.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:54 Automation

Sample Name: R9806 Lab Sample ID: 9271977

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s95.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:54 Automation

Sample Name: R9806 Lab Sample ID: 9271977

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s95.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:54 Automation

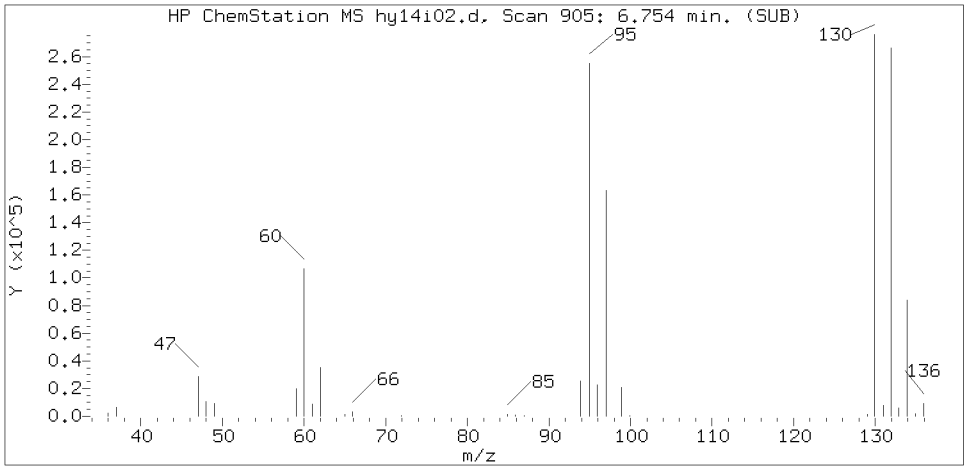
Sample Name: R9806 Lab Sample ID: 9271977

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	56297	50.000
50)$Dibromofluoromethane	(2)	6.879	113	553751	9.923
57)$1,2-Dichloroethane-d4	(2)	7.342	102	84693	9.691
63)*Fluorobenzene	(2)	7.787	96	2311035	10.000
67) Trichloroethene	(2)	8.275	95	185417	2.874
82)$Toluene-d8	(3)	9.799	98	2280021	9.916
97)*Chlorobenzene-d5	(3)	11.250	117	1582200	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	644922	9.233
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	631433	10.000

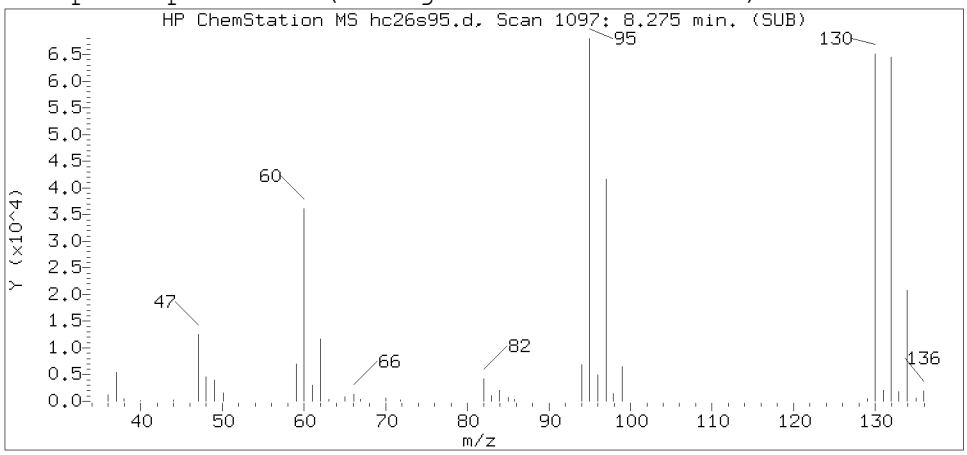
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

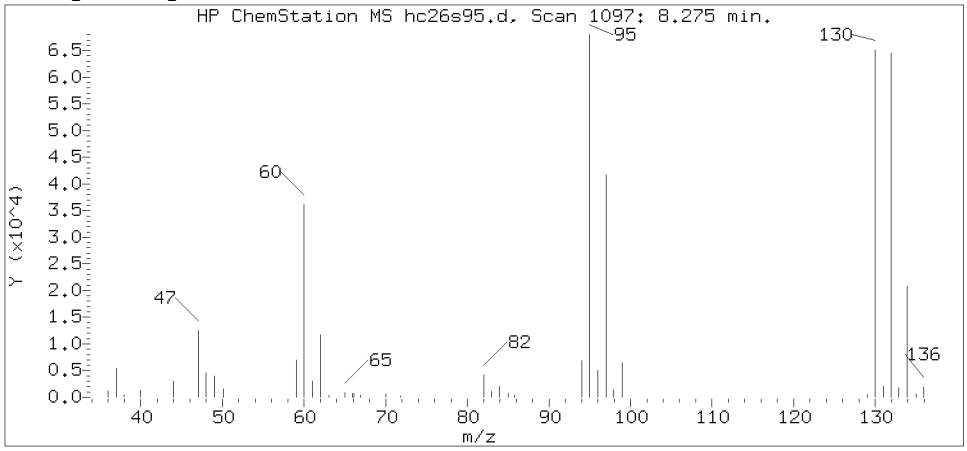
Reference Standard Spectrum for Trichloroethene

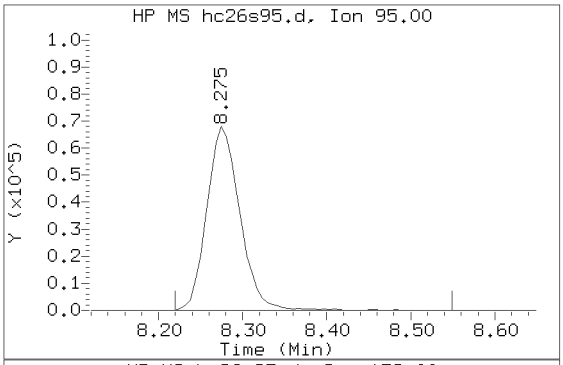


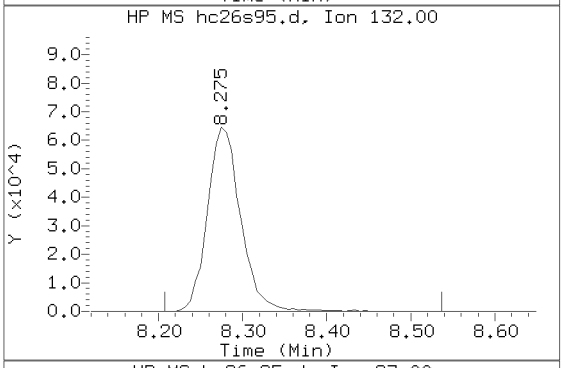
Sample Spectrum (Background Subtracted)

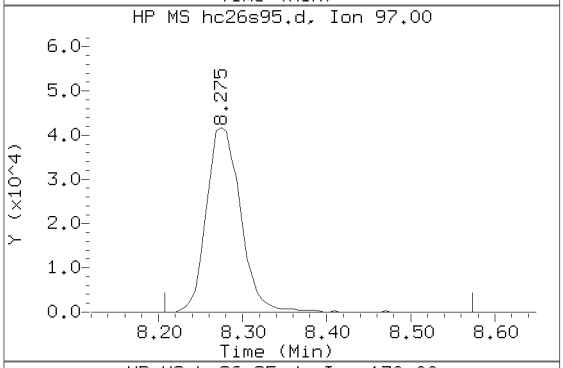


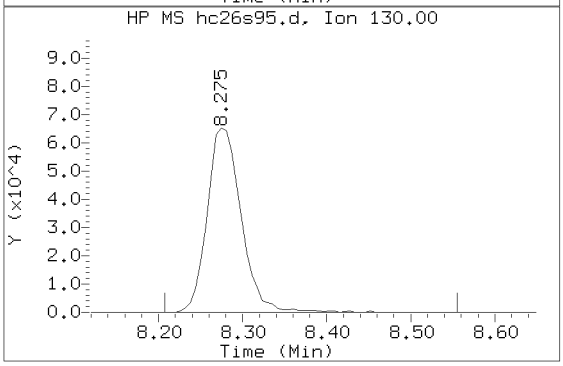
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct26b.b/hc26s95.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 05:54 Automation

Sample Name: R9806 Lab Sample ID: 9271977

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1097
Retention Time (minutes)	: 8.275
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 185417
On-Column Amount (ng)	: 2.8739

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct26b.b/hc26s96.d Injection date and time: **27-OCT-2017 05:57**
Data file Sample Info. Line: R9807;9271978;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 06:15 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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:Cl-

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.306	(-0.061)	446	65	50013	(-37)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2236600	(-9)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1533711	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	608252	(-28)	10.00	

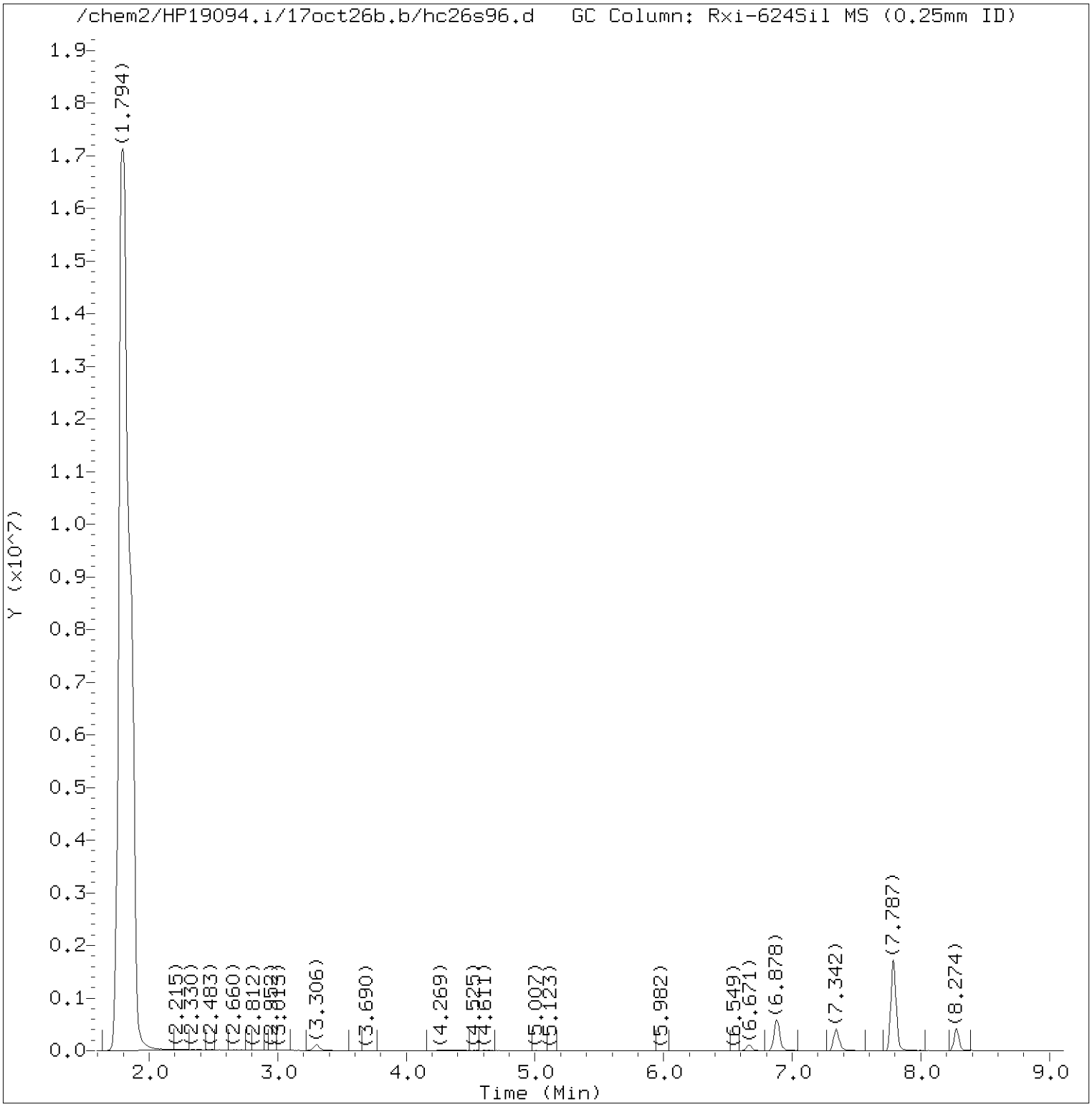
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	533945	9.886	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.001)	102	80826	9.556	96%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2221275	9.966	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	625688	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 (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.274	(-0.000)	95	193421	3.098	3.10			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:49. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

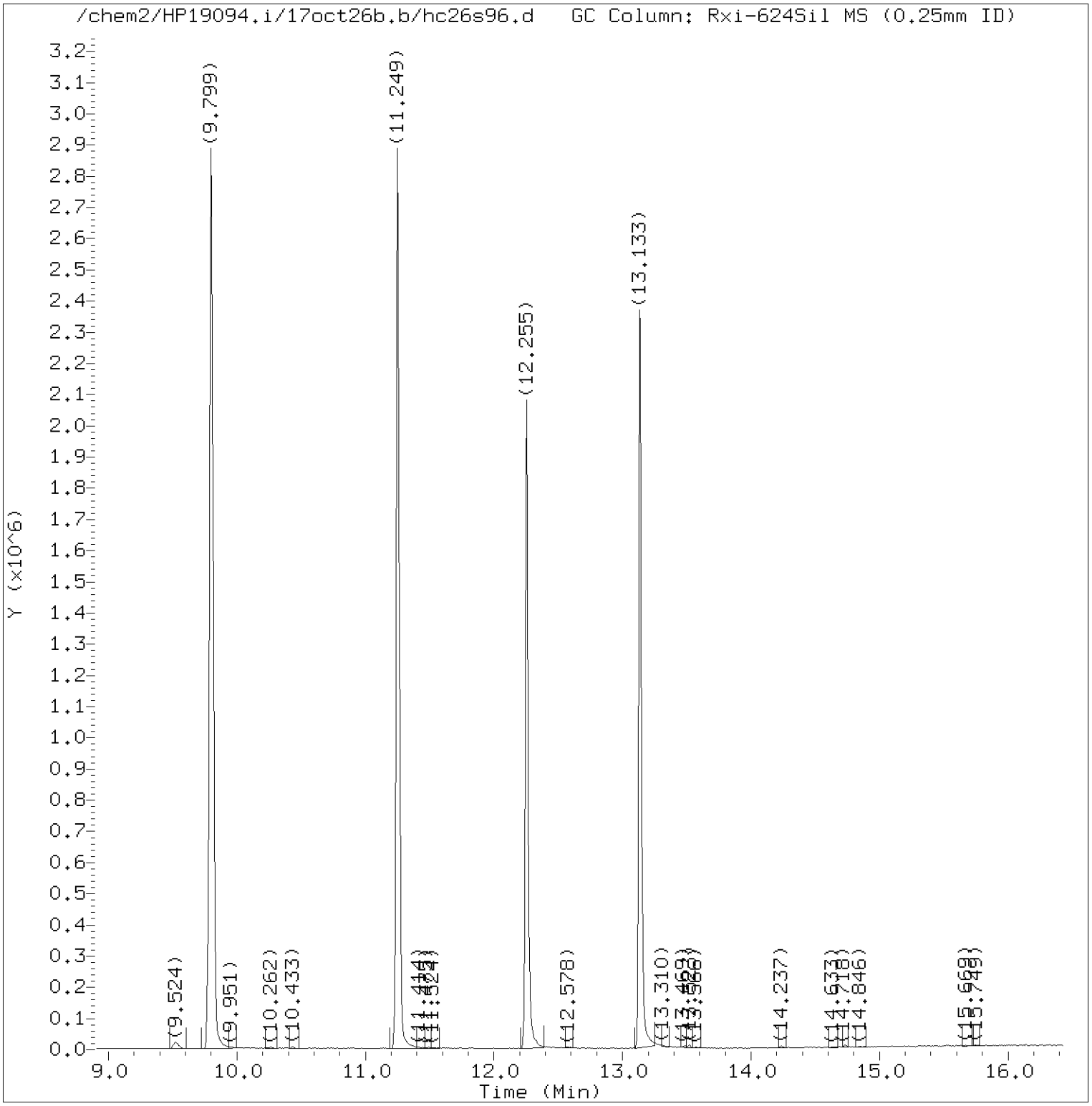
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s96.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:57 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:15 Automation

Sample Name: R9807 Lab Sample ID: 9271978

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:49.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s96.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:57 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:15 Automation

Sample Name: R9807 Lab Sample ID: 9271978

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:49.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s96.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:57 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:15 Automation

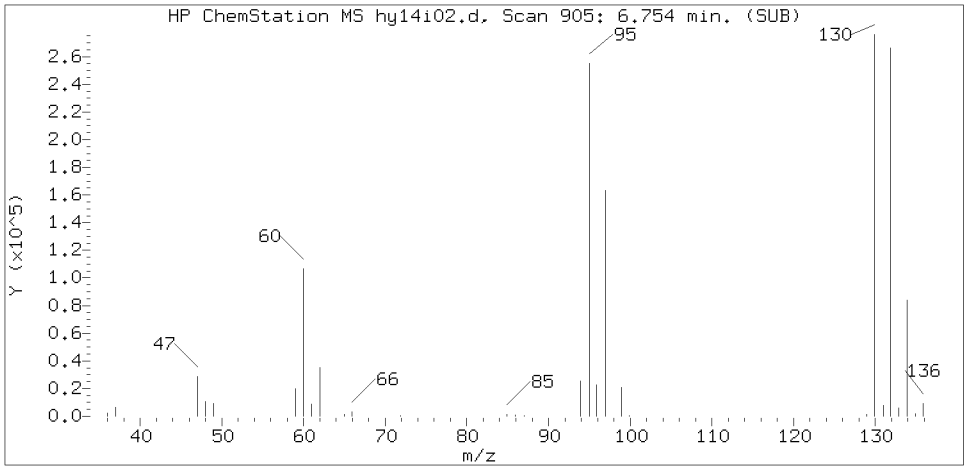
Sample Name: R9807 Lab Sample ID: 9271978

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.306	65	50013	50.000
50)$Dibromofluoromethane	(2)	6.878	113	533945	9.886
57)$1,2-Dichloroethane-d4	(2)	7.348	102	80826	9.556
63)*Fluorobenzene	(2)	7.787	96	2236600	10.000
67) Trichloroethene	(2)	8.274	95	193421	3.098
82)$Toluene-d8	(3)	9.799	98	2221275	9.966
97)*Chlorobenzene-d5	(3)	11.249	117	1533711	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	625688	9.241
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	608252	10.000

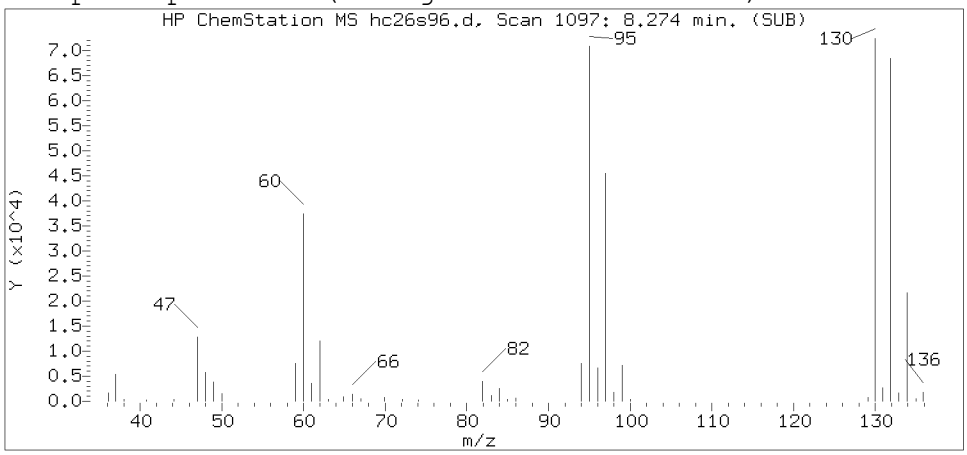
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:49.
Target 3.5 esignature user ID: kas02648

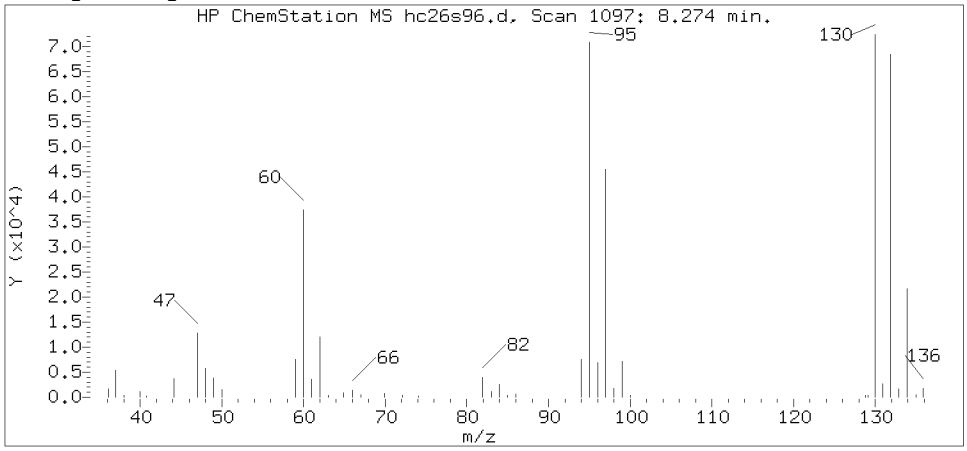
Reference Standard Spectrum for Trichloroethene

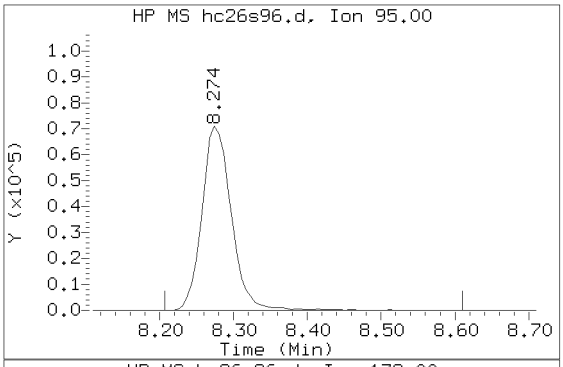


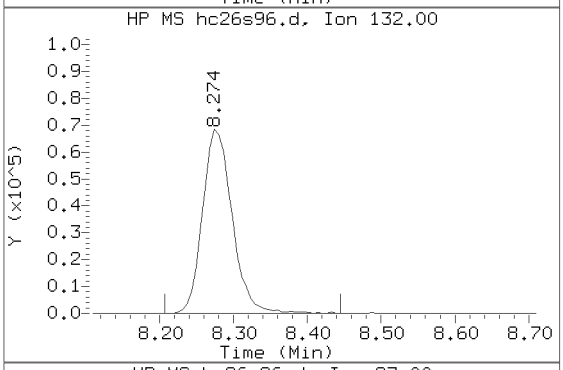
Sample Spectrum (Background Subtracted)

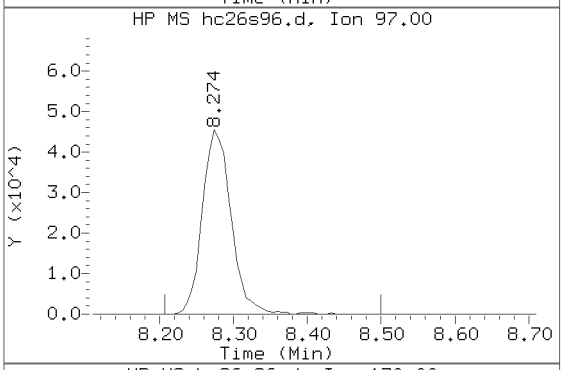


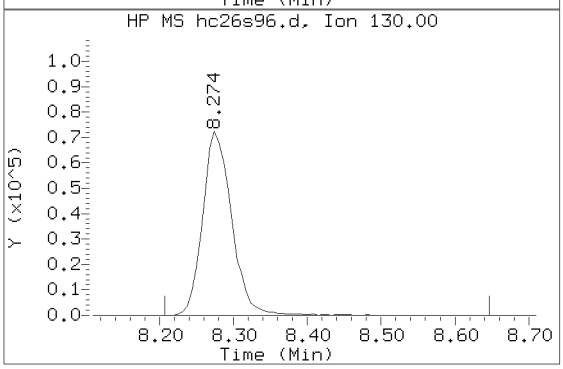
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct26b.b/hc26s96.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 05:57 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:15 Automation

Sample Name: R9807 Lab Sample ID: 9271978

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.274
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 193421
On-Column Amount (ng) : 3.0977

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:49.
Target 3.5 esignature user ID: kas02648

R9808 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9271979

Data file: /chem2/HP19094.i/17oct26b.b/hc26s97.d Injection date and time: **27-OCT-2017 06:17**
Data file Sample Info. Line: R9808;9271979;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 06:36 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.263	(-0.018)	439	65	71787	(-10)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2288145	(-7)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1557359	(-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	628032	(-26)	10.00	

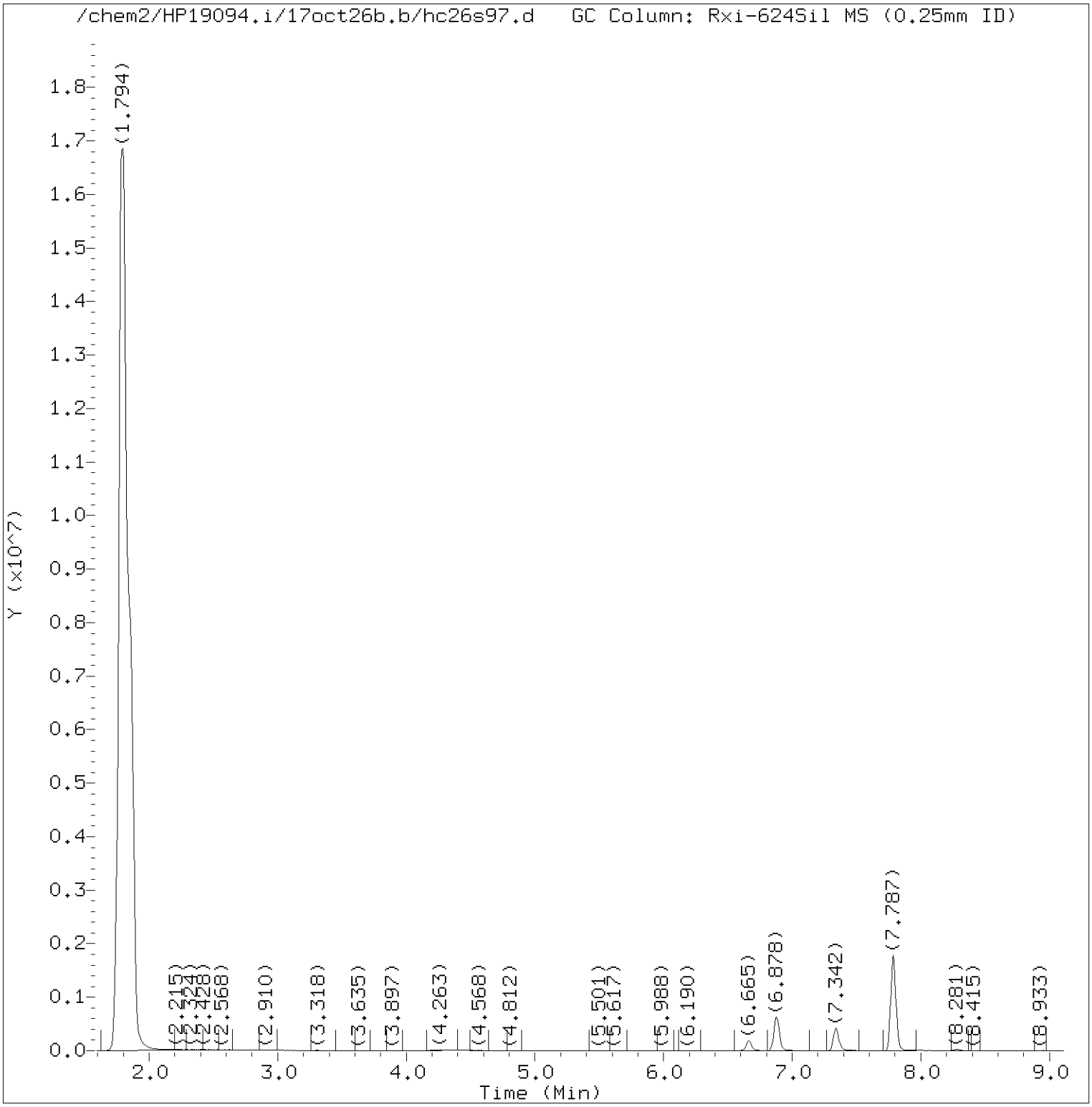
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	547521	9.909	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	86127	9.953	100%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2272066	10.039	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	634481	9.229	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

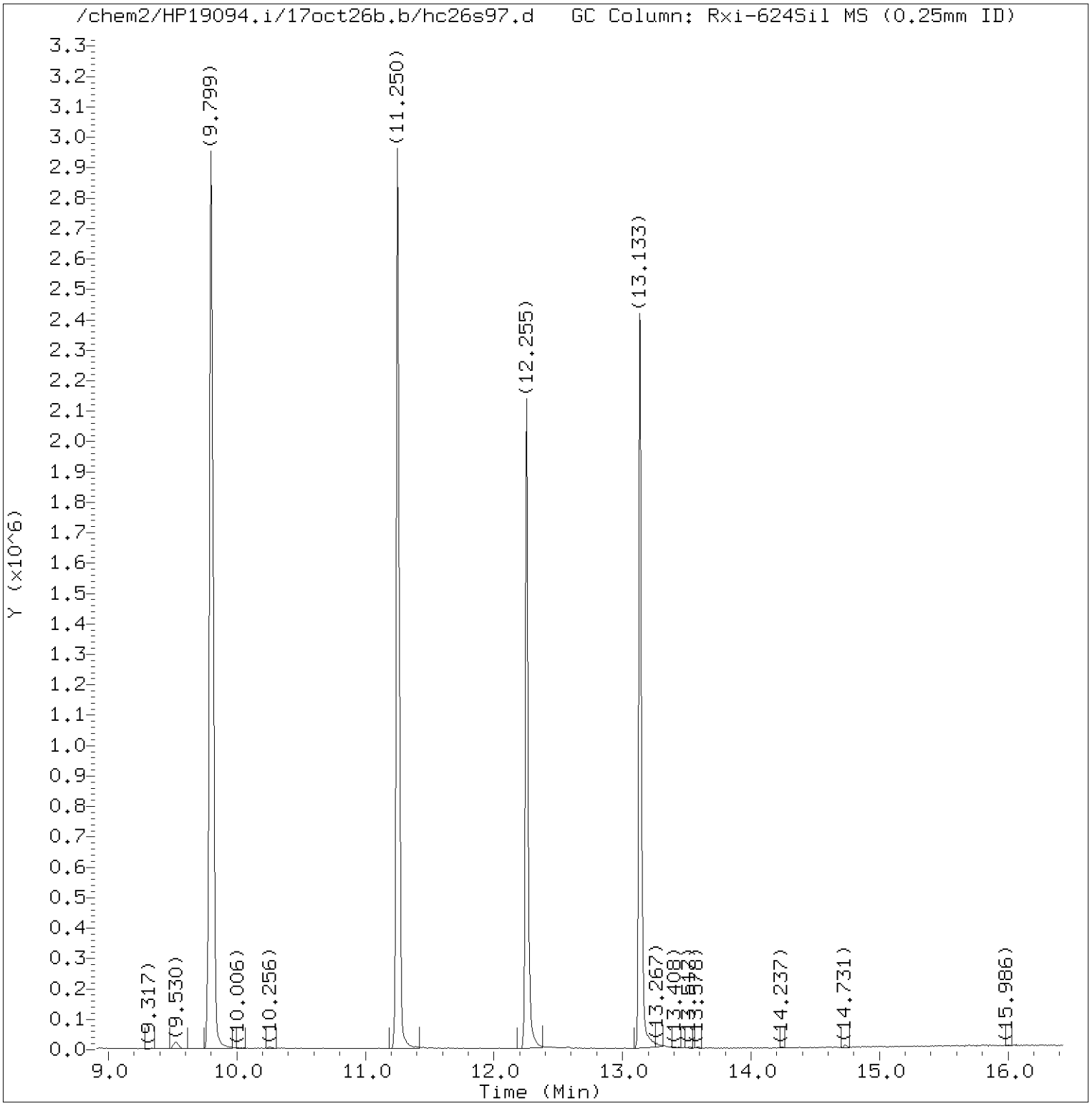
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s97.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 06:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:36 Automation

Sample Name: R9808 Lab Sample ID: 9271979

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s97.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 06:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:36 Automation

Sample Name: R9808 Lab Sample ID: 9271979

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s97.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 06:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 06:36 Automation

Sample Name: R9808 Lab Sample ID: 9271979

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.263	65	71787	50.000
50)$Dibromofluoromethane	(2)	6.878	113	547521	9.909
57)$1,2-Dichloroethane-d4	(2)	7.342	102	86127	9.953
63)*Fluorobenzene	(2)	7.787	96	2288145	10.000
82)$Toluene-d8	(3)	9.799	98	2272066	10.039
97)*Chlorobenzene-d5	(3)	11.250	117	1557359	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	634481	9.229
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	628032	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

R9809 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9271980

Data file: /chem2/HP19094.i/17oct26b.b/hc26s86.d Injection date and time: **27-OCT-2017 02:34**
Data file Sample Info. Line: R9809;9271980;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 02:52 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.257	(-0.012)	438	65	81754	(2)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2221477	(-10)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1525947	(-17)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	618673	(-27)	10.00	

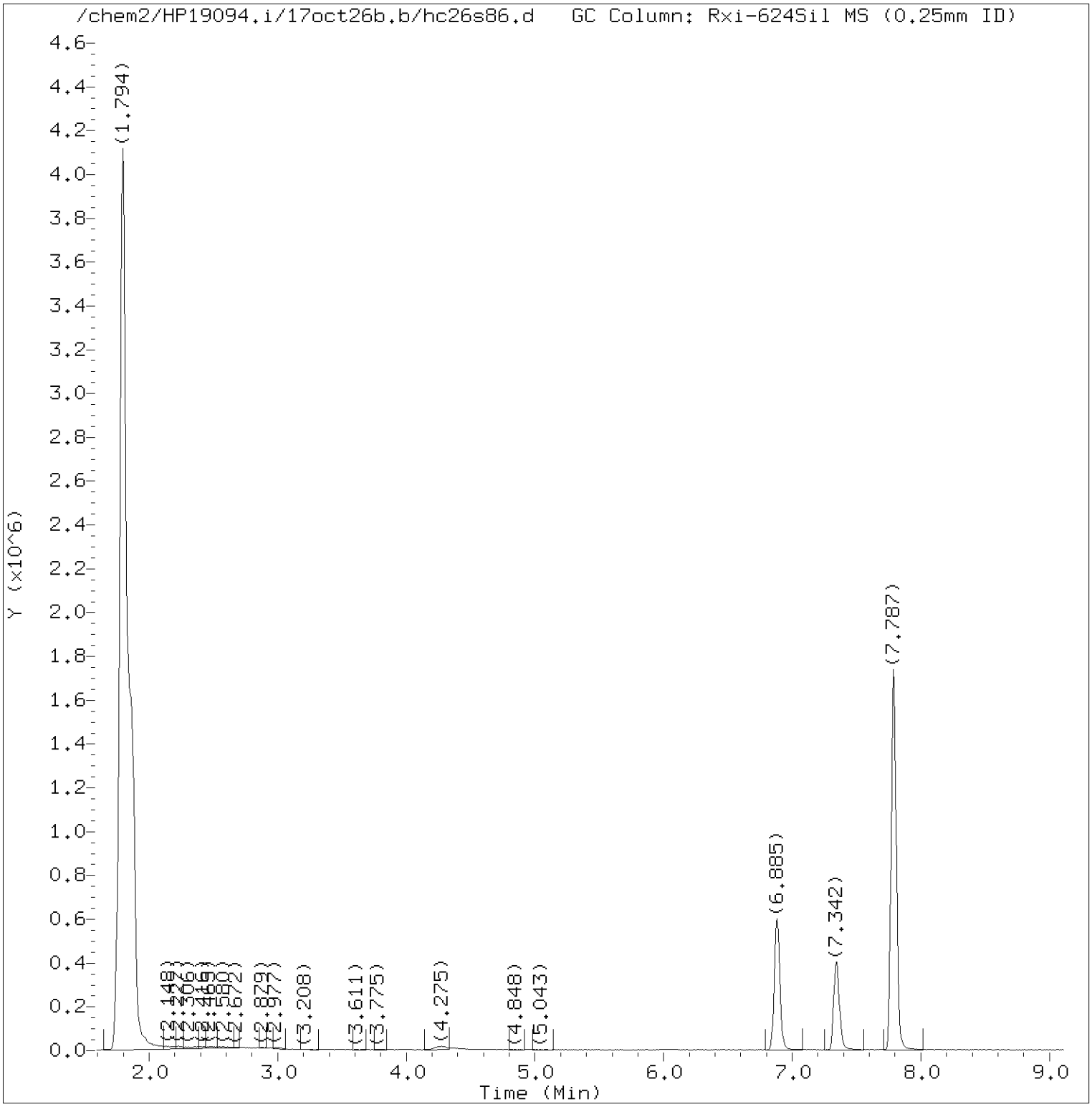
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(-0.001)	113	529970	9.879	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	82044	9.766	98%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2194344	9.895	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	619556	9.197	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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

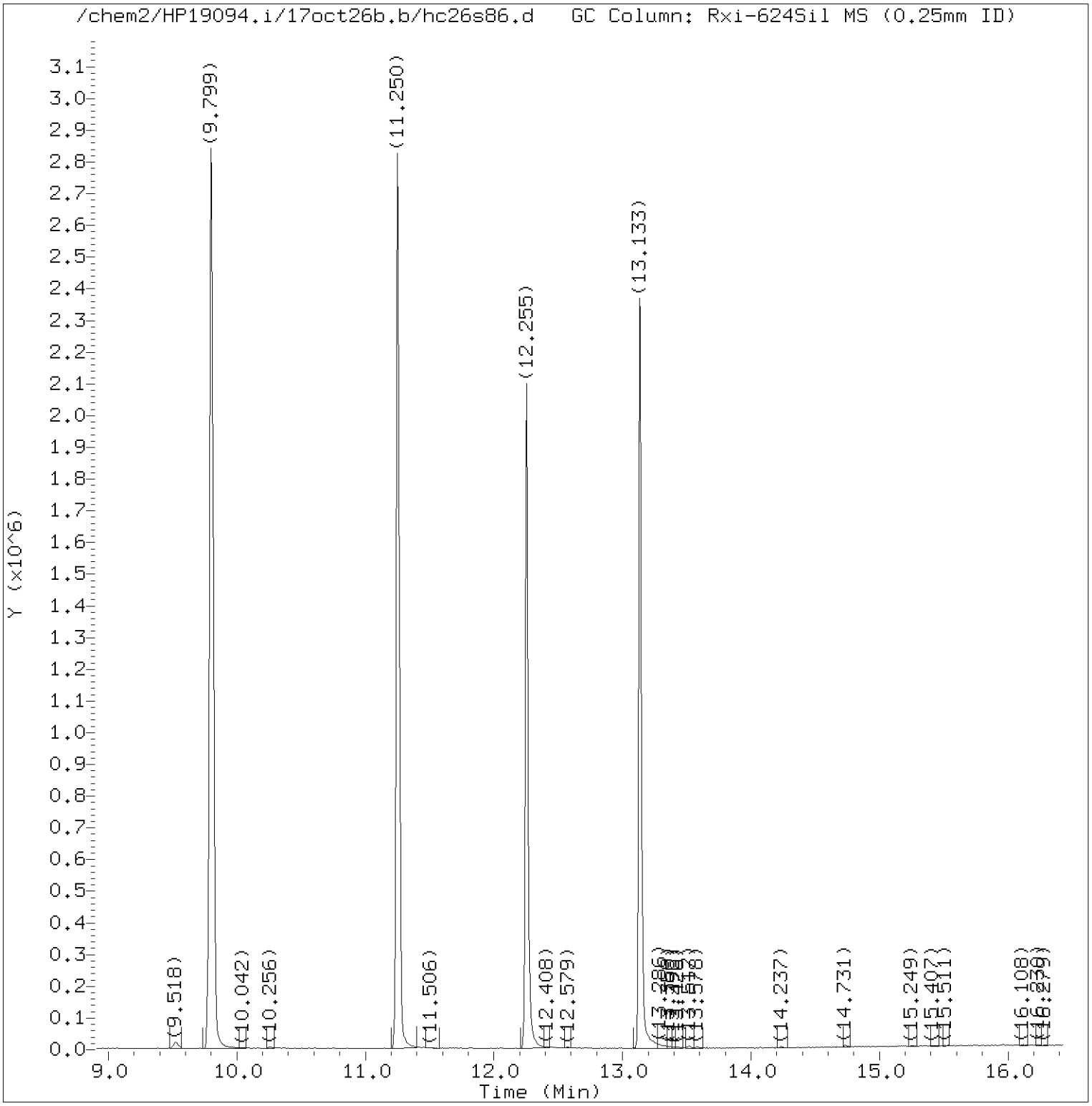
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s86.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:34 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 02:52 Automation

Sample Name: R9809 Lab Sample ID: 9271980

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s86.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:34 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 02:52 Automation

Sample Name: R9809 Lab Sample ID: 9271980

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s86.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:34 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 02:52 Automation

Sample Name: R9809 Lab Sample ID: 9271980

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	81754	50.000
50)$Dibromofluoromethane	(2)	6.885	113	529970	9.879
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82044	9.766
63)*Fluorobenzene	(2)	7.787	96	2221477	10.000
82)$Toluene-d8	(3)	9.799	98	2194344	9.895
97)*Chlorobenzene-d5	(3)	11.250	117	1525947	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	619556	9.197
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	618673	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

R9810 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9271981

Data file: /chem2/HP19094.i/17oct26b.b/hc26s87.d Injection date and time: **27-OCT-2017 02:54**
Data file Sample Info. Line: R9810;9271981;1;0;;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 03:12 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.275	(-0.030)	441	65	76228	(-5)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2258160	(-8)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1542166	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	634375	(-25)	10.00	

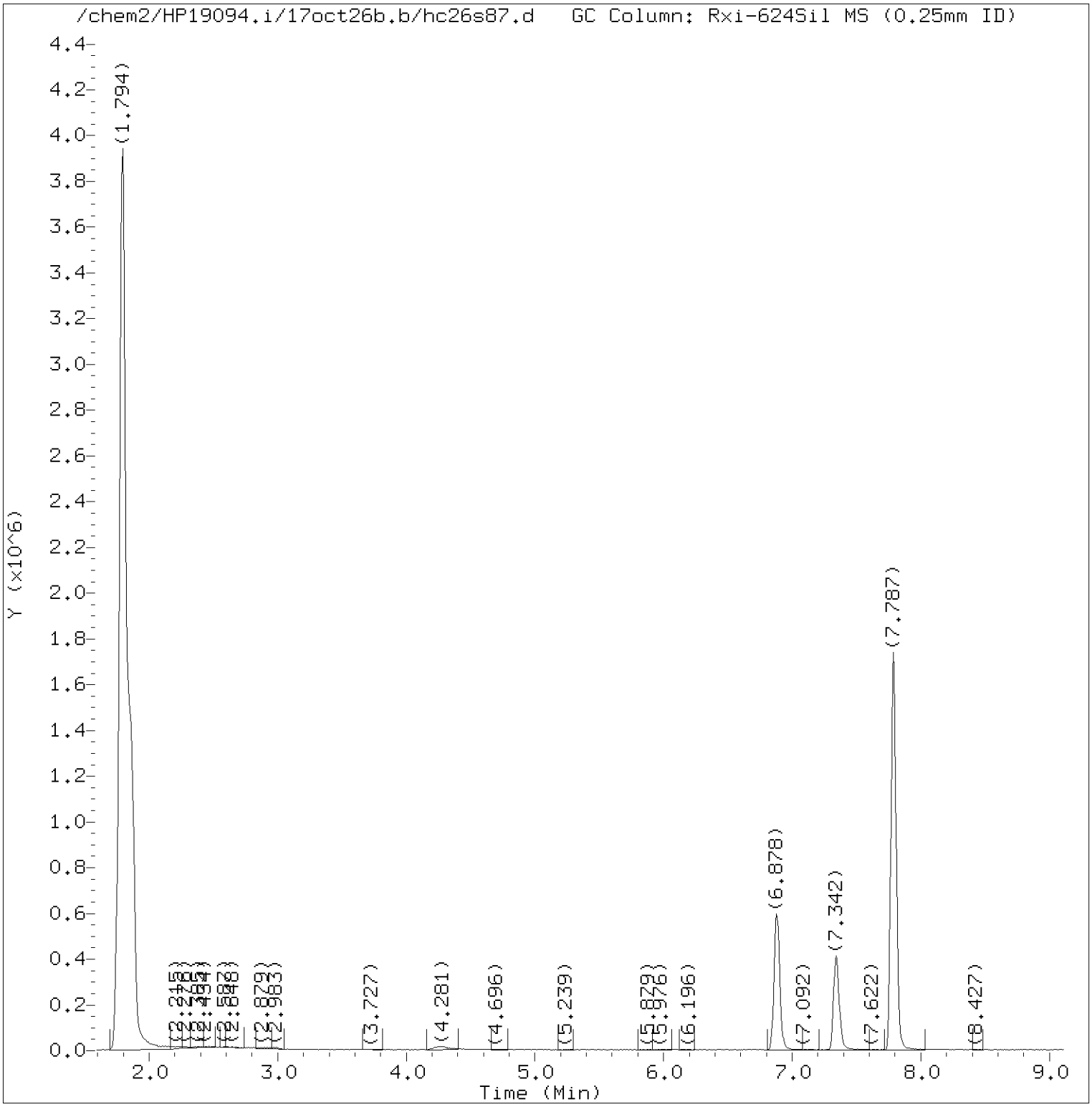
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	538789	9.880	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.001)	102	86087	10.081	101%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2233600	9.966	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	638904	9.385	94%		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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

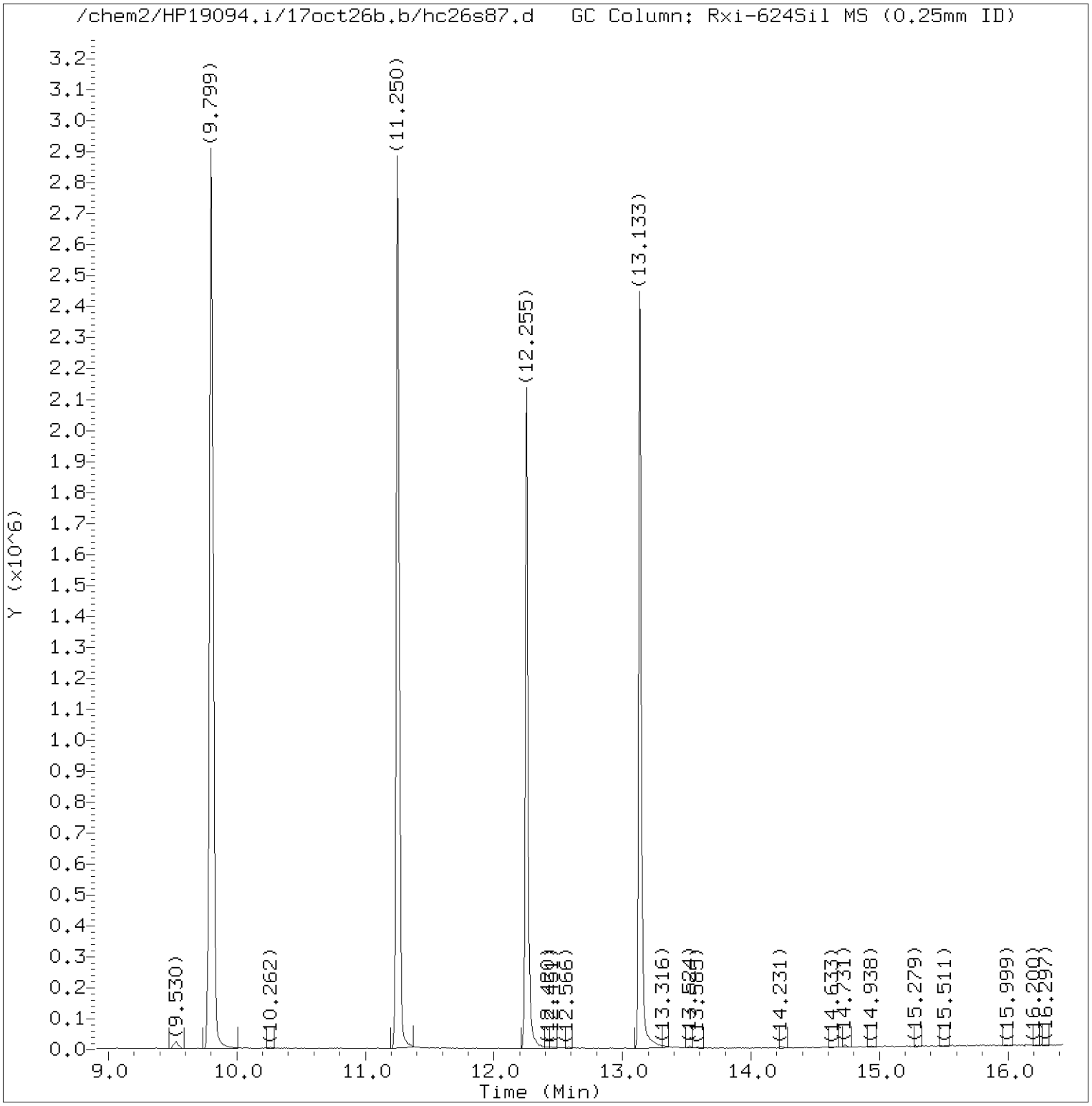
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s87.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:54 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:12 Automation

Sample Name: R9810 Lab Sample ID: 9271981

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s87.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:54 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:12 Automation

Sample Name: R9810 Lab Sample ID: 9271981

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s87.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 02:54 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:12 Automation

Sample Name: R9810 Lab Sample ID: 9271981

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	76228	50.000
50)$Dibromofluoromethane	(2)	6.878	113	538789	9.880
57)$1,2-Dichloroethane-d4	(2)	7.348	102	86087	10.081
63)*Fluorobenzene	(2)	7.787	96	2258160	10.000
82)$Toluene-d8	(3)	9.799	98	2233600	9.966
97)*Chlorobenzene-d5	(3)	11.250	117	1542166	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	638904	9.385
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	634375	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Standards Data

Volatiles by GC/MS

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

Data Directory Path is - D:\DATA\17OCT16a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	HC16T01.D	bfb 08-14-17	10/16/2017	10:07		
KAS02648	HC16X01.D	BLK	10/16/2017	10:23		
KAS02648	HC16I01.D	VSTD025	10/16/2017	10:43		
KAS02648	HC16I02.D	VSTD010	10/16/2017	11:03		
KAS02648	HC16I03.D	VSTD005	10/16/2017	11:23		
KAS02648	HC16I04.D	VSTD002	10/16/2017	11:44		
KAS02648	HC16I05.D	VSTD001	10/16/2017	12:04		
KAS02648	HC16I06.D	VSTD0.5	10/16/2017	12:24		
KAS02648	HC16I07.D	VSTD0.2	10/16/2017	12:45		
KAS02648	HC16M01.D	MDL0.1	10/16/2017	13:05		
KAS02648	HC16M02.D	MDL0.4	10/16/2017	13:28		
KAS02648	HC16V01.D	LCSHSM	10/16/2017	13:48		
KAS02648	HC16X11.D	BLK	10/16/2017	14:44		
KAS02648	HC16I11.D	VSTD025	10/16/2017	15:04		
KAS02648	HC16I12.D	VSTD010	10/16/2017	15:25		
KAS02648	HC16I13.D	VSTD005	10/16/2017	15:45		
KAS02648	HC16I14.D	VSTD002	10/16/2017	16:05		
KAS02648	HC16I15.D	VSTD001	10/16/2017	16:26		
KAS02648	HC16I16.D	VSTD0.5	10/16/2017	16:46		
KAS02648	HC16I17.D	VSTD0.2	10/16/2017	17:06		
KAS02648	HC16M11.D	MDL0.1	10/16/2017	17:27		
KAS02648	HC16V11.D	LCSHSM	10/16/2017	17:47		
KAS02648	HC16I18.D	VSTD001	10/16/2017	18:51		
KAS02648	HC16I19.D	VSTD0.5	10/16/2017	19:11		
KAS02648	HC16I20.D	VSTD0.2	10/16/2017	19:31		
KAS02648	HC16M15.D	MDL0.1	10/16/2017	19:52		

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

Data Directory Path is - d:\data\17oct26B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
MSK07970	HC26T10.D	50NGBFB	10/26/2017	19:51	H172995AA	
MSK07970	HC26X71.D	VBLKH18	10/26/2017	20:12	H172995AA	
MSK07970	HC26C10.D	VSTD010	10/26/2017	20:32	H172995AA	
MSK07970	HC26S71.D	LCSH18	10/26/2017	20:52	H172995AA	
MSK07970	HC26X72.D	VBLKH18	10/26/2017	21:12	H172995AA	
MSK07970	HC26B71.D	VBLKH18	10/26/2017	21:33	H172995AA	
MSK07970	HC26S72.D	9264010	10/26/2017	22:06	H172995AA	100
MSK07970	HC26X73.D	VBLKH18	10/26/2017	22:30	H172995AA	
MSK07970	HC26S73.D	9268887	10/26/2017	22:50	H172995AA	
MSK07970	HC26S74.D	9272373	10/26/2017	23:11	H172995AA	
MSK07970	HC26S75.D	9268879	10/26/2017	23:31	H172995AA	
MSK07970	HC26S76.D	9268880MS	10/26/2017	23:51	H172995AA	
MSK07970	HC26S77.D	9268881MSD	10/27/2017	00:12	H172995AA	
MSK07970	HC26S78.D	9268877	10/27/2017	00:32	H172995AA	
MSK07970	HC26S79.D	9272367	10/27/2017	00:52	H172995AA	
MSK07970	HC26S80.D	9272369	10/27/2017	01:13	H172995AA	
MSK07970	HC26S81.D	9272369DL	10/27/2017	01:33	H172995AA	10
MSK07970	HC26S82.D	9272371	10/27/2017	01:53	H172995AA	
MSK07970	HC26S83.D	9272371DL	10/27/2017	02:14	H172995AA	10
MSK07970	HC26S86.D	9271980	10/27/2017	02:34	H172996AA	
MSK07970	HC26S87.D	9271981	10/27/2017	02:54	H172996AA	
MSK07970	HC26S88.D	9271972	10/27/2017	03:14	H172996AA	
MSK07970	HC26S89.D	9271973MS	10/27/2017	03:35	H172996AA	
MSK07970	HC26S90.D	9271974MSD	10/27/2017	03:55	H172996AA	
MSK07970	HC26S91.D	9271970	10/27/2017	04:15	H172996AA	
MSK07970	HC26S92.D	9271971	10/27/2017	04:35	H172996AA	
MSK07970	HC26S93.D	9271975	10/27/2017	04:56	H172996AA	
MSK07970	HC26S94.D	9271976	10/27/2017	05:16	H172996AA	
MSK07970	HC26S95.D	9271977	10/27/2017	05:36	H172996AA	
MSK07970	HC26S96.D	9271978	10/27/2017	05:57	H172996AA	
MSK07970	HC26S97.D	9271979	10/27/2017	06:17	H172996AA	

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

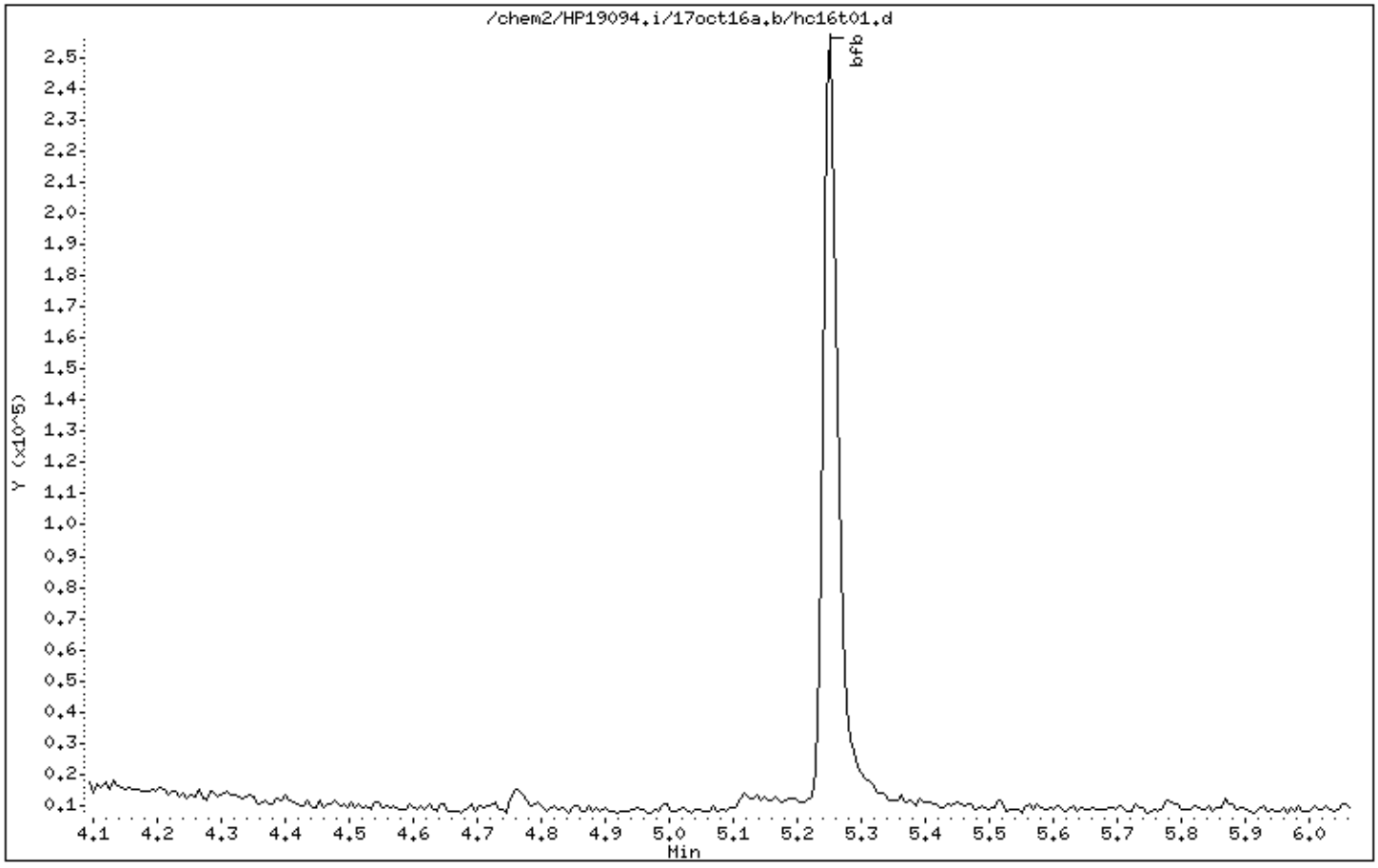
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

Instrument: HP19094.i

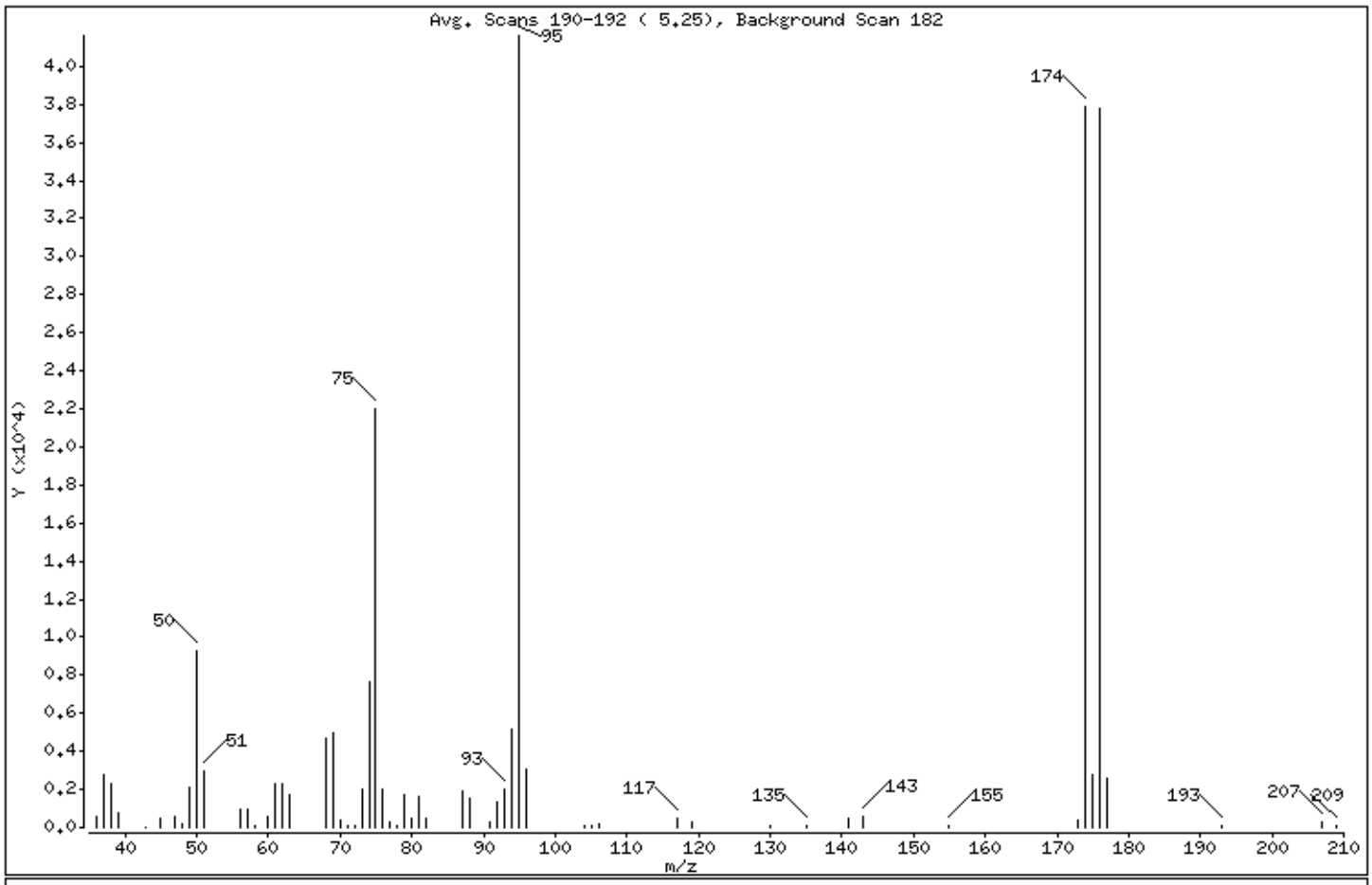
Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

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	22.28
75	30.00 - 60.00% of mass 95	52.78
96	5.00 - 9.00% of mass 95	7.42
173	Less than 2.00% of mass 174	0.87 (0.95)
174	50.00 - 100.00% of mass 95	90.93
175	5.00 - 9.00% of mass 174	6.63 (7.29)
176	95.00 - 101.00% of mass 174	90.78 (99.83)
177	5.00 - 9.00% of mass 176	6.25 (6.89)

Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

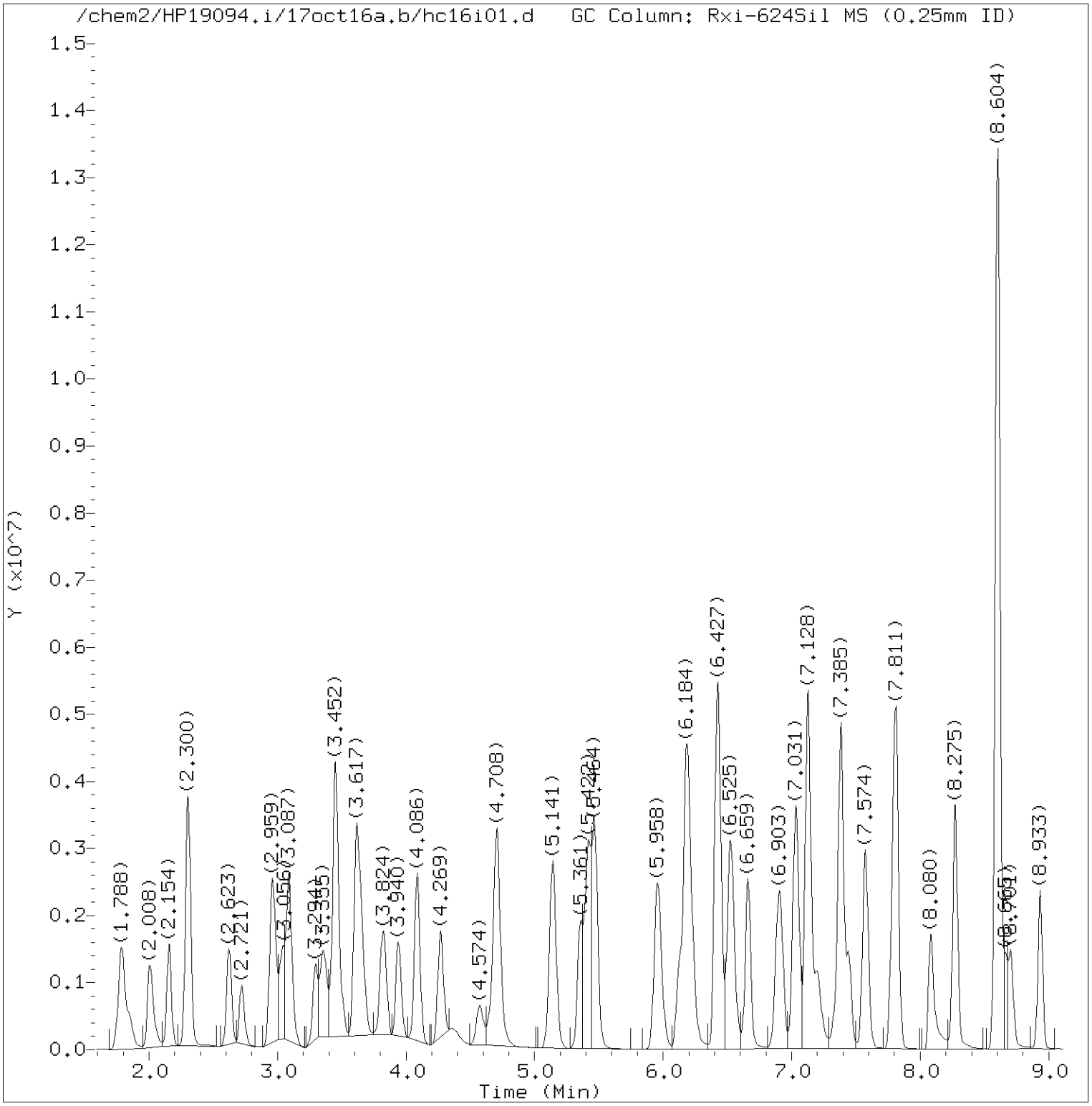
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hc16t01.d
Spectrum: Avg. Scans 190-192 (5.25), Background Scan 182
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	578	61.00	2328	80.00	505	119.00	261
37.00	2772	62.00	2285	81.00	1668	130.00	84
38.00	2303	63.00	1753	82.00	485	135.00	103
39.00	798	68.00	4686	87.00	1898	141.00	510
43.00	12	69.00	4939	88.00	1565	143.00	529
45.00	436	70.00	408	91.00	324	155.00	86
47.00	544	71.00	97	92.00	1351	173.00	360
48.00	187	72.00	94	93.00	2038	174.00	37840
49.00	2073	73.00	2025	94.00	5193	175.00	2757
50.00	9270	74.00	7636	95.00	41608	176.00	37776
51.00	2934	75.00	21960	96.00	3088	177.00	2602
56.00	961	76.00	1984	104.00	95	193.00	113
57.00	939	77.00	289	105.00	90	207.00	254
58.00	96	78.00	105	106.00	198	209.00	97
60.00	591	79.00	1735	117.00	455		

Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

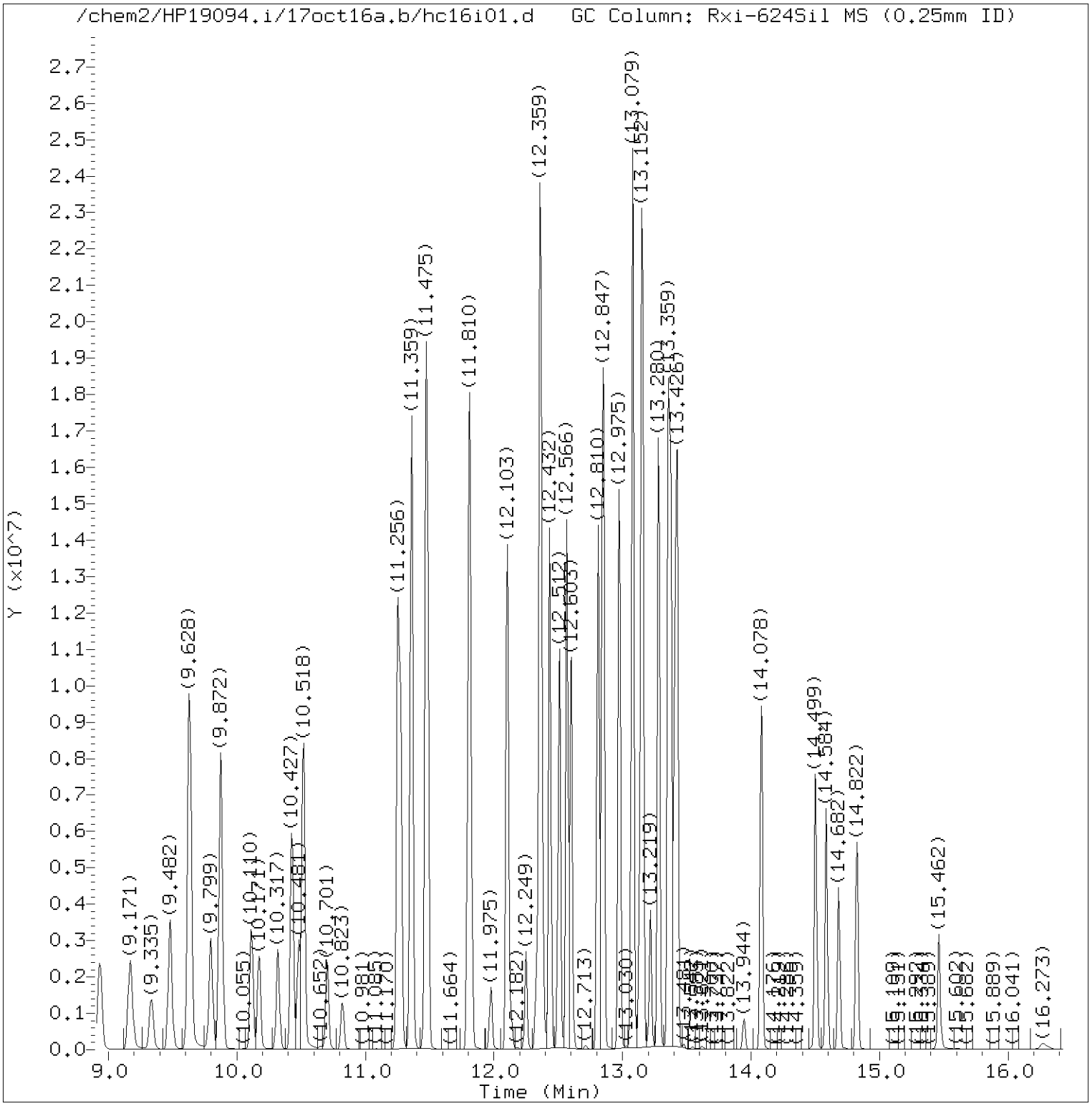
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	2457572	24.493
2) Chloromethane	(2)	2.154	50	2319776	23.413
5) Vinyl Chloride	(2)	2.288	62	2231657	24.507
6) 1,3-Butadiene	(2)	2.306	39	2037236	23.671
7) Bromomethane	(2)	2.623	94	1489312	24.045
8) Chloroethane	(2)	2.721	64	1232099	23.766
9) Dichlorofluoromethane	(2)	2.959	67	3519372	23.183
10) Trichlorofluoromethane	(2)	3.038	101	3109531	25.636
11) Ethyl ether	(2)	3.294	59	993448	25.659
12) Freon 123a	(2)	3.361	67	1853598	24.424
13) Acrolein	(1)	3.452	56	7105454	1270.457
14) Acetone	(1)	3.611	43	1675733M	233.972
15) 1,1-Dichloroethene	(2)	3.611	96	1225800	25.257
16) Freon 113	(2)	3.647	101	1417681	26.234
17) Methyl Iodide	(2)	3.812	142	2421914	25.052
18) Carbon Disulfide	(2)	3.940	76	3773365	24.295
21) Methyl Acetate	(1)	4.050	43	556859	25.827
22) Allyl Chloride	(2)	4.086	41	2710146	24.613
26)*t-Butyl Alcohol-d10	(1)	4.245	65	89021M	50.000
23) Methylene Chloride	(2)	4.269	84	1326578	23.961
28) t-Butyl Alcohol	(1)	4.373	59	1173829	483.994
29) Acrylonitrile	(1)	4.574	53	1192615	135.735
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	3062929	25.555
31) trans-1,2-Dichloroethene	(2)	4.708	96	1368875	24.948
32) n-Hexane	(2)	5.141	57	2506668	25.869
33) 1,1-Dichloroethane	(2)	5.354	63	2860784	25.346
34) di-Isopropyl Ether	(2)	5.415	45	5382775	25.269
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	2720487	25.692
37) Ethyl t-butyl ether	(2)	5.958	59	4358629	25.502
40) 1,2-Dichloroethene (Total)	(2)		96	2945548	50.076
38) 2-Butanone	(1)	6.129	43	3469543	246.622
39) cis-1,2-Dichloroethene	(2)	6.177	96	1576673	25.128
42) Propionitrile	(1)	6.190	54	1736254	535.083
41) 2,2-Dichloropropane	(2)	6.202	77	2411181	25.293
45) Methacrylonitrile	(1)	6.427	67	3097577	262.688
47) Bromochloromethane	(2)	6.519	128	636472	25.790
48) Tetrahydrofuran	(1)	6.537	71	811958	254.485
49) Chloroform	(2)	6.659	83	2771504	25.426

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	560949	10.183
50)$Dibromofluoromethane	(2)	6.879	111	577365	10.208
51) 1,1,1-Trichloroethane	(2)	6.909	97	2485505	25.289
52) Cyclohexane	(2)	7.031	56	3035427	25.269
52) Cyclohexane	(2)	7.037	84	2309414	25.003
52) Cyclohexane	(2)	7.031	69	871619	25.451
55) 1,1-Dichloropropene	(2)	7.122	75	2250322	25.889
54) Carbon Tetrachloride	(2)	7.135	117	2242696	26.127
56) Isobutyl Alcohol	(1)	7.202	41	1179160	1202.351
57)$1,2-Dichloroethane-d4	(2)	7.342	102	87384	10.130
57)$1,2-Dichloroethane-d4	(2)	7.336	65	491986	10.424
57)$1,2-Dichloroethane-d4	(2)	7.336	104	55468	10.222
58) Benzene	(2)	7.385	78	6003652	25.254
59) 1,2-Dichloroethane	(2)	7.445	62	1683091	25.313
60) t-Amyl methyl ether	(2)	7.574	73	3565667	25.705
63)*Fluorobenzene	(2)	7.787	96	2281153	10.000
62) n-Heptane	(2)	7.811	43	2992254	25.863
65) n-Butanol	(1)	8.080	56	1928740	2673.562
67) Trichloroethene	(2)	8.275	95	1615652	25.370
70) 1,2-Dichloropropane	(2)	8.598	63	1623040	26.307
69) Methylcyclohexane	(2)	8.604	83	2960660	27.045
71) Methyl Methacrylate	(1)	8.665	69	624541	26.657
72) 1,4-Dioxane	(1)	8.677	88	222318M	1510.212
73) Dibromomethane	(2)	8.707	93	657217	25.461
74) Bromodichloromethane	(2)	8.933	83	1986576	26.670
76) 2-Nitropropane	(1)	9.171	41	2152126	269.405
80) cis-1,3-Dichloropropene	(2)	9.482	75	2317432	26.803
81) 4-Methyl-2-Pentanone	(1)	9.628	43	9003062	261.191
82)$Toluene-d8	(3)	9.799	98	2291746	9.607
82)$Toluene-d8	(3)	9.799	100	1449755	9.601
83) Toluene	(3)	9.872	92	3816193	24.483
84) trans-1,3-Dichloropropene	(3)	10.110	75	1847385	25.949
85) 1,3-Dichloropropene (total)	(3)		75	4164817	52.752
86) Ethyl Methacrylate	(3)	10.171	69	1344242	25.274
88) 1,1,2-Trichloroethane	(3)	10.317	97	885368	24.327
89) Tetrachloroethene	(3)	10.427	166	1798605	24.587
90) 1,3-Dichloropropane	(3)	10.481	76	1591912	24.598
91) 2-Hexanone	(1)	10.518	43	6135211M	247.023

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	1237283	26.033
95) 1,2-Dibromoethane	(3)	10.823	107	862854	25.089
97)*Chlorobenzene-d5	(3)	11.250	117	1641394	10.000
98) Chlorobenzene	(3)	11.274	112	4120449	24.805
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	1516938	25.931
100) Ethylbenzene	(3)	11.359	91	7846755	25.032
101) m+p-Xylene	(3)	11.475	106	5918193	50.105
105) Xylene (Total)	(3)		106	8869300	75.647
104) o-Xylene	(3)	11.804	106	2951107	25.550
106) Styrene	(3)	11.817	104	4736548	26.252
107) Bromoform	(3)	11.975	173	725518	28.128
108) Isopropylbenzene	(3)	12.103	105	7809247	25.183
111)$4-Bromofluorobenzene	(3)	12.249	95	747701	10.319
111)$4-Bromofluorobenzene	(3)	12.249	174	655837	10.292
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	1098870	23.455
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	3254819	305.229
114) Bromobenzene	(4)	12.365	156	1755790	23.761
116) 1,2,3-Trichloropropane	(4)	12.384	110	279704	23.416
117) n-Propylbenzene	(4)	12.432	91	9437638	23.368
119) 2-Chlorotoluene	(4)	12.512	126	1769695	23.381
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	6711936	23.985
122) 4-Chlorotoluene	(4)	12.603	126	1820126	23.628
125) tert-Butylbenzene	(4)	12.810	134	1409371M	23.687
126) Pentachloroethane	(4)	12.841	167	1191039	25.729
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	6769415	24.084
128) sec-Butylbenzene	(4)	12.975	105	8646072	23.860
131) 1,3-Dichlorobenzene	(4)	13.079	146	3553965	24.700
132) p-Isopropyltoluene	(4)	13.085	119	7527846	24.899
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	759767	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	3458715	23.083
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	2852829	23.922
136) Benzyl Chloride	(4)	13.219	126	458392	27.449
138) n-Butylbenzene	(4)	13.371	92	3930104	25.928
139) 1,2-Dichlorobenzene	(4)	13.408	146	3049193	23.781
143) 1,2-Dibromo-3-chloropropane	(1)	13.944	155	143162	27.750
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	2618994	24.558
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	2065619	23.514
146) Hexachlorobutadiene	(4)	14.584	225	1072130	25.868

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

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

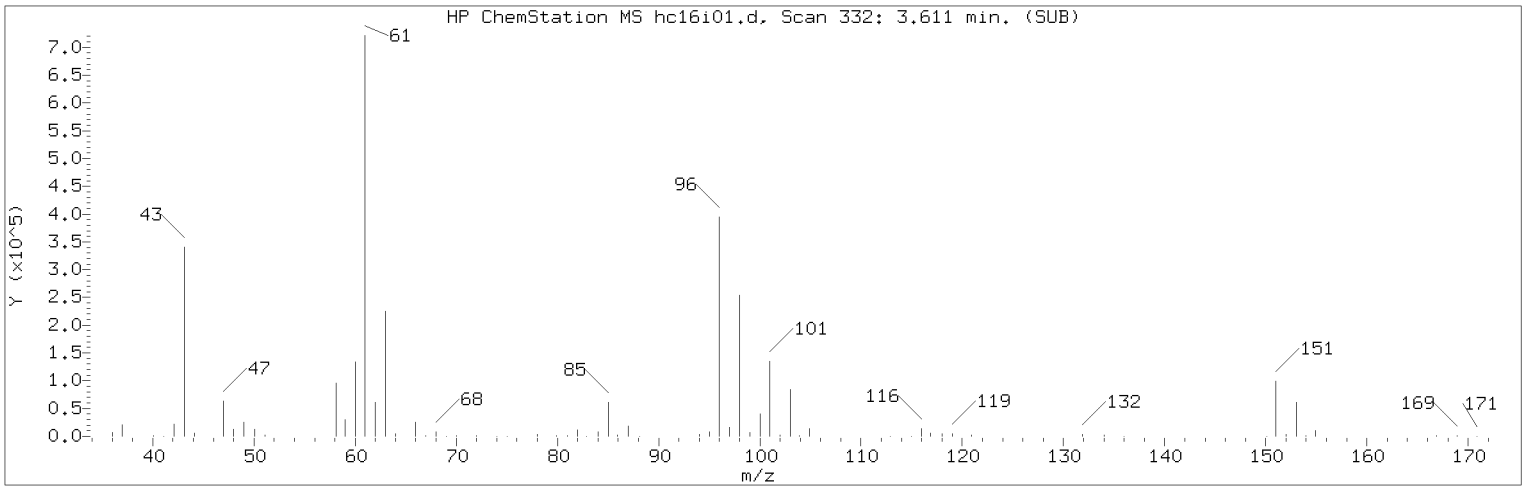
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

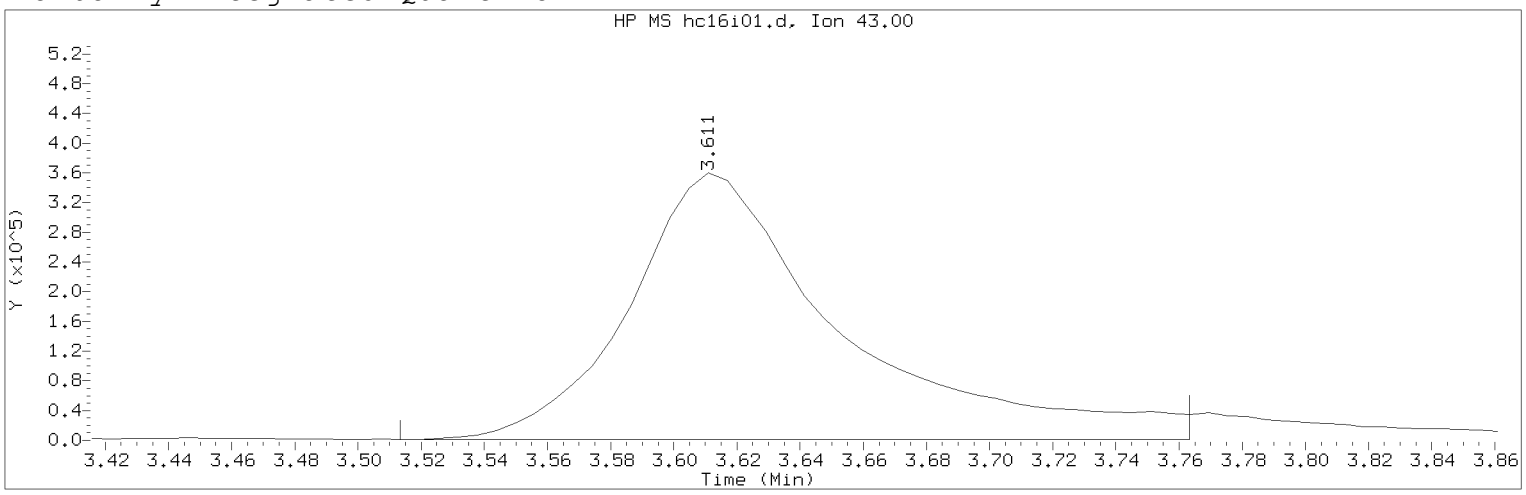
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.682	128	2912957	20.380
148) 1,2,3-Trichlorobenzene	(4)	14.822	180	1559749	21.091

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Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

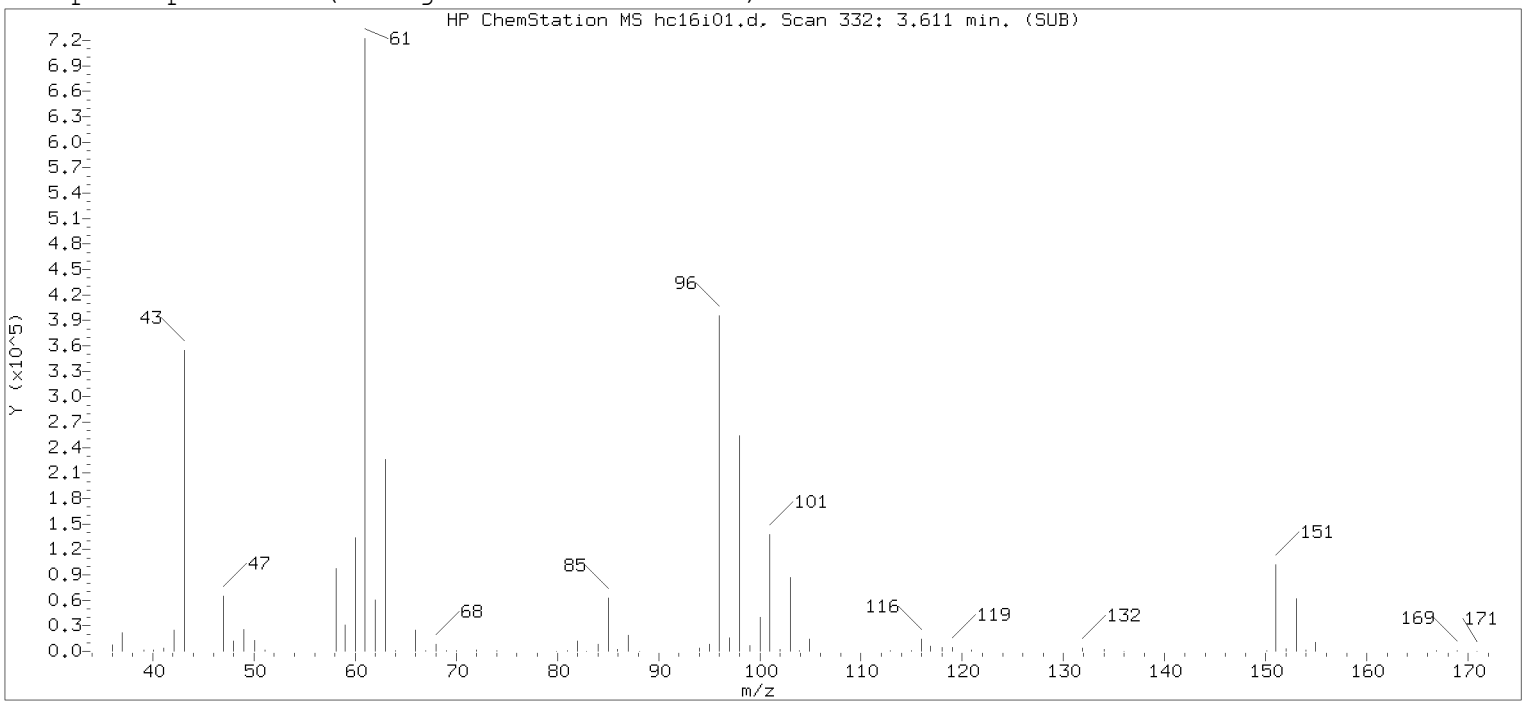
Compound Number : 14
Compound Name : Acetone
Scan Number : 332
Retention Time (minutes): 3.611
Quant Ion : 43.00
Area (flag) : 1675733M
On-Column Amount (ng) : 233.9725
Integration start scan : 315 Integration stop scan: 356
Y at integration start : 1052 Y at integration end: 1139

Reason for manual integration: improper integration

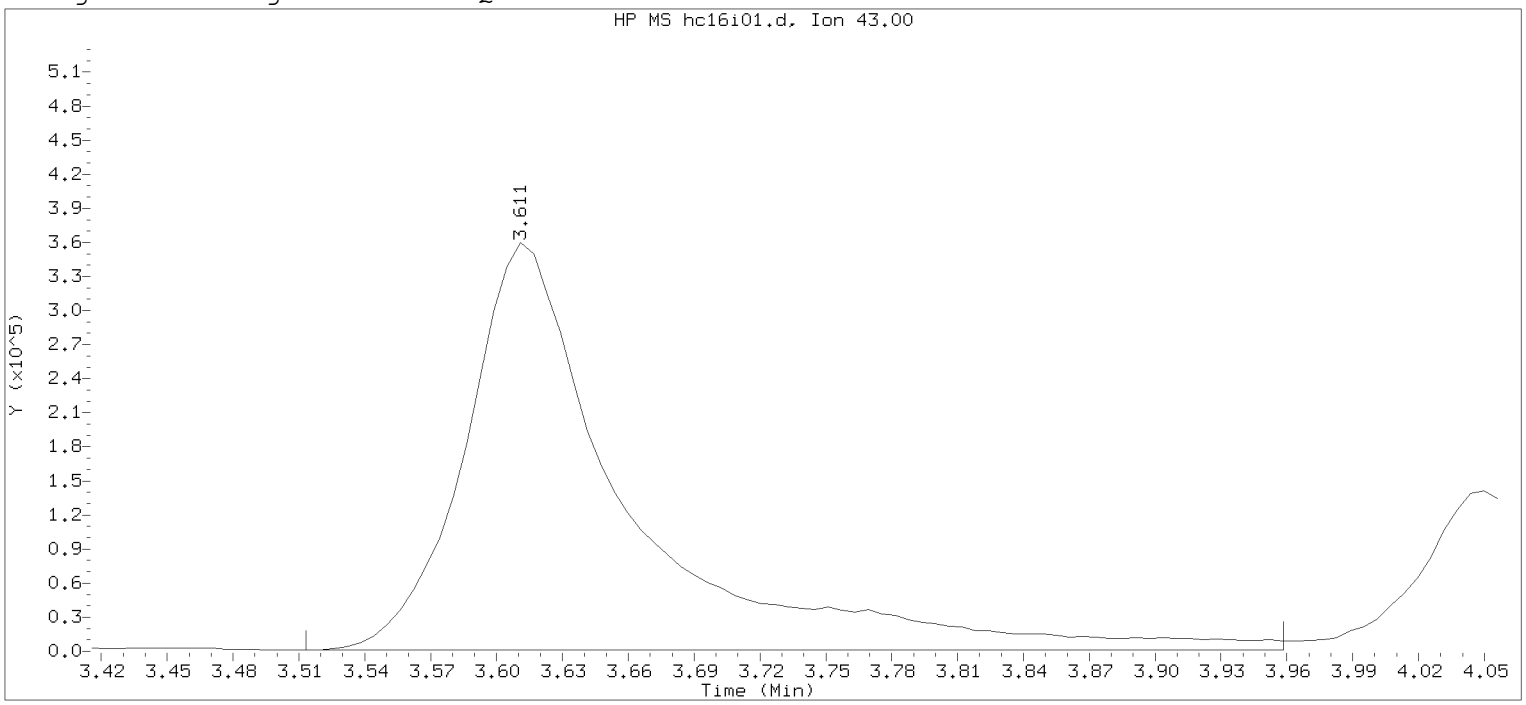
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

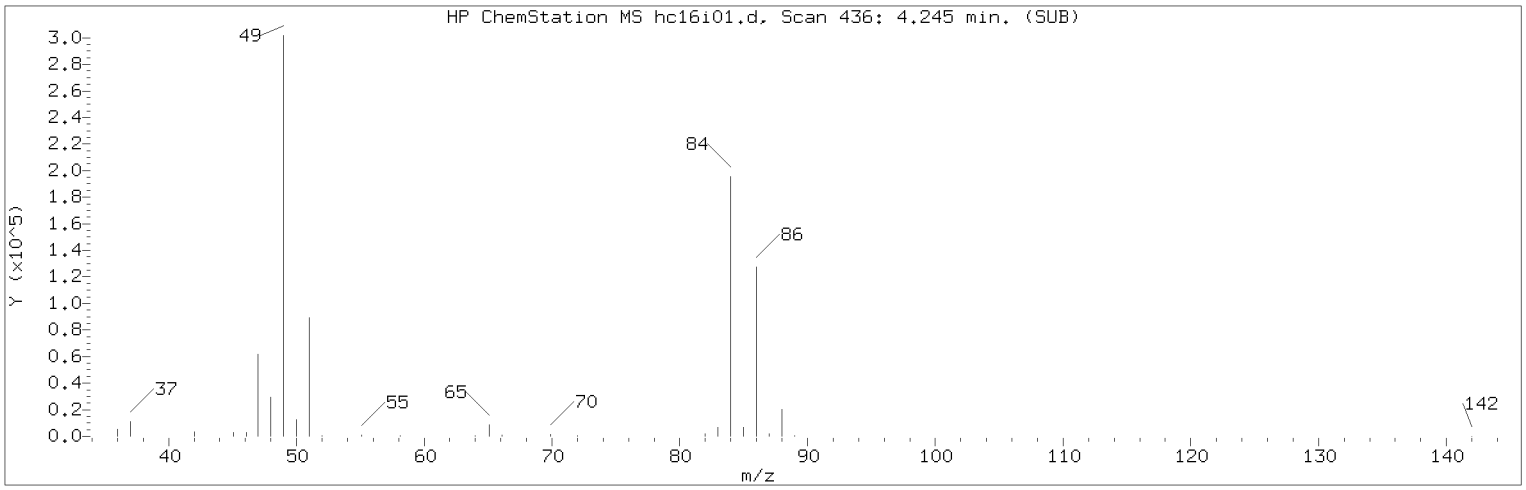
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

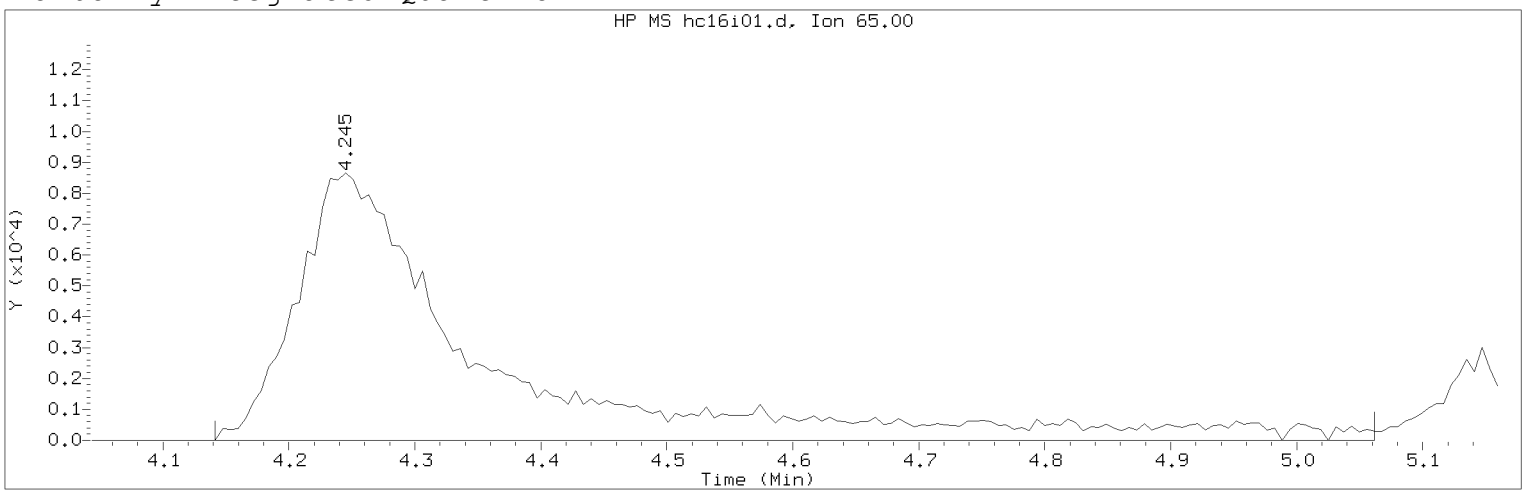
Compound Number : 14
Compound Name : Acetone
Scan Number : 332
Retention Time (minutes): 3.611
Quant Ion : 43.00
Area : 1851697
On-column Amount (ng) : 248.6120
Integration start scan : 315 Integration stop scan: 388
Y at integration start : 1052 Y at integration end: 1207

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

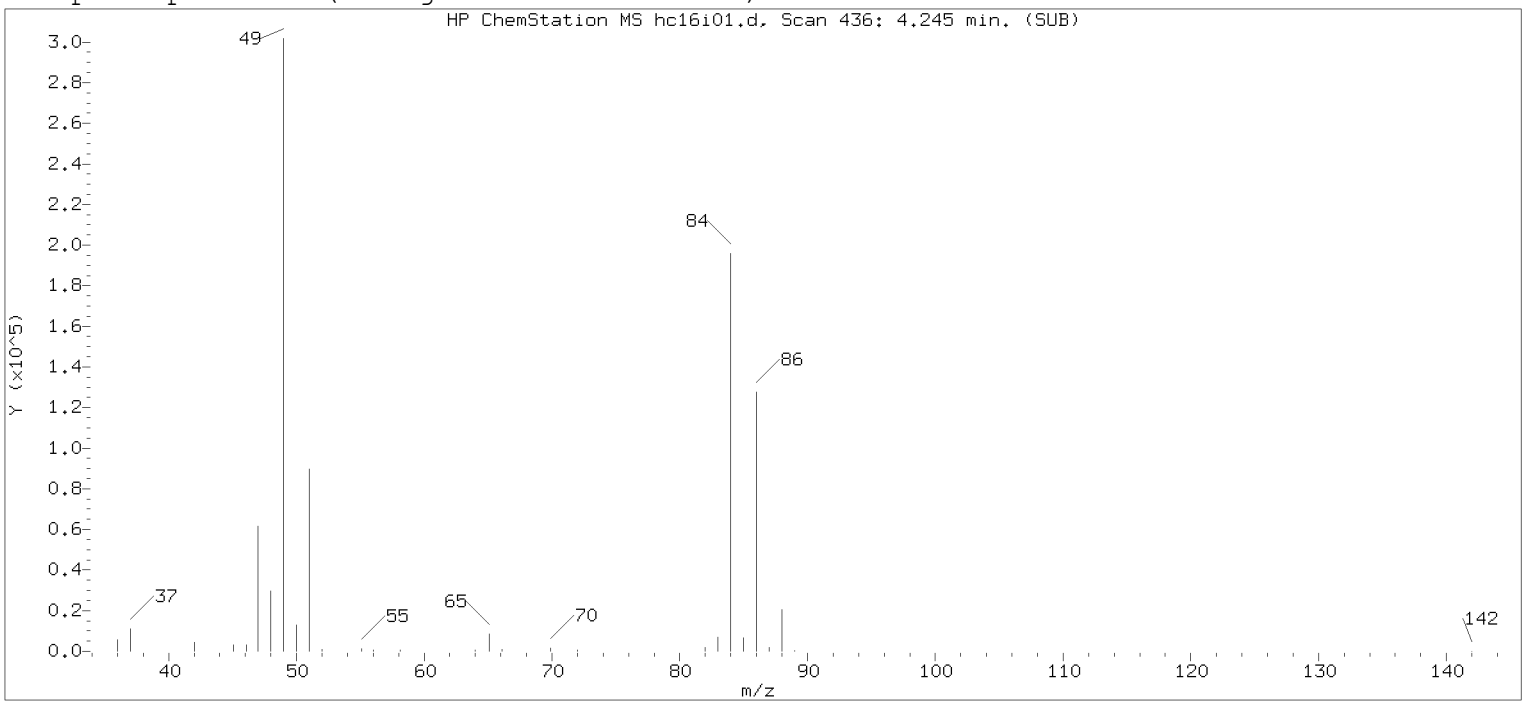
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area (flag) : 89021M
On-Column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 569
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

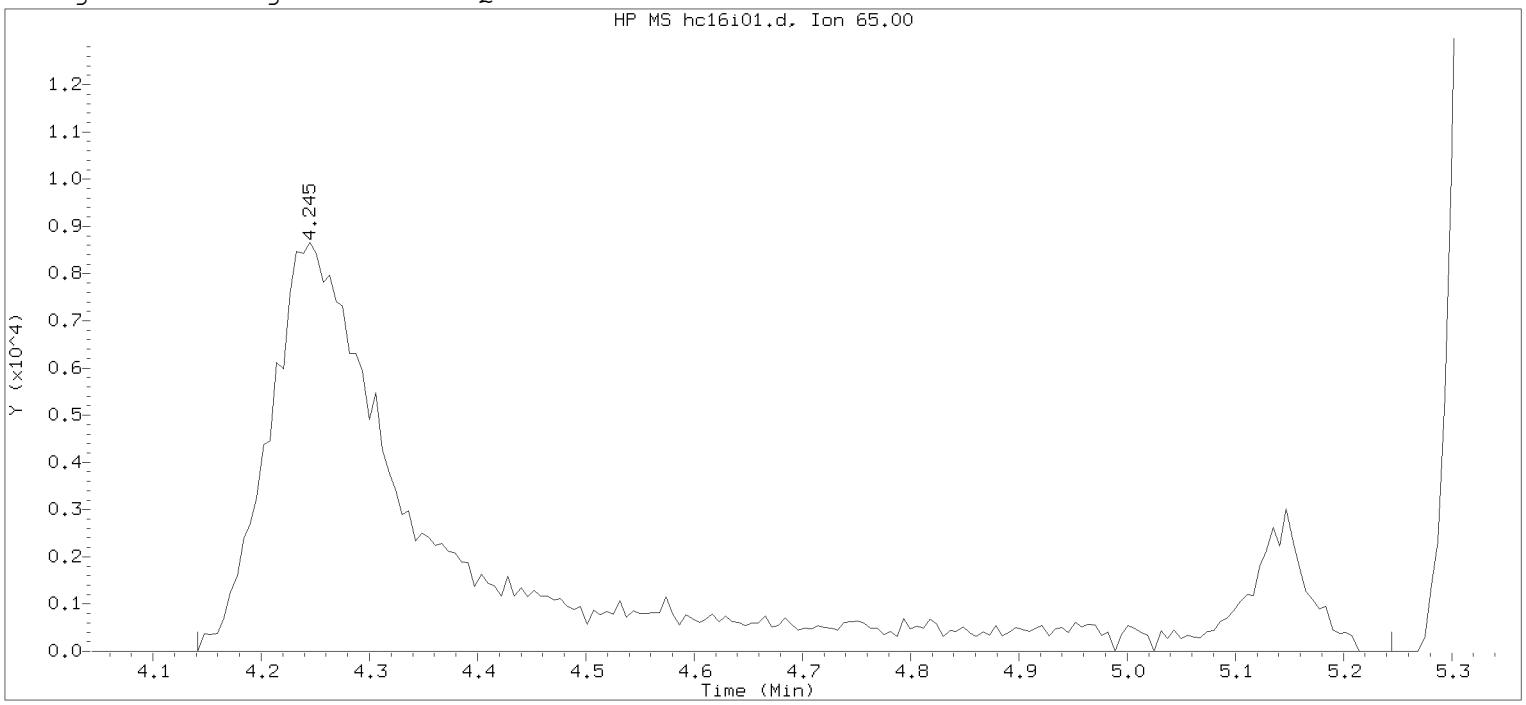
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

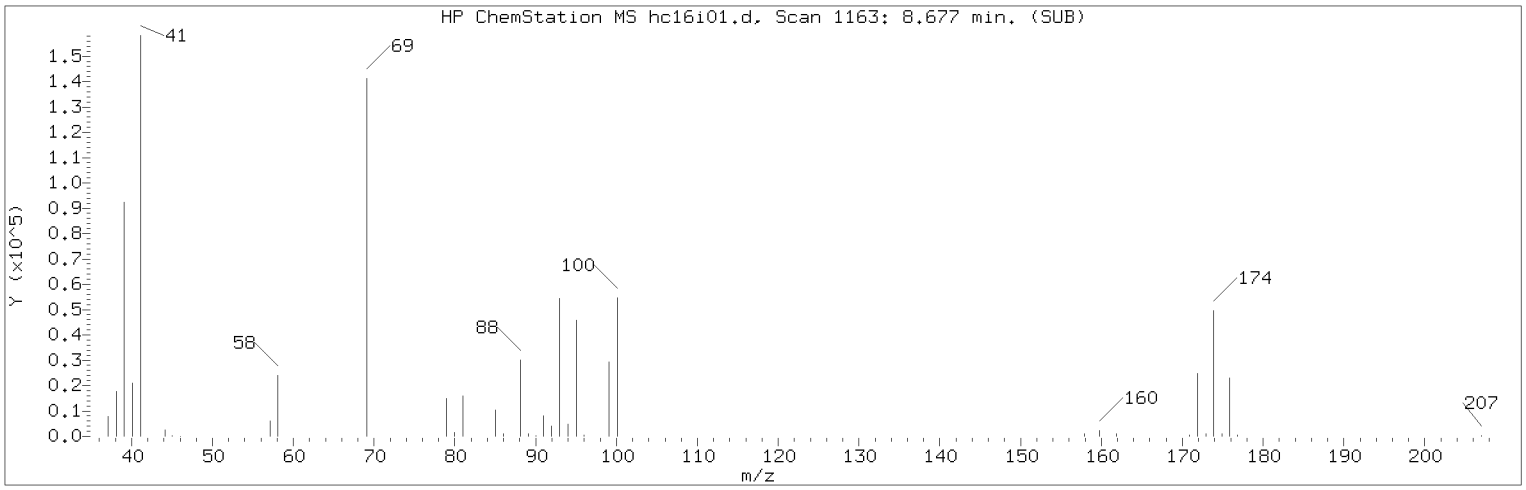
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Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

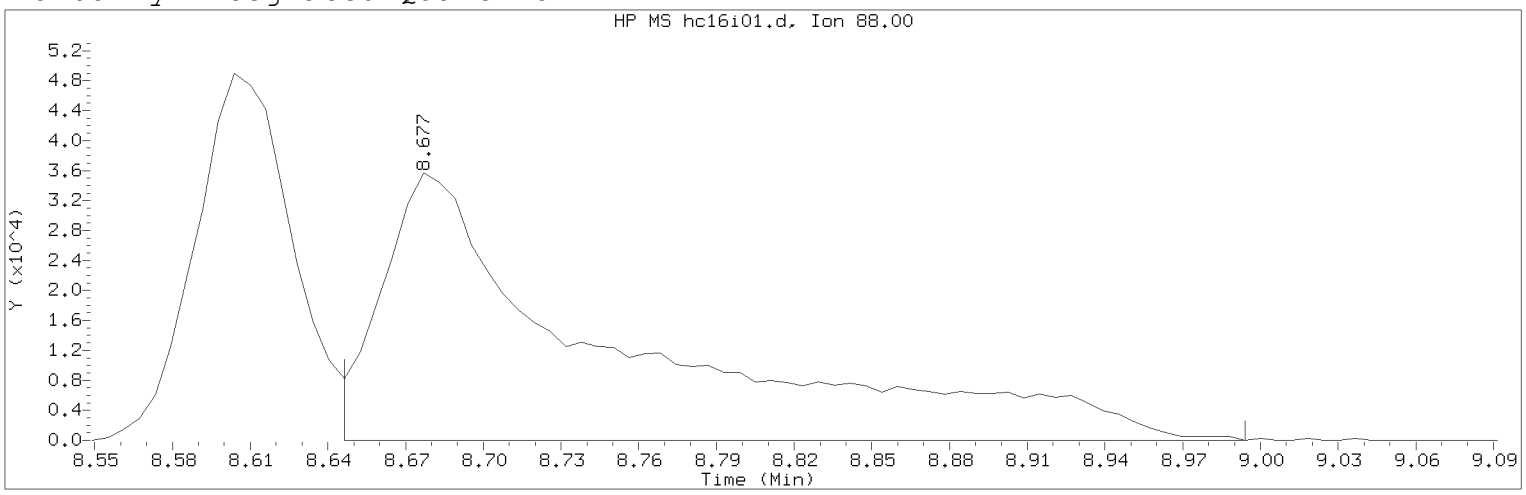
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area : 99413
On-column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

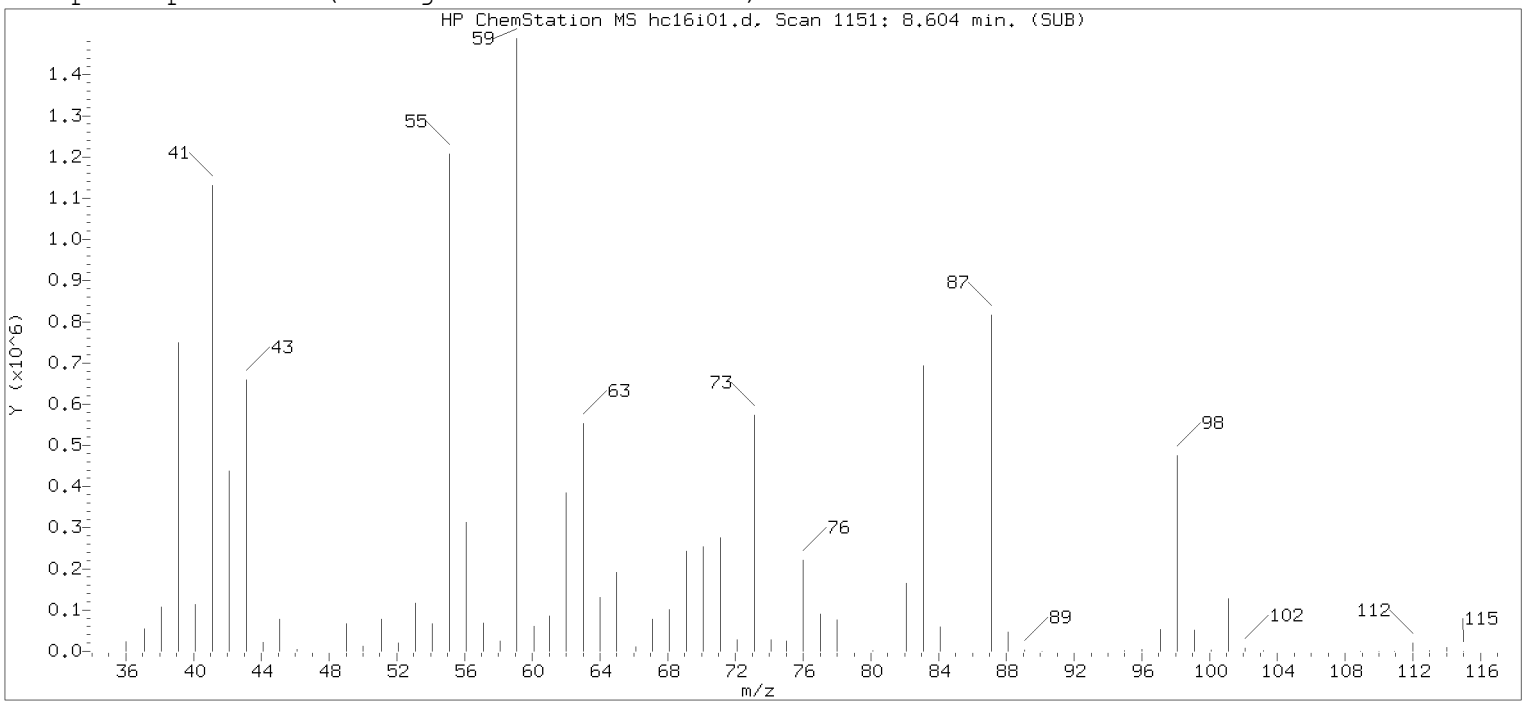
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1163
Retention Time (minutes): 8.677
Quant Ion : 88.00
Area (flag) : 222318M
On-Column Amount (ng) : 1510.2124
Integration start scan : 1157 Integration stop scan: 1214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

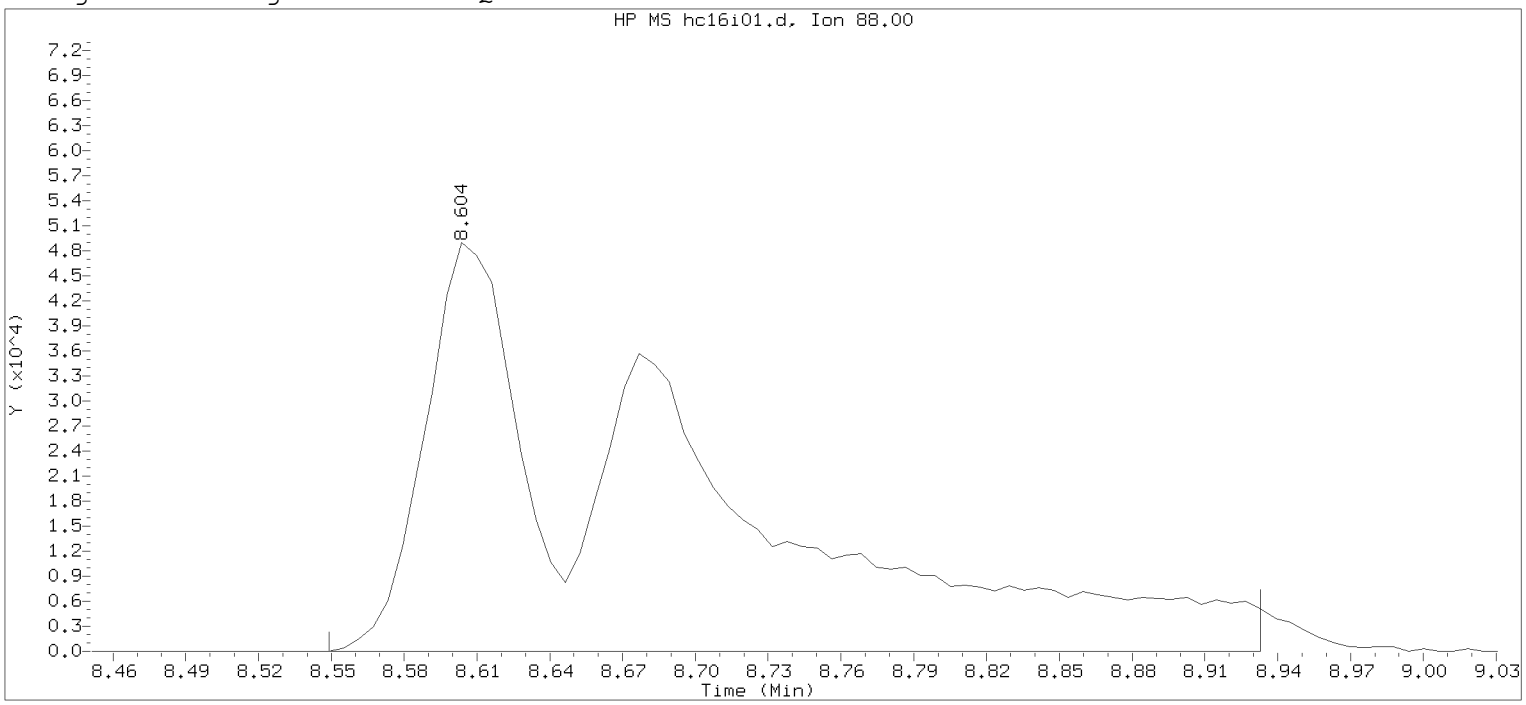
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

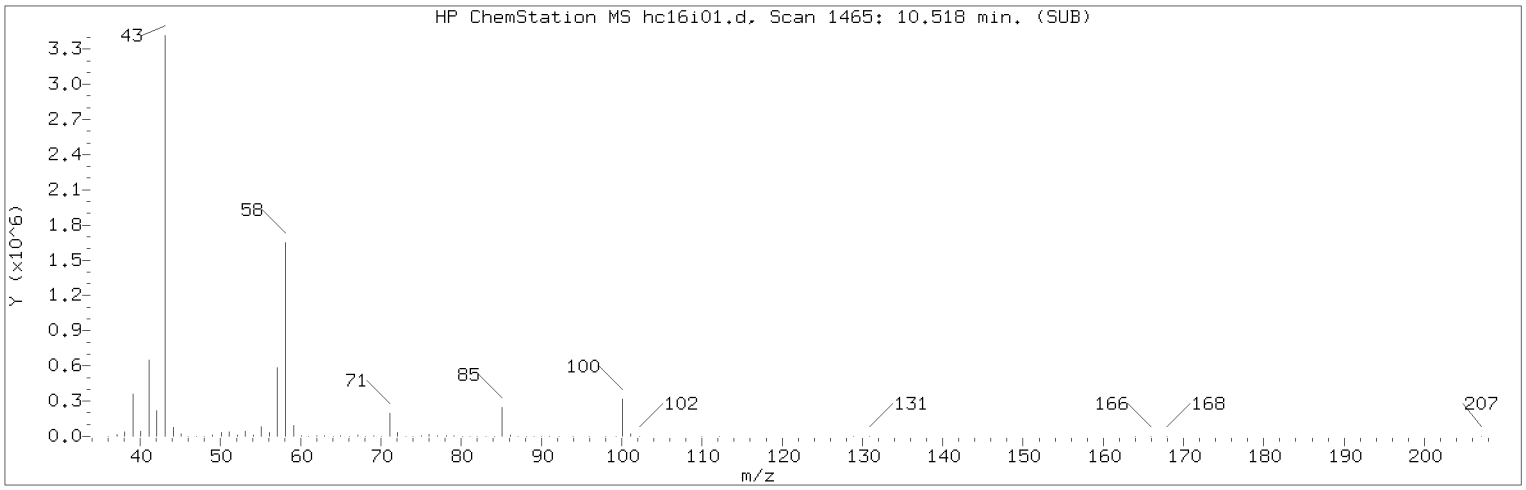
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

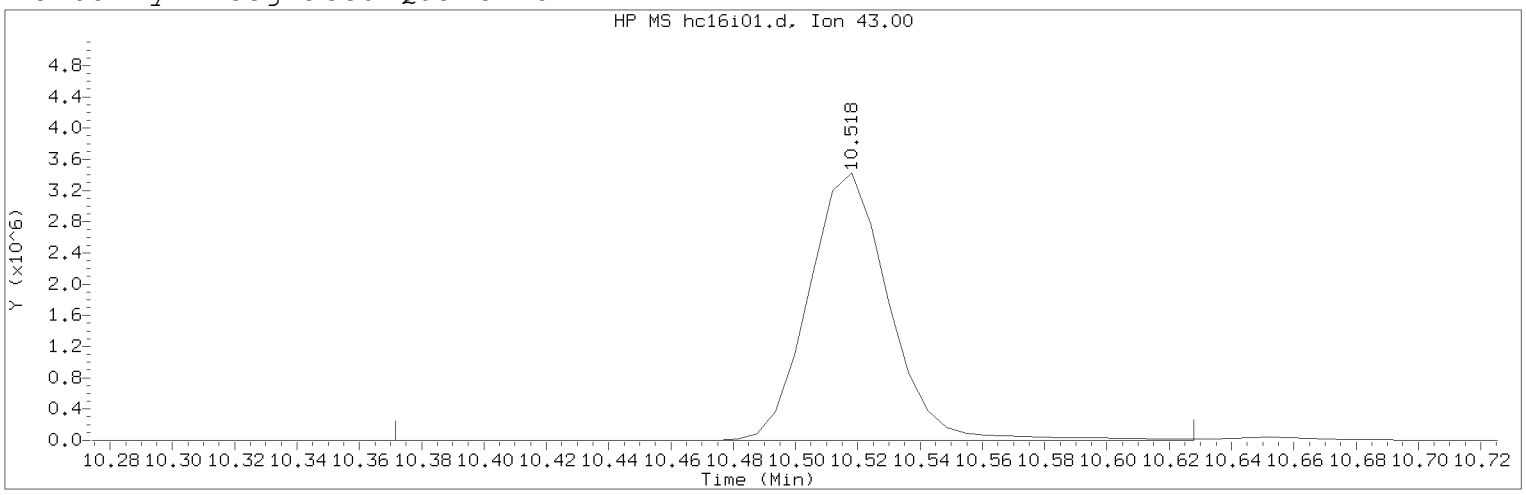
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 88.00
Area : 341639
On-column Amount (ng) : 1447.7858
Integration start scan : 1141 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

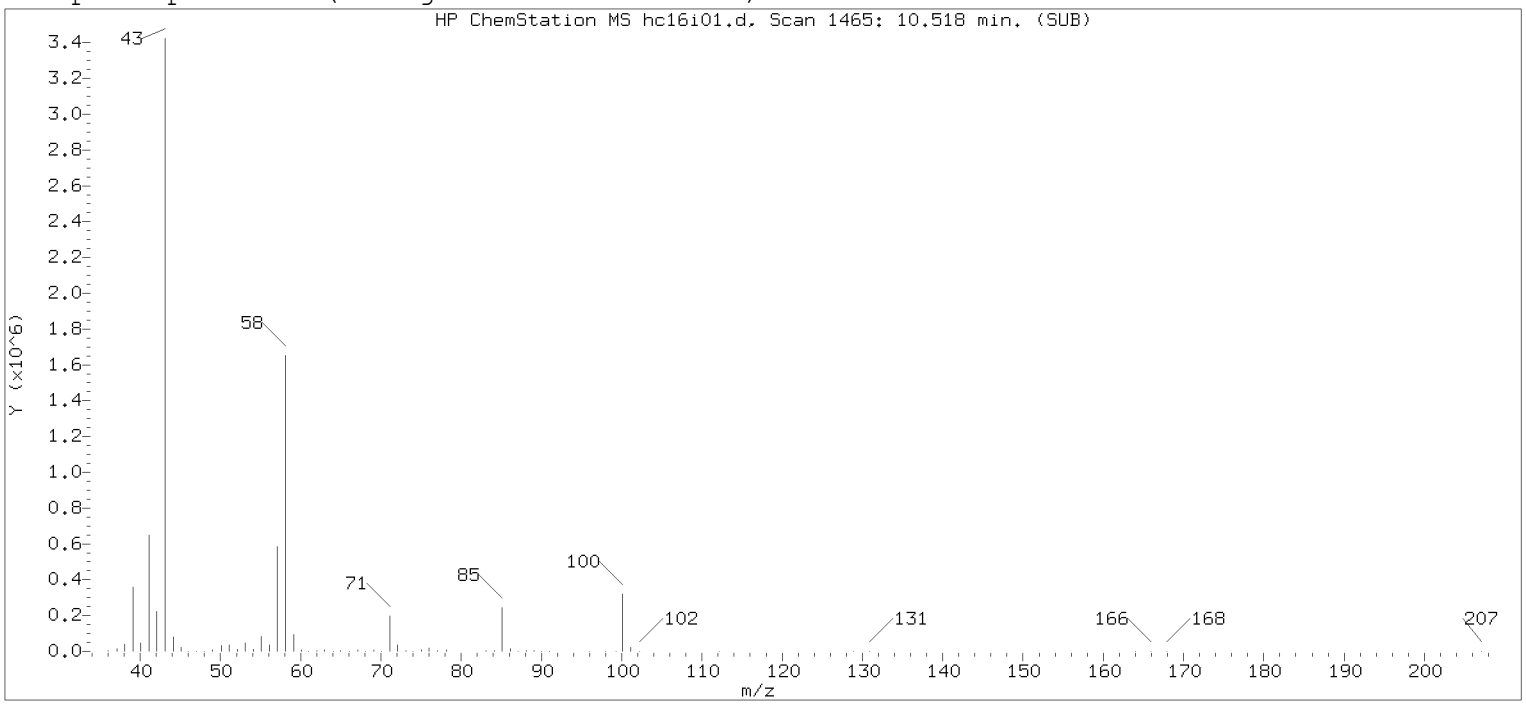
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1465
Retention Time (minutes): 10.518
Quant Ion : 43.00
Area (flag) : 6135211M
On-Column Amount (ng) : 247.0229
Integration start scan : 1440 Integration stop scan: 1482
Y at integration start : 580 Y at integration end: 580

Reason for manual integration: improper integration

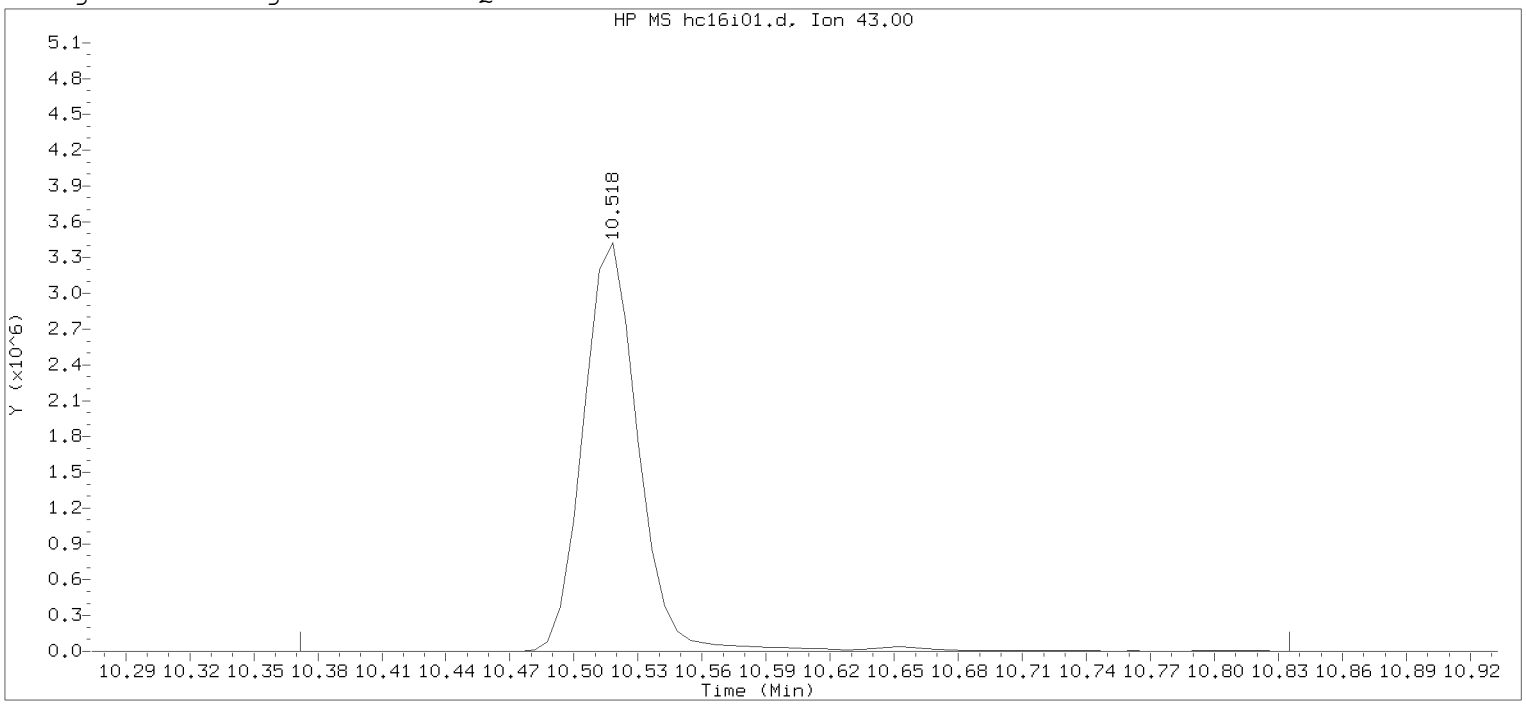
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

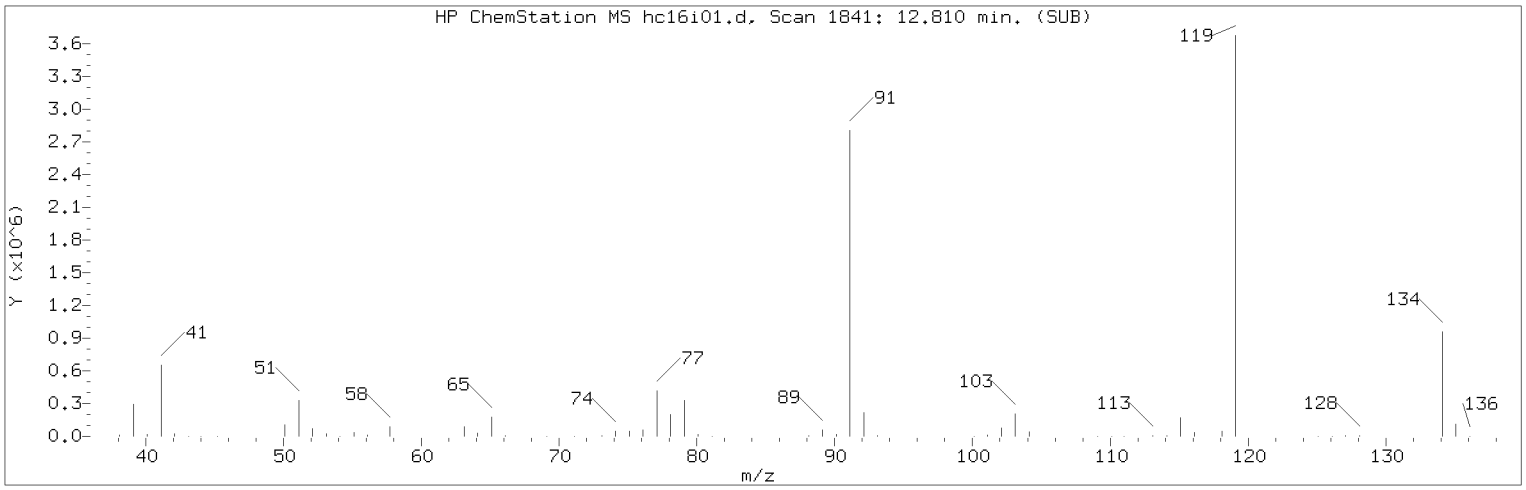
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Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

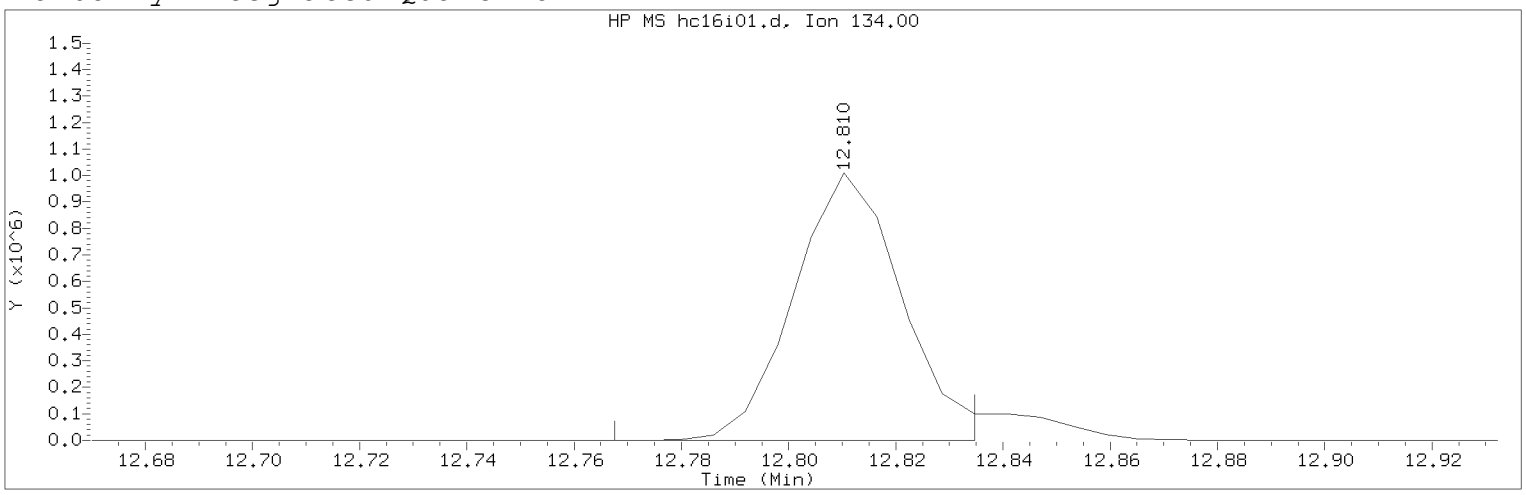
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1465
Retention Time (minutes): 10.518
Quant Ion : 43.00
Area : 6228015
On-column Amount (ng) : 242.4272
Integration start scan : 1440 Integration stop scan: 1516
Y at integration start : 580 Y at integration end: 580

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

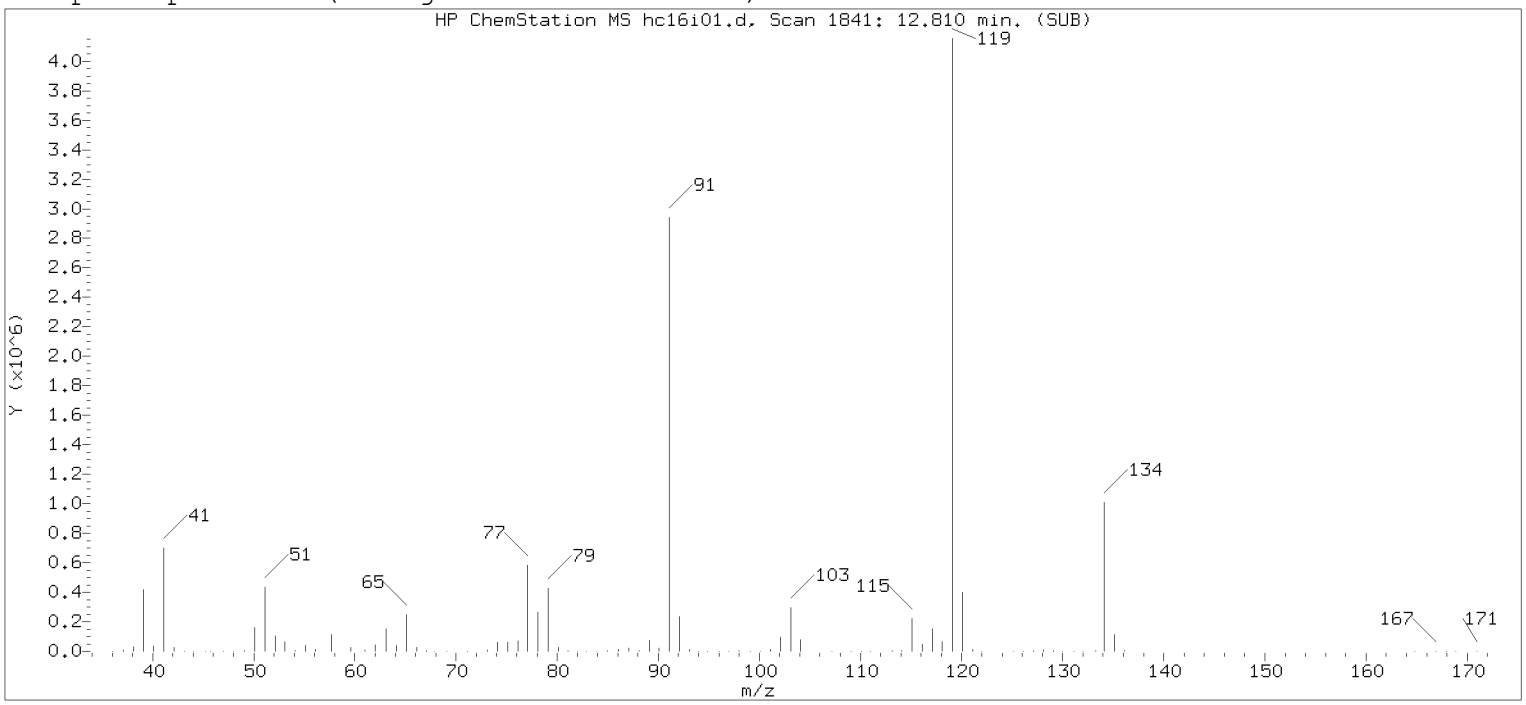
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 1409371M
On-Column Amount (ng) : 23.6872
Integration start scan : 1833 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

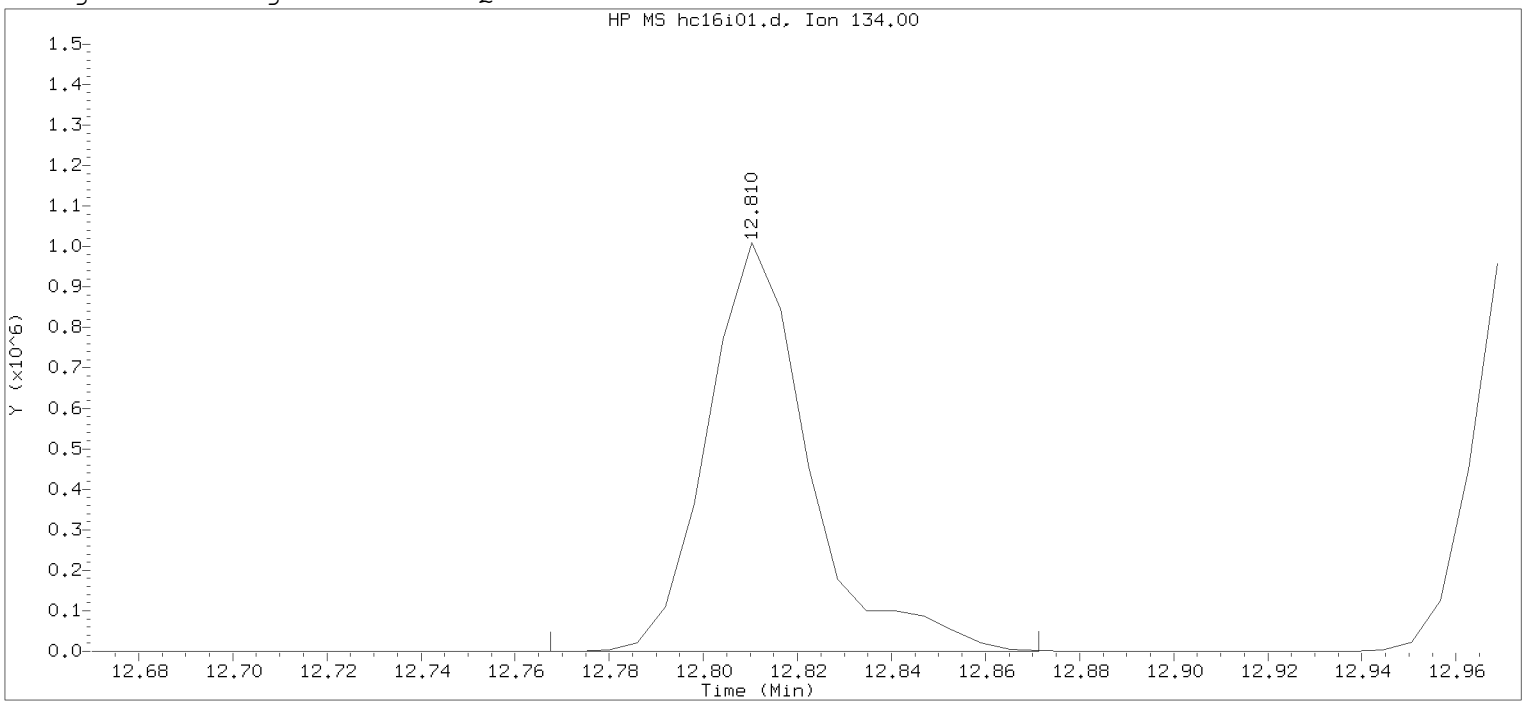
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



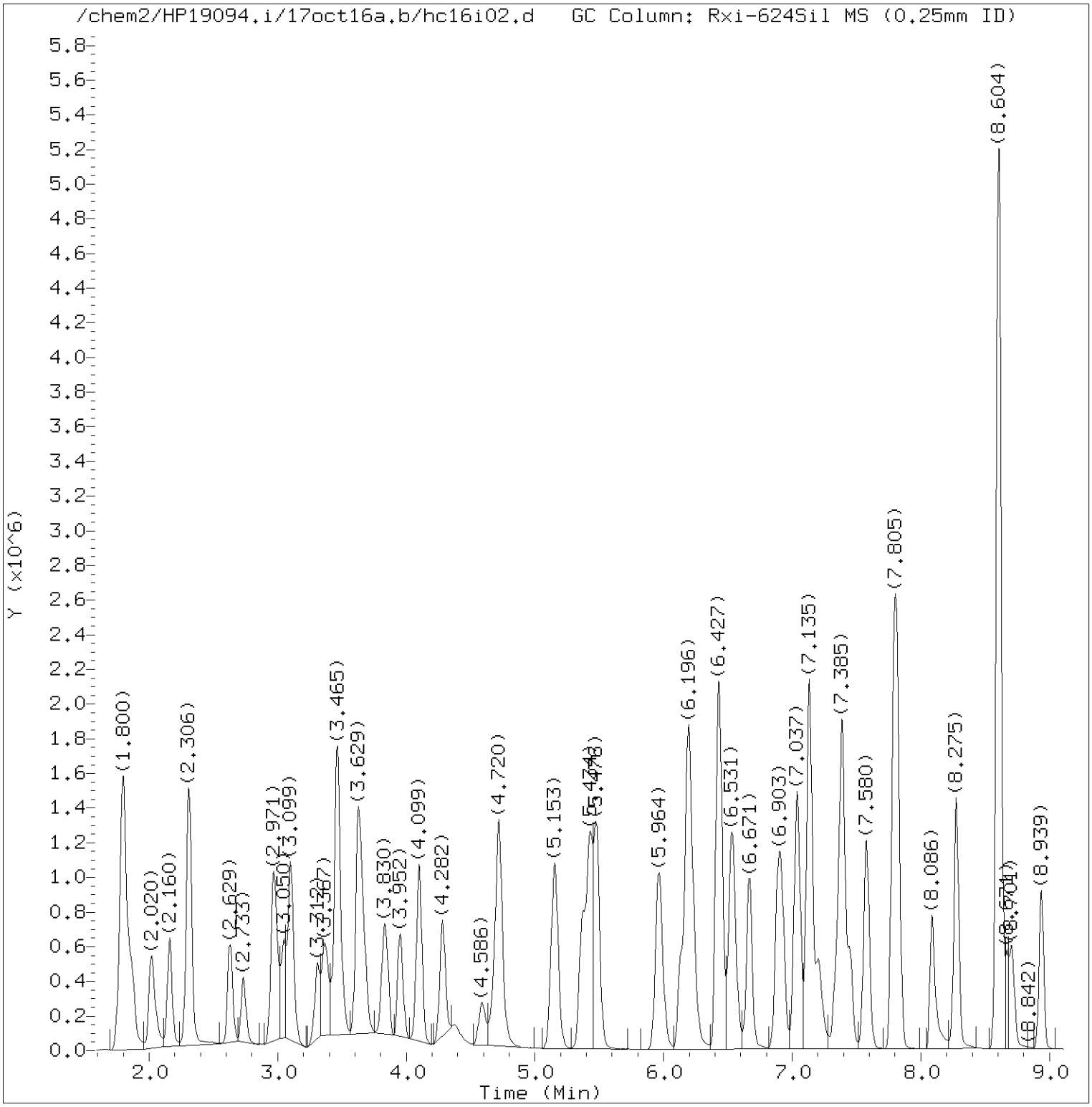
Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 1506710
On-column Amount (ng) : 25.6522
Integration start scan : 1833 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

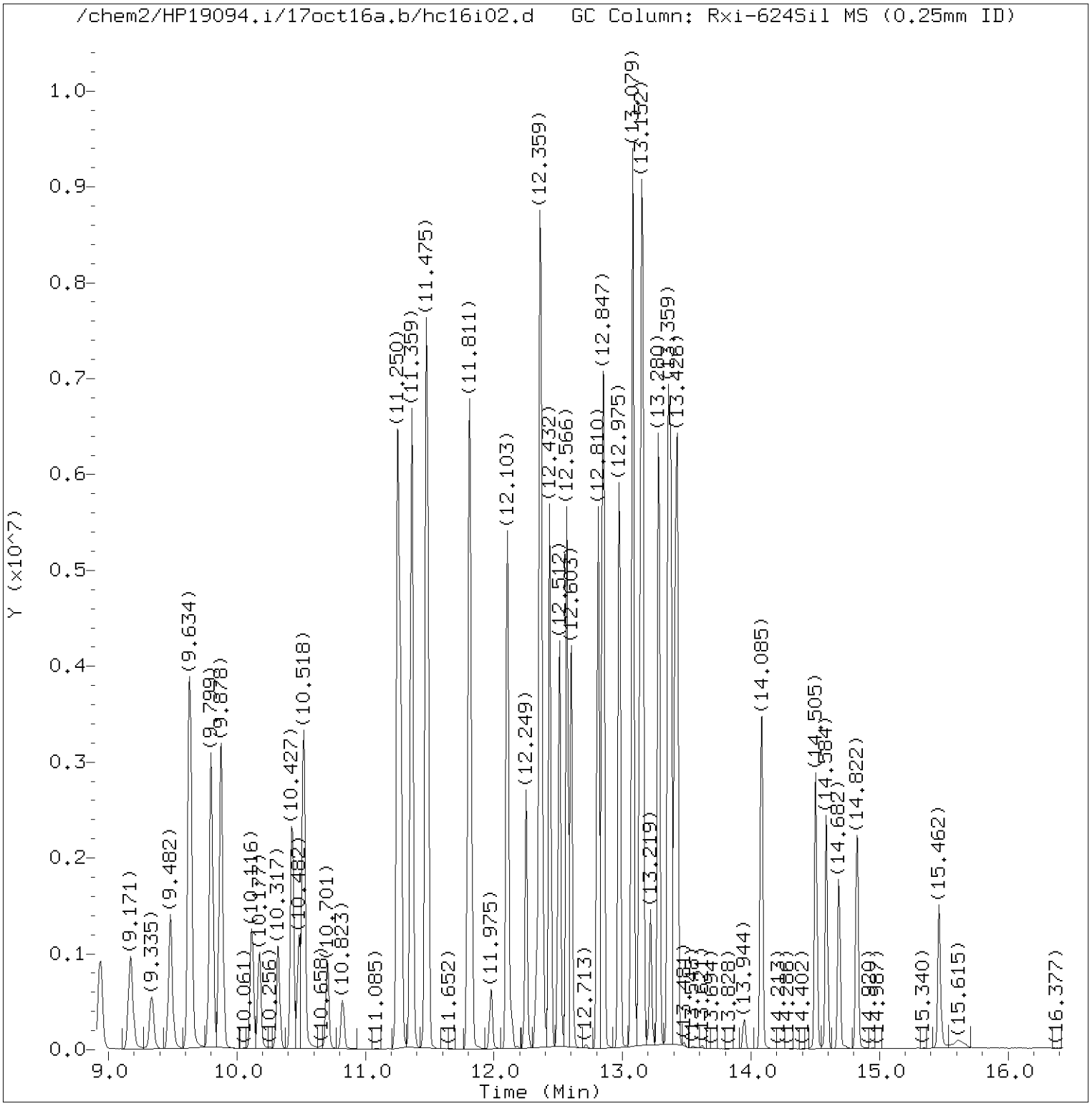
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.020	85	1021064	10.000
2) Chloromethane	(2)	2.160	50	946481	10.000
5) Vinyl Chloride	(2)	2.294	62	905448	10.000
6) 1,3-Butadiene	(2)	2.312	39	811682	10.000
7) Bromomethane	(2)	2.629	94	593154	10.000
8) Chloroethane	(2)	2.733	64	502058	10.000
9) Dichlorofluoromethane	(2)	2.965	67	1424856	10.000
10) Trichlorofluoromethane	(2)	3.050	101	1259182	10.000
11) Ethyl ether	(2)	3.306	59	401580	10.000
12) Freon 123a	(2)	3.367	67	759734	10.000
13) Acrolein	(1)	3.465	56	2872965	500.000
14) Acetone	(1)	3.623	43	702361M	100.000
15) 1,1-Dichloroethene	(2)	3.623	96	499355	10.000
16) Freon 113	(2)	3.660	101	571302	10.000
17) Methyl Iodide	(2)	3.824	142	989922	10.000
18) Carbon Disulfide	(2)	3.952	76	1544275	10.000
21) Methyl Acetate	(1)	4.068	43	215195	10.000
22) Allyl Chloride	(2)	4.099	41	1112069	10.000
26)*t-Butyl Alcohol-d10	(1)	4.251	65	93229M	50.000
23) Methylene Chloride	(2)	4.282	84	539360	10.000
28) t-Butyl Alcohol	(1)	4.379	59	519747	200.000
29) Acrylonitrile	(1)	4.592	53	480578	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	1247658	10.000
31) trans-1,2-Dichloroethene	(2)	4.720	96	558602	10.000
32) n-Hexane	(2)	5.153	57	1012246	10.000
33) 1,1-Dichloroethane	(2)	5.367	63	1140599	10.000
34) di-Isopropyl Ether	(2)	5.428	45	2171028	10.000
35) 2-Chloro-1,3-Butadiene	(2)	5.483	53	1107724	10.000
37) Ethyl t-butyl ether	(2)	5.964	59	1774353	10.000
40) 1,2-Dichloroethene (Total)	(2)		96	1192533	20.000
38) 2-Butanone	(1)	6.135	43	1399461	100.000
39) cis-1,2-Dichloroethene	(2)	6.190	96	633931	10.000
42) Propionitrile	(1)	6.202	54	712868	200.000
41) 2,2-Dichloropropane	(2)	6.214	77	980214	10.000
45) Methacrylonitrile	(1)	6.434	67	1229067	100.000
47) Bromochloromethane	(2)	6.525	128	253104	10.000
48) Tetrahydrofuran	(1)	6.543	71	325254	100.000
49) Chloroform	(2)	6.665	83	1117103	10.000

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

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.885	113	569586	10.000
50)$Dibromofluoromethane	(2)	6.885	111	588824	10.000
51) 1,1,1-Trichloroethane	(2)	6.915	97	1015267	10.000
52) Cyclohexane	(2)	7.037	56	1225986	10.000
52) Cyclohexane	(2)	7.037	84	926374	10.000
52) Cyclohexane	(2)	7.043	69	349747	10.000
55) 1,1-Dichloropropene	(2)	7.129	75	907493	10.000
54) Carbon Tetrachloride	(2)	7.141	117	902350	10.000
56) Isobutyl Alcohol	(1)	7.214	41	485480	500.000
57)$1,2-Dichloroethane-d4	(2)	7.348	102	87137	10.000
57)$1,2-Dichloroethane-d4	(2)	7.348	65	494919	10.000
57)$1,2-Dichloroethane-d4	(2)	7.348	104	57225	10.000
58) Benzene	(2)	7.391	78	2420089	10.000
59) 1,2-Dichloroethane	(2)	7.446	62	679756	10.000
60) t-Amyl methyl ether	(2)	7.580	73	1439728	10.000
63)*Fluorobenzene	(2)	7.787	96	2332021	10.000
62) n-Heptane	(2)	7.817	43	1186400	10.000
65) n-Butanol	(1)	8.086	56	797425	1000.000
67) Trichloroethene	(2)	8.275	95	649025	10.000
70) 1,2-Dichloropropane	(2)	8.598	63	646809	10.000
69) Methylcyclohexane	(2)	8.604	83	1163027	10.000
71) Methyl Methacrylate	(1)	8.671	69	247352M	10.000
72) 1,4-Dioxane	(1)	8.683	88	93140M	500.000
73) Dibromomethane	(2)	8.707	93	263656	10.000
74) Bromodichloromethane	(2)	8.939	83	787534	10.000
76) 2-Nitropropane	(1)	9.171	41	825937	100.000
80) cis-1,3-Dichloropropene	(2)	9.482	75	915774	10.000
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3565585	100.000
82)$Toluene-d8	(3)	9.799	98	2333343	10.000
82)$Toluene-d8	(3)	9.799	100	1465374	10.000
83) Toluene	(3)	9.878	92	1514967	10.000
84) trans-1,3-Dichloropropene	(3)	10.116	75	722203	10.000
85) 1,3-Dichloropropene (total)	(3)		75	1637977	20.000
86) Ethyl Methacrylate	(3)	10.177	69	534723	10.000
88) 1,1,2-Trichloroethane	(3)	10.323	97	352071	10.000
89) Tetrachloroethene	(3)	10.433	166	721958	10.000
90) 1,3-Dichloropropane	(3)	10.482	76	631241	10.000
91) 2-Hexanone	(1)	10.518	43	2482197	100.000

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	481784	10.000
95) 1,2-Dibromoethane	(3)	10.823	107	340248	10.000
97)*Chlorobenzene-d5	(3)	11.250	117	1624059	10.000
98) Chlorobenzene	(3)	11.274	112	1624792	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	589944	10.000
100) Ethylbenzene	(3)	11.359	91	3075071	10.000
101) m+p-Xylene	(3)	11.475	106	2320055	20.000
105) Xylene (Total)	(3)		106	3463799	30.000
104) o-Xylene	(3)	11.804	106	1143744	10.000
106) Styrene	(3)	11.817	104	1821702	10.000
107) Bromoform	(3)	11.981	173	276043	10.000
108) Isopropylbenzene	(3)	12.103	105	3085397	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	738883	10.000
111)$4-Bromofluorobenzene	(3)	12.249	174	647286	10.000
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	433298	10.000
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	1220077	100.000
114) Bromobenzene	(4)	12.365	156	674707	10.000
116) 1,2,3-Trichloropropane	(4)	12.384	110	110468	10.000
117) n-Propylbenzene	(4)	12.432	91	3769529	10.000
119) 2-Chlorotoluene	(4)	12.512	126	697581	10.000
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	2617121	10.000
122) 4-Chlorotoluene	(4)	12.603	126	708469	10.000
125) tert-Butylbenzene	(4)	12.810	134	549099M	10.000
126) Pentachloroethane	(4)	12.841	167	454911	10.000
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	2665328	10.000
128) sec-Butylbenzene	(4)	12.975	105	3397397	10.000
131) 1,3-Dichlorobenzene	(4)	13.079	146	1347038	10.000
132) p-Isopropyltoluene	(4)	13.085	119	2903991	10.000
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	729300	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	1330084	10.000
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	1107929	10.000
136) Benzyl Chloride	(4)	13.219	126	172866	10.000
138) n-Butylbenzene	(4)	13.377	92	1512807	10.000
139) 1,2-Dichlorobenzene	(4)	13.408	146	1191125	10.000
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	56469	10.000
144) 1,3,5-Trichlorobenzene	(4)	14.085	180	1005643	10.000
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	810765	10.000
146) Hexachlorobutadiene	(4)	14.584	225	403596	10.000

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

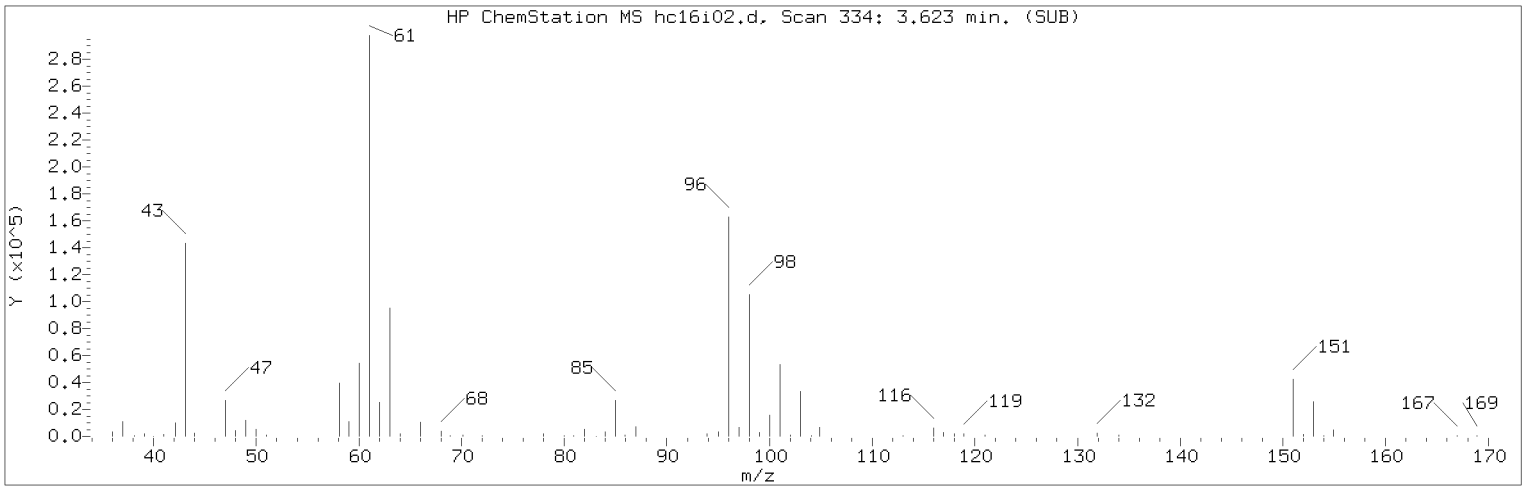
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

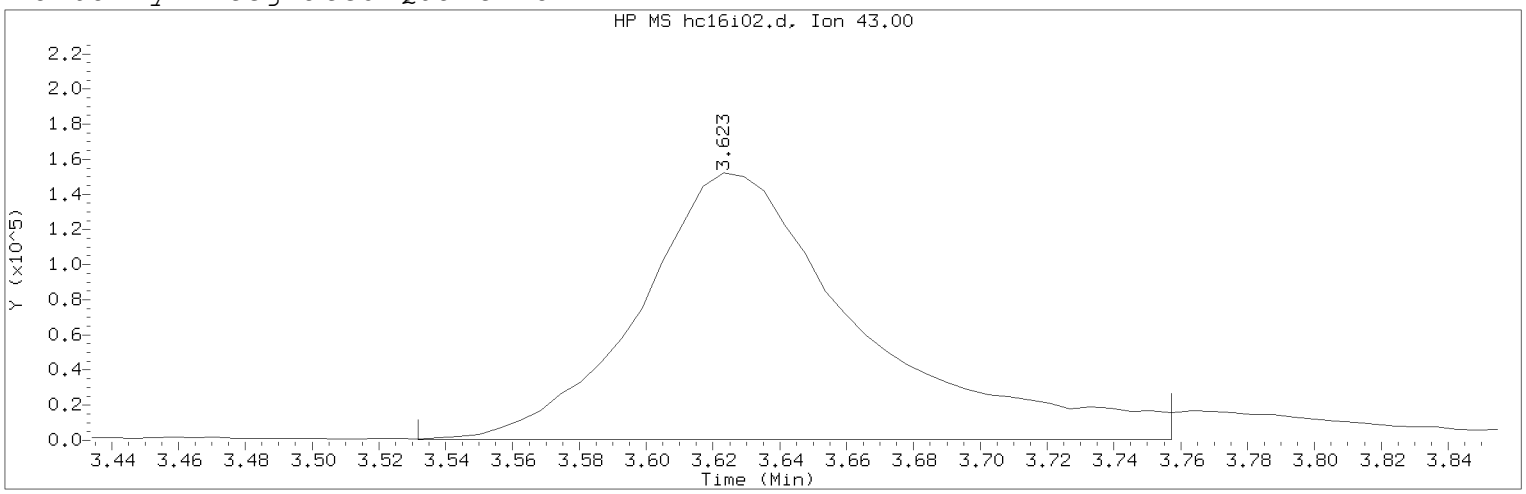
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.682	128	1213534	10.000
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	643771	10.000

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

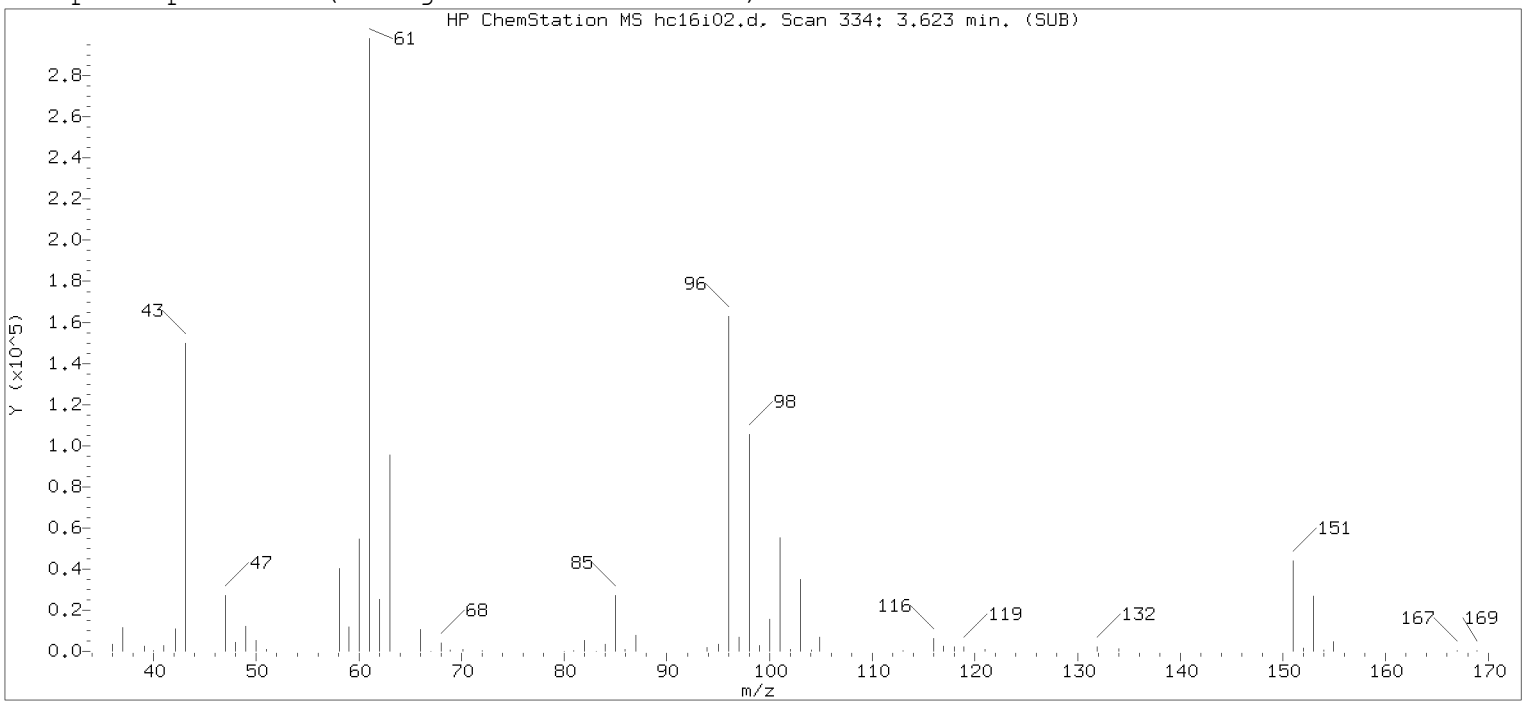
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 702361M
On-Column Amount (ng) : 100.0000
Integration start scan : 318 Integration stop scan: 355
Y at integration start : 281 Y at integration end: 296

Reason for manual integration: improper integration

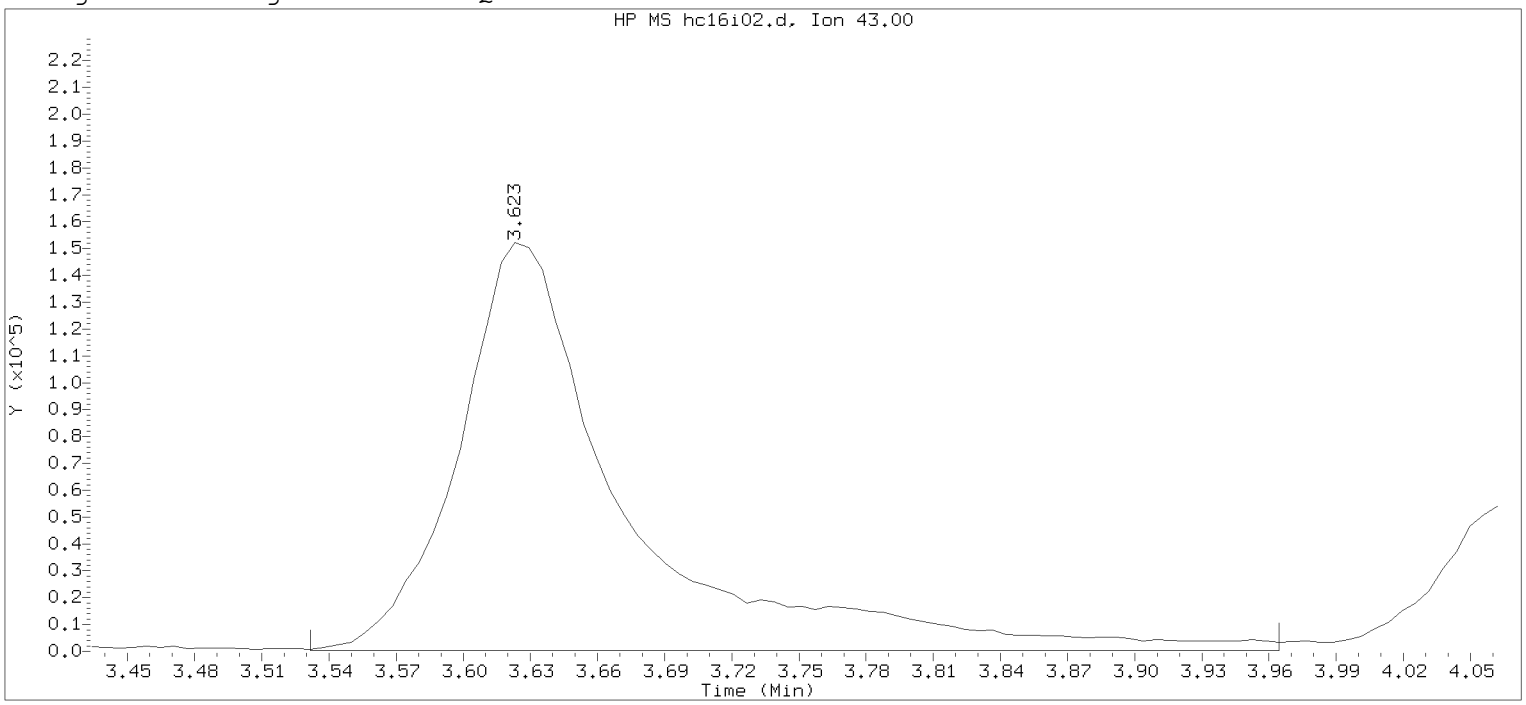
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

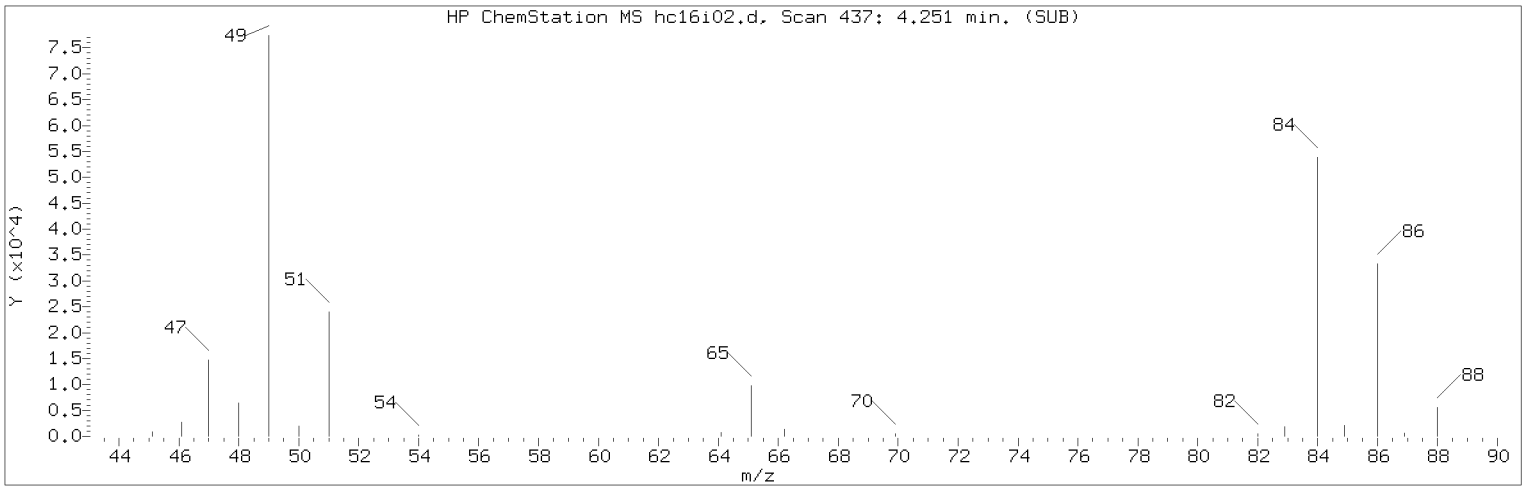
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

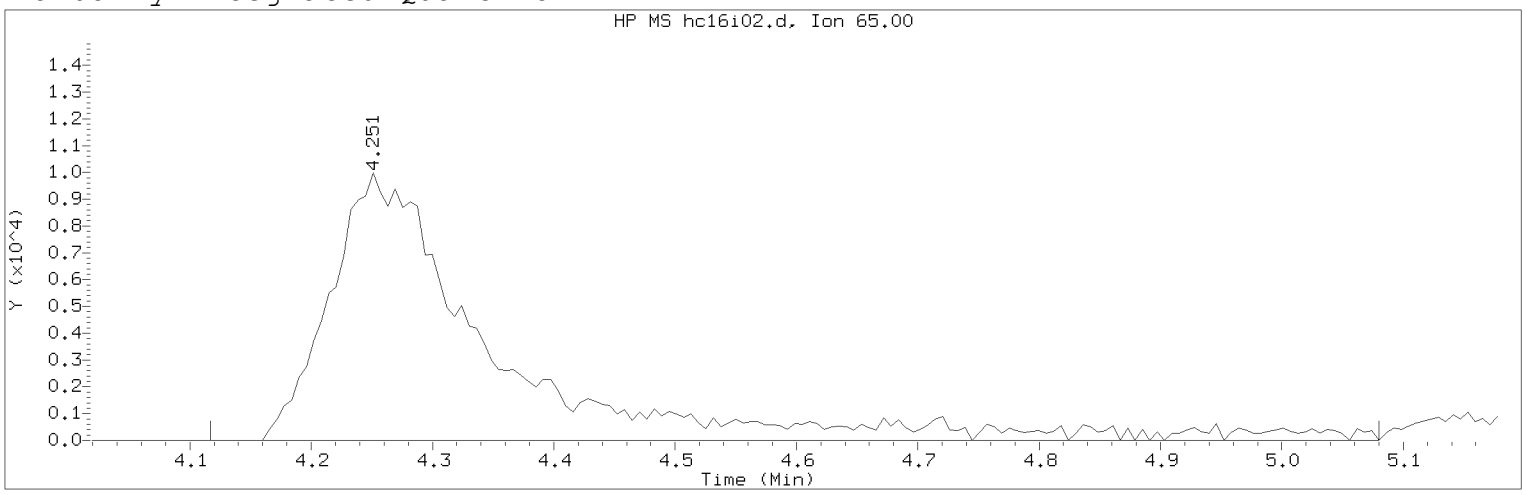
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area : 791194
On-column Amount (ng) : 105.4473
Integration start scan : 318 Integration stop scan: 389
Y at integration start : 281 Y at integration end: 310

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Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

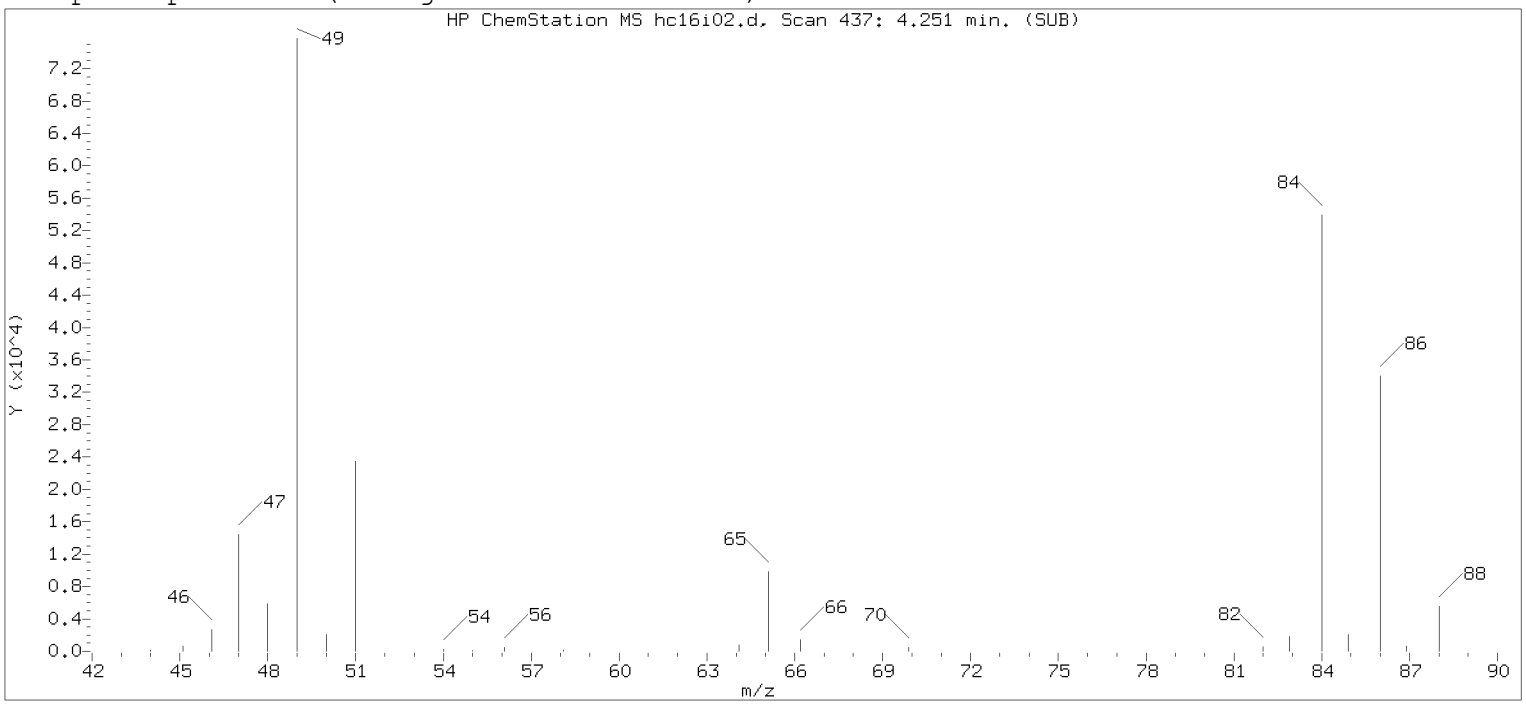
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area (flag) : 93229M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

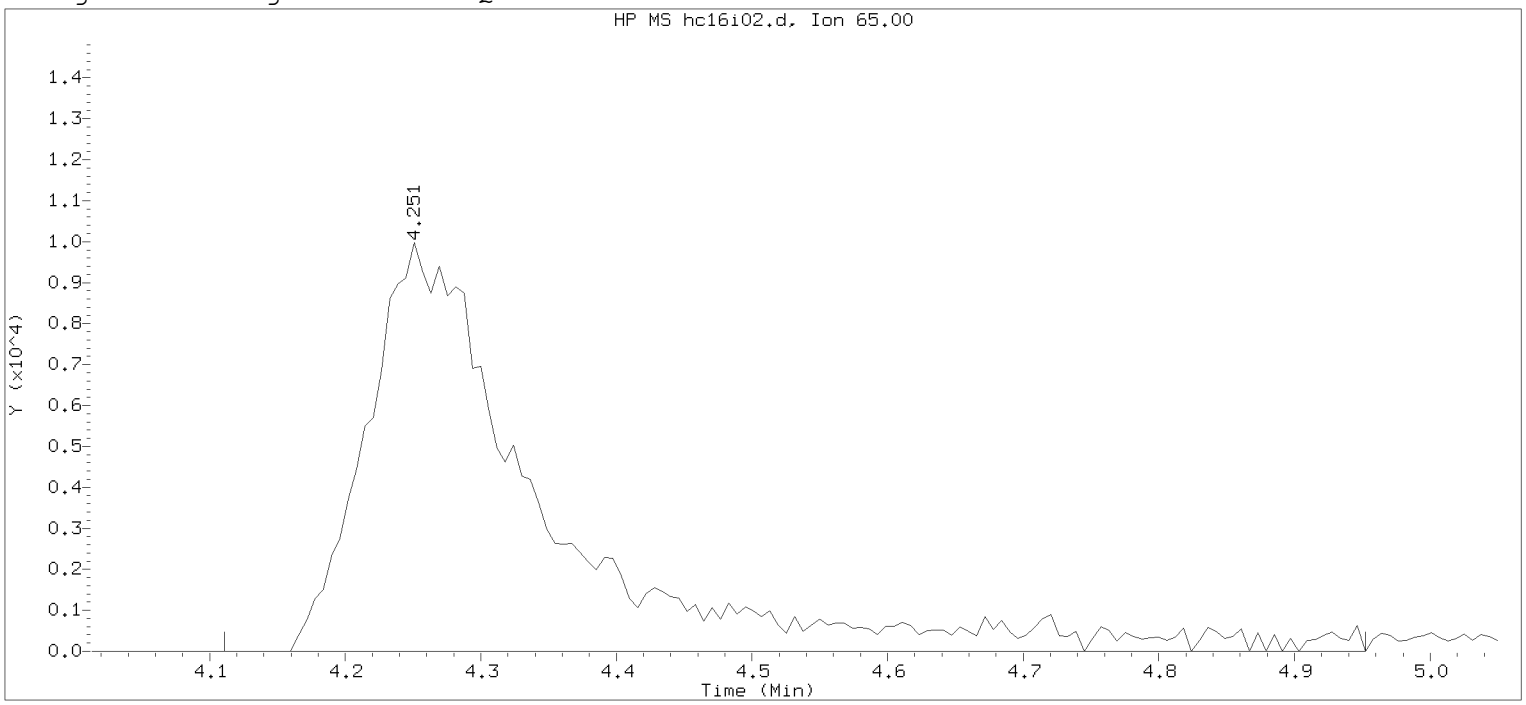
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

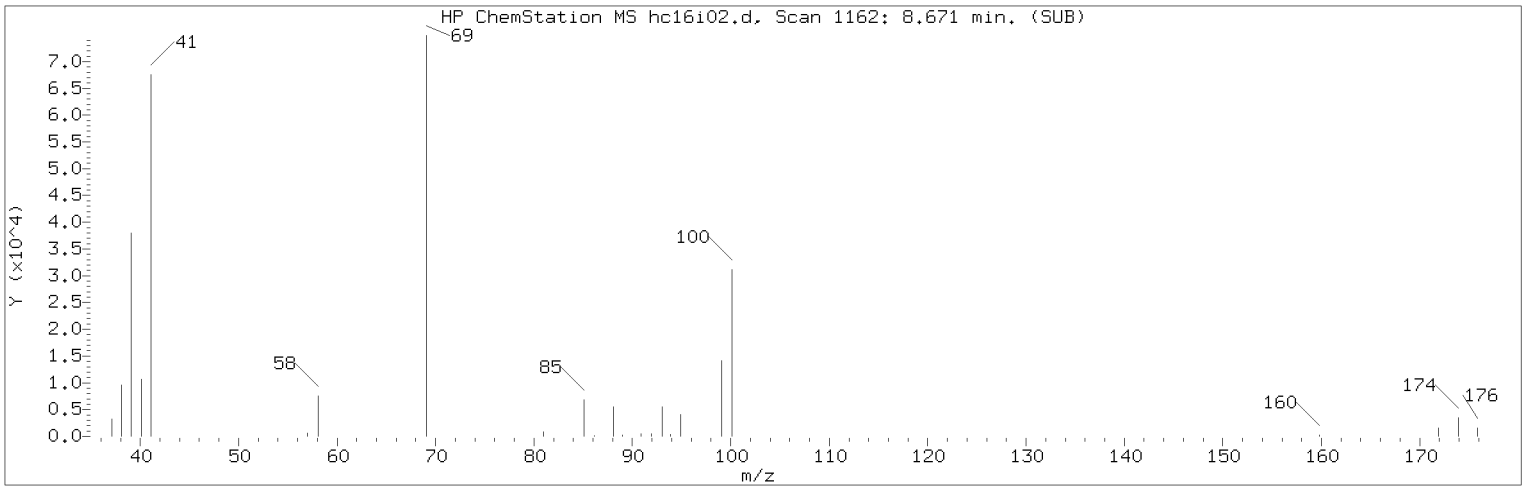
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

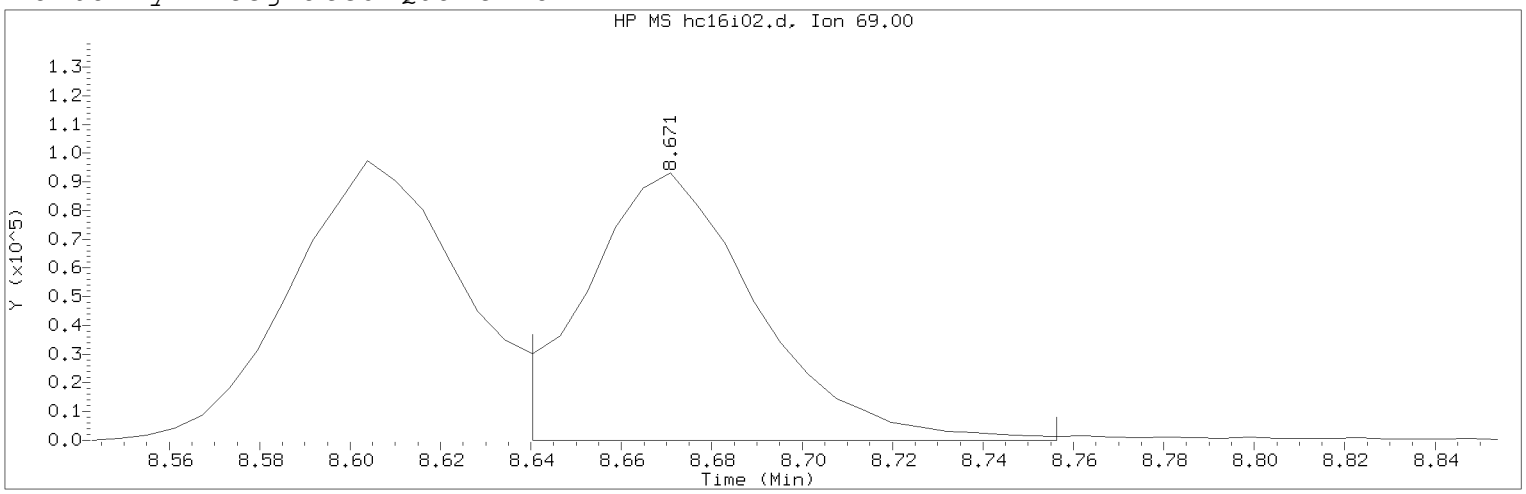
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area : 90841
On-column Amount (ng) : 50.0000
Integration start scan : 413 Integration stop scan: 551
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

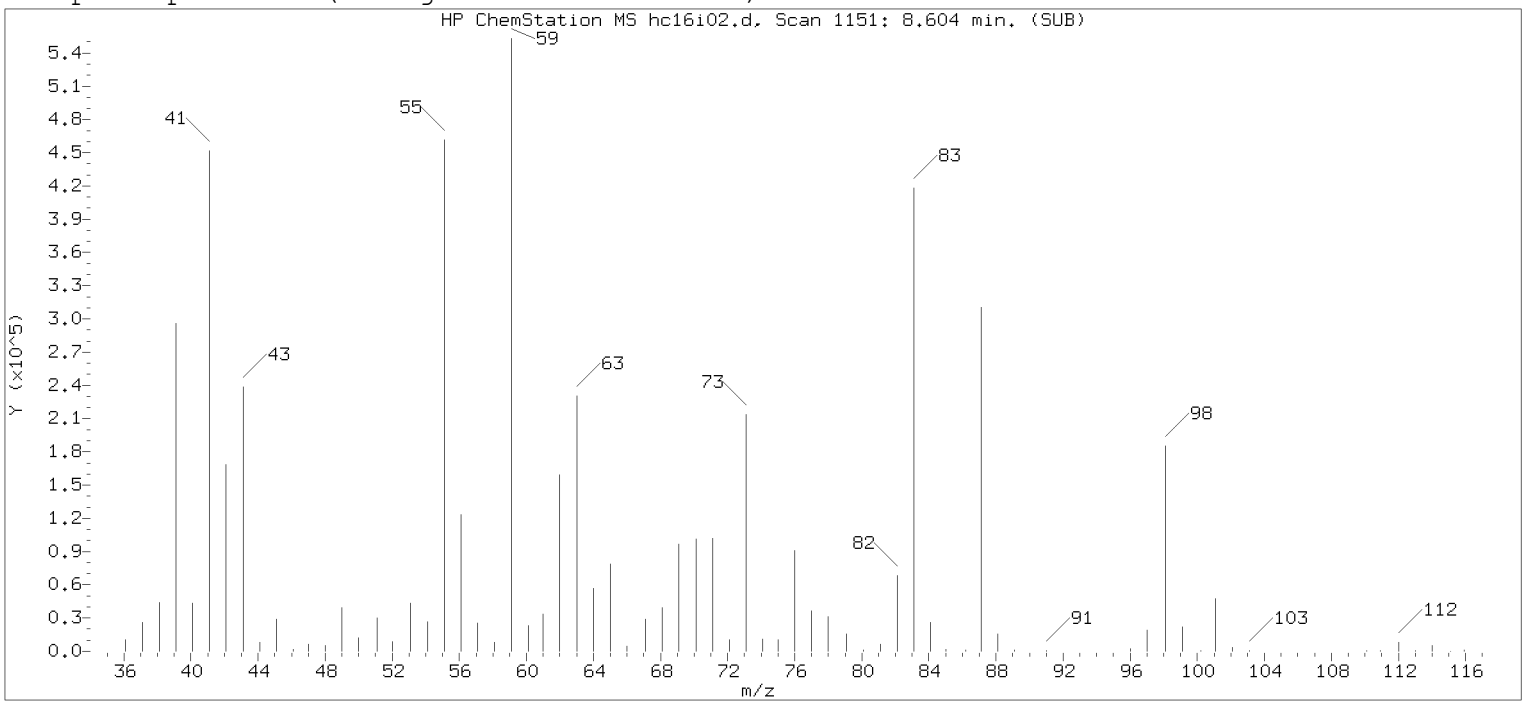
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1162
Retention Time (minutes): 8.671
Quant Ion : 69.00
Area (flag) : 247352M
On-Column Amount (ng) : 10.0000
Integration start scan : 1156 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

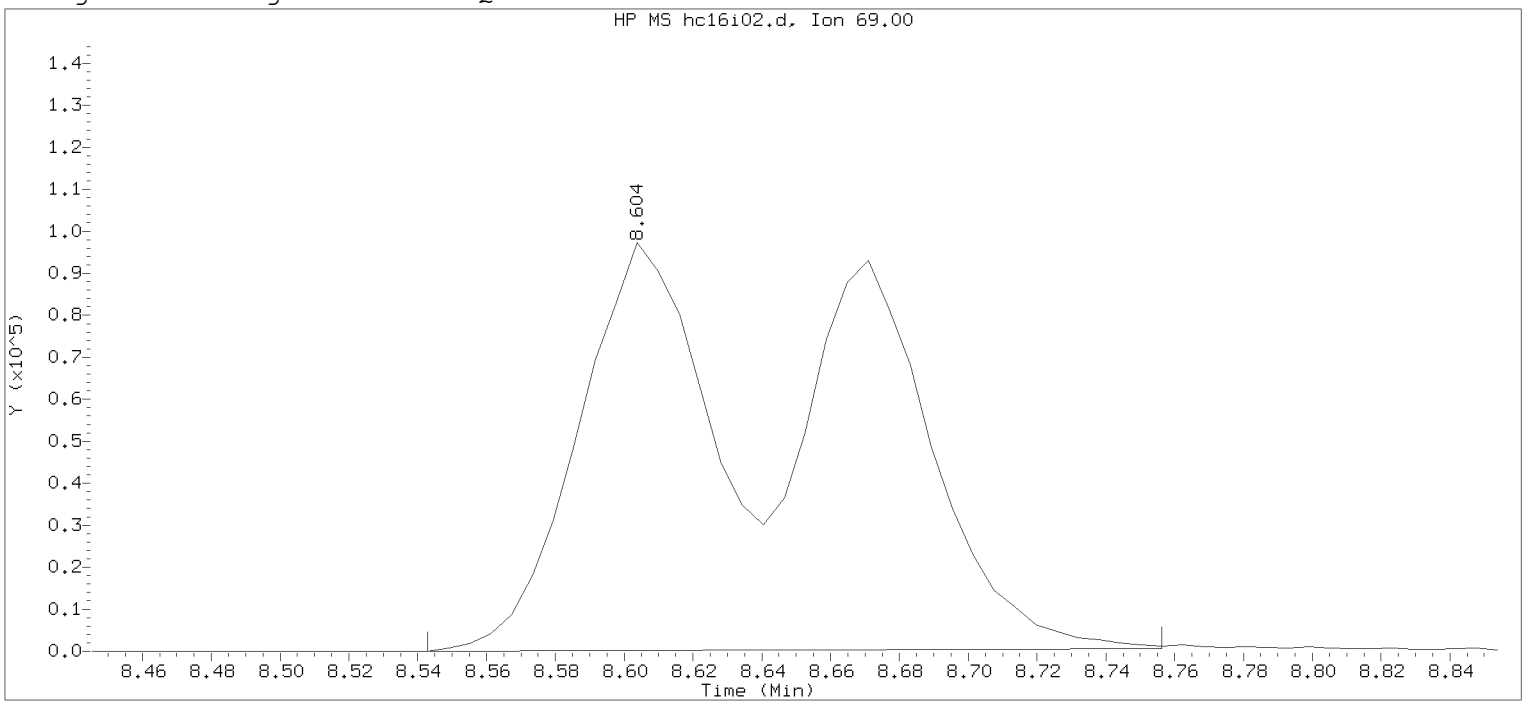
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

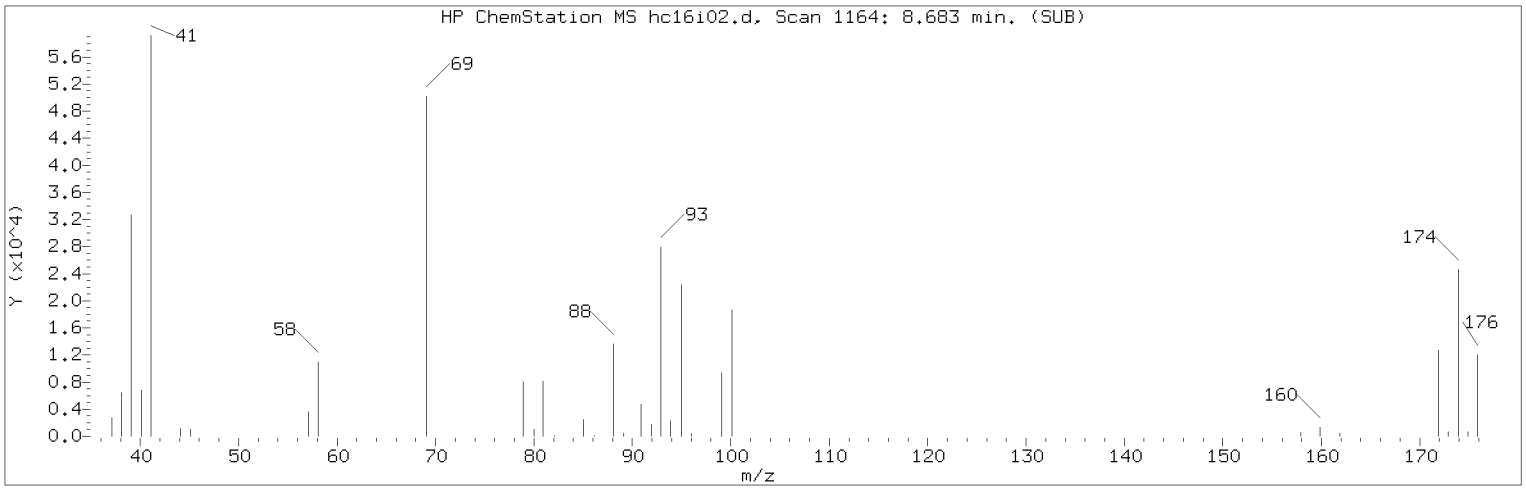
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

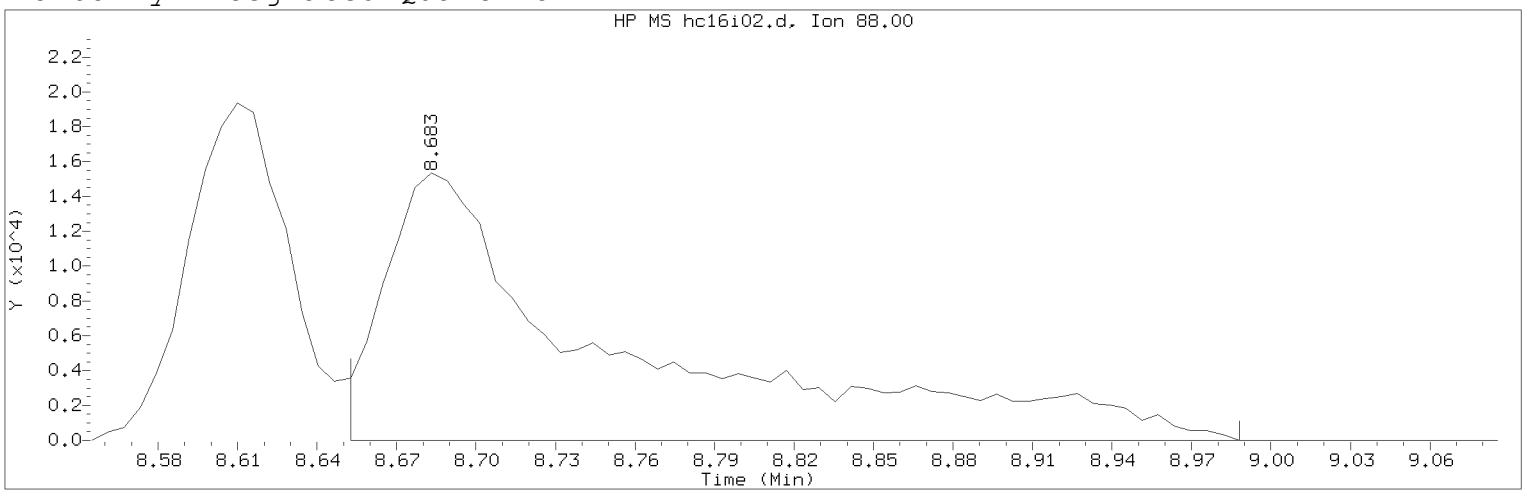
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 490751
On-column Amount (ng) : 19.2009
Integration start scan : 1140 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 621

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Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

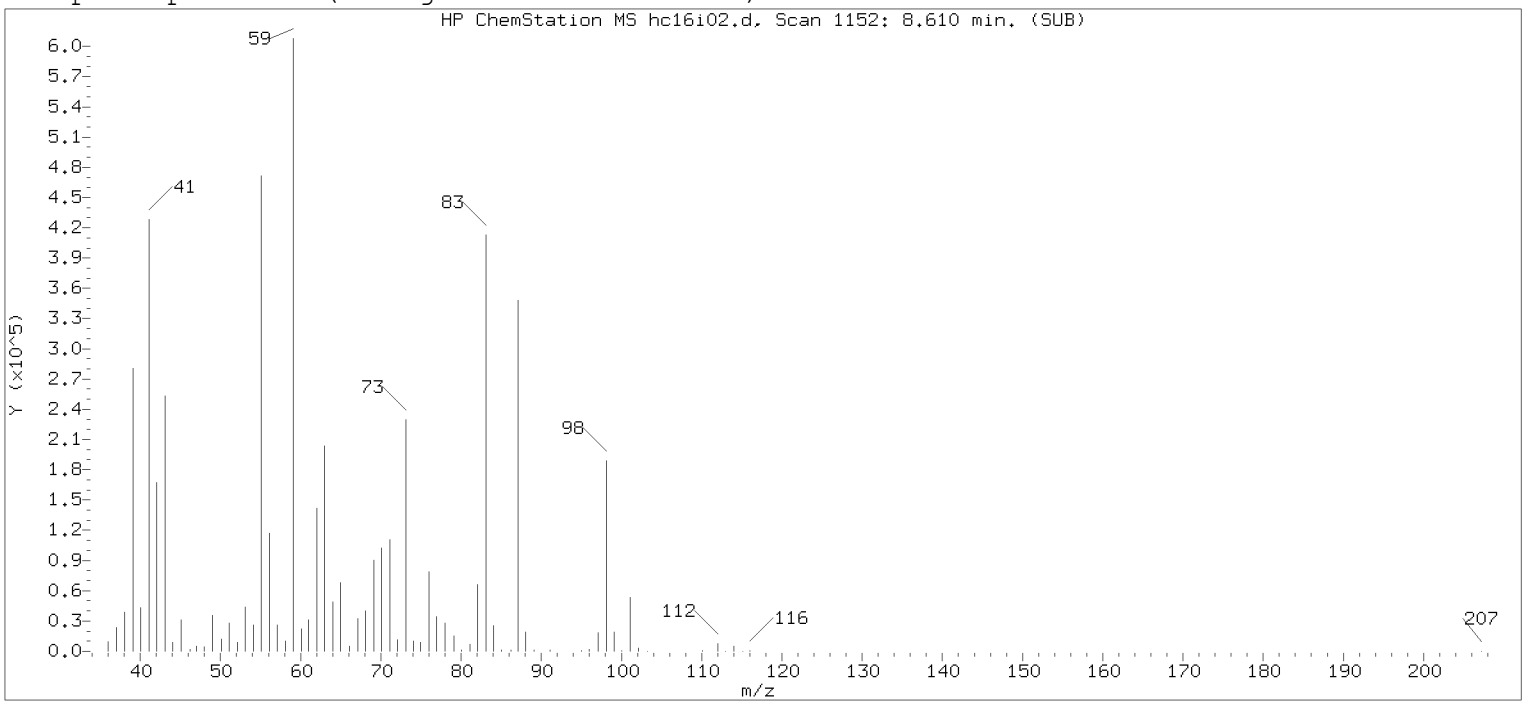
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 93140M
On-Column Amount (ng) : 500.0000
Integration start scan : 1158 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

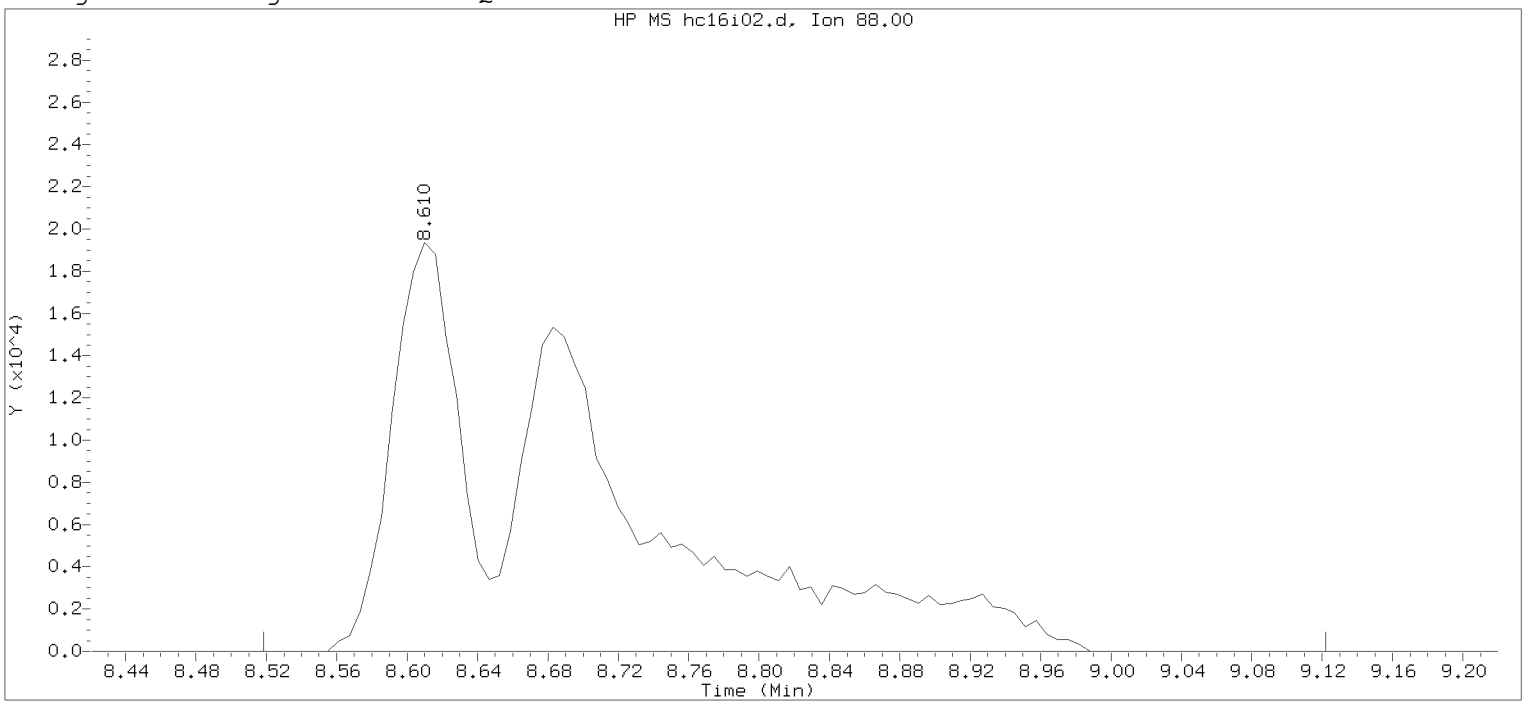
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

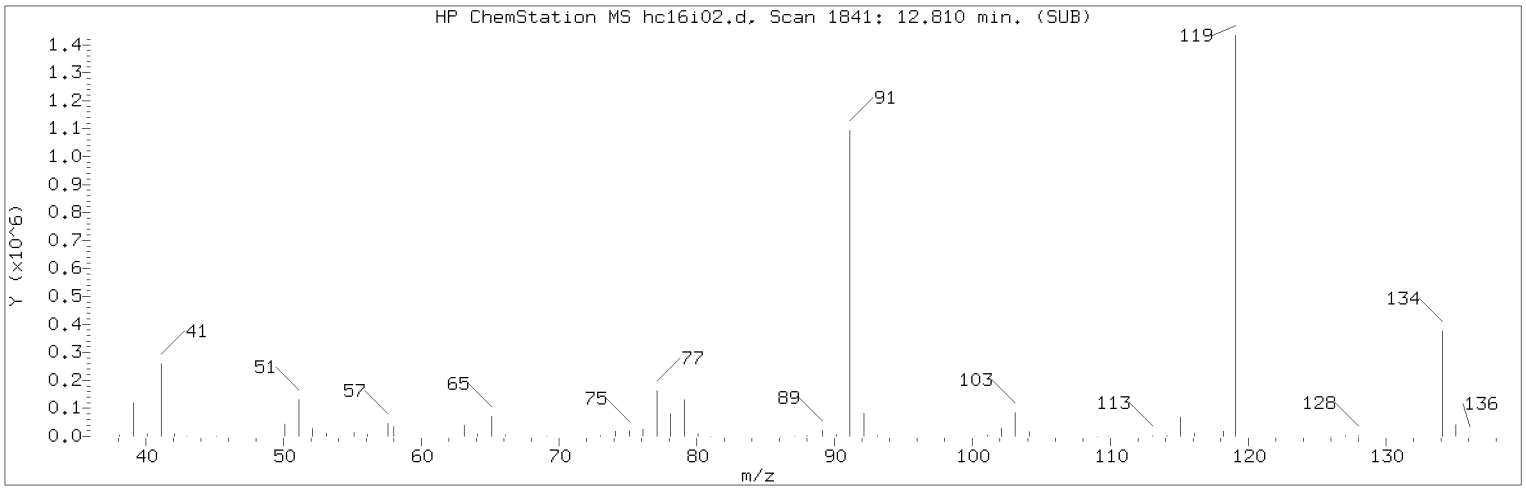
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

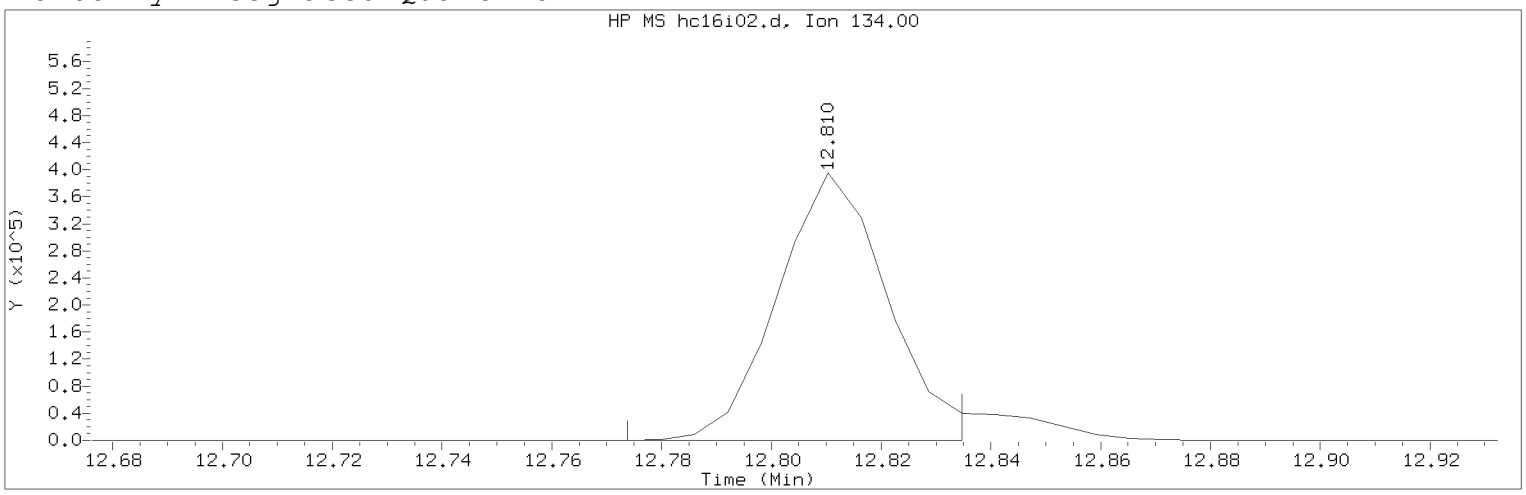
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 143817
On-column Amount (ng) : 605.6751
Integration start scan : 1136 Integration stop scan: 1235
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

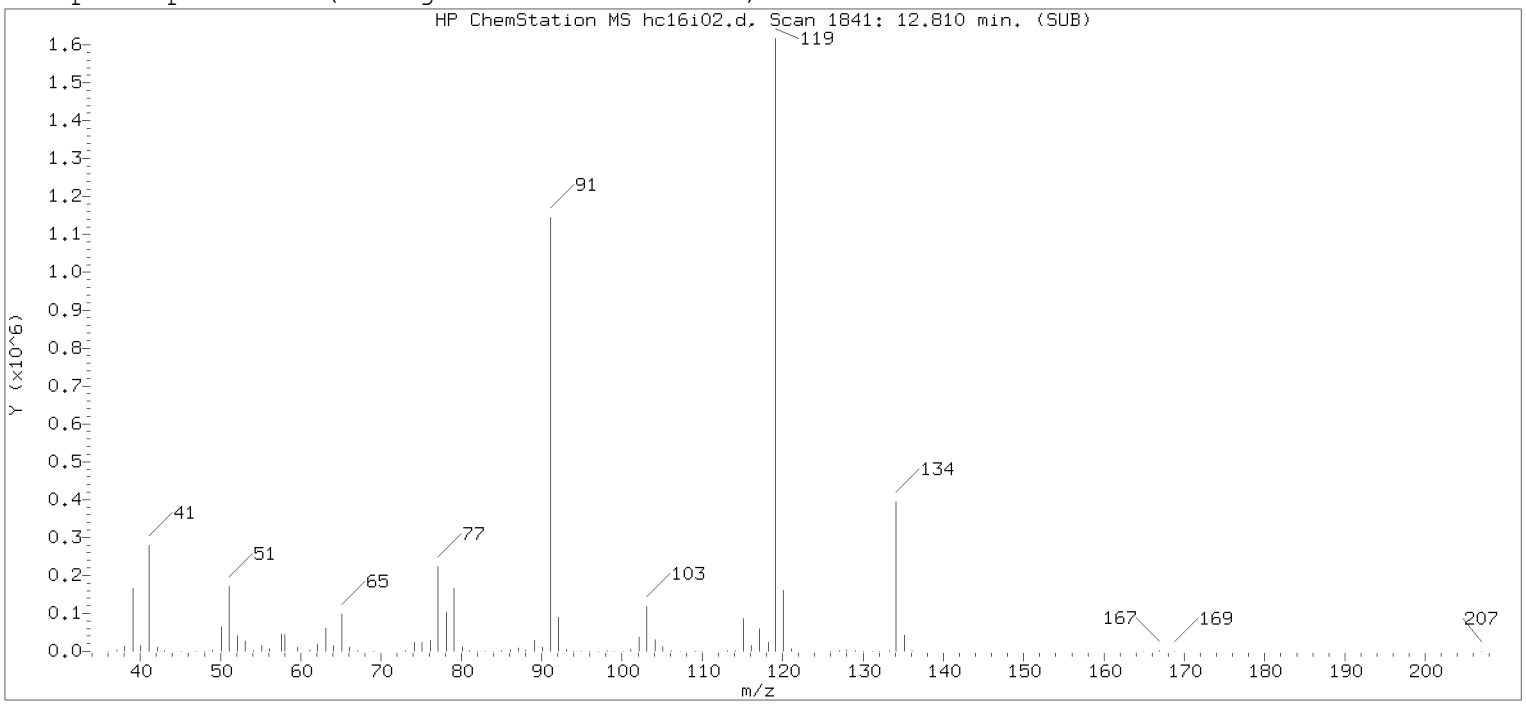
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 549099M
On-Column Amount (ng) : 10.0000
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

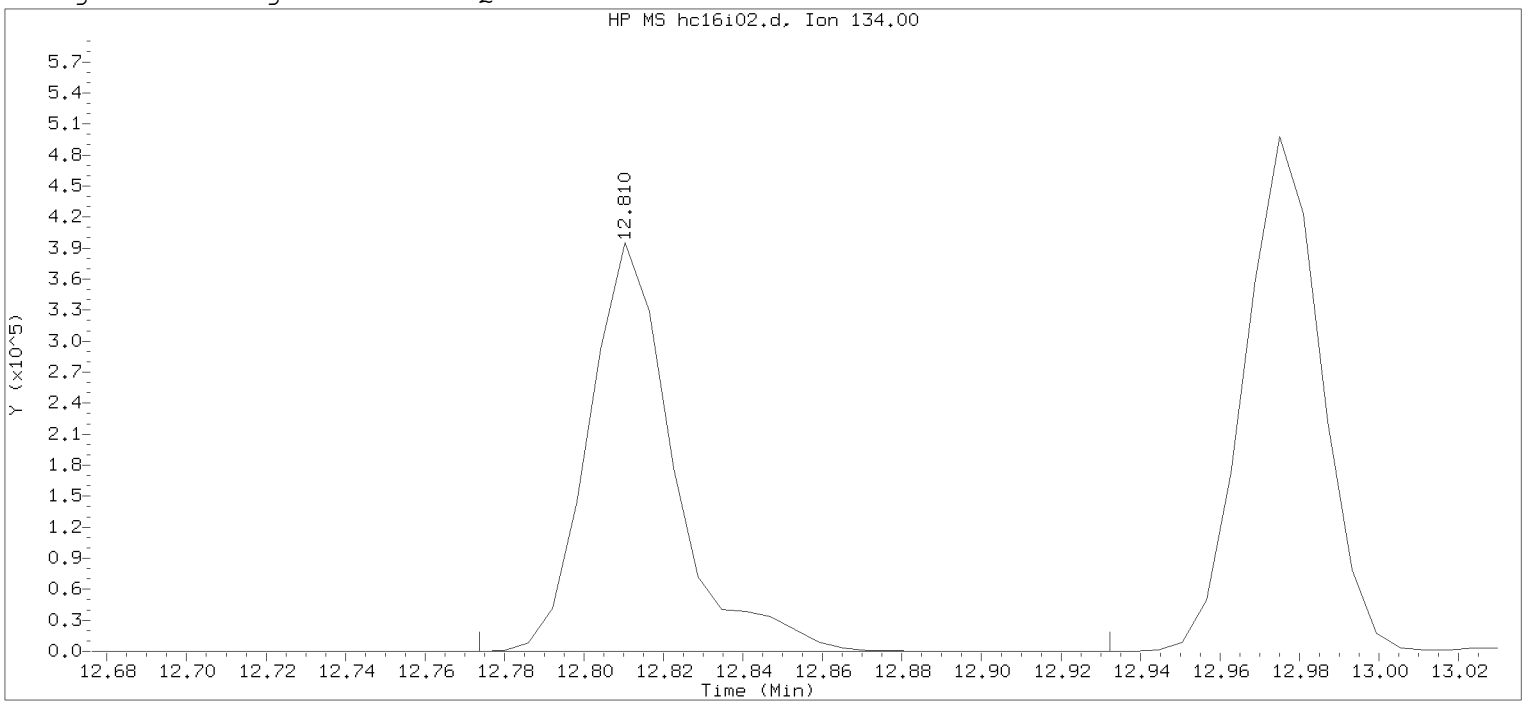
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



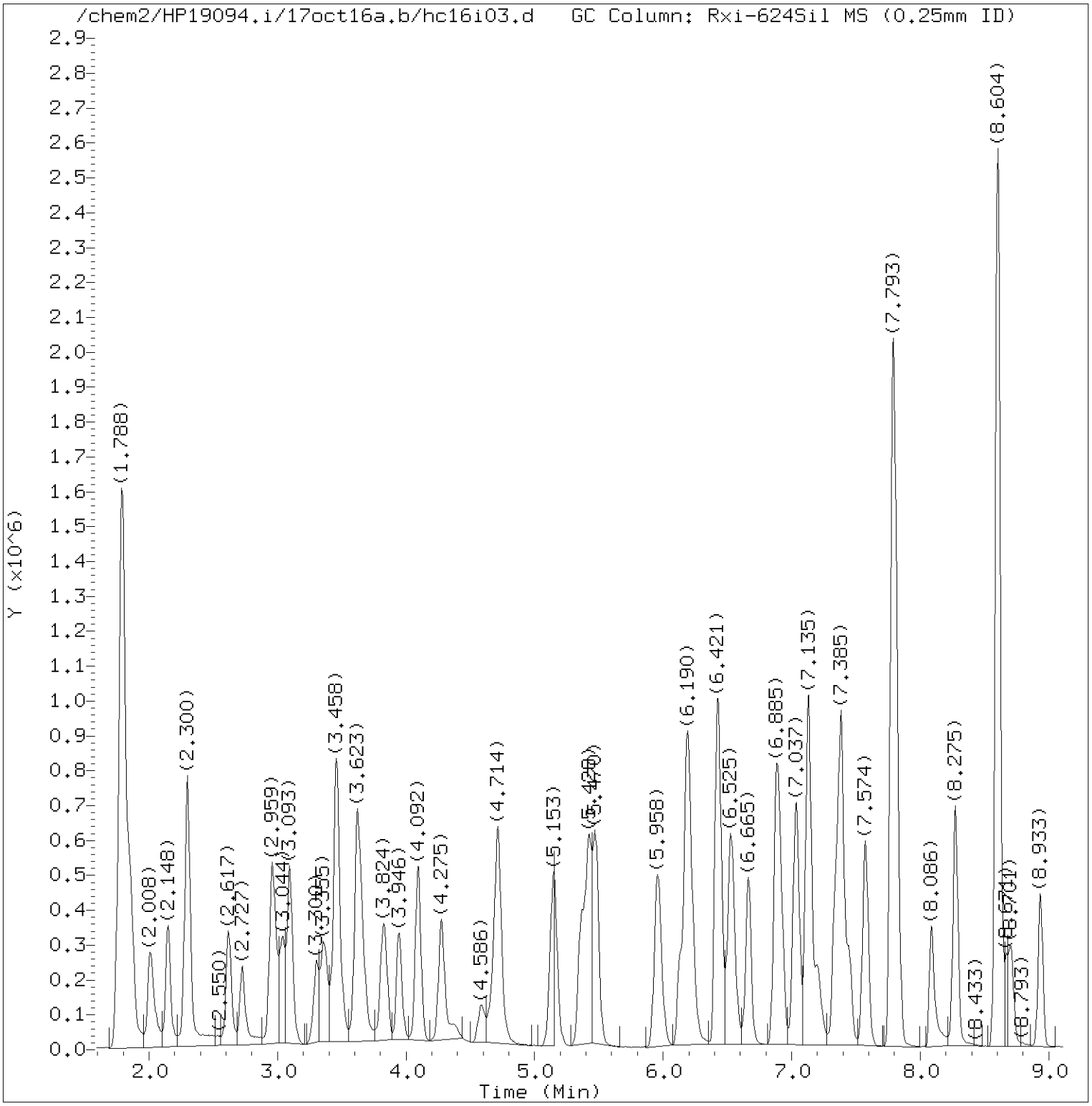
Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 587495
On-column Amount (ng) : 9.7153
Integration start scan : 1834 Integration stop scan: 1860
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kevin.sposito



Total Ion Chromatogram (TIC)

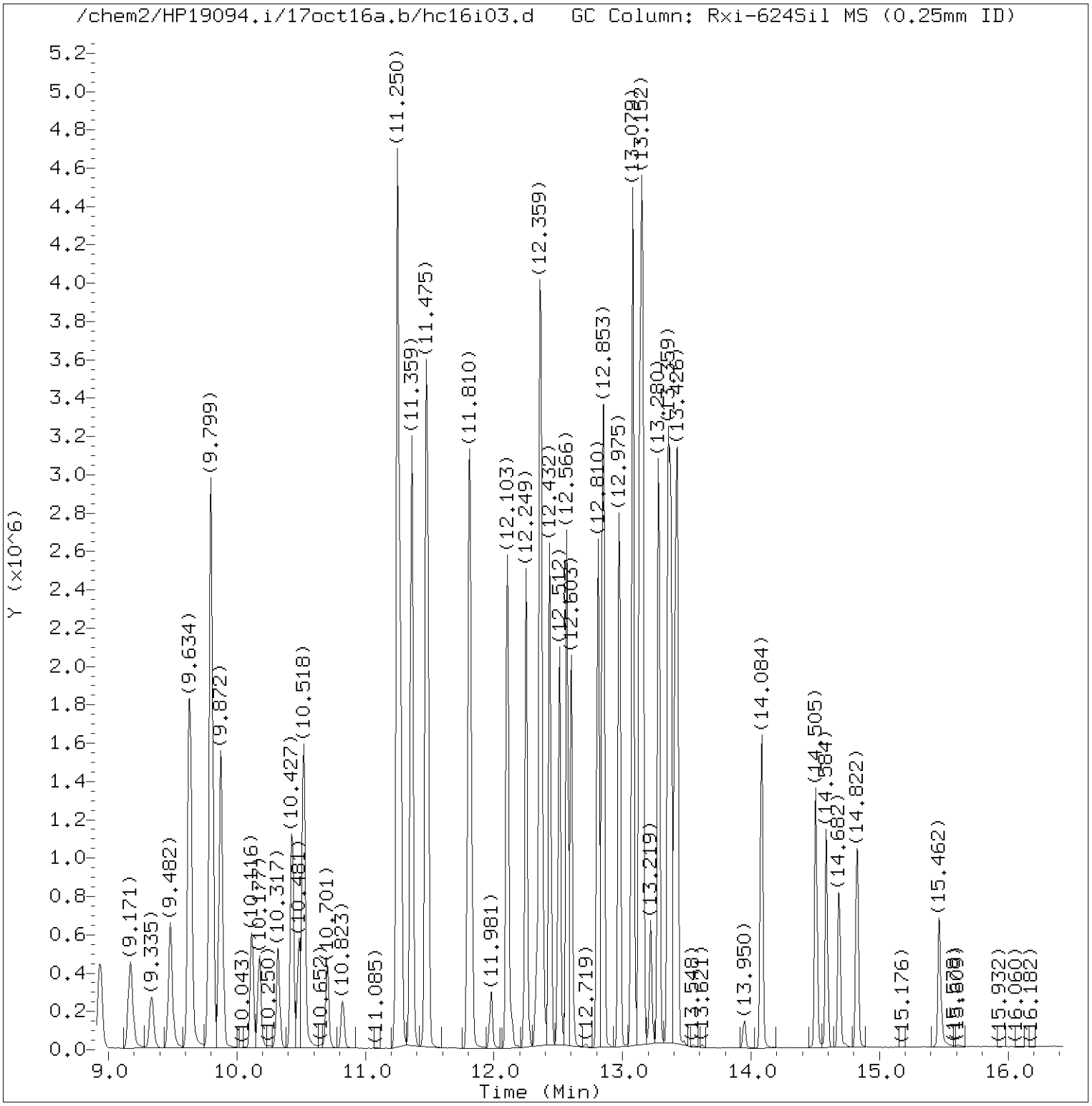
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	495986	4.914
2) Chloromethane	(2)	2.148	50	486622	4.882
5) Vinyl Chloride	(2)	2.282	62	460857	5.031
6) 1,3-Butadiene	(2)	2.300	39	404750	4.675
7) Bromomethane	(2)	2.617	94	306631	4.921
8) Chloroethane	(2)	2.727	64	256892	4.926
9) Dichlorofluoromethane	(2)	2.959	67	736472	4.823
10) Trichlorofluoromethane	(2)	3.044	101	624467	5.118
11) Ethyl ether	(2)	3.300	59	201853	5.183
12) Freon 123a	(2)	3.361	67	371337	4.864
13) Acrolein	(1)	3.458	56	1390698	250.977
15) 1,1-Dichloroethene	(2)	3.617	96	244582	5.010
14) Acetone	(1)	3.623	43	330359M	45.850
16) Freon 113	(2)	3.654	101	272143	5.006
17) Methyl Iodide	(2)	3.818	142	479661	4.932
18) Carbon Disulfide	(2)	3.946	76	745380	4.771
21) Methyl Acetate	(1)	4.068	43	106000	4.018
22) Allyl Chloride	(2)	4.099	41	556857	5.027
26)*t-Butyl Alcohol-d10	(1)	4.245	65	89047	50.000
23) Methylene Chloride	(2)	4.275	84	264607	4.751
28) t-Butyl Alcohol	(1)	4.367	59	236031M	98.179
29) Acrylonitrile	(1)	4.586	53	230985	26.561
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	606929	5.034
31) trans-1,2-Dichloroethene	(2)	4.720	96	268879	4.871
32) n-Hexane	(2)	5.153	57	481360	4.938
33) 1,1-Dichloroethane	(2)	5.361	63	569691	5.017
34) di-Isopropyl Ether	(2)	5.428	45	1065079	4.970
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	532394	4.998
37) Ethyl t-butyl ether	(2)	5.958	59	858586	4.994
40) 1,2-Dichloroethene (Total)	(2)		96	580733	9.812
38) 2-Butanone	(1)	6.129	43	682430	48.942
39) cis-1,2-Dichloroethene	(2)	6.184	96	311854	4.941
42) Propionitrile	(1)	6.196	54	341638	106.382
41) 2,2-Dichloropropane	(2)	6.208	77	474678	4.950
45) Methacrylonitrile	(1)	6.427	67	594453	50.915
47) Bromochloromethane	(2)	6.525	128	126444	5.093
48) Tetrahydrofuran	(1)	6.531	71	159054	50.315
49) Chloroform	(2)	6.665	83	547170	4.990

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

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	559847	10.103
50)$Dibromofluoromethane	(2)	6.879	111	573246	10.075
51) 1,1,1-Trichloroethane	(2)	6.909	97	484819	4.904
52) Cyclohexane	(2)	7.037	56	587012	4.858
52) Cyclohexane	(2)	7.037	84	442914	4.767
52) Cyclohexane	(2)	7.037	69	170549	4.950
55) 1,1-Dichloropropene	(2)	7.128	75	441655	5.051
54) Carbon Tetrachloride	(2)	7.135	117	430687	4.988
56) Isobutyl Alcohol	(1)	7.202	41	232782	239.503
57)$1,2-Dichloroethane-d4	(2)	7.342	102	90310	10.407
57)$1,2-Dichloroethane-d4	(2)	7.342	65	481950	10.150
57)$1,2-Dichloroethane-d4	(2)	7.342	104	54127	9.916
58) Benzene	(2)	7.385	78	1180956	4.938
59) 1,2-Dichloroethane	(2)	7.445	62	328582	4.912
60) t-Amyl methyl ether	(2)	7.574	73	703690	5.043
63)*Fluorobenzene	(2)	7.787	96	2294767	10.000
62) n-Heptane	(2)	7.817	43	556785	4.784
65) n-Butanol	(1)	8.092	56	382532	535.688
67) Trichloroethene	(2)	8.275	95	314404	4.908
70) 1,2-Dichloropropane	(2)	8.598	63	314823	5.073
69) Methylcyclohexane	(2)	8.604	83	575769	5.228
71) Methyl Methacrylate	(1)	8.671	69	121323	4.577
72) 1,4-Dioxane	(1)	8.683	88	43135M	272.103
73) Dibromomethane	(2)	8.714	93	129119	4.972
74) Bromodichloromethane	(2)	8.933	83	377173	5.034
76) 2-Nitropropane	(1)	9.171	41	388932	49.211
80) cis-1,3-Dichloropropene	(2)	9.482	75	441754	5.079
81) 4-Methyl-2-Pentanone	(1)	9.634	43	1747699	49.487
82)$Toluene-d8	(3)	9.799	98	2285727	9.968
82)$Toluene-d8	(3)	9.799	100	1449068	9.983
83) Toluene	(3)	9.872	92	737573	4.922
84) trans-1,3-Dichloropropene	(3)	10.116	75	348907	5.098
85) 1,3-Dichloropropene (total)	(3)		75	790661	10.177
86) Ethyl Methacrylate	(3)	10.177	69	259567	5.077
88) 1,1,2-Trichloroethane	(3)	10.317	97	170629	4.877
89) Tetrachloroethene	(3)	10.427	166	346840	4.932
90) 1,3-Dichloropropane	(3)	10.481	76	310719	4.995
91) 2-Hexanone	(1)	10.518	43	1224554	49.750

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	229760	5.029
95) 1,2-Dibromoethane	(3)	10.823	107	166258	5.029
97)*Chlorobenzene-d5	(3)	11.250	117	1577860	10.000
98) Chlorobenzene	(3)	11.274	112	786050	4.923
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	280279	4.984
100) Ethylbenzene	(3)	11.359	91	1489379	4.943
101) m+p-Xylene	(3)	11.475	106	1124315	9.902
105) Xylene (Total)	(3)		106	1677781	14.886
104) o-Xylene	(3)	11.804	106	553466	4.985
106) Styrene	(3)	11.817	104	873045	5.034
107) Bromoform	(3)	11.981	173	129397	5.219
108) Isopropylbenzene	(3)	12.103	105	1480246	4.966
111)$4-Bromofluorobenzene	(3)	12.249	95	705791	10.133
111)$4-Bromofluorobenzene	(3)	12.249	174	620160	10.124
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	210231	4.894
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	572603	54.390
114) Bromobenzene	(4)	12.365	156	324016	4.783
116) 1,2,3-Trichloropropane	(4)	12.384	110	54754	5.000
117) n-Propylbenzene	(4)	12.432	91	1813771	4.898
119) 2-Chlorotoluene	(4)	12.512	126	334957	4.827
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	1263292	4.924
122) 4-Chlorotoluene	(4)	12.603	126	338083	4.787
125) tert-Butylbenzene	(4)	12.810	134	262784M	4.659
126) Pentachloroethane	(4)	12.841	167	218166	5.140
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	1260210	4.890
128) sec-Butylbenzene	(4)	12.975	105	1619504	4.875
131) 1,3-Dichlorobenzene	(4)	13.079	146	644750	4.887
132) p-Isopropyltoluene	(4)	13.085	119	1370570	4.944
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	696589	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	641597	4.670
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	540321	4.942
136) Benzyl Chloride	(4)	13.219	126	80545	5.261
138) n-Butylbenzene	(4)	13.377	92	711303	5.118
139) 1,2-Dichlorobenzene	(4)	13.408	146	568933	4.840
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	27188	5.328
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	474447	4.852
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	384232	4.771
146) Hexachlorobutadiene	(4)	14.584	225	186384	4.905

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

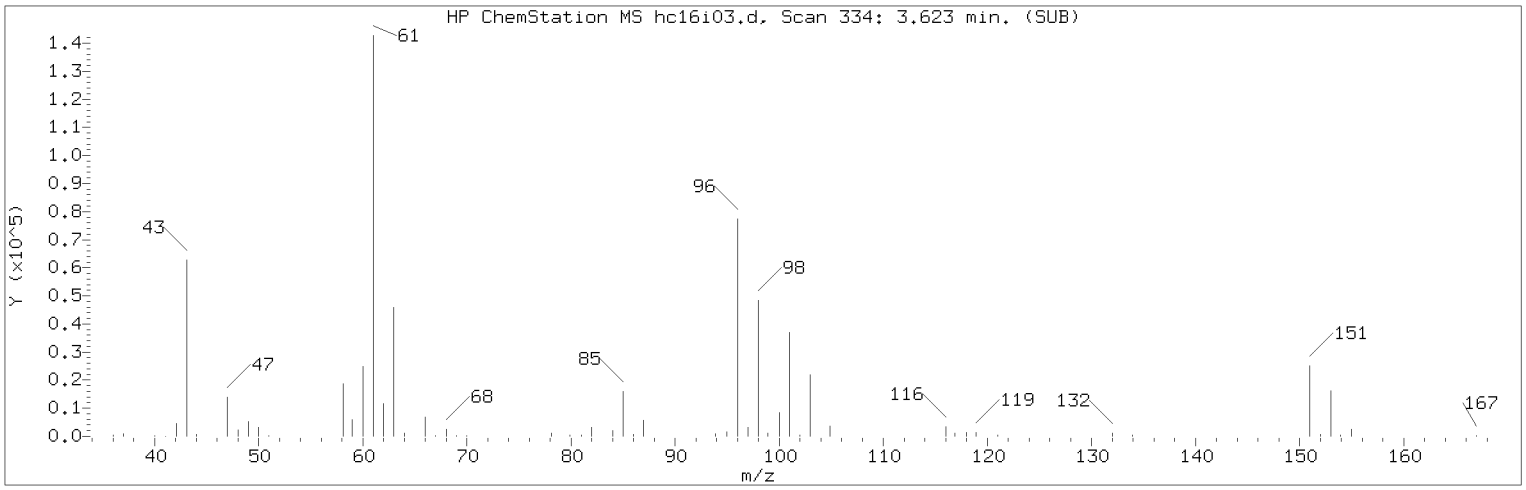
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

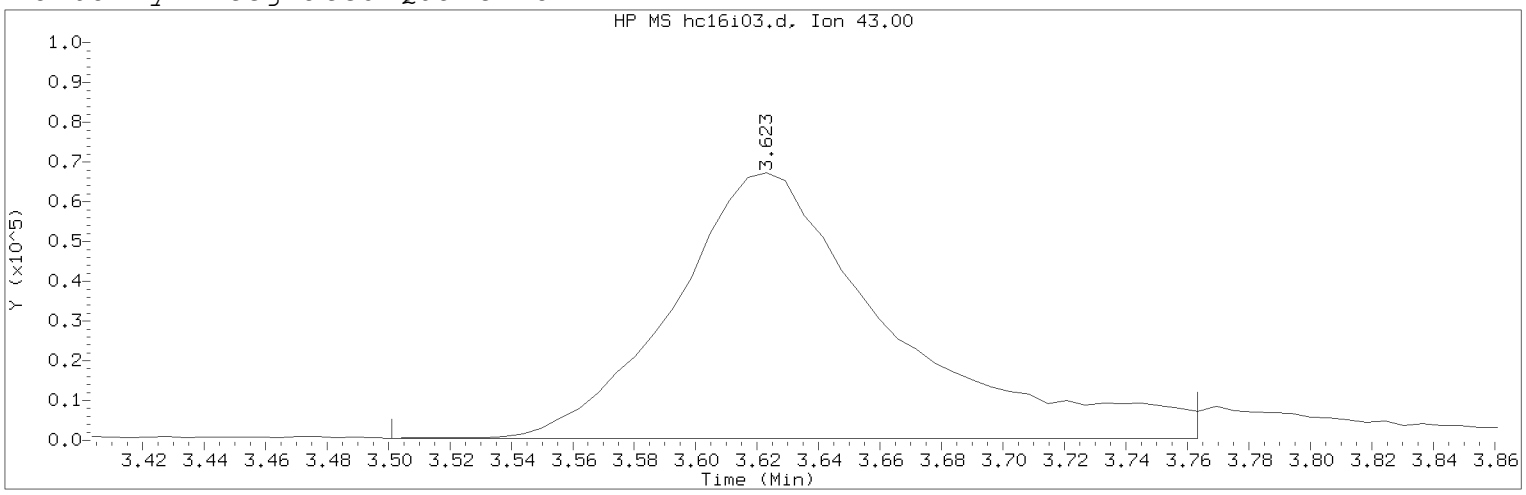
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	593812	4.531
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	302575	4.462

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

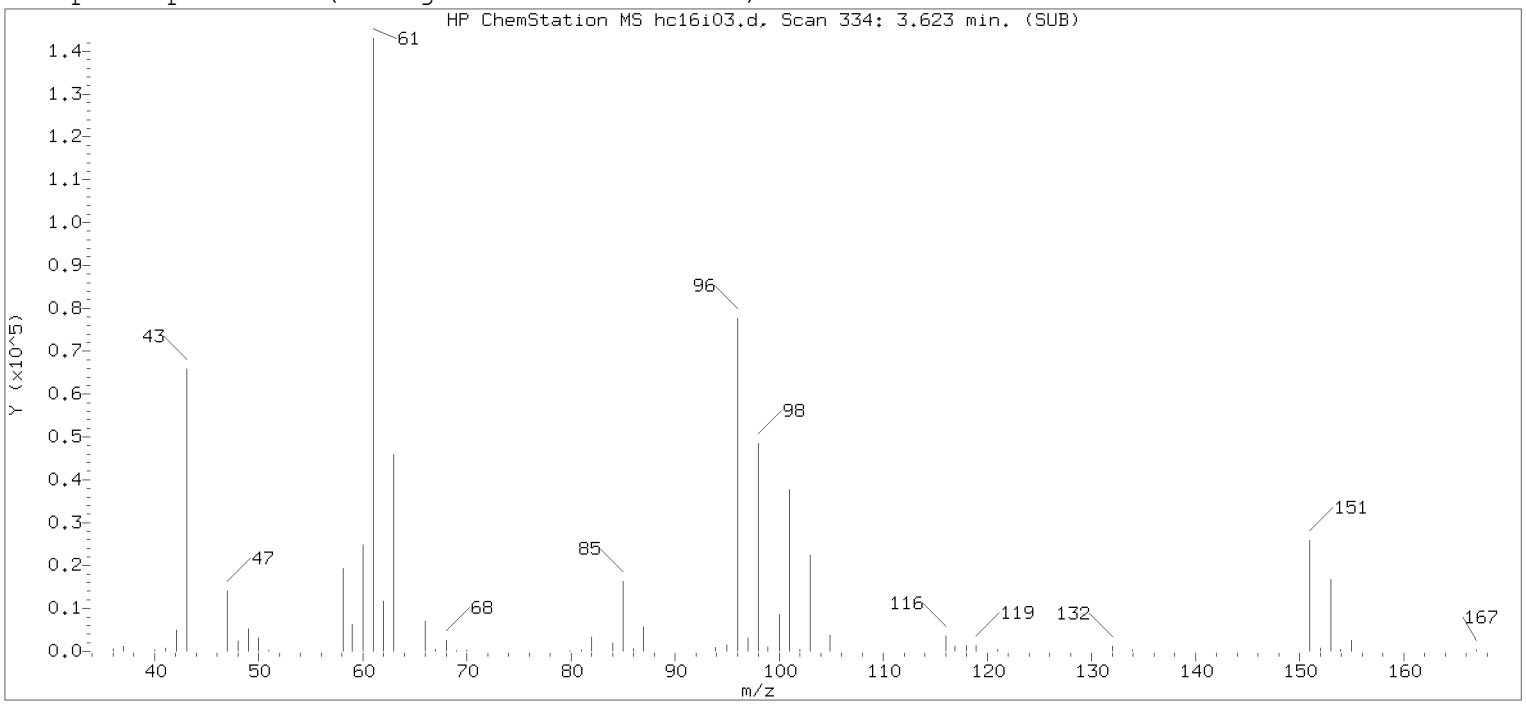
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 330359M
On-Column Amount (ng) : 45.8497
Integration start scan : 313 Integration stop scan: 356
Y at integration start : 411 Y at integration end: 411

Reason for manual integration: improper integration

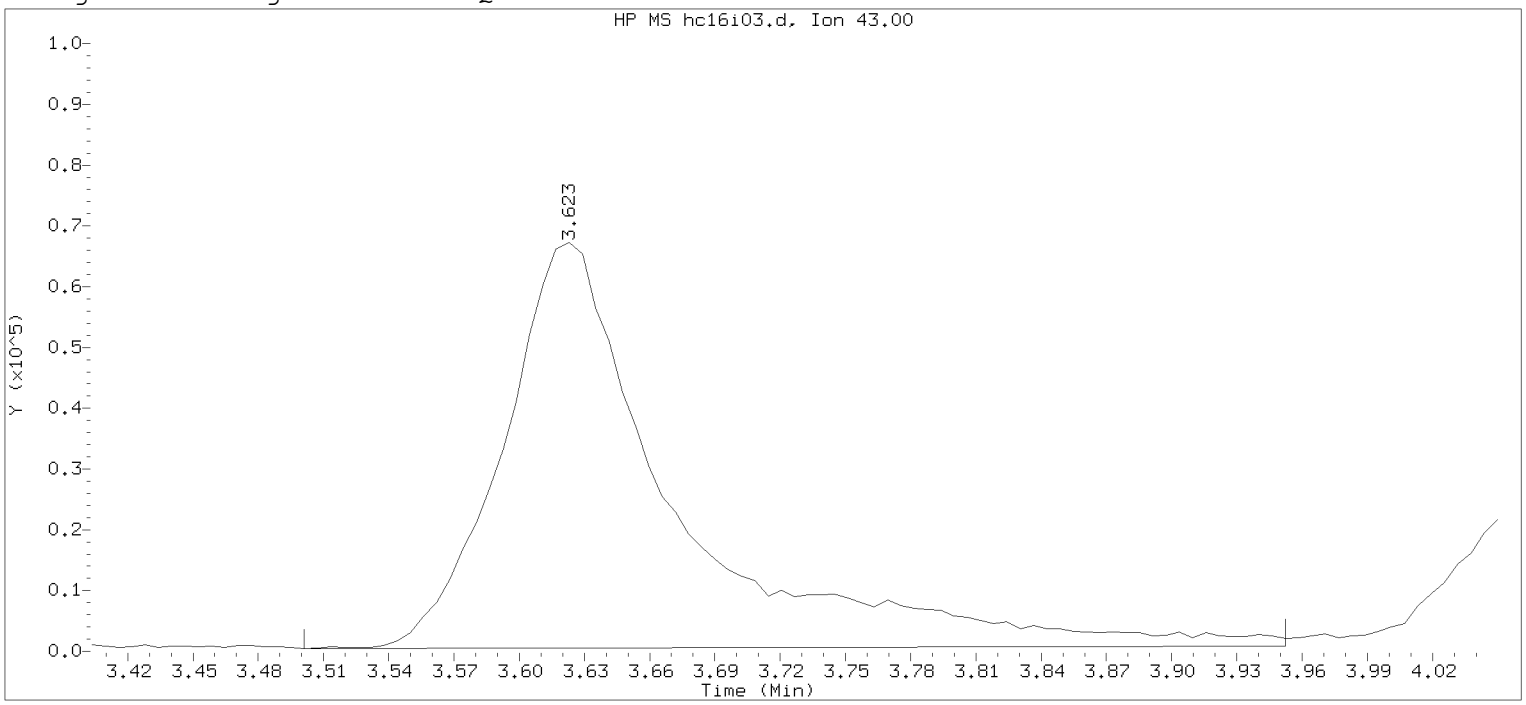
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

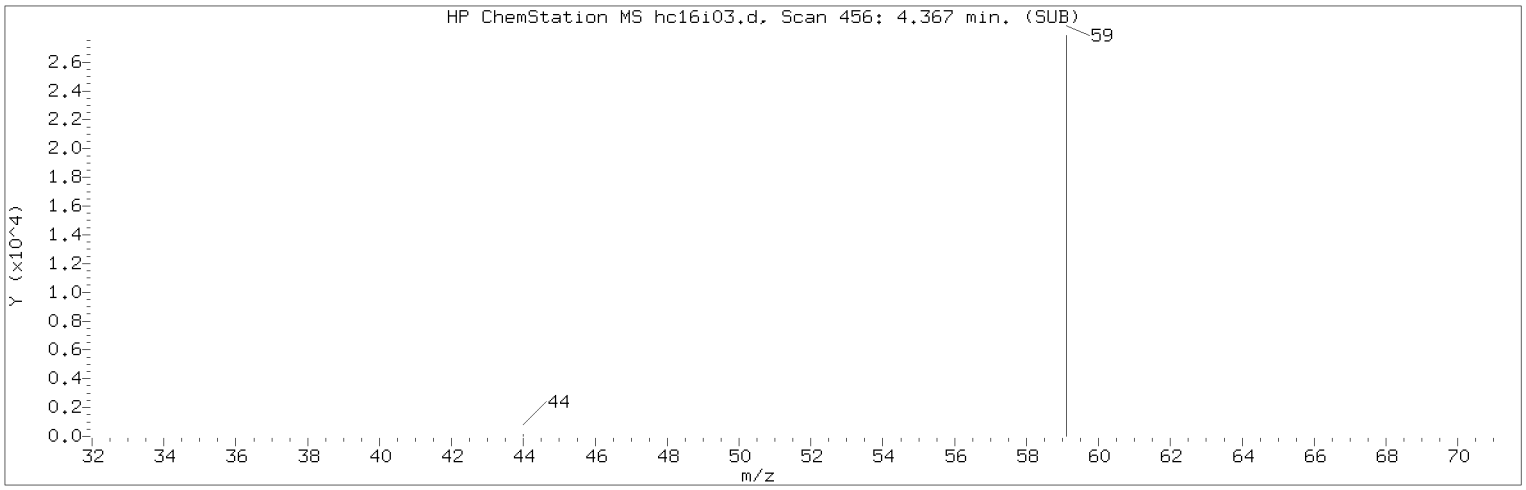
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

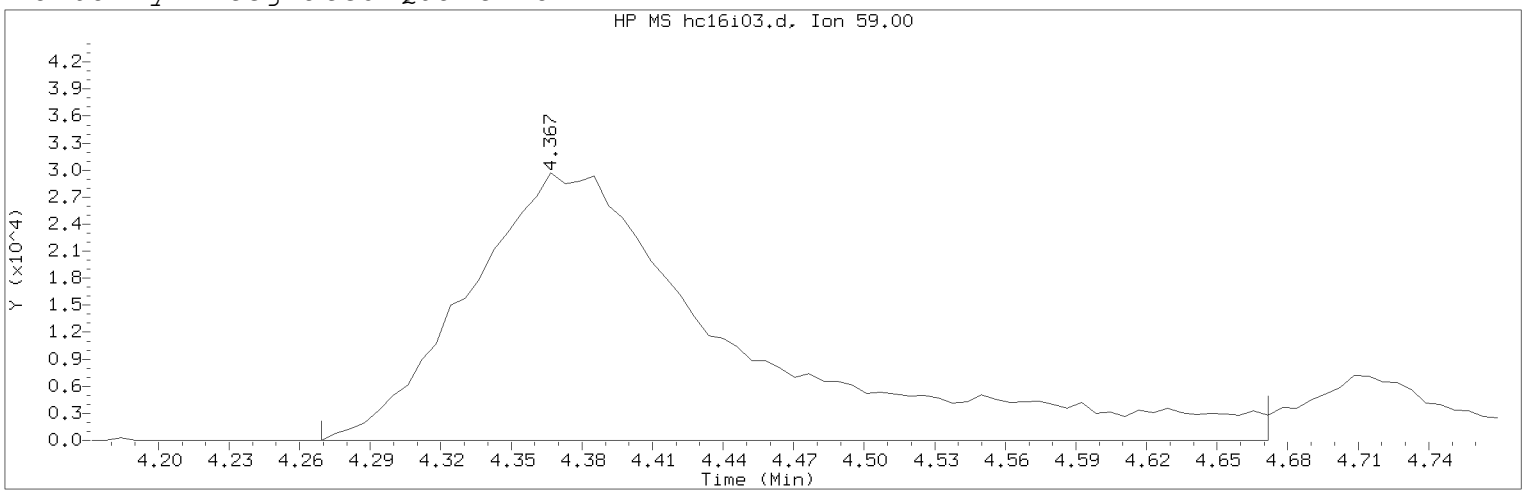
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area : 365147
On-column Amount (ng) : 53.0581
Integration start scan : 313 Integration stop scan: 387
Y at integration start : 422 Y at integration end: 846

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

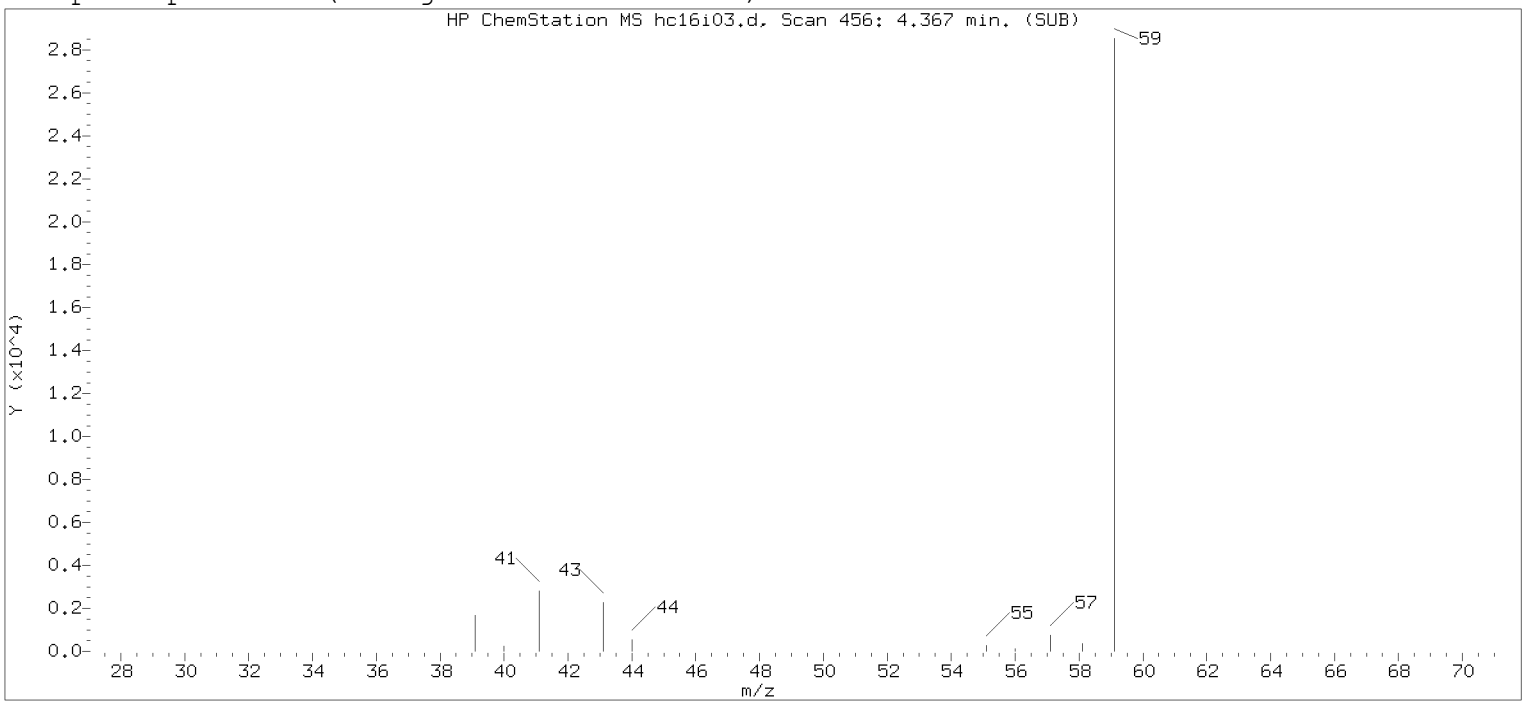
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area (flag) : 236031M
On-Column Amount (ng) : 98.1795
Integration start scan : 439 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

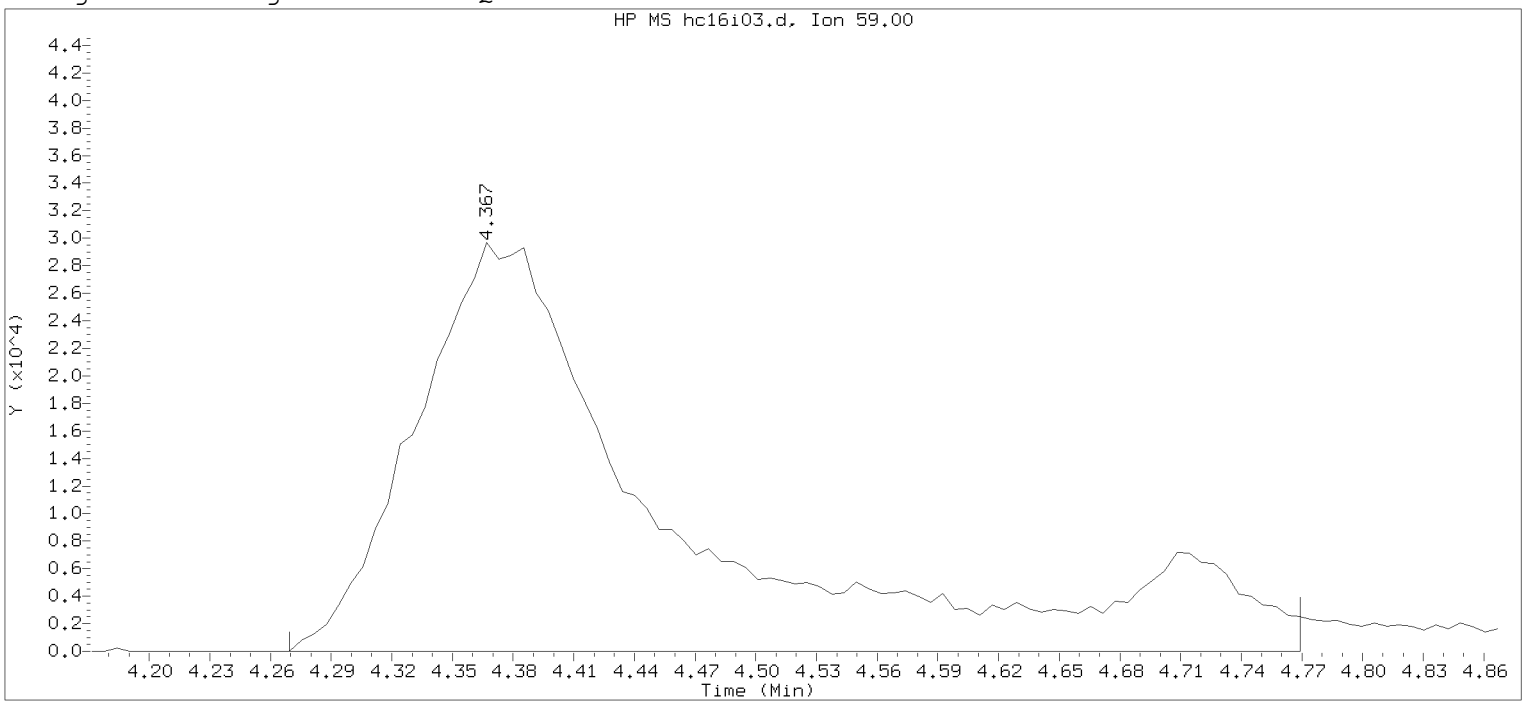
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

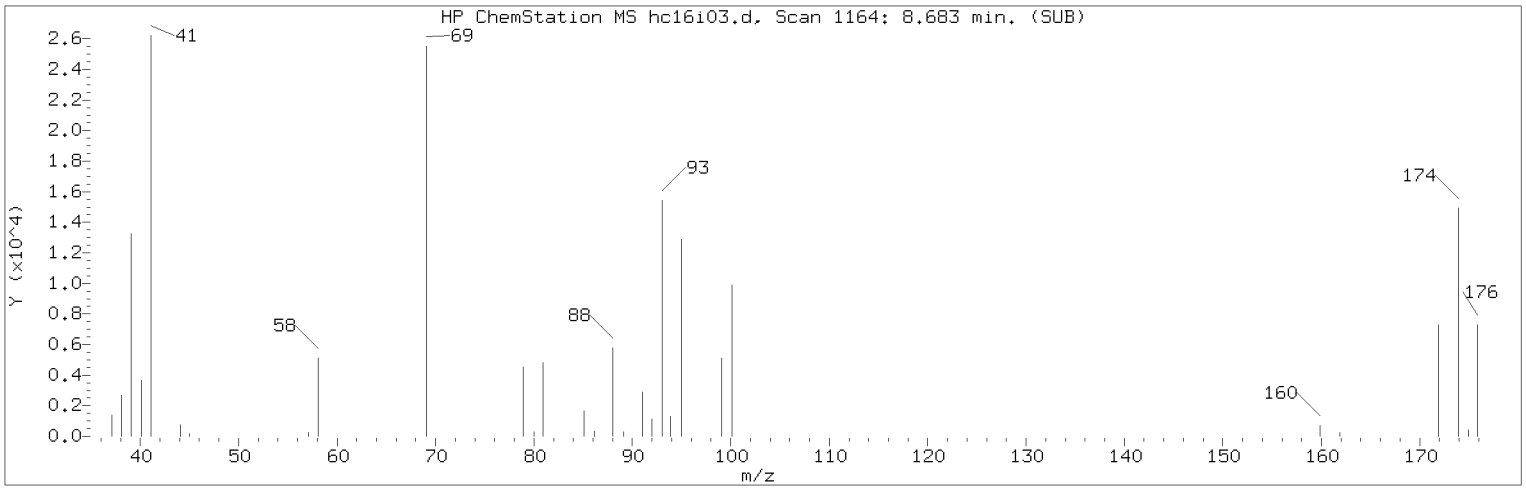
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

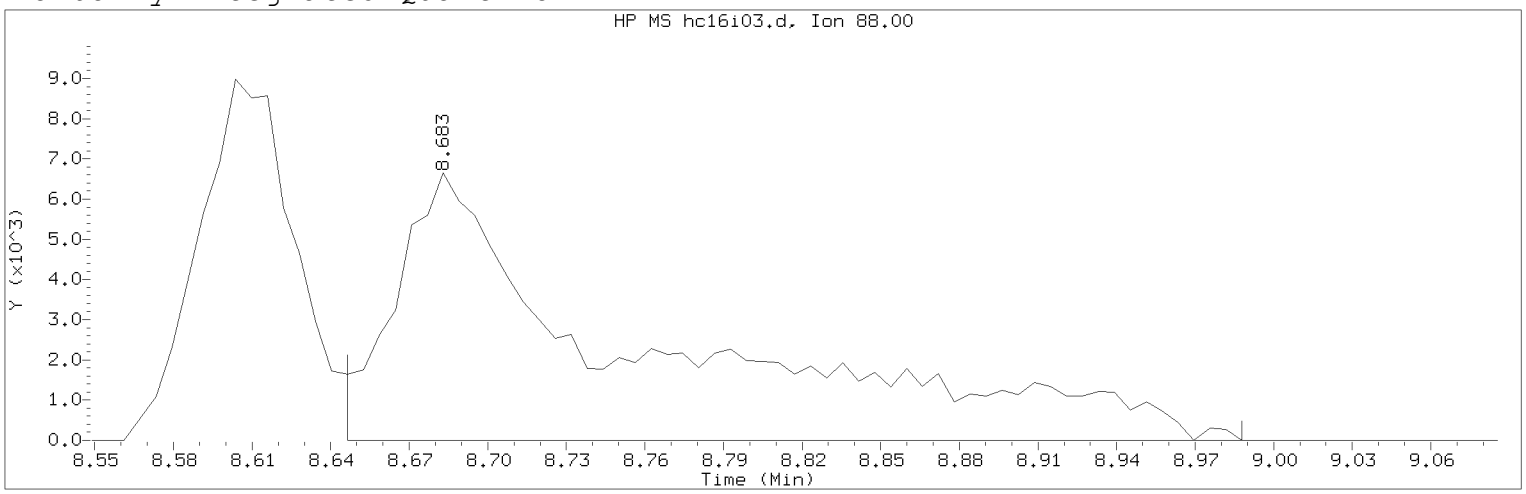
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area : 263091
On-column Amount (ng) : 109.3786
Integration start scan : 439 Integration stop scan: 521
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

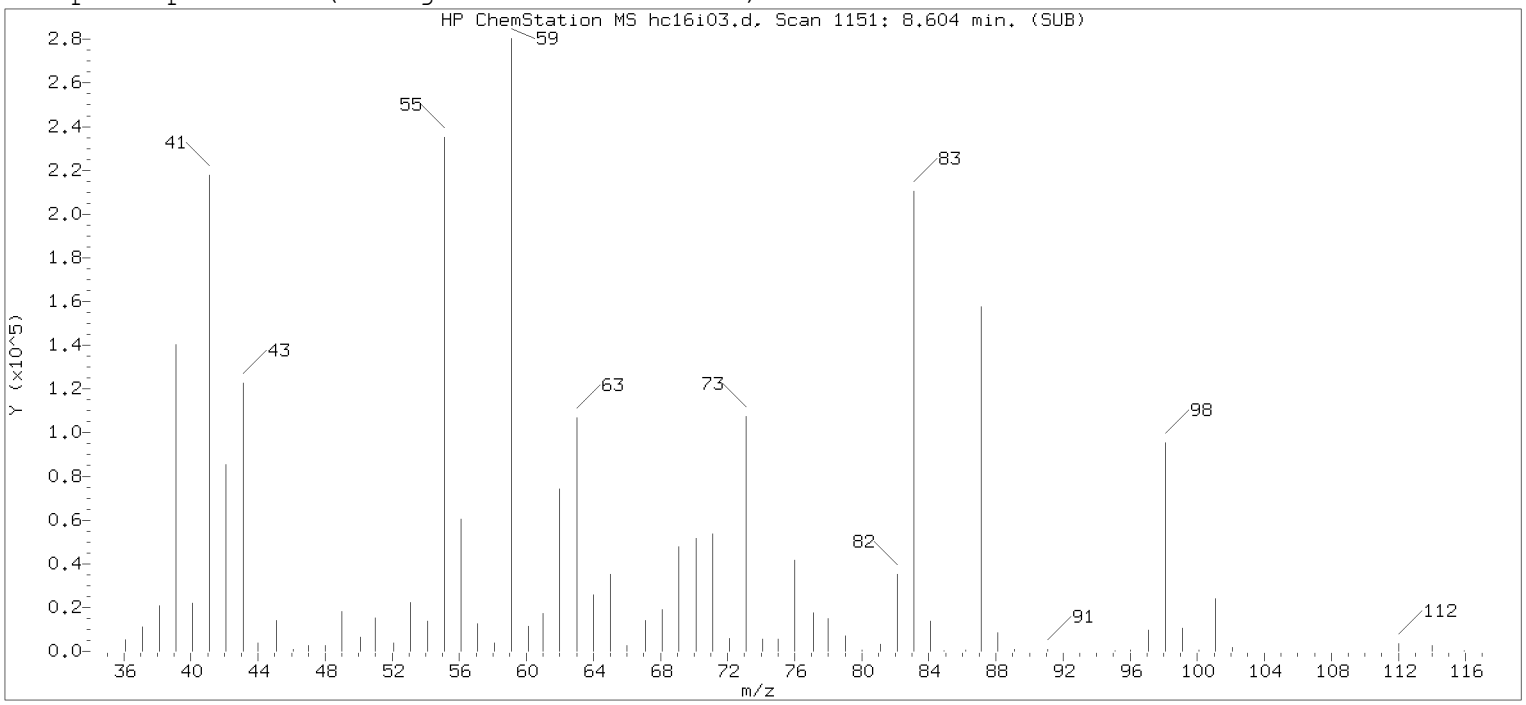
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 43135M
On-Column Amount (ng) : 272.1025
Integration start scan : 1157 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

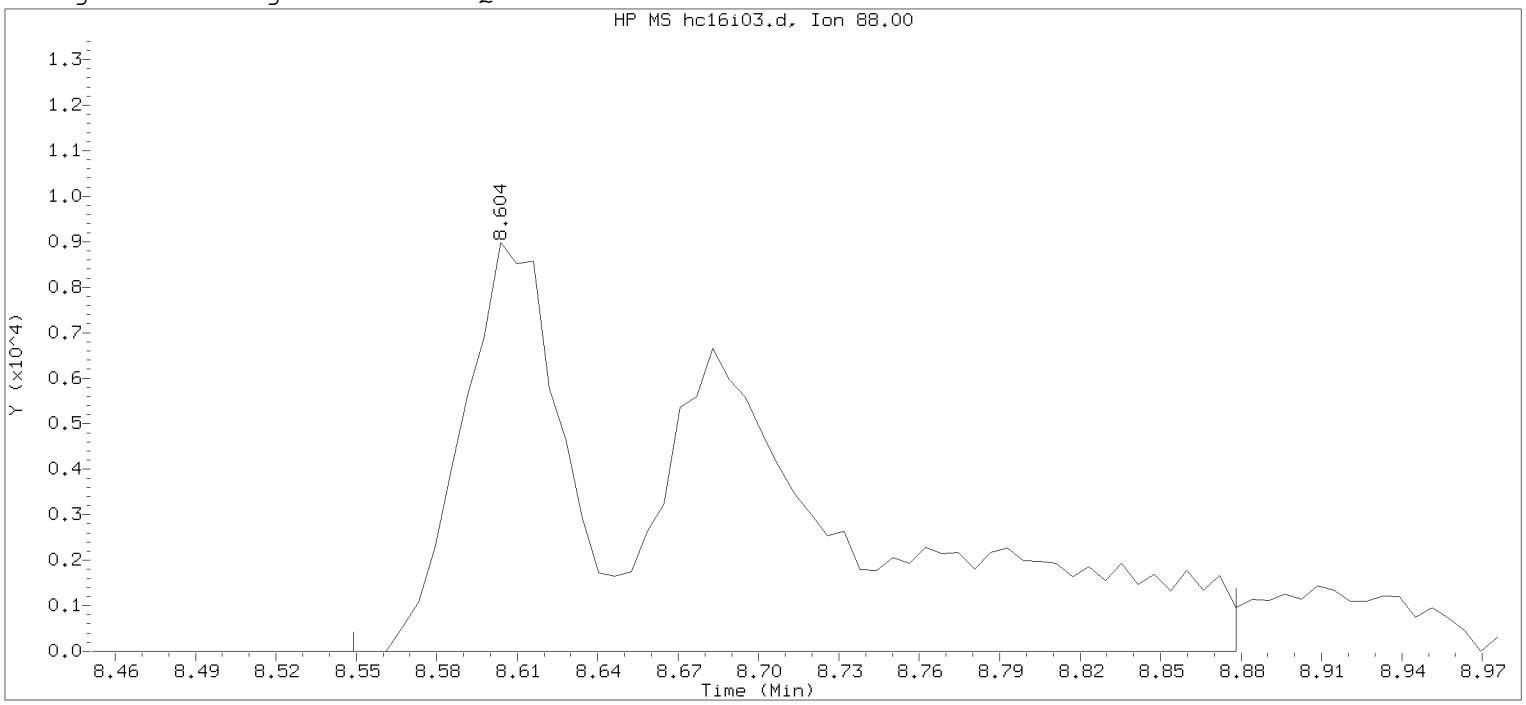
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

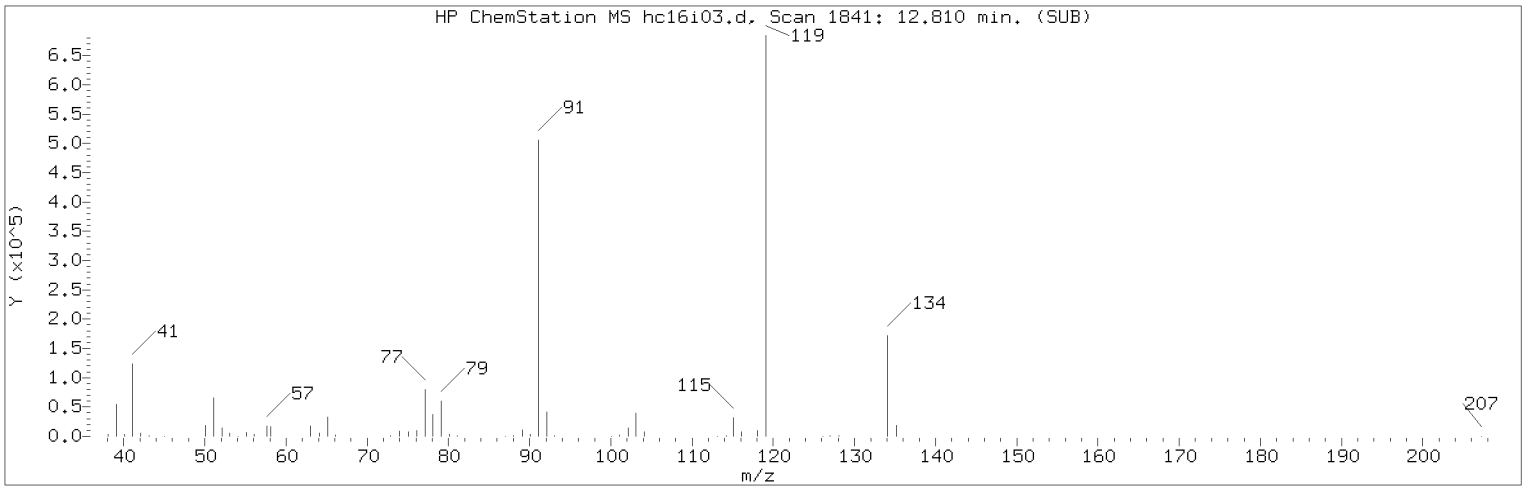
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

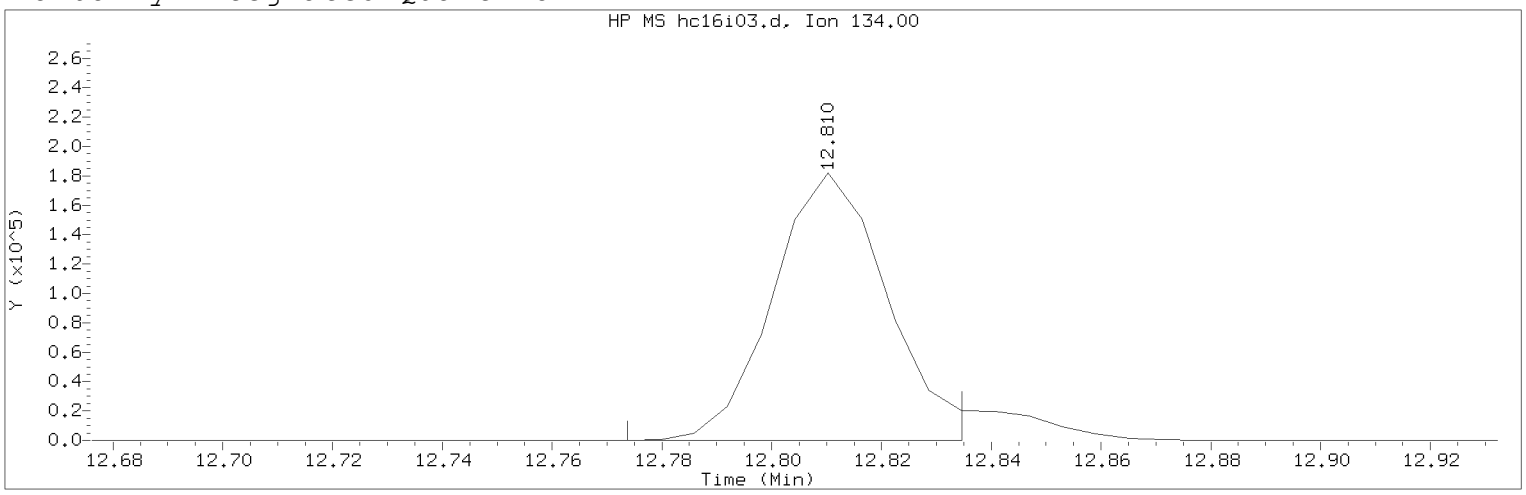
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1151		
Retention Time (minutes)	: 8.604		
Quant Ion	: 88.00		
Area	: 59845		
On-column Amount (ng)	: 271.1536		
Integration start scan	: 1141	Integration stop scan:	1195
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

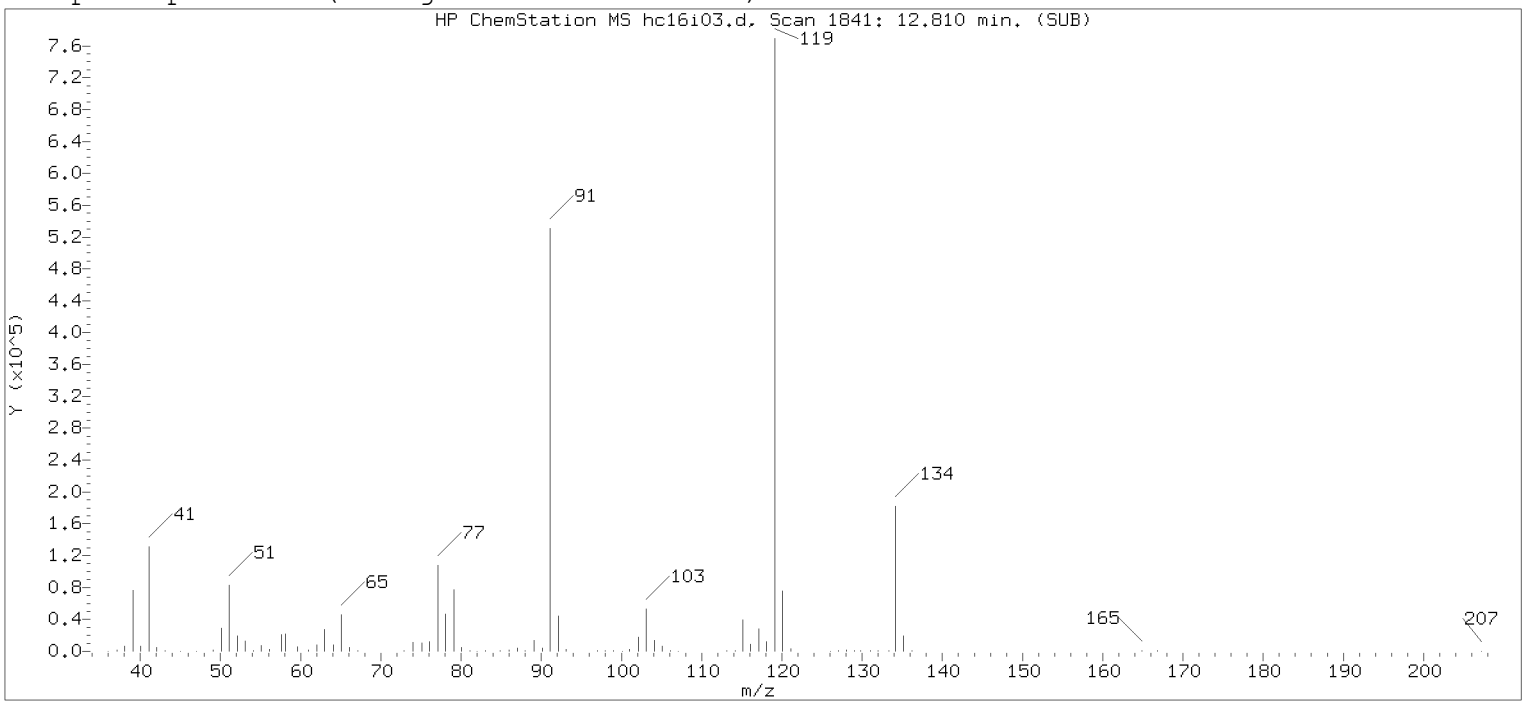
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 262784M
On-Column Amount (ng) : 4.6593
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

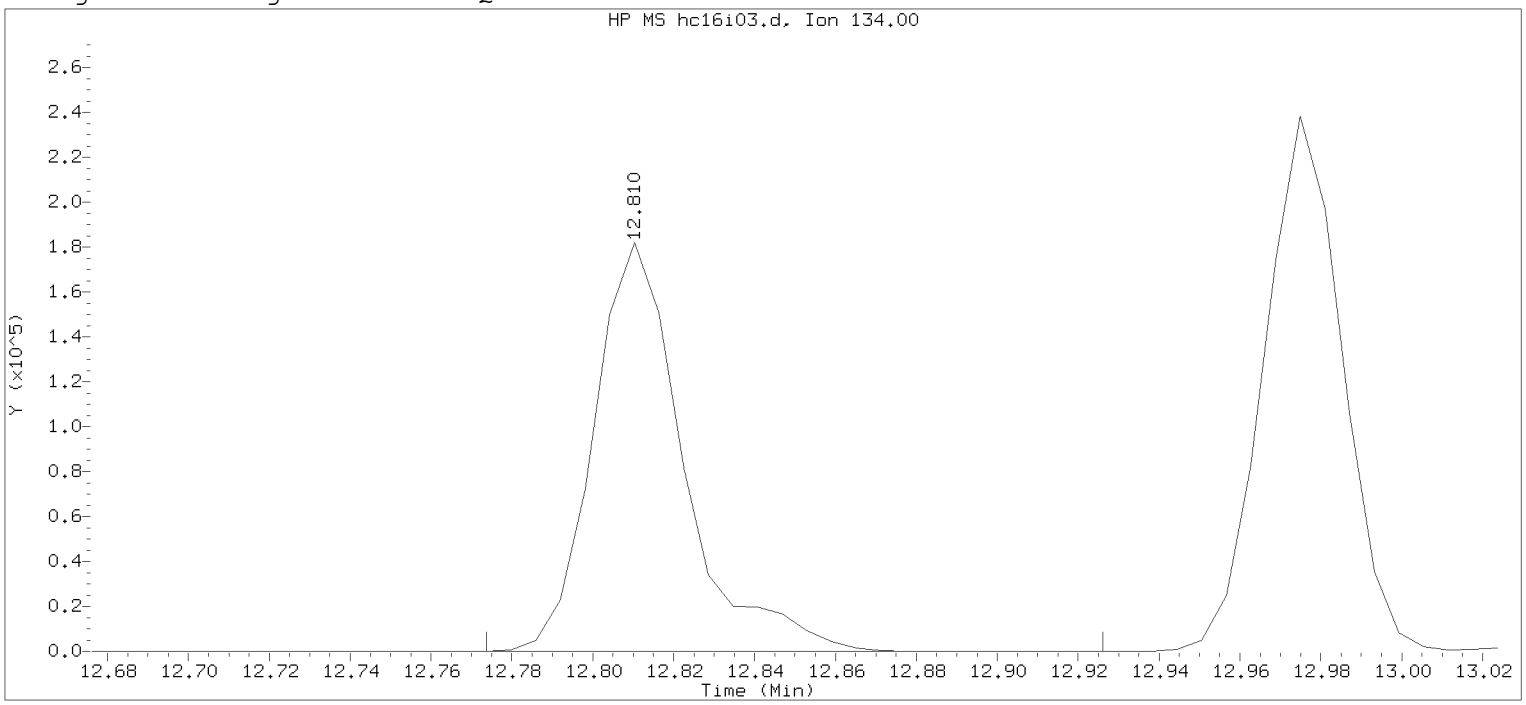
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



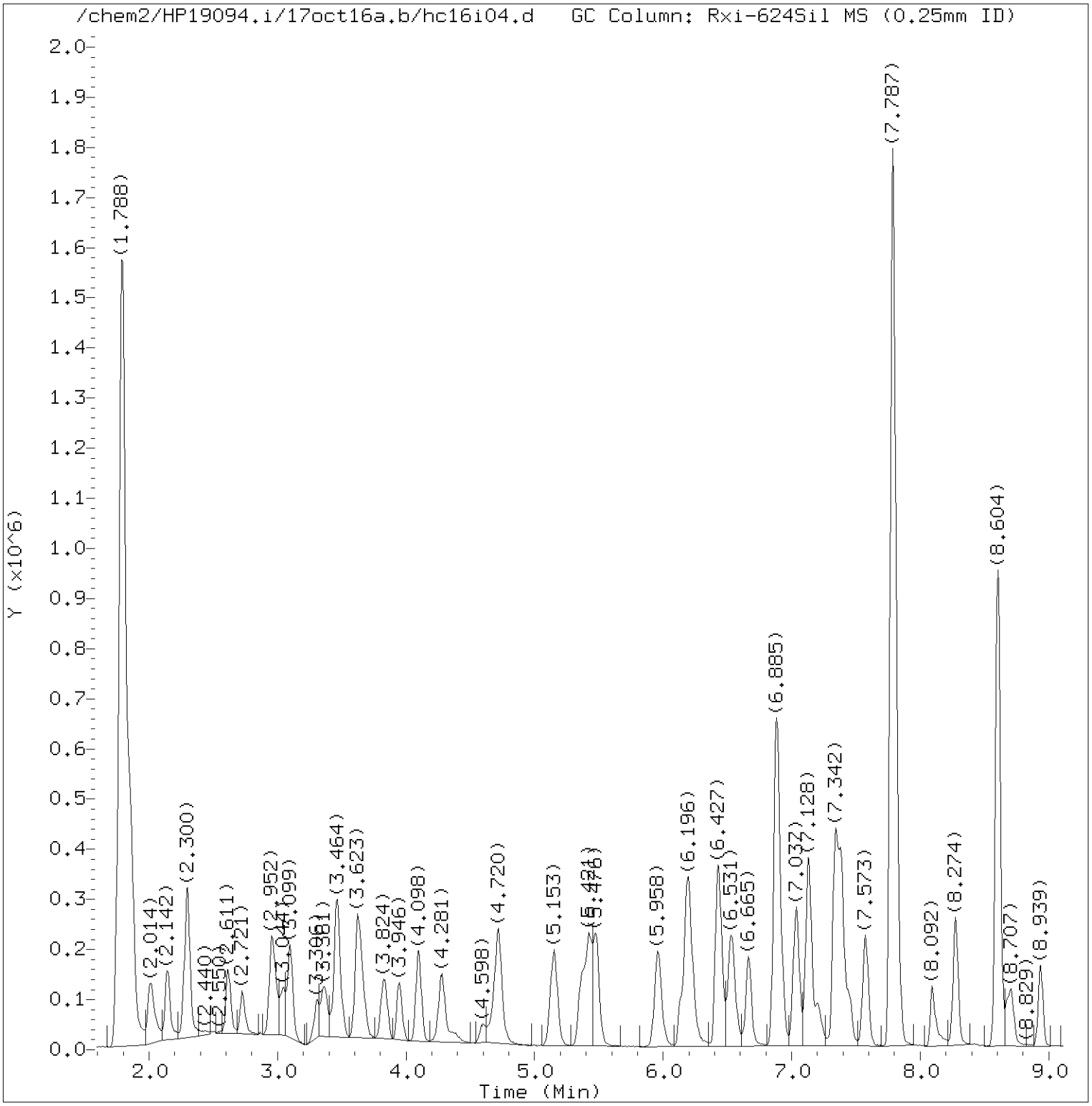
Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 281491
On-column Amount (ng) : 5.1492
Integration start scan : 1834 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

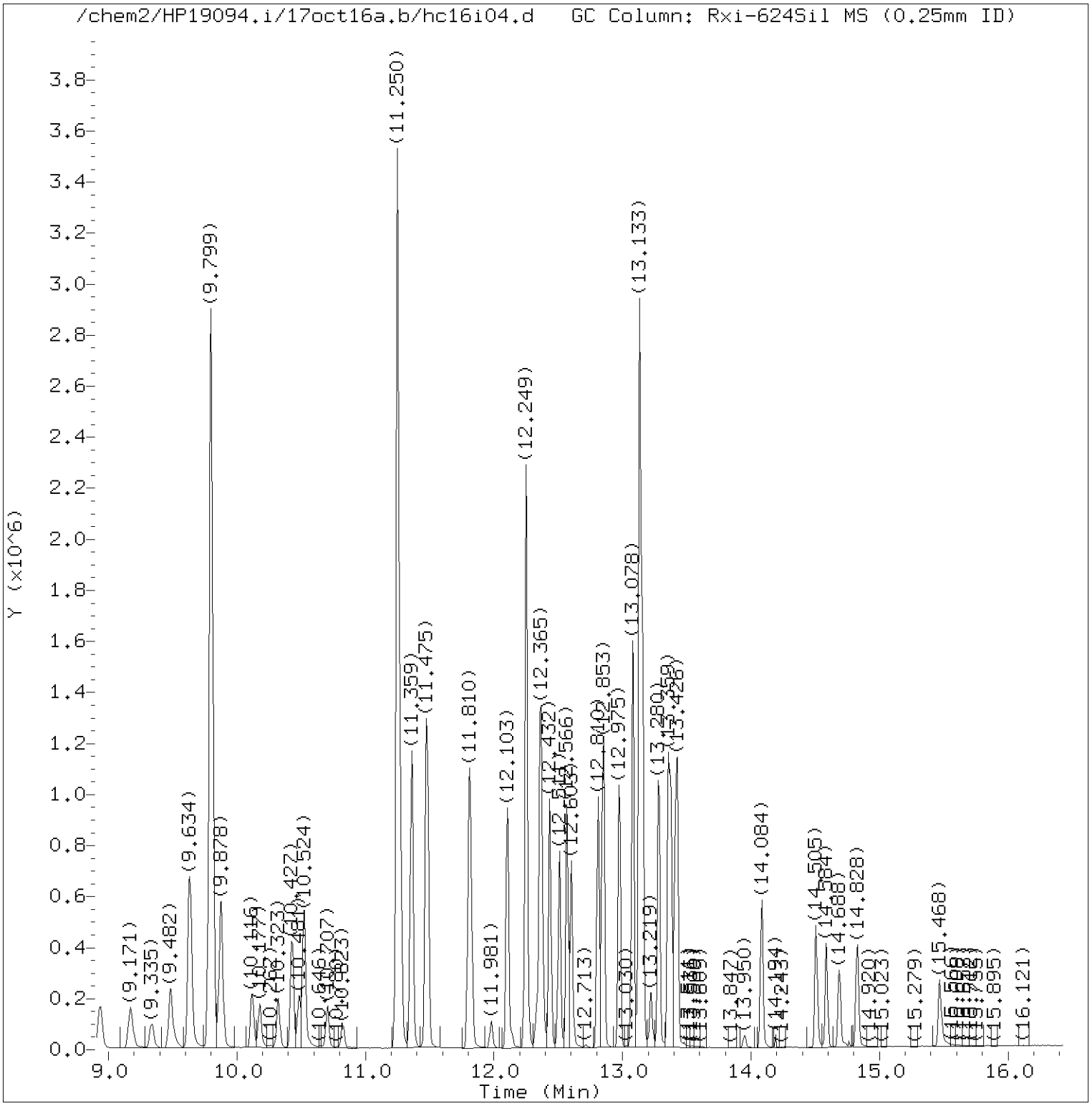
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	206883	2.112
2) Chloromethane	(2)	2.142	50	191700	1.982
5) Vinyl Chloride	(2)	2.276	62	180706	2.033
6) 1,3-Butadiene	(2)	2.300	39	159067	1.893
7) Bromomethane	(2)	2.611	94	119588	1.978
8) Chloroethane	(2)	2.721	64	102030	2.016
9) Dichlorofluoromethane	(2)	2.952	67	291454	1.967
10) Trichlorofluoromethane	(2)	3.038	101	230503	1.947
11) Ethyl ether	(2)	3.306	59	74270	1.965
12) Freon 123a	(2)	3.367	67	142181	1.919
13) Acrolein	(1)	3.464	56	506035	93.846
14) Acetone	(1)	3.623	43	127337M	18.415
15) 1,1-Dichloroethene	(2)	3.623	96	91944	1.941
16) Freon 113	(2)	3.653	101	104004	1.972
17) Methyl Iodide	(2)	3.818	142	182139	1.930
18) Carbon Disulfide	(2)	3.946	76	288566	1.903
21) Methyl Acetate	(1)	4.068	43	41676	1.624
22) Allyl Chloride	(2)	4.098	41	204732	1.905
26)*t-Butyl Alcohol-d10	(1)	4.257	65	86653	50.000
23) Methylene Chloride	(2)	4.281	84	102048	1.888
28) t-Butyl Alcohol	(1)	4.379	59	86041	36.778
29) Acrylonitrile	(1)	4.598	53	81659	9.649
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	223327	1.909
31) trans-1,2-Dichloroethene	(2)	4.720	96	102593	1.915
32) n-Hexane	(2)	5.147	57	188380	1.992
33) 1,1-Dichloroethane	(2)	5.367	63	212771	1.931
34) di-Isopropyl Ether	(2)	5.421	45	399704	1.922
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	200830	1.943
37) Ethyl t-butyl ether	(2)	5.958	59	320689	1.922
40) 1,2-Dichloroethene (Total)	(2)		96	221414	3.855
38) 2-Butanone	(1)	6.135	43	249784	18.409
39) cis-1,2-Dichloroethene	(2)	6.190	96	118821	1.940
42) Propionitrile	(1)	6.208	54	117622	37.638
41) 2,2-Dichloropropane	(2)	6.208	77	177657	1.909
45) Methacrylonitrile	(1)	6.427	67	223566	19.677
47) Bromochloromethane	(2)	6.525	128	45800	1.901
48) Tetrahydrofuran	(1)	6.543	71	57943	18.836
49) Chloroform	(2)	6.665	83	201088	1.890

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	538012	10.006
50)$Dibromofluoromethane	(2)	6.878	111	552062	9.999
51) 1,1,1-Trichloroethane	(2)	6.915	97	189098	1.971
52) Cyclohexane	(2)	7.037	56	227474	1.940
52) Cyclohexane	(2)	7.037	84	202944	2.251
52) Cyclohexane	(2)	7.037	69	63933	1.912
55) 1,1-Dichloropropene	(2)	7.128	75	167018	1.968
54) Carbon Tetrachloride	(2)	7.141	117	163454	1.951
56) Isobutyl Alcohol	(1)	7.202	41	81940	86.635
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82581	9.807
57)$1,2-Dichloroethane-d4	(2)	7.342	65	453387	9.841
57)$1,2-Dichloroethane-d4	(2)	7.342	104	52242	9.863
58) Benzene	(2)	7.384	78	447418	1.928
59) 1,2-Dichloroethane	(2)	7.445	62	122488	1.887
60) t-Amyl methyl ether	(2)	7.573	73	260831	1.926
63)*Fluorobenzene	(2)	7.787	96	2226720	10.000
62) n-Heptane	(2)	7.817	43	214090	1.896
65) n-Butanol	(1)	8.092	56	132962	191.341
67) Trichloroethene	(2)	8.274	95	118114	1.900
70) 1,2-Dichloropropane	(2)	8.598	63	115891	1.924
69) Methylcyclohexane	(2)	8.604	83	215678	2.018
71) Methyl Methacrylate	(1)	8.677	69	43151	1.673
72) 1,4-Dioxane	(1)	8.689	88	16029M	97.677
73) Dibromomethane	(2)	8.707	93	47557	1.887
74) Bromodichloromethane	(2)	8.939	83	139011	1.912
76) 2-Nitropropane	(1)	9.171	41	136363	17.731
80) cis-1,3-Dichloropropene	(2)	9.488	75	162374	1.924
81) 4-Methyl-2-Pentanone	(1)	9.634	43	635486	18.491
82)$Toluene-d8	(3)	9.799	98	2219837	10.113
82)$Toluene-d8	(3)	9.799	100	1412063	10.163
83) Toluene	(3)	9.878	92	277306	1.933
84) trans-1,3-Dichloropropene	(3)	10.116	75	123172	1.880
85) 1,3-Dichloropropene (total)	(3)		75	285546	3.804
86) Ethyl Methacrylate	(3)	10.177	69	94971	1.941
88) 1,1,2-Trichloroethane	(3)	10.323	97	65410	1.953
89) Tetrachloroethene	(3)	10.433	166	131425	1.952
90) 1,3-Dichloropropane	(3)	10.481	76	117184	1.968
91) 2-Hexanone	(1)	10.524	43	444086	18.540

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	84787	1.939
95) 1,2-Dibromoethane	(3)	10.823	107	61285	1.937
97)*Chlorobenzene-d5	(3)	11.250	117	1510352	10.000
98) Chlorobenzene	(3)	11.274	112	293900	1.923
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	103261	1.918
100) Ethylbenzene	(3)	11.359	91	559794	1.941
101) m+p-Xylene	(3)	11.475	106	421356	3.877
105) Xylene (Total)	(3)		106	627514	5.817
104) o-Xylene	(3)	11.804	106	206158	1.940
106) Styrene	(3)	11.823	104	318794	1.920
107) Bromoform	(3)	11.981	173	45653	1.924
108) Isopropylbenzene	(3)	12.103	105	555143	1.946
111)$4-Bromofluorobenzene	(3)	12.249	95	649815	9.746
111)$4-Bromofluorobenzene	(3)	12.249	174	576581	9.834
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	76844	1.970
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	198333	19.360
114) Bromobenzene	(4)	12.371	156	118926	1.933
116) 1,2,3-Trichloropropane	(4)	12.383	110	19746	1.985
117) n-Propylbenzene	(4)	12.432	91	668731	1.989
119) 2-Chlorotoluene	(4)	12.511	126	123804	1.964
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	460486	1.976
122) 4-Chlorotoluene	(4)	12.603	126	125728	1.960
125) tert-Butylbenzene	(4)	12.810	134	99006M	1.953
126) Pentachloroethane	(4)	12.841	167	76079	1.974
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	460013	1.966
128) sec-Butylbenzene	(4)	12.975	105	594536	1.971
131) 1,3-Dichlorobenzene	(4)	13.078	146	232835	1.943
132) p-Isopropyltoluene	(4)	13.085	119	499156	1.983
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	632606	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	239923	1.923
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	196021	1.974
136) Benzyl Chloride	(4)	13.219	126	27286	1.962
138) n-Butylbenzene	(4)	13.377	92	246814	1.956
139) 1,2-Dichlorobenzene	(4)	13.408	146	210085	1.968
143) 1,2-Dibromo-3-chloropropane	(1)	13.944	155	8773	1.767
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	172678	1.945
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	141182	1.930
146) Hexachlorobutadiene	(4)	14.590	225	67106	1.945

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

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

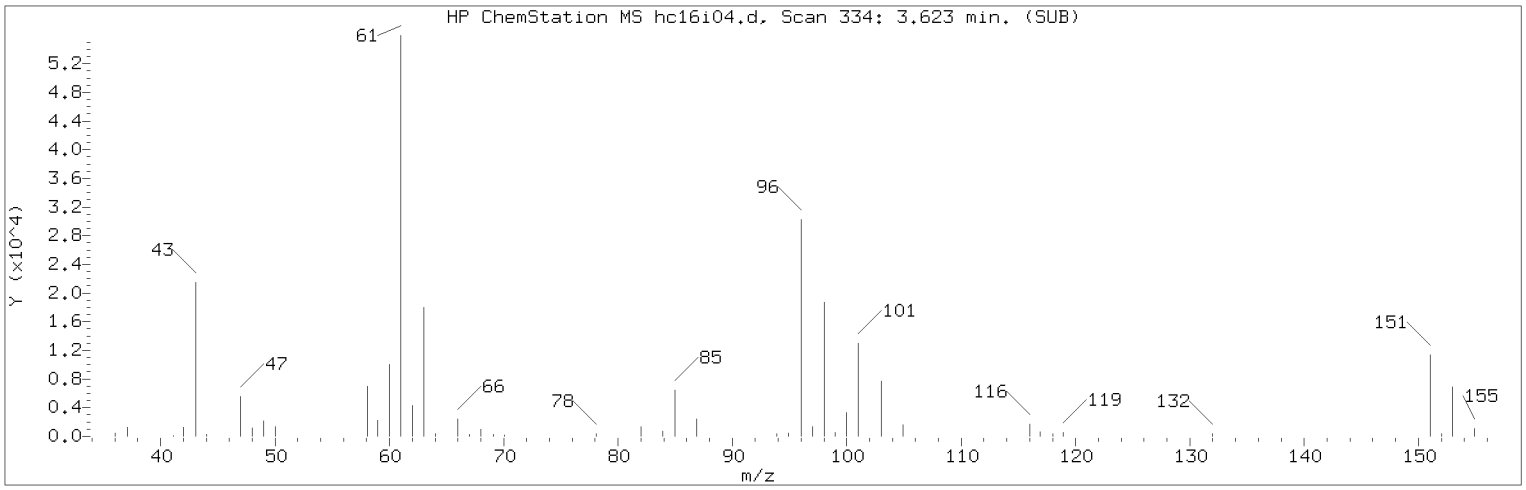
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

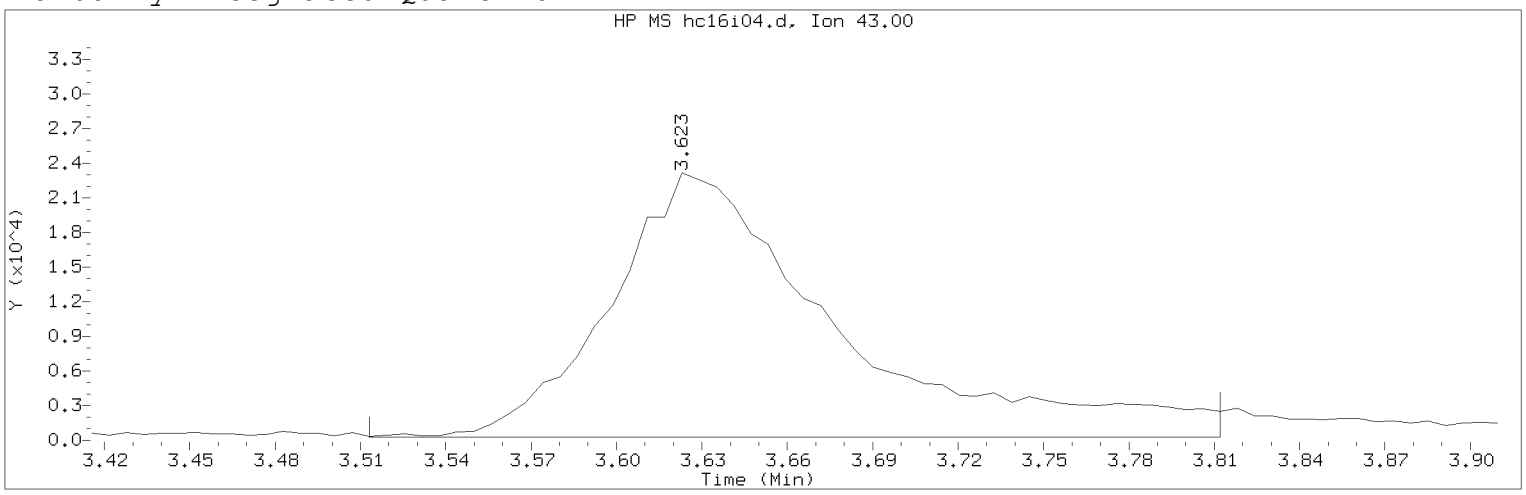
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	231742	1.947
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	120195	1.952

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

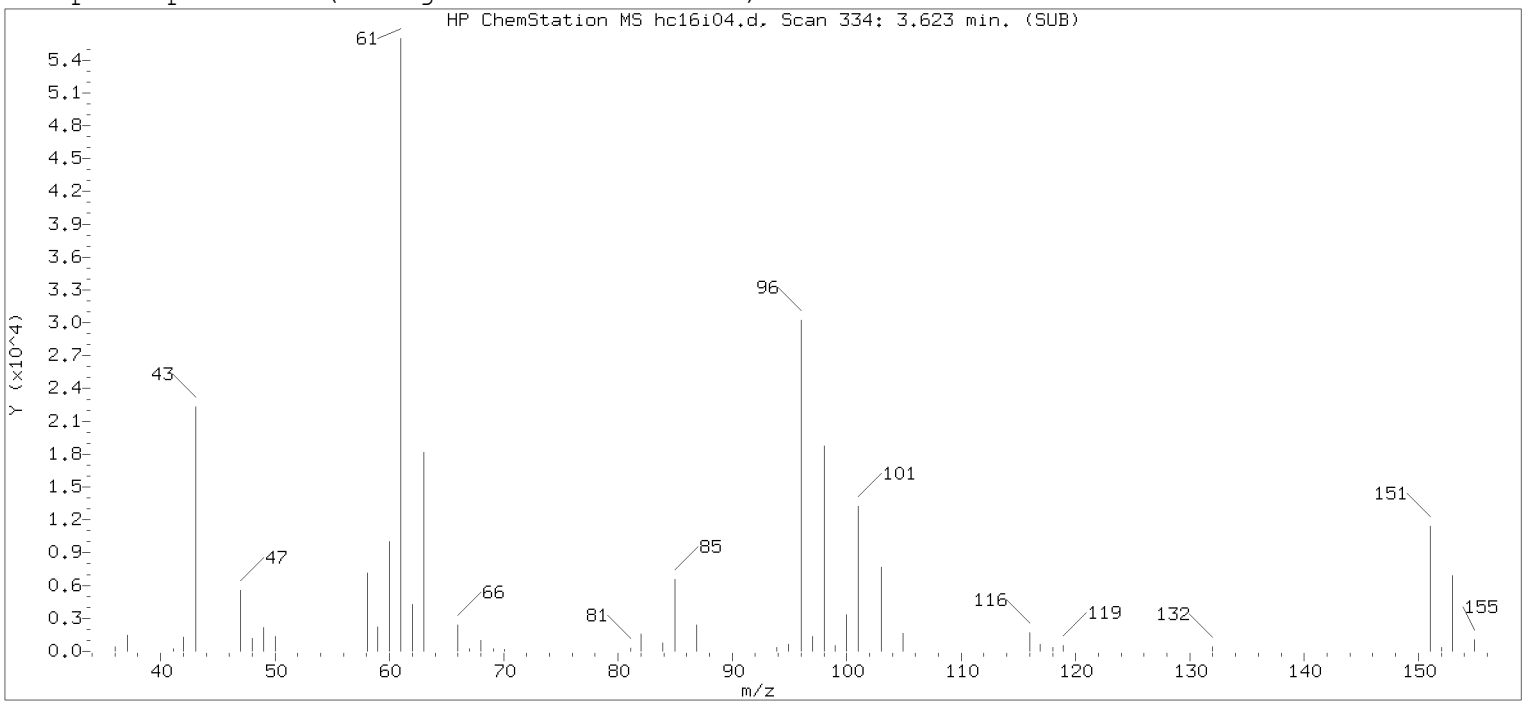
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 127337M
On-Column Amount (ng) : 18.4147
Integration start scan : 315 Integration stop scan: 364
Y at integration start : 258 Y at integration end: 258

Reason for manual integration: improper integration

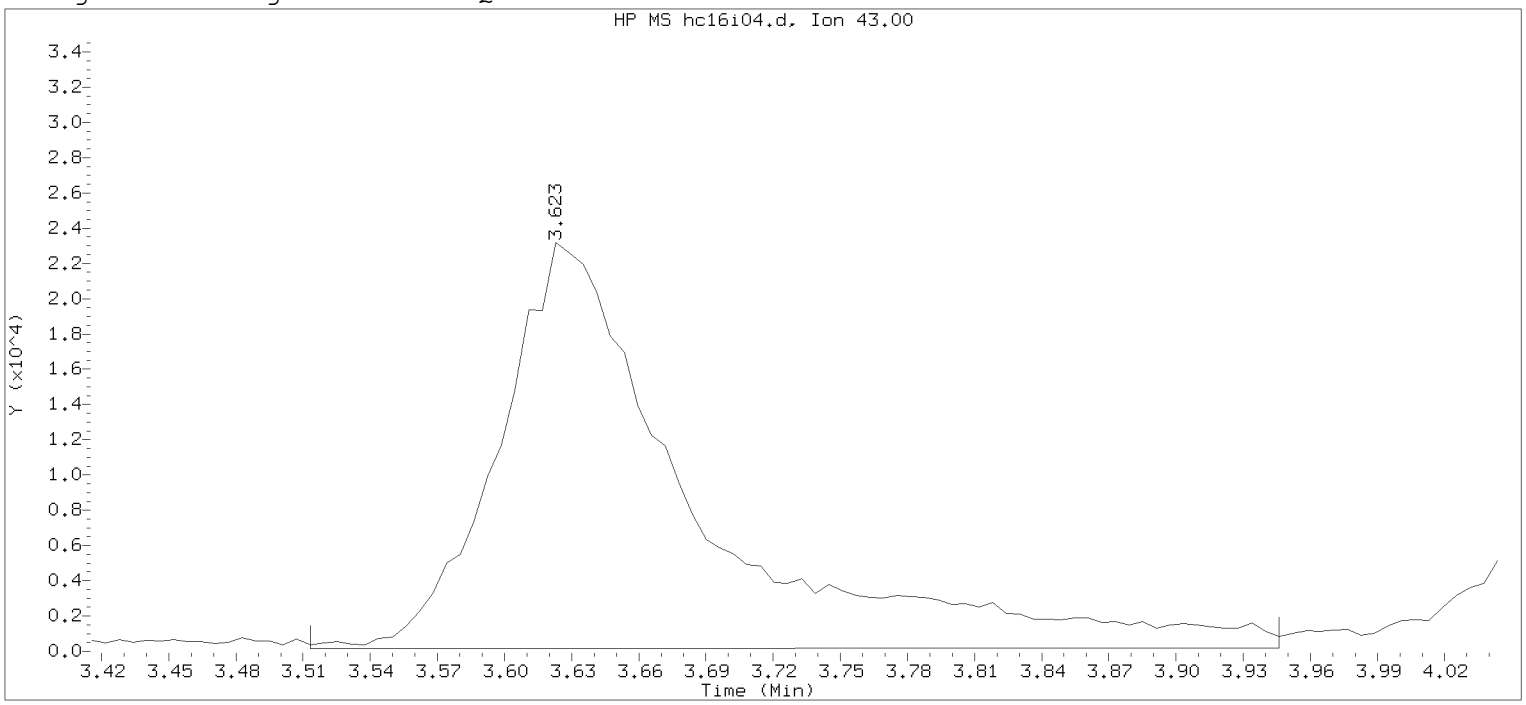
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

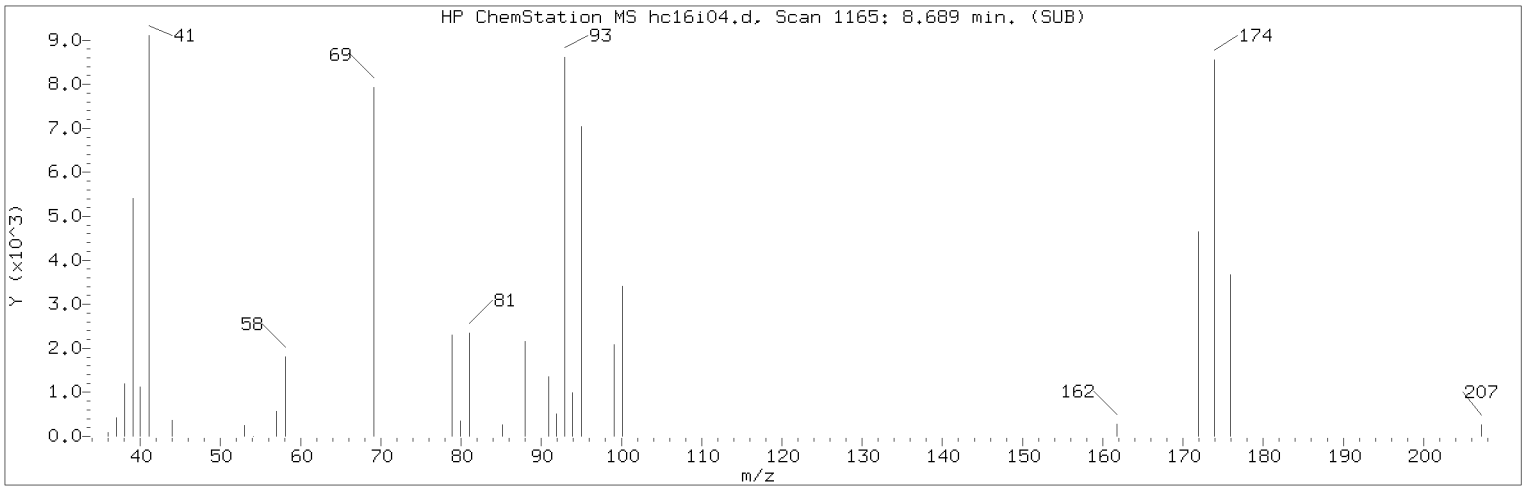
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

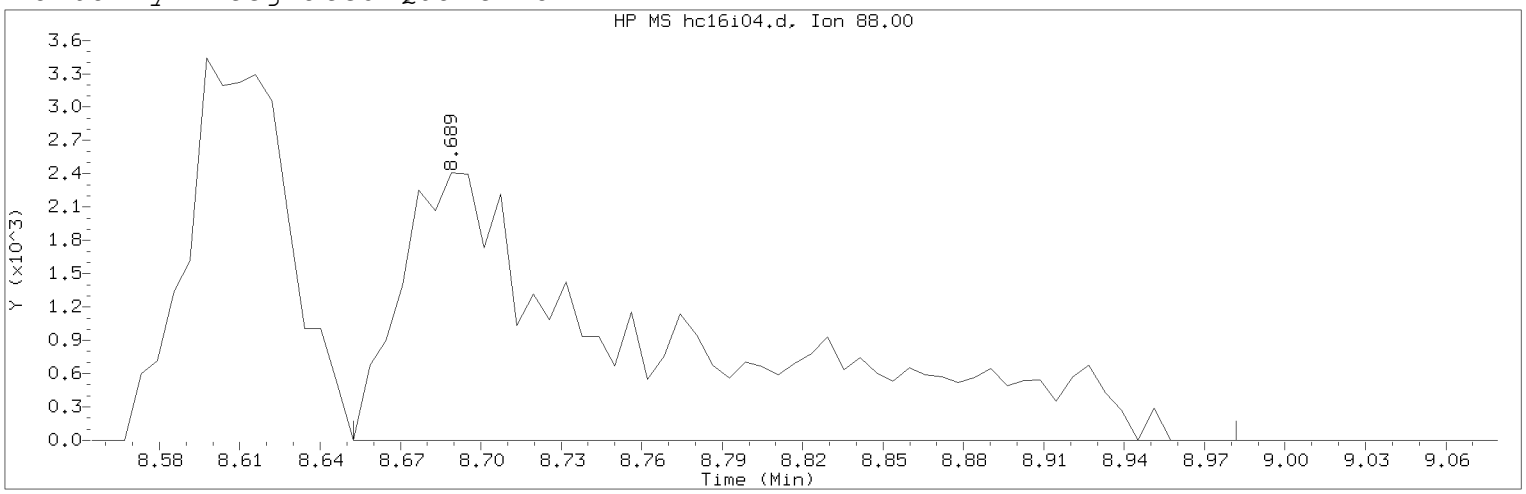
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 334		
Retention Time (minutes)	: 3.623		
Quant Ion	: 43.00		
Area	: 140855		
On-column Amount (ng)	: 20.7647		
Integration start scan	: 315	Integration stop scan:	386
Y at integration start	: 136	Y at integration end:	187

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

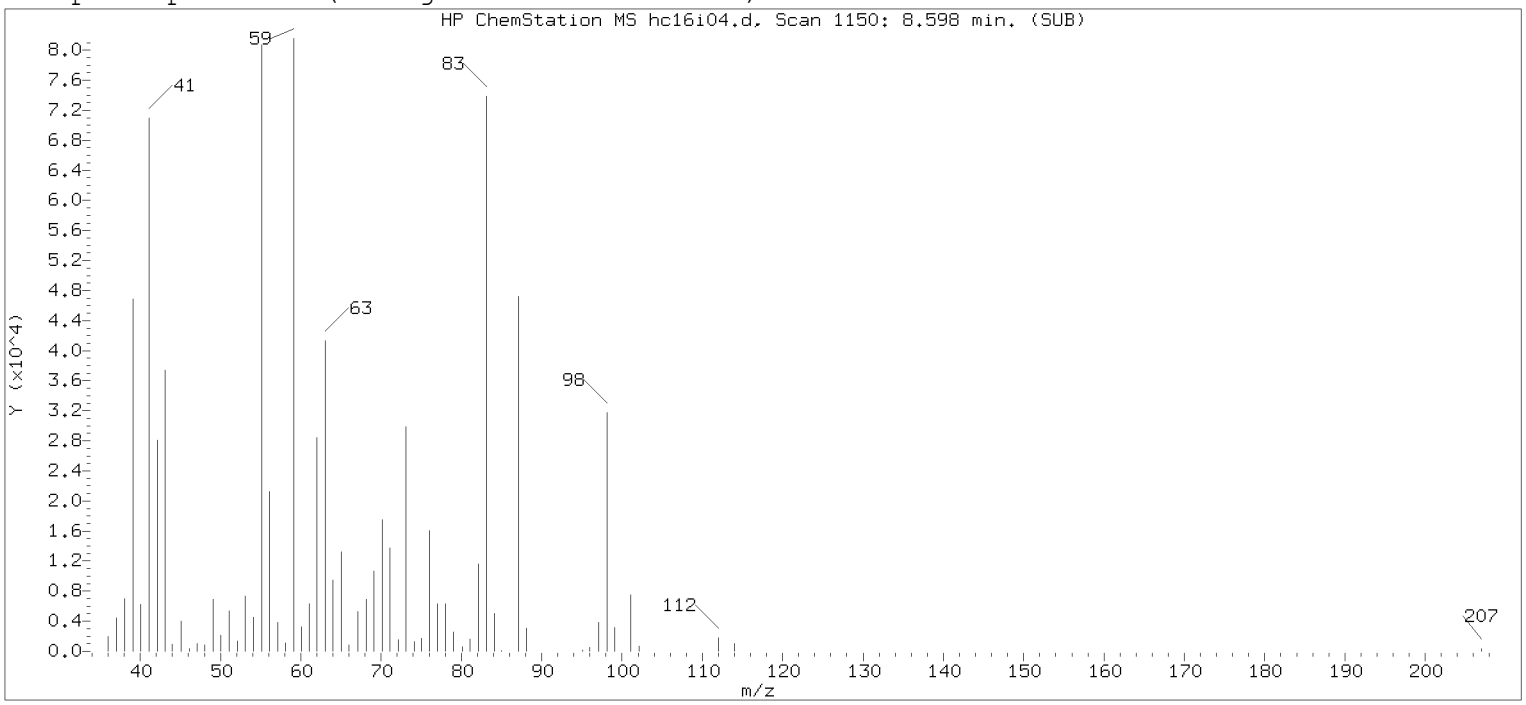
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 88.00
Area (flag) : 16029M
On-Column Amount (ng) : 97.6772
Integration start scan : 1158 Integration stop scan: 1212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

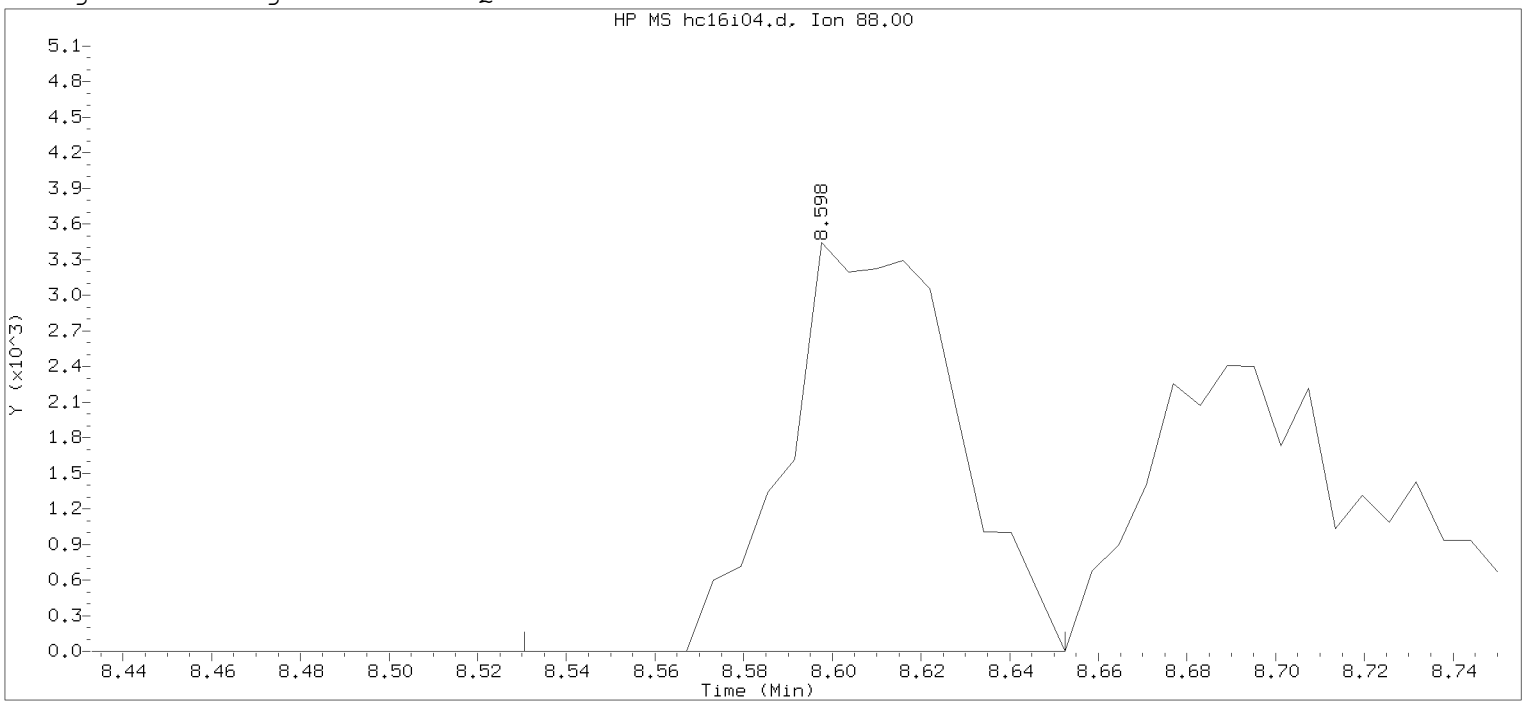
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

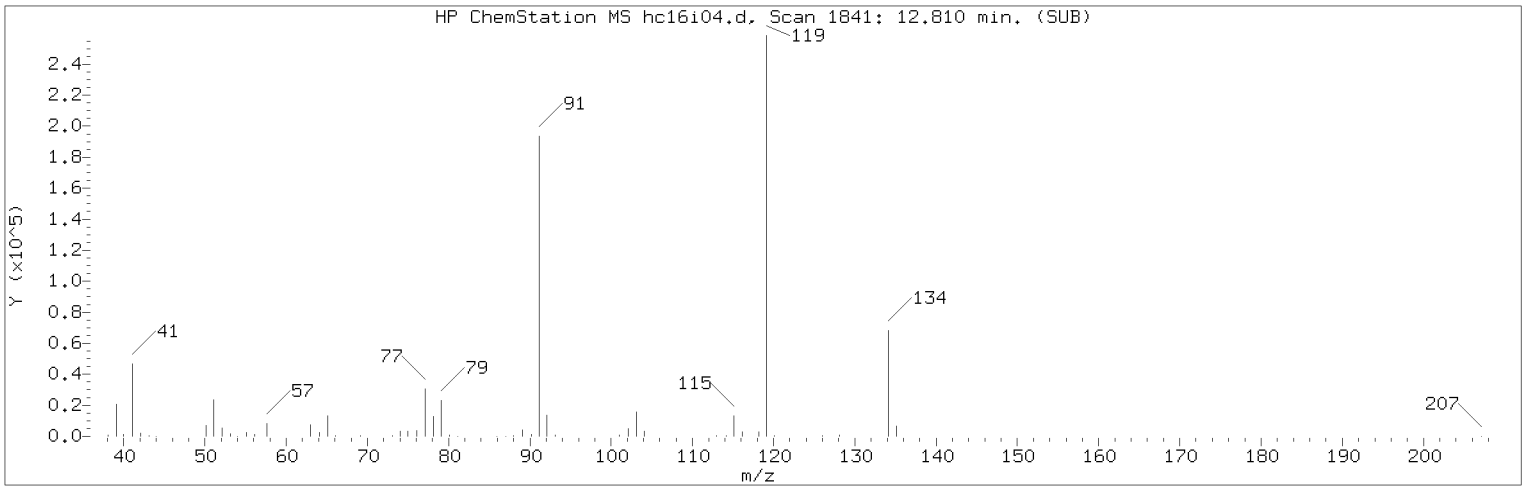
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

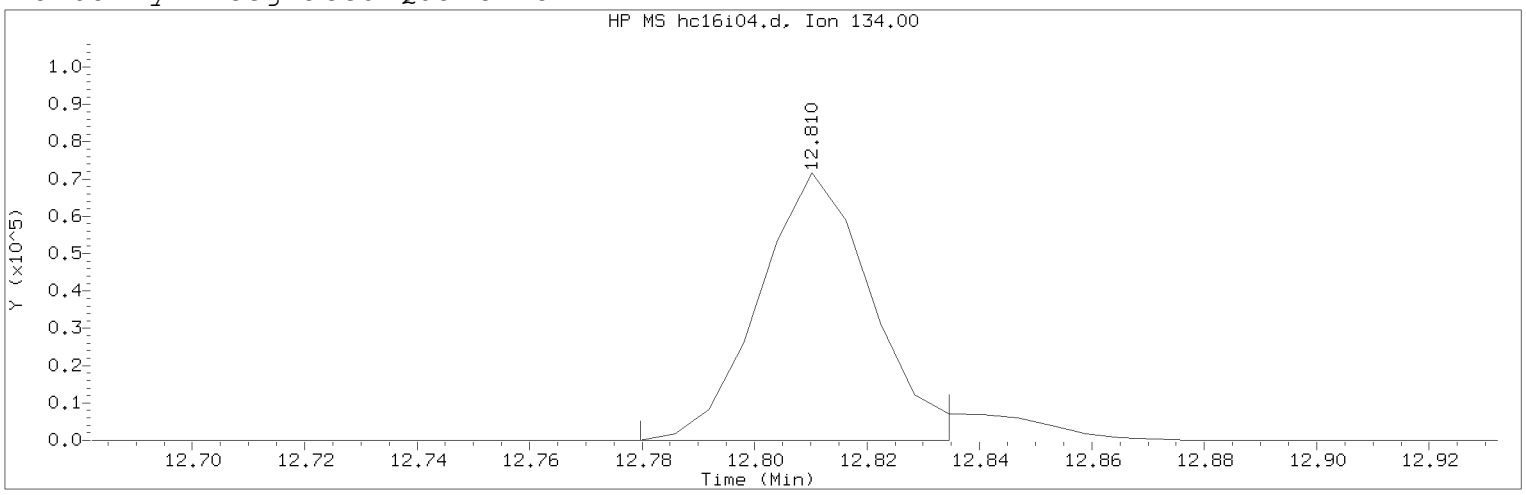
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1150		
Retention Time (minutes)	: 8.598		
Quant Ion	: 88.00		
Area	: 9142		
On-column Amount (ng)	: 49.7041		
Integration start scan	: 1138	Integration stop scan:	1158
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

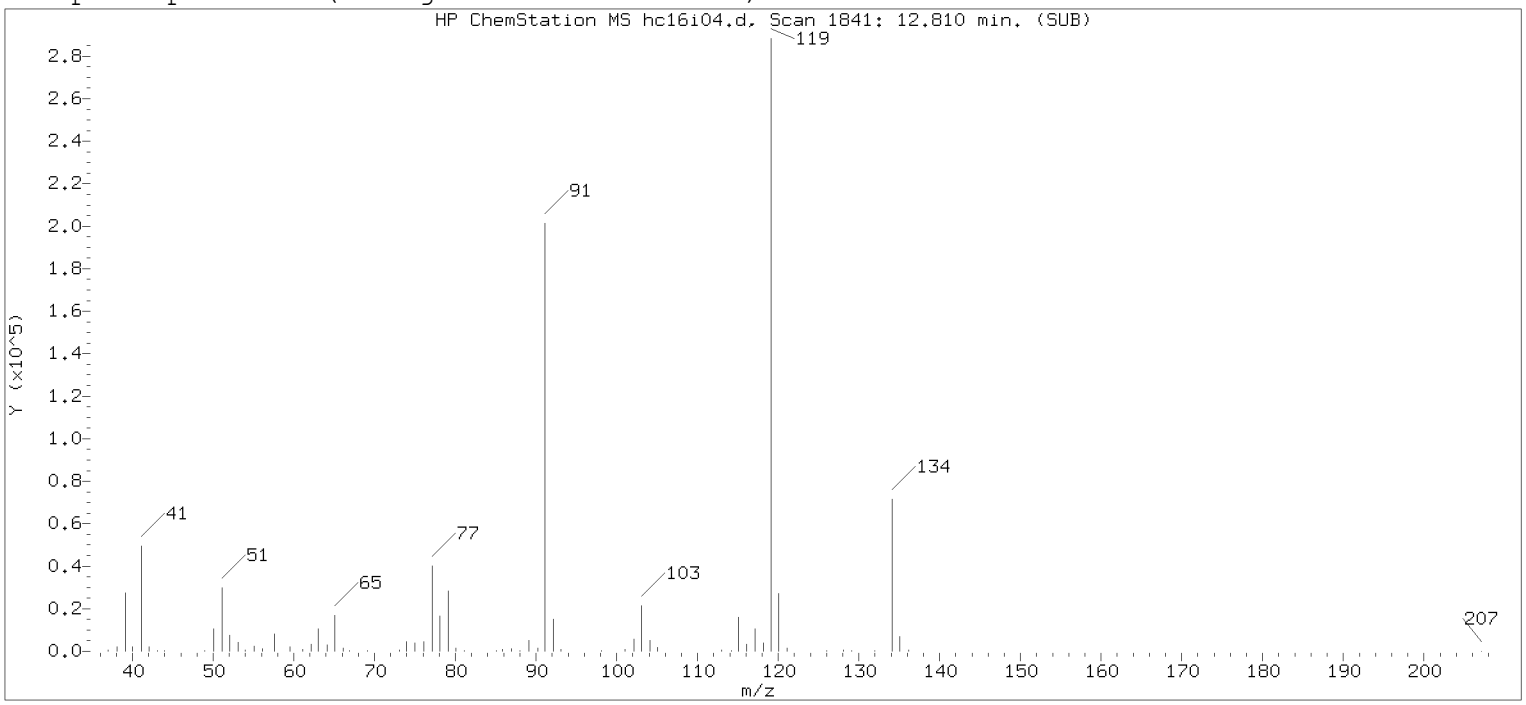
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 99006M
On-Column Amount (ng) : 1.9526
Integration start scan : 1835 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

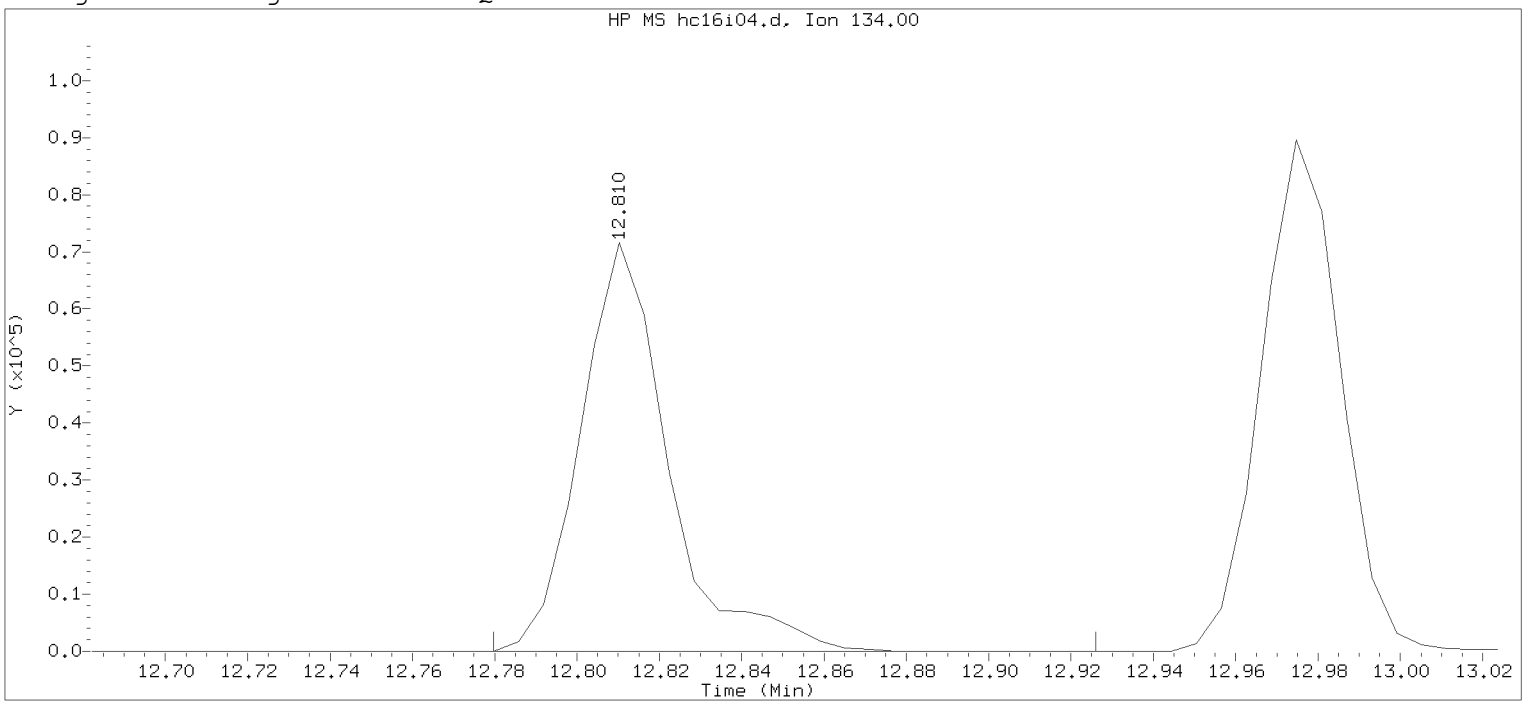
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



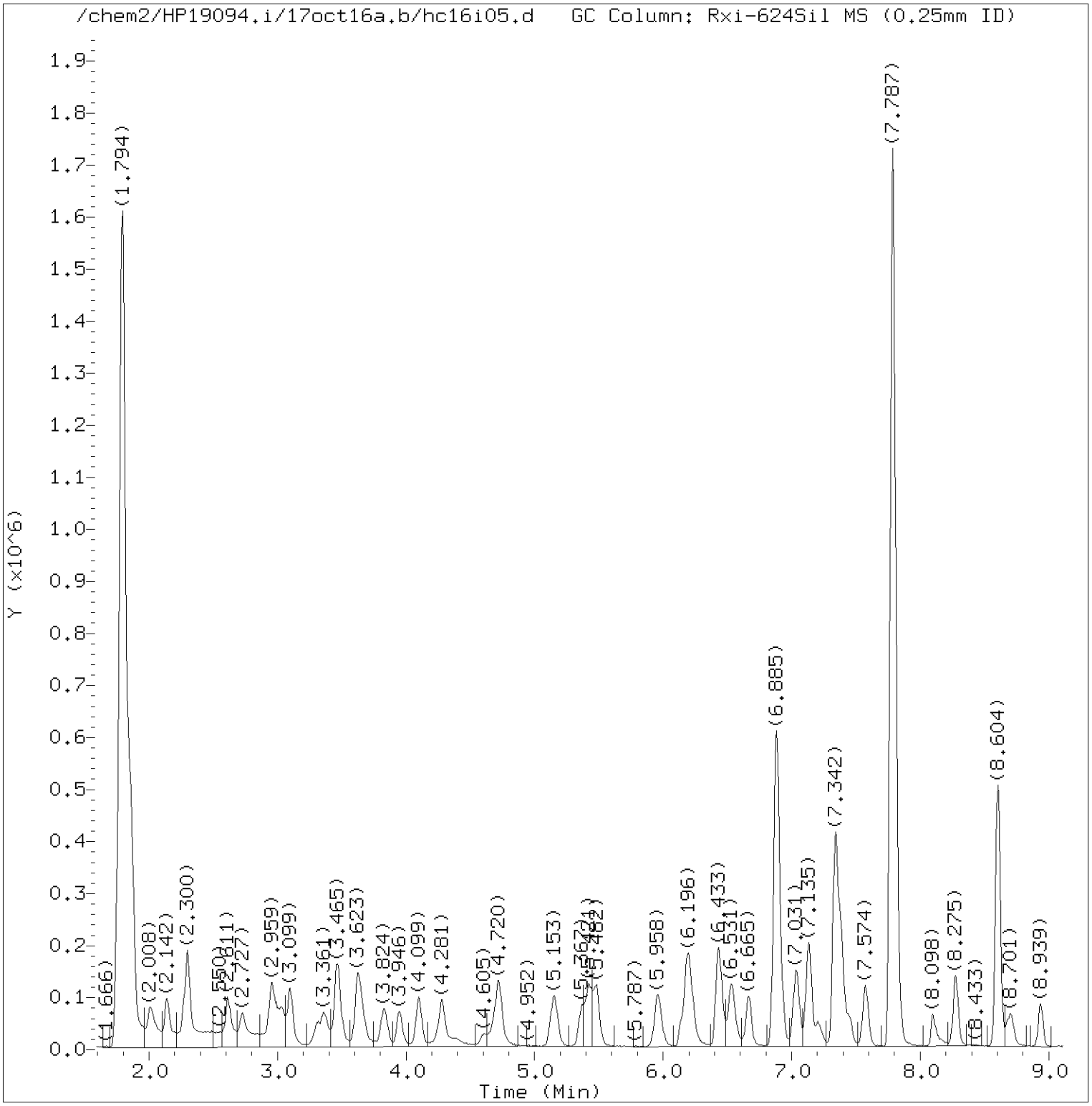
Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 106222
On-column Amount (ng) : 2.1029
Integration start scan : 1835 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

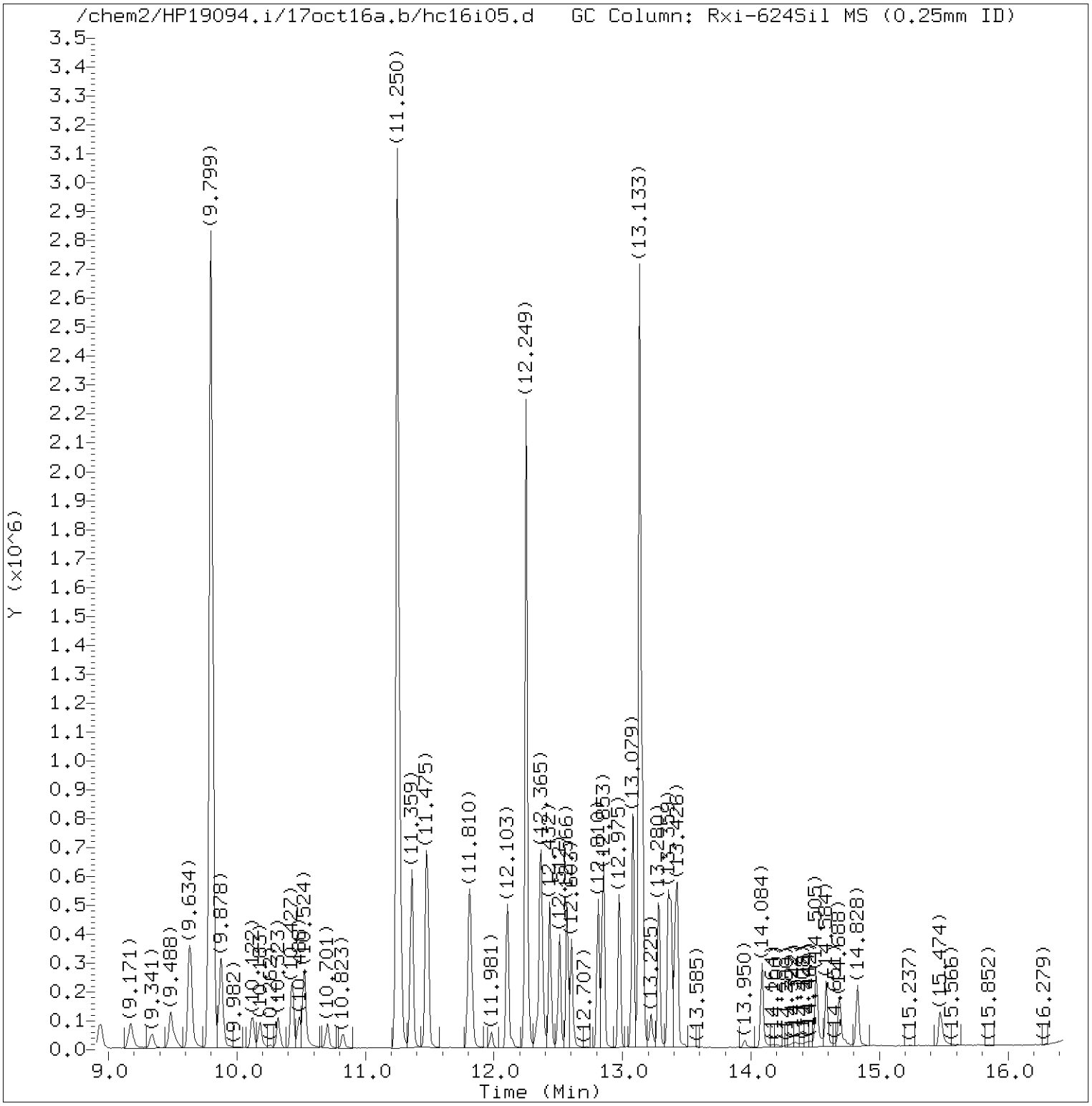
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	106626	1.099
2) Chloromethane	(2)	2.142	50	98261	1.026
5) Vinyl Chloride	(2)	2.276	62	90988	1.033
6) 1,3-Butadiene	(2)	2.300	39	86465	1.039
7) Bromomethane	(2)	2.611	94	60938	1.017
8) Chloroethane	(2)	2.727	64	52618	1.050
9) Dichlorofluoromethane	(2)	2.952	67	148072	1.009
10) Trichlorofluoromethane	(2)	3.032	101	122383	1.043
11) Ethyl ether	(2)	3.306	59	36437	0.973
12) Freon 123a	(2)	3.361	67	77677	1.058
13) Acrolein	(1)	3.465	56	278819	52.394
15) 1,1-Dichloroethene	(2)	3.623	96	49137	1.047
14) Acetone	(1)	3.635	43	74148	10.867
16) Freon 113	(2)	3.660	101	55424	1.061
17) Methyl Iodide	(2)	3.824	142	96615	1.033
18) Carbon Disulfide	(2)	3.946	76	154346	1.028
21) Methyl Acetate	(1)	4.068	43	22019	1.074
22) Allyl Chloride	(2)	4.099	41	104799	0.984
26)*t-Butyl Alcohol-d10	(1)	4.257	65	86008M	50.000
23) Methylene Chloride	(2)	4.275	84	54107	1.011
28) t-Butyl Alcohol	(1)	4.379	59	46416	20.099
29) Acrylonitrile	(1)	4.605	53	44193	5.292
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	119111	1.028
31) trans-1,2-Dichloroethene	(2)	4.720	96	55348	1.043
32) n-Hexane	(2)	5.153	57	98905	1.055
33) 1,1-Dichloroethane	(2)	5.367	63	114647	1.050
34) di-Isopropyl Ether	(2)	5.421	45	215493	1.046
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	105917	1.034
37) Ethyl t-butyl ether	(2)	5.958	59	173575	1.050
40) 1,2-Dichloroethene (Total)	(2)		96	117911	2.074
38) 2-Butanone	(1)	6.141	43	138888	10.371
39) cis-1,2-Dichloroethene	(2)	6.190	96	62563	1.031
42) Propionitrile	(1)	6.202	54	61876	20.058
41) 2,2-Dichloropropane	(2)	6.214	77	95894	1.040
45) Methacrylonitrile	(1)	6.427	67	115094	10.263
47) Bromochloromethane	(2)	6.531	128	23476	0.984
48) Tetrahydrofuran	(1)	6.537	71	32010	10.544
49) Chloroform	(2)	6.665	83	110326	1.047

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	528736	9.925
50)$Dibromofluoromethane	(2)	6.885	111	540190	9.876
51) 1,1,1-Trichloroethane	(2)	6.921	97	99392	1.046
52) Cyclohexane	(2)	7.037	56	120739	1.039
52) Cyclohexane	(2)	7.043	84	92193	1.032
52) Cyclohexane	(2)	7.043	69	34493	1.042
55) 1,1-Dichloropropene	(2)	7.128	75	86619	1.030
54) Carbon Tetrachloride	(2)	7.141	117	87397	1.053
56) Isobutyl Alcohol	(1)	7.208	41	44406	47.548
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82483	9.887
57)$1,2-Dichloroethane-d4	(2)	7.336	65	447388	9.802
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51264	9.769
58) Benzene	(2)	7.391	78	238855	1.039
59) 1,2-Dichloroethane	(2)	7.452	62	65525	1.019
60) t-Amyl methyl ether	(2)	7.574	73	139368	1.039
63)*Fluorobenzene	(2)	7.787	96	2205975	10.000
62) n-Heptane	(2)	7.817	43	111064	0.993
65) n-Butanol	(1)	8.092	56	70573	102.896
67) Trichloroethene	(2)	8.268	95	63924	1.038
70) 1,2-Dichloropropane	(2)	8.598	63	62101	1.041
69) Methylcyclohexane	(2)	8.610	83	108168	1.022
71) Methyl Methacrylate	(1)	8.683	69	23250M	1.044
72) 1,4-Dioxane	(1)	8.689	88	8479M	60.711
73) Dibromomethane	(2)	8.707	93	25814	1.034
74) Bromodichloromethane	(2)	8.939	83	71961	0.999
76) 2-Nitropropane	(1)	9.171	41	72631	9.564
80) cis-1,3-Dichloropropene	(2)	9.482	75	85511	1.023
81) 4-Methyl-2-Pentanone	(1)	9.634	43	337244	10.287
82)$Toluene-d8	(3)	9.799	98	2178723	10.185
82)$Toluene-d8	(3)	9.799	100	1378710	10.182
83) Toluene	(3)	9.878	92	149350	1.069
84) trans-1,3-Dichloropropene	(3)	10.122	75	65427	1.025
85) 1,3-Dichloropropene (total)	(3)		75	150938	2.048
86) Ethyl Methacrylate	(3)	10.183	69	50986	1.069
88) 1,1,2-Trichloroethane	(3)	10.317	97	34725	1.064
89) Tetrachloroethene	(3)	10.433	166	69518	1.060
90) 1,3-Dichloropropane	(3)	10.481	76	61266	1.056
91) 2-Hexanone	(1)	10.524	43	242151	10.242

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

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	44180	1.037
95) 1,2-Dibromoethane	(3)	10.823	107	33405	1.083
97)*Chlorobenzene-d5	(3)	11.250	117	1471876	10.000
98) Chlorobenzene	(3)	11.280	112	158730	1.066
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	55255	1.053
100) Ethylbenzene	(3)	11.359	91	293666	1.045
101) m+p-Xylene	(3)	11.475	106	219327	2.071
105) Xylene (Total)	(3)		106	327787	3.118
104) o-Xylene	(3)	11.804	106	108460	1.047
106) Styrene	(3)	11.823	104	167982	1.038
107) Bromoform	(3)	11.981	173	23791	1.029
108) Isopropylbenzene	(3)	12.103	105	294109	1.058
111)$4-Bromofluorobenzene	(3)	12.249	95	648367	9.979
111)$4-Bromofluorobenzene	(3)	12.249	174	567981	9.940
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	39073	1.039
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	98074	9.696
114) Bromobenzene	(4)	12.371	156	63703	1.074
116) 1,2,3-Trichloropropane	(4)	12.384	110	9556	0.997
117) n-Propylbenzene	(4)	12.432	91	351201	1.084
119) 2-Chlorotoluene	(4)	12.512	126	65427	1.077
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	242261	1.079
122) 4-Chlorotoluene	(4)	12.603	126	65946	1.067
125) tert-Butylbenzene	(4)	12.810	134	52067M	1.091
126) Pentachloroethane	(4)	12.841	167	36631	0.986
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	238797	1.059
128) sec-Butylbenzene	(4)	12.975	105	313277	1.077
131) 1,3-Dichlorobenzene	(4)	13.079	146	122969	1.065
132) p-Isopropyltoluene	(4)	13.085	119	259075	1.068
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	609642	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	129499	1.077
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	96775	1.011
136) Benzyl Chloride	(4)	13.225	126	13215	0.986
138) n-Butylbenzene	(4)	13.377	92	124050	1.020
139) 1,2-Dichlorobenzene	(4)	13.408	146	110110	1.070
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	4968	1.013
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	90262	1.055
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	74772	1.061
146) Hexachlorobutadiene	(4)	14.584	225	34801	1.046

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

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

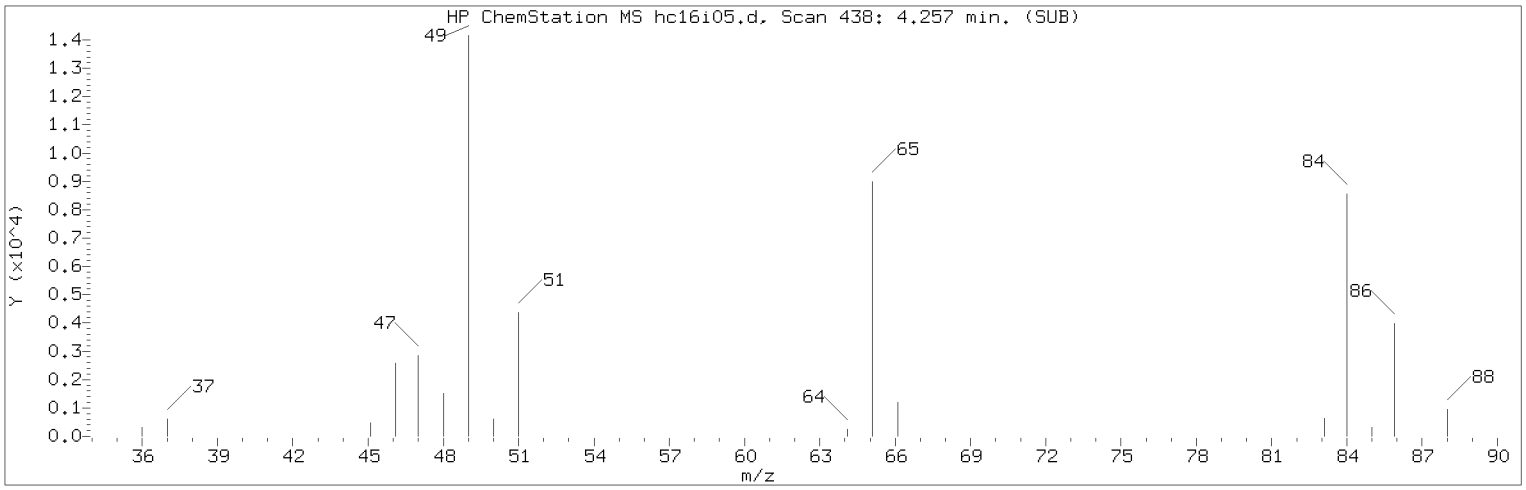
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

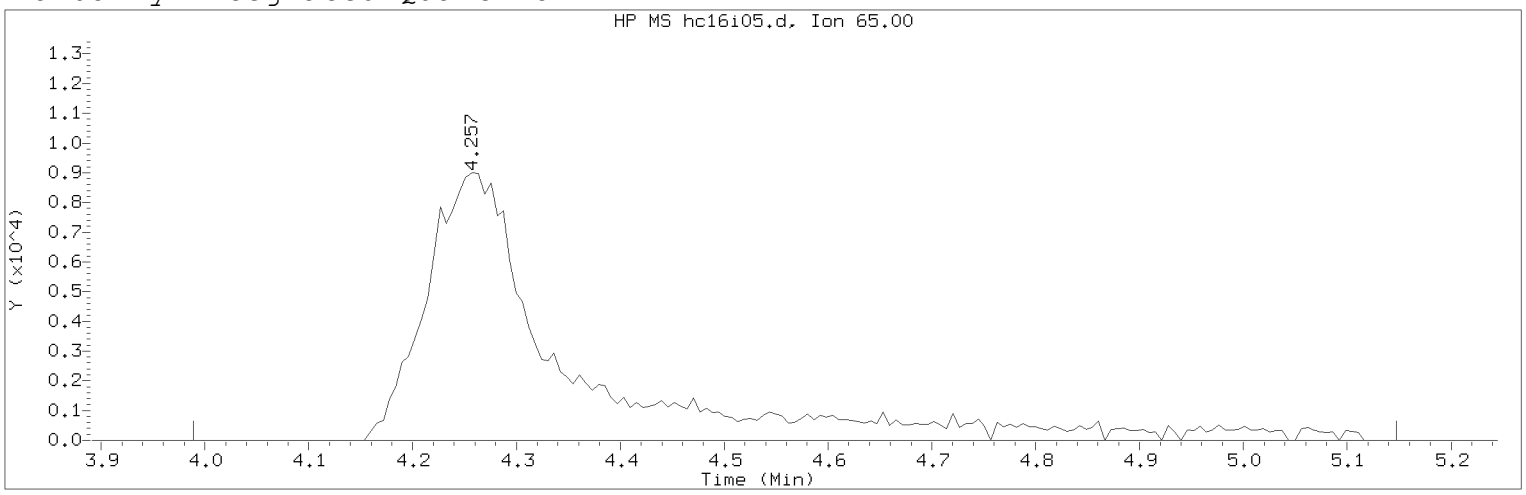
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	126585	1.104
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	63842	1.076

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

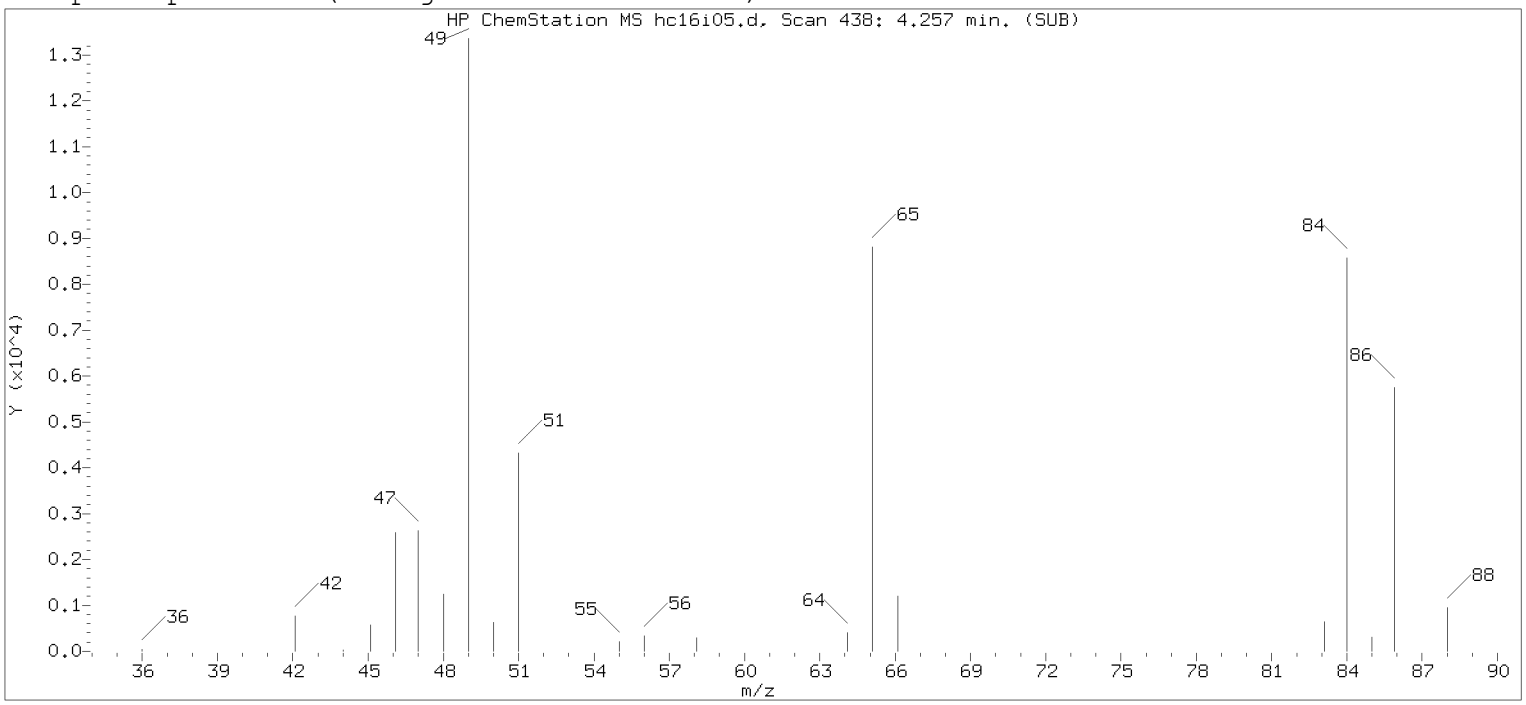
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 438
Retention Time (minutes): 4.257
Quant Ion : 65.00
Area (flag) : 86008M
On-Column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 583
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

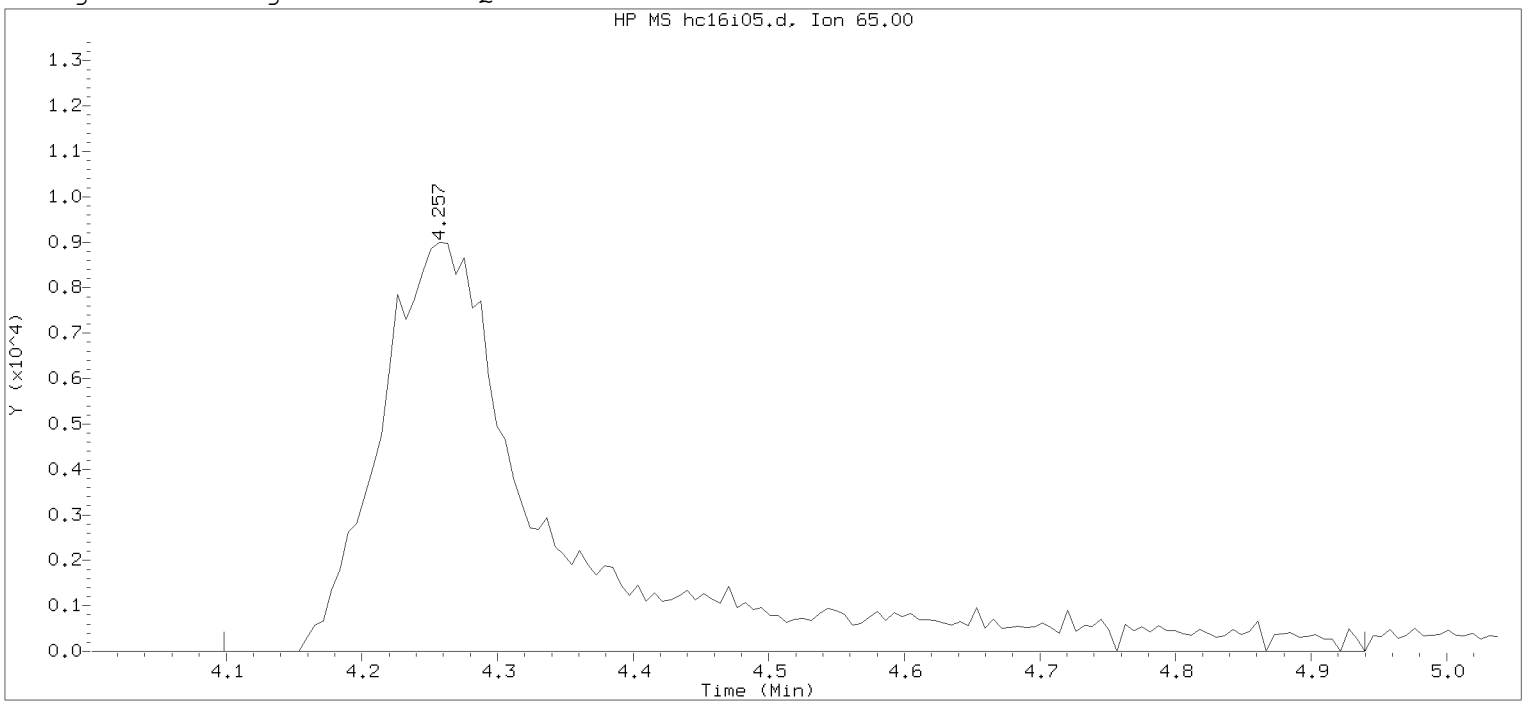
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

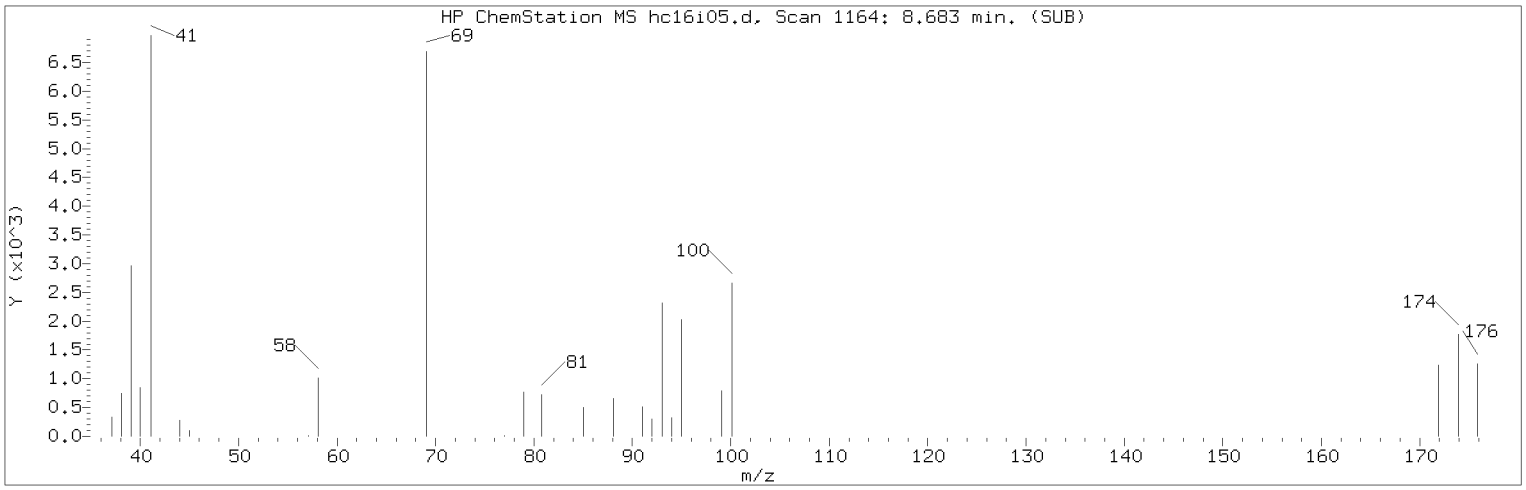
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

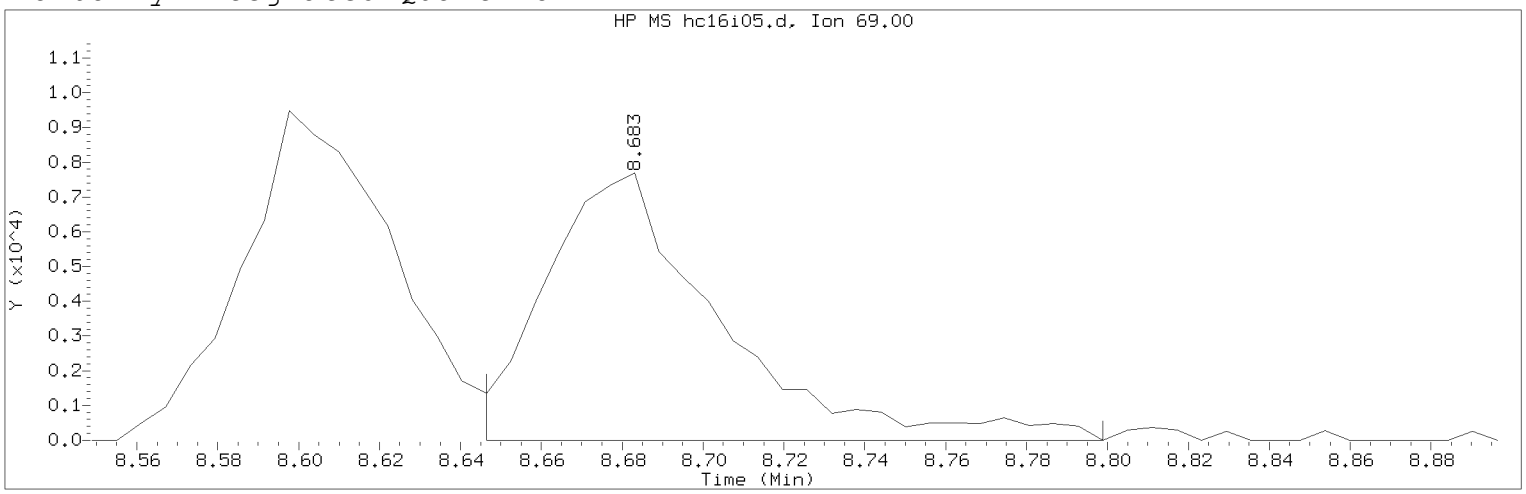
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 438
Retention Time (minutes): 4.257
Quant Ion : 65.00
Area : 82836
On-column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 549
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

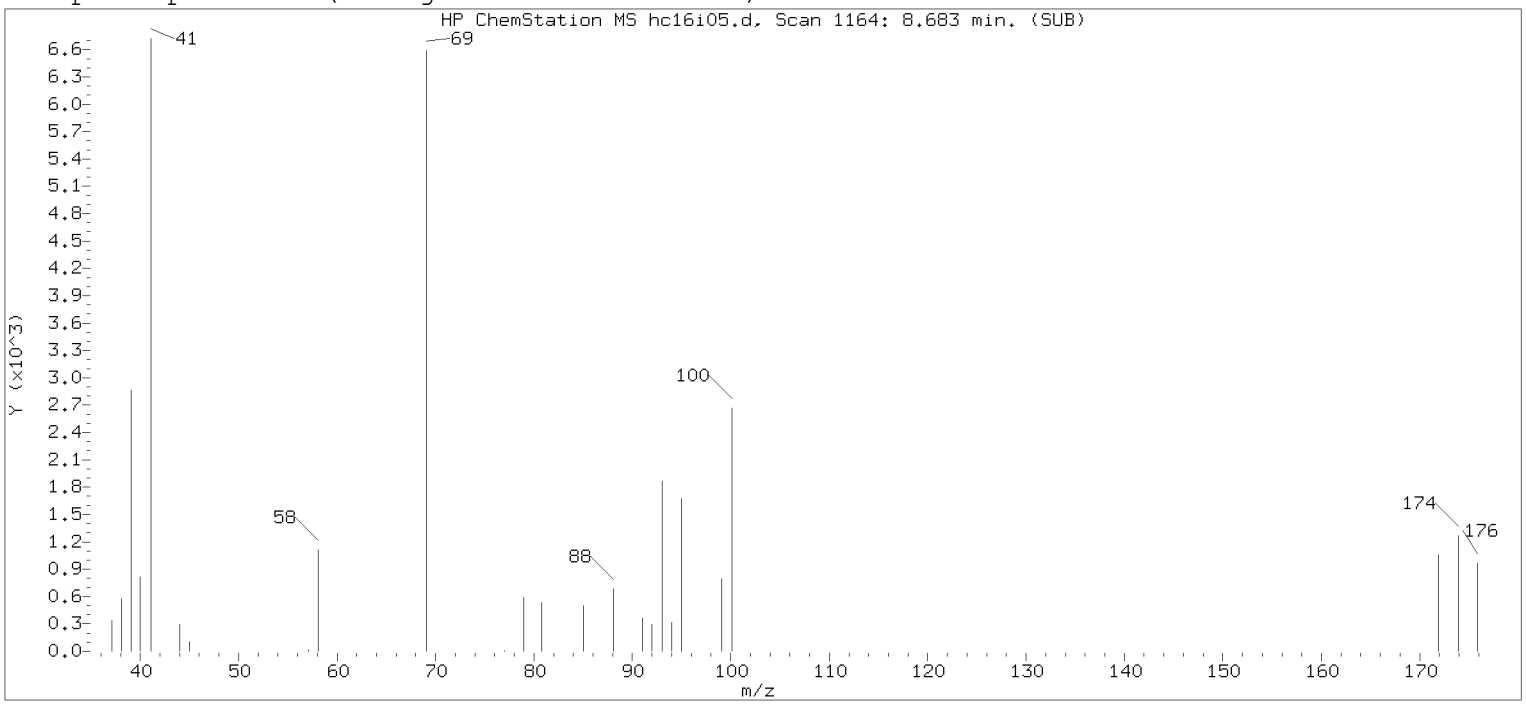
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 23250M
On-Column Amount (ng) : 1.0437
Integration start scan : 1157 Integration stop scan: 1182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

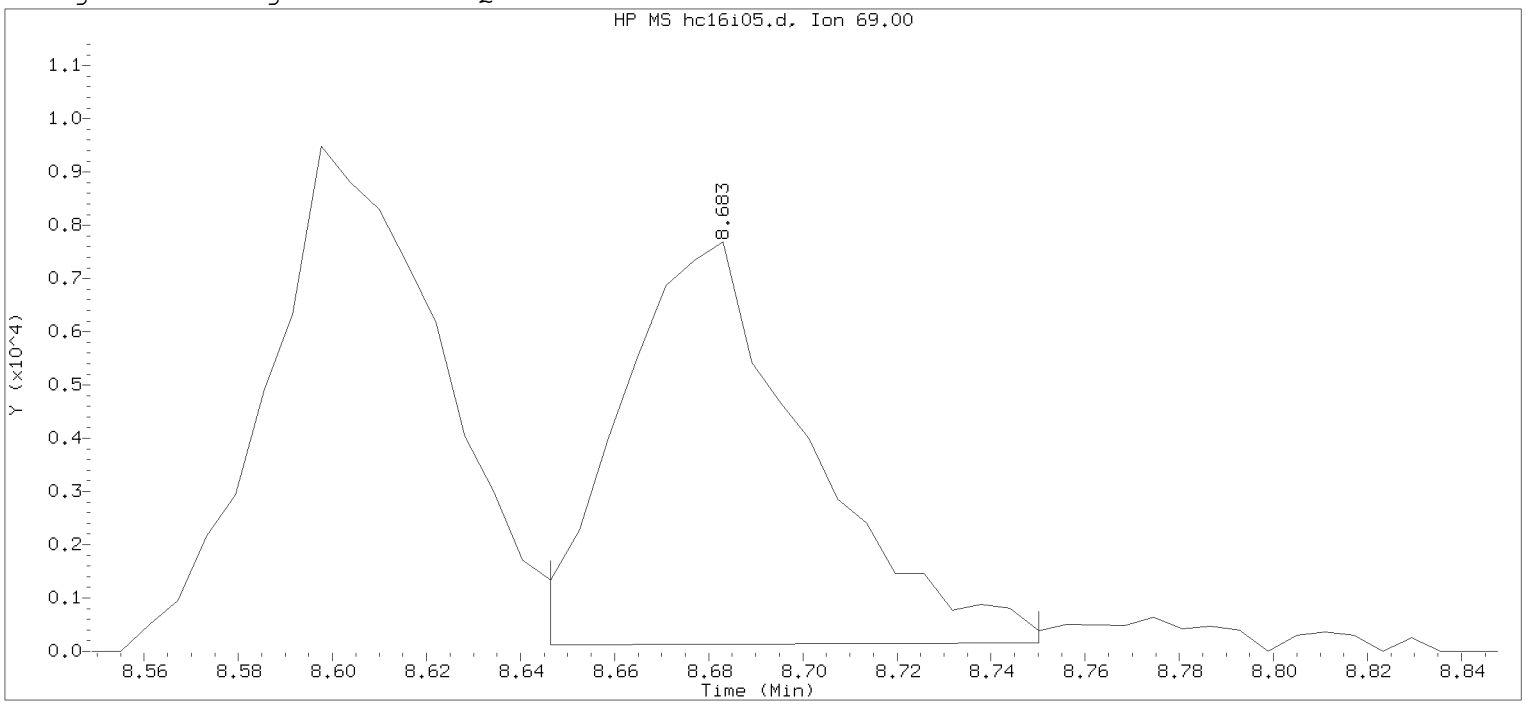
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

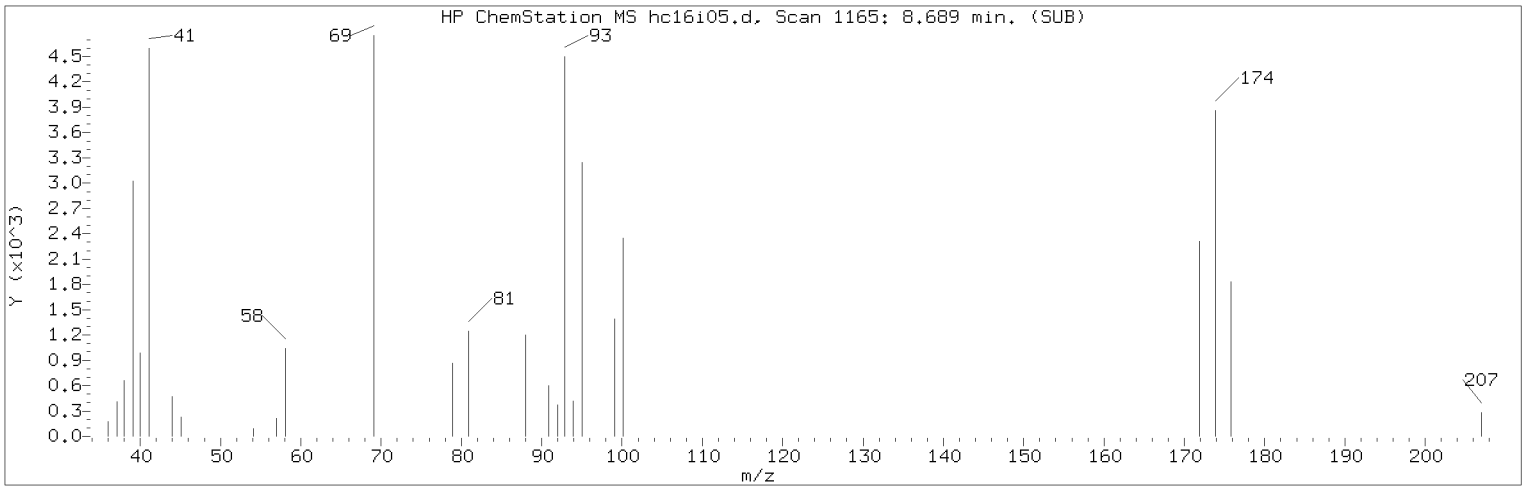
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

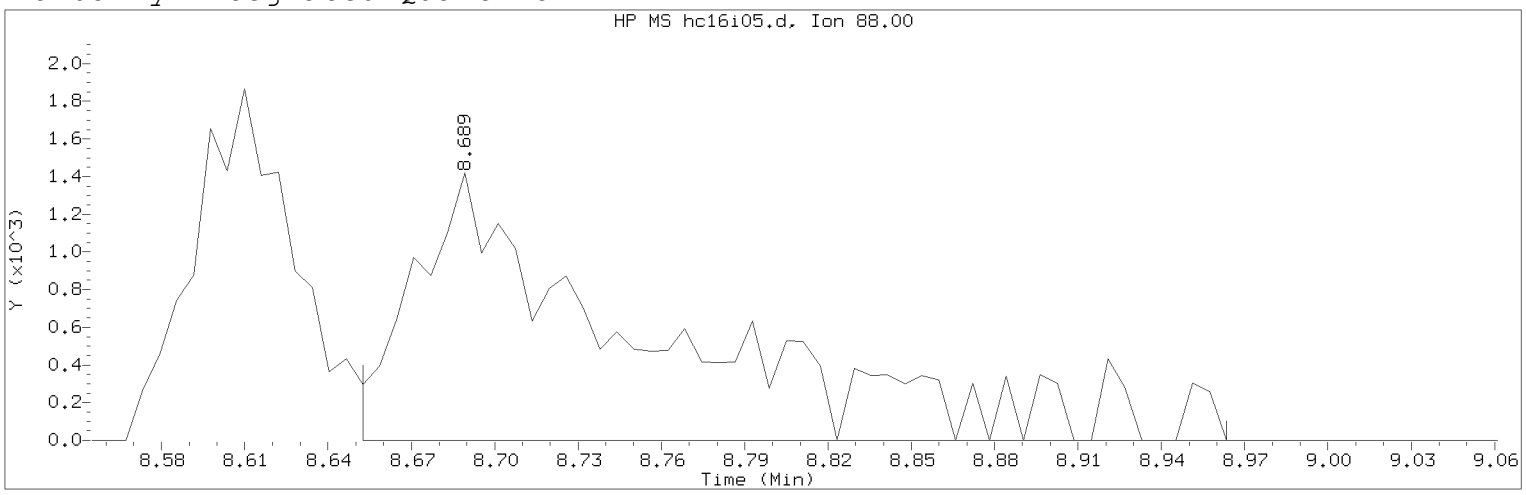
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area : 20849
On-column Amount (ng) : 0.9757
Integration start scan : 1157 Integration stop scan: 1174
Y at integration start : 117 Y at integration end: 152

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

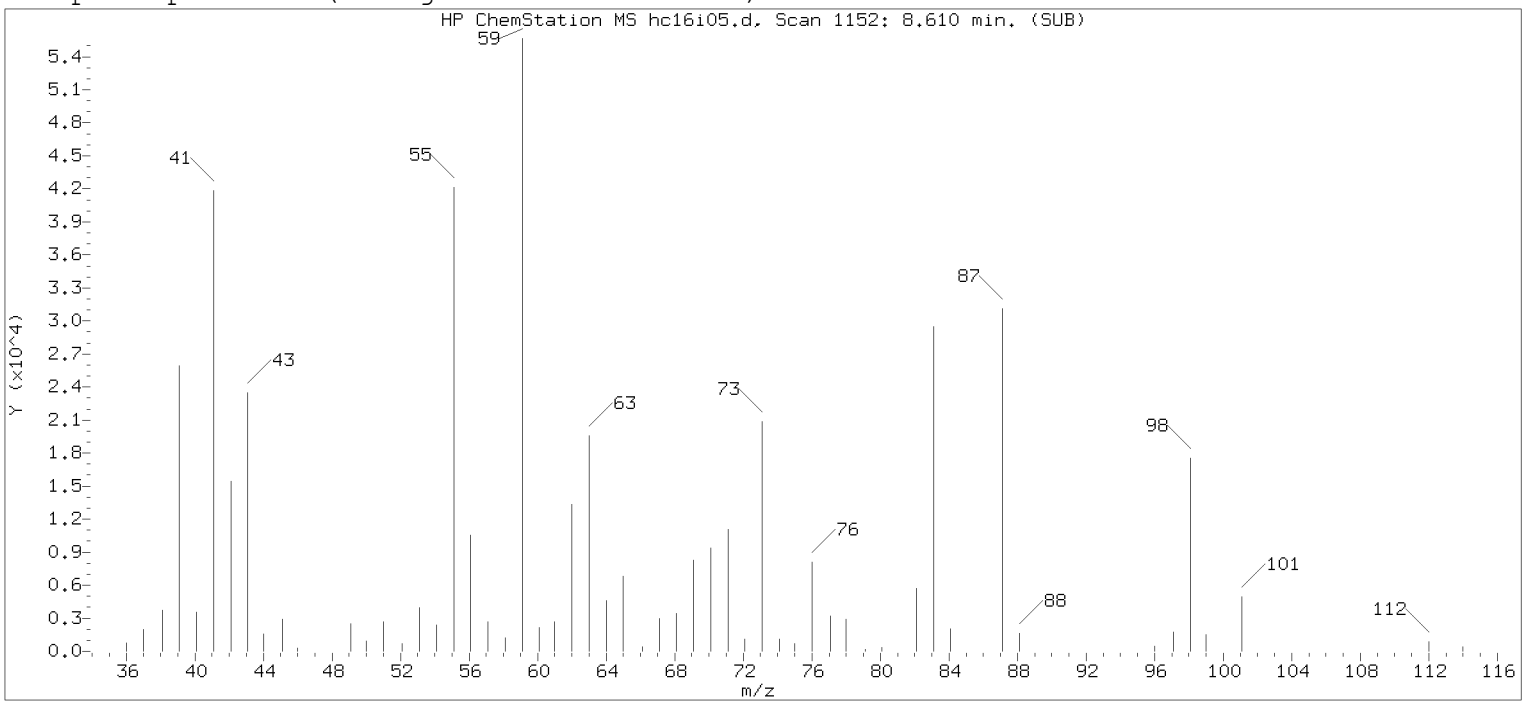
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 88.00
Area (flag) : 8479M
On-Column Amount (ng) : 60.7109
Integration start scan : 1158 Integration stop scan: 1209
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

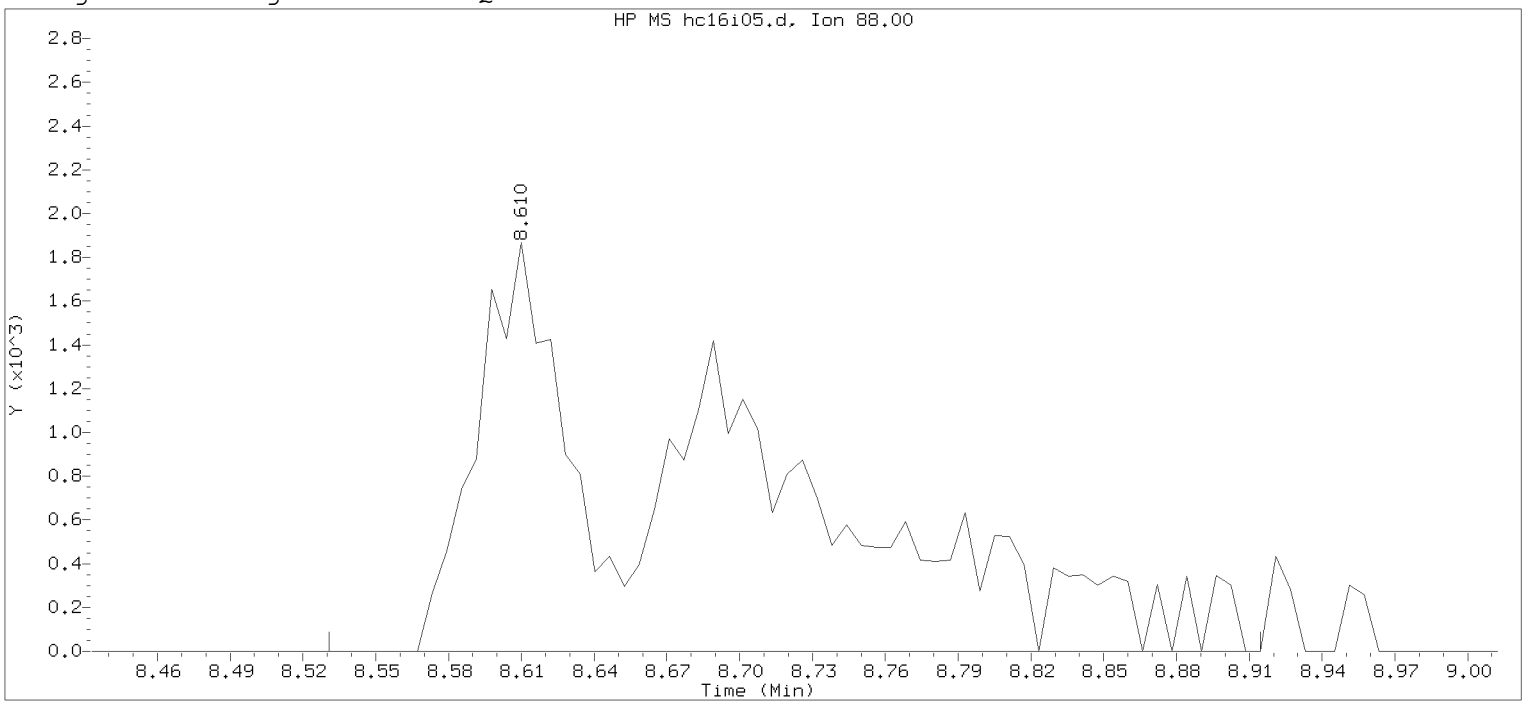
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

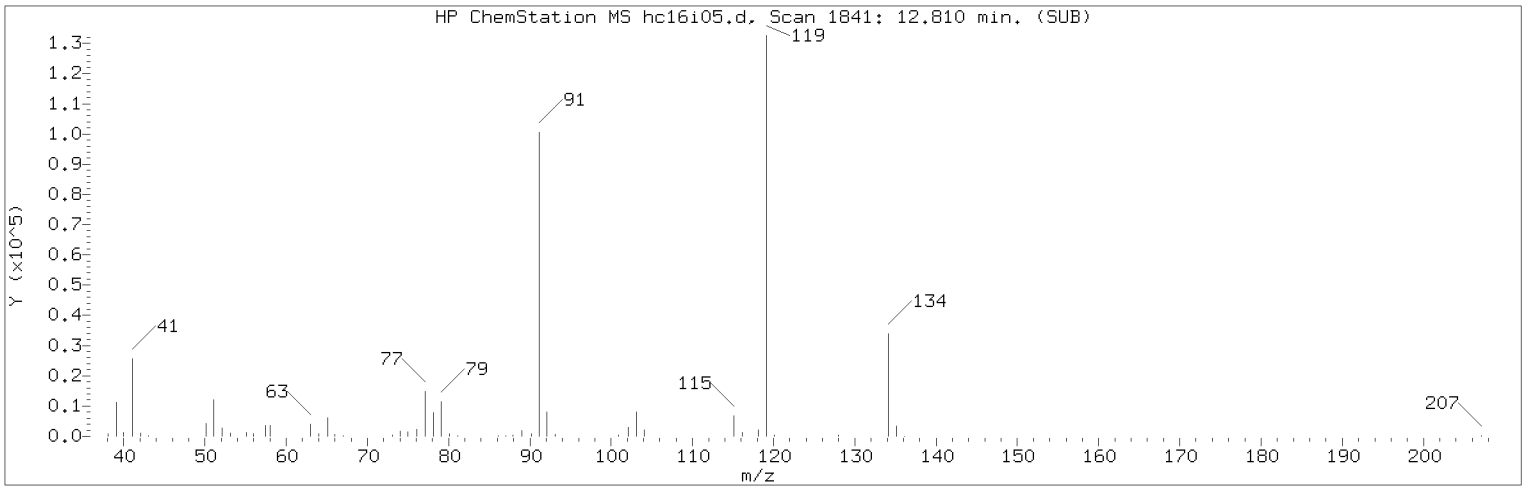
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

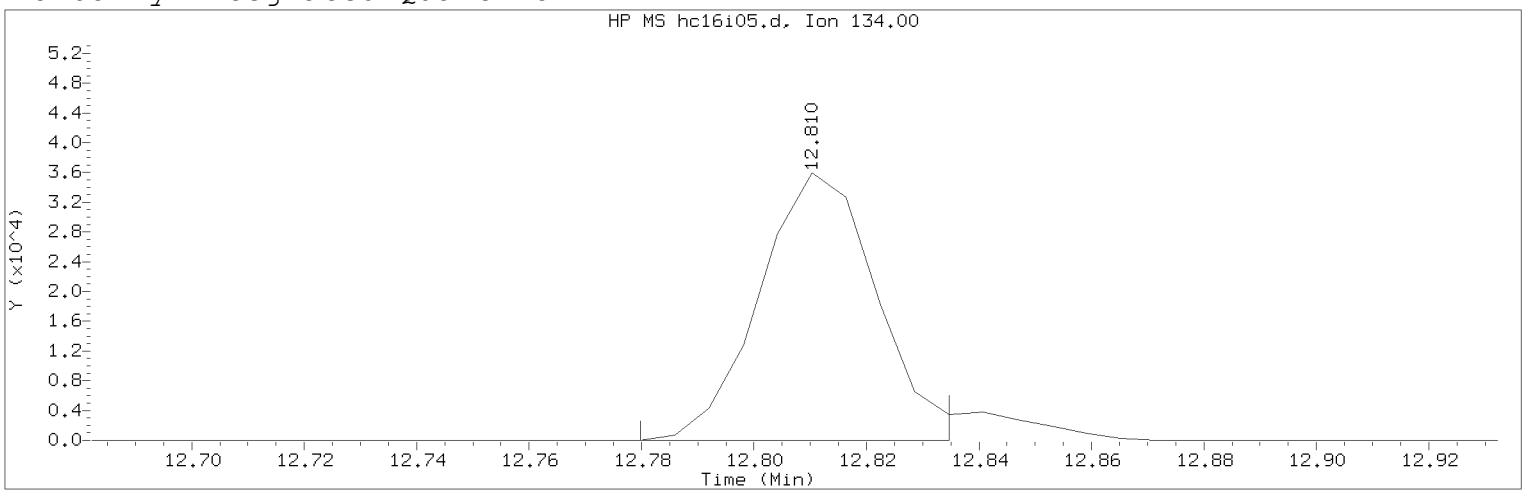
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 12633
On-column Amount (ng) : 66.0739
Integration start scan : 1138 Integration stop scan: 1201
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

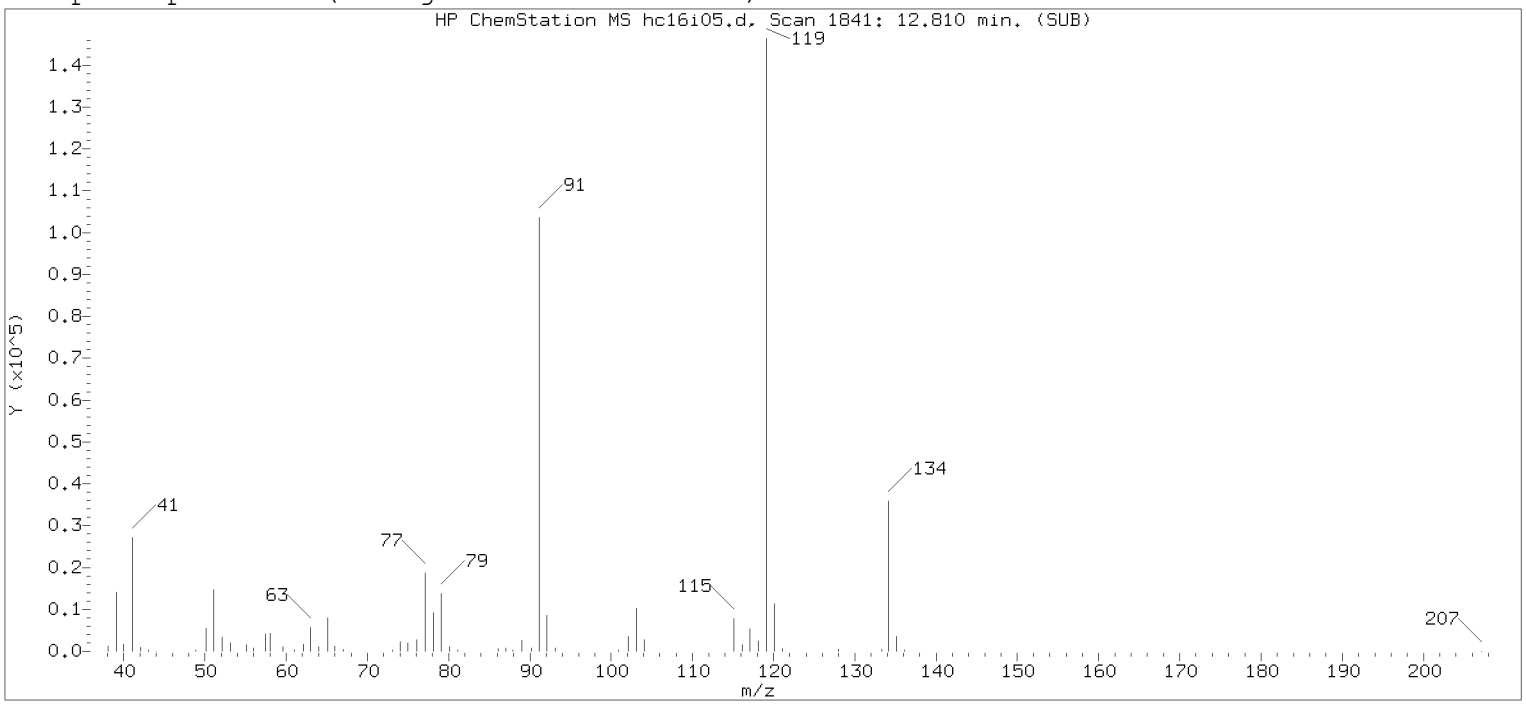
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 52067M
On-Column Amount (ng) : 1.0906
Integration start scan : 1835 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

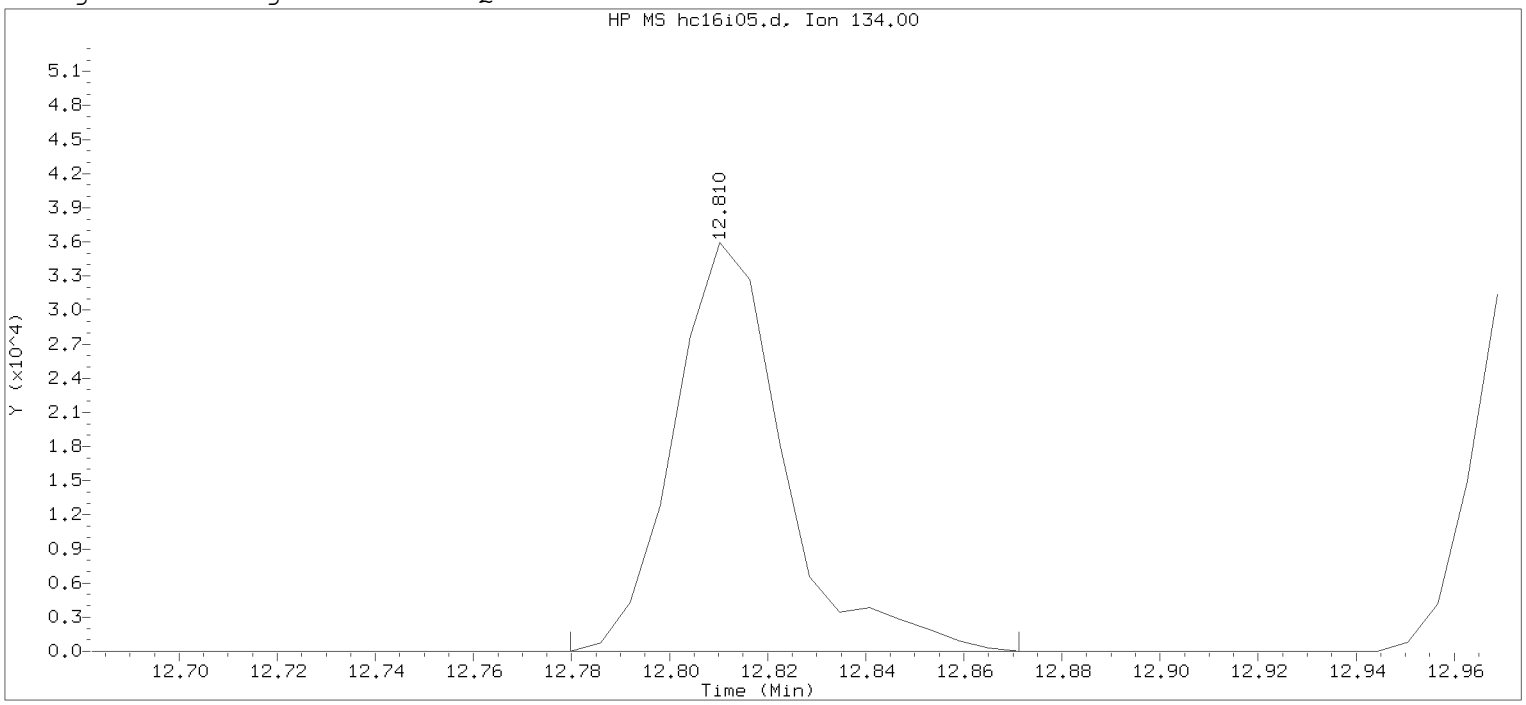
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



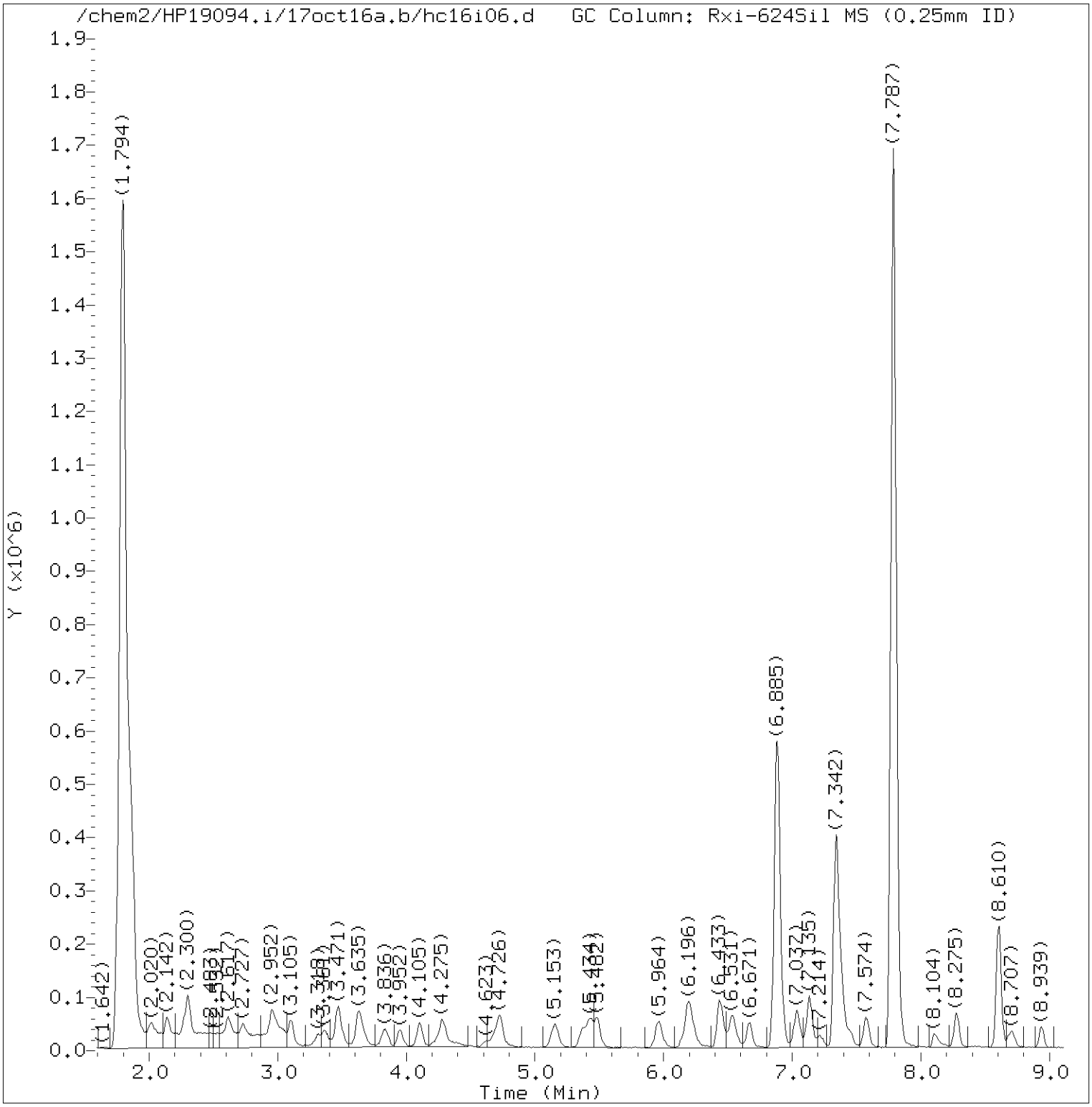
Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 55620
On-column Amount (ng) : 1.1109
Integration start scan : 1835 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

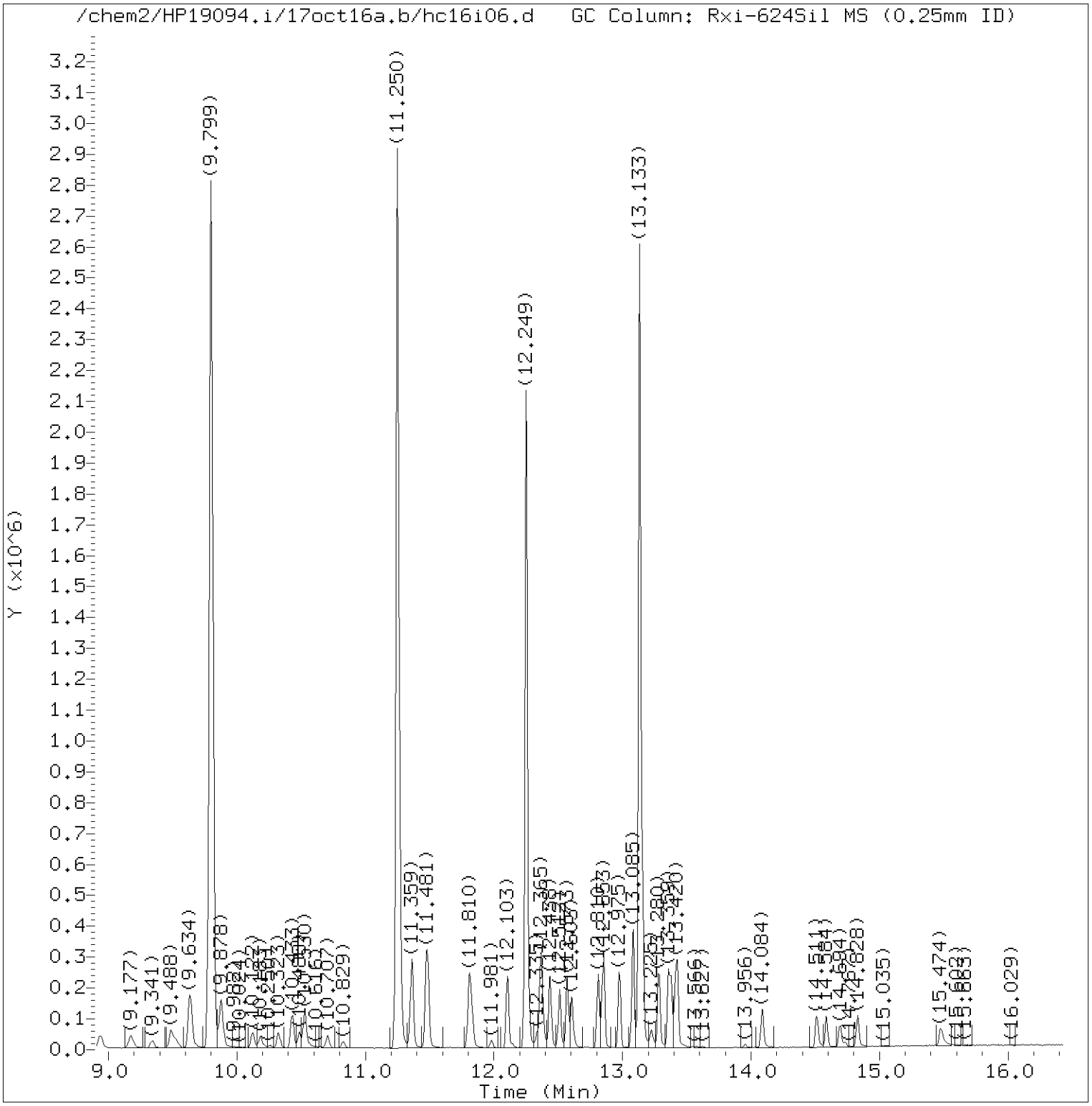
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	45956	0.479
2) Chloromethane	(2)	2.142	50	47008	0.496
5) Vinyl Chloride	(2)	2.276	62	42476	0.487
6) 1,3-Butadiene	(2)	2.306	39	42495	0.516
7) Bromomethane	(2)	2.611	94	29825	0.503
8) Chloroethane	(2)	2.727	64	24456	0.493
9) Dichlorofluoromethane	(2)	2.952	67	72429	0.499
10) Trichlorofluoromethane	(2)	3.044	101	54616	0.471
11) Ethyl ether	(2)	3.306	59	18816	0.508
12) Freon 123a	(2)	3.361	67	36253	0.499
13) Acrolein	(1)	3.471	56	133622	25.837
15) 1,1-Dichloroethene	(2)	3.623	96	22912	0.493
14) Acetone	(1)	3.641	43	38067	5.740
16) Freon 113	(2)	3.647	101	24363	0.471
17) Methyl Iodide	(2)	3.824	142	46006	0.497
18) Carbon Disulfide	(2)	3.952	76	74265	0.500
21) Methyl Acetate	(1)	4.086	43	9929M	0.436
22) Allyl Chloride	(2)	4.105	41	50856	0.483
26)*t-Butyl Alcohol-d10	(1)	4.269	65	83112	50.000
23) Methylene Chloride	(2)	4.288	84	27906	0.527
28) t-Butyl Alcohol	(1)	4.397	59	25257	11.256
29) Acrylonitrile	(1)	4.629	53	21568	2.657
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	58232	0.508
31) trans-1,2-Dichloroethene	(2)	4.726	96	26327	0.501
32) n-Hexane	(2)	5.153	57	45003	0.485
33) 1,1-Dichloroethane	(2)	5.361	63	52659	0.488
34) di-Isopropyl Ether	(2)	5.434	45	101947	0.500
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	50390	0.497
37) Ethyl t-butyl ether	(2)	5.964	59	81617	0.499
40) 1,2-Dichloroethene (Total)	(2)		96	56623	1.006
38) 2-Butanone	(1)	6.147	43	69204	5.318
39) cis-1,2-Dichloroethene	(2)	6.190	96	30296	0.505
41) 2,2-Dichloropropane	(2)	6.208	77	45307	0.497
42) Propionitrile	(1)	6.220	54	30137	10.054
45) Methacrylonitrile	(1)	6.433	67	56101	5.148
47) Bromochloromethane	(2)	6.525	128	11540	0.489
48) Tetrahydrofuran	(1)	6.549	71	15466	5.242
49) Chloroform	(2)	6.665	83	53201	0.510

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

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	514192	9.754
50)$Dibromofluoromethane	(2)	6.879	111	530178	9.795
51) 1,1,1-Trichloroethane	(2)	6.915	97	47283	0.503
52) Cyclohexane	(2)	7.031	56	58479	0.509
52) Cyclohexane	(2)	7.043	84	42055	0.476
52) Cyclohexane	(2)	7.031	69	16442	0.502
55) 1,1-Dichloropropene	(2)	7.128	75	41009	0.493
54) Carbon Tetrachloride	(2)	7.141	117	38860	0.473
56) Isobutyl Alcohol	(1)	7.214	41	28929	31.890
57)$1,2-Dichloroethane-d4	(2)	7.348	102	82033	9.937
57)$1,2-Dichloroethane-d4	(2)	7.342	65	441814	9.781
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51737	9.963
58) Benzene	(2)	7.385	78	114827	0.505
59) 1,2-Dichloroethane	(2)	7.445	62	31671	0.498
60) t-Amyl methyl ether	(2)	7.586	73	65779	0.496
63)*Fluorobenzene	(2)	7.787	96	2183030	10.000
62) n-Heptane	(2)	7.823	43	54273	0.490
65) n-Butanol	(1)	8.104	56	30974	46.473
67) Trichloroethene	(2)	8.281	95	30386	0.499
70) 1,2-Dichloropropane	(2)	8.598	63	28335	0.480
69) Methylcyclohexane	(2)	8.604	83	48436	0.462
72) 1,4-Dioxane	(1)	8.677	88	2265M	16.672
71) Methyl Methacrylate	(1)	8.683	69	10253	0.409
73) Dibromomethane	(2)	8.714	93	12645	0.512
74) Bromodichloromethane	(2)	8.933	83	35496	0.498
76) 2-Nitropropane	(1)	9.177	41	37376	5.067
80) cis-1,3-Dichloropropene	(2)	9.488	75	40246	0.486
81) 4-Methyl-2-Pentanone	(1)	9.634	43	162348	4.925
82)$Toluene-d8	(3)	9.799	98	2153620	10.155
82)$Toluene-d8	(3)	9.799	100	1365748	10.173
83) Toluene	(3)	9.878	92	72334	0.522
84) trans-1,3-Dichloropropene	(3)	10.122	75	31408	0.496
85) 1,3-Dichloropropene (total)	(3)		75	71654	0.983
86) Ethyl Methacrylate	(3)	10.183	69	24163	0.511
88) 1,1,2-Trichloroethane	(3)	10.323	97	16260	0.503
89) Tetrachloroethene	(3)	10.433	166	32577	0.501
90) 1,3-Dichloropropane	(3)	10.488	76	28654	0.498
91) 2-Hexanone	(1)	10.530	43	119949	5.221

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	21534	0.510
95) 1,2-Dibromoethane	(3)	10.829	107	14775	0.483
97)*Chlorobenzene-d5	(3)	11.250	117	1459268	10.000
98) Chlorobenzene	(3)	11.280	112	75074	0.508
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	25674	0.494
100) Ethylbenzene	(3)	11.365	91	140408	0.504
101) m+p-Xylene	(3)	11.481	106	107191	1.021
105) Xylene (Total)	(3)		106	157621	1.512
104) o-Xylene	(3)	11.804	106	50430	0.491
106) Styrene	(3)	11.823	104	78714	0.491
107) Bromoform	(3)	11.981	173	11096	0.484
108) Isopropylbenzene	(3)	12.103	105	138738	0.503
111)$4-Bromofluorobenzene	(3)	12.249	95	630118	9.782
111)$4-Bromofluorobenzene	(3)	12.249	174	554373	9.786
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	20219	0.547
115) trans-1,4-Dichloro-2-butene	(1)	12.365	53	47128	4.796
114) Bromobenzene	(4)	12.371	156	30495	0.523
116) 1,2,3-Trichloropropane	(4)	12.390	110	5152	0.546
117) n-Propylbenzene	(4)	12.438	91	166612	0.522
119) 2-Chlorotoluene	(4)	12.512	126	31729	0.531
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	113047	0.512
122) 4-Chlorotoluene	(4)	12.609	126	32427	0.533
125) tert-Butylbenzene	(4)	12.810	134	23723M	0.505
126) Pentachloroethane	(4)	12.847	167	18349	0.502
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	112705	0.508
128) sec-Butylbenzene	(4)	12.975	105	148189	0.518
131) 1,3-Dichlorobenzene	(4)	13.079	146	59422	0.523
132) p-Isopropyltoluene	(4)	13.085	119	120387	0.504
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	599945	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	63010	0.533
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	49155	0.522
136) Benzyl Chloride	(4)	13.225	126	6357	0.482
138) n-Butylbenzene	(4)	13.377	92	56680	0.474
139) 1,2-Dichlorobenzene	(4)	13.408	146	52951	0.523
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	2183	0.458
144) 1,3,5-Trichlorobenzene	(4)	14.091	180	42913	0.510
145) 1,2,4-Trichlorobenzene	(4)	14.511	180	35115	0.506
146) Hexachlorobutadiene	(4)	14.590	225	15857	0.485

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

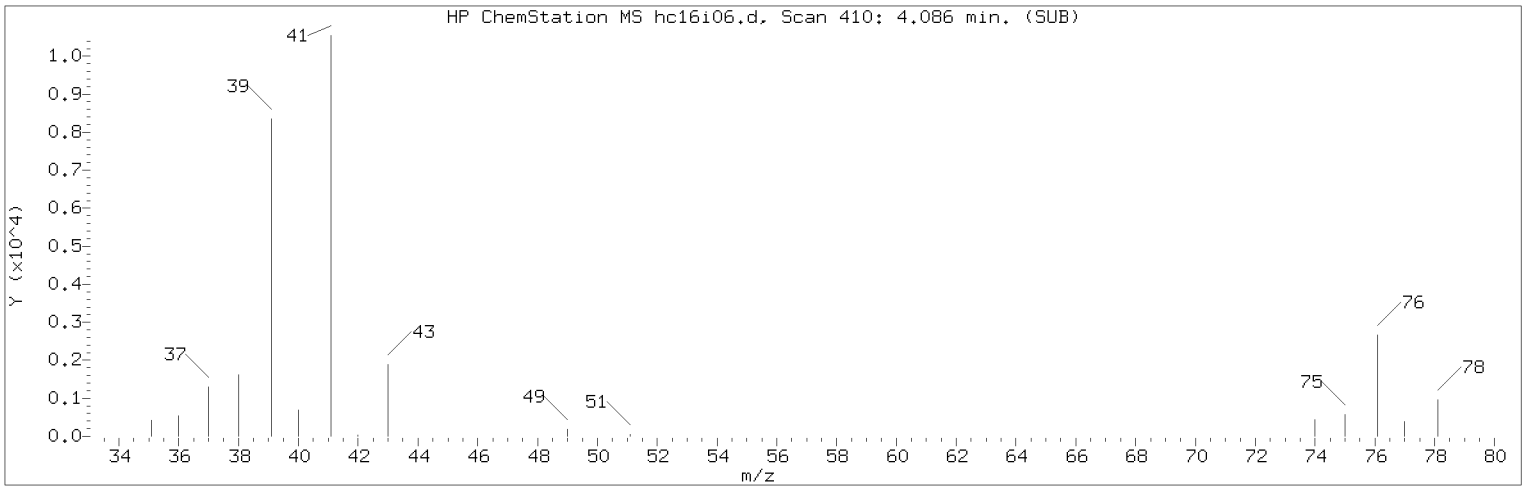
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

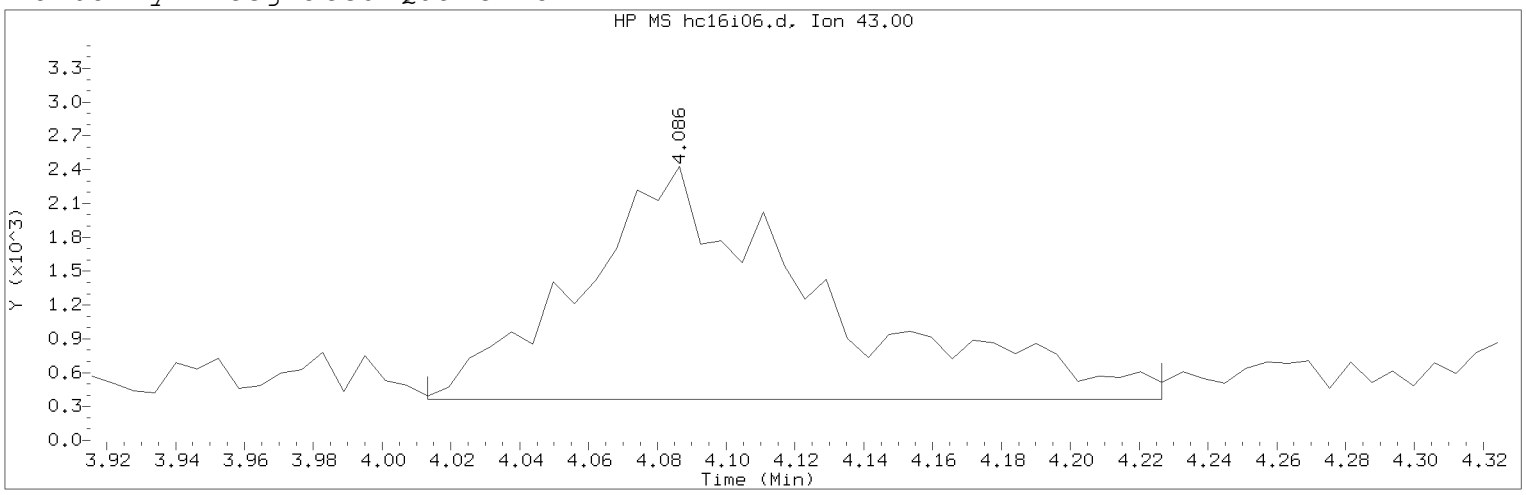
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.694	128	61798	0.548
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	30581	0.524

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

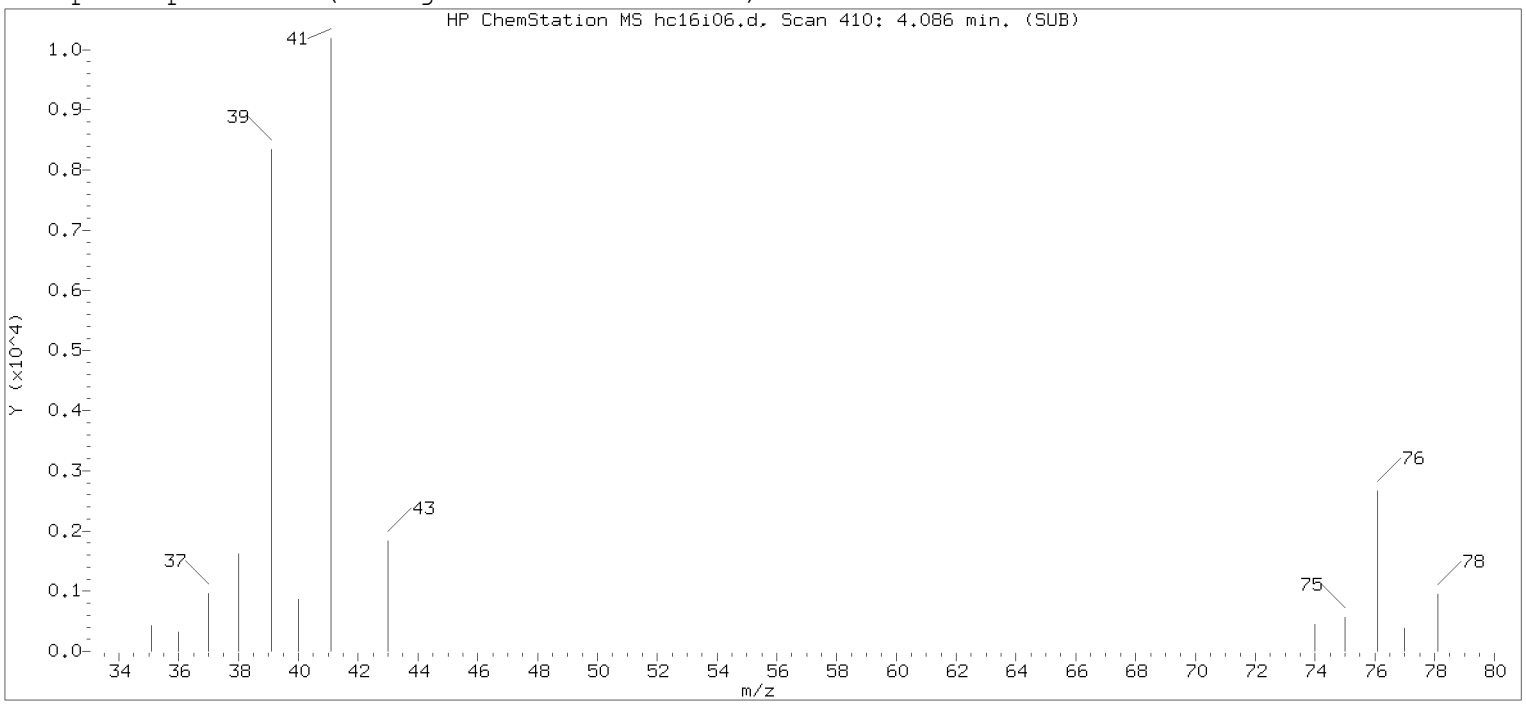
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 410
Retention Time (minutes): 4.086
Quant Ion : 43.00
Area (flag) : 9929M
On-Column Amount (ng) : 0.4355
Integration start scan : 397 Integration stop scan: 432
Y at integration start : 362 Y at integration end: 362

Reason for manual integration: improper integration

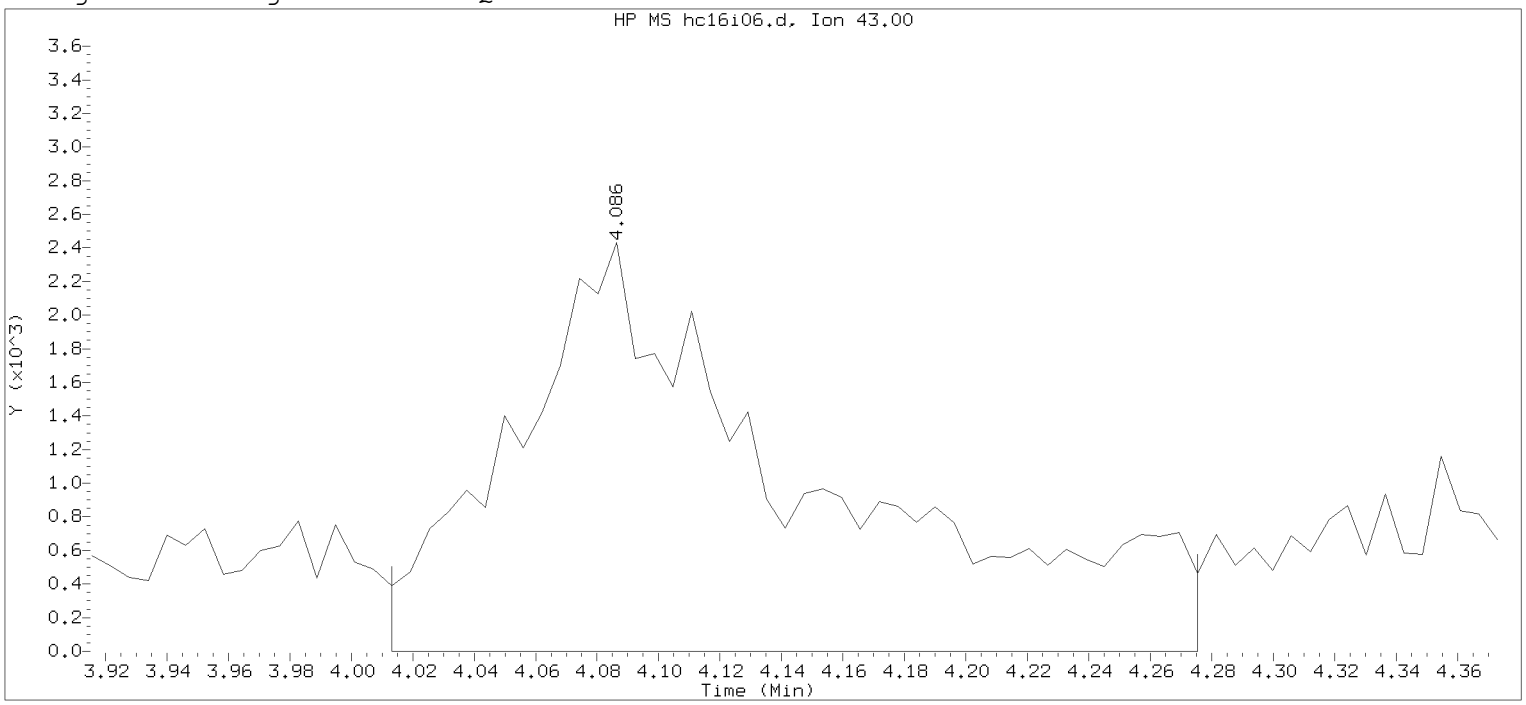
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

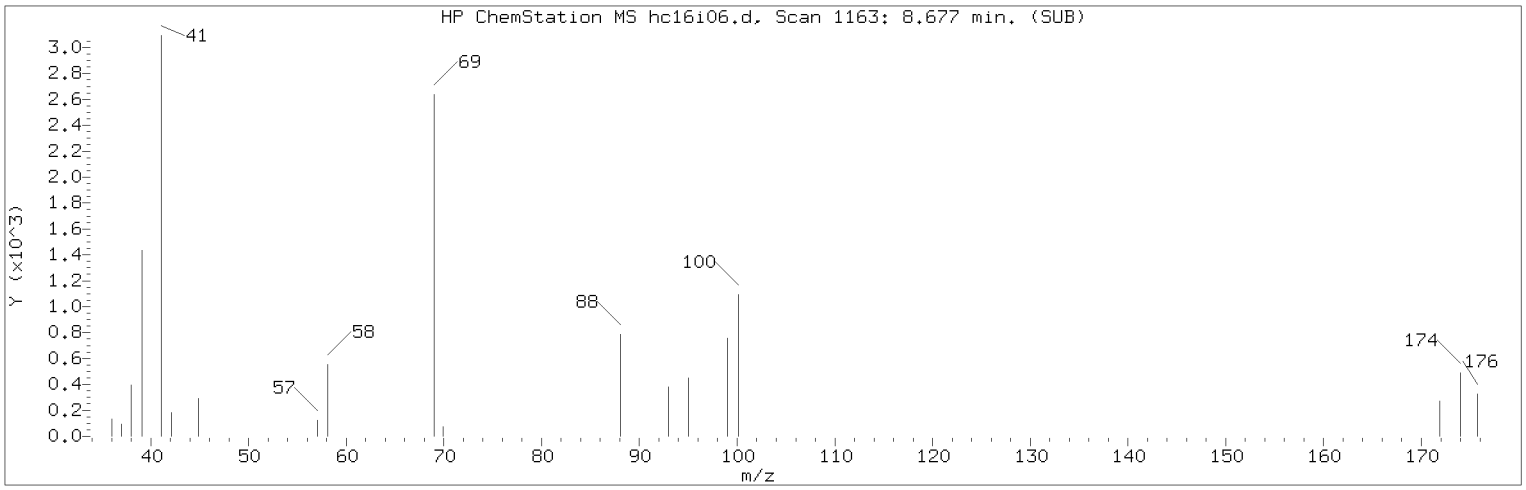
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

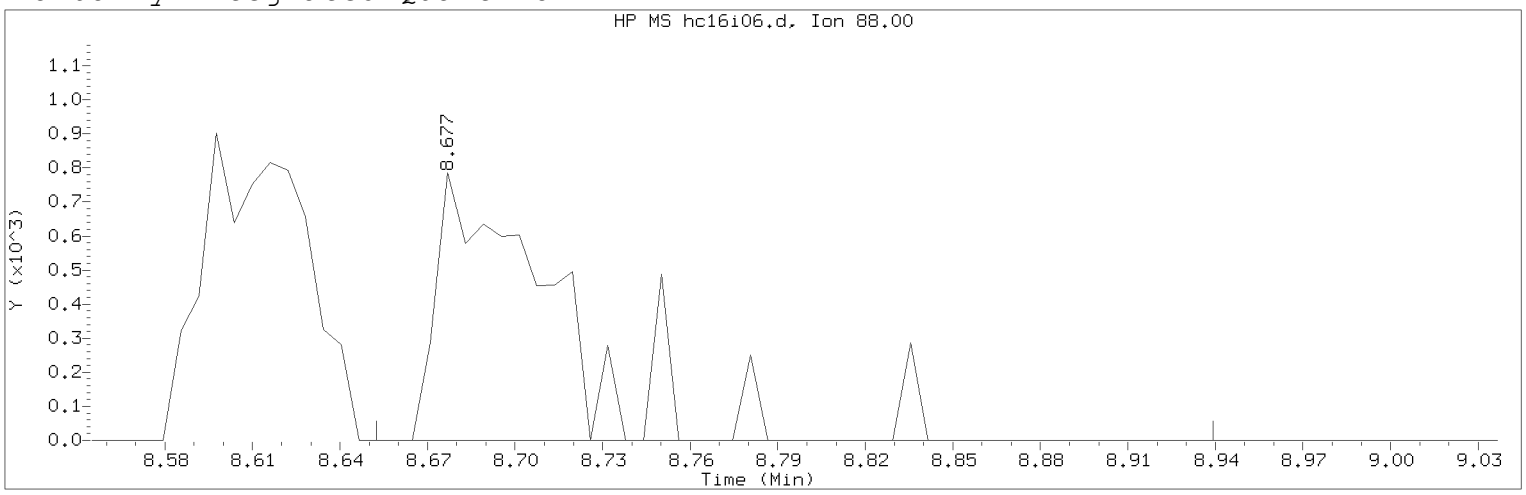
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 410
Retention Time (minutes): 4.086
Quant Ion : 43.00
Area : 16310
On-column Amount (ng) : 0.7397
Integration start scan : 397 Integration stop scan: 440
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

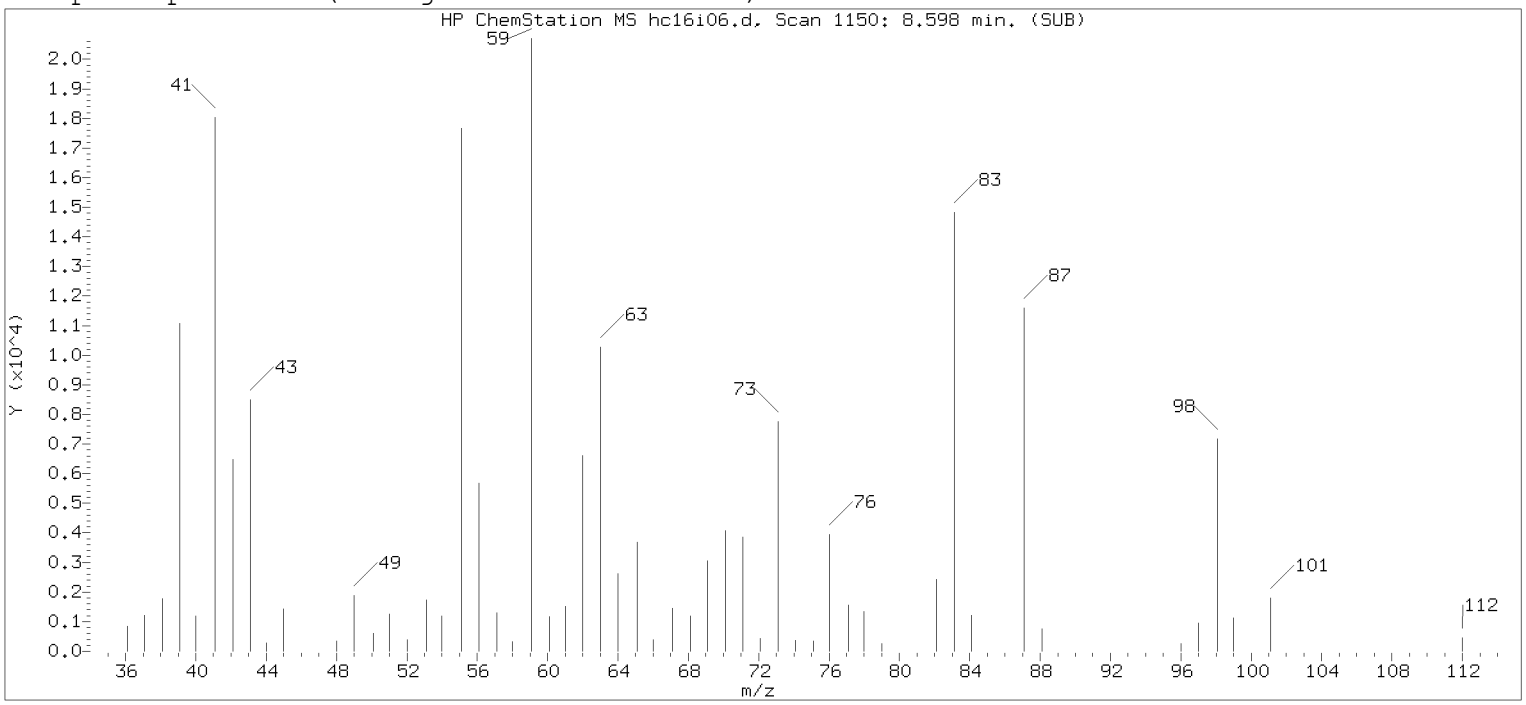
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1163
Retention Time (minutes): 8.677
Quant Ion : 88.00
Area (flag) : 2265M
On-Column Amount (ng) : 16.6722
Integration start scan : 1158 Integration stop scan: 1205
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

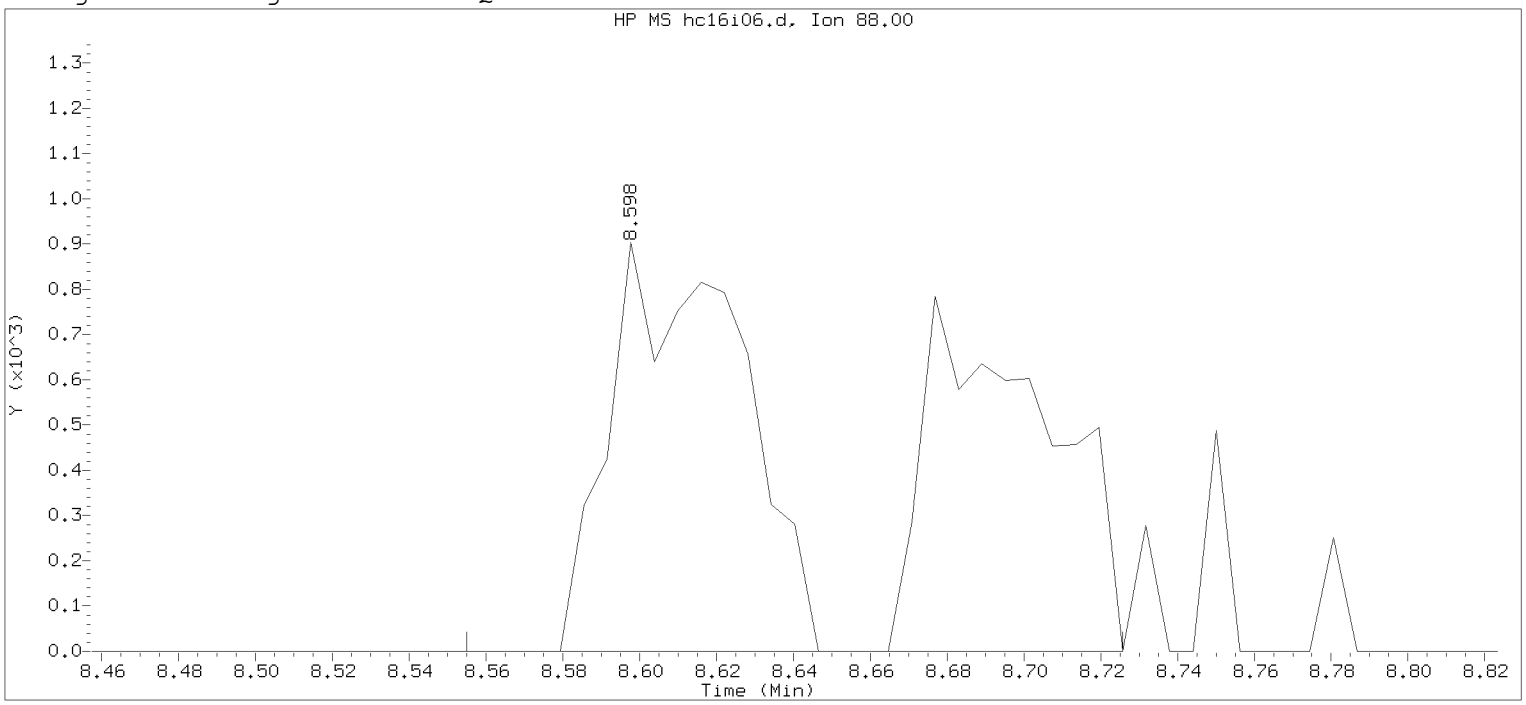
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

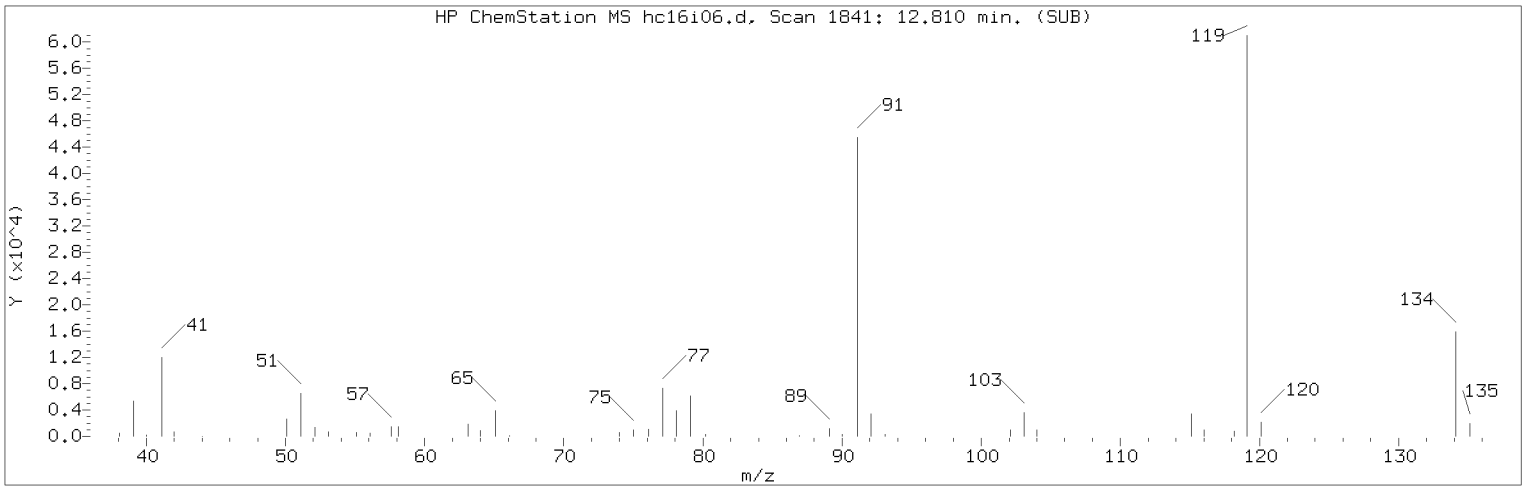
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

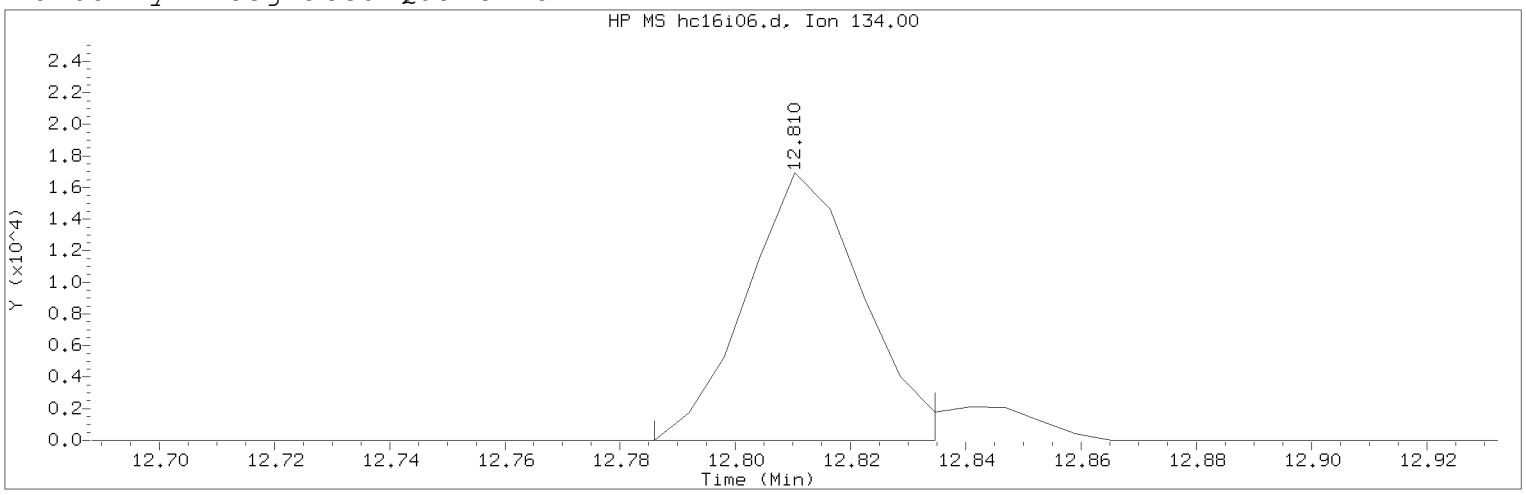
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1150		
Retention Time (minutes)	: 8.598		
Quant Ion	: 88.00		
Area	: 3951		
On-column Amount (ng)	: 21.2213		
Integration start scan	: 1142	Integration stop scan:	1170
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

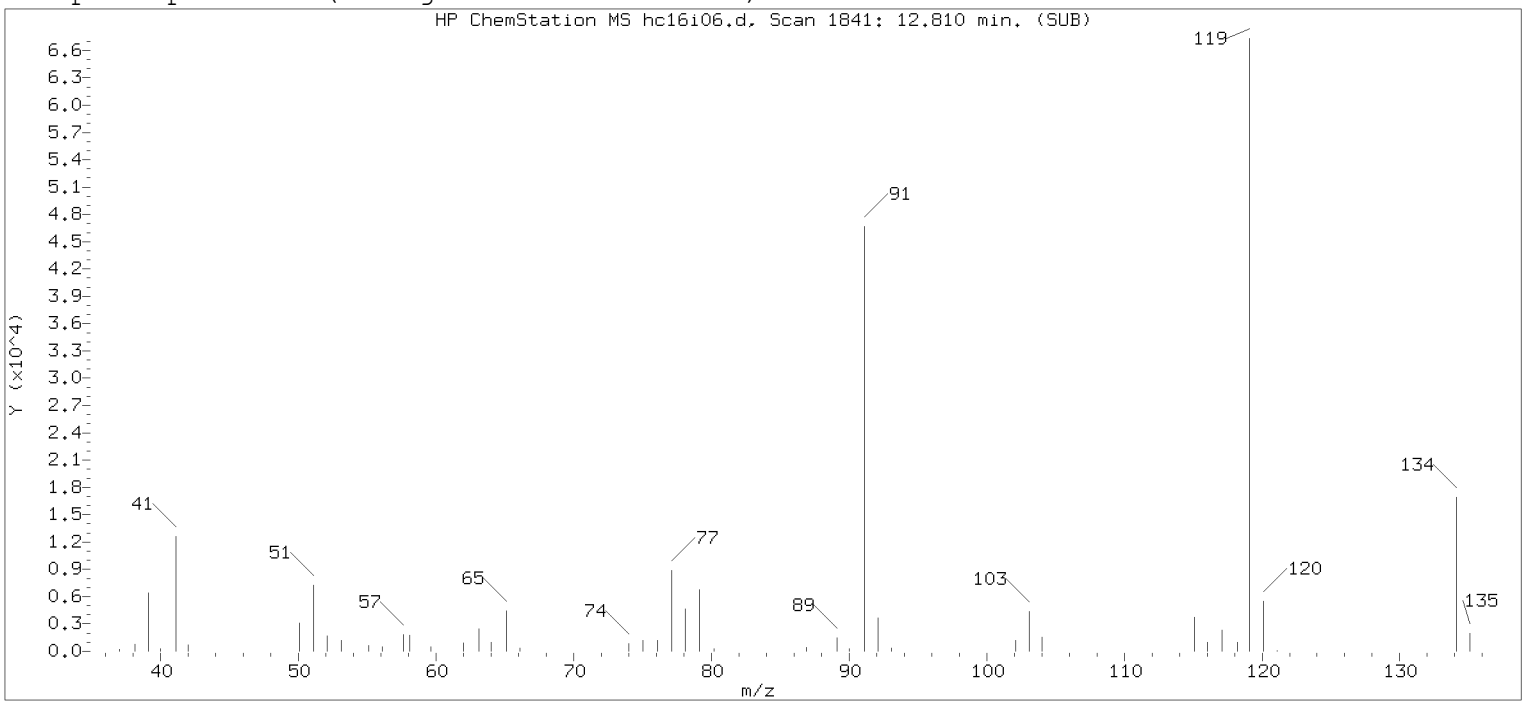
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 23723M
On-Column Amount (ng) : 0.5049
Integration start scan : 1836 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

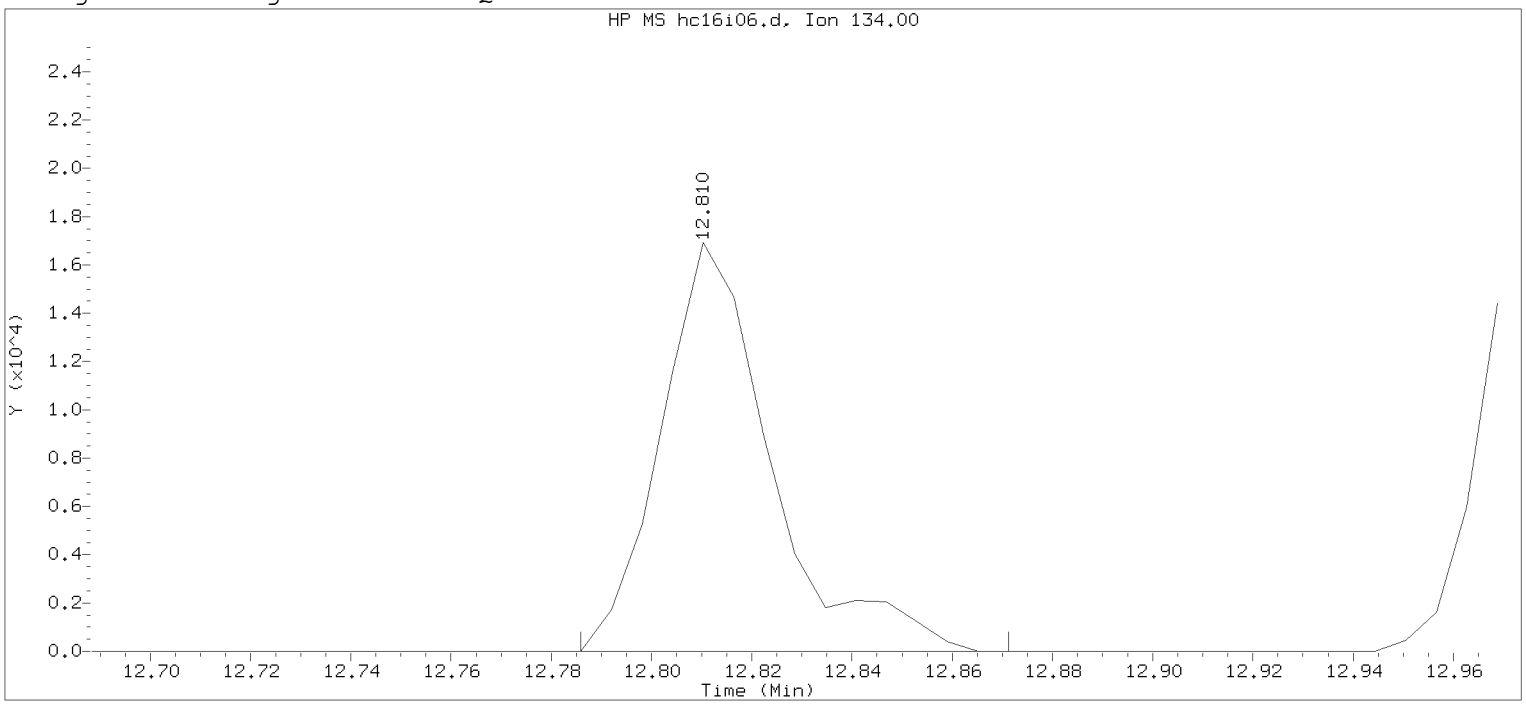
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



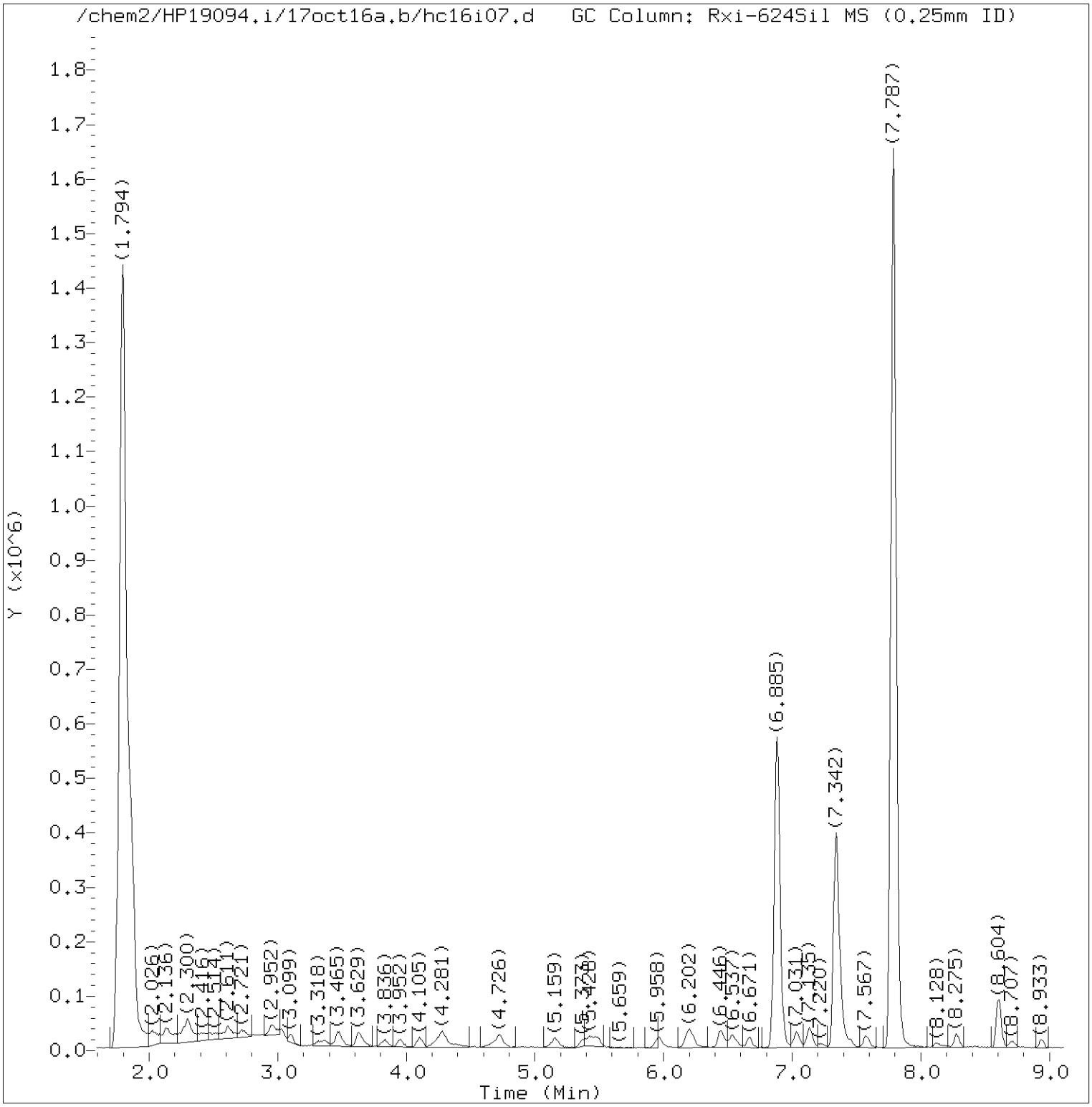
Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 25836
On-column Amount (ng) : 0.5202
Integration start scan : 1836 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

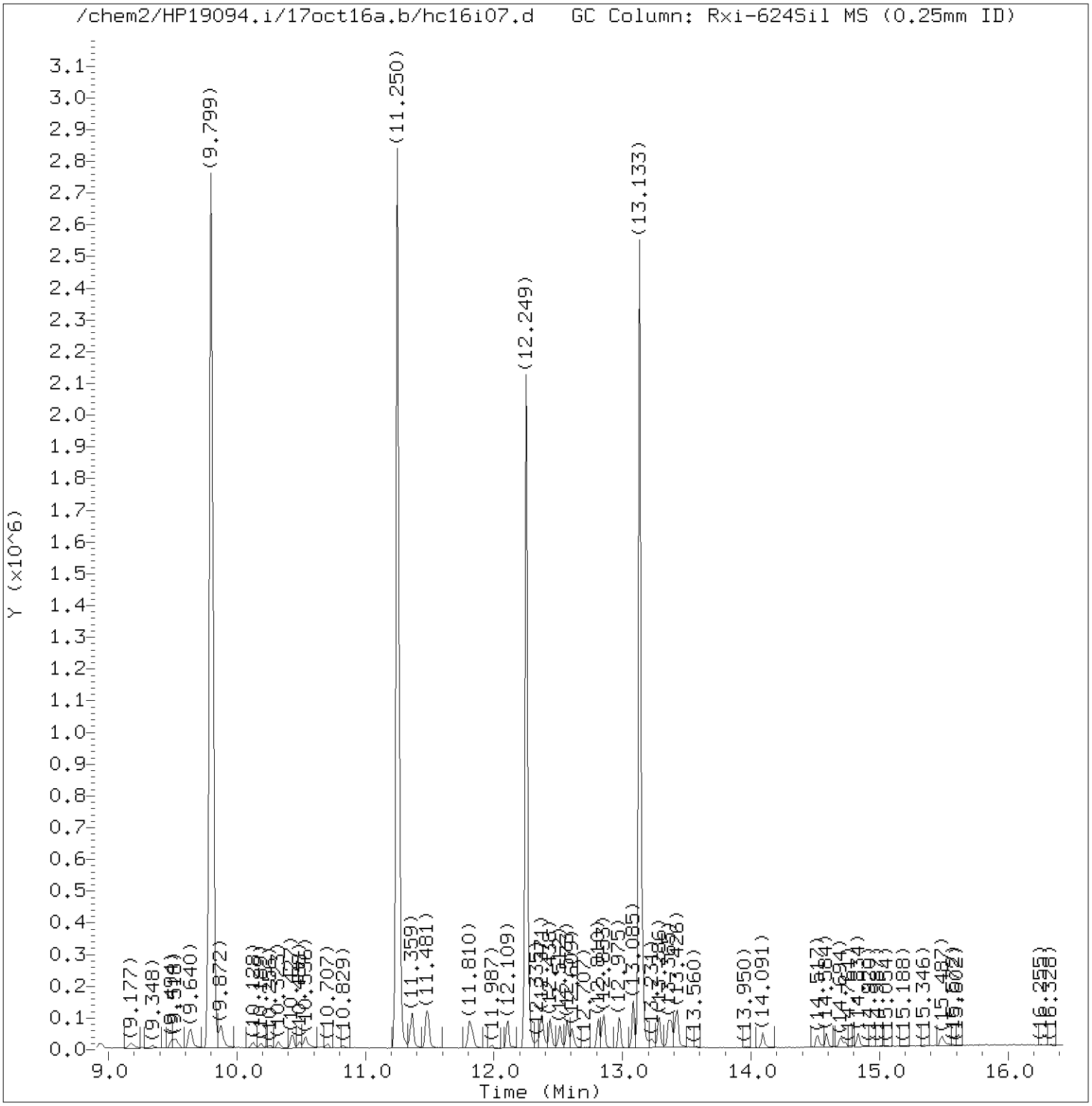
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	17741	0.186
2) Chloromethane	(2)	2.136	50	21560	0.229
5) Vinyl Chloride	(2)	2.276	62	17599	0.203
6) 1,3-Butadiene	(2)	2.300	39	19277	0.236
7) Bromomethane	(2)	2.611	94	13009	0.221
8) Chloroethane	(2)	2.727	64	10580	0.215
9) Dichlorofluoromethane	(2)	2.952	67	34663	0.240
10) Trichlorofluoromethane	(2)	3.038	101	22552	0.196
11) Ethyl ether	(2)	3.318	59	7001	0.190
12) Freon 123a	(2)	3.367	67	15219	0.211
13) Acrolein	(1)	3.477	56	51223	10.330
15) 1,1-Dichloroethene	(2)	3.617	96	9019	0.195
14) Acetone	(1)	3.641	43	13874	2.182
16) Freon 113	(2)	3.647	101	9523	0.185
17) Methyl Iodide	(2)	3.830	142	18690	0.203
18) Carbon Disulfide	(2)	3.952	76	33156	0.225
21) Methyl Acetate	(1)	4.092	43	3839M	0.201
22) Allyl Chloride	(2)	4.099	41	23451	0.224
26)*t-Butyl Alcohol-d10	(1)	4.263	65	79685	50.000
23) Methylene Chloride	(2)	4.294	84	11897	0.226
28) t-Butyl Alcohol	(1)	4.409	59	8848	4.113
29) Acrylonitrile	(1)	4.641	53	6061	0.779
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	21771	0.191
31) trans-1,2-Dichloroethene	(2)	4.726	96	10728	0.206
32) n-Hexane	(2)	5.159	57	17207	0.187
33) 1,1-Dichloroethane	(2)	5.373	63	21531	0.201
34) di-Isopropyl Ether	(2)	5.428	45	40136	0.198
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	19107	0.190
37) Ethyl t-butyl ether	(2)	5.958	59	31081	0.191
40) 1,2-Dichloroethene (Total)	(2)		96	22757	0.407
38) 2-Butanone	(1)	6.171	43	27859	2.233
39) cis-1,2-Dichloroethene	(2)	6.190	96	12029	0.202
41) 2,2-Dichloropropane	(2)	6.208	77	18209	0.201
42) Propionitrile	(1)	6.226	54	10639	3.702
45) Methacrylonitrile	(1)	6.440	67	19902	1.905
47) Bromochloromethane	(2)	6.531	128	4857	0.207
48) Tetrahydrofuran	(1)	6.549	71	5725	2.024
49) Chloroform	(2)	6.665	83	20122	0.194

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

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.885	113	519229	9.915
50)$Dibromofluoromethane	(2)	6.885	111	530426	9.864
51) 1,1,1-Trichloroethane	(2)	6.915	97	17951	0.192
52) Cyclohexane	(2)	7.037	56	22669	0.199
52) Cyclohexane	(2)	7.043	84	16796	0.191
52) Cyclohexane	(2)	7.043	69	6458	0.198
54) Carbon Tetrachloride	(2)	7.135	117	15582	0.191
55) 1,1-Dichloropropene	(2)	7.135	75	15408	0.186
56) Isobutyl Alcohol	(1)	7.220	41	9517	10.942
57)$1,2-Dichloroethane-d4	(2)	7.348	102	81614	9.952
57)$1,2-Dichloroethane-d4	(2)	7.342	65	437305	9.746
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51334	9.951
58) Benzene	(2)	7.391	78	44928	0.199
59) 1,2-Dichloroethane	(2)	7.458	62	13236	0.209
60) t-Amyl methyl ether	(2)	7.580	73	25182	0.191
63)*Fluorobenzene	(2)	7.787	96	2168662	10.000
62) n-Heptane	(2)	7.817	43	23860	0.217
65) n-Butanol	(1)	8.128	56	12087	18.915
67) Trichloroethene	(2)	8.275	95	12370	0.204
69) Methylcyclohexane	(2)	8.598	83	18267	0.176
70) 1,2-Dichloropropane	(2)	8.604	63	11083	0.189
72) 1,4-Dioxane	(1)	8.610	88	582	4.468
71) Methyl Methacrylate	(1)	8.695	69	4109M	0.198
73) Dibromomethane	(2)	8.714	93	4841	0.197
74) Bromodichloromethane	(2)	8.939	83	13333	0.188
76) 2-Nitropropane	(1)	9.177	41	16325	2.308
80) cis-1,3-Dichloropropene	(2)	9.494	75	15101	0.184
81) 4-Methyl-2-Pentanone	(1)	9.640	43	60789M	1.990
82)$Toluene-d8	(3)	9.799	98	2155491	10.085
82)$Toluene-d8	(3)	9.799	100	1365396	10.091
83) Toluene	(3)	9.878	92	27228	0.195
84) trans-1,3-Dichloropropene	(3)	10.128	75	12246	0.192
85) 1,3-Dichloropropene (total)	(3)		75	27347	0.376
86) Ethyl Methacrylate	(3)	10.189	69	8542	0.179
88) 1,1,2-Trichloroethane	(3)	10.329	97	6705	0.206
89) Tetrachloroethene	(3)	10.433	166	13043	0.199
90) 1,3-Dichloropropane	(3)	10.488	76	11547	0.199
91) 2-Hexanone	(1)	10.536	43	49339	2.240

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	7693	0.181
95) 1,2-Dibromoethane	(3)	10.829	107	5996	0.195
97)*Chlorobenzene-d5	(3)	11.250	117	1470758	10.000
98) Chlorobenzene	(3)	11.280	112	29500	0.198
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	9926	0.189
100) Ethylbenzene	(3)	11.365	91	55951	0.199
101) m+p-Xylene	(3)	11.481	106	41904	0.396
105) Xylene (Total)	(3)		106	62208	0.592
104) o-Xylene	(3)	11.804	106	20304	0.196
106) Styrene	(3)	11.829	104	30491	0.189
107) Bromoform	(3)	11.981	173	3658	0.158
108) Isopropylbenzene	(3)	12.109	105	53181	0.191
111)$4-Bromofluorobenzene	(3)	12.249	95	632123	9.736
111)$4-Bromofluorobenzene	(3)	12.249	174	557125	9.758
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	7440	0.200
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	14487	1.538
114) Bromobenzene	(4)	12.371	156	12361	0.211
116) 1,2,3-Trichloropropane	(4)	12.390	110	1927	0.204
117) n-Propylbenzene	(4)	12.438	91	63381	0.198
119) 2-Chlorotoluene	(4)	12.518	126	12210	0.204
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	43967	0.198
122) 4-Chlorotoluene	(4)	12.609	126	12529	0.205
125) tert-Butylbenzene	(4)	12.810	134	9693	0.206
126) Pentachloroethane	(4)	12.847	167	6911	0.188
127) 1,2,4-Trimethylbenzene	(4)	12.859	105	45150	0.203
128) sec-Butylbenzene	(4)	12.975	105	57161	0.199
131) 1,3-Dichlorobenzene	(4)	13.085	146	22266	0.195
132) p-Isopropyltoluene	(4)	13.085	119	45352	0.189
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	602005	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	26454	0.223
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	19742	0.209
136) Benzyl Chloride	(4)	13.225	126	2223	0.168
138) n-Butylbenzene	(4)	13.377	92	22932	0.191
139) 1,2-Dichlorobenzene	(4)	13.414	146	20584	0.203
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	937	0.205
144) 1,3,5-Trichlorobenzene	(4)	14.091	180	17214	0.204
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	15389	0.221
146) Hexachlorobutadiene	(4)	14.590	225	6451	0.196

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

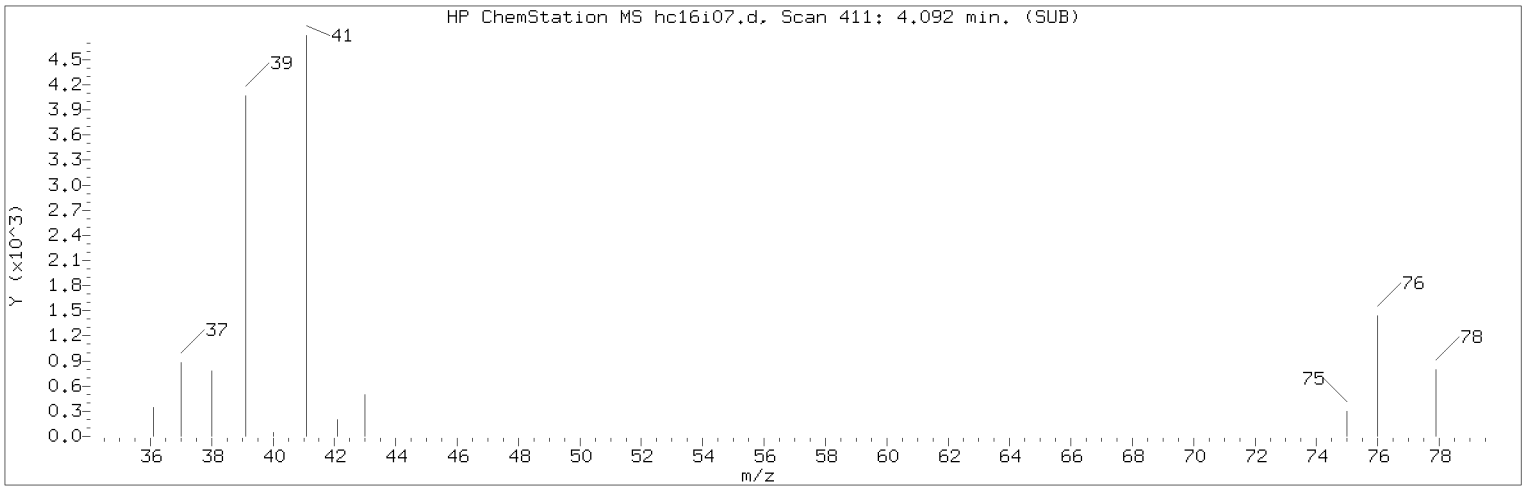
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

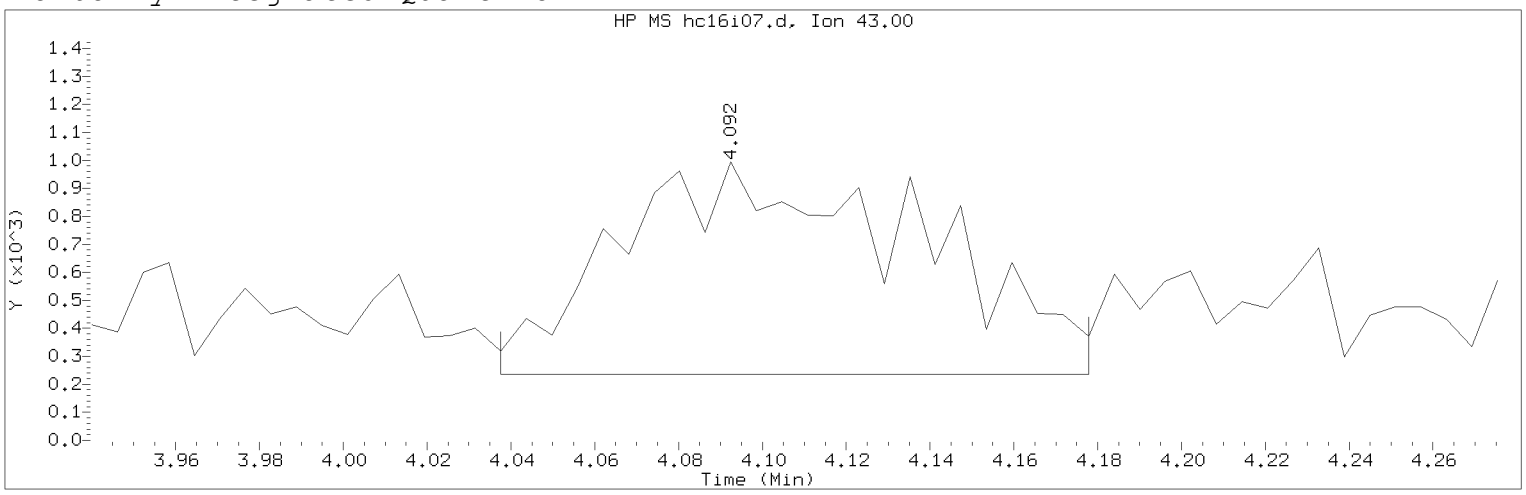
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.700	128	27671	0.244
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	14742	0.252

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

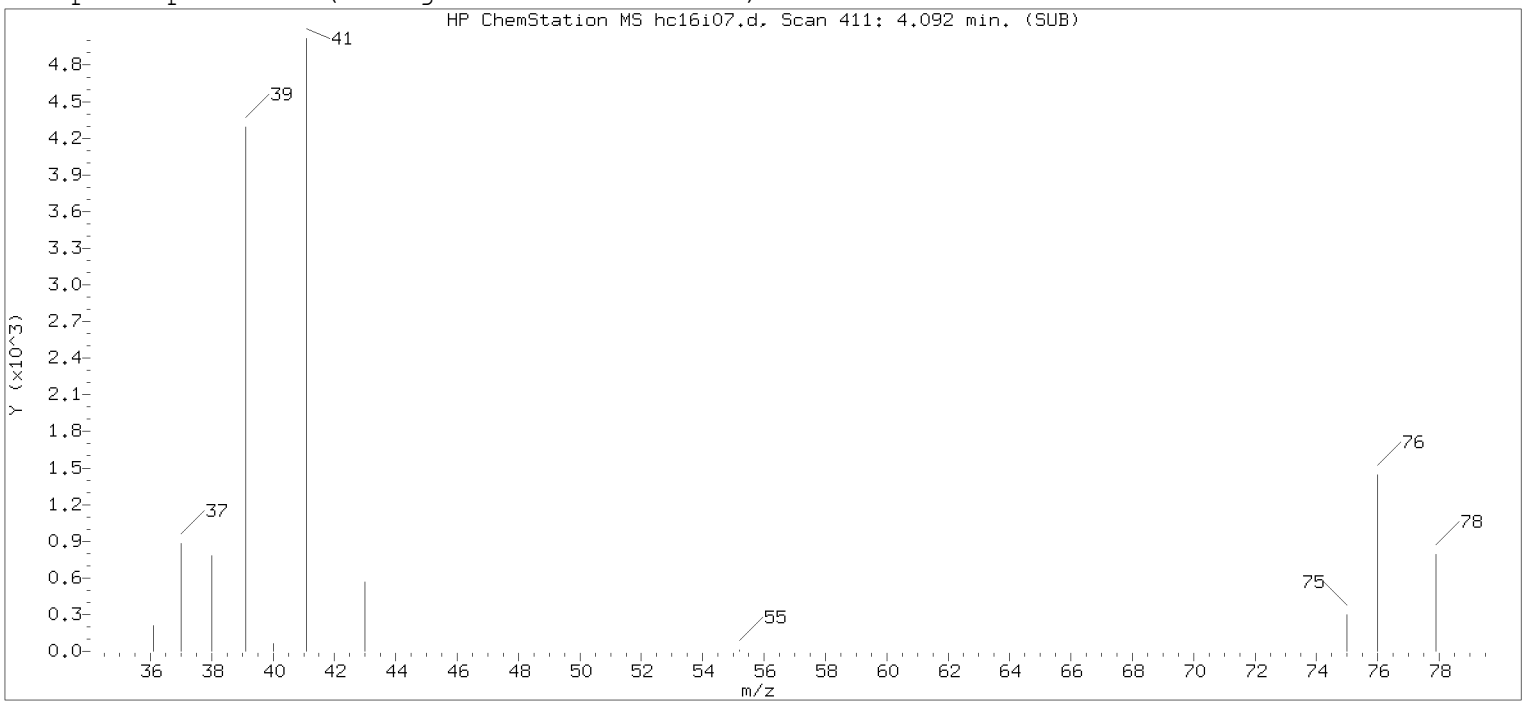
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 411
Retention Time (minutes): 4.092
Quant Ion : 43.00
Area (flag) : 3839M
On-Column Amount (ng) : 0.2009
Integration start scan : 401 Integration stop scan: 424
Y at integration start : 235 Y at integration end: 235

Reason for manual integration: improper integration

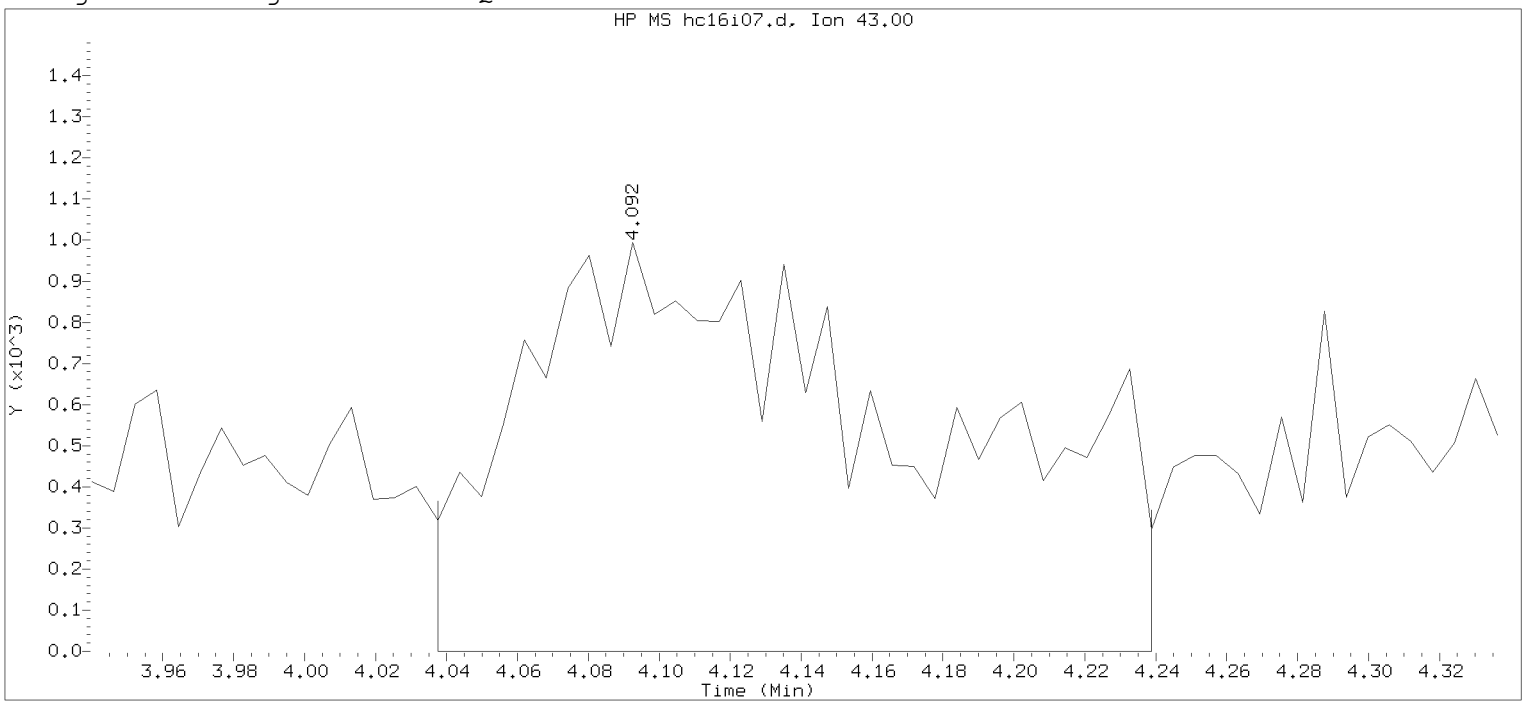
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

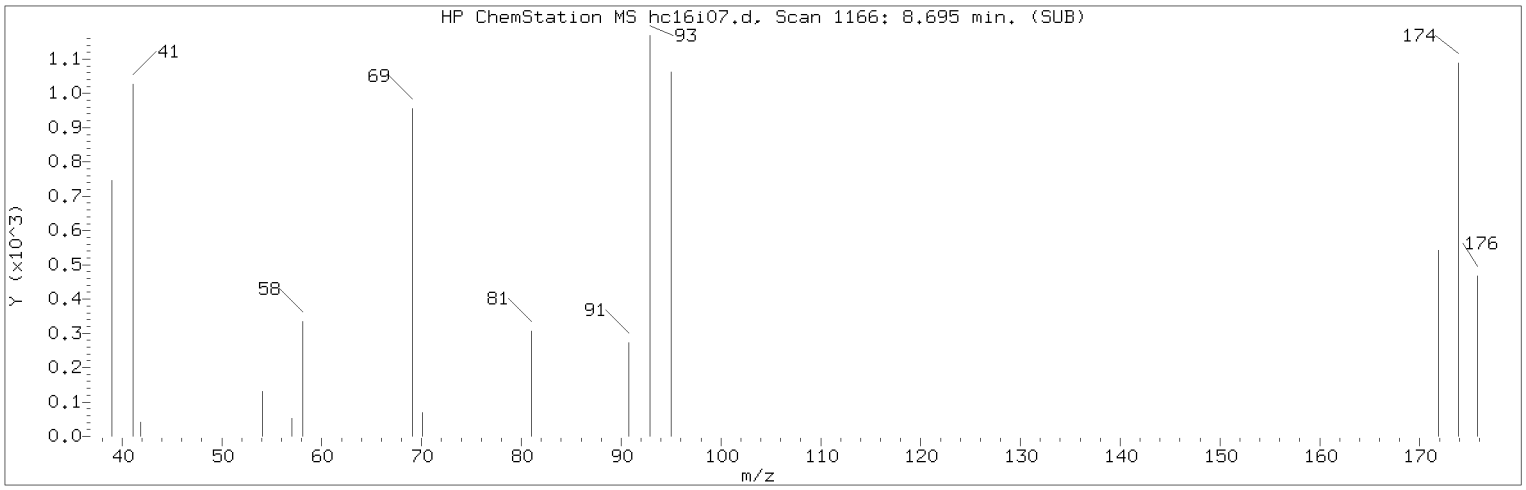
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

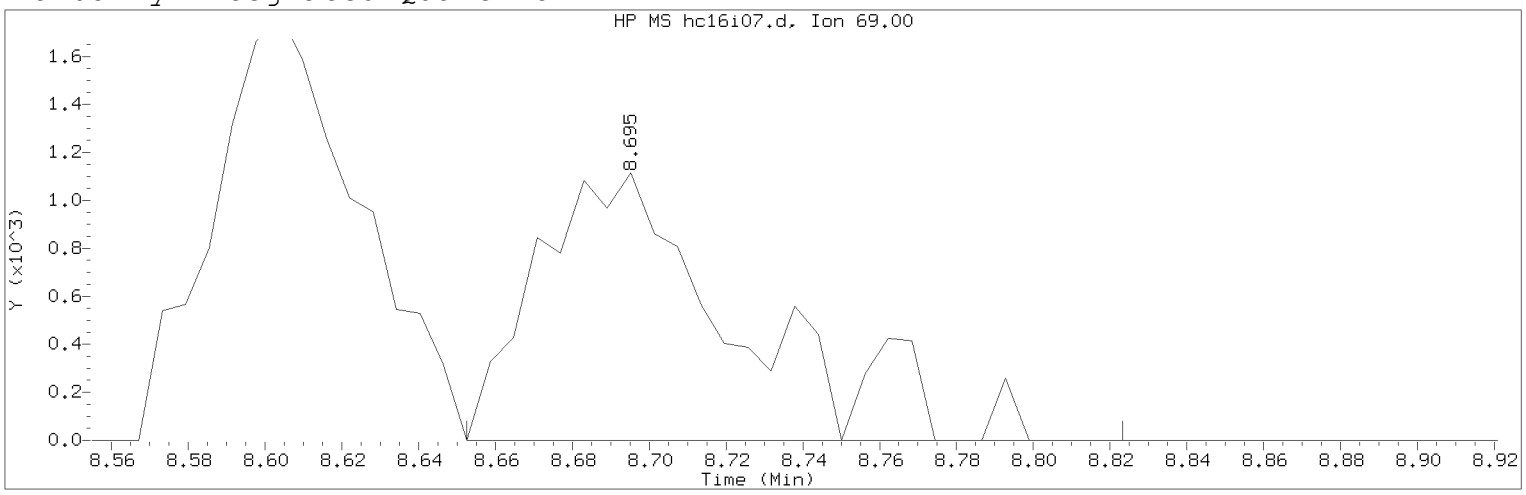
Compound Number	: 21		
Compound Name	: Methyl Acetate		
Scan Number	: 411		
Retention Time (minutes)	: 4.092		
Quant Ion	: 43.00		
Area	: 7680		
On-column Amount (ng)	: 0.3254		
Integration start scan	: 401	Integration stop scan:	434
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

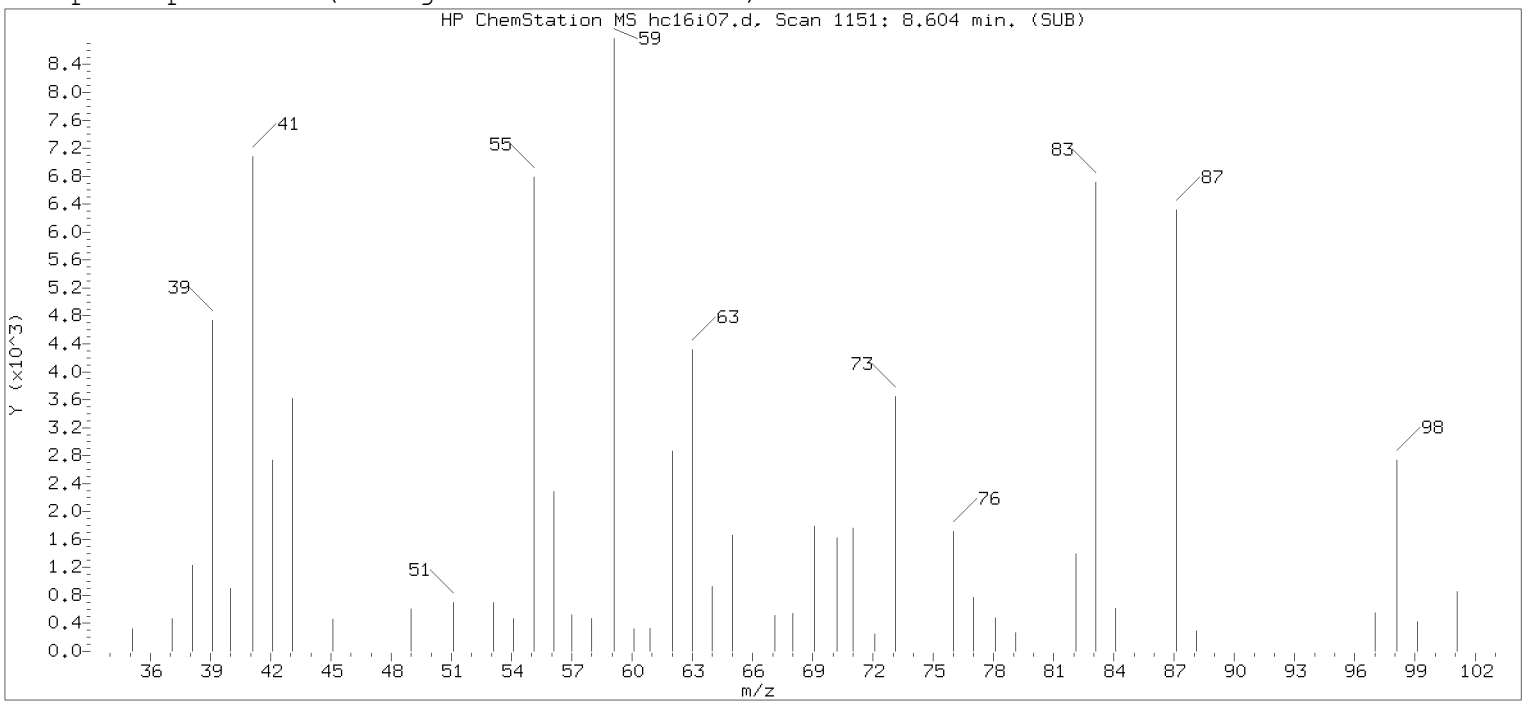
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 4109M
On-Column Amount (ng) : 0.1980
Integration start scan : 1158 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

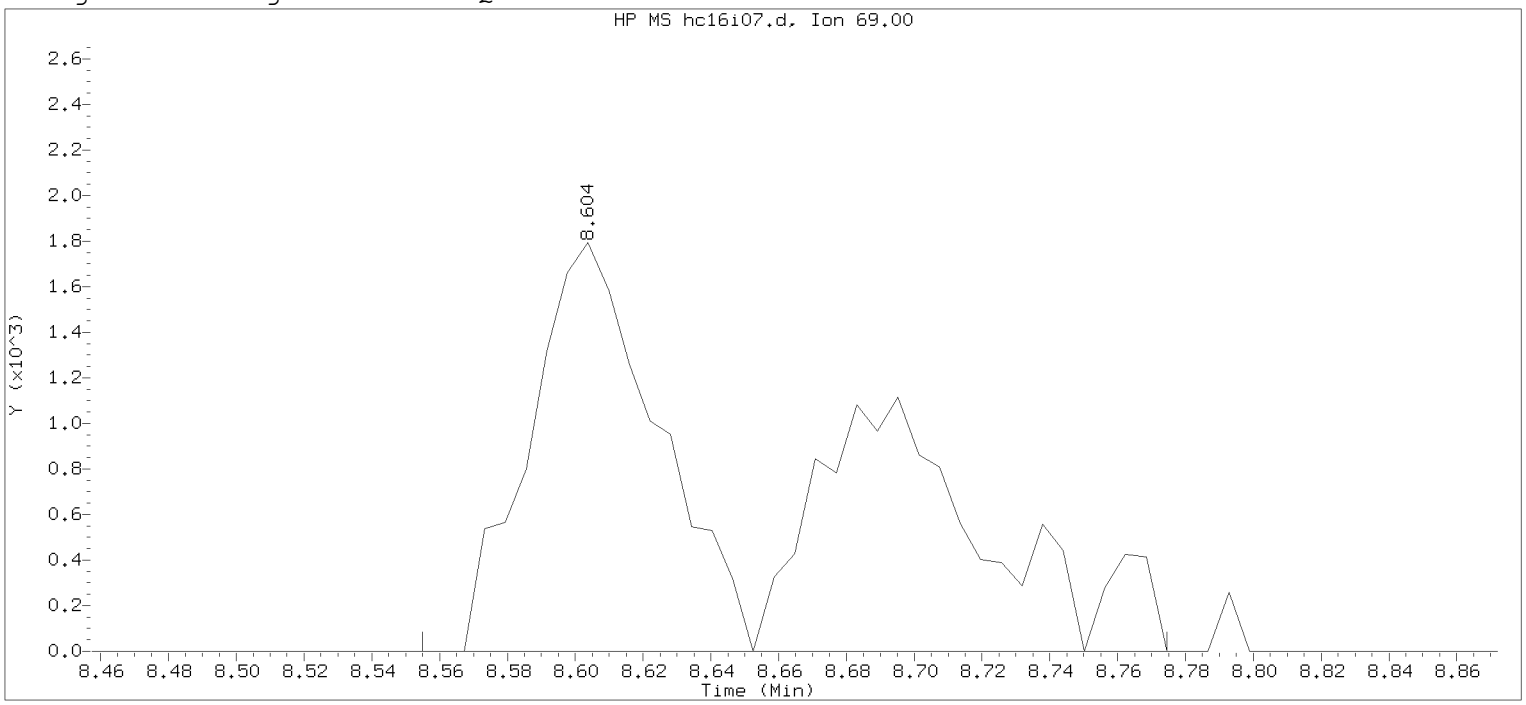
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

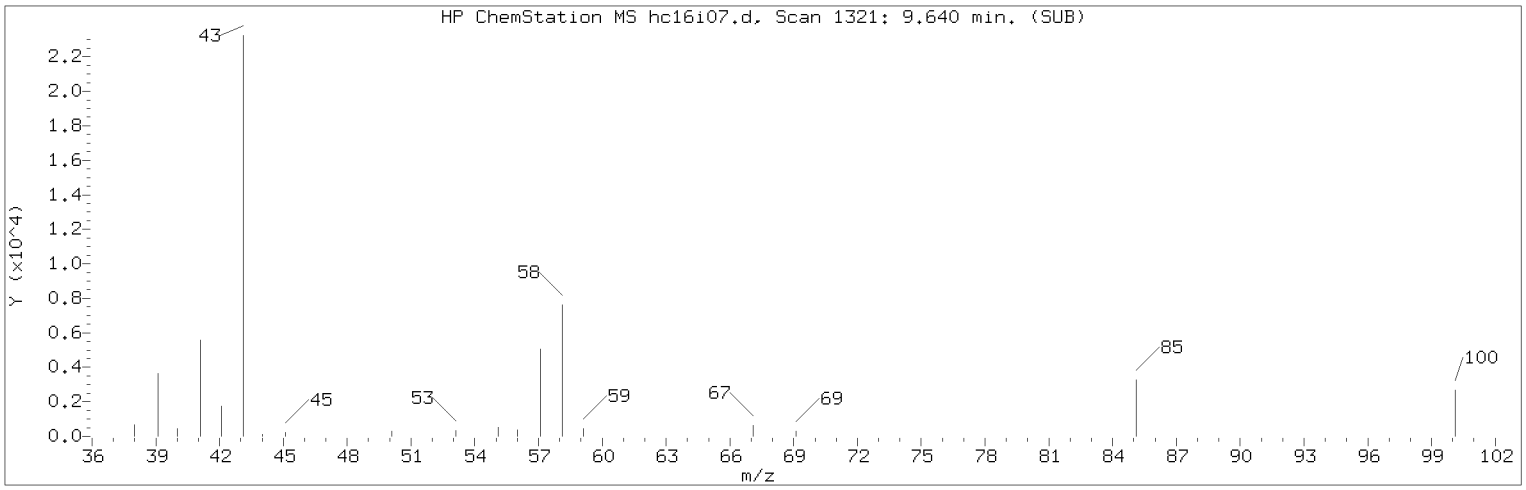
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

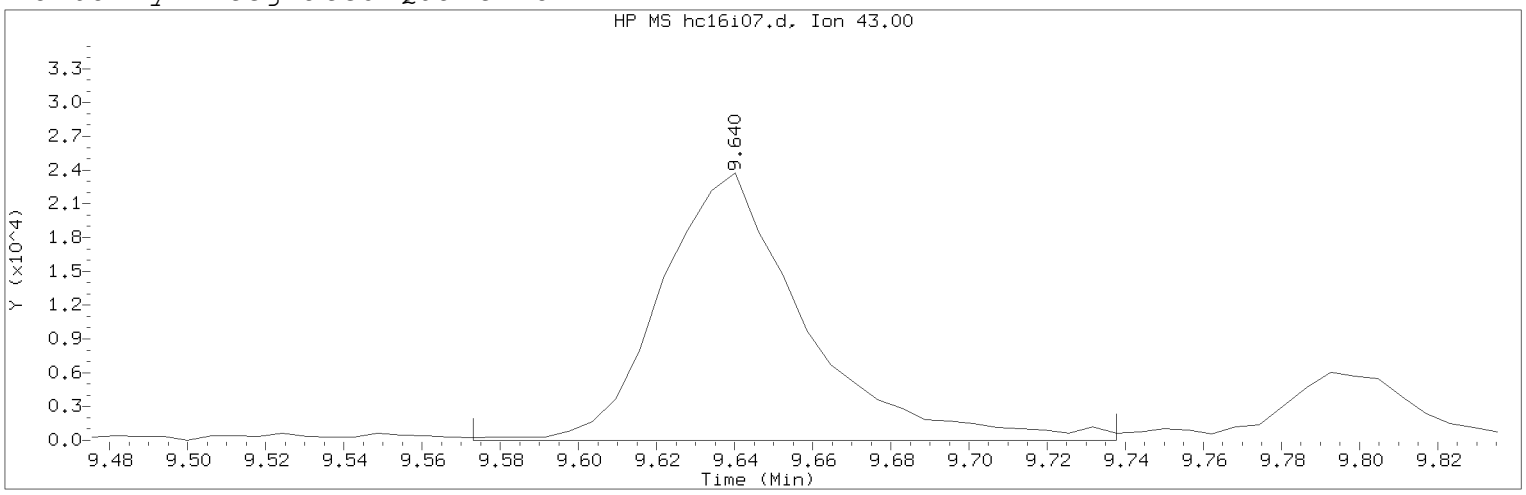
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 8723
On-column Amount (ng) : 0.3677
Integration start scan : 1142 Integration stop scan: 1178
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

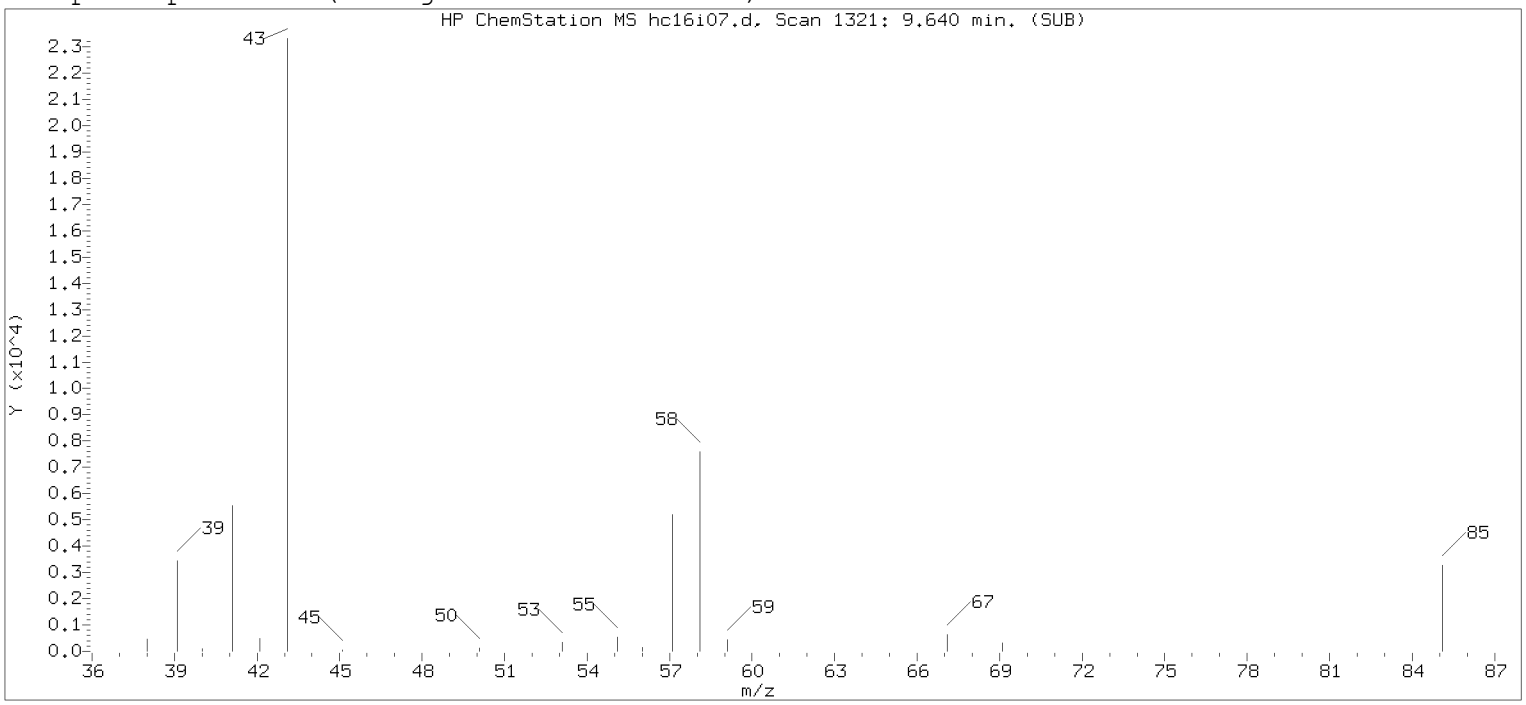
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1321
Retention Time (minutes): 9.640
Quant Ion : 43.00
Area (flag) : 60789M
On-Column Amount (ng) : 1.9902
Integration start scan : 1309 Integration stop scan: 1336
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

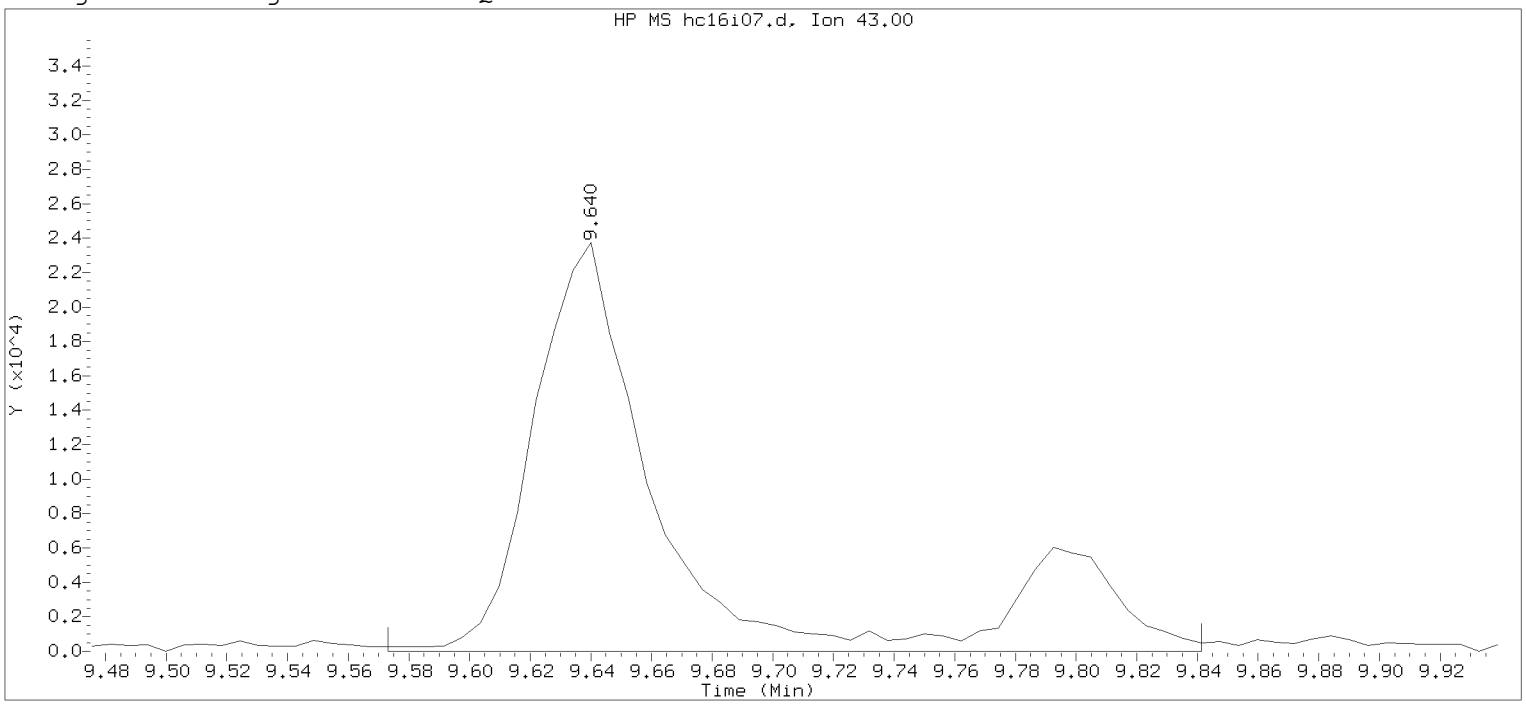
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



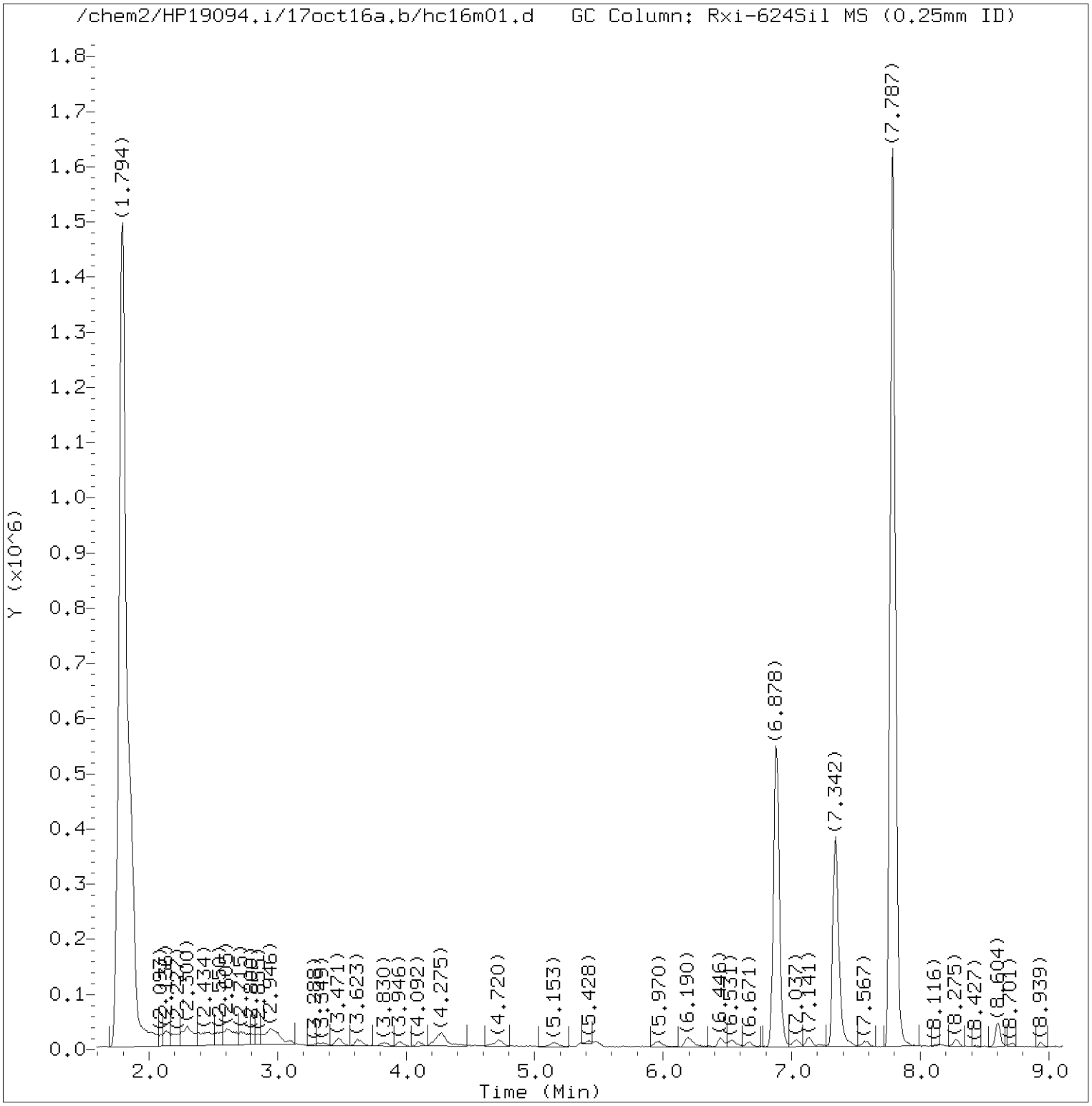
Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 81		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1321		
Retention Time (minutes)	: 9.640		
Quant Ion	: 43.00		
Area	: 75621		
On-column Amount (ng)	: 2.3928		
Integration start scan	: 1309	Integration stop scan:	1353
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature user kas02648



Total Ion Chromatogram (TIC)

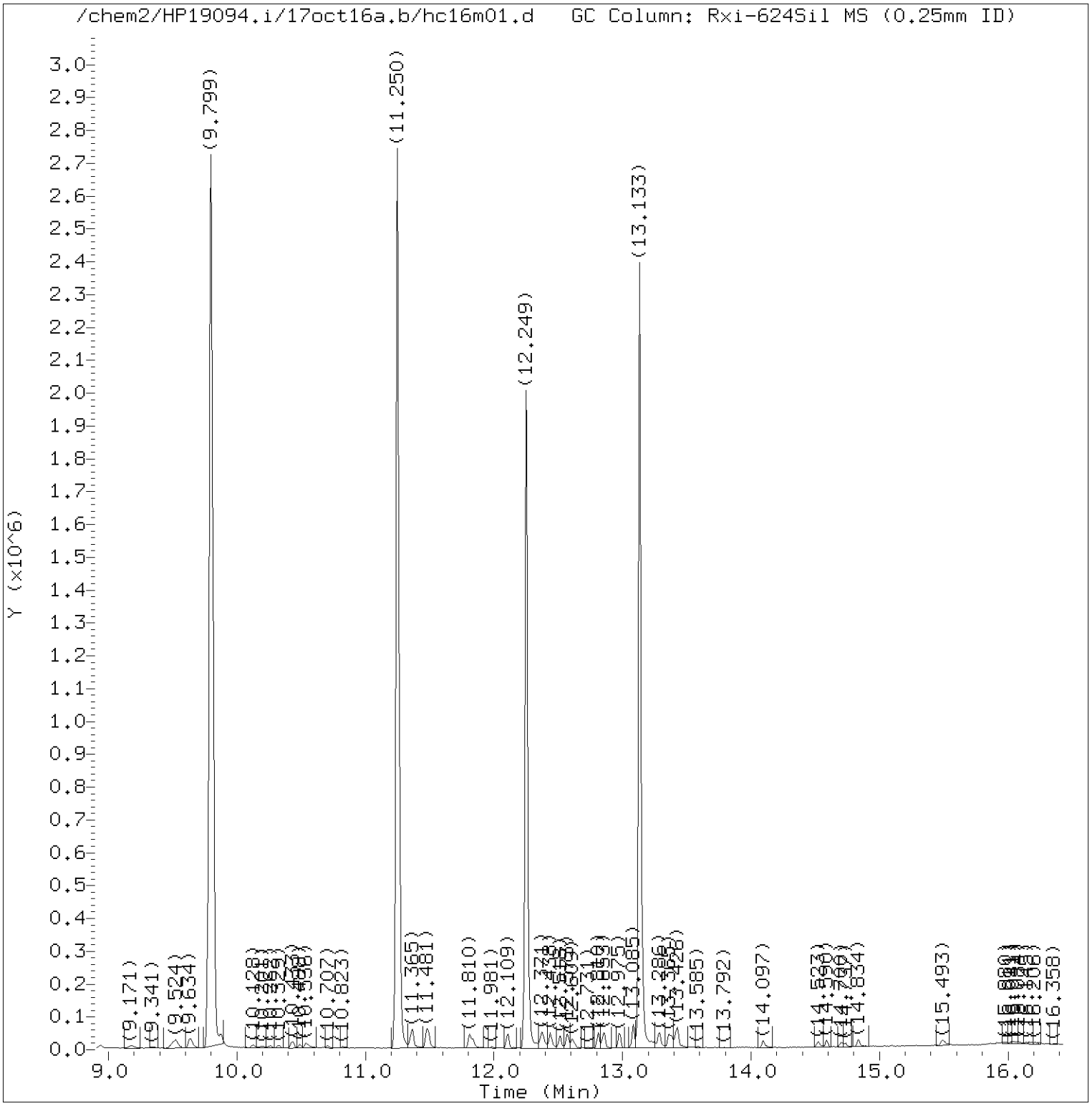
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	9153	0.097
2) Chloromethane	(2)	2.129	50	12284	0.132
5) Vinyl Chloride	(2)	2.270	62	8986	0.105
6) 1,3-Butadiene	(2)	2.300	39	9123	0.112
7) Bromomethane	(2)	2.617	94	6690	0.115
8) Chloroethane	(2)	2.721	64	5510	0.113
9) Dichlorofluoromethane	(2)	2.952	67	16317	0.114
10) Trichlorofluoromethane	(2)	3.050	101	11429	0.100
11) Ethyl ether	(2)	3.288	59	2964	0.081
12) Freon 123a	(2)	3.367	67	6734	0.094
13) Acrolein	(1)	3.477	56	26992	4.897
15) 1,1-Dichloroethene	(2)	3.617	96	4338	0.095
14) Acetone	(1)	3.654	43	14864	2.106
16) Freon 113	(2)	3.660	101	4018	0.079
17) Methyl Iodide	(2)	3.818	142	8549	0.094
18) Carbon Disulfide	(2)	3.946	76	18651	0.127
21) Methyl Acetate	(1)	4.086	43	1371	0.065
22) Allyl Chloride	(2)	4.092	41	11399	0.110
26)*t-Butyl Alcohol-d10	(1)	4.251	65	87742	50.000
23) Methylene Chloride	(2)	4.275	84	7149	0.137
28) t-Butyl Alcohol	(1)	4.379	59	5109	2.137
29) Acrylonitrile	(1)	4.684	53	3512	0.406
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	11302	0.100
31) trans-1,2-Dichloroethene	(2)	4.733	96	5630	0.109
32) n-Hexane	(2)	5.159	57	7720	0.085
33) 1,1-Dichloroethane	(2)	5.373	63	10703	0.101
34) di-Isopropyl Ether	(2)	5.415	45	20136	0.100
35) 2-Chloro-1,3-Butadiene	(2)	5.489	53	8611	0.086
37) Ethyl t-butyl ether	(2)	5.958	59	15736	0.098
40) 1,2-Dichloroethene (Total)	(2)		96	11927	0.215
39) cis-1,2-Dichloroethene	(2)	6.184	96	6297	0.106
38) 2-Butanone	(1)	6.190	43	12253	0.884
41) 2,2-Dichloropropane	(2)	6.208	77	9134	0.102
42) Propionitrile	(1)	6.244	54	5162	1.614
45) Methacrylonitrile	(1)	6.446	67	10325	0.888
47) Bromochloromethane	(2)	6.525	128	1962	0.084
48) Tetrahydrofuran	(1)	6.543	71	3101	0.986
49) Chloroform	(2)	6.677	83	10206	0.099

* = Compound is an internal standard.

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	509012	9.804
51) 1,1,1-Trichloroethane	(2)	6.915	97	9028	0.097
52) Cyclohexane	(2)	7.037	56	10534	0.093
54) Carbon Tetrachloride	(2)	7.135	117	7595	0.094
55) 1,1-Dichloropropene	(2)	7.141	75	7504	0.092
56) Isobutyl Alcohol	(1)	7.220	41	7958	8.233
57)$1,2-Dichloroethane-d4	(2)	7.342	102	78470	9.651
58) Benzene	(2)	7.385	78	23501	0.105
59) 1,2-Dichloroethane	(2)	7.452	62	7364	0.118
60) t-Amyl methyl ether	(2)	7.580	73	12488	0.096
63)*Fluorobenzene	(2)	7.787	96	2150060	10.000
62) n-Heptane	(2)	7.811	43	12230	0.112
65) n-Butanol	(1)	8.128	56	7591	10.676
67) Trichloroethene	(2)	8.281	95	6339	0.106
69) Methylcyclohexane	(2)	8.598	83	8289	0.080
70) 1,2-Dichloropropane	(2)	8.610	63	6311	0.109
71) Methyl Methacrylate	(1)	8.701	69	1730M	0.075
73) Dibromomethane	(2)	8.720	93	2551	0.105
74) Bromodichloromethane	(2)	8.927	83	6761	0.096
76) 2-Nitropropane	(1)	9.183	41	10465	1.329
80) cis-1,3-Dichloropropene	(2)	9.500	75	7190	0.088
81) 4-Methyl-2-Pentanone	(1)	9.640	43	31029	0.913
82)$Toluene-d8	(3)	9.799	98	2127274	10.260
83) Toluene	(3)	9.878	92	14469	0.107
84) trans-1,3-Dichloropropene	(3)	10.128	75	5542	0.090
85) 1,3-Dichloropropene (total)	(3)		75	12732	0.178
86) Ethyl Methacrylate	(3)	10.195	69	4205	0.091
88) 1,1,2-Trichloroethane	(3)	10.329	97	3015	0.095
89) Tetrachloroethene	(3)	10.433	166	5438	0.086
90) 1,3-Dichloropropane	(3)	10.488	76	5691	0.101
91) 2-Hexanone	(1)	10.542	43	25406	1.038
93) Dibromochloromethane	(3)	10.707	129	3746	0.091
95) 1,2-Dibromoethane	(3)	10.823	107	2741	0.092
97)*Chlorobenzene-d5	(3)	11.250	117	1426744	10.000
98) Chlorobenzene	(3)	11.280	112	14600	0.101
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	4878	0.096
100) Ethylbenzene	(3)	11.365	91	27184	0.100
101) m+p-Xylene	(3)	11.481	106	20341	0.198

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

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

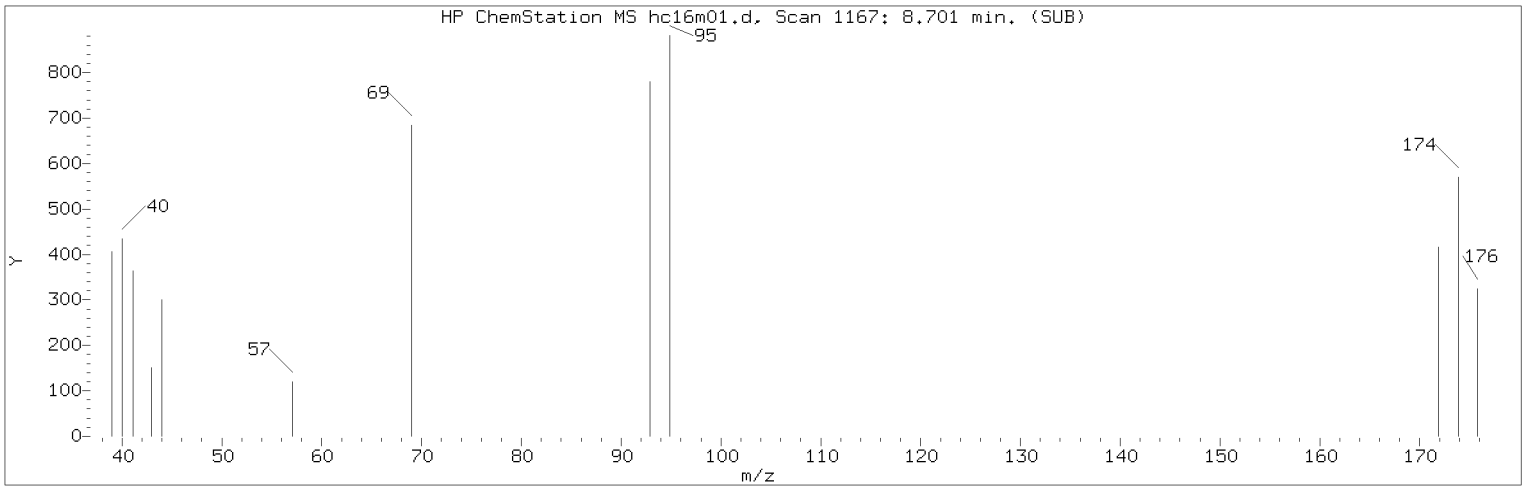
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Xylene (Total)	(3)		106	30911	0.303
104) o-Xylene	(3)	11.810	106	10570	0.105
106) Styrene	(3)	11.835	104	15420	0.098
107) Bromoform	(3)	11.993	173	1827	0.081
108) Isopropylbenzene	(3)	12.109	105	26275	0.097
111)$4-Bromofluorobenzene	(3)	12.249	95	608680	9.664
113) 1,1,2,2-Tetrachloroethane	(4)	12.341	83	4090	0.116
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	7373	0.702
114) Bromobenzene	(4)	12.371	156	6269	0.113
116) 1,2,3-Trichloropropane	(4)	12.384	110	820	0.091
117) n-Propylbenzene	(4)	12.438	91	31562	0.104
119) 2-Chlorotoluene	(4)	12.518	126	6186	0.109
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	21650	0.103
122) 4-Chlorotoluene	(4)	12.609	126	5758	0.099
125) tert-Butylbenzene	(4)	12.810	134	5131	0.114
126) Pentachloroethane	(4)	12.847	167	3304	0.095
127) 1,2,4-Trimethylbenzene	(4)	12.859	105	21393	0.101
128) sec-Butylbenzene	(4)	12.975	105	27793	0.102
131) 1,3-Dichlorobenzene	(4)	13.085	146	11765	0.109
132) p-Isopropyltoluene	(4)	13.085	119	22907	0.101
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	572291	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	13317	0.118
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	9910M	0.110
136) Benzyl Chloride	(4)	13.237	126	755	0.060
138) n-Butylbenzene	(4)	13.377	92	10709	0.094
139) 1,2-Dichlorobenzene	(4)	13.414	146	10649	0.110
143) 1,2-Dibromo-3-chloropropane	(1)	13.975	155	113	0.022
144) 1,3,5-Trichlorobenzene	(4)	14.097	180	9045	0.113
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	8416	0.127
146) Hexachlorobutadiene	(4)	14.590	225	3349	0.107
147) Naphthalene	(4)	14.700	128	16748	0.156
148) 1,2,3-Trichlorobenzene	(4)	14.834	180	8533	0.153

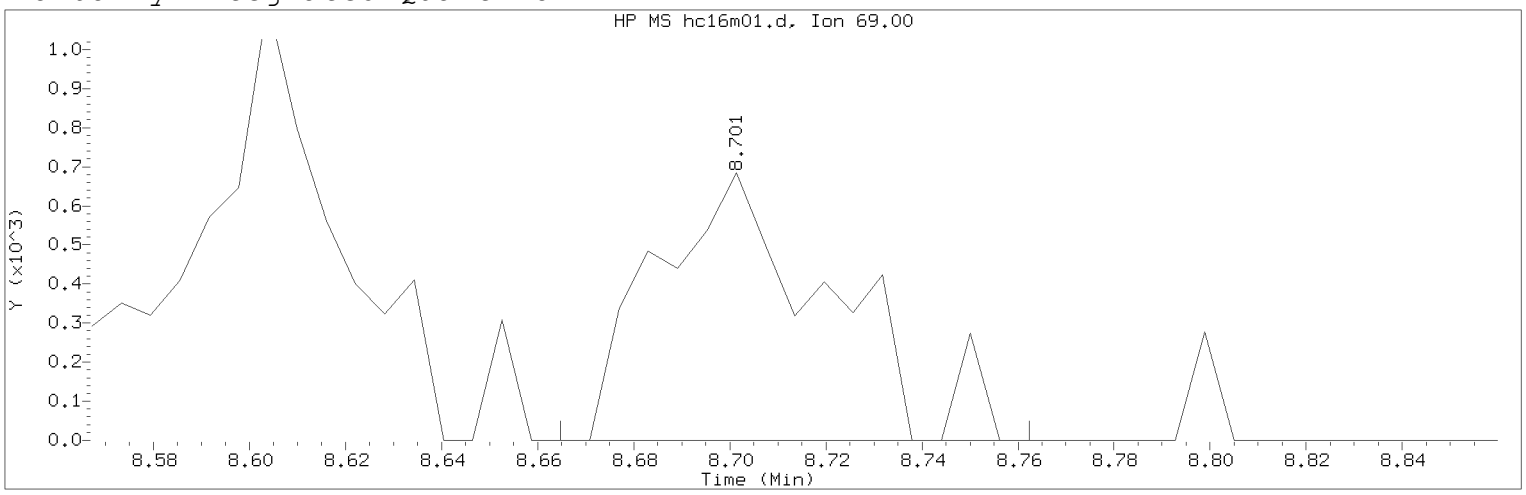
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

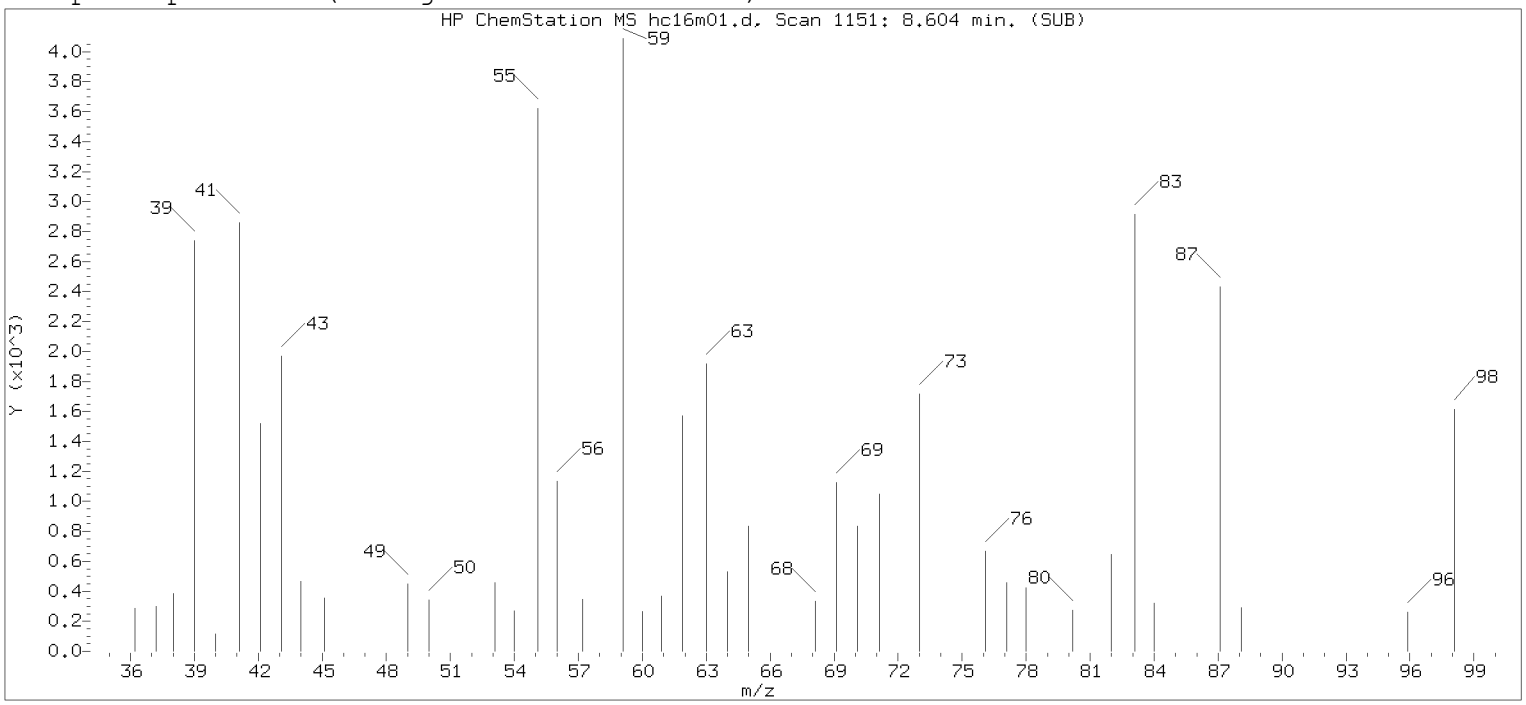
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1167
Retention Time (minutes): 8.701
Quant Ion : 69.00
Area (flag) : 1730M
On-Column Amount (ng) : 0.0750
Integration start scan : 1160 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

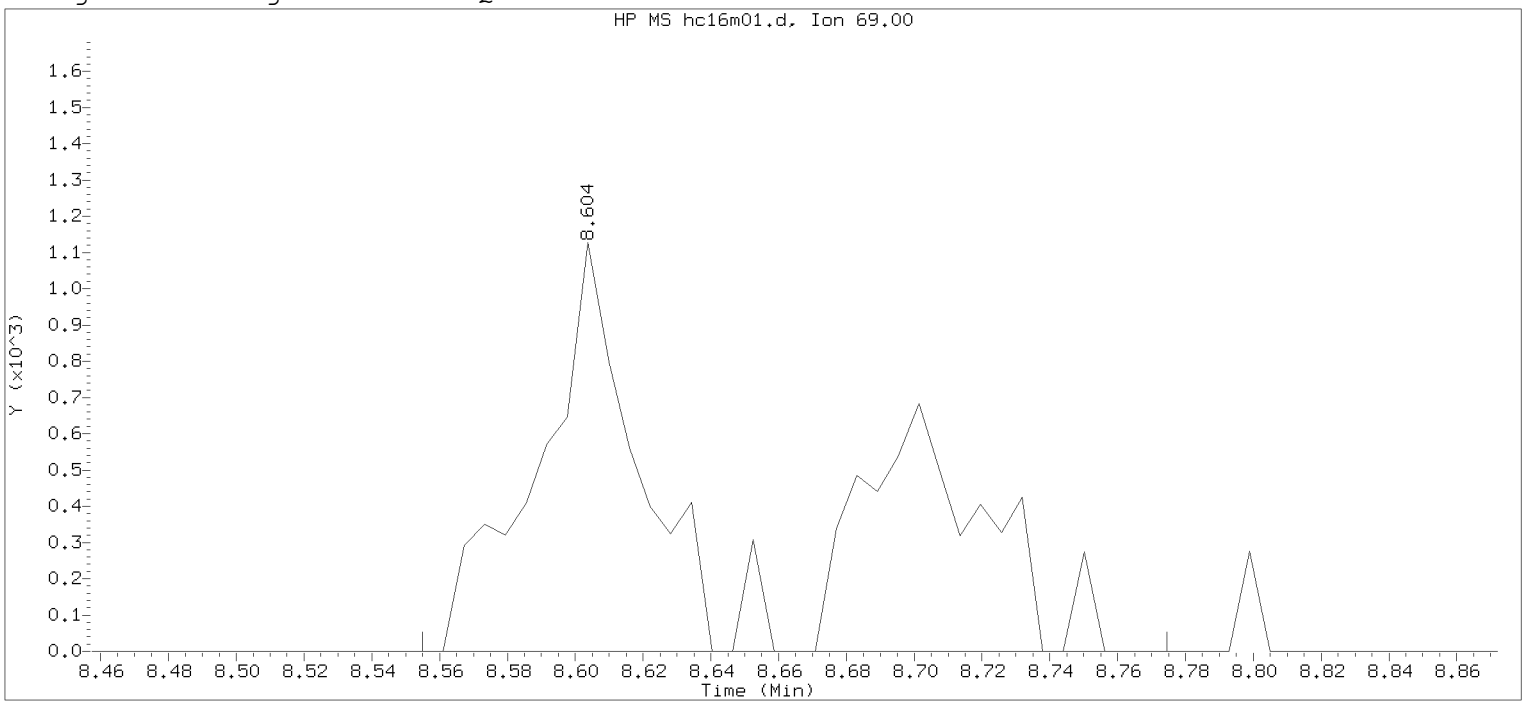
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

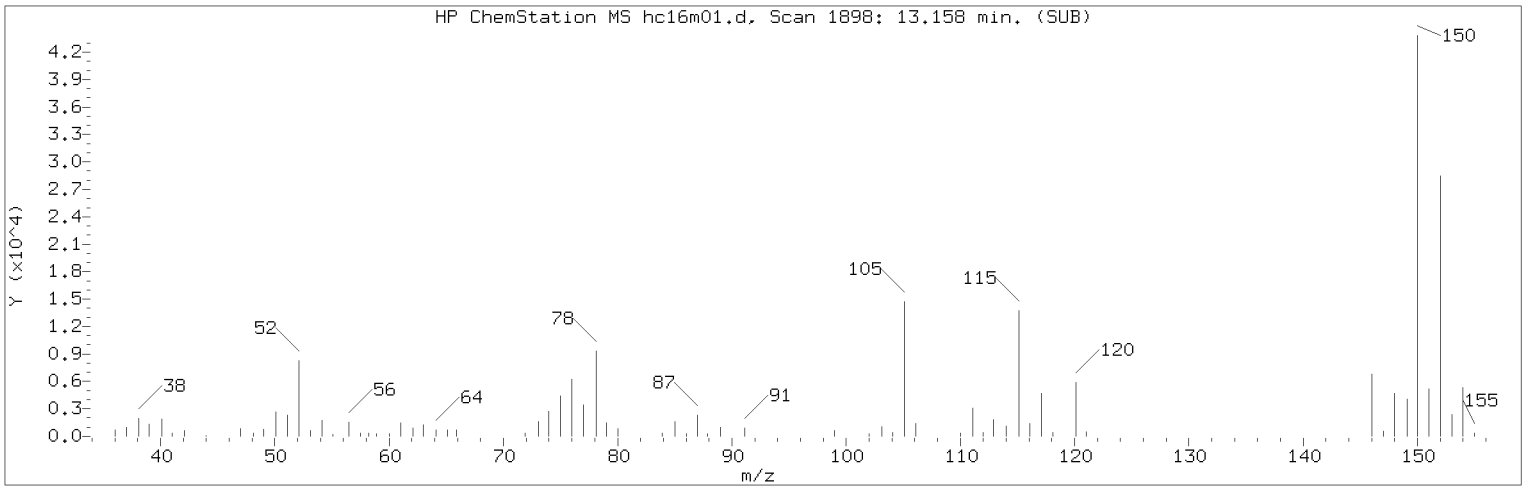
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:03
Date, time and analyst ID of latest file update: 16-Oct-2017 13:23 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

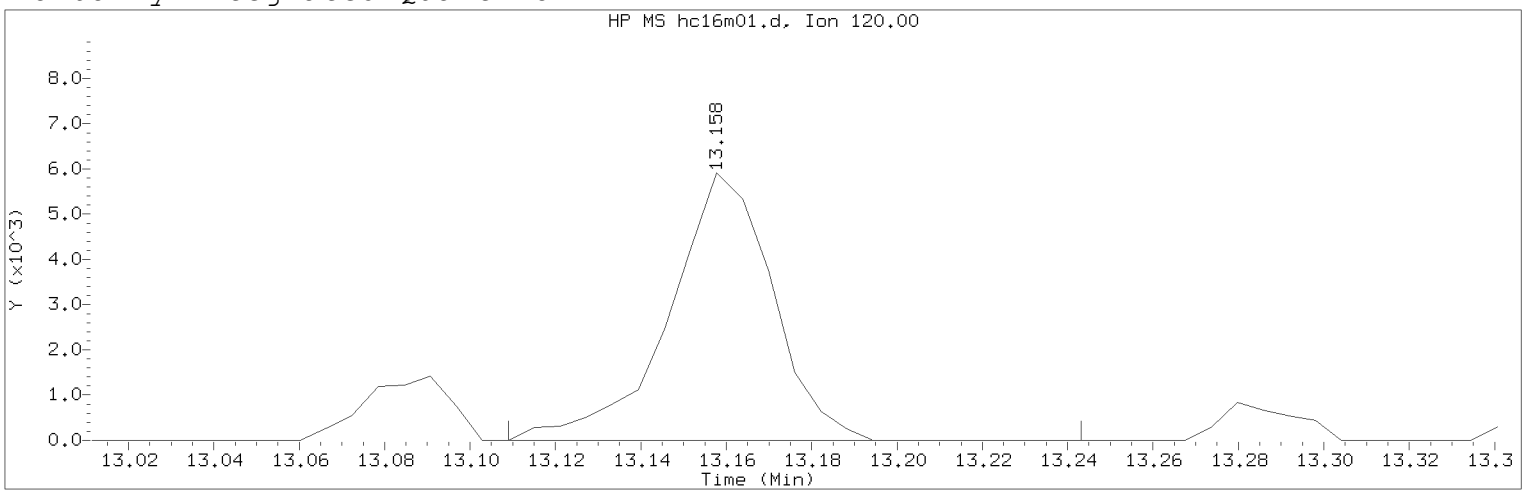
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 4115
On-column Amount (ng) : 0.1347
Integration start scan : 1142 Integration stop scan: 1178
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

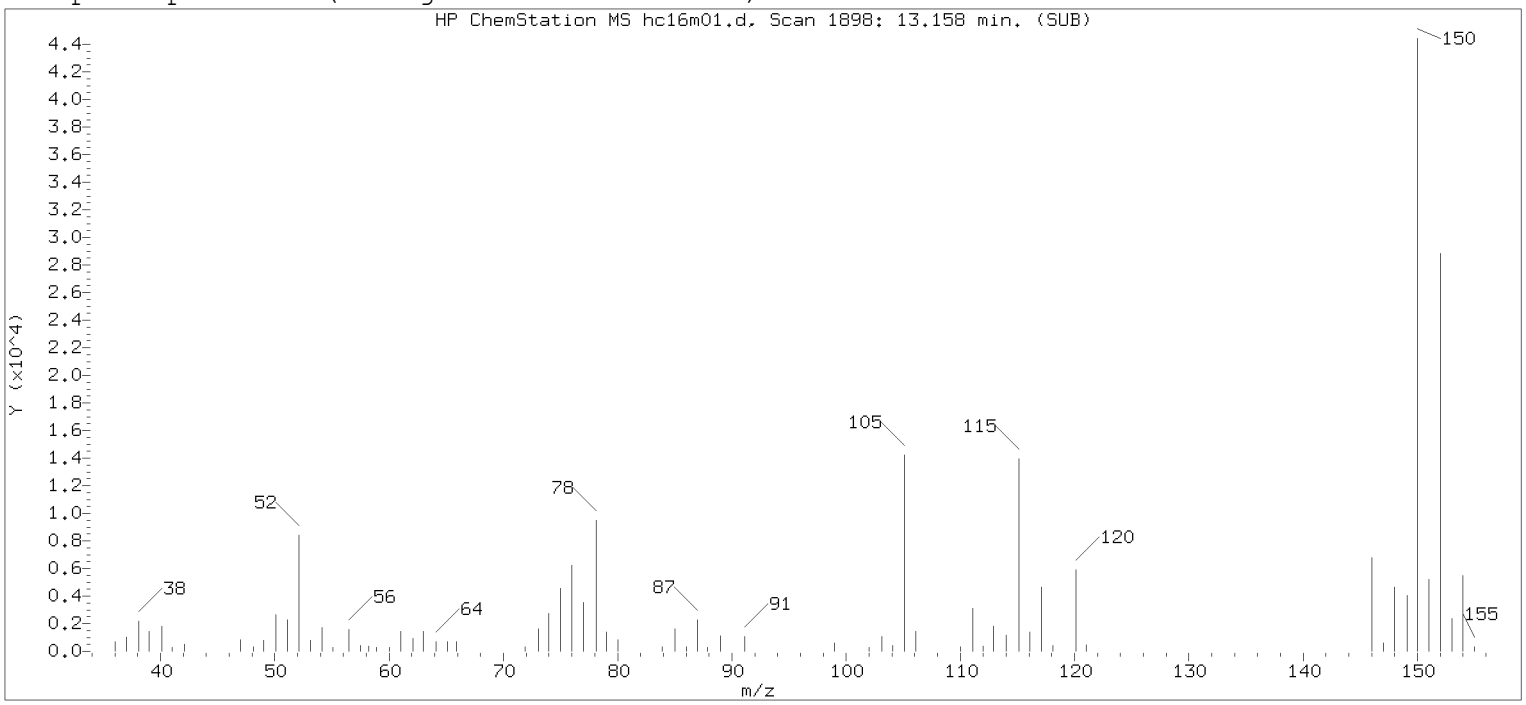
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 120.00
Area (flag) : 9910M
On-Column Amount (ng) : 0.1103
Integration start scan : 1889 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

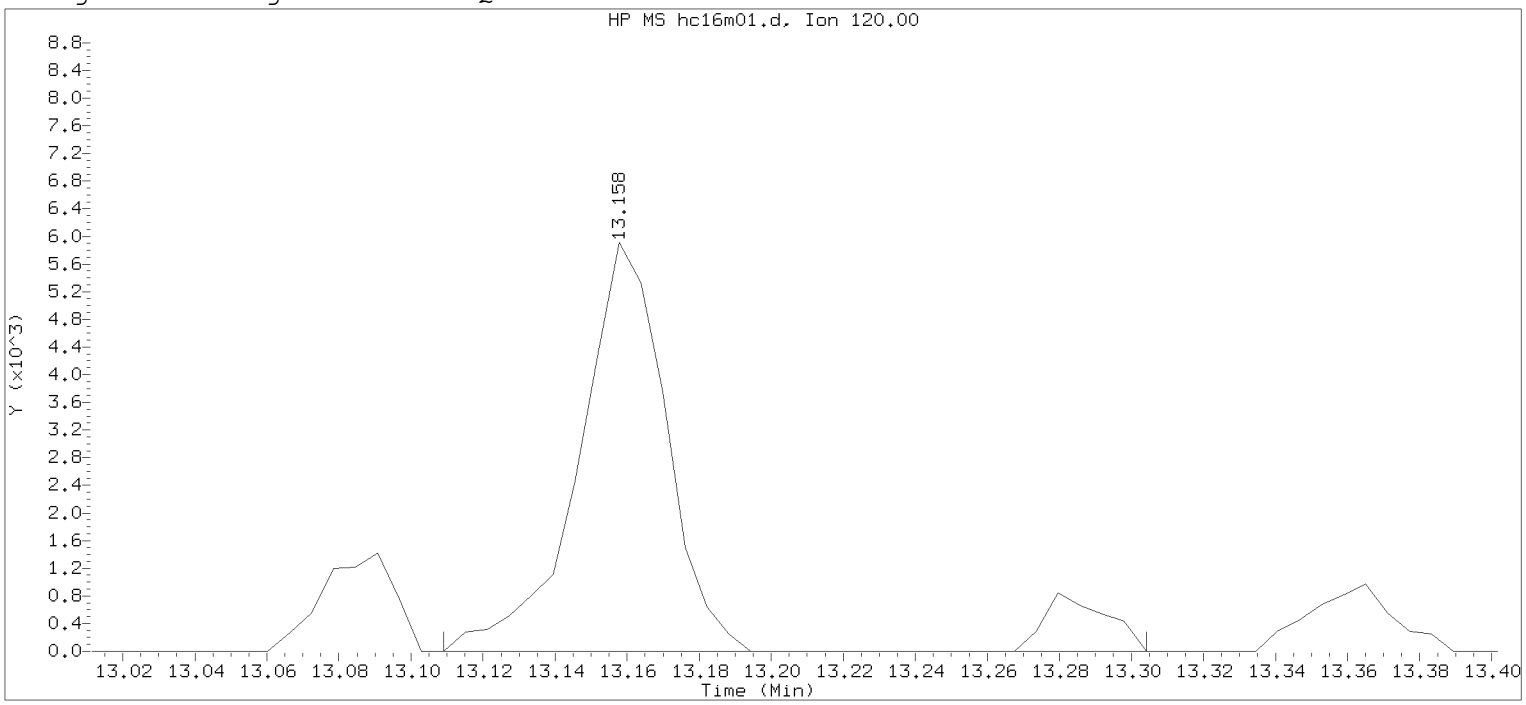
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



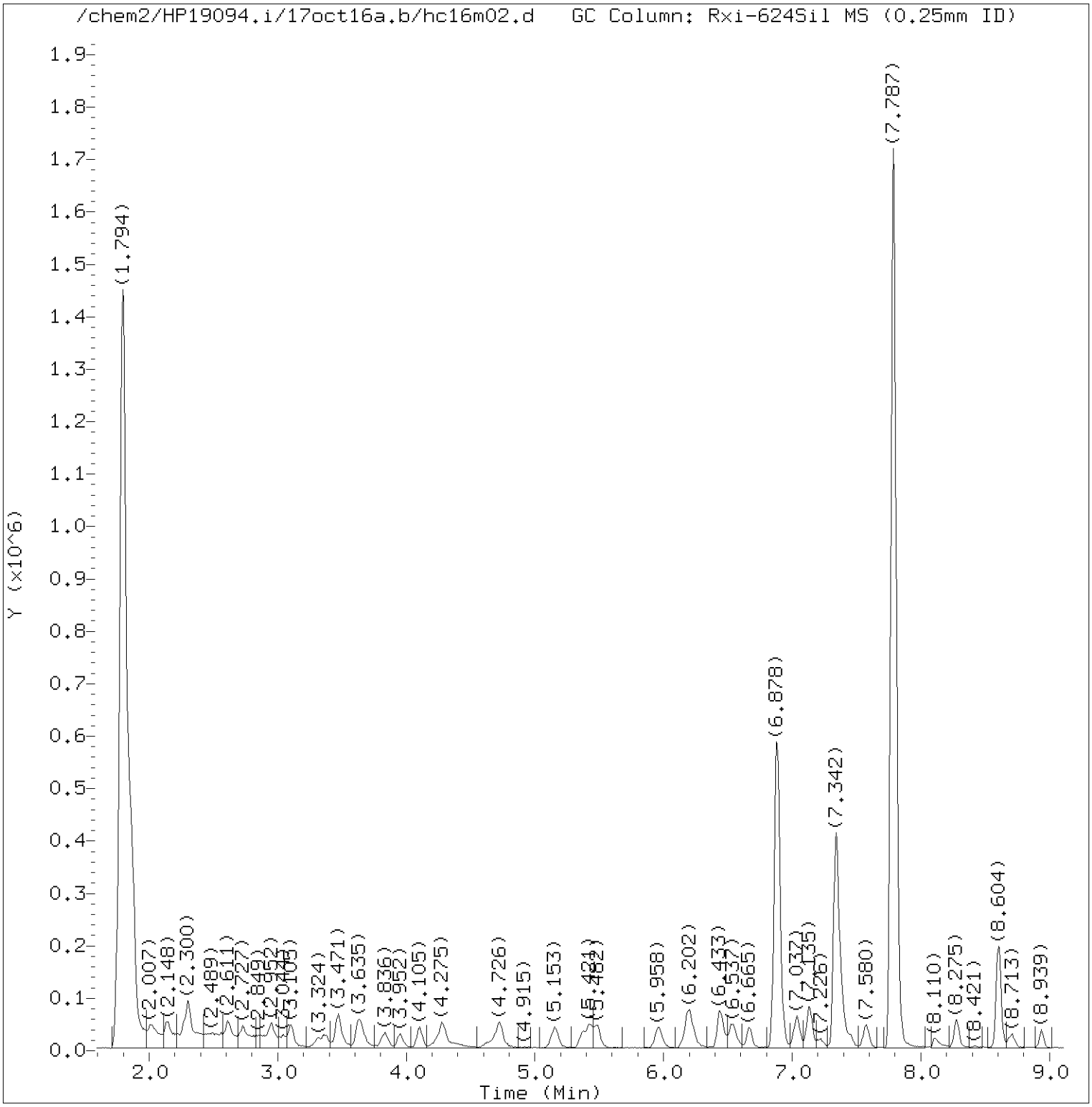
Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:03
Date, time and analyst ID of latest file update: 16-Oct-2017 13:23 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 120.00
Area : 10922
On-column Amount (ng) : 0.1216
Integration start scan : 1889 Integration stop scan: 1921
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user key: 2013



Total Ion Chromatogram (TIC)

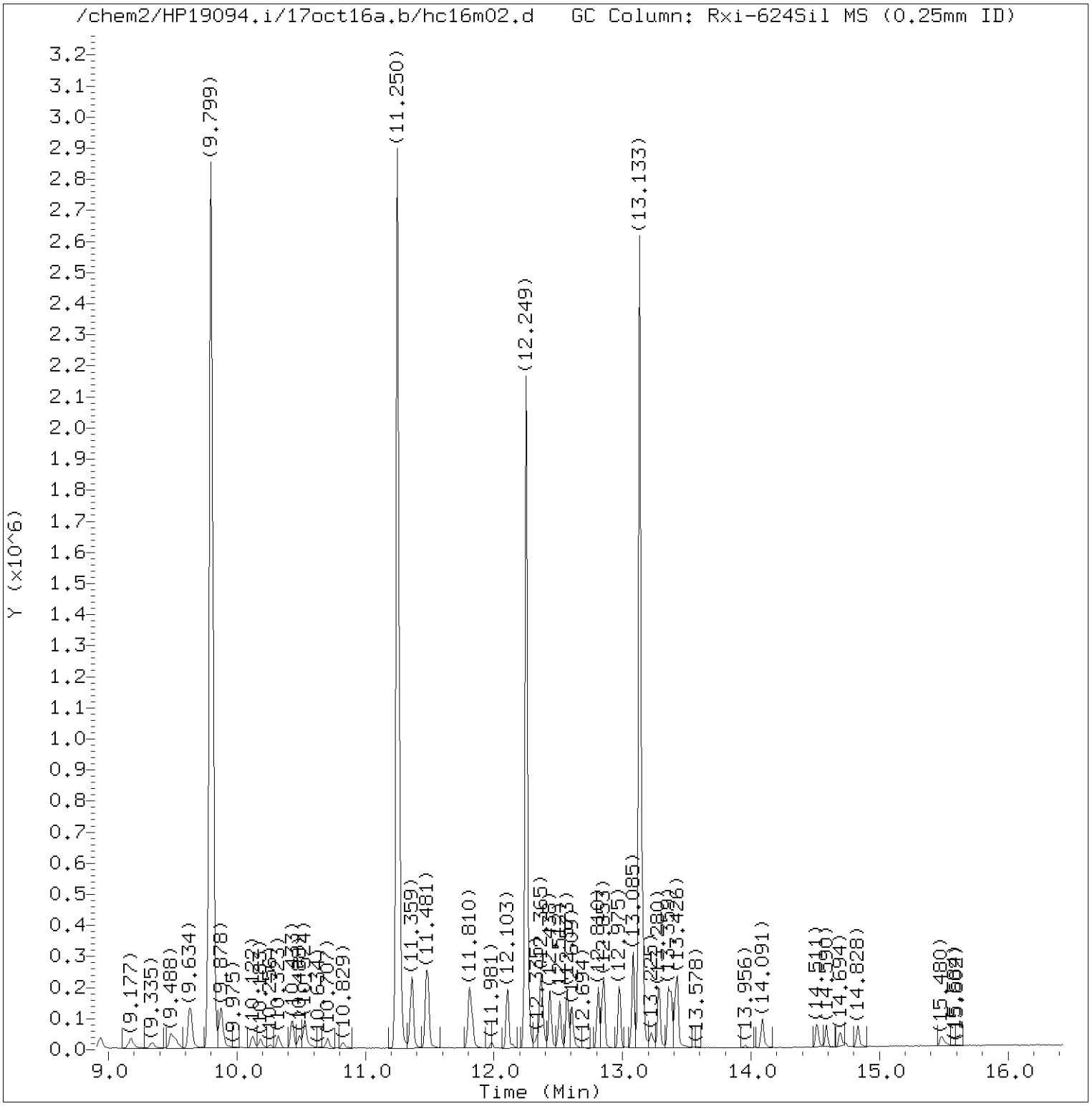
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

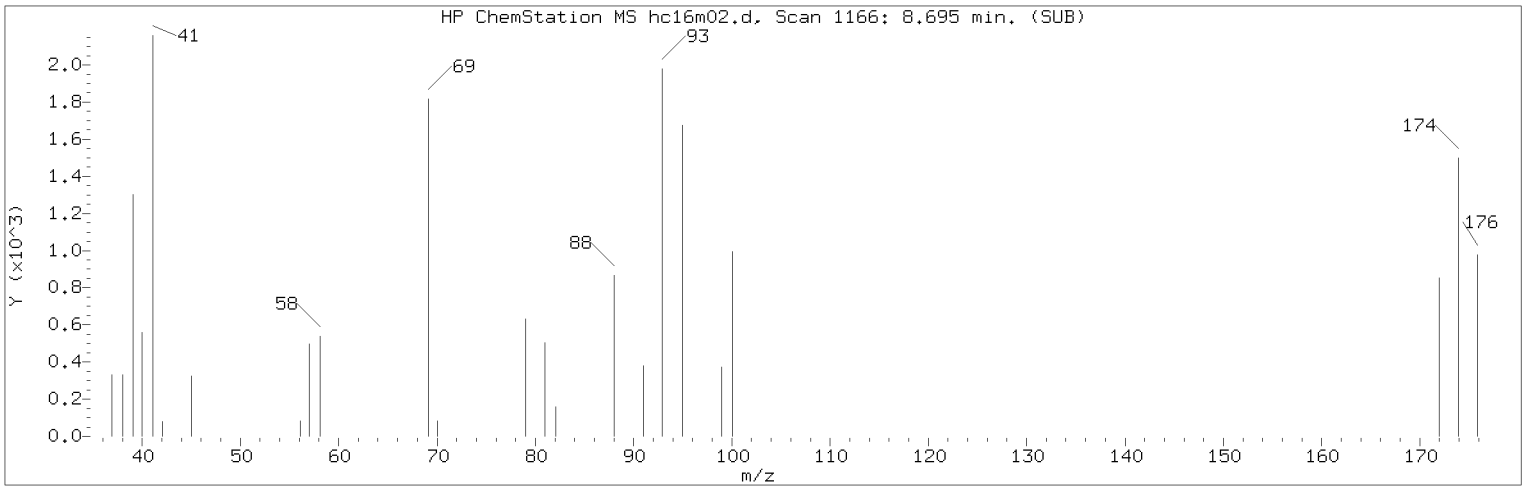
Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	85164	50.000
50)$Dibromofluoromethane	(2)	6.885	113	526844	9.820
57)$1,2-Dichloroethane-d4	(2)	7.342	102	81733	9.729
63)*Fluorobenzene	(2)	7.787	96	2221581	10.000
72) 1,4-Dioxane	(1)	8.695	88	1843M	11.974
82)$Toluene-d8	(3)	9.799	98	2193085	10.409
97)*Chlorobenzene-d5	(3)	11.250	117	1449707	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	629888	9.842
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	606801	10.000

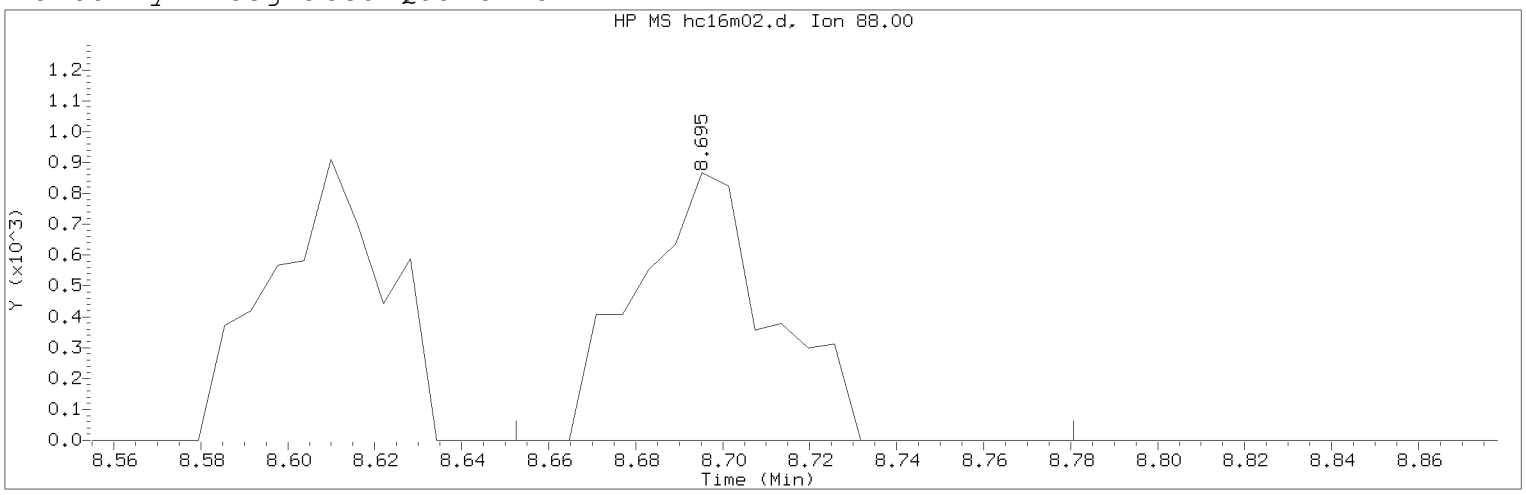
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

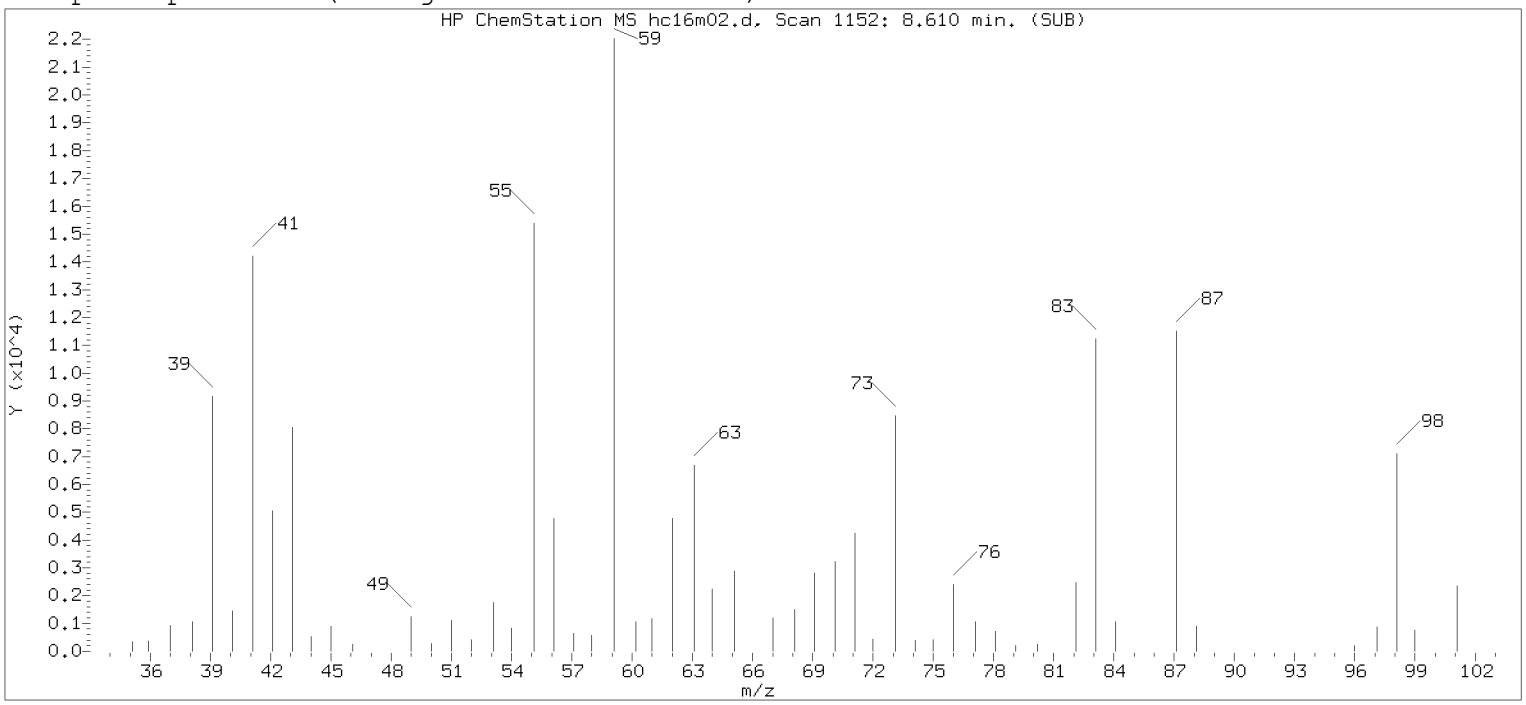
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 88.00
Area (flag) : 1843M
On-Column Amount (ng) : 11.9737
Integration start scan : 1158 Integration stop scan: 1179
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

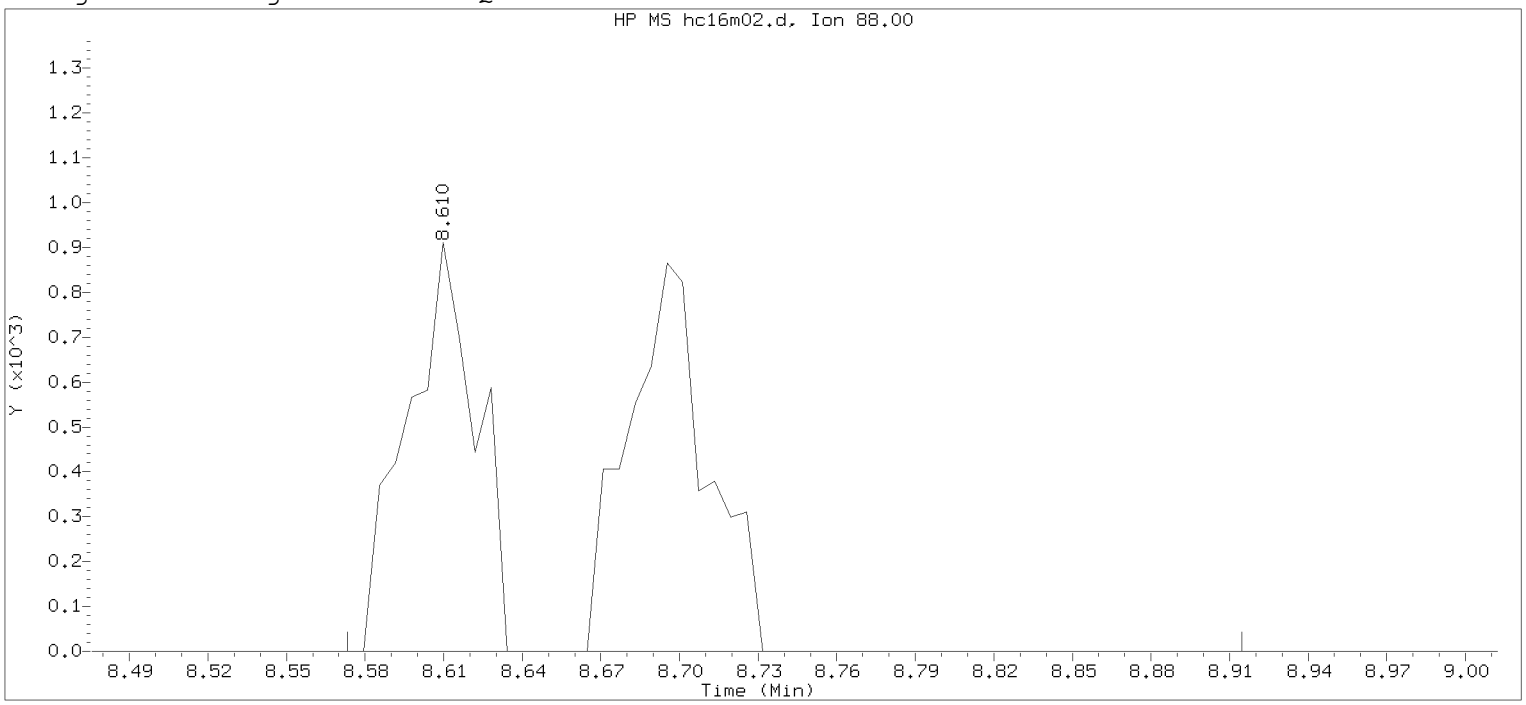
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



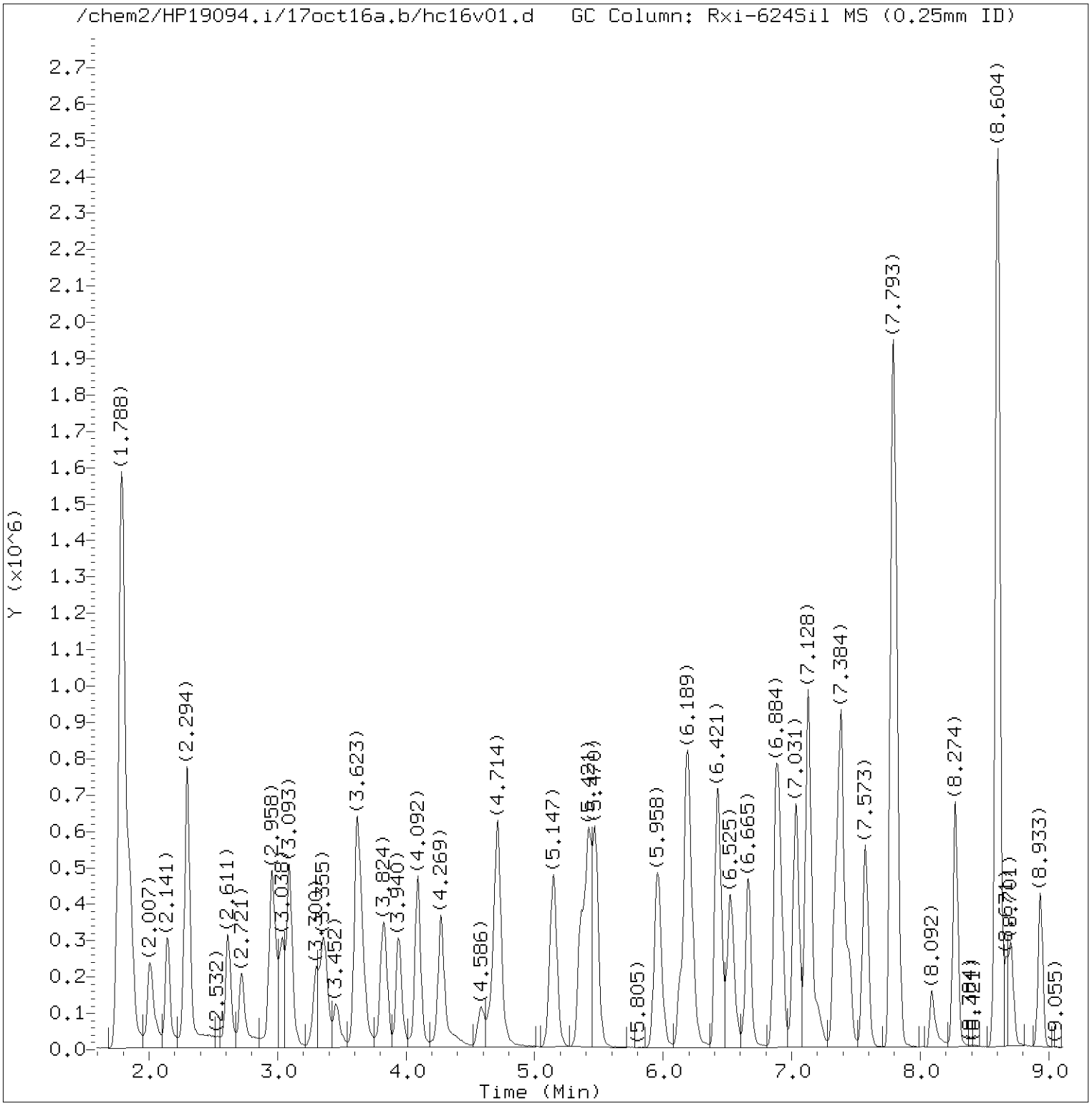
Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 Automation

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1152		
Retention Time (minutes)	: 8.610		
Quant Ion	: 88.00		
Area	: 3519		
On-column Amount (ng)	: 21.8242		
Integration start scan	: 1145	Integration stop scan:	1201
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/17/2017 at 11:50.
Target 3.5 esignature user kasposito



Total Ion Chromatogram (TIC)

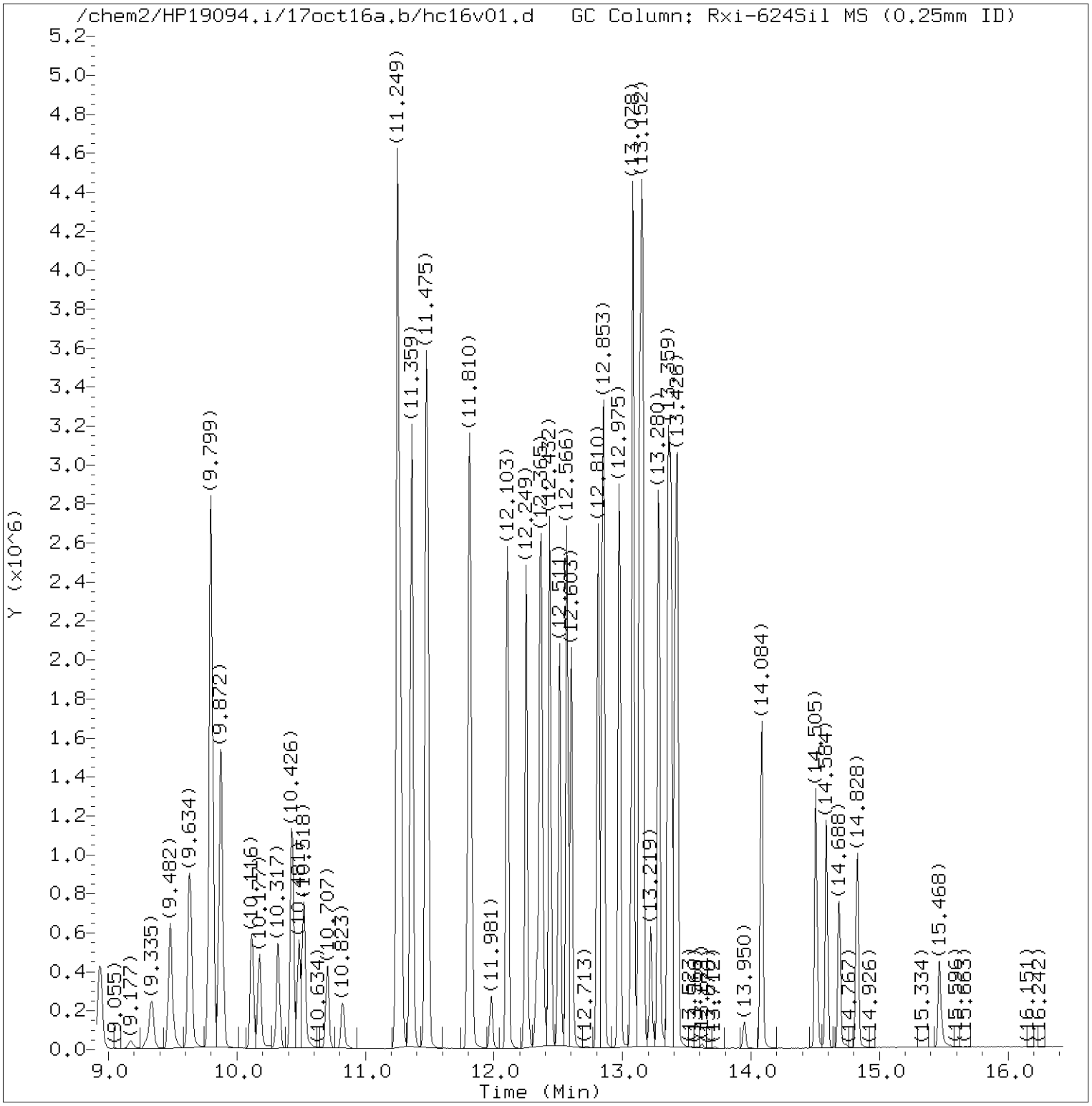
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	413321	4.309
2) Chloromethane	(2)	2.141	50	424516	4.482
5) Vinyl Chloride	(2)	2.282	62	404202	4.643
6) 1,3-Butadiene	(2)	2.300	39	420903	5.116
7) Bromomethane	(2)	2.611	94	283129	4.781
8) Chloroethane	(2)	2.721	64	229318	4.627
9) Dichlorofluoromethane	(2)	2.952	67	670407	4.619
10) Trichlorofluoromethane	(2)	3.038	101	573082	4.942
11) Ethyl ether	(2)	3.300	59	181378	4.900
12) Freon 123a	(2)	3.361	67	361652	4.985
13) Acrolein	(1)	3.458	56	191119	39.706
14) Acetone	(1)	3.617	43	233441M	37.872
15) 1,1-Dichloroethene	(2)	3.617	96	246650	5.316
16) Freon 113	(2)	3.647	101	266826	5.165
17) Methyl Iodide	(2)	3.818	142	453113	4.903
18) Carbon Disulfide	(2)	3.940	76	713202	4.803
21) Methyl Acetate	(1)	4.056	43	95265	5.134
22) Allyl Chloride	(2)	4.092	41	494909	4.702
26)*t-Butyl Alcohol-d10	(1)	4.251	65	76615M	50.000
23) Methylene Chloride	(2)	4.269	84	266383	5.033
28) t-Butyl Alcohol	(1)	4.385	59	116012	55.580
29) Acrylonitrile	(1)	4.580	53	215161	28.453
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	585342	5.108
31) trans-1,2-Dichloroethene	(2)	4.714	96	274416	5.231
32) n-Hexane	(2)	5.141	57	460938	4.976
33) 1,1-Dichloroethane	(2)	5.360	63	554886	5.142
34) di-Isopropyl Ether	(2)	5.421	45	1051648	5.164
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	507991	5.018
37) Ethyl t-butyl ether	(2)	5.958	59	829899	5.079
40) 1,2-Dichloroethene (Total)	(2)		96	589551	10.485
38) 2-Butanone	(1)	6.128	43	475763	39.294
39) cis-1,2-Dichloroethene	(2)	6.183	96	315135	5.254
42) Propionitrile	(1)	6.196	54	114519	41.008
41) 2,2-Dichloropropane	(2)	6.208	77	471083	5.169
45) Methacrylonitrile	(1)	6.427	67	434229	42.787
47) Bromochloromethane	(2)	6.525	128	116227	4.926
48) Tetrahydrofuran	(1)	6.537	71	75379	27.451
49) Chloroform	(2)	6.665	83	535513	5.139

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	538774	10.231
51) 1,1,1-Trichloroethane	(2)	6.915	97	478338	5.091
52) Cyclohexane	(2)	7.031	56	546402	4.758
55) 1,1-Dichloropropene	(2)	7.128	75	423921	5.101
54) Carbon Tetrachloride	(2)	7.134	117	423055	5.155
56) Isobutyl Alcohol	(1)	7.208	41	104070	123.300
57)$1,2-Dichloroethane-d4	(2)	7.342	102	85434M	10.359
58) Benzene	(2)	7.384	78	1165954	5.130
59) 1,2-Dichloroethane	(2)	7.451	62	317810	5.000
60) t-Amyl methyl ether	(2)	7.573	73	675228	5.092
63)*Fluorobenzene	(2)	7.787	96	2180817	10.000
62) n-Heptane	(2)	7.811	43	557321	5.039
65) n-Butanol	(1)	8.085	56	163918	264.011
67) Trichloroethene	(2)	8.274	95	309863	5.090
70) 1,2-Dichloropropane	(2)	8.598	63	311979	5.289
69) Methylcyclohexane	(2)	8.604	83	536719	5.128
71) Methyl Methacrylate	(1)	8.665	69	116826	5.794
72) 1,4-Dioxane	(1)	8.683	88	21676M	156.524
73) Dibromomethane	(2)	8.707	93	126747	5.136
74) Bromodichloromethane	(2)	8.933	83	371354	5.215
76) 2-Nitropropane	(1)	9.171	41	35680	5.190
80) cis-1,3-Dichloropropene	(2)	9.482	75	429743	5.199
81) 4-Methyl-2-Pentanone	(1)	9.634	43	842881	28.413
82)$Toluene-d8	(3)	9.799	98	2178183	9.779
83) Toluene	(3)	9.878	92	737581	5.067
84) trans-1,3-Dichloropropene	(3)	10.116	75	331256	4.983
85) 1,3-Dichloropropene (total)	(3)		75	760999	10.182
86) Ethyl Methacrylate	(3)	10.177	69	256409	5.163
88) 1,1,2-Trichloroethane	(3)	10.317	97	176788	5.202
89) Tetrachloroethene	(3)	10.426	166	352722	5.163
90) 1,3-Dichloropropane	(3)	10.481	76	309707	5.125
91) 2-Hexanone	(1)	10.518	43	574347	26.870
93) Dibromochloromethane	(3)	10.707	129	226178	5.096
95) 1,2-Dibromoethane	(3)	10.823	107	164196	5.113
97)*Chlorobenzene-d5	(3)	11.249	117	1532756	10.000
98) Chlorobenzene	(3)	11.274	112	791430	5.102
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	281608	5.155
100) Ethylbenzene	(3)	11.359	91	1492561	5.099

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$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

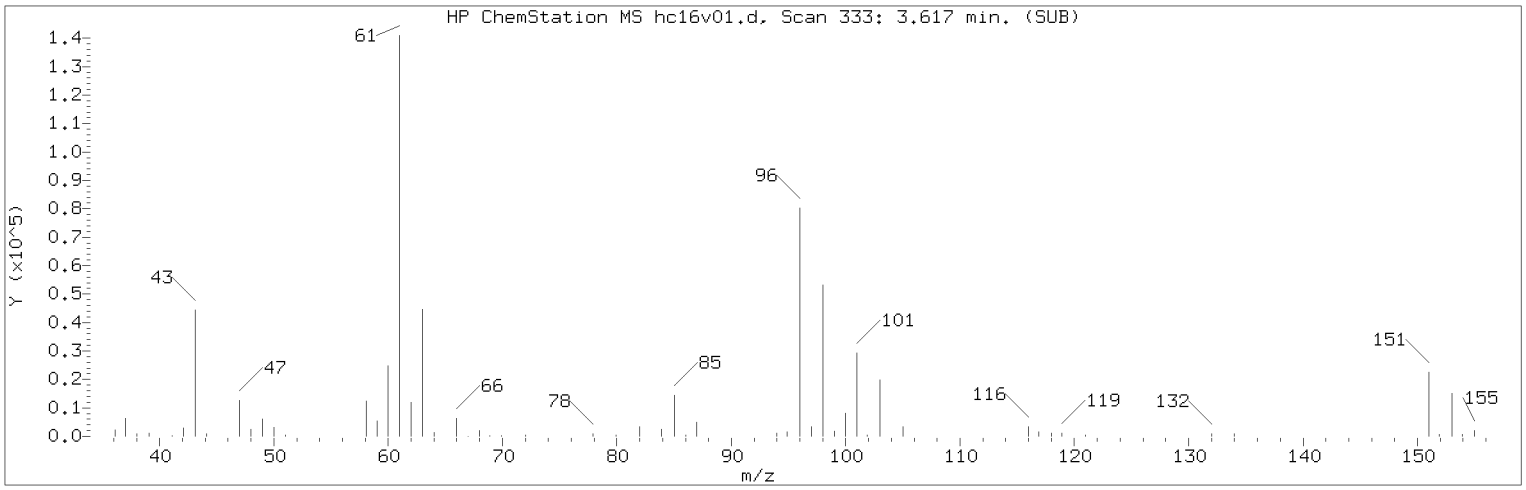
Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.475	106	1130069	10.245
105) Xylene (Total)	(3)		106	1674144	15.290
104) o-Xylene	(3)	11.804	106	544075	5.044
106) Styrene	(3)	11.816	104	880660	5.227
107) Bromoform	(3)	11.981	173	121209	5.032
108) Isopropylbenzene	(3)	12.103	105	1496672	5.169
111)$4-Bromofluorobenzene	(3)	12.249	95	693539	10.250
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	204922	4.706
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	288332	31.417
114) Bromobenzene	(4)	12.371	156	326857	4.759
116) 1,2,3-Trichloropropane	(4)	12.383	110	55385	4.989
117) n-Propylbenzene	(4)	12.432	91	1836231	4.892
119) 2-Chlorotoluene	(4)	12.511	126	343081	4.877
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	1261902	4.852
122) 4-Chlorotoluene	(4)	12.603	126	335125	4.681
125) tert-Butylbenzene	(4)	12.810	134	266628M	4.822
126) Pentachloroethane	(4)	12.841	167	204864	4.762
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	1273025	4.873
128) sec-Butylbenzene	(4)	12.975	105	1672039	4.965
131) 1,3-Dichlorobenzene	(4)	13.078	146	645045	4.824
132) p-Isopropyltoluene	(4)	13.084	119	1412184	5.026
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	706123	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	647505	4.650
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	528102	4.765
136) Benzyl Chloride	(4)	13.219	126	78597	5.064
138) n-Butylbenzene	(4)	13.377	92	715376	5.078
139) 1,2-Dichlorobenzene	(4)	13.408	146	574928	4.825
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	25677	5.783
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	485805	4.901
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	370173	4.534
146) Hexachlorobutadiene	(4)	14.590	225	198260	5.147
147) Naphthalene	(4)	14.688	128	546885	4.117
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	290826	4.231

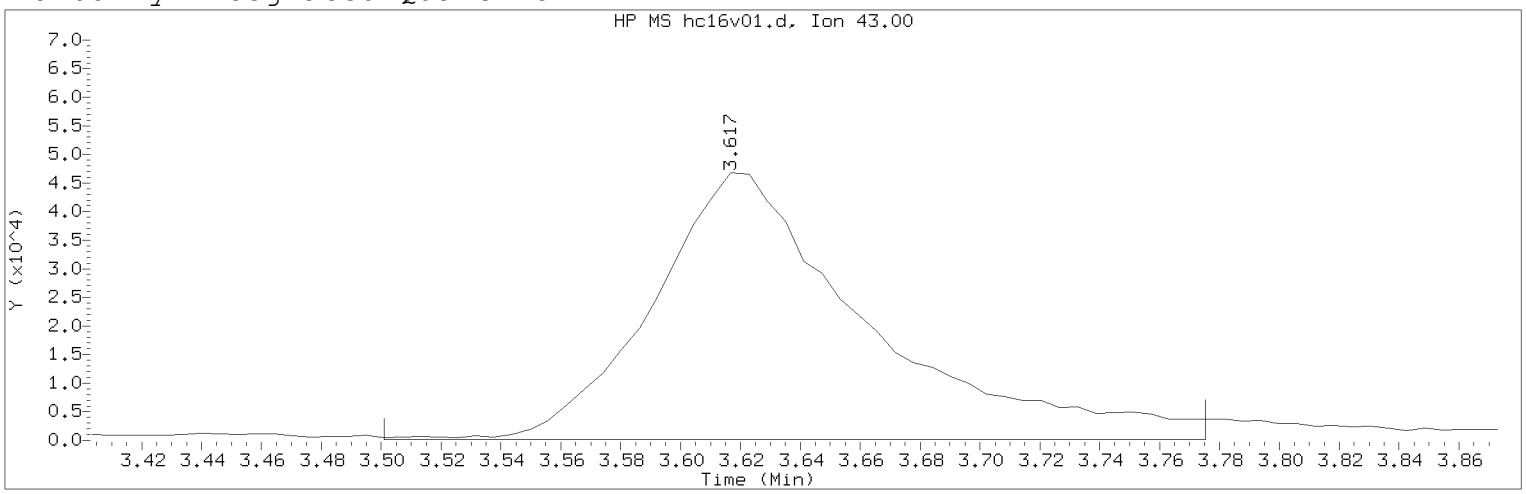
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

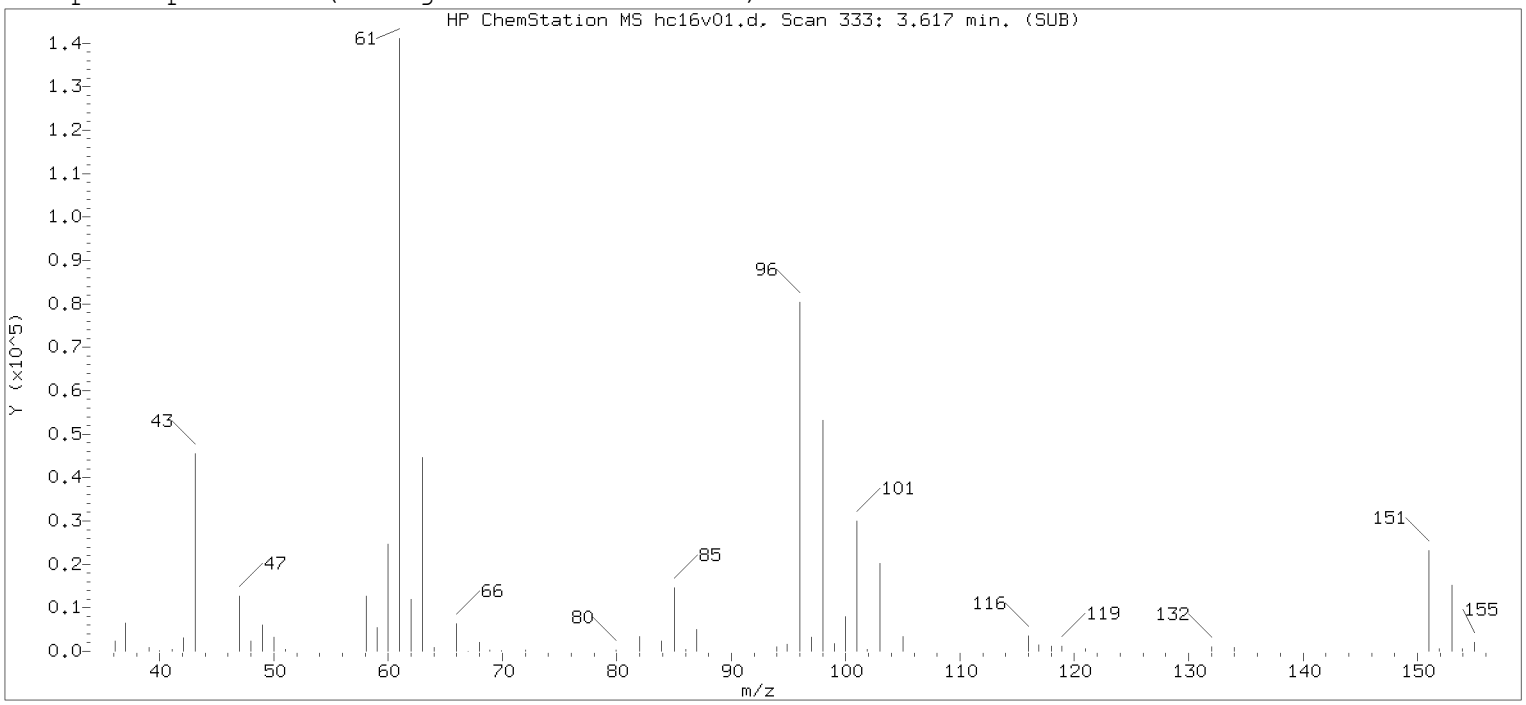
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area (flag) : 233441M
On-Column Amount (ng) : 37.8718
Integration start scan : 313 Integration stop scan: 358
Y at integration start : 116 Y at integration end: 124

Reason for manual integration: improper integration

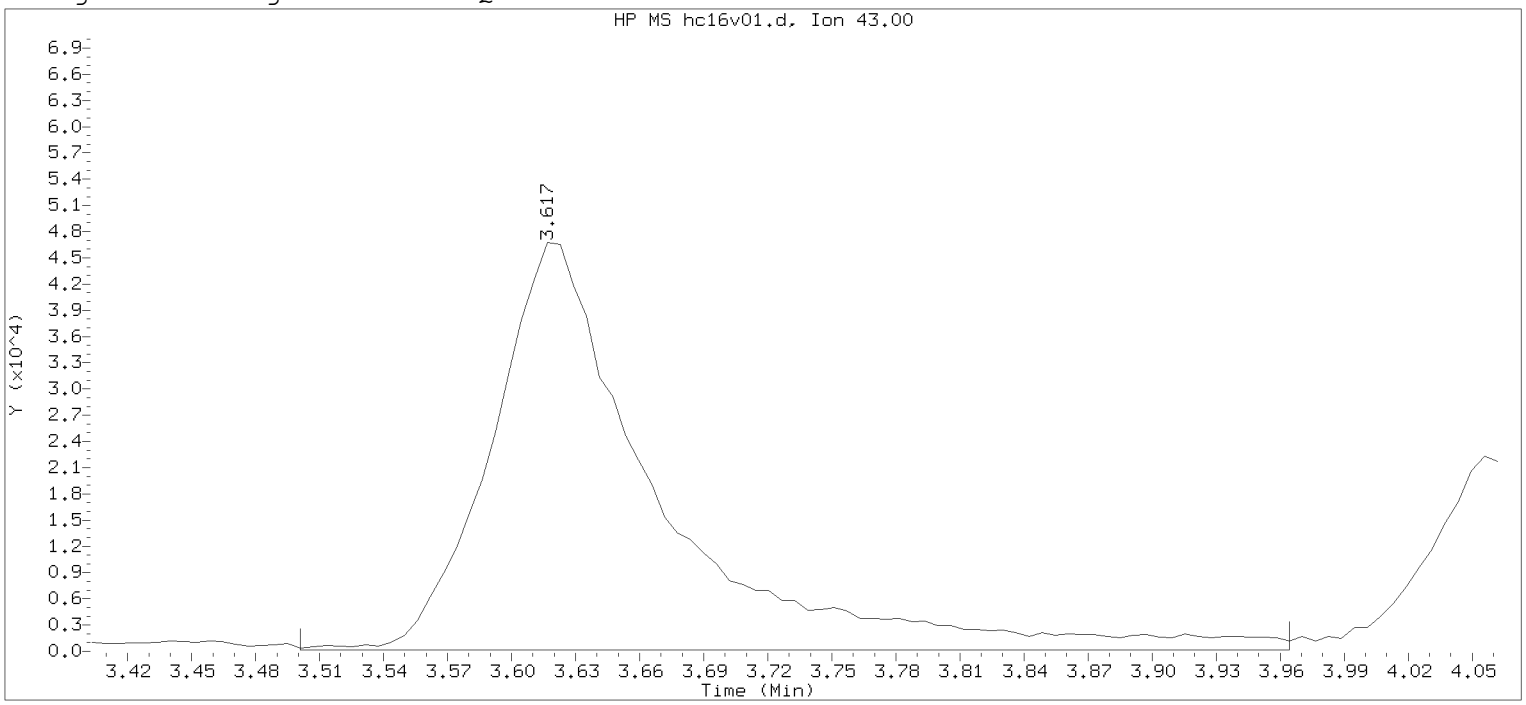
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

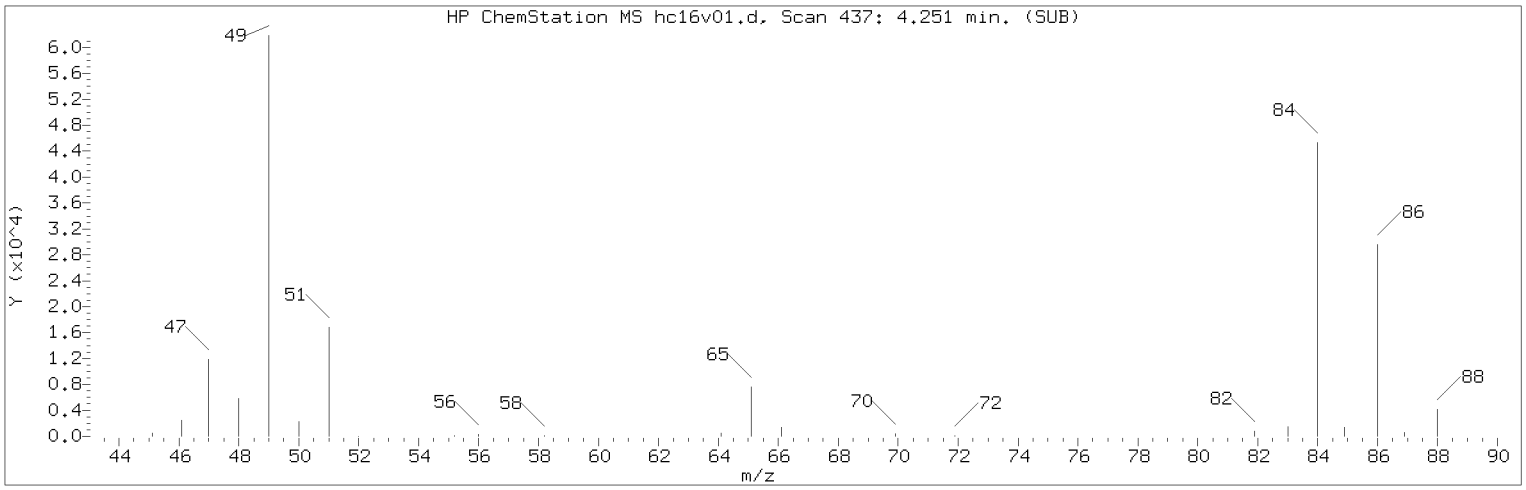
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

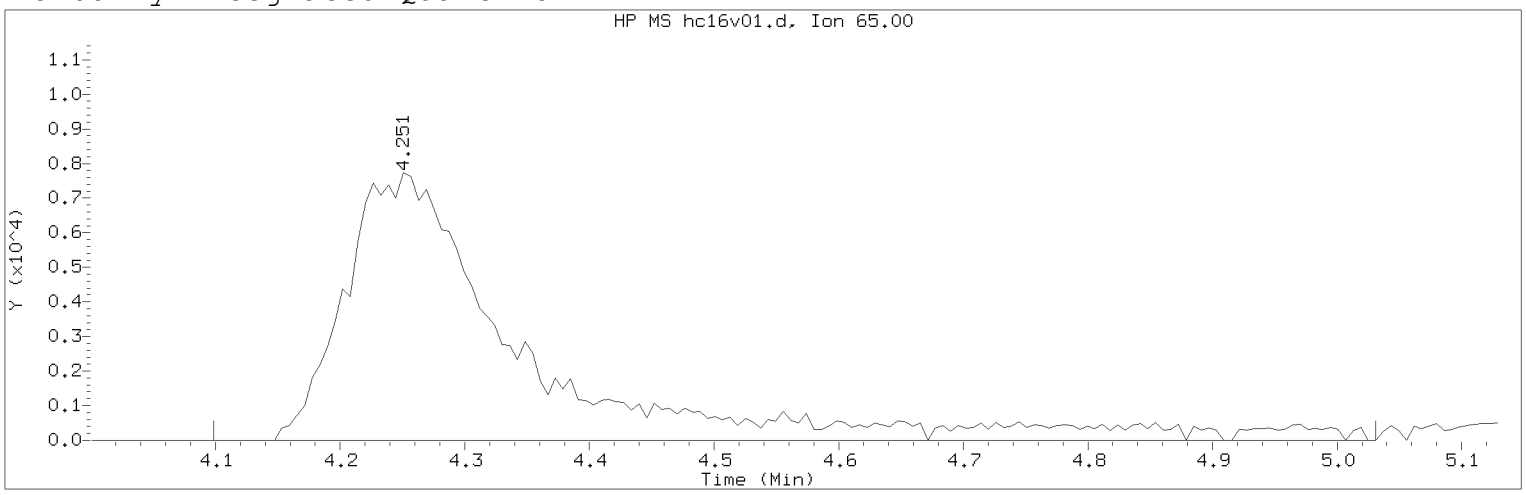
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area : 255331
On-column Amount (ng) : 45.7588
Integration start scan : 313 Integration stop scan: 389
Y at integration start : 116 Y at integration end: 130

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature user kevin.sposito@ae

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

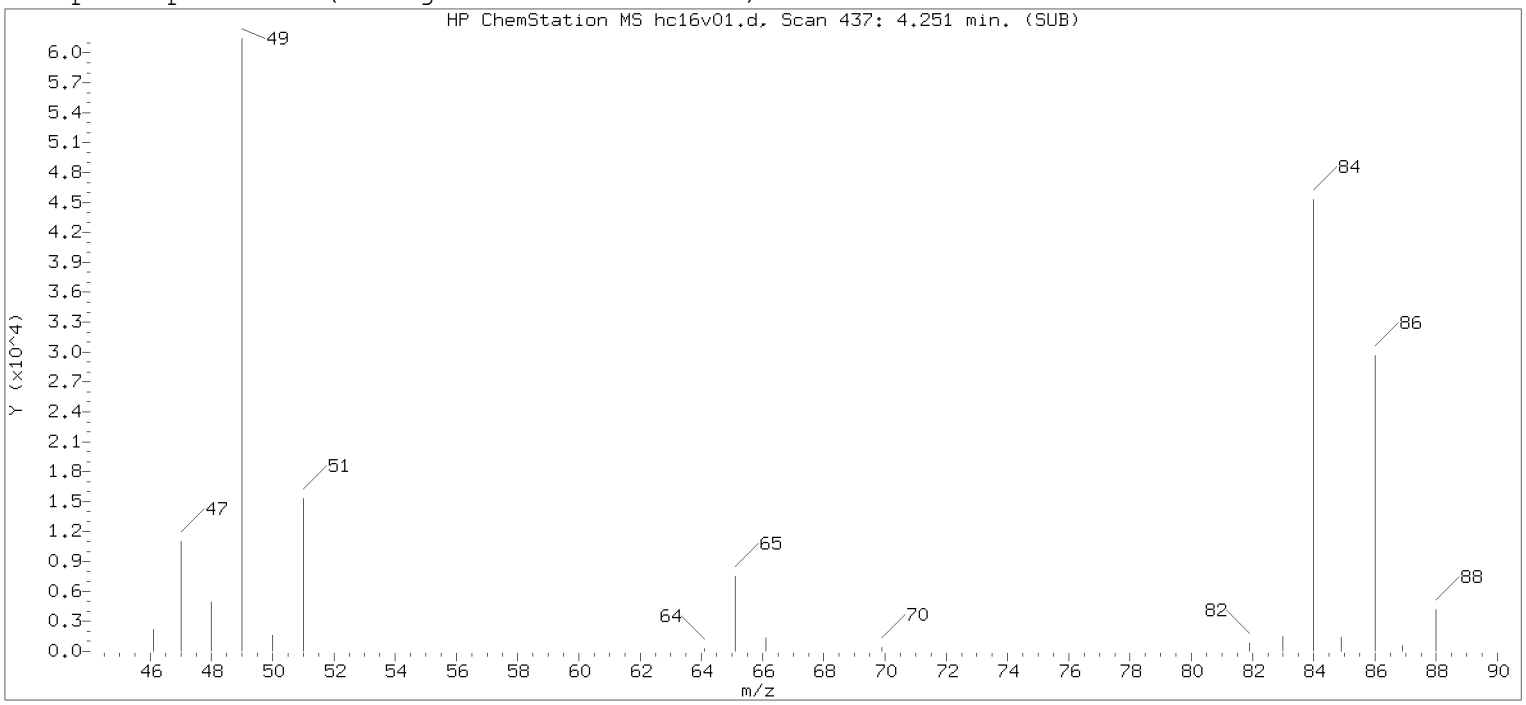
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area (flag) : 76615M
On-Column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

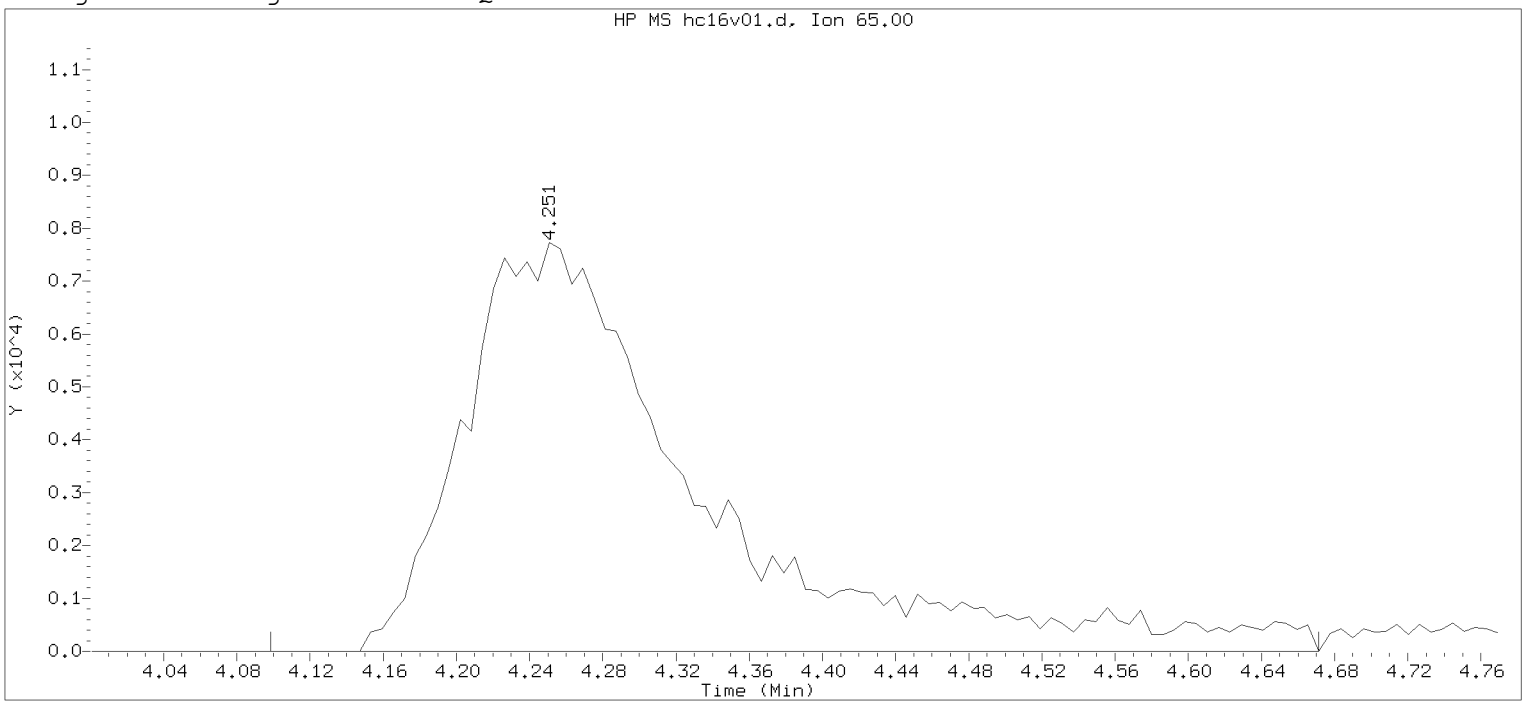
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

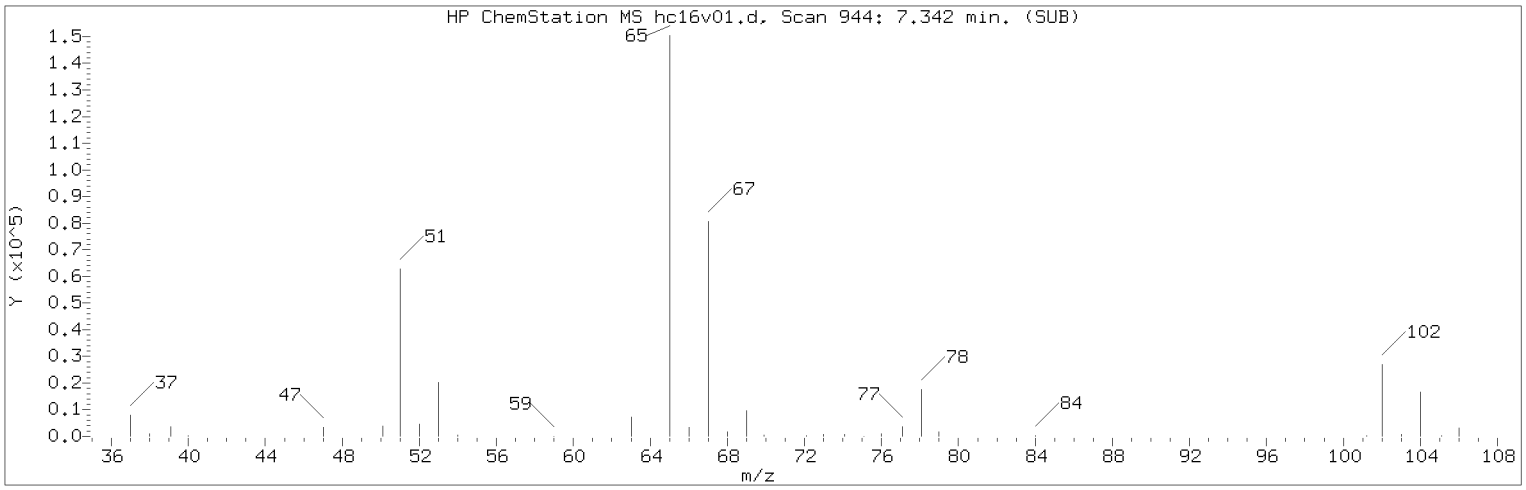
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

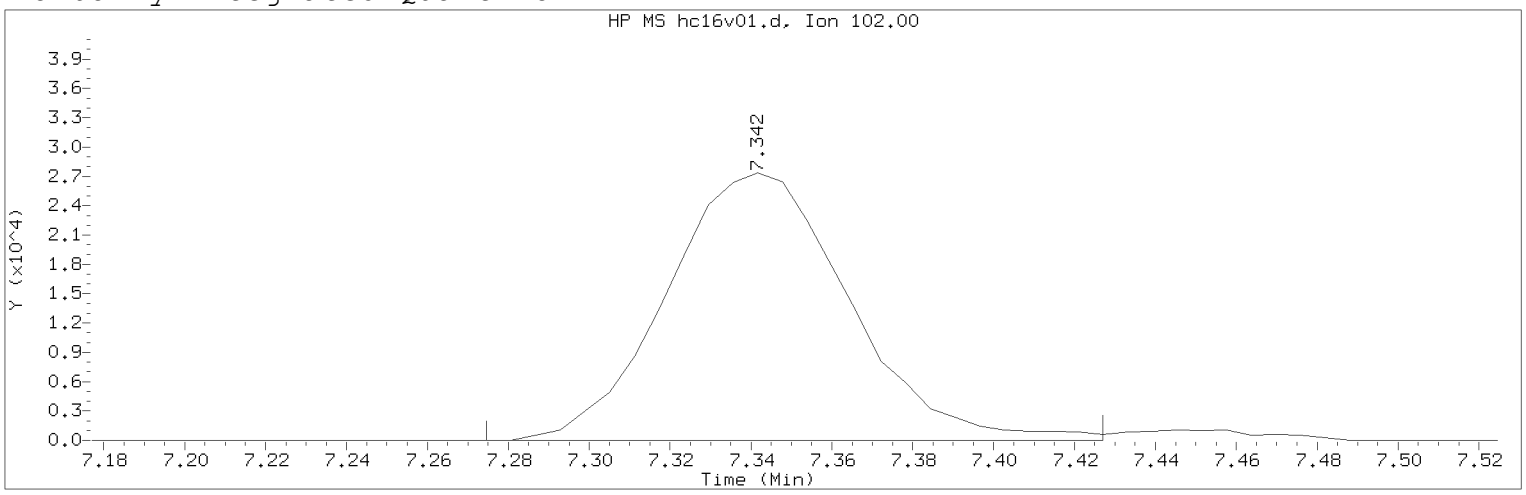
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area : 69355
On-column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

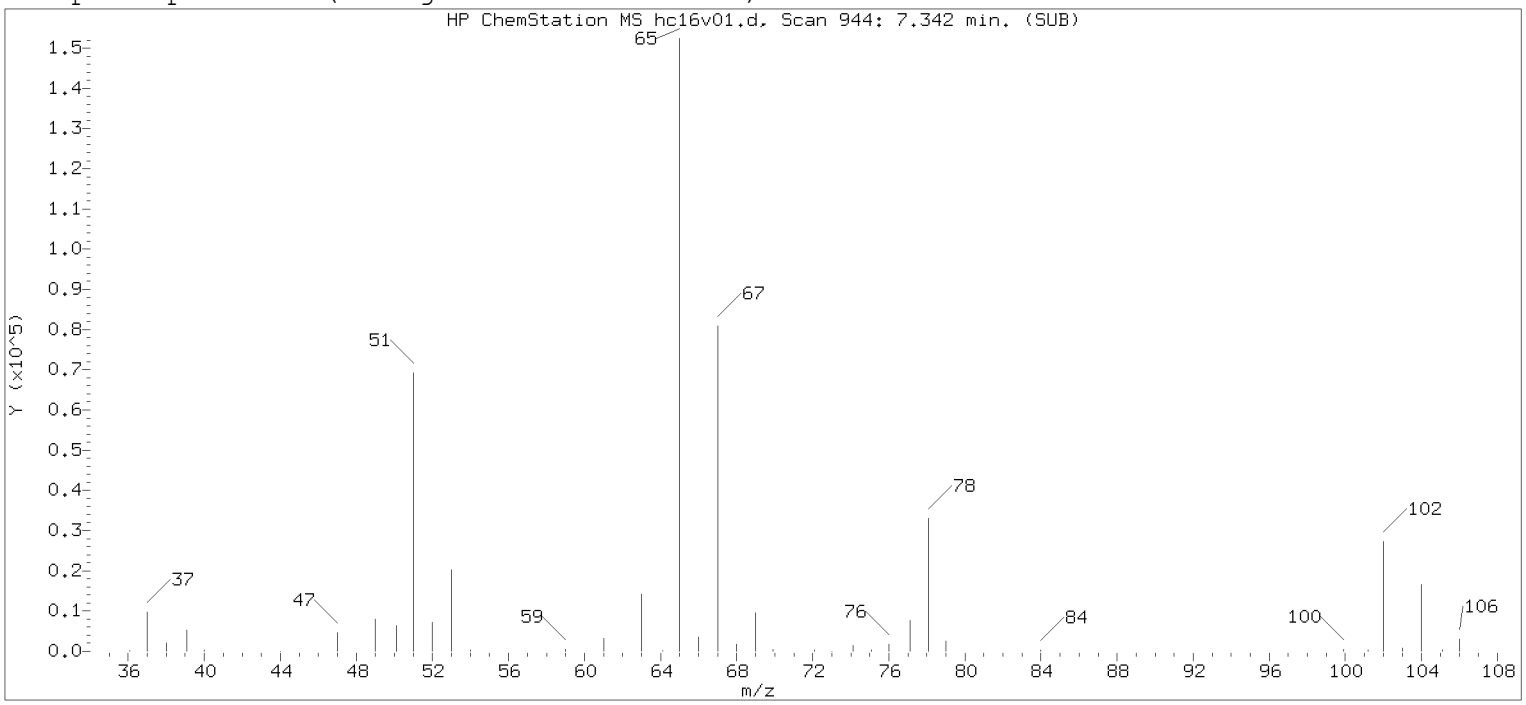
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area (flag) : 85434M
On-Column Amount (ng) : 10.3593
Integration start scan : 932 Integration stop scan: 957
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

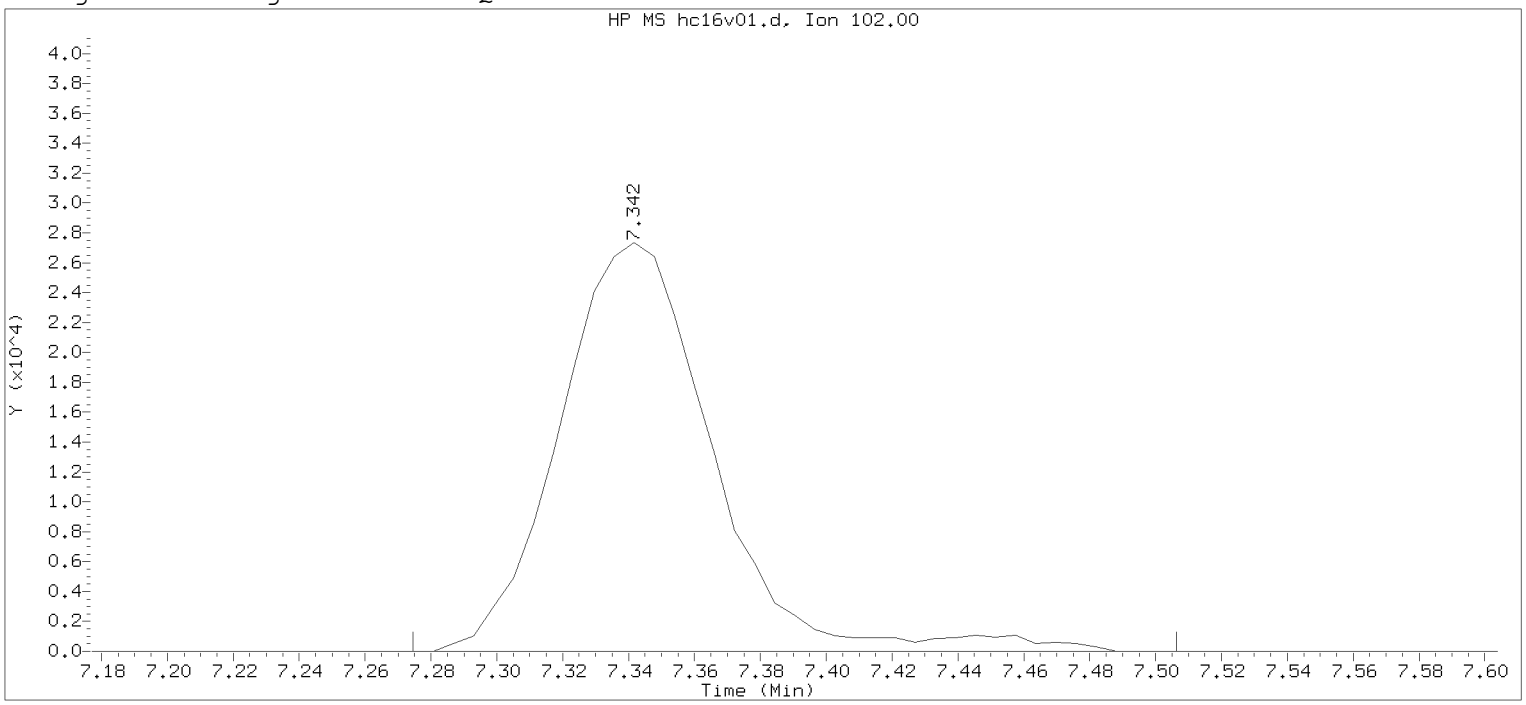
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

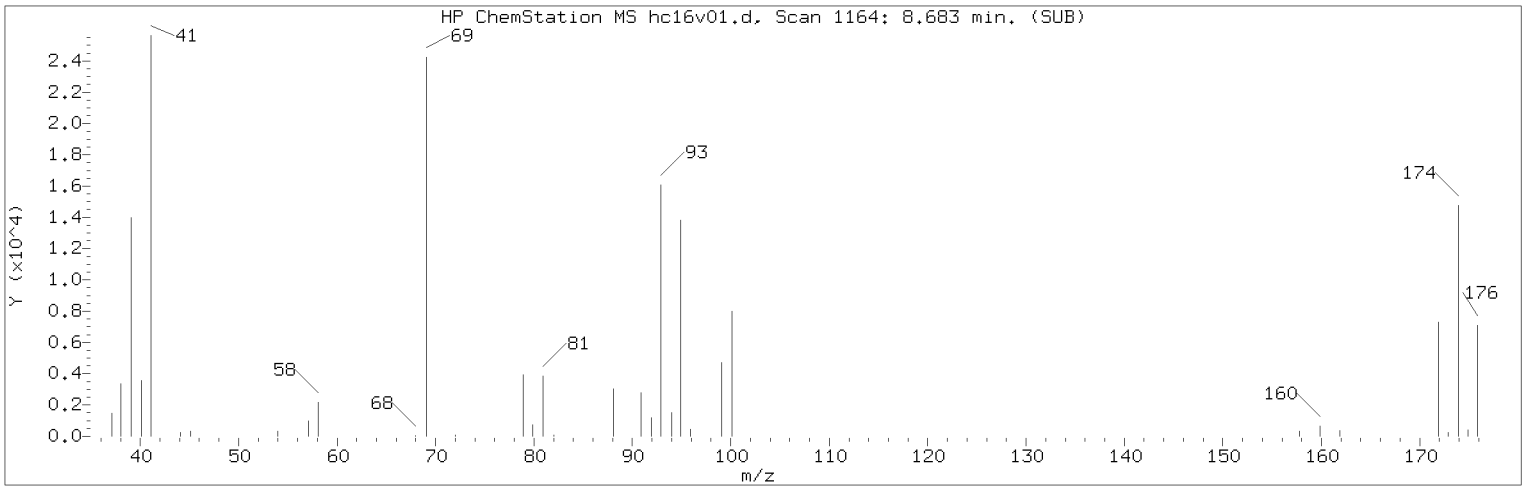
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

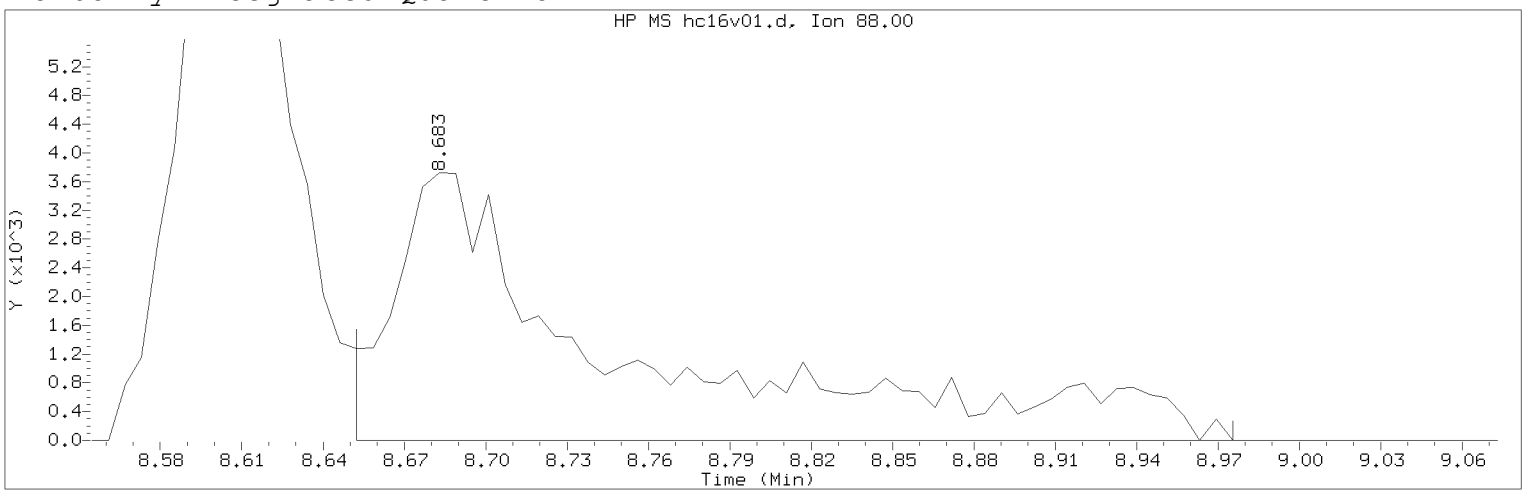
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area : 87912
On-column Amount (ng) : 10.6598
Integration start scan : 932 Integration stop scan: 970
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature user kevin.sposito

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

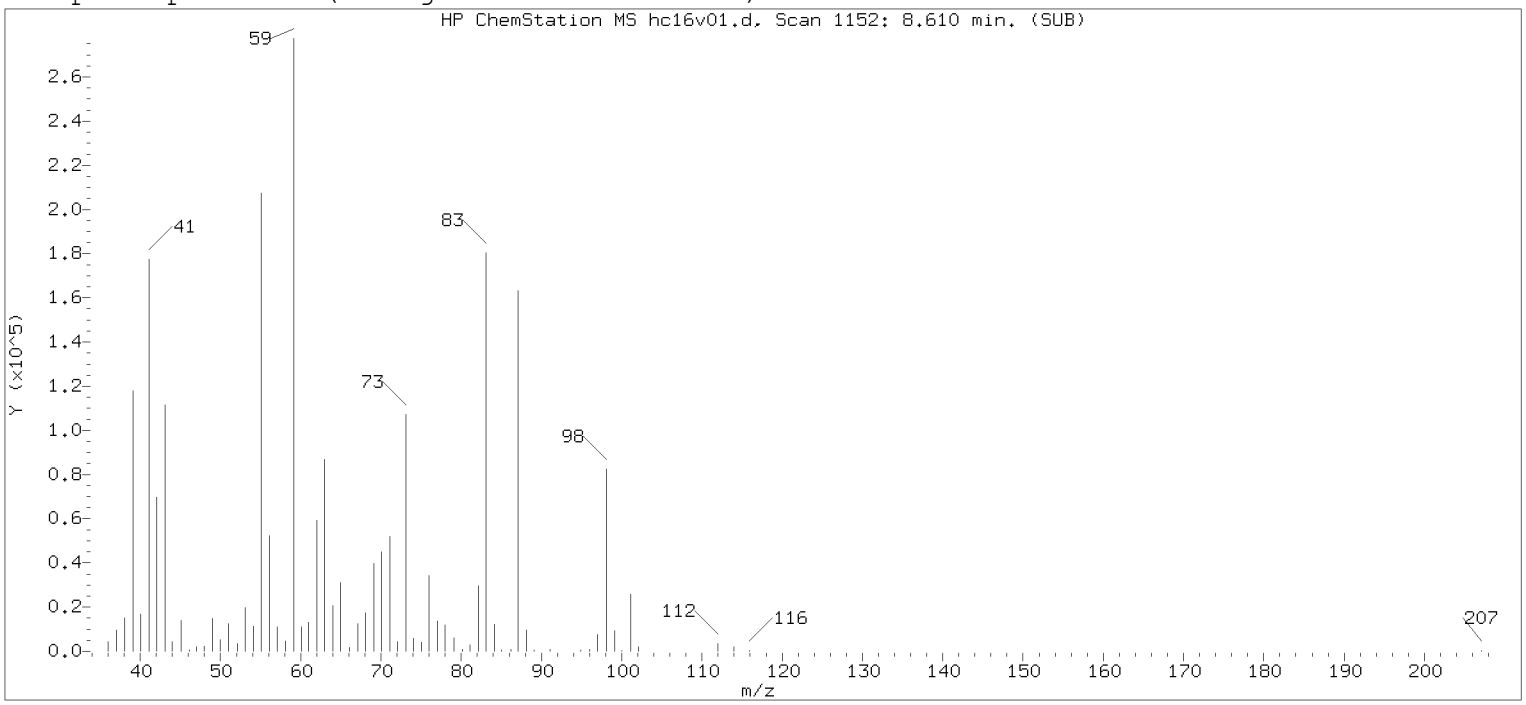
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 21676M
On-Column Amount (ng) : 156.5237
Integration start scan : 1158 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

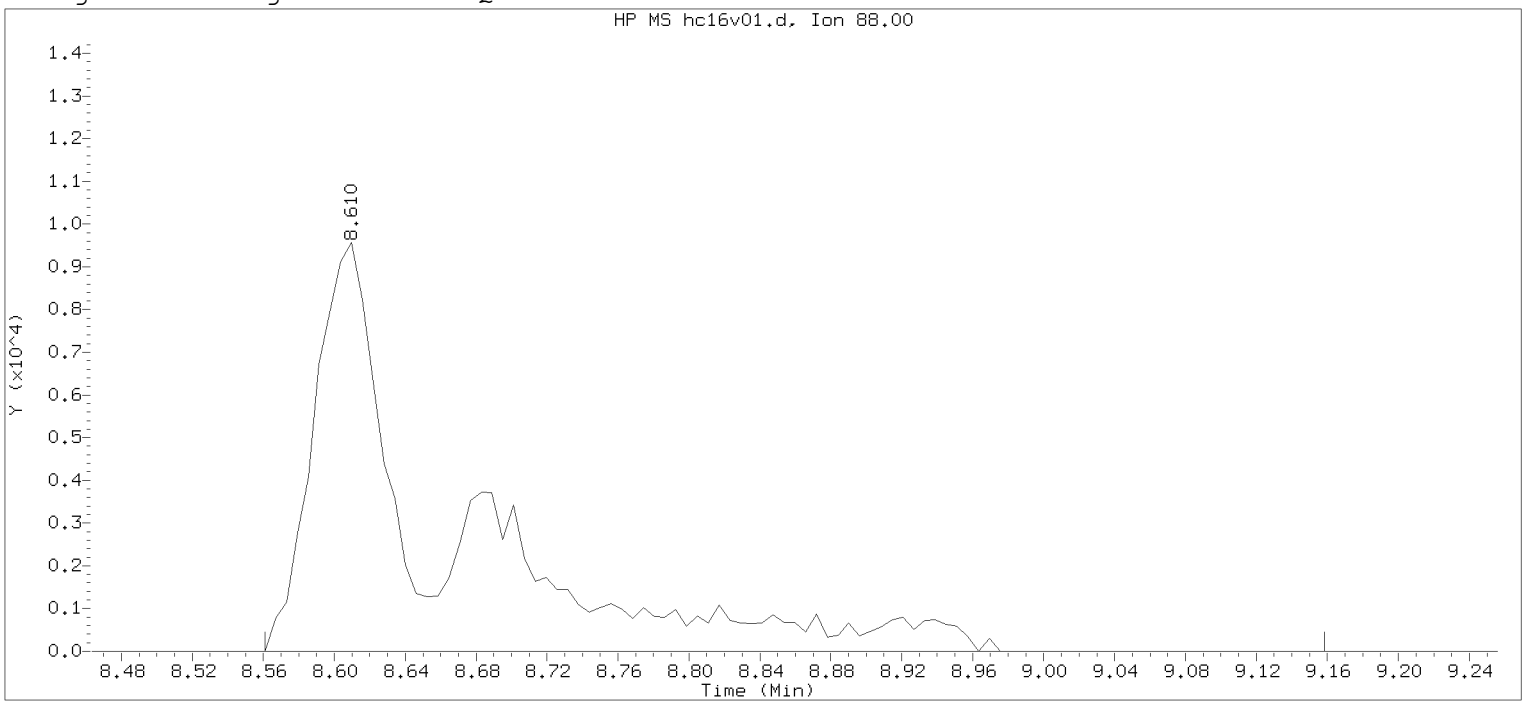
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

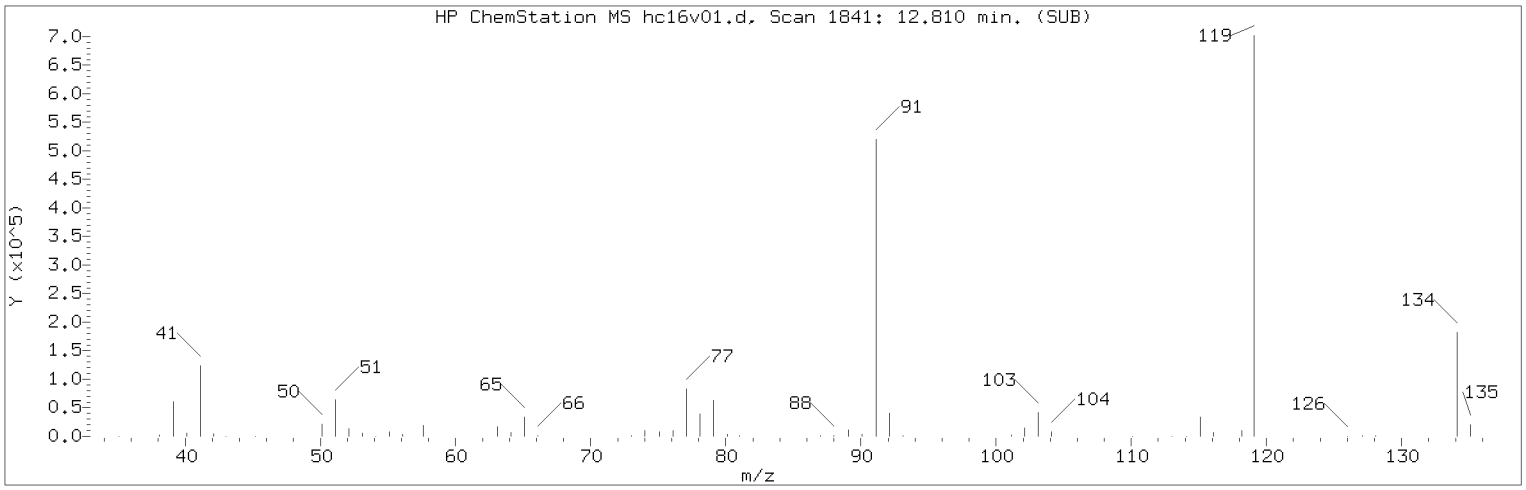
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

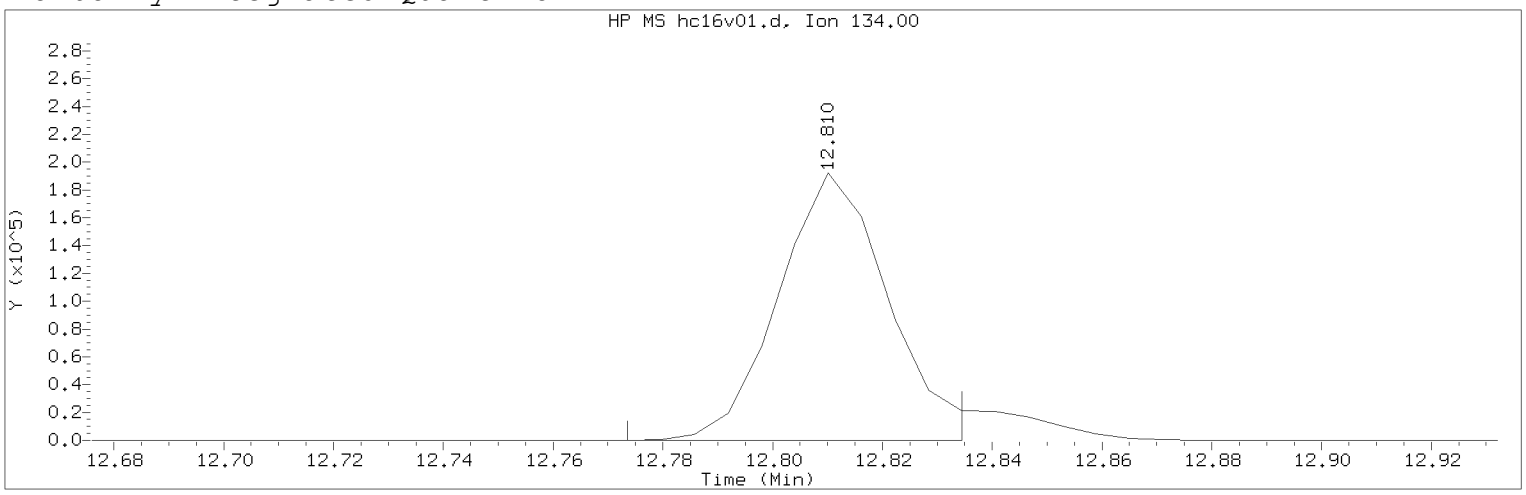
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1152		
Retention Time (minutes)	: 8.610		
Quant Ion	: 88.00		
Area	: 46545		
On-column Amount (ng)	: 371.2853		
Integration start scan	: 1143	Integration stop scan:	1241
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature user kevin.sposito@ae

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

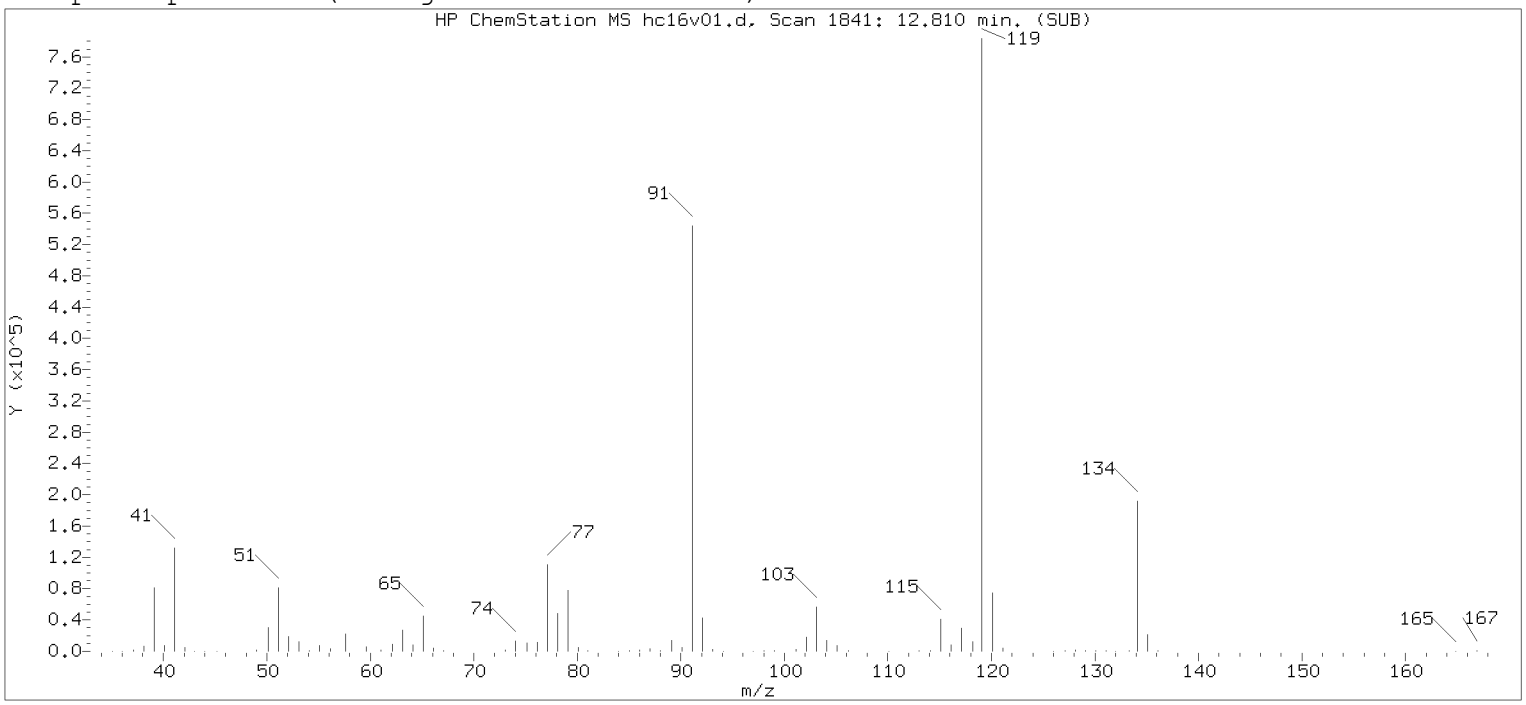
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 266628M
On-Column Amount (ng) : 4.8216
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

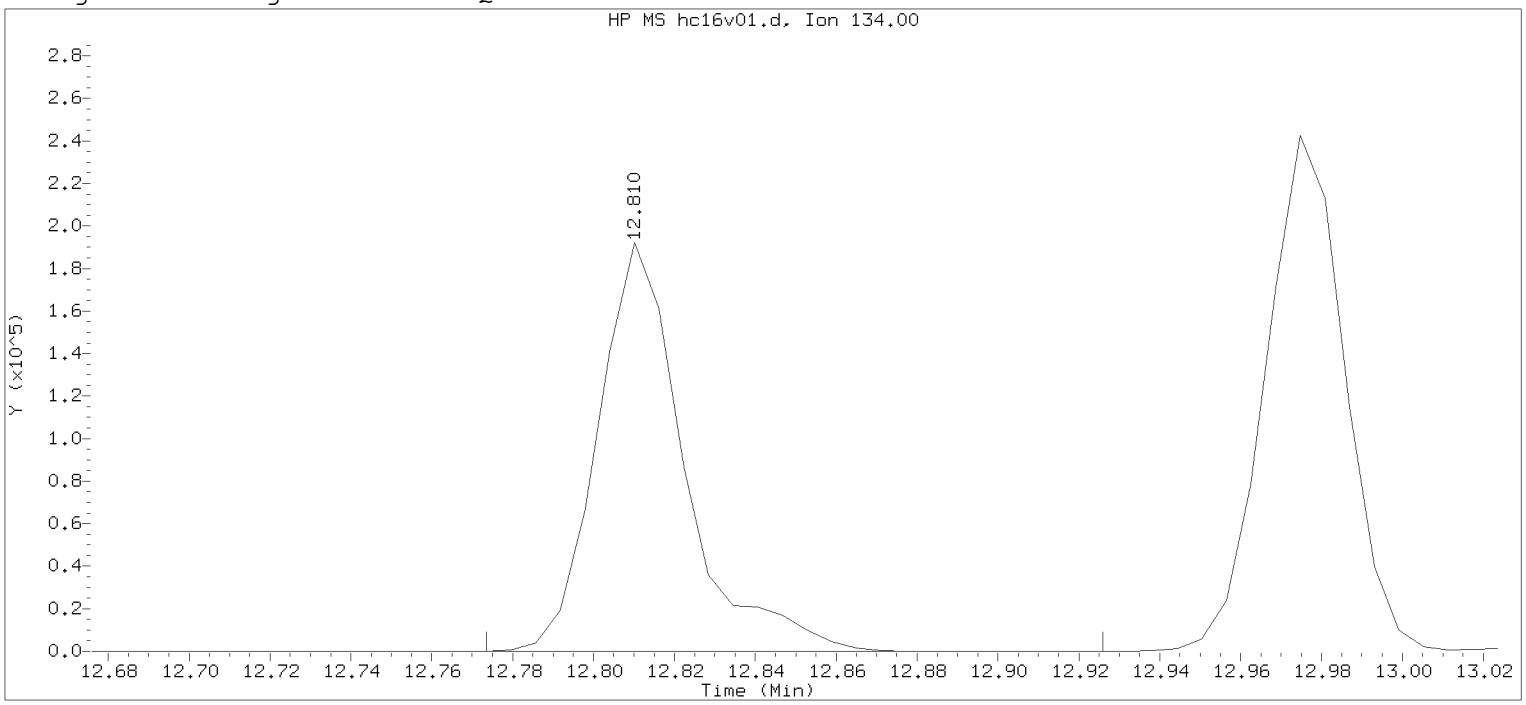
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 286417
On-column Amount (ng) : 5.1795
Integration start scan : 1834 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature user kevin.sposito@

Data File: /chem2/HP19094.i/17oct26b.b/hc26t10.d

Date : 26-OCT-2017 19:51

Client ID: BFB/aug14-17

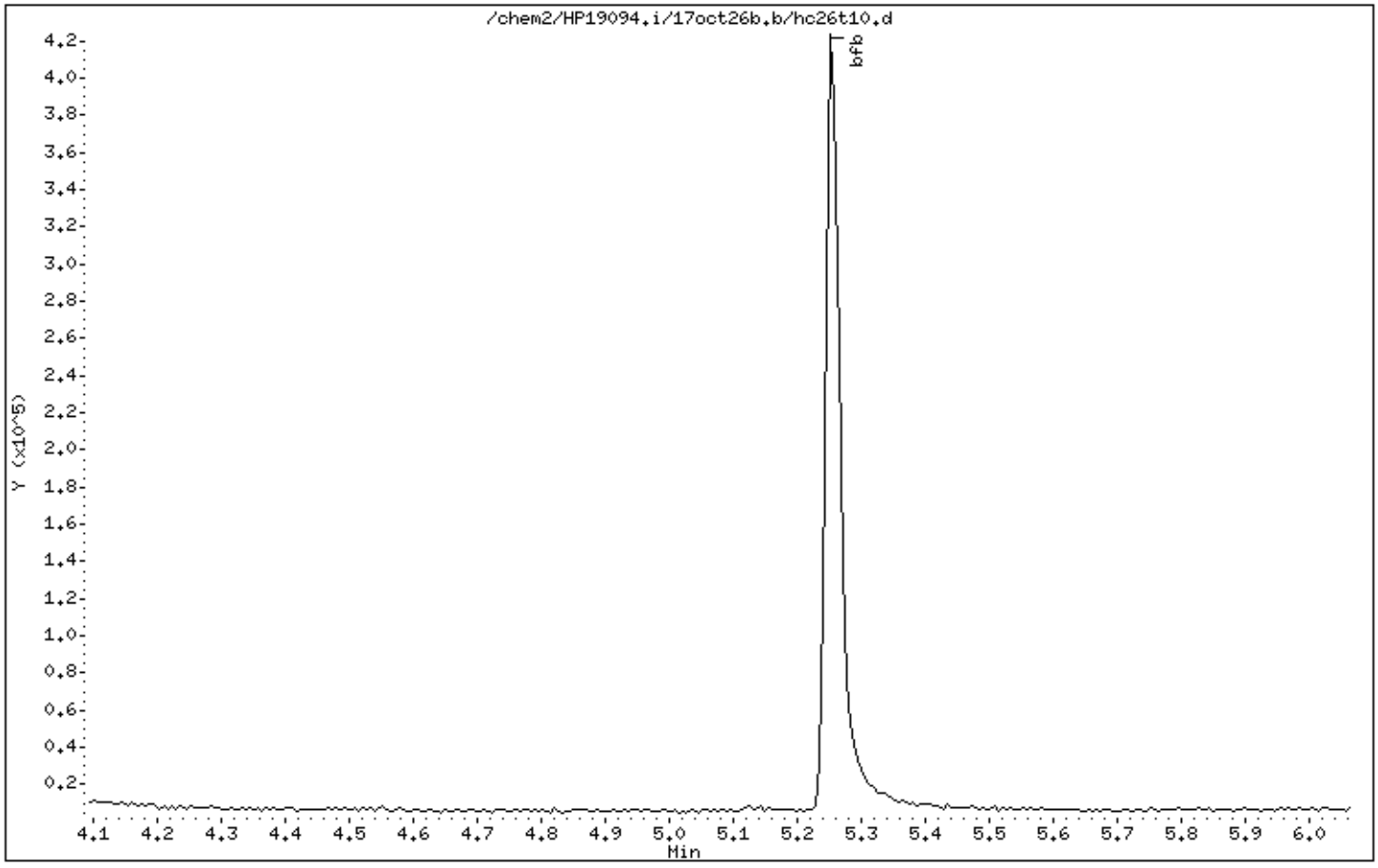
Instrument: HP19094.i

Sample Info: BFB/aug14-17;50NGBFB;1;3;;;;;;

Operator: MSK07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 10/26/2017 at 21:58.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP19094.i/17oct26b.b/hc26t10.d

Date : 26-OCT-2017 19:51

Client ID: BFB/aug14-17

Instrument: HP19094.i

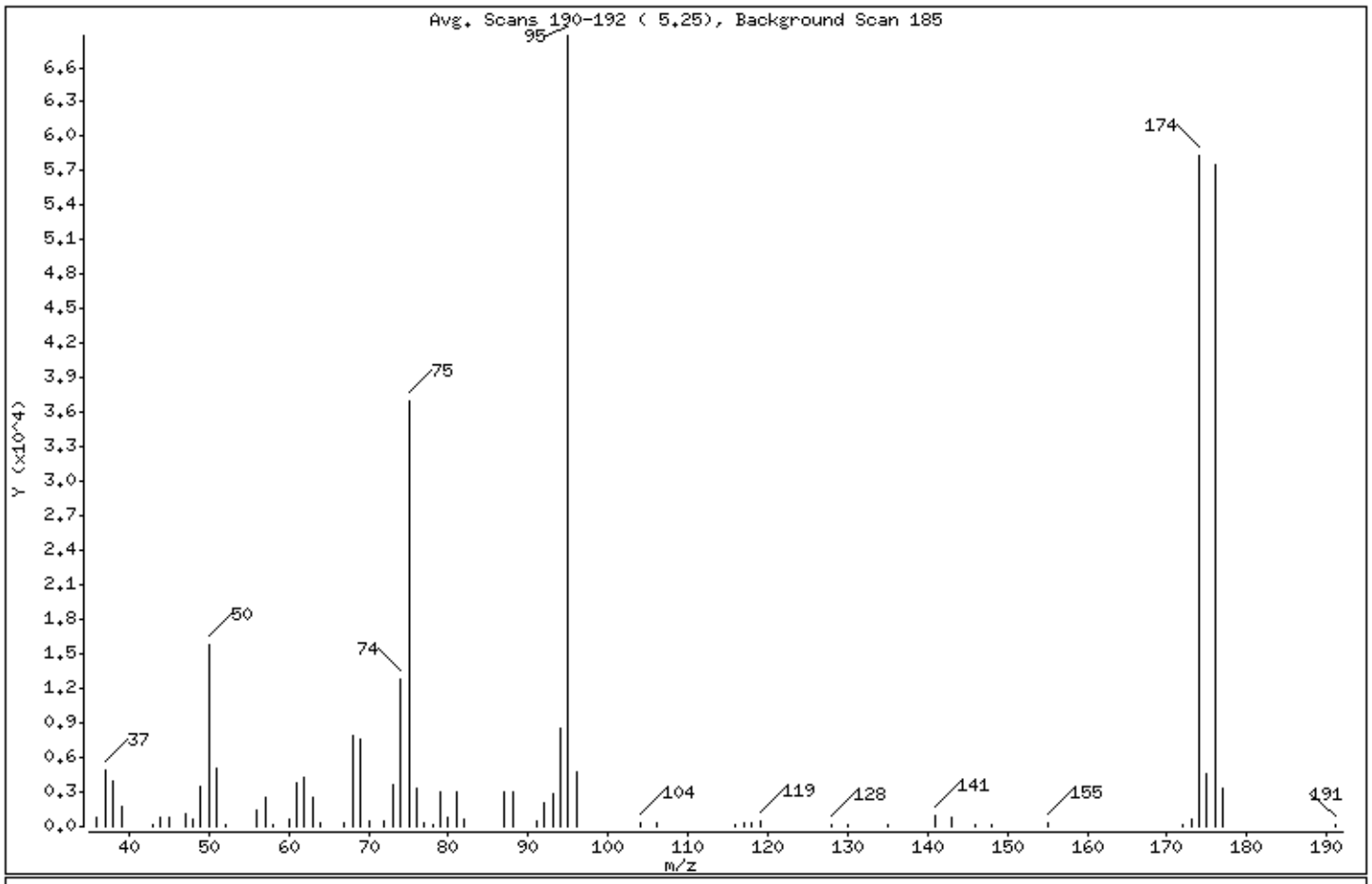
Sample Info: BFB/aug14-17;50NGBFB;1;3;;;;;;

Operator: MSK07970

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	22.91
75	30.00 - 60.00% of mass 95	53.85
96	5.00 - 9.00% of mass 95	6.86
173	Less than 2.00% of mass 174	1.00 (1.17)
174	50.00 - 100.00% of mass 95	84.80
175	5.00 - 9.00% of mass 174	6.69 (7.88)
176	95.00 - 101.00% of mass 174	83.76 (98.77)
177	5.00 - 9.00% of mass 176	4.85 (5.79)

Digitally signed by Matthew S. Krause on 10/26/2017 at 21:58.
Target 3.5 esignature user ID: msk07970

Date : 26-OCT-2017 19:51

Client ID: BFB/aug14-17 Instrument: HP19094.i

Sample Info: BFB/aug14-17;50NGBFB;1;3;;;;;;

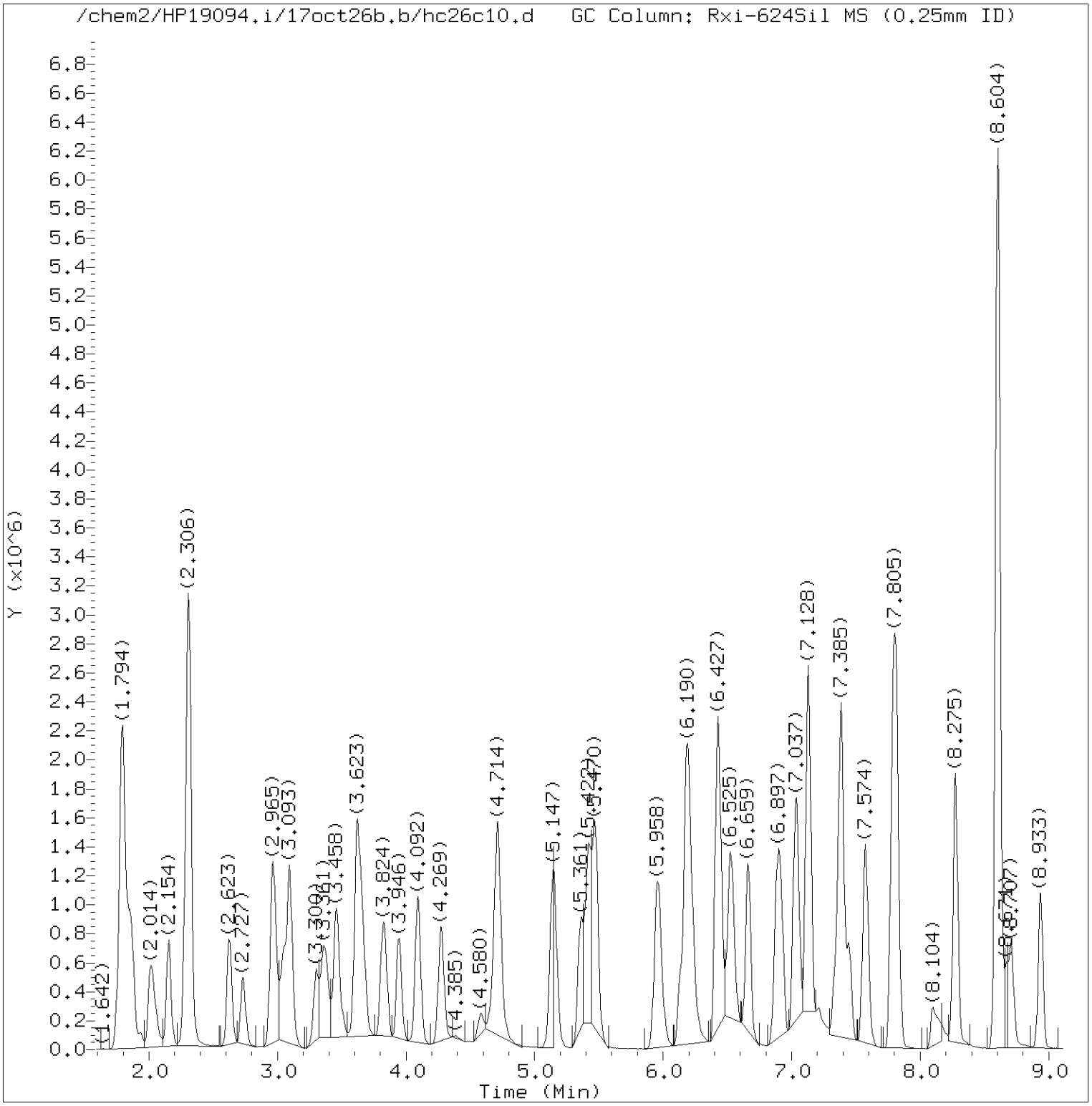
Operator: MSK07970

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hc26t10.d
Spectrum: Avg. Scans 190-192 (5.25), Background Scan 185
Location of Maximum: 95.00
Number of points: 65

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	856	61.00	3752	81.00	2978	130.00	127
37.00	4917	62.00	4312	82.00	645	135.00	110
38.00	3937	63.00	2578	87.00	3075	141.00	949
39.00	1805	64.00	300	88.00	3068	143.00	869
43.00	116	67.00	288	91.00	401	146.00	91
44.00	761	68.00	7863	92.00	2039	148.00	202
45.00	780	69.00	7570	93.00	2901	155.00	241
47.00	1097	70.00	538	94.00	8477	172.00	103
48.00	601	72.00	439	95.00	68768	173.00	685
49.00	3493	73.00	3589	96.00	4715	174.00	58312
50.00	15752	74.00	12831	104.00	395	175.00	4598
51.00	5014	75.00	37024	106.00	270	176.00	57600
52.00	232	76.00	3396	116.00	231	177.00	3333
56.00	1451	77.00	346	117.00	370	191.00	112
57.00	2595	78.00	200	118.00	298		
58.00	188	79.00	3059	119.00	460		
60.00	573	80.00	798	128.00	200		

Digitally signed by Matthew S. Krause on 10/26/2017 at 21:58.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

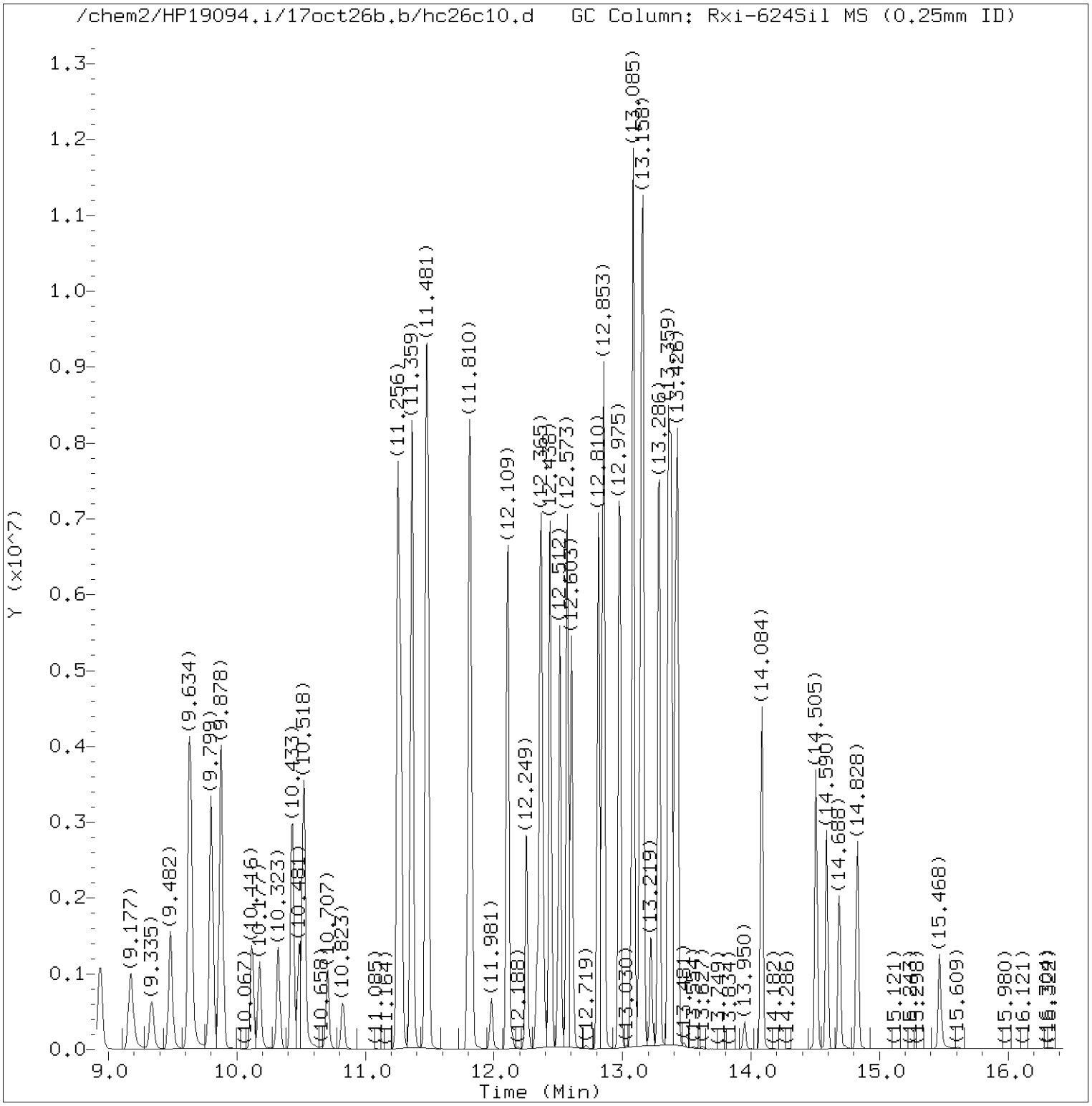
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.020	85	1260943	11.670
2) Chloromethane	(2)	2.154	50	1107989	10.384
5) Vinyl Chloride	(2)	2.288	62	1106565	11.284
6) 1,3-Butadiene	(2)	2.312	39	2207123	23.814
7) Bromomethane	(2)	2.623	94	754826	11.316
8) Chloroethane	(2)	2.727	64	645407	11.561
9) Dichlorofluoromethane	(2)	2.959	67	1769467	10.824
10) Trichlorofluoromethane	(2)	3.044	101	1422789	10.892
11) Ethyl ether	(2)	3.300	59	431801	10.357
12) Freon 123a	(2)	3.367	67	889692	10.886
13) Acrolein	(1)	3.458	56	1788563	356.209
15) 1,1-Dichloroethene	(2)	3.617	96	591048	11.309
14) Acetone	(1)	3.617	43	677406M	105.352
16) Freon 113	(2)	3.654	101	702362	12.069
17) Methyl Iodide	(2)	3.818	142	1196085	11.489
18) Carbon Disulfide	(2)	3.946	76	1661100	9.932
21) Methyl Acetate	(1)	4.056	43	216289	11.174
22) Allyl Chloride	(2)	4.092	41	1017863	8.584
26)*t-Butyl Alcohol-d10	(1)	4.245	65	79921M	50.000
23) Methylene Chloride	(2)	4.275	84	633553	10.627
28) t-Butyl Alcohol	(1)	4.385	59	389114	178.708
29) Acrylonitrile	(1)	4.580	53	487314	61.778
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	1409788	10.923
31) trans-1,2-Dichloroethene	(2)	4.714	96	674975	11.423
32) n-Hexane	(2)	5.147	57	1111488	10.651
33) 1,1-Dichloroethane	(2)	5.361	63	1331488	10.954
34) di-Isopropyl Ether	(2)	5.422	45	2349074	10.240
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	1269607	11.134
37) Ethyl t-butyl ether	(2)	5.958	59	1955866	10.627
40) 1,2-Dichloroethene (Total)	(2)		96	1451625	22.917
38) 2-Butanone	(1)	6.135	43	1429458	113.178
39) cis-1,2-Dichloroethene	(2)	6.184	96	776650	11.494
42) Propionitrile	(1)	6.202	54	707129	242.739
41) 2,2-Dichloropropane	(2)	6.208	77	1090070	10.618
45) Methacrylonitrile	(1)	6.427	67	1377661	130.134
47) Bromochloromethane	(2)	6.519	128	302928	11.398
48) Tetrahydrofuran	(1)	6.543	71	357567	124.830
49) Chloroform	(2)	6.659	83	1378949	11.747

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

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	605736	10.211
50)$Dibromofluoromethane	(2)	6.879	111	624370	10.251
51) 1,1,1-Trichloroethane	(2)	6.909	97	1215300	11.482
52) Cyclohexane	(2)	7.037	56	1389969	10.745
52) Cyclohexane	(2)	7.037	84	1116065	11.220
52) Cyclohexane	(2)	7.037	69	407422	11.047
55) 1,1-Dichloropropene	(2)	7.128	75	1079712	11.535
54) Carbon Tetrachloride	(2)	7.141	117	1067034	11.543
56) Isobutyl Alcohol	(1)	7.214	41	409107	464.652
57)$1,2-Dichloroethane-d4	(2)	7.342	102	93357	10.049
57)$1,2-Dichloroethane-d4	(2)	7.342	65	525017	10.329
57)$1,2-Dichloroethane-d4	(2)	7.348	104	59675	10.212
58) Benzene	(2)	7.385	78	2924591	11.424
59) 1,2-Dichloroethane	(2)	7.445	62	833355	11.638
60) t-Amyl methyl ether	(2)	7.574	73	1625176	10.880
63)*Fluorobenzene	(2)	7.787	96	2456542	10.000
62) n-Heptane	(2)	7.817	43	1267665	10.175
65) n-Butanol	(1)	8.104	56	614286	948.461
67) Trichloroethene	(2)	8.275	95	821090	11.973
70) 1,2-Dichloropropane	(2)	8.598	63	748096	11.260
69) Methylcyclohexane	(2)	8.604	83	1340078	11.367
71) Methyl Methacrylate	(1)	8.671	69	277097	13.174
73) Dibromomethane	(2)	8.707	93	328895	11.832
72) 1,4-Dioxane	(1)	8.744	88	72948A	504.972
74) Bromodichloromethane	(2)	8.933	83	917995	11.444
76) 2-Nitropropane	(1)	9.177	41	968915	135.100
80) cis-1,3-Dichloropropene	(2)	9.482	75	986932	10.600
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3918897	126.638
82)$Toluene-d8	(3)	9.799	98	2516914	9.446
82)$Toluene-d8	(3)	9.799	100	1602387	9.500
83) Toluene	(3)	9.878	92	1896535	10.892
84) trans-1,3-Dichloropropene	(3)	10.116	75	757543	9.526
85) 1,3-Dichloropropene (total)	(3)		75	1744475	20.125
86) Ethyl Methacrylate	(3)	10.177	69	595670	10.026
88) 1,1,2-Trichloroethane	(3)	10.323	97	436268	10.731
89) Tetrachloroethene	(3)	10.433	166	940408	11.508
90) 1,3-Dichloropropane	(3)	10.481	76	767026	10.610
91) 2-Hexanone	(1)	10.518	43	2701839	121.171

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	543990	10.246
95) 1,2-Dibromoethane	(3)	10.823	107	418197	10.886
97)*Chlorobenzene-d5	(3)	11.250	117	1833496	10.000
98) Chlorobenzene	(3)	11.280	112	2054872	11.074
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	723379	11.070
100) Ethylbenzene	(3)	11.365	91	3892499	11.117
101) m+p-Xylene	(3)	11.481	106	2952407	22.377
105) Xylene (Total)	(3)		106	4400217	33.598
104) o-Xylene	(3)	11.804	106	1447810	11.222
106) Styrene	(3)	11.823	104	2286657	11.346
107) Bromoform	(3)	11.981	173	284415	9.871
108) Isopropylbenzene	(3)	12.109	105	3952244	11.410
111)$4-Bromofluorobenzene	(3)	12.249	95	802339	9.913
111)$4-Bromofluorobenzene	(3)	12.256	174	740081	10.397
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	523185	10.038
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	769995	80.430
114) Bromobenzene	(4)	12.371	156	875465	10.650
116) 1,2,3-Trichloropropane	(4)	12.390	110	139115	10.469
117) n-Propylbenzene	(4)	12.438	91	4771389	10.620
119) 2-Chlorotoluene	(4)	12.512	126	906139	10.762
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	3367916	10.819
122) 4-Chlorotoluene	(4)	12.603	126	918034	10.713
125) tert-Butylbenzene	(4)	12.810	134	752881	11.375
126) Pentachloroethane	(4)	12.847	167	520405	10.106
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	3368528	10.773
128) sec-Butylbenzene	(4)	12.975	105	4365043	10.829
131) 1,3-Dichlorobenzene	(4)	13.079	146	1768028	11.046
132) p-Isopropyltoluene	(4)	13.085	119	3747268	11.142
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	845191	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	1731752	10.389
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	1380564	10.406
136) Benzyl Chloride	(4)	13.225	126	186170	10.021
138) n-Butylbenzene	(4)	13.377	92	1887823	11.196
139) 1,2-Dichlorobenzene	(4)	13.408	146	1560032	10.937
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	64440	13.913
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	1277058	10.764
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	1006263	10.297
146) Hexachlorobutadiene	(4)	14.590	225	474925	10.301

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

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

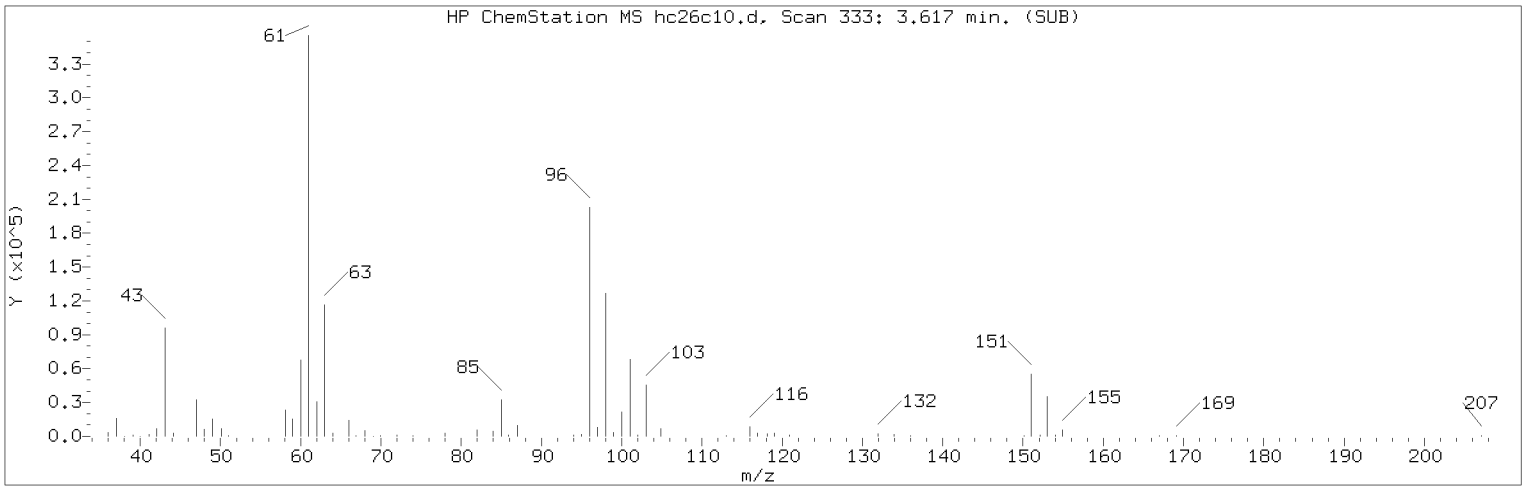
Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

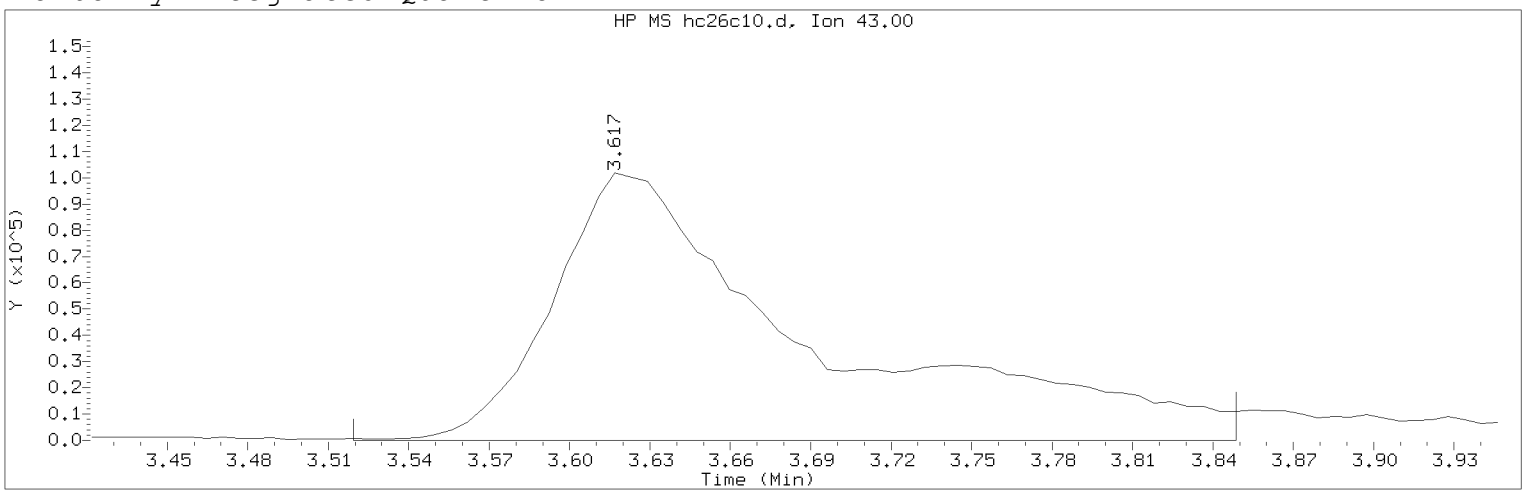
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	1427989	8.981
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	768257	9.338

Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

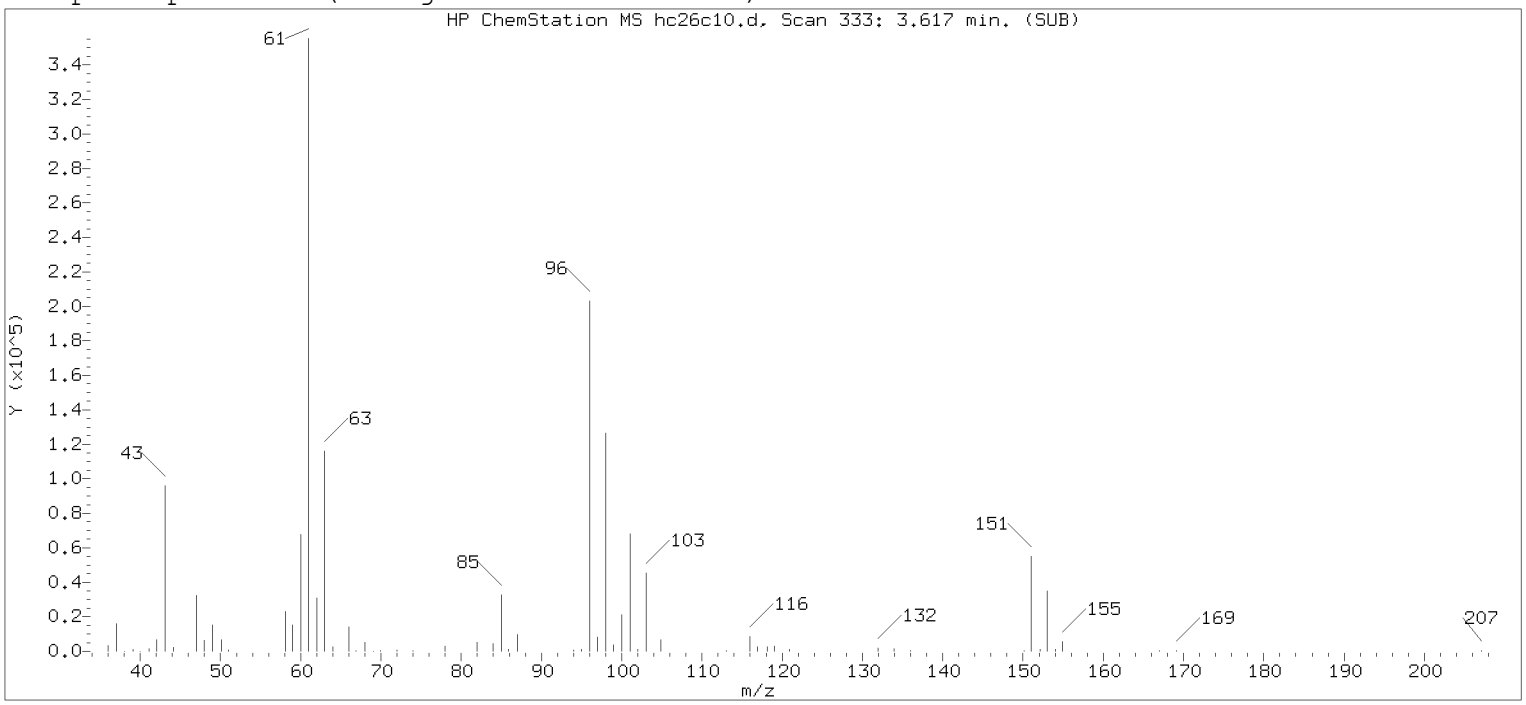
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area (flag) : 677406M
On-Column Amount (ng) : 105.3516
Integration start scan : 316 Integration stop scan: 370
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

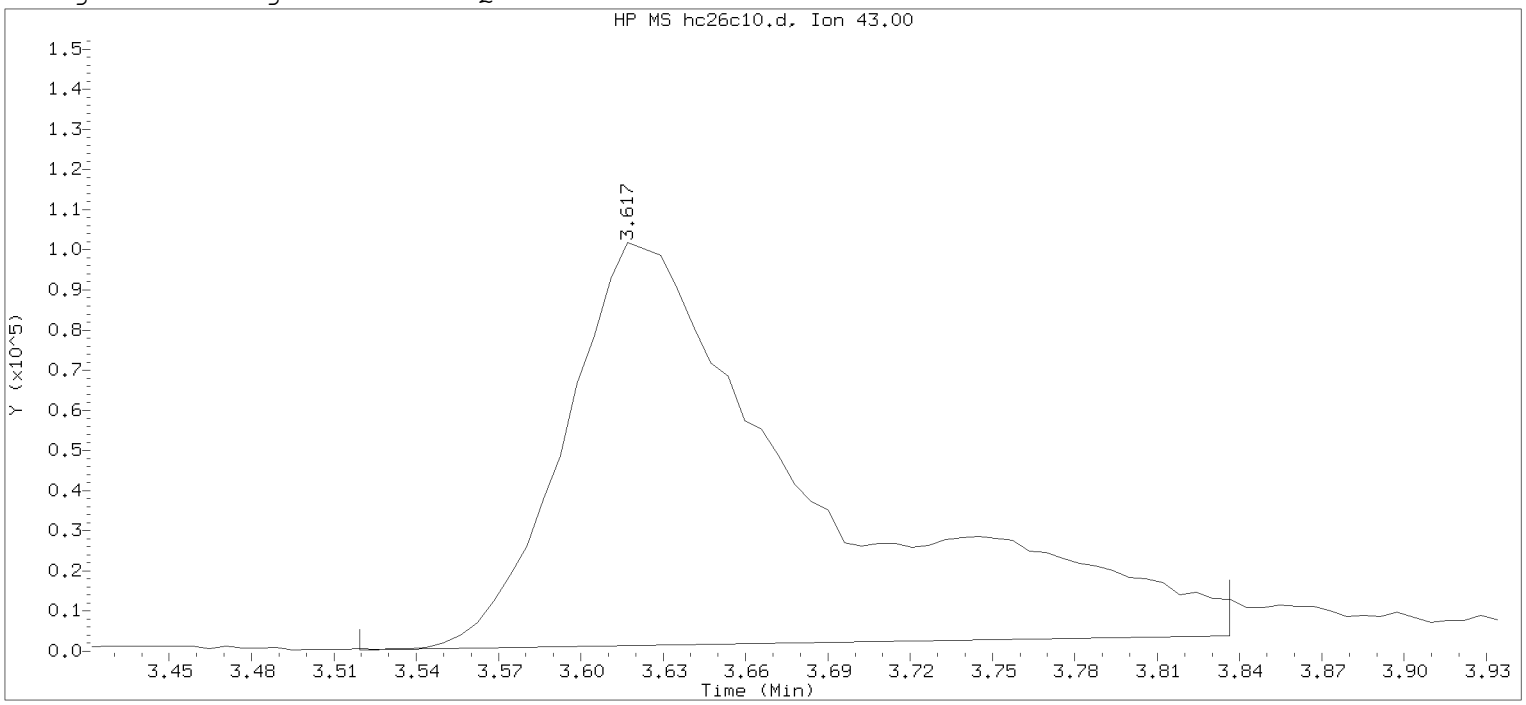
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 10/27/2017 at 16:51.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

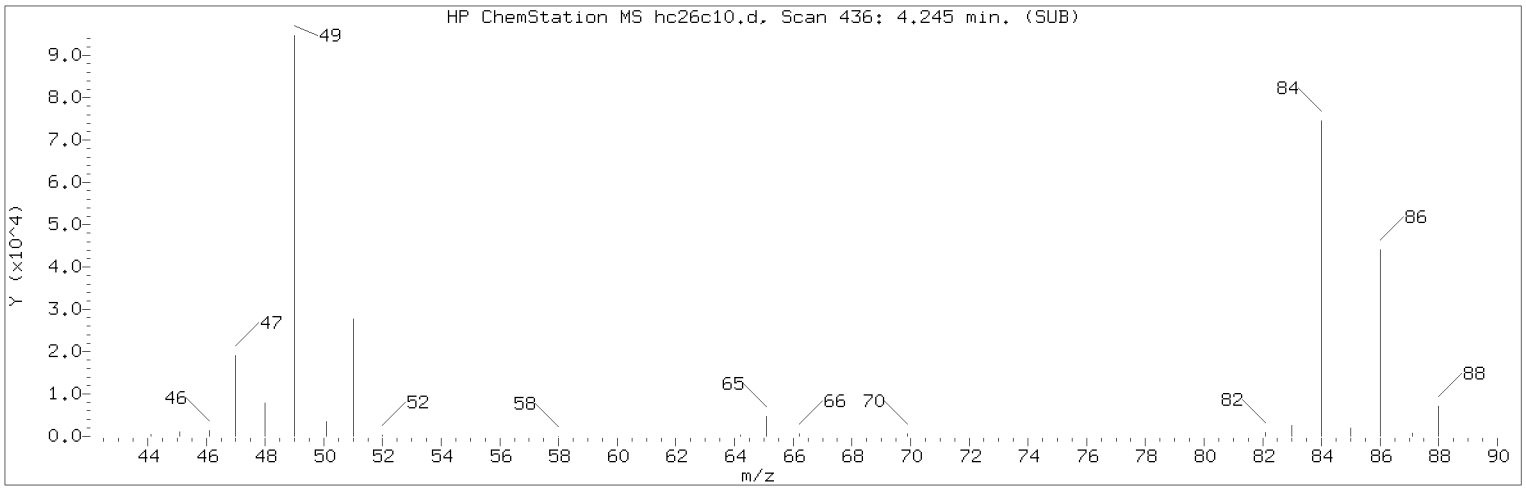
Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:51 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

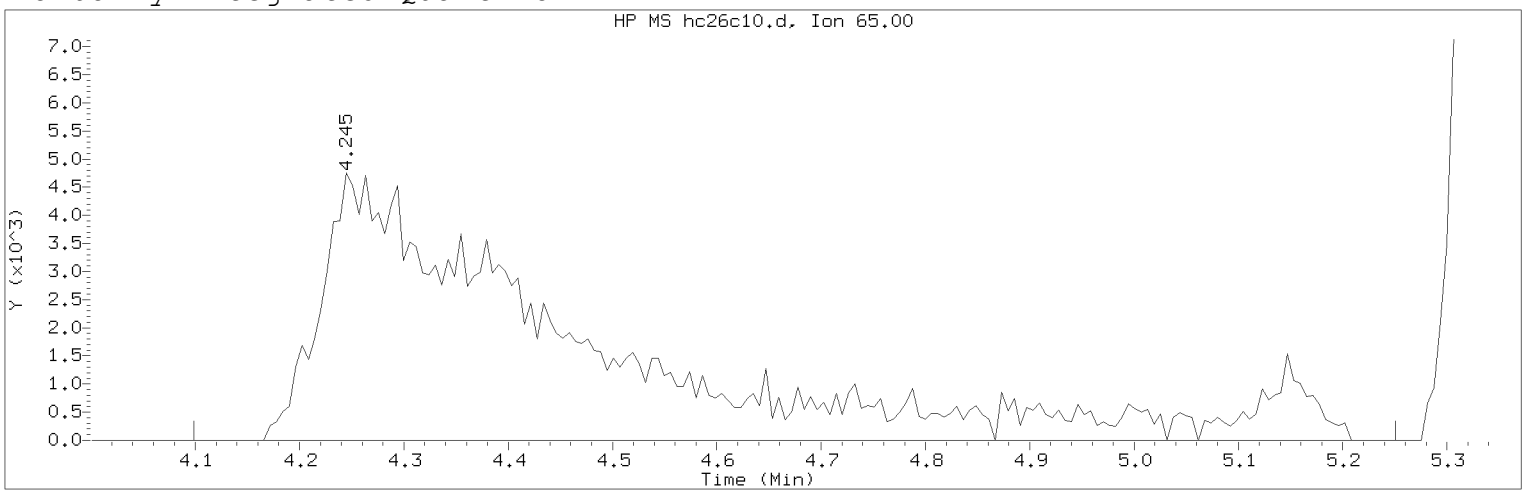
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area : 627319
On-column Amount (ng) : 116.8937
Integration start scan : 316 Integration stop scan: 368
Y at integration start : 351 Y at integration end: 3816

Digitally signed by Matthew S. Krause on 10/26/2017 at 21:57.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

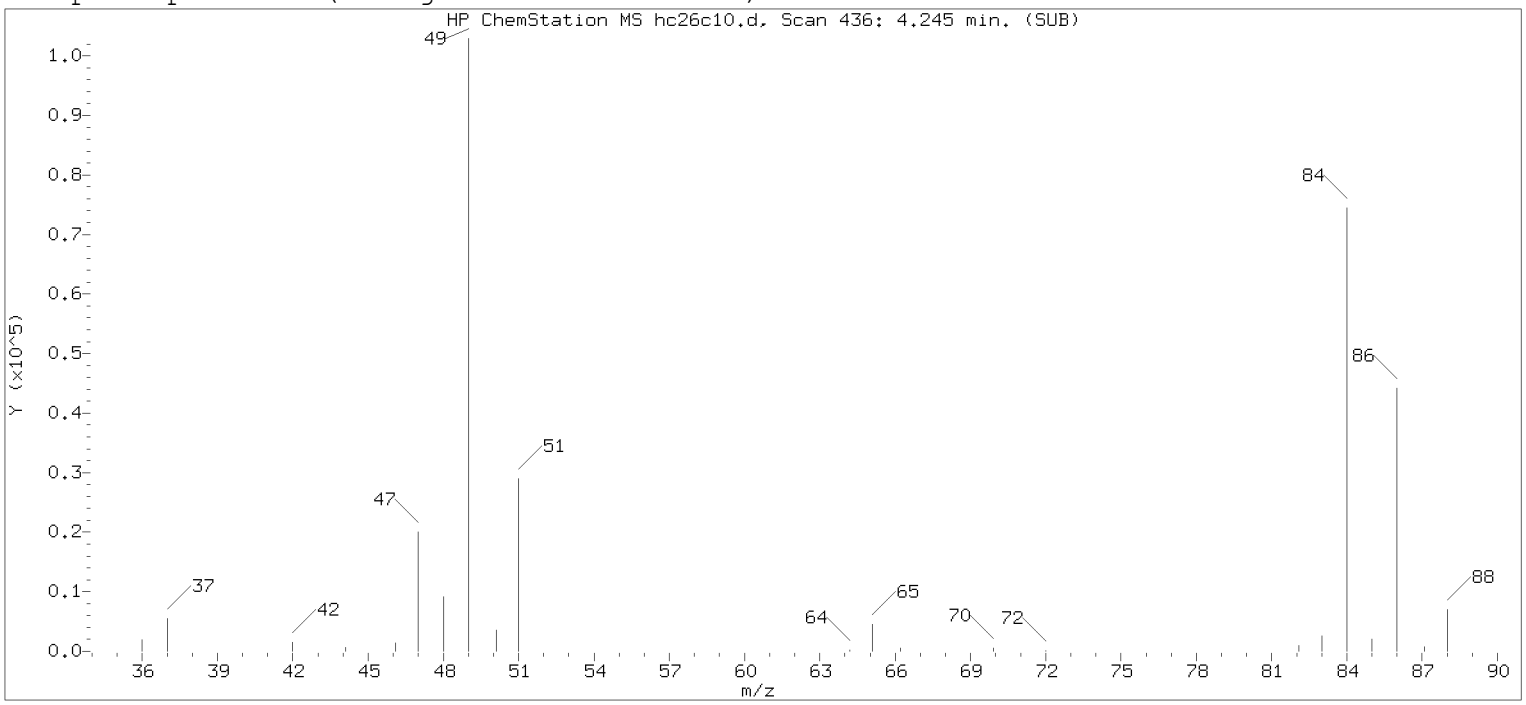
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area (flag) : 79921M
On-Column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 600
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

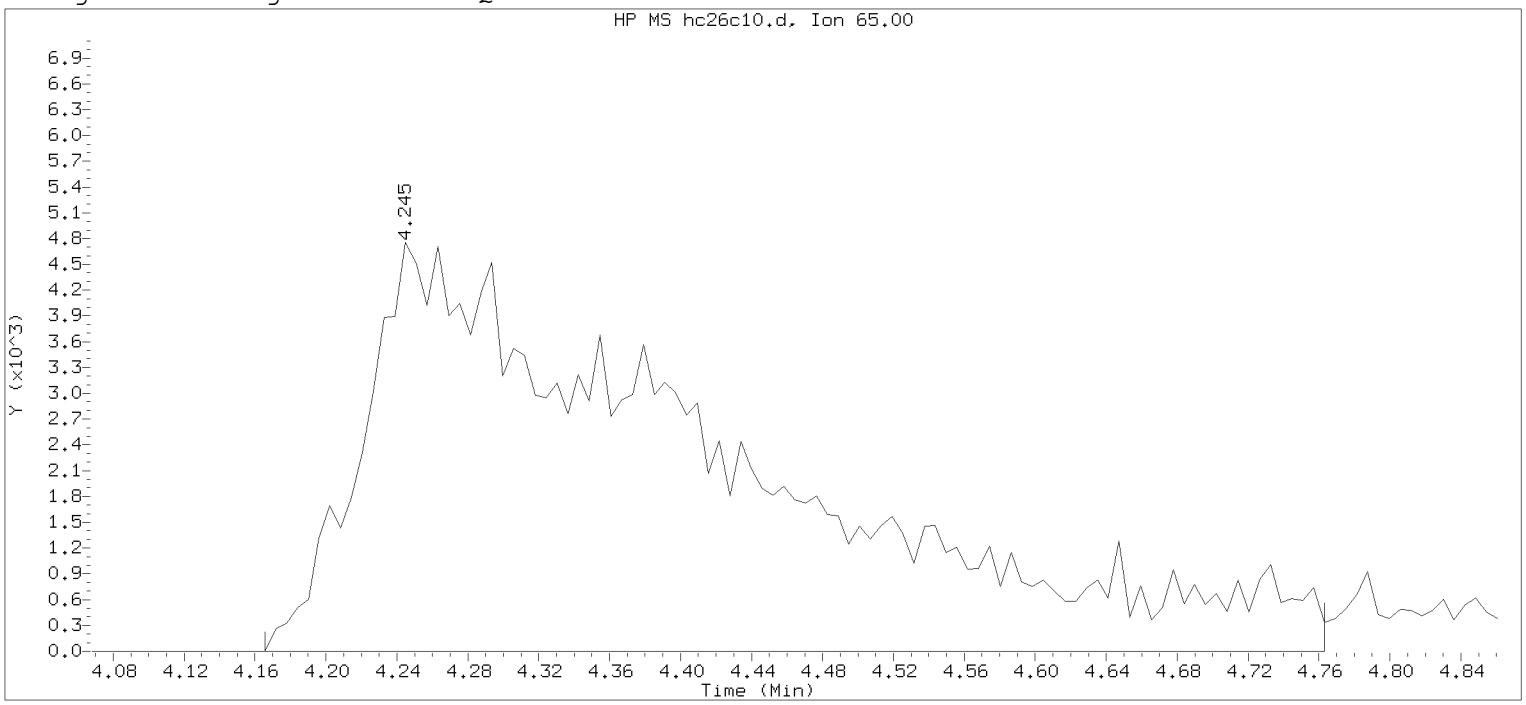
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 10/27/2017 at 16:51.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

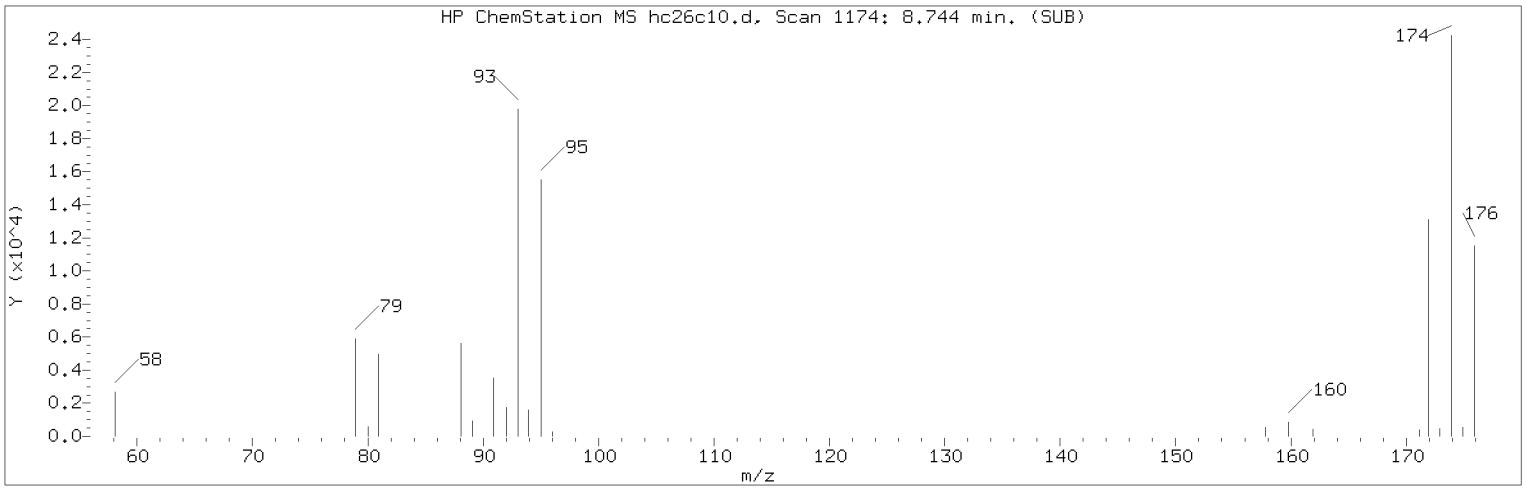
Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:51 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

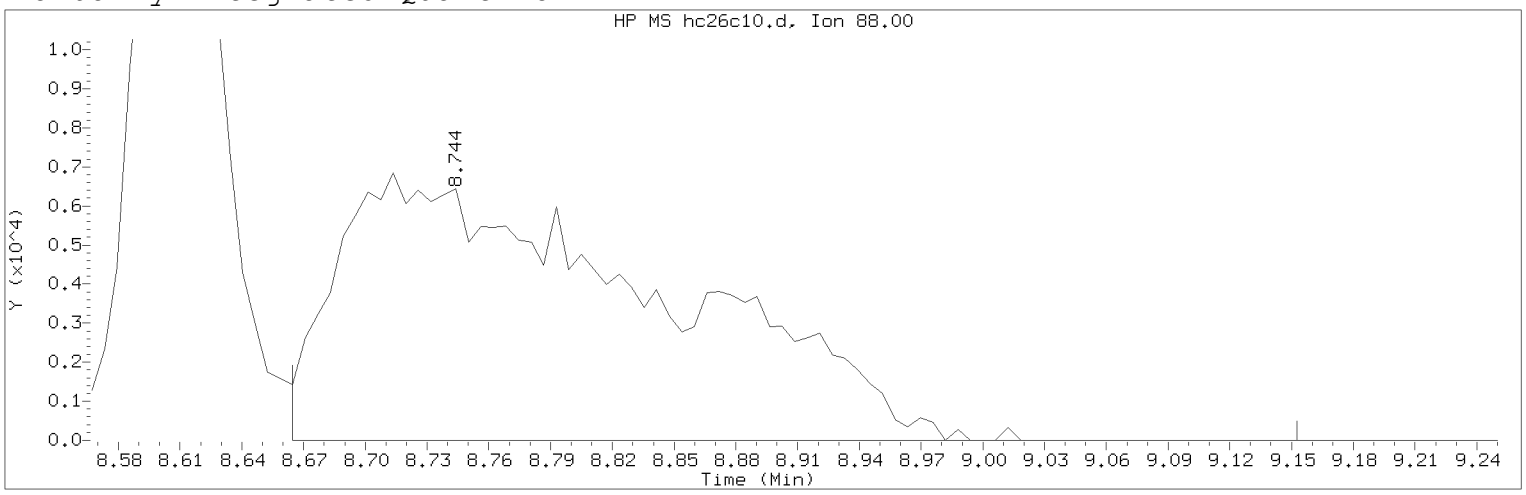
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area : 66703
On-column Amount (ng) : 50.0000
Integration start scan : 422 Integration stop scan: 520
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 10/26/2017 at 21:57.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:58 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

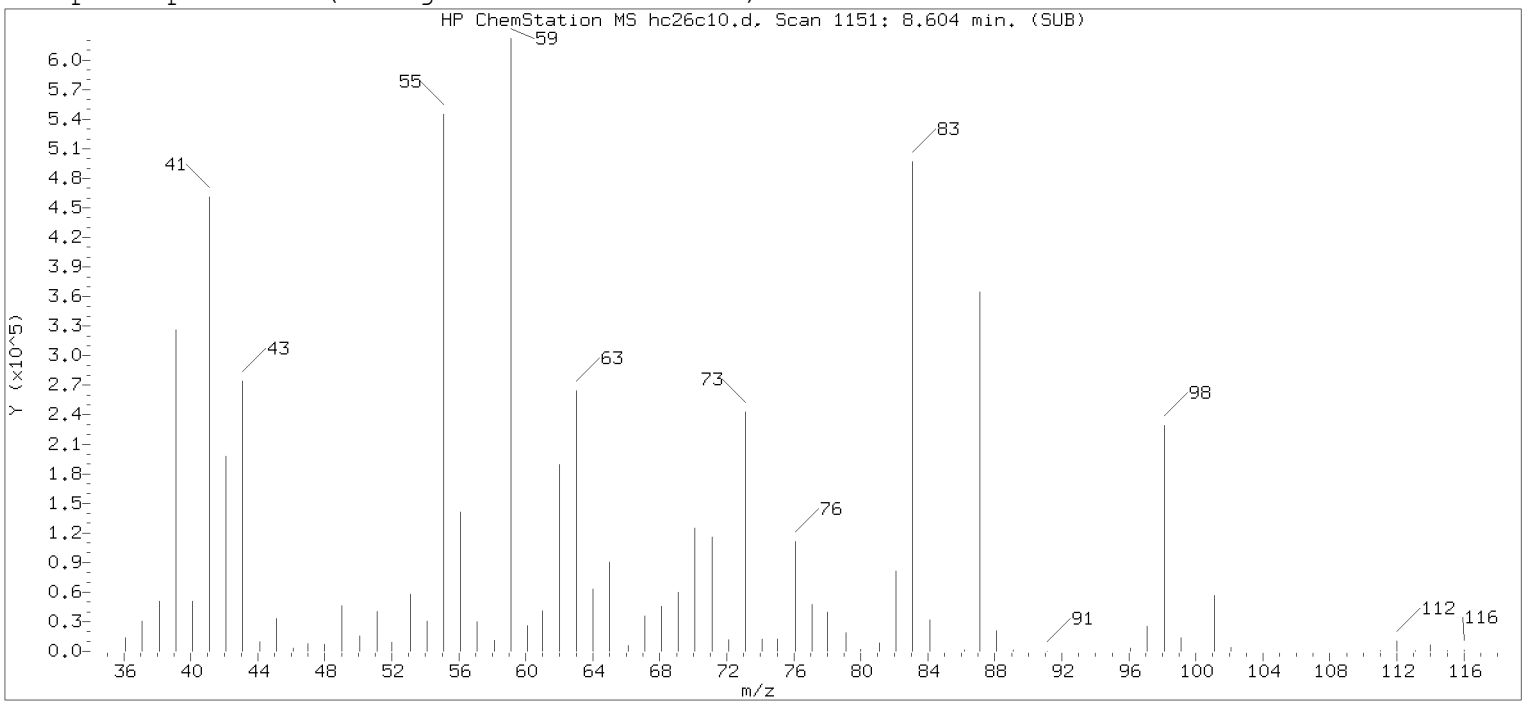
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1174
Retention Time (minutes): 8.744
Quant Ion : 88.00
Area (flag) : 72948A
On-Column Amount (ng) : 504.9718
Integration start scan : 1160 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

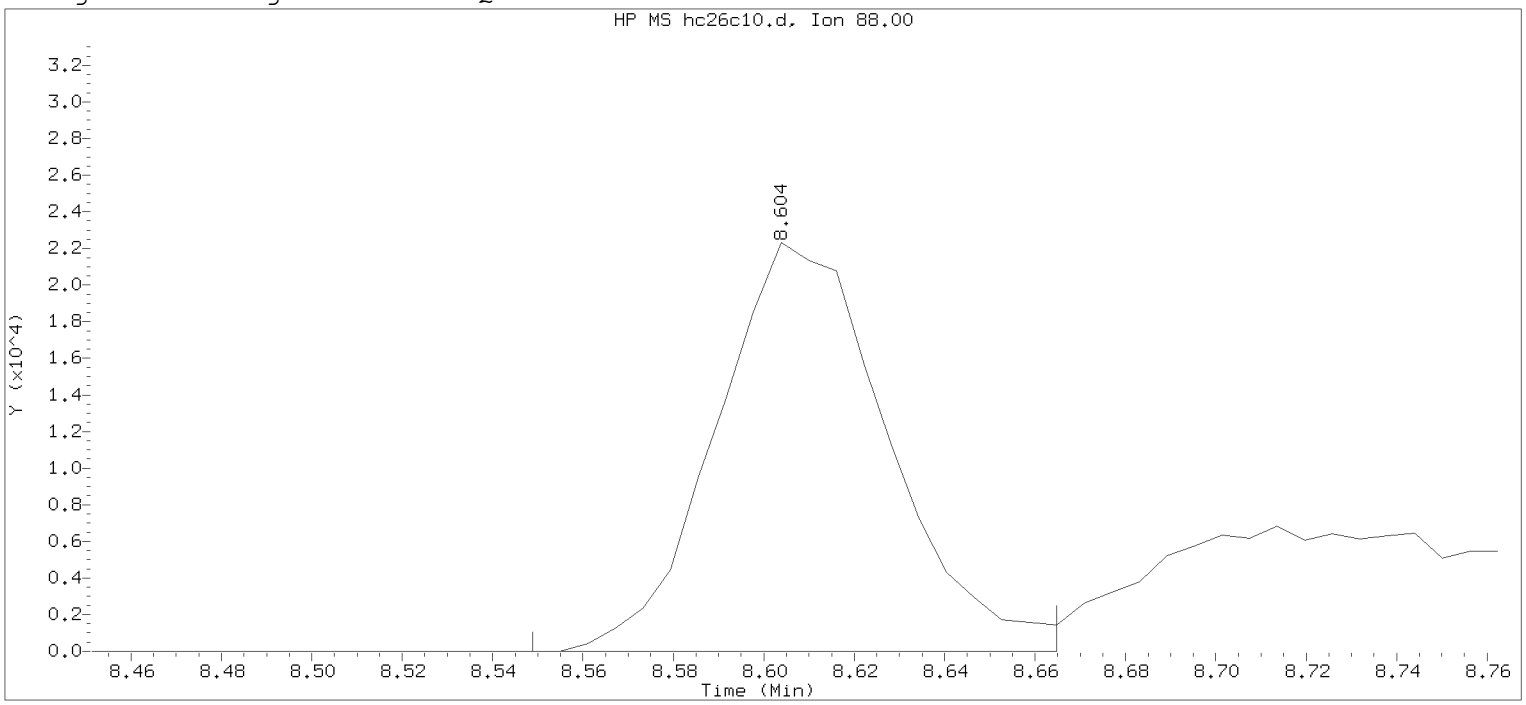
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 10/26/2017 at 21:57.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 10/27/2017 at 16:51.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct26b.b/hc26c10.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:32 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 20:51 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 88.00
Area : 58596
On-column Amount (ng) : 485.9980
Integration start scan : 1141 Integration stop scan: 1160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 10/26/2017 at 21:57.
Target 3.5 esignature user name: mskrause

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH19

Data file: /chem2/HP19094.i/17oct26b.b/hc26b85.d Injection date and time: **26-OCT-2017 21:33**
Data file Sample Info. Line: VBLKH19;VBLKH19;1;3;;;DAA3178;;; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 26-Oct-2017 21:55 msk07970

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 20:51
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.245	(0.000)	436	65	58289	(-27)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2326981	(-5)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1614714	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	659584	(-22)	10.00	

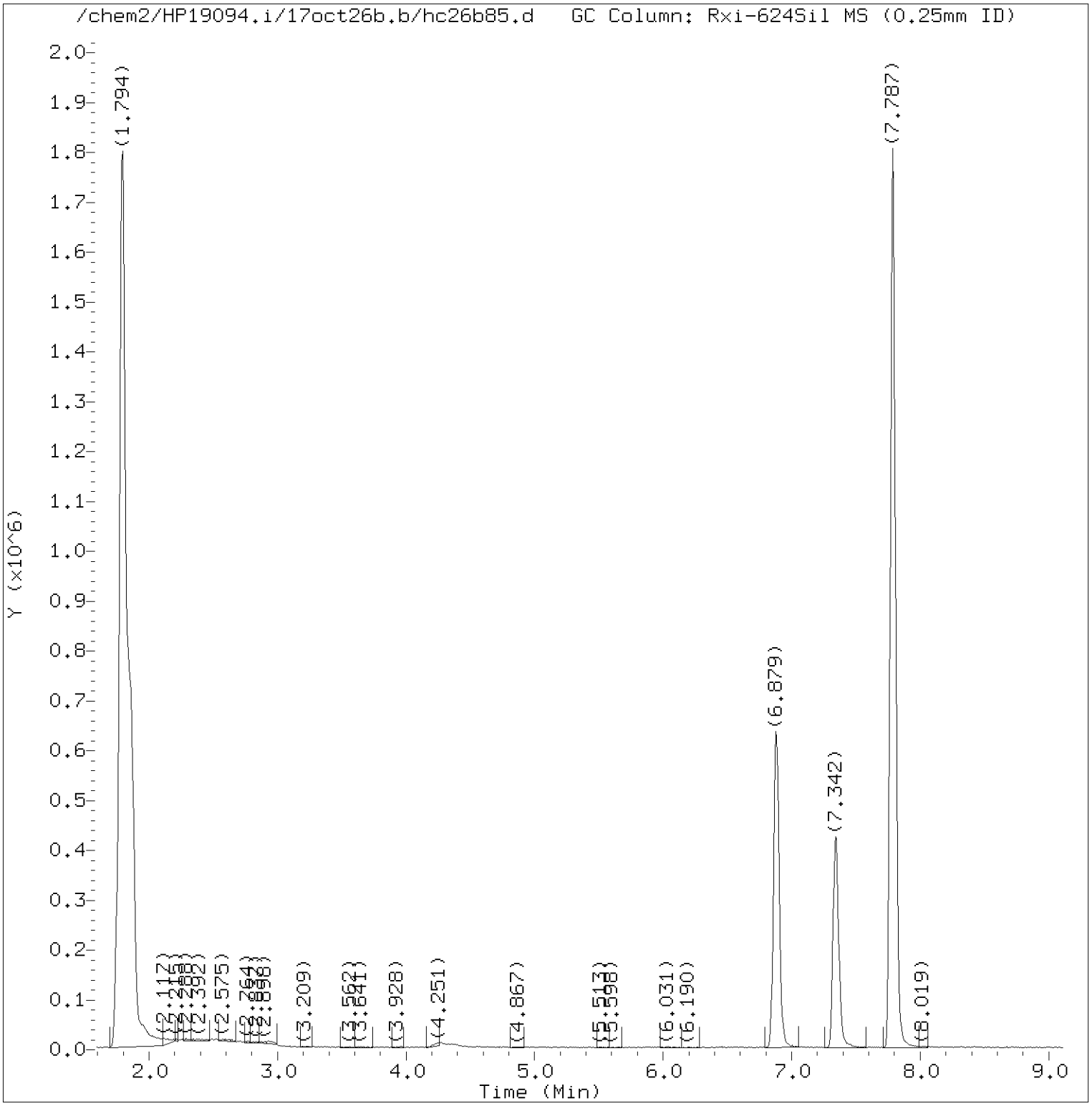
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	564518	10.046	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	87052	9.893	99%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2330224	9.930	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	670186	9.402	94%		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
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/31/2017 at 08:47. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/31/2017 at 13:44. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

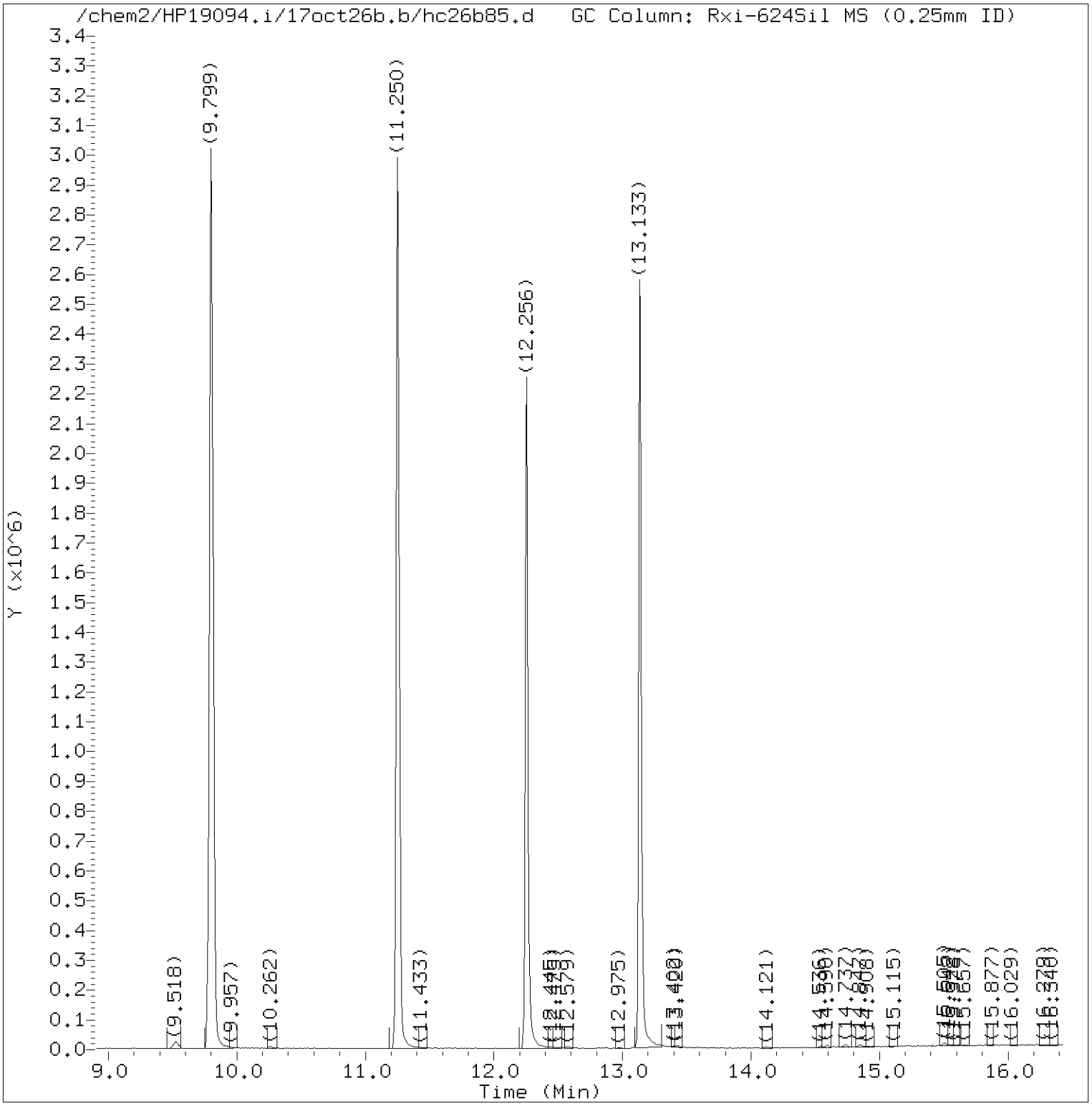
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26b85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 21:33 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 21:55 msk07970

Sample Name: VBLKH19 Lab Sample ID: VBLKH19

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 08:47.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26b85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 21:33 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 21:55 msk07970

Sample Name: VBLKH19 Lab Sample ID: VBLKH19

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 08:47.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26b85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 21:33 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 20:51
Date, time and analyst ID of latest file update: 26-Oct-2017 21:55 msk07970

Sample Name: VBLKH19 Lab Sample ID: VBLKH19

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.245	65	58289	50.000
50)$Dibromofluoromethane	(2)	6.879	113	564518	10.046
57)$1,2-Dichloroethane-d4	(2)	7.342	102	87052	9.893
63)*Fluorobenzene	(2)	7.787	96	2326981	10.000
82)$Toluene-d8	(3)	9.799	98	2330224	9.930
97)*Chlorobenzene-d5	(3)	11.250	117	1614714	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	670186	9.402
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	659584	10.000

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

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 08:47.
Target 3.5 esignature user ID: kas02648

R9803MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9271973MS

Data file: /chem2/HP19094.i/17oct26b.b/hc26s89.d Injection date and time: **27-OCT-2017 03:35**
Data file Sample Info. Line: R9803MS;9271973MS;1;3;MS;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 27-Oct-2017 03:53 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.239	(0.006)	435	65	72866	(-9)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2417187	(-2)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1730810	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	771315	(-9)	10.00	

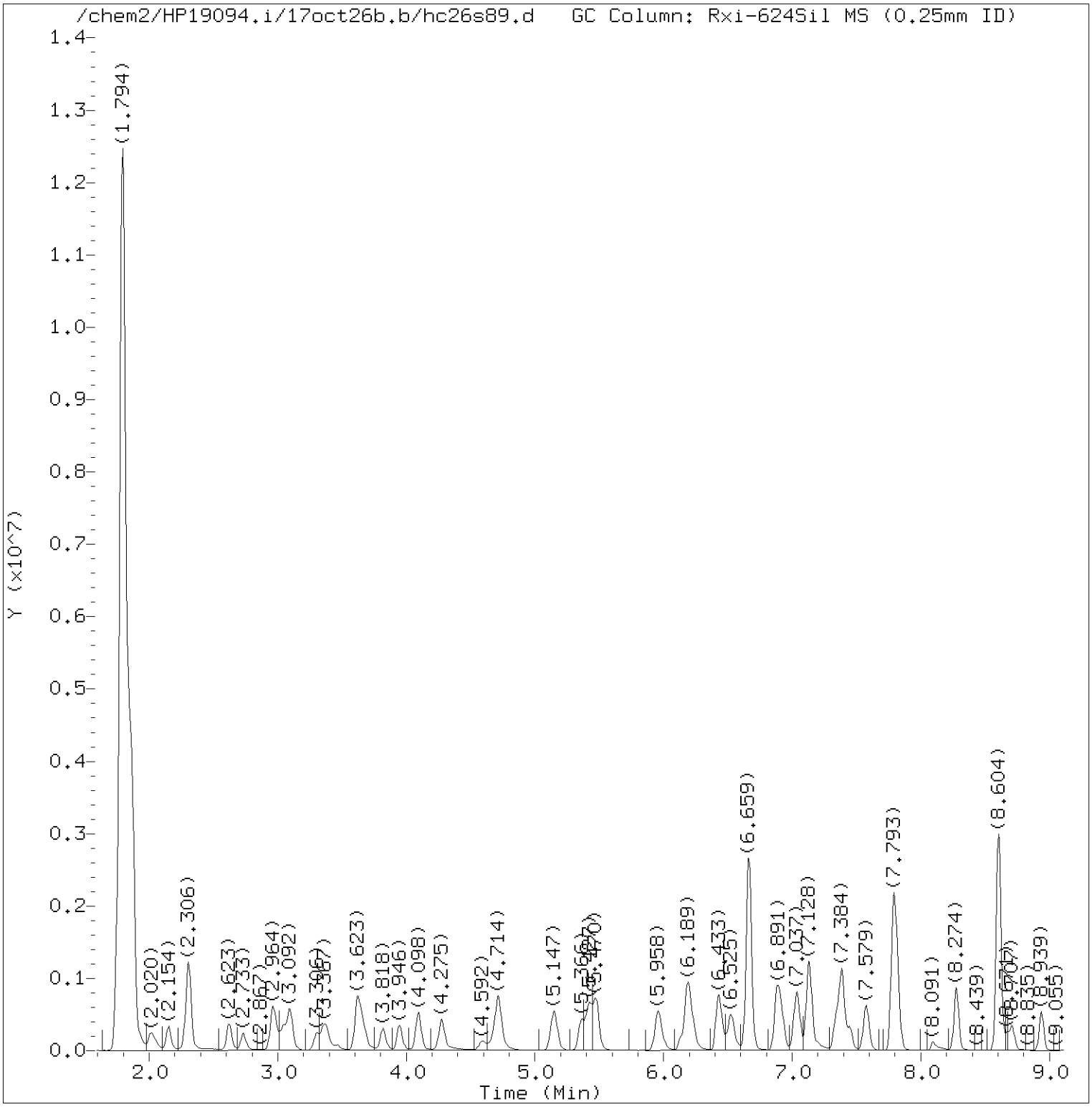
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	585850	10.037	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.001)	102	92280	10.095	101%		80 - 120
82) Toluene-d8	(3)	9.798	(0.000)	98	2451375	9.746	97%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	736509	9.639	96%		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)	2.288	(0.000)	62	489941	5.077	5.08			0.1	1
15) 1,1-Dichloroethene	(2)	3.617	(0.000)	96	301116	5.855	5.86			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.720	(-0.000)	96	331292	5.698	5.70			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.189	(-0.000)	96	369808	5.562	5.56			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	388917	5.763	5.76			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

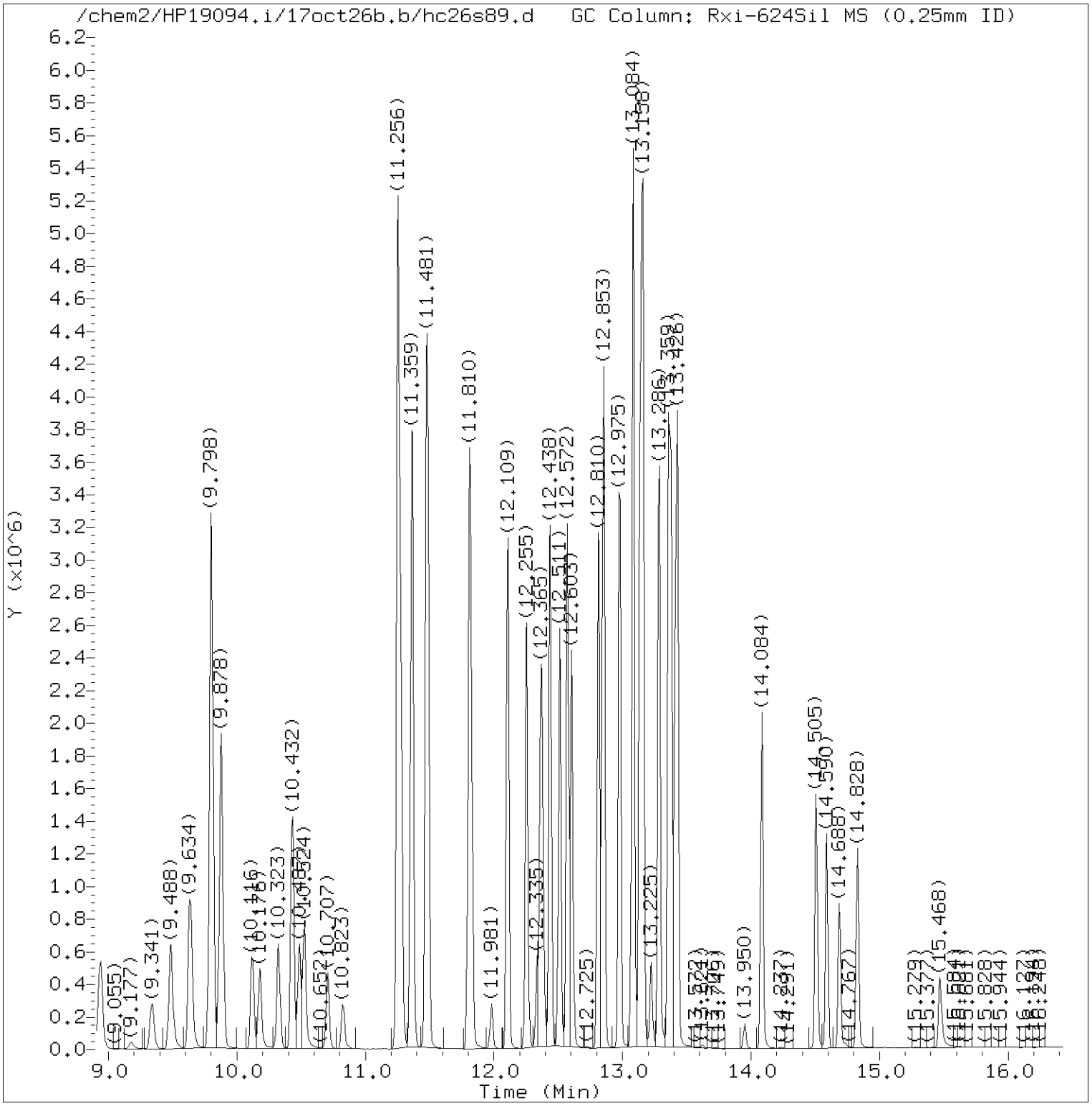
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s89.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:53 Automation

Sample Name: R9803MS Lab Sample ID: 9271973MS

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s89.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:53 Automation

Sample Name: R9803MS Lab Sample ID: 9271973MS

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s89.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:35 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 03:53 Automation

Sample Name: R9803MS Lab Sample ID: 9271973MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.288	62	489941	5.077
15) 1,1-Dichloroethene	(2)	3.617	96	301116	5.855
26)*t-Butyl Alcohol-d10	(1)	4.239	65	72866	50.000
31) trans-1,2-Dichloroethene	(2)	4.720	96	331292	5.698
39) cis-1,2-Dichloroethene	(2)	6.189	96	369808	5.562
50)$Dibromofluoromethane	(2)	6.878	113	585850	10.037
57)$1,2-Dichloroethane-d4	(2)	7.348	102	92280	10.095
63)*Fluorobenzene	(2)	7.787	96	2417187	10.000
67) Trichloroethene	(2)	8.274	95	388917	5.763
82)$Toluene-d8	(3)	9.798	98	2451375	9.746
97)*Chlorobenzene-d5	(3)	11.249	117	1730810	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	736509	9.639
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	771315	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s90.d Injection date and time: **27-OCT-2017 03:55**
Data file Sample Info. Line: R9803MSD;9271974MSD;1;3;MSD;RAE98;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H17299**
Date, time and analyst ID of latest file update: 27-Oct-2017 04:13 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.233(0.012)	434	65	68498	(-14)	50.00	
63) Fluorobenzene	7.787(0.000)	1017	96	2438596	(-1)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1735182	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133(0.000)	1894	152	768095	(-9)	10.00	

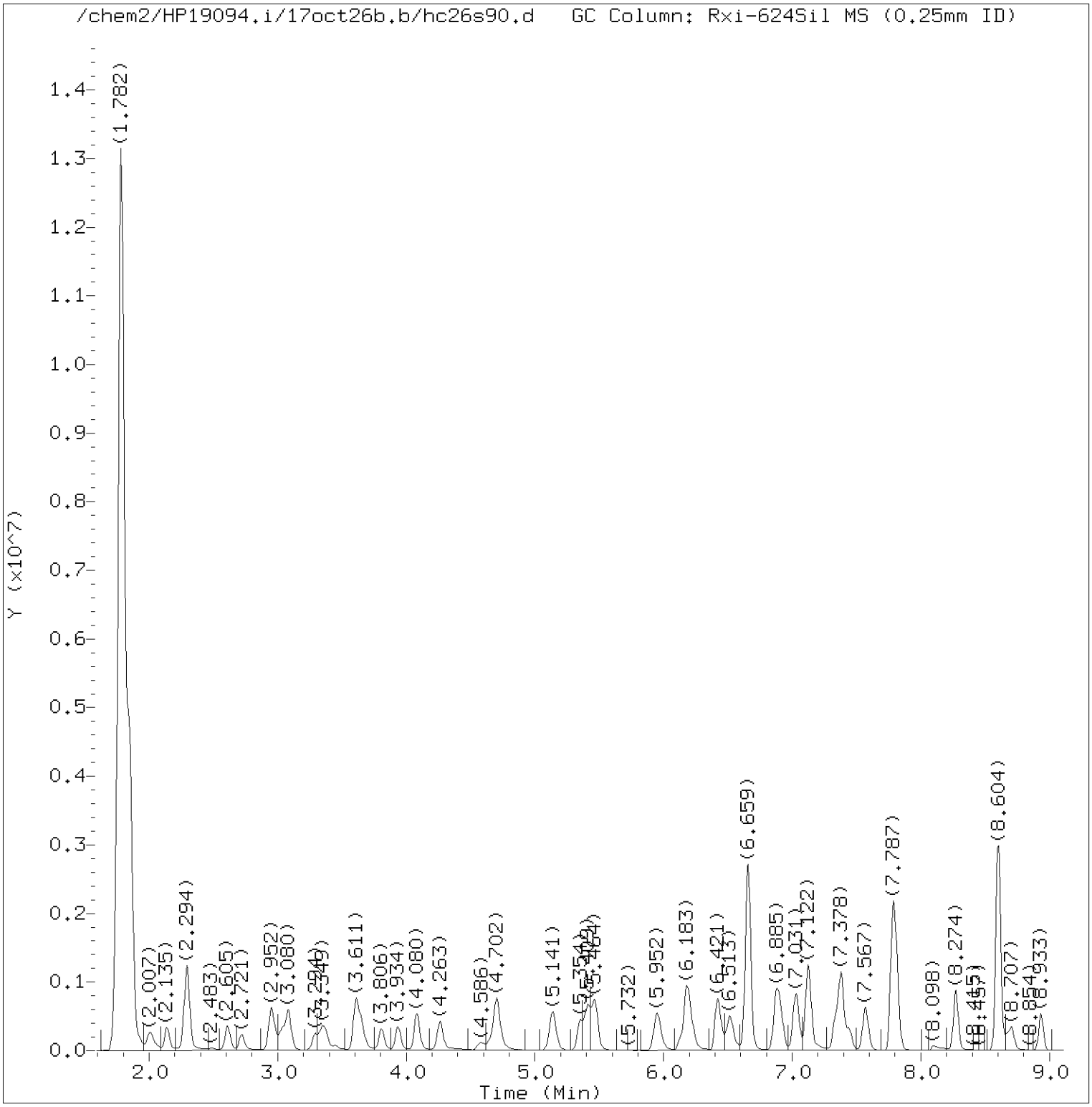
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872(0.001)	113	585767	9.947	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336(0.001)	102	89467	9.702	97%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2454853	9.735	97%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249(0.000)	95	748127	9.767	98%		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)	2.276(0.001)	62	493150	5.066	5.07			0.1	1
15) 1,1-Dichloroethene	(2)	3.605(0.001)	96	303825	5.856	5.86			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.702(0.001)	96	340138	5.799	5.80			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.177(0.000)	96	385182	5.742	5.74			0.1	1
67) Trichloroethene	(2)	8.274(0.000)	95	394655	5.797	5.80			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/27/2017 at 11:45. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/29/2017 at 08:36. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

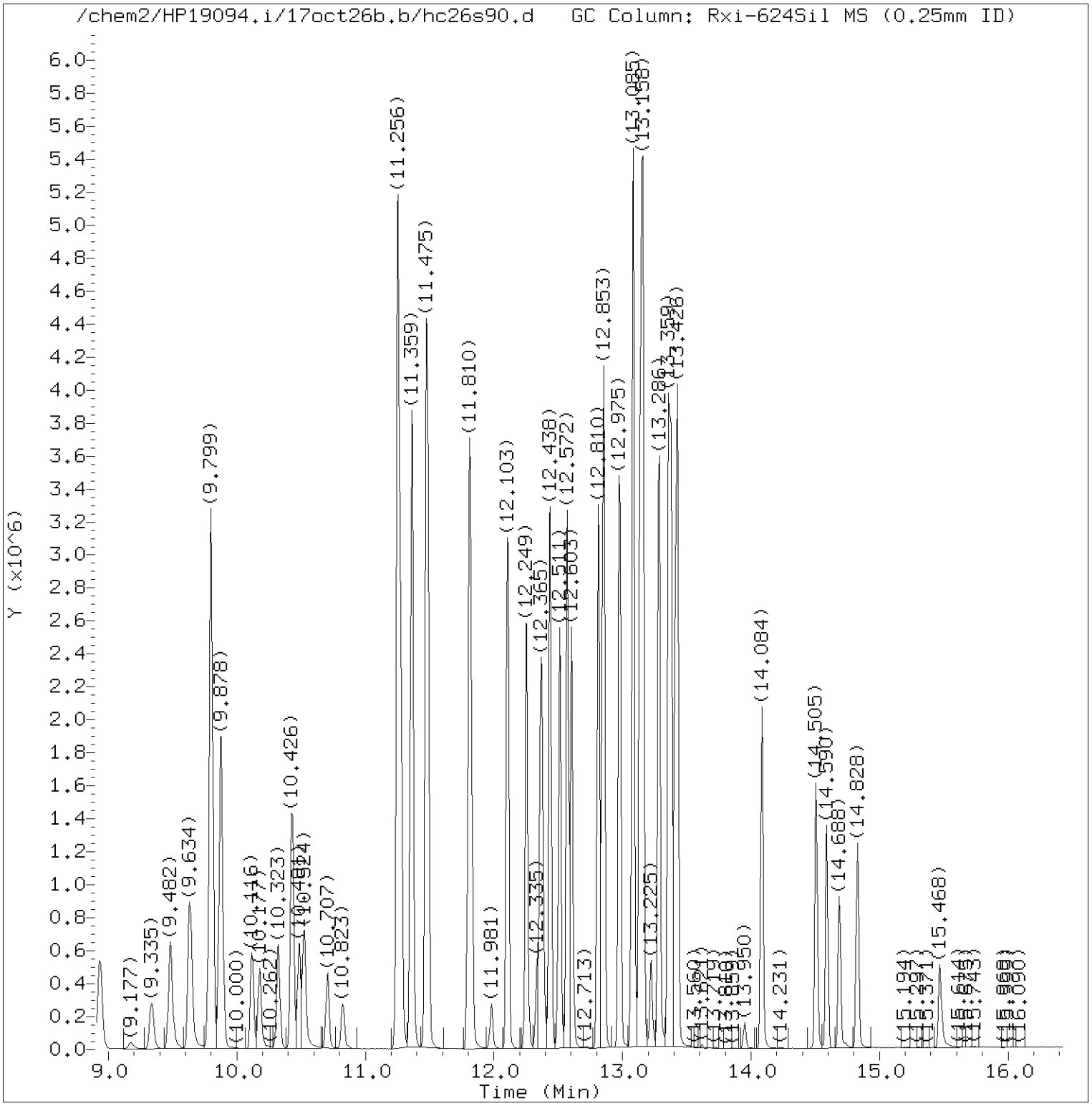
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s90.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:55 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:13 Automation

Sample Name: R9803MSD Lab Sample ID: 9271974MSD

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s90.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:55 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:13 Automation

Sample Name: R9803MSD Lab Sample ID: 9271974MSD

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s90.d Instrument ID: HP19094.i
Injection date and time: 27-OCT-2017 03:55 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 27-Oct-2017 04:13 Automation

Sample Name: R9803MSD Lab Sample ID: 9271974MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.276	62	493150	5.066
15) 1,1-Dichloroethene	(2)	3.605	96	303825	5.856
26)*t-Butyl Alcohol-d10	(1)	4.233	65	68498	50.000
31) trans-1,2-Dichloroethene	(2)	4.702	96	340138	5.799
39) cis-1,2-Dichloroethene	(2)	6.177	96	385182	5.742
50)$Dibromofluoromethane	(2)	6.872	113	585767	9.947
57)$1,2-Dichloroethane-d4	(2)	7.336	102	89467	9.702
63)*Fluorobenzene	(2)	7.787	96	2438596	10.000
67) Trichloroethene	(2)	8.274	95	394655	5.797
82)$Toluene-d8	(3)	9.799	98	2454853	9.735
97)*Chlorobenzene-d5	(3)	11.249	117	1735182	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	748127	9.767
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	768095	10.000

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

Digitally signed by Kevin A. Sposito
on 10/27/2017 at 11:45.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct26b.b/hc26s85.d Injection date and time: **26-OCT-2017 20:52**
Data file Sample Info. Line: LCSH19;LCSH19;1;3;LCS;;DAA3178;;hc26b85; Instrument ID: **HP19094.i** Batch: **H172996AA**
Date, time and analyst ID of latest file update: 31-Oct-2017 13:35 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct26b.b/hc26b85.d**

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 26-OCT-2017 22:46
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct26b.b/hc26c10.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
26) t-Butyl Alcohol-d10	4.287	(-0.043)	443	65	77329	(-3)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2487376	(1)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1791490	(-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	812148	(-4)	10.00	

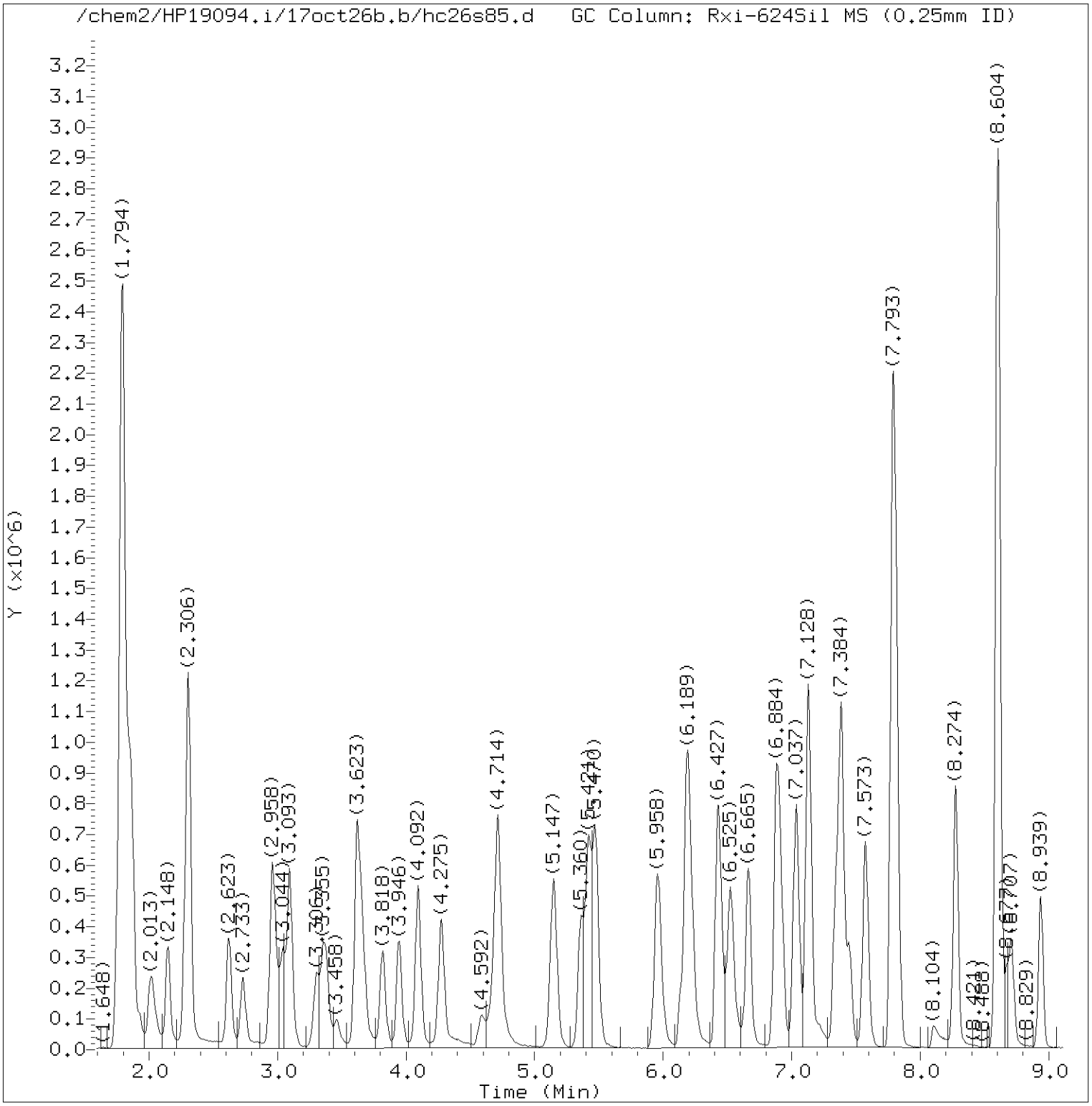
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	616987	10.272	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	97738	10.391	104%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2496501	9.589	96%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	774224	9.790	98%		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)	2.282	(0.000)	62	472007	4.754	4.75			0.1	1
15) 1,1-Dichloroethene	(2)	3.617	(0.000)	96	285058	5.387	5.39			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.714	(0.000)	96	327368	5.472	5.47			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.183	(0.000)	96	378914	5.538	5.54			0.1	1
67) Trichloroethene	(2)	8.280	(-0.000)	95	380418	5.478	5.48			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/31/2017 at 13:35. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Kerri E. Legerlotz on 10/31/2017 at 13:44. PARALLAX ID: kel01973



Total Ion Chromatogram (TIC)

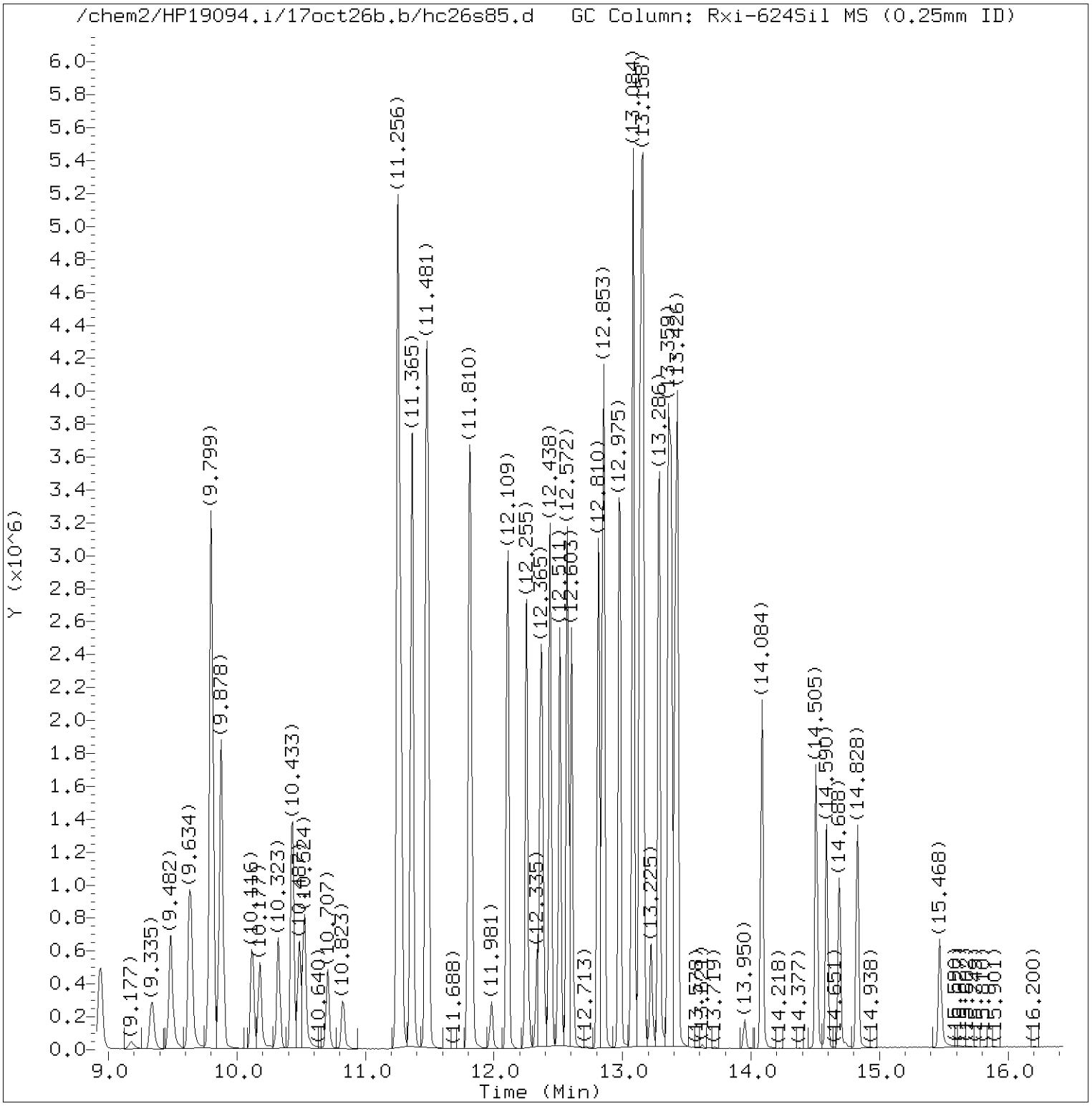
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:52 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 31-Oct-2017 13:35 kas02648

Sample Name: LCSH19 Lab Sample ID: LCSH19

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 13:35.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:52 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 31-Oct-2017 13:35 kas02648

Sample Name: LCSH19 Lab Sample ID: LCSH19

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 13:35.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct26b.b/hc26s85.d Instrument ID: HP19094.i
Injection date and time: 26-OCT-2017 20:52 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/17oct26b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 26-OCT-2017 22:46
Date, time and analyst ID of latest file update: 31-Oct-2017 13:35 kas02648

Sample Name: LCSH19 Lab Sample ID: LCSH19

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.282	62	472007	4.754
15) 1,1-Dichloroethene	(2)	3.617	96	285058	5.387
26)*t-Butyl Alcohol-d10	(1)	4.287	65	77329	50.000
31) trans-1,2-Dichloroethene	(2)	4.714	96	327368	5.472
39) cis-1,2-Dichloroethene	(2)	6.183	96	378914	5.538
50)$Dibromofluoromethane	(2)	6.878	113	616987	10.272
57)$1,2-Dichloroethane-d4	(2)	7.342	102	97738	10.391
63)*Fluorobenzene	(2)	7.787	96	2487376	10.000
67) Trichloroethene	(2)	8.281	95	380418	5.478
82)$Toluene-d8	(3)	9.799	98	2496501	9.589
97)*Chlorobenzene-d5	(3)	11.249	117	1791490	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	774224	9.790
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	812148	10.000

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

Digitally signed by Kevin A. Sposito
on 10/31/2017 at 13:35.
Target 3.5 esignature user ID: kas02648

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy, West Columbia, SC							
Arsenic	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	J	10	Analyte not detected at or above the QL. Internal standard recovered low.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Barium	16C1	290		290		10	No action taken.
	16MW8	130		130		10	No action taken.
	16MW9	530		530		10	No action taken.
	16WC1A	280		280		10	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WC1B	130		130		10	No action taken.
	16WC2B	110		110		10	No action taken.
	16-2	190		190		10	No action taken.
	16-3	710		710		10	No action taken.
	16-5	160		160		10	No action taken.
	16SPRING	200		200		10	No action taken.
	16WDUP	290		290		10	No action taken. Blind field duplicate of 16WC1A. RPD<20.
Beryllium	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. Internal standard recovered low.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy, West Columbia, SC							
Beryllium	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Cadmium	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Chromium	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Cobalt	16C1	5.9		5.9		5	No action taken.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5.9		5.9		5	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WC1B	33		33	J	5	Internal standard recovered low.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy, West Columbia, SC							
Cobalt	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5.9		5.9		5	No action taken. Blind field duplicate of 16WC1A. RPD<20.
Copper	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	49		49		5	No action taken.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	No action taken. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	J	5	Analyte not detected. Internal standard recovered low.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Lead	16C1	2	U	U		2	Analyte not detected at or above the QL.
	16MW8	2	U	U		2	Analyte not detected at or above the QL.
	16MW9	2	U	U		2	Analyte not detected at or above the QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		2	Analyte not detected at or above the QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Nickel	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	11		11		10	No action taken.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	J	10	Analyte not detected. Internal standard recovered low.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy, West Columbia, SC							
Nickel	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Vanadium	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	J	10	Analyte not detected. Internal standard recovered low.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Zinc	16C1	30	U	U		30	Analyte not detected at or above the QL.
	16MW8	140		140		30	No action taken.
	16MW9	30	U	U		30	Analyte not detected at or above the QL.
	16WC1A	30	U	U		30	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	30	U	U	J	30	Analyte not detected. Internal standard recovered low.
	16WC2B	30	U	U		30	Analyte not detected at or above the QL.
	16-2	30	U	U		30	Analyte not detected at or above the QL.
	16-3	30	U	U		30	Analyte not detected at or above the QL.
	16-5	30	U	U		30	Analyte not detected at or above the QL.
	16SPRING	30	U	U		30	Analyte not detected at or above the QL.
	16WDUP	30	U	U		30	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 7470A							
Laboratory: Shealy, West Columbia, SC							
Mercury	16C1	2	U	U		2	Analyte not detected at or above the QL.
	16MW8	2	U	U		2	Analyte not detected at or above the QL.
	16MW9	2	U	U		2	Analyte not detected at or above the QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		2	Analyte not detected at or above the QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Benzene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
2-Butanone	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the QL.
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the QL.
Carbon tetrachloride	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon tetrachloride	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Chloroethane	16C1	4.2		4.2		1	No action taken.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	2.1		2.1		1	No action taken.
	16WC1A	1.5		1.5		1	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1.5		1.5		1	No action taken. Blind field duplicate of 16WC1A. RPD<20.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Dichlorodifluoromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dichlorodifluoromethane	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
1,1-Dichloroethane	16C1	6.2		6.2		1	No action taken.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	6.8		6.8		1	No action taken.
	16WC1A	3.6		3.6		1	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	3.7		3.7		1	No action taken. Blind field duplicate of 16WC1A. RPD<20.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
1,1-Dichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Diethyl ether	16C1	46		46	J	12.5	Result reported from previously opened container with headspace. Analyzed in dilution (1:2.5). Actual QL 31 ug/L.
	16MW8	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16MW9	52		52	J	12.5	Result reported from previously opened container with headspace. Analyzed in dilution (1:2.5). Actual QL 31 ug/L.
	16WC1A	24		24		12.5	No action taken. Blind field duplicate of 16WDUP. RPD<20.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Diethyl ether	16WC1B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WC2B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-2	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-3	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-5	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16SPRING	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WDUP	25		25		12.5	No action taken. Blind field duplicate of 16WC1A. RPD<20.
	Trip_Blank_1	12.5	U	U		12.5	Analyte not detected at or above the QL.
	Trip_Blank_2	12.5	U	U		12.5	Analyte not detected at or above the QL.
Dimethyl ether	16C1	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16MW8	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16MW9	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WC1A	12.5	U	U		12.5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WC2B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-2	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-3	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-5	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16SPRING	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WDUP	12.5	U	U		12.5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	12.5	U	U		12.5	Analyte not detected at or above the QL.
	Trip_Blank_2	12.5	U	U		12.5	Analyte not detected at or above the QL.
Ethylbenzene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Ethylbenzene	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Chloromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Methylene chloride	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Tetrachloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Tetrachloroethene	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Tetrahydrofuran	16C1	25	U	U		25	Analyte not detected at or above the QL.
	16MW8	25	U	U		25	Analyte not detected at or above the QL.
	16MW9	25	U	U		25	Analyte not detected at or above the QL.
	16WC1A	25	U	U		25	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U		25	Analyte not detected at or above the QL.
	16WC2B	25	U	U		25	Analyte not detected at or above the QL.
	16-2	25	U	U		25	Analyte not detected at or above the QL.
	16-3	25	U	U		25	Analyte not detected at or above the QL.
	16-5	25	U	U		25	Analyte not detected at or above the QL.
	16SPRING	25	U	U		25	Analyte not detected at or above the QL.
	16WDUP	25	U	U		25	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	25	U	U		25	Analyte not detected at or above the QL.
	Trip_Blank_2	25	U	U		25	Analyte not detected at or above the QL.
Toluene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Toluene	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
1,1,1-Trichloroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Trichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Trichlorofluoromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Trichlorofluoromethane	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the QL.
Xylenes (Total)	16C1	3	U	U		3	Analyte not detected at or above the QL.
	16MW8	3	U	U		3	Analyte not detected at or above the QL.
	16MW9	3	U	U		3	Analyte not detected at or above the QL.
	16WC1A	3	U	U		3	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	3	U	U		3	Analyte not detected at or above the QL.
	16WC2B	3	U	U		3	Analyte not detected at or above the QL.
	16-2	3	U	U		3	Analyte not detected at or above the QL.
	16-3	3	U	U		3	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Xylenes (Total)	16-5	3	U	U		3	Analyte not detected at or above the QL.
	16SPRING	3	U	U		3	Analyte not detected at or above the QL.
	16WDUP	3	U	U		3	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	3	U	U		3	Analyte not detected at or above the QL.
	Trip_Blank_2	3	U	U		3	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Diethyl phthalate	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
2,4-Dinitrotoluene	16C1	10	U	U		10	Analyte not detected at or above the QL or DL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL or DL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL or DL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL or DL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL or DL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-2	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-3	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-5	10	U	U		10	Analyte not detected at or above the QL or DL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL or DL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL or DL. Blind field duplicate of 16WC1A.
2,6-Dinitrotoluene	16C1	10	U	U		10	Analyte not detected at or above the QL or DL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL or DL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL or DL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL or DL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL or DL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-2	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-3	10	U	U		10	Analyte not detected at or above the QL or DL.
	16-5	10	U	U		10	Analyte not detected at or above the QL or DL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL or DL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,6-Dinitrotoluene	16WDUP	10	U	U		10	Analyte not detected at or above the QL or DL. Blind field duplicate of 16WC1A.

Definitions:

Appendix IX monitoring events and compliance monitoring wells:
For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.
See separate table for Appendix IX monitoring event detection limits.
QLDenotes permit quantitation limit**.**
Q Denotes data qualifier.
U Denotes analyte not detected at or above laboratory detection limit (DL) or QL.
J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation limit/detection limit is estimated.
UA Denotes analyte not detected at or above adjusted sample detection limit /QL.
UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.
R Denotes result rejected.
Laboratory Data Qualifiers,
"U" and "<", denote not detected at or above the detection limit or QL.
B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:
Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, 2Q 2011, 2Q 2012, 2Q 2013. 2Q 2014, 2Q 2015, 2Q 2016, 2Q 2017

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:
QL Denotes permit quantitation limit**.**
Q Denotes data qualifier.
U Denotes analyte not detected at or above QL.
UA Denotes analyte not detected at or above adjusted sample QL. See data validation report for further explanation.
UN Denotes analyte concentration is less than five times the blank concentration. Analyte was not reliably detected due to blank contamination.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA"(i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated.
R Denotes result rejected. See data validation report for further explanation.
Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

Comprehensive Data Validation Report

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16 Monitoring Event: Fourth Quarter 2017

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy, West Columbia, SC							
Barium	16WC1A	280		280		10	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	290		290		10	No action taken. Blind field duplicate of 16WC1A. RPD<20.
Cobalt	16WC1A	5.9		5.9		5	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	5.9		5.9		5	No action taken. Blind field duplicate of 16WC1A. RPD<20.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroethane	16WC1A	1.5		1.5		1	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	1.5		1.5		1	No action taken. Blind field duplicate of 16WC1A. RPD<20.
1,1-Dichloroethane	16WC1A	3.6		3.6		1	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	3.7		3.7		1	No action taken. Blind field duplicate of 16WC1A. RPD<20.
Diethyl ether	16WC1A	24		24		12.5	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	25		25		12.5	No action taken. Blind field duplicate of 16WC1A. RPD<20.

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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Type I Data Package

Prepared for:

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

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 10/09/17-10/11/17

SDG# RAE95-V.2

GROUP	SAMPLE NUMBERS
1862465	9262022-9262036

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
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 **Date:** **01/15/2018**

Dana M. Kauffman
Manager

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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Sample Reference List for SDG Number RAE95
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9262022	16C1	10/11/2017 08:25	10/12/2017 09:30
9262023	16MW8	10/10/2017 11:40	10/12/2017 09:30
9262024	16MW9	10/11/2017 07:40	10/12/2017 09:30
9262025	16WC1A	10/10/2017 13:50	10/12/2017 09:30
9262026	16WC1A MS	10/10/2017 13:50	10/12/2017 09:30
9262027	16WC1A MSD	10/10/2017 13:50	10/12/2017 09:30
9262028	16WDUP	10/10/2017 14:05	10/12/2017 09:30
9262029	16WC1B	10/10/2017 13:00	10/12/2017 09:30
9262030	16-2	10/10/2017 10:55	10/12/2017 09:30
9262031	16-3	10/09/2017 14:00	10/12/2017 09:30
9262032	16-5	10/10/2017 09:10	10/12/2017 09:30
9262033	16WC2B	10/10/2017 10:10	10/12/2017 09:30
9262034	16SPRING	10/10/2017 09:20	10/12/2017 09:30
9262035	Trip Blank_1	10/10/2017 00:00	10/12/2017 09:30
9262036	Trip Blank_2	10/10/2017 00:00	10/12/2017 09:30

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Sample pH Log

SDG: RAE95

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 #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
9262022	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:07AM	2648
9262022	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 2:40:31PM	2648
9262023	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262024	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262024	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 2:40:30PM	2648
9262025	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262026	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262026	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262027	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262027	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:05AM	2648
9262028	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:06AM	2648
9262029	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:06AM	2648
9262030	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:11AM	2648
9262031	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:10AM	2648
9262032	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 2:40:30PM	2648
9262033	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 2:40:30PM	2648
9262034	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 2:40:30PM	2648
9262035	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:06AM	2648
9262036	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/23/2017 10:10:06AM	2648

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

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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

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 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: January 12, 2018 08:25

Project: RAAP - Radford, VA - HWMU16

Account #: 11200
Group Number: 1862465
SDG: RAE95
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

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

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
16C1 Grab Groundwater	10/11/2017 08:25	9262022
16MW8 Grab Groundwater	10/10/2017 11:40	9262023
16MW9 Grab Groundwater	10/11/2017 07:40	9262024
16WC1A Grab Groundwater	10/10/2017 13:50	9262025
16WC1A MS Grab Groundwater	10/10/2017 13:50	9262026
16WC1A MSD Grab Groundwater	10/10/2017 13:50	9262027
16WDUP Grab Groundwater	10/10/2017 14:05	9262028
16WC1B Grab Groundwater	10/10/2017 13:00	9262029
16-2 Grab Groundwater	10/10/2017 10:55	9262030
16-3 Grab Groundwater	10/09/2017 14:00	9262031
16-5 Grab Groundwater	10/10/2017 09:10	9262032
16WC2B Grab Groundwater	10/10/2017 10:10	9262033
16SPRING Grab Groundwater	10/10/2017 09:20	9262034
Trip Blank_1 Water	10/10/2017	9262035
Trip Blank_2 Water	10/10/2017	9262036

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

Project Name: RAAP - Radford, VA - HWMU16
ELLE Group #: 1862465

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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 9262024

The diluted analysis (DF 2.5) was performed from a previously opened container with headspace.

Sample #s: 9262022

The diluted analysis (DF 2.5) was performed from a previously opened container with headspace.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Tetrahydrofuran

Batch #: H172952AA (Sample number(s): 9262022-9262031, 9262035-9262036 UNSPK: 9262025)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Tetrahydrofuran

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene, Tetrahydrofuran, Tetrachloroethene

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9262029

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

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Batch #: 17290WAE026 (Sample number(s): 9262029)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, Diethylphthalate

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9262029

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Sample Description: **16C1 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/11/2017 08:25
SDG#: RAE95-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262022
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	4.2	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	6.2	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	46	31	2.5
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

The diluted analysis (DF 2.5) was performed from a previously opened container with headspace.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Tetrahydrofuran

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 04:02	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C	1	H172961AA	10/23/2017 12:11	Kevin A Sposito	2.5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 04:02	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H172961AA	10/23/2017 12:11	Kevin A Sposito	2.5
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 14:25	Holly B Ziegler	1

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Sample Description: **16C1 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/11/2017 08:25
SDG#: RAE95-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262022
ELLE Group #: 1862465
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

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Sample Description: **16MW8 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 11:40
SDG#: RAE95-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262023
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 04:43	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 04:43	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 14:53	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

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Sample Description: **16MW9 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/11/2017 07:40
SDG#: RAE95-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262024
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	2.1	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	6.8	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	52	31	2.5
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
	The diluted analysis (DF 2.5) was performed from a previously opened container with headspace.				
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 05:03	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C	1	H172961AA	10/23/2017 12:32	Kevin A Sposito	2.5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 05:03	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H172961AA	10/23/2017 12:32	Kevin A Sposito	2.5
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 15:21	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

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Sample Description: **16WC1A Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 13:50
SDG#: RAE95-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262025
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	1.5	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	3.6	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	24	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 02:00	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 02:00	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 13:01	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

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Sample Description: **16WC1A MS Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 13:50
SDG#: RAE95-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262026
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	
11996	Benzene	71-43-2	5.9		1.0	1
11996	2-Butanone	78-93-3	41		10	1
11996	Carbon Tetrachloride	56-23-5	5.9		1.0	1
11996	Chloroethane	75-00-3	6.7		1.0	1
11996	Chloromethane	74-87-3	4.6		1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.4		1.0	1
11996	1,1-Dichloroethane	75-34-3	9.1		1.0	1
11996	1,1-Dichloroethene	75-35-4	6.4		1.0	1
11996	Dimethyl ether	115-10-6	< 13		13	1
11996	Ethyl ether	60-29-7	29	E	13	1
11996	Ethylbenzene	100-41-4	5.8		1.0	1
11996	Freon 113	76-13-1	6.3		1.0	1
11996	Methylene Chloride	75-09-2	5.5		1.0	1
11996	Tetrachloroethene	127-18-4	6.3		1.0	1
11996	Tetrahydrofuran	109-99-9	31		25	1
11996	Toluene	108-88-3	5.8		1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.9		1.0	1
11996	Trichloroethene	79-01-6	5.9		1.0	1
11996	Trichlorofluoromethane	75-69-4	5.5		1.0	1
11996	Xylene (Total)	1330-20-7	17		3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	
14241	Diethylphthalate	84-66-2	49		5	1
14241	2,4-Dinitrotoluene	121-14-2	49		10	1
14241	2,6-Dinitrotoluene	606-20-2	50		10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 02:21	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 03:01	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 02:21	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H172952AA	10/23/2017 03:01	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 13:28	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16WC1A MSD Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 13:50
SDG#: RAE95-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262027
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	
11996	Benzene	71-43-2	5.8		1.0	1
11996	2-Butanone	78-93-3	43		10	1
11996	Carbon Tetrachloride	56-23-5	5.9		1.0	1
11996	Chloroethane	75-00-3	6.3		1.0	1
11996	Chloromethane	74-87-3	4.3		1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.2		1.0	1
11996	1,1-Dichloroethane	75-34-3	9.1		1.0	1
11996	1,1-Dichloroethene	75-35-4	6.3		1.0	1
11996	Dimethyl ether	115-10-6	< 13		13	1
11996	Ethyl ether	60-29-7	29	E	13	1
11996	Ethylbenzene	100-41-4	5.7		1.0	1
11996	Freon 113	76-13-1	6.3		1.0	1
11996	Methylene Chloride	75-09-2	5.4		1.0	1
11996	Tetrachloroethene	127-18-4	6.1		1.0	1
11996	Tetrahydrofuran	109-99-9	33		25	1
11996	Toluene	108-88-3	5.7		1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.9		1.0	1
11996	Trichloroethene	79-01-6	5.8		1.0	1
11996	Trichlorofluoromethane	75-69-4	5.2		1.0	1
11996	Xylene (Total)	1330-20-7	17		3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	
14241	Diethylphthalate	84-66-2	50		5	1
14241	2,4-Dinitrotoluene	121-14-2	49		10	1
14241	2,6-Dinitrotoluene	606-20-2	49		10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 02:41	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 03:21	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 02:41	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H172952AA	10/23/2017 03:21	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 13:57	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16WDUP Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 14:05
SDG#: RAE95-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262028
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	1.5	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	3.7	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	25	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 05:44	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 05:44	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 15:49	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16WC1B Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 13:00
SDG#: RAE95-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262029
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 06:04	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 06:04	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17290WAE026	10/25/2017 01:00	Edward C Monborne	1
11010	8270D BNA Extraction	SW-846 3510C	1	17290WAE026	10/17/2017 16:19	Kate E Lutte	1

REVISED

Sample Description: **16-2 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 10:55
SDG#: RAE95-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262030
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 00:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 00:39	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 16:17	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16-3 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/09/2017 14:00
SDG#: RAE95-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262031
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 01:00	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 01:00	Don V Viray	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 16:45	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16-5 Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 09:10
SDG#: RAE95-09

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262032
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172961AA	10/23/2017 12:52	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172961AA	10/23/2017 12:52	Kevin A Sposito	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 17:13	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16WC2B Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 10:10
SDG#: RAE95-10

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262033
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172961AA	10/23/2017 13:12	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172961AA	10/23/2017 13:12	Kevin A Sposito	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 17:41	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **16SPRING Grab Groundwater**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017 09:20
SDG#: RAE95-11

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262034
ELLE Group #: 1862465
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172961AA	10/23/2017 13:32	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172961AA	10/23/2017 13:32	Kevin A Sposito	1
14241	3 SVOCs 8270D	SW-846 8270D	1	17286WAP026	10/25/2017 18:09	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	17286WAP026	10/16/2017 12:00	Osvaldo R Sanchez	1

REVISED

Sample Description: **Trip Blank_1 Water**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017
SDG#: RAE95-12TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262035
ELLE Group #: 1862465
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 01:20	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 01:20	Don V Viray	1

REVISED

Sample Description: **Trip Blank_2 Water**
2017 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2017 09:30
Collection Date/Time: 10/10/2017
SDG#: RAE95-13TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9262036
ELLE Group #: 1862465
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H172952AA	10/23/2017 01:40	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H172952AA	10/23/2017 01:40	Don V Viray	1

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

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	LOQ
	ug/l	ug/l
Batch number: H172952AA	Sample number(s): 9262022-9262031,9262035-9262036	
Benzene	< 1.0	1.0
2-Butanone	< 10	10
Carbon Tetrachloride	< 1.0	1.0
Chloroethane	< 1.0	1.0
Chloromethane	< 1.0	1.0
Dichlorodifluoromethane	< 1.0	1.0
1,1-Dichloroethane	< 1.0	1.0
1,1-Dichloroethene	< 1.0	1.0
Dimethyl ether	< 13	13
Ethyl ether	< 13	13
Ethylbenzene	< 1.0	1.0
Freon 113	< 1.0	1.0
Methylene Chloride	< 1.0	1.0
Tetrachloroethene	< 1.0	1.0
Tetrahydrofuran	< 25	25
Toluene	< 1.0	1.0
1,1,1-Trichloroethane	< 1.0	1.0
Trichloroethene	< 1.0	1.0
Trichlorofluoromethane	< 1.0	1.0
Xylene (Total)	< 3.0	3.0
Batch number: H172961AA	Sample number(s): 9262022,9262024,9262032-9262034	
Benzene	< 1.0	1.0
2-Butanone	< 10	10
Carbon Tetrachloride	< 1.0	1.0
Chloroethane	< 1.0	1.0
Chloromethane	< 1.0	1.0
Dichlorodifluoromethane	< 1.0	1.0
1,1-Dichloroethane	< 1.0	1.0
1,1-Dichloroethene	< 1.0	1.0
Dimethyl ether	< 13	13
Ethyl ether	< 13	13
Ethylbenzene	< 1.0	1.0
Freon 113	< 1.0	1.0
Methylene Chloride	< 1.0	1.0
Tetrachloroethene	< 1.0	1.0
Tetrahydrofuran	< 25	25
Toluene	< 1.0	1.0
1,1,1-Trichloroethane	< 1.0	1.0

*- Outside of specification
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

Method Blank (continued)

Analysis Name	Result ug/l	LOQ ug/l
Trichloroethene	< 1.0	1.0
Trichlorofluoromethane	< 1.0	1.0
Xylene (Total)	< 3.0	3.0
Batch number: 17286WAP026	Sample number(s): 9262022-9262028,9262030-9262034	
Diethylphthalate	< 5	5
2,4-Dinitrotoluene	< 10	10
2,6-Dinitrotoluene	< 10	10
Batch number: 17290WAE026	Sample number(s): 9262029	
Diethylphthalate	< 5	5
2,4-Dinitrotoluene	< 10	10
2,6-Dinitrotoluene	< 10	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: H172952AA	Sample number(s): 9262022-9262031,9262035-9262036								
Benzene	5.00	5.29	5.00	5.33	106	107	80-120	1	30
2-Butanone	37.5	39.61	37.5	45.62	106	122	69-132	14	30
Carbon Tetrachloride	5.00	5.38	5.00	5.37	108	107	76-134	0	30
Chloroethane	5.00	4.72	5.00	4.69	94	94	63-125	1	30
Chloromethane	5.00	4.14	5.00	4.21	83	84	55-126	2	30
Dichlorodifluoromethane	5.00	3.76	5.00	3.80	75	76	31-150	1	30
1,1-Dichloroethane	5.00	5.28	5.00	5.31	106	106	80-120	1	30
1,1-Dichloroethene	5.00	5.58	5.00	5.59	112	112	76-120	0	30
Dimethyl ether	5.00	4.80	5.00	4.68	96	94	70-130	3	30
Ethyl ether	5.00	4.98	5.00	5.05	100	101	62-120	1	30
Ethylbenzene	5.00	5.42	5.00	5.45	108	109	80-120	1	30
Freon 113	5.00	5.45	5.00	5.37	109	107	75-127	1	30
Methylene Chloride	5.00	5.21	5.00	5.22	104	104	80-120	0	30
Tetrachloroethene	5.00	5.62	5.00	5.62	112	112	80-120	0	30
Tetrahydrofuran	25	28.31	25	33.39	113	134*	68-128	16	30
Toluene	5.00	5.46	5.00	5.45	109	109	80-120	0	30
1,1,1-Trichloroethane	5.00	5.41	5.00	5.39	108	108	79-120	0	30
Trichloroethene	5.00	5.33	5.00	5.41	107	108	80-120	1	30
Trichlorofluoromethane	5.00	4.44	5.00	4.76	89	95	66-141	7	30
Xylene (Total)	15	16.29	15	16.46	109	110	80-120	1	30
Batch number: H172961AA	Sample number(s): 9262022,9262024,9262032-9262034								
Benzene	5.00	5.25	5.00	5.21	105	104	80-120	1	30

*- Outside of specification
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

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
2-Butanone	37.5	42.69	37.5	37.95	114	101	69-132	12	30
Carbon Tetrachloride	5.00	5.33	5.00	5.28	107	106	76-134	1	30
Chloroethane	5.00	4.51	5.00	4.56	90	91	63-125	1	30
Chloromethane	5.00	3.91	5.00	3.84	78	77	55-126	2	30
Dichlorodifluoromethane	5.00	3.53	5.00	3.54	71	71	31-150	0	30
1,1-Dichloroethane	5.00	5.16	5.00	5.20	103	104	80-120	1	30
1,1-Dichloroethene	5.00	5.38	5.00	5.46	108	109	76-120	2	30
Dimethyl ether	5.00	4.65	5.00	4.61	93	92	70-130	1	30
Ethyl ether	5.00	4.92	5.00	4.95	98	99	62-120	1	30
Ethylbenzene	5.00	5.41	5.00	5.35	108	107	80-120	1	30
Freon 113	5.00	5.49	5.00	5.50	110	110	75-127	0	30
Methylene Chloride	5.00	5.10	5.00	5.06	102	101	80-120	1	30
Tetrachloroethene	5.00	5.64	5.00	5.51	113	110	80-120	2	30
Tetrahydrofuran	25	31.15	25	26.99	125	108	68-128	14	30
Toluene	5.00	5.41	5.00	5.41	108	108	80-120	0	30
1,1,1-Trichloroethane	5.00	5.20	5.00	5.36	104	107	79-120	3	30
Trichloroethene	5.00	5.27	5.00	5.32	105	106	80-120	1	30
Trichlorofluoromethane	5.00	4.72	5.00	4.79	94	96	66-141	1	30
Xylene (Total)	15	16.3	15	16.07	109	107	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 17286WAP026	Sample number(s): 9262022-9262028,9262030-9262034								
Diethylphthalate	50	44.85			90		55-113		
2,4-Dinitrotoluene	50	46.68			93		70-122		
2,6-Dinitrotoluene	50	47.13			94		75-121		
Batch number: 17290WAE026	Sample number(s): 9262029								
Diethylphthalate	50	82.17	50	77.59	164*	155*	55-113	6	30
2,4-Dinitrotoluene	50	90.66	50	84.08	181*	168*	70-122	8	30
2,6-Dinitrotoluene	50	93.91	50	89.55	188*	179*	75-121	5	30

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: H172952AA	Sample number(s): 9262022-9262031,9262035-9262036 UNSPK: 9262025									
Benzene	0.203	5.00	5.86	5.00	5.83	113	113	80-120	0	30
2-Butanone	< 10	37.5	41.13	37.5	42.51	110	113	69-132	3	30
Carbon Tetrachloride	< 1.0	5.00	5.88	5.00	5.91	118	118	76-134	1	30

*- Outside of specification
(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.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

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
Chloroethane	1.46	5.00	6.66	5.00	6.31	104	97	63-125	5	30
Chloromethane	< 1.0	5.00	4.57	5.00	4.30	91	86	55-126	6	30
Dichlorodifluoromethane	< 1.0	5.00	4.38	5.00	4.23	88	85	31-150	3	30
1,1-Dichloroethane	3.55	5.00	9.13	5.00	9.14	111	112	80-120	0	30
1,1-Dichloroethene	0.168	5.00	6.41	5.00	6.30	125*	123*	76-120	2	30
Dimethyl ether	0.613	5.00	5.12	5.00	4.85	90	85	70-130	5	30
Ethyl ether	24.11	5.00	29.01	5.00	28.86	98 (2)	95 (2)	62-120	1	30
Ethylbenzene	< 1.0	5.00	5.85	5.00	5.67	117	113	80-120	3	30
Freon 113	< 1.0	5.00	6.34	5.00	6.28	127	126	75-127	1	30
Methylene Chloride	< 1.0	5.00	5.50	5.00	5.44	110	109	80-120	1	30
Tetrachloroethene	0.163	5.00	6.29	5.00	6.13	123*	119	80-120	3	30
Tetrahydrofuran	< 25	25	31.47	25	32.84	126	131*	68-128	4	30
Toluene	< 1.0	5.00	5.81	5.00	5.67	116	113	80-120	2	30
1,1,1-Trichloroethane	< 1.0	5.00	5.86	5.00	5.87	117	117	79-120	0	30
Trichloroethene	0.101	5.00	5.88	5.00	5.79	115	114	80-120	2	30
Trichlorofluoromethane	< 1.0	5.00	5.47	5.00	5.16	109	103	66-141	6	30
Xylene (Total)	< 3.0	15	17.34	15	16.98	116	113	80-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 17286WAP026	Sample number(s): 9262022-9262028,9262030-9262034 UNSPK: 9262025									
Diethylphthalate	< 5	50.2	48.69	50.61	49.71	97	98	55-113	2	30
2,4-Dinitrotoluene	< 10	50.2	49.35	50.61	49.2	98	97	70-122	0	30
2,6-Dinitrotoluene	< 10	50.2	49.72	50.61	49.46	99	98	75-121	1	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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: 8260C (25 ml)
Batch number: H172952AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9262022	95	96	105	94
9262023	95	95	104	92
9262024	96	97	104	91
9262025	99	97	102	91
9262026	98	98	102	96
9262027	98	98	100	96

*- Outside of specification
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: 8260C (25 ml)
Batch number: H172952AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9262028	98	99	103	91
9262029	97	100	104	92
9262030	95	101	105	93
9262031	95	93	105	91
9262035	96	96	104	92
9262036	96	94	105	93
Blank	96	96	104	92
LCS	98	94	101	95
LCSD	98	96	101	97
MS	98	98	102	96
MSD	98	98	100	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 8260C (25 ml)
Batch number: H172961AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9262032	100	95	101	92
9262033	101	99	101	92
9262034	100	99	101	93
Blank	97	97	103	94
LCS	96	93	102	96
LCSD	98	96	101	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 3 SVOCs 8270D
Batch number: 17286WAP026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9262022	44	46	92	72	81	88
9262023	34	40	92	68	77	59
9262024	43	46	83	67	74	82
9262025	39	37	76	72	78	82
9262026	50	51	46	76	84	83
9262027	53	51	57	76	84	86
9262028	43	40	62	73	80	71
9262030	31	39	80	66	71	79
9262031	29	41	89	76	83	90
9262032	30	39	88	67	76	89

*- Outside of specification
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1862465
Reported: 01/12/2018 08:25

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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: 3 SVOCs 8270D
Batch number: 17286WAP026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9262033	29	41	81	69	79	85
9262034	29	39	87	70	81	87
Blank	25	34	78	63	73	74
LCS	32	45	95	74	81	82
MS	50	51	46	76	84	83
MSD	53	51	57	76	84	86
Limits:	10-69	10-83	13-149	40-113	46-104	35-119

Analysis Name: 3 SVOCs 8270D
Batch number: 17290WAE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9262029	79	81	33*
Blank	78	79	80
LCS	85	86	89
LCSD	79	78	83
Limits:	40-113	46-104	35-119

*- Outside of specification
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1862465/9262022-36

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC , 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 JK JUK 9/27/17

Client: 0 **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:** HWMU16 **Event:** 2017 - 2nd Semiannual Monitoring Event **DAA JN:** B03204-17A **Lab JN:**	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES UPS: 12-75Y02X-Y0-5658-8441 Carrier: Tracking Number: 12-75Y02X-Y0-5649-6666		

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

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

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	2-250 ML AG							
Sample ID	Date: 2017	Time	Box 1: Matrix	Number of Bottles	8260C/5030C - 25 ml purge	8270D/3510C (Semivolatiles)							
16C1	10/11	0825	GW	5	X	X							
16MW8	10/10	1140	GW	5	X	X							
16MW9	10/11	0740	GW	84	X 2	X 2	~~NFE~~ 10/11/17						submitted only(2) 8260C - ~~NFE~~ 10-16-17
16WC1A	10/10	1350	GW	15	X	X							USE FOR QC
16WDUP	10/10	1405	GW	5	X	X							
16WC1B	10/10	1300	GW	5	X	X							
16-2	10/10	1055	GW	5	X	X							
16-3	10/9	1400	GW	5	X	X							
16-5	10/10	0910	GW	5	X	X							
16WC2B	10/10	1010	GW	5	X	X							
16SPRING	10/10	0920	GW	5	X	X							
Trip Blank1	10/10	—	GW	3	X								
Trip Blank2	10/10	—	GW	3	X								
~~Trip Blank3~~			GW	3	X								NOT NEEDED

GENERAL NOTES:

1. DAA EDD required.
2. Level 1 deliverables required.
3. See attached target analyte list.
4. 1 Trip Blank to be analyzed per day of sample collection.
5. Project required LOQs attached. Please report these LOQs.
6. Report to at or above project QL's.

Clients Special Instructions: Level 1 with edd. See attached target analyte list. See Genral Notes block.

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: 10/09/17	#1 Relinquished by (Signature):	Date: 10/11/17	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KY-Tran Vo	Date: 10/09/17	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/12/17	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name: ELLE	Time: 930	

JWMD 10-5-17

JUK 1/3 9/27/17

1862465

11/22/04

ANALYTICAL METHOD: 8260C/5030C 25 ml purge volume
TYPE METHOD: GCMS
CLASS: VOLATILE

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5
15	Dimethyl ether	115-10-6	12.5
16	Methylene chloride	75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1
20	Tetrahydrofuran		25

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF

17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014 KPO
20 added 04 2016 JCF

25 ml purge volume

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-q.doc JCF 11/04/2004

1862465

3/3 JVF 4/21/17

HWMU16
Radford Army Ammunition Plant (RFAAP)
Semiannual Monitoring Event
DAA JN: B03204-17A

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

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthalate		5

10/13 – diethylphthate added

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Sample Administration Receipt Documentation Log

Doc Log ID: 197336

Group Number(s): 1862465

Client: Draper Aden Associates

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/12/2017 9:30
Number of Packages:	5	Number of Projects:	3
State/Province of Origin:	VA		

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	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 16:00 on 10/12/2017

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	DT42-02	1.8	DT	Wet	Y	Bagged	N
2	DT42-02	2.2	DT	Wet	Y	Bagged	N
3	DT42-02	1.7	DT	Wet	Y	Bagged	N
4	DT42-02	2.9	DT	Wet	Y	Bagged	N
5	DT42-02	1.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
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	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	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
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.
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: RAE95

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9262022	16C1	X		1; 2.5	
9262023	16MW8	X		1	
9262024	16MW9	X		1; 2.5	
9262025	16WC1A	X		1	Unspiked
9262026	16WC1A MS	X		1	Matrix Spike
9262027	16WC1A MSD	X		1	Matrix Spike Duplicate
9262028	16WDUP	X		1	Field Duplicate Sample
9262029	16WC1B	X		1	
9262030	16-2	X		1	
9262031	16-3	X		1	
9262032	16-5	X		1	
9262033	16WC2B	X		1	
9262034	16SPRING	X		1	
9262035	Trip Blank_1	X		1	Trip Blank
9262036	Trip Blank_2	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.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE95

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 9262023-9262025, 9262028-9262031, 9262035-9262036: Analysis: 11996)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: H172952AA (Sample number(s): 9262022-9262031, 9262035-9262036, UNSPK: 9262025)
The recovery(ies) for the following analyte(s) in the LCSD exceeded the acceptance window indicating a positive bias: Tetrahydrofuran

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Tetrahydrofuran

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Batch#: H172952AA (Sample number(s): 9262022-9262031, 9262035-9262036, UNSPK: 9262025)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Tetrachloroethene

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:Tetrahydrofuran

The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene

SAMPLE ANALYSIS:

(Sample number(s): 9262022 and 9262024: Analysis: 11996)
The diluted analysis (DF 2.5) was performed from a previously opened container with headspace.

No additional problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE95

GC/MS Volatiles

Fraction: Volatiles 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

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE95

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
8260C (25 ml)	H172952AA	VBLKH96	10/23/2017 00:06:00
		LCSH97	10/22/2017 21:44:00
		LCSH96	10/22/2017 23:05:00
		LCDH96	10/22/2017 23:25:00
		LCDH97	10/22/2017 23:45:00
		9262022	10/23/2017 04:02:00
		9262023	10/23/2017 04:43:00
		9262024	10/23/2017 05:03:00
		9262025 UNSPK	10/23/2017 02:00:00
		9262026 MS	10/23/2017 02:21:00
		9262026 MS	10/23/2017 03:01:00
		9262027 MSD	10/23/2017 02:41:00
		9262027 MSD	10/23/2017 03:21:00
		9262028	10/23/2017 05:44:00
		9262029	10/23/2017 06:04:00
		9262030	10/23/2017 00:39:00
		9262031	10/23/2017 01:00:00
		9262035	10/23/2017 01:20:00
		9262036	10/23/2017 01:40:00
8260C (25 ml)	H172961AA	VBLKH98	10/23/2017 11:13:00
		LCSH98	10/23/2017 09:51:00
		LCDH98	10/23/2017 10:11:00
		LCSH99	10/23/2017 10:32:00
		LCDH99	10/23/2017 10:52:00
		9262022	10/23/2017 12:11:00
		9262024	10/23/2017 12:32:00
		9262032	10/23/2017 12:52:00
		9262033	10/23/2017 13:12:00
		9262034	10/23/2017 13:32:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAE95
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H172952AA / VBLKH96 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	10/23/17	N.D.	ug/l	0.1	1.0
Chloromethane	10/23/17	N.D.	ug/l	0.2	1.0
Chloroethane	10/23/17	N.D.	ug/l	0.1	1.0
Trichlorofluoromethane	10/23/17	N.D.	ug/l	0.1	1.0
Ethyl ether	10/23/17	N.D.	ug/l	0.1	13
1,1-Dichloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Freon 113	10/23/17	N.D.	ug/l	0.2	1.0
Methylene Chloride	10/23/17	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	10/23/17	N.D.	ug/l	0.1	1.0
2-Butanone	10/23/17	N.D.	ug/l	1.0	10
Tetrahydrofuran	10/23/17	N.D.	ug/l	2.0	25
1,1,1-Trichloroethane	10/23/17	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	10/23/17	N.D.	ug/l	0.1	1.0
Benzene	10/23/17	N.D.	ug/l	0.1	1.0
Trichloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Toluene	10/23/17	N.D.	ug/l	0.1	1.0
Tetrachloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Ethylbenzene	10/23/17	N.D.	ug/l	0.1	1.0
Xylene (Total)	10/23/17	N.D.	ug/l	0.1	3.0
Dimethyl ether	10/23/17	N.D.	ug/l	0.1	13

H172961AA / VBLKH98 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	10/23/17	N.D.	ug/l	0.1	1.0
Chloromethane	10/23/17	N.D.	ug/l	0.2	1.0
Chloroethane	10/23/17	N.D.	ug/l	0.1	1.0
Trichlorofluoromethane	10/23/17	N.D.	ug/l	0.1	1.0
Ethyl ether	10/23/17	N.D.	ug/l	0.1	13
1,1-Dichloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Freon 113	10/23/17	N.D.	ug/l	0.2	1.0
Methylene Chloride	10/23/17	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	10/23/17	N.D.	ug/l	0.1	1.0
2-Butanone	10/23/17	N.D.	ug/l	1.0	10
Tetrahydrofuran	10/23/17	N.D.	ug/l	2.0	25
1,1,1-Trichloroethane	10/23/17	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	10/23/17	N.D.	ug/l	0.1	1.0
Benzene	10/23/17	N.D.	ug/l	0.1	1.0
Trichloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Toluene	10/23/17	N.D.	ug/l	0.1	1.0
Tetrachloroethene	10/23/17	N.D.	ug/l	0.1	1.0
Ethylbenzene	10/23/17	N.D.	ug/l	0.1	1.0
Xylene (Total)	10/23/17	N.D.	ug/l	0.1	3.0
Dimethyl ether	10/23/17	N.D.	ug/l	0.1	13

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAE95
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H172952AA	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
VBLKH96	96	80 - 120	92	80 - 120	96	80 - 120	104	80 - 120
LCSH96	94	80 - 120	95	80 - 120	98	80 - 120	101	80 - 120
LCDH96	96	80 - 120	97	80 - 120	98	80 - 120	101	80 - 120
9262022	96	80 - 120	94	80 - 120	95	80 - 120	105	80 - 120
9262023	95	80 - 120	92	80 - 120	95	80 - 120	104	80 - 120
9262024	97	80 - 120	91	80 - 120	96	80 - 120	104	80 - 120
9262025 UNSPK	97	80 - 120	91	80 - 120	99	80 - 120	102	80 - 120
9262026 MS	98	80 - 120	96	80 - 120	98	80 - 120	102	80 - 120
9262027 MSD	98	80 - 120	96	80 - 120	98	80 - 120	100	80 - 120
9262028	99	80 - 120	91	80 - 120	98	80 - 120	103	80 - 120
9262029	100	80 - 120	92	80 - 120	97	80 - 120	104	80 - 120
9262030	101	80 - 120	93	80 - 120	95	80 - 120	105	80 - 120
9262031	93	80 - 120	91	80 - 120	95	80 - 120	105	80 - 120
9262035	96	80 - 120	92	80 - 120	96	80 - 120	104	80 - 120
9262036	94	80 - 120	93	80 - 120	96	80 - 120	105	80 - 120

H172961AA	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
VBLKH98	97	80 - 120	94	80 - 120	97	80 - 120	103	80 - 120
LCSH98	93	80 - 120	96	80 - 120	96	80 - 120	102	80 - 120
LCDH98	96	80 - 120	96	80 - 120	98	80 - 120	101	80 - 120
9262032	95	80 - 120	92	80 - 120	100	80 - 120	101	80 - 120
9262033	99	80 - 120	92	80 - 120	101	80 - 120	101	80 - 120
9262034	99	80 - 120	93	80 - 120	100	80 - 120	101	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9262025 MS: 9262026 MSD: 9262027 **Analyte**	Batch: **H172952AA** (Sample number(s): 9262022-9262031, 9262035-9262036)								
	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.	4.38	4.23	88	85	31-150	3	30
Chloromethane	5.00	N.D.	4.57	4.30	91	86	55-126	6	30
Chloroethane	5.00	1.46	6.66	6.31	104	97	63-125	5	30
Trichlorofluoromethane	5.00	N.D.	5.47	5.16	109	103	66-141	6	30
Ethyl ether	5.00	24.11	29.01	28.86	98 (2)	95 (2)	62-120	1	30
1,1-Dichloroethene	5.00	0.168	6.41	6.30	125 *	123 *	76-120	2	30
Freon 113	5.00	N.D.	6.34	6.28	127	126	75-127	1	30
Methylene Chloride	5.00	N.D.	5.50	5.44	110	109	80-120	1	30
1,1-Dichloroethane	5.00	3.55	9.13	9.14	111	112	80-120	0	30
2-Butanone	37.5	N.D.	41.13	42.51	110	113	69-132	3	30
Tetrahydrofuran	25	N.D.	31.47	32.84	126	131 *	68-128	4	30
1,1,1-Trichloroethane	5.00	N.D.	5.86	5.87	117	117	79-120	0	30
Carbon Tetrachloride	5.00	N.D.	5.88	5.91	118	118	76-134	1	30
Benzene	5.00	0.203	5.86	5.83	113	113	80-120	0	30
Trichloroethene	5.00	0.101	5.88	5.79	115	114	80-120	2	30
Toluene	5.00	N.D.	5.81	5.67	116	113	80-120	2	30
Tetrachloroethene	5.00	0.163	6.29	6.13	123 *	119	80-120	3	30
Ethylbenzene	5.00	N.D.	5.85	5.67	117	113	80-120	3	30
Xylene (Total)	15	N.D.	17.34	16.98	116	113	80-120	2	30
Dimethyl ether	5.00	0.613	5.12	4.85	90	85	70-130	5	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: RAE95
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH96 LCSD: LCDH96	Batch: **H172952AA** (Sample number(s): 9262022-9262031, 9262035-9262036)							
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	3.76	3.80	75	76	31-150	1	30
Chloromethane	5.00	4.14	4.21	83	84	55-126	2	30
Chloroethane	5.00	4.72	4.69	94	94	63-125	1	30
Trichlorofluoromethane	5.00	4.44	4.76	89	95	66-141	7	30
Ethyl ether	5.00	4.98	5.05	100	101	62-120	1	30
1,1-Dichloroethene	5.00	5.58	5.59	112	112	76-120	0	30
Freon 113	5.00	5.45	5.37	109	107	75-127	1	30
Methylene Chloride	5.00	5.21	5.22	104	104	80-120	0	30
1,1-Dichloroethane	5.00	5.28	5.31	106	106	80-120	1	30
2-Butanone	37.5	39.61	45.62	106	122	69-132	14	30
Tetrahydrofuran	25	28.31	33.39	113	134 *	68-128	16	30
1,1,1-Trichloroethane	5.00	5.41	5.39	108	108	79-120	0	30
Carbon Tetrachloride	5.00	5.38	5.37	108	107	76-134	0	30
Benzene	5.00	5.29	5.33	106	107	80-120	1	30
Trichloroethene	5.00	5.33	5.41	107	108	80-120	1	30
Toluene	5.00	5.46	5.45	109	109	80-120	0	30
Tetrachloroethene	5.00	5.62	5.62	112	112	80-120	0	30
Ethylbenzene	5.00	5.42	5.45	108	109	80-120	1	30
Xylene (Total)	15	16.29	16.46	109	110	80-120	1	30

LCS: LCSH97 LCSD: LCDH97	Batch: **H172952AA** (Sample number(s): 9262022-9262031, 9262035-9262036)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dimethyl ether	5.00	4.80	4.68	96	94	70-130	3	30

LCS: LCSH98 LCSD: LCDH98	Batch: **H172961AA** (Sample number(s): 9262022, 9262024, 9262032-9262034)							
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	3.53	3.54	71	71	31-150	0	30
Chloromethane	5.00	3.91	3.84	78	77	55-126	2	30
Chloroethane	5.00	4.51	4.56	90	91	63-125	1	30
Trichlorofluoromethane	5.00	4.72	4.79	94	96	66-141	1	30
Ethyl ether	5.00	4.92	4.95	98	99	62-120	1	30
1,1-Dichloroethene	5.00	5.38	5.46	108	109	76-120	2	30
Freon 113	5.00	5.49	5.50	110	110	75-127	0	30
Methylene Chloride	5.00	5.10	5.06	102	101	80-120	1	30
1,1-Dichloroethane	5.00	5.16	5.20	103	104	80-120	1	30
2-Butanone	37.5	42.69	37.95	114	101	69-132	12	30
Tetrahydrofuran	25	31.15	26.99	125	108	68-128	14	30
1,1,1-Trichloroethane	5.00	5.20	5.36	104	107	79-120	3	30

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH98 LCSD: LCDH98	Batch: **H172961AA** (Sample number(s): 9262022, 9262024, 9262032-9262034)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Carbon Tetrachloride	5.00	5.33	5.28	107	106	76-134	1	30
Benzene	5.00	5.25	5.21	105	104	80-120	1	30
Trichloroethene	5.00	5.27	5.32	105	106	80-120	1	30
Toluene	5.00	5.41	5.41	108	108	80-120	0	30
Tetrachloroethene	5.00	5.64	5.51	113	110	80-120	2	30
Ethylbenzene	5.00	5.41	5.35	108	107	80-120	1	30
Xylene (Total)	15	16.3	16.07	109	107	80-120	1	30

LCS: LCSH99 LCSD: LCDH99	Batch: **H172961AA** (Sample number(s): 9262022, 9262024, 9262032-9262034)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dimethyl ether	5.00	4.65	4.61	93	92	70-130	1	30

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID: hc16t01.d BFB Injection Date: 10/16/17

Instrument ID: HP19094 BFB Injection Time: 10:07

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	22.28
75	30.0 - 60.0% of mass 95	52.78
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.42
173	Less than 2.0% of mass 174	0.87 (0.95)1
174	Greater than 50.0% of mass 95	90.93
175	5.0 - 9.0% of mass 174	6.63 (7.29)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.78 (99.83)1
177	5.0 - 9.0% of mass 176	6.25 (6.89)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	hc16i01.d	10/16/17	10:43
02	VSTD10	hc16i02.d	10/16/17	11:03
03	VSTD5	hc16i03.d	10/16/17	11:23
04	VSTD2	hc16i04.d	10/16/17	11:44
05	VSTD1	hc16i05.d	10/16/17	12:04
06	VSTD.5	hc16i06.d	10/16/17	12:24
07	VSTD.2	hc16i07.d	10/16/17	12:45
08	MDL0.1 - MDL0.1	hc16m01.d	10/16/17	13:05
09	MDL0.4 - MDL0.4	hc16m02.d	10/16/17	13:28
10	LCSHLG	hc16v01.d	10/16/17	13:48

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID: hc22t01.d BFB Injection Date: 10/22/17

Instrument ID: HP19094 BFB Injection Time: 18:21

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	23.74
75	30.0 - 60.0% of mass 95	55.06
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.78
173	Less than 2.0% of mass 174	1.02 (1.14)1
174	Greater than 50.0% of mass 95	89.09
175	5.0 - 9.0% of mass 174	6.21 (6.97)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.61 (96.10)1
177	5.0 - 9.0% of mass 176	6.06 (7.08)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	hc22i01.d	10/22/17	19:02
02	VSTD10	hc22i02.d	10/22/17	19:23
03	VSTD5	hc22i03.d	10/22/17	19:43
04	VSTD2	hc22i04.d	10/22/17	20:03
05	VSTD1	hc22i05.d	10/22/17	20:23
06	VSTD.5	hc22i06.d	10/22/17	20:44
07	VSTD.2	hc22i07.d	10/22/17	21:04
08	MDL0.1 - MDL0.1	hc22m01.d	10/22/17	21:24
09	LCSH97	hc22s33.d	10/22/17	21:44
10	LCSHSM	hc22v01.d	10/22/17	21:44
11	VSTD10	hc22c01.d	10/22/17	22:45
12	LCSH96	hc22s31.d	10/22/17	23:05
13	LCDH96	hc22s32.d	10/22/17	23:25
14	LCSH94	hc22l01.d	10/22/17	23:25
15	LCDH97	hc22s34.d	10/22/17	23:45
16	LCSH95	hc22l02.d	10/22/17	23:45
17	VBLKH94	hc22b01.d	10/23/17	00:06
18	VBLKH96	hc22b05.d	10/23/17	00:06
19	9262030	hc22s35.d	10/23/17	00:39
20	9262031	hc22s36.d	10/23/17	01:00
21	9262035	hc22s03.d	10/23/17	01:20
22	9262036	hc22s04.d	10/23/17	01:40

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID: hc22t01.d BFB Injection Date: 10/22/17

Instrument ID: HP19094 BFB Injection Time: 18:21

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	23.74
75	30.0 - 60.0% of mass 95	55.06
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.78
173	Less than 2.0% of mass 174	1.02 (1.14)1
174	Greater than 50.0% of mass 95	89.09
175	5.0 - 9.0% of mass 174	6.21 (6.97)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.61 (96.10)1
177	5.0 - 9.0% of mass 176	6.06 (7.08)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	9262025	hc22s05.d	10/23/17	02:00
24	9262026MS	hc22s06.d	10/23/17	02:21
25	9262027MSD	hc22s07.d	10/23/17	02:41
26	9262026MS1	hc22s08.d	10/23/17	03:01
27	9262027MSD1	hc22s09.d	10/23/17	03:21
28	9262022	hc22s11.d	10/23/17	04:02
29	9262023	hc22s13.d	10/23/17	04:43
30	9262024	hc22s14.d	10/23/17	05:03
31	9262028	hc22s16.d	10/23/17	05:44
32	9262029	hc22s17.d	10/23/17	06:04

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID: hc23t01.d BFB Injection Date: 10/23/17

Instrument ID: HP19094 BFB Injection Time: 08:03

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	22.73
75	30.0 - 60.0% of mass 95	55.30
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.83
173	Less than 2.0% of mass 174	0.68 (0.71)1
174	Greater than 50.0% of mass 95	96.24
175	5.0 - 9.0% of mass 174	7.47 (7.77)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.35 (98.03)1
177	5.0 - 9.0% of mass 176	5.85 (6.20)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	hc23c01.d	10/23/17	09:11
02	VSTD10	hc23c02.d	10/23/17	09:31
03	LCSH01	hc23s31.d	10/23/17	09:51
04	LCSH98	hc23s01.d	10/23/17	09:51
05	LCDH01	hc23s32.d	10/23/17	10:11
06	LCDH98	hc23s02.d	10/23/17	10:11
07	LCSH99	hc23s03.d	10/23/17	10:32
08	LCDH99	hc23s04.d	10/23/17	10:52
09	VBLKH01	hc23b31.d	10/23/17	11:13
10	VBLKH98	hc23b01.d	10/23/17	11:13
11	9262022DL	hc23s05.d	10/23/17	12:11
12	9262024DL	hc23s06.d	10/23/17	12:32
13	9262032	hc23s07.d	10/23/17	12:52
14	9262033	hc23s08.d	10/23/17	13:12
15	9262034	hc23s09.d	10/23/17	13:32
16	9264000	hc23s33.d	10/23/17	13:53
17	9265683	hc23s34.d	10/23/17	14:13
18	9264021	hc23s35.d	10/23/17	14:33
19	9264022MS	hc23s36.d	10/23/17	14:54
20	9264023MSD	hc23s37.d	10/23/17	15:14
21	9264019	hc23s39.d	10/23/17	15:55
22	9264024	hc23s40.d	10/23/17	16:15

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID: hc23t01.d BFB Injection Date: 10/23/17

Instrument ID: HP19094 BFB Injection Time: 08:03

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	22.73
75	30.0 - 60.0% of mass 95	55.30
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.83
173	Less than 2.0% of mass 174	0.68 (0.71)1
174	Greater than 50.0% of mass 95	96.24
175	5.0 - 9.0% of mass 174	7.47 (7.77)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.35 (98.03)1
177	5.0 - 9.0% of mass 176	5.85 (6.20)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	9264024DL	hc23s41.d	10/23/17	16:36
24	9264025	hc23s42.d	10/23/17	16:56
25	9264025DL	hc23s43.d	10/23/17	17:16
26	9264026	hc23s44.d	10/23/17	17:37
27	9264026DL	hc23s45.d	10/23/17	17:57
28	9264027	hc23s46.d	10/23/17	18:17
29	9264027DL	hc23s47.d	10/23/17	18:37

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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.4090	0.4210	0.4834	0.4645	0.4323	0.4378	0.4309	0.4399	6	AVG #
Chloromethane	#0.4971	0.4307	0.4454	0.4305	0.4241	0.4059	0.4068	0.4343	7	AVG #
Vinyl Chloride	#0.4058	0.3891	0.4125	0.4058	0.4017	0.3883	0.3913	0.3992	2	AVG #
1,3-Butadiene	0.4444	0.3893	0.3920	0.3572	0.3528	0.3481	0.3572	0.3773	9	AVG
Bromomethane	#0.2999	0.2732	0.2762	0.2685	0.2672	0.2544	0.2612	0.2715	5	AVG #
Chloroethane	#0.2439	0.2241	0.2385	0.2291	0.2239	0.2153	0.2160	0.2273	5	AVG #
Dichlorofluoromethane	0.7992	0.6636	0.6712	0.6544	0.6419	0.6110	0.6171	0.6655	9	AVG
Trichlorofluoromethane	#0.5200	0.5004	0.5548	0.5176	0.5443	0.5400	0.5453	0.5317	4	AVG #
Ethyl ether	0.1614	0.1724	0.1652	0.1668	0.1759	0.1722	0.1742	0.1697	3	AVG
Freon 123a	0.3509	0.3321	0.3521	0.3193	0.3236	0.3258	0.3250	0.3327	4	AVG
Acrolein	3.2141	3.2155	3.2418	2.9199	3.1235	3.0816	3.1927	3.1413	4	AVG
1,1-Dichloroethene	#0.2079	0.2099	0.2227	0.2065	0.2132	0.2141	0.2149	0.2128	3	AVG #
Freon 113	#0.2196	0.2232	0.2512	0.2335	0.2372	0.2450	0.2486	0.2369	5	AVG #
Acetone	#4.3528	4.5802	4.3105	3.6738	3.7099	3.7669	3.7648	4.0227	9	AVG #
Methyl Iodide	0.4309	0.4215	0.4380	0.4090	0.4180	0.4245	0.4247	0.4238	2	AVG
Carbon Disulfide	#0.7644	0.6804	0.6997	0.6480	0.6496	0.6622	0.6617	0.6809	6	AVG #
Allyl Chloride	0.5407	0.4659	0.4751	0.4597	0.4853	0.4769	0.4752	0.4827	6	AVG
Methyl Acetate	#12.044	11.947	12.801	12.024	11.904	11.541	12.511	12.110	3	AVG #
Methylene Chloride	#0.2743	0.2557	0.2453	0.2291	0.2306	0.2313	0.2326	0.2427	7	AVG #
t-Butyl Alcohol	1.3880	1.5195	1.3492	1.2412	1.3253	1.3937	1.3186	1.3622	6	AVG
Acrylonitrile	3.8031	5.1901	5.1382	4.7118	5.1879	5.1548	5.3588	4.9350	11	AVG
trans-1,2-Dichloroethene	#0.2473	0.2412	0.2509	0.2304	0.2343	0.2395	0.2400	0.2405	3	AVG #
Methyl Tertiary Butyl Ether	#0.5019	0.5335	0.5399	0.5015	0.5290	0.5350	0.5371	0.5254	3	AVG #
n-Hexane	0.3967	0.4123	0.4484	0.4230	0.4195	0.4341	0.4395	0.4248	4	AVG
1,1-Dichloroethane	#0.4964	0.4824	0.5197	0.4778	0.4965	0.4891	0.5016	0.4948	3	AVG #
di-Isopropyl Ether	0.9254	0.9340	0.9769	0.8975	0.9283	0.9310	0.9439	0.9338	3	AVG
2-Chloro-1,3-Butadiene	0.4405	0.4617	0.4801	0.4510	0.4640	0.4750	0.4770	0.4642	3	AVG
Ethyl t-butyl ether	0.7166	0.7477	0.7868	0.7201	0.7483	0.7609	0.7643	0.7492	3	AVG
cis-1,2-Dichloroethene	#0.2773	0.2776	0.2836	0.2668	0.2718	0.2718	0.2765	0.2751	2	AVG #
2,2-Dichloropropane	0.4198	0.4151	0.4347	0.3989	0.4137	0.4203	0.4228	0.4179	3	AVG
2-Butanone	#8.7404	8.3266	8.0741	7.2064	7.6637	7.5055	7.7949	7.9017	7	AVG #
Propionitrile	1.6689	1.8130	1.7986	1.6967	1.9183	1.9116	1.9504	1.8225	6	AVG
Methacrylonitrile	6.2440	6.7500	6.6909	6.4500	6.6757	6.5917	6.9592	6.6231	3	AVG
Bromochloromethane	0.1120	0.1057	0.1064	0.1028	0.1102	0.1085	0.1116	0.1082	3	AVG
Tetrahydrofuran	1.7961	1.8609	1.8609	1.6717	1.7862	1.7444	1.8242	1.7920	4	AVG
Chloroform	#0.4639	0.4874	0.5001	0.4515	0.4769	0.4790	0.4860	0.4778	3	AVG #
1,1,1-Trichloroethane	#0.4139	0.4332	0.4506	0.4246	0.4225	0.4354	0.4358	0.4308	3	AVG #
Cyclohexane	#0.5226	0.5358	0.5473	0.5108	0.5116	0.5257	0.5323	0.5266	2	AVG #
Cyclohexane(2)	#0.3872	0.3853	0.4179	0.4557	0.3860	0.3972	0.4050	0.4049	6	AVG #
Cyclohexane(3)	#0.1489	0.1506	0.1564	0.1436	0.1486	0.1500	0.1528	0.1501	3	AVG #
1,1-Dichloropropene	0.3552	0.3757	0.3927	0.3750	0.3849	0.3891	0.3946	0.3810	4	AVG
Carbon Tetrachloride	#0.3593	0.3560	0.3962	0.3670	0.3754	0.3869	0.3933	0.3763	4	AVG #
Isobutyl Alcohol	0.5972	0.6961	0.5163	0.4728	0.5228	0.5207	0.5298	0.5508	13	AVG
Benzene	#1.0358	1.0520	1.0828	1.0047	1.0293	1.0378	1.0527	1.0421	2	AVG #
1,2-Dichloroethane	#0.3052	0.2902	0.2970	0.2750	0.2864	0.2915	0.2951	0.2915	3	AVG #
t-Amyl methyl ether	0.5806	0.6026	0.6318	0.5857	0.6133	0.6174	0.6252	0.6081	3	AVG
n-Heptane	0.5501	0.4972	0.5035	0.4807	0.4853	0.5087	0.5247	0.5072	5	AVG
n-Butanol	0.3792	0.3727	0.4103	0.3836	0.4296	0.4277	0.4333	0.4052	6	AVG
Trichloroethene	#0.2852	0.2784	0.2898	0.2652	0.2740	0.2783	0.2833	0.2792	3	AVG #
Methylcyclohexane	#0.4212	0.4437	0.4903	0.4843	0.5018	0.4987	0.5192	0.4799	7	AVG #
1,2-Dichloropropane	#0.2555	0.2596	0.2815	0.2602	0.2744	0.2774	0.2846	0.2704	4	AVG #
Methyl Methacrylate	12.891	12.336	13.516	12.449	13.625	13.266	14.031	13.159	5	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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1116	0.1158	0.1170	0.1068	0.1125	0.1131	0.1152	0.1132	3	AVG
1,4-Dioxane		0.0545	0.0986	0.0925	0.0969	0.0999	0.0999	0.0904	20	AVG
Bromodichloromethane	#0.3074	0.3252	0.3262	0.3121	0.3287	0.3377	0.3483	0.3265	4	AVG #
2-Nitropropane	5.1217	4.4971	4.2223	3.9342	4.3677	4.4296	4.8351	4.4868	9	AVG
cis-1,3-Dichloropropene	#0.3482	0.3687	0.3876	0.3646	0.3850	0.3927	0.4064	0.3790	5	AVG #
4-Methyl-2-Pentanone	#19.072	19.534	19.605	18.334	19.627	19.123	20.227	19.360	3	AVG #
Toluene	#0.9256	0.9914	1.0147	0.9180	0.9349	0.9328	0.9300	0.9496	4	AVG #
trans-1,3-Dichloropropene	#0.4163	0.4305	0.4445	0.4078	0.4423	0.4447	0.4502	0.4337	4	AVG #
Ethyl Methacrylate	0.2904	0.3312	0.3464	0.3144	0.3290	0.3293	0.3276	0.3240	5	AVG
1,1,2-Trichloroethane	#0.2279	0.2229	0.2359	0.2165	0.2163	0.2168	0.2158	0.2217	3	AVG #
Tetrachloroethene	#0.4434	0.4465	0.4723	0.4351	0.4396	0.4445	0.4383	0.4457	3	AVG #
1,3-Dichloropropane	0.3926	0.3927	0.4162	0.3879	0.3938	0.3887	0.3879	0.3943	3	AVG
2-Hexanone	#15.479	14.432	14.077	12.812	13.752	13.312	13.784	13.949	6	AVG #
Dibromochloromethane	#0.2615	0.2951	0.3002	0.2807	0.2912	0.2967	0.3015	0.2896	5	AVG #
1,2-Dibromoethane	#0.2038	0.2025	0.2270	0.2029	0.2107	0.2095	0.2103	0.2095	4	AVG #
Chlorobenzene	#1.0029	1.0289	1.0784	0.9730	0.9963	1.0005	1.0041	1.0120	3	AVG #
1,1,1,2-Tetrachloroethane	0.3374	0.3519	0.3754	0.3418	0.3553	0.3633	0.3697	0.3564	4	AVG
Ethylbenzene	#1.9021	1.9244	1.9952	1.8532	1.8878	1.8934	1.9122	1.9098	2	AVG #
m+p-Xylene	#0.7123	0.7346	0.7451	0.6974	0.7126	0.7143	0.7211	0.7196	2	AVG #
o-Xylene	#0.6903	0.6912	0.7369	0.6825	0.7015	0.7042	0.7192	0.7037	3	AVG #
Styrene	#1.0366	1.0788	1.1413	1.0554	1.1066	1.1217	1.1543	1.0992	4	AVG #
Bromoform	#0.1244	0.1521	0.1616	0.1511	0.1640	0.1700	0.1768	0.1571	11	AVG #
Isopropylbenzene	#1.8079	1.9015	1.9982	1.8378	1.8763	1.8998	1.9031	1.8892	3	AVG #
1,1,2,2-Tetrachloroethane	#0.6179	0.6740	0.6409	0.6074	0.6036	0.5941	0.5785	0.6166	5	AVG #
Bromobenzene	1.0267	1.0166	1.0449	0.9400	0.9303	0.9251	0.9244	0.9726	6	AVG
trans-1,4-Dichloro-2-butene	4.5451	5.6704	5.7014	5.7220	6.4303	6.5434	7.3125	5.9893	15	AVG
1,2,3-Trichloropropane	0.1600	0.1717	0.1567	0.1561	0.1572	0.1515	0.1473	0.1572	5	AVG
n-Propylbenzene	5.2642	5.5542	5.7608	5.2855	5.2076	5.1687	4.9687	5.3157	5	AVG
2-Chlorotoluene	1.0141	1.0577	1.0732	0.9785	0.9617	0.9565	0.9317	0.9962	5	AVG
1,3,5-Trimethylbenzene	3.6517	3.7686	3.9738	3.6396	3.6271	3.5885	3.5337	3.6833	4	AVG
4-Chlorotoluene	1.0406	1.0810	1.0817	0.9937	0.9707	0.9714	0.9583	1.0139	5	AVG
tert-Butylbenzene	0.8051	0.7908	0.8541	0.7825	0.7545	0.7529	0.7420	0.7831	5	AVG
Pentachloroethane	0.5740	0.6117	0.6009	0.6013	0.6264	0.6238	0.6271	0.6093	3	AVG
1,2,4-Trimethylbenzene	3.7500	3.7572	3.9170	3.6359	3.6182	3.6546	3.5639	3.6995	3	AVG
sec-Butylbenzene	4.7476	4.9401	5.1387	4.6991	4.6498	4.6584	4.5520	4.7694	4	AVG
1,3-Dichlorobenzene	#1.8493	1.9809	2.0171	1.8403	1.8512	1.8470	1.8711	1.8938	4	AVG #
p-Isopropyltoluene	3.7667	4.0133	4.2496	3.9452	3.9351	3.9819	3.9632	3.9793	4	AVG
1,4-Dichlorobenzene	#2.1972	2.1005	2.1242	1.8963	1.8421	1.8238	1.8209	1.9721	8	AVG #
1,2,3-Trimethylbenzene	1.6397	1.6386	1.5874	1.5493	1.5513	1.5192	1.5019	1.5696	3	AVG
Benzyl Chloride	0.1846	0.2119	0.2168	0.2157	0.2313	0.2370	0.2413	0.2198	9	AVG
n-Butylbenzene	1.9046	1.8895	2.0348	1.9508	2.0422	2.0743	2.0691	1.9950	4	AVG
1,2-Dichlorobenzene	#1.7096	1.7652	1.8061	1.6605	1.6335	1.6332	1.6053	1.6876	4	AVG #
1,2-Dibromo-3-chloropropane	#2.9397	2.6266	2.8881	2.5311	3.0532	3.0285	3.2164	2.8977	8	AVG #
1,3,5-Trichlorobenzene	1.4297	1.4306	1.4806	1.3648	1.3622	1.3789	1.3788	1.4037	3	AVG
1,2,4-Trichlorobenzene	#1.2781	1.1706	1.2265	1.1159	1.1032	1.1117	1.0875	1.1562	6	AVG #
Hexachlorobutadiene	0.5358	0.5286	0.5708	0.5304	0.5351	0.5534	0.5645	0.5455	3	AVG
Naphthalene	2.2982	2.0601	2.0764	1.8316	1.7049	1.6640	1.5336	1.8813	14	AVG
1,2,3-Trichlorobenzene	1.2244	1.0195	1.0472	0.9500	0.8687	0.8827	0.8212	0.9734	14	AVG
Dibromofluoromethane	0.2394	0.2355	0.2397	0.2416	0.2440	0.2442	0.2459	0.2415	1	AVG
Dibromofluoromethane(2)	0.2446	0.2429	0.2449	0.2479	0.2498	0.2525	0.2531	0.2480	2	AVG
1,2-Dichloroethane-d4	0.0376	0.0376	0.0374	0.0371	0.0394	0.0374	0.0383	0.0378	2	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): 10/16/17 10/16/17

Heated Purge: (Y/N) Y Calibration Times: 10:43 12:45

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

LAB FILE ID: RRF0.2= hc16i07.d RRF0.5= hc16i06.d RRF 1 = hc16i05.d
RRF 2 = hc16i04.d RRF 5 = hc16i03.d RRF 10= hc16i02.d RRF 25= hc16i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(2)	0.2016	0.2024	0.2028	0.2036	0.2100	0.2122	0.2157	0.2069	3	AVG
1,2-Dichloroethane-d4(3)	0.0237	0.0237	0.0232	0.0235	0.0236	0.0245	0.0243	0.0238	2	AVG
Toluene-d8	1.4656	1.4758	1.4802	1.4697	1.4486	1.4367	1.3962	1.4533	2	AVG
Toluene-d8(2)	0.9284	0.9359	0.9367	0.9349	0.9184	0.9023	0.8832	0.9200	2	AVG
4-Bromofluorobenzene	0.4298	0.4318	0.4405	0.4302	0.4473	0.4550	0.4555	0.4414	3	AVG
4-Bromofluorobenzene(2)	0.3788	0.3799	0.3859	0.3818	0.3930	0.3986	0.3996	0.3882	2	AVG

Average %RSD 5

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

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/17oct16a.b/hc16i01.d	VSTD025
/chem2/HP19094.i/17oct16a.b/hc16i02.d	VSTD010
/chem2/HP19094.i/17oct16a.b/hc16i03.d	VSTD005
/chem2/HP19094.i/17oct16a.b/hc16i04.d	VSTD002
/chem2/HP19094.i/17oct16a.b/hc16i05.d	VSTD001
/chem2/HP19094.i/17oct16a.b/hc16i06.d	VSTD0.5
/chem2/HP19094.i/17oct16a.b/hc16i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hc16i01.d	hc16i02.d	hc16i03.d	hc16i04.d	hc16i05.d	hc16i06.d	hc16i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	89021	93229	89047	86653	86008	83112	79685	86679	5	Yes
Fluorobenzene	2281153	2332021	2294767	2226720	2205975	2183030	2168662	2241761	3	Yes
Chlorobenzene-d5	1641394	1624059	1577860	1510352	1471876	1459268	1470758	1536510	5	Yes
1,4-Dichlorobenzene-d4	759767	729300	696589	632606	609642	599945	602005	661408	10	Yes

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

RT Summary

File ID:

Internal Standard Name	hc16i01.d	hc16i02.d	hc16i03.d	hc16i04.d	hc16i05.d	hc16i06.d	hc16i07.d	Avg. RT
t-Butyl Alcohol-d10	4.245	4.251	4.245	4.257	4.257	4.269	4.263	4.255
Fluorobenzene	7.787	7.787	7.787	7.787	7.787	7.787	7.787	7.787
Chlorobenzene-d5	11.250	11.250	11.250	11.250	11.250	11.250	11.250	11.250
1,4-Dichlorobenzene-d4	13.133	13.133	13.133	13.133	13.133	13.133	13.133	13.133

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

Report generated on 10/16/2017 at 13:53.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 ICV Date: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4399	0.3791	4.31	5	-14	#
# Chloromethane	0.4343	0.3893	4.48	5	-10	#
# Vinyl Chloride	0.3992	0.3707	4.64	5	-7	#
1,3-Butadiene	0.3773	0.3860	5.12	5	2	
# Bromomethane	0.2715	0.2597	4.78	5	-4	#
# Chloroethane	0.2273	0.2103	4.63	5	-7	#
Dichlorofluoromethane	0.6655	0.6148	4.62	5	-8	
# Trichlorofluoromethane	0.5317	0.5256	4.94	5	-1	#
Ethyl ether	0.1697	0.1663	4.90	5	-2	
Freon 123a	0.3327	0.3317	4.98	5	0	
Acrolein	3.1413	3.3261	39.71	37.5	6	
# 1,1-Dichloroethene	0.2128	0.2262	5.32	5	6	#
# Freon 113	0.2369	0.2447	5.16	5	3	#
# Acetone	4.0227	4.0626	37.87	37.5	1	#
Methyl Iodide	0.4238	0.4155	4.90	5	-2	
# Carbon Disulfide	0.6809	0.6541	4.80	5	-4	#
Allyl Chloride	0.4827	0.4539	4.70	5	-6	
# Methyl Acetate	12.1100	12.4342	5.13	5	3	#
# Methylene Chloride	0.2427	0.2443	5.03	5	1	#
t-Butyl Alcohol	1.3622	1.5142	55.58	50	11	
Acrylonitrile	4.9350	5.6167	28.45	25	14	
# trans-1,2-Dichloroethene	0.2405	0.2517	5.23	5	5	#
# Methyl Tertiary Butyl Ether	0.5254	0.5368	5.11	5	2	#
n-Hexane	0.4248	0.4227	4.98	5	0	
# 1,1-Dichloroethane	0.4948	0.5089	5.14	5	3	#
di-Isopropyl Ether	0.9338	0.9645	5.16	5	3	
2-Chloro-1,3-Butadiene	0.4642	0.4659	5.02	5	0	
Ethyl t-butyl ether	0.7492	0.7611	5.08	5	2	
# cis-1,2-Dichloroethene	0.2751	0.2890	5.25	5	5	#
2,2-Dichloropropane	0.4179	0.4320	5.17	5	3	
# 2-Butanone	7.9017	8.2797	39.29	37.5	5	#
Propionitrile	1.8225	1.9930	41.01	37.5	9	
Methacrylonitrile	6.6231	7.5569	42.79	37.5	14	
Bromochloromethane	0.1082	0.1066	4.93	5	-1	
Tetrahydrofuran	1.7920	1.9677	27.45	25	10	
# Chloroform	0.4778	0.4911	5.14	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: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4308	0.4387	5.09	5	2	#
# Cyclohexane	0.5266	0.5011	4.76	5	-5	#
1,1-Dichloropropene	0.3810	0.3888	5.10	5	2	
# Carbon Tetrachloride	0.3763	0.3880	5.16	5	3	#
Isobutyl Alcohol	0.5508	0.5433	123.30	125	-1	
# Benzene	1.0421	1.0693	5.13	5	3	#
# 1,2-Dichloroethane	0.2915	0.2915	5.00	5	0	#
t-Amyl methyl ether	0.6081	0.6192	5.09	5	2	
n-Heptane	0.5072	0.5111	5.04	5	1	
n-Butanol	0.4052	0.4279	264.01	250	6	
# Trichloroethene	0.2792	0.2842	5.09	5	2	#
# Methylcyclohexane	0.4799	0.4922	5.13	5	3	#
# 1,2-Dichloropropane	0.2704	0.2861	5.29	5	6	#
Methyl Methacrylate	13.159	15.2484	5.79	5	16	
Dibromomethane	0.1132	0.1162	5.14	5	3	
1,4-Dioxane	0.0904	0.1132	156.52	125	25	
# Bromodichloromethane	0.3265	0.3406	5.21	5	4	#
2-Nitropropane	4.4868	4.6571	5.19	5	4	
# cis-1,3-Dichloropropene	0.3790	0.3941	5.20	5	4	#
# 4-Methyl-2-Pentanone	19.360	22.0030	28.41	25	14	#
# Toluene	0.9496	0.9624	5.07	5	1	#
# trans-1,3-Dichloropropene	0.4337	0.4322	4.98	5	0	#
Ethyl Methacrylate	0.3240	0.3346	5.16	5	3	
# 1,1,2-Trichloroethane	0.2217	0.2307	5.20	5	4	#
# Tetrachloroethene	0.4457	0.4602	5.16	5	3	#
1,3-Dichloropropane	0.3943	0.4041	5.12	5	2	
# 2-Hexanone	13.949	14.9931	26.87	25	7	#
# Dibromochloromethane	0.2896	0.2951	5.10	5	2	#
# 1,2-Dibromoethane	0.2095	0.2142	5.11	5	2	#
# Chlorobenzene	1.0120	1.0327	5.10	5	2	#
1,1,1,2-Tetrachloroethane	0.3564	0.3675	5.16	5	3	
# Ethylbenzene	1.9098	1.9476	5.10	5	2	#
# m+p-Xylene	0.7196	0.7373	10.25	10	2	#
# o-Xylene	0.7037	0.7099	5.04	5	1	#
# Styrene	1.0992	1.1491	5.23	5	5	#
# Bromoform	0.1571	0.1582	5.03	5	1	#

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: 10/16/17 Time: 13:48

Lab File ID: hc16v01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Isopropylbenzene	1.8892	1.9529	5.17	5	3	#
# 1,1,2,2-Tetrachloroethane	0.6166	0.5804	4.71	5	-6	#
Bromobenzene	0.9726	0.9258	4.76	5	-5	
trans-1,4-Dichloro-2-butene	5.9893	7.5268	31.42	25	26	
1,2,3-Trichloropropane	0.1572	0.1569	4.99	5	0	
n-Propylbenzene	5.3157	5.2009	4.89	5	-2	
2-Chlorotoluene	0.9962	0.9717	4.88	5	-2	
1,3,5-Trimethylbenzene	3.6833	3.5742	4.85	5	-3	
4-Chlorotoluene	1.0139	0.9492	4.68	5	-6	
tert-Butylbenzene	0.7831	0.7552	4.82	5	-4	
Pentachloroethane	0.6093	0.5803	4.76	5	-5	
1,2,4-Trimethylbenzene	3.6995	3.6057	4.87	5	-3	
sec-Butylbenzene	4.7694	4.7358	4.96	5	-1	
# 1,3-Dichlorobenzene	1.8938	1.8270	4.82	5	-4	#
p-Isopropyltoluene	3.9793	3.9998	5.03	5	1	
# 1,4-Dichlorobenzene	1.9721	1.8340	4.65	5	-7	#
1,2,3-Trimethylbenzene	1.5696	1.4958	4.76	5	-5	
Benzyl Chloride	0.2198	0.2226	5.06	5	1	
n-Butylbenzene	1.9950	2.0262	5.08	5	2	
# 1,2-Dichlorobenzene	1.6876	1.6284	4.82	5	-4	#
# 1,2-Dibromo-3-chloropropane	2.8977	3.3514	5.78	5	16	#
1,3,5-Trichlorobenzene	1.4037	1.3760	4.90	5	-2	
# 1,2,4-Trichlorobenzene	1.1562	1.0485	4.53	5	-9	#
Hexachlorobutadiene	0.5455	0.5615	5.15	5	3	
Naphthalene	1.8813	1.5490	4.12	5	-18	
1,2,3-Trichlorobenzene	0.9734	0.8237	4.23	5	-15	
			Average %Drift		5	

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

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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): 10/22/17 10/22/17

Heated Purge: (Y/N) Y Calibration Times: 19:02 21:04

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

LAB FILE ID: RRF0.2= hc22i07.d RRF0.5= hc22i06.d RRF 1 = hc22i05.d
RRF 2 = hc22i04.d RRF 5 = hc22i03.d RRF 10= hc22i02.d RRF 25= hc22i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1-Chlorobutane	0.5039	0.4334	0.4783	0.5439	0.4745	0.5465	0.5540	0.5049	9	AVG
2-Chloroethyl vinyl ether	0.0826	0.0948	0.0964	0.1050	0.1076	0.1177	0.1228	0.1038	13	AVG
Acetonitrile	2.3201	2.3588	2.1511	2.0659	1.9805	2.0080	1.9901	2.1249	7	AVG
Chloroacetonitrile	0.0047	0.0037	0.0052	0.0059	0.0064	0.0062	0.0064	0.0055	19	AVG
Cyclohexanone	0.5823	0.5206	0.4611	0.5608	0.5549	0.5298	0.6027	0.5446	9	AVG
Hexachloroethane	0.5383	0.5496	0.5938	0.6942	0.6513	0.7458	0.8030	0.6537	15	AVG
Methyl Acrylate	0.0834	0.1022	0.1046	0.1107	0.1179	0.1205	0.1240	0.1090	13	AVG
Vinyl Acetate	0.2194	0.2642	0.2929	0.3043	0.3210	0.3361	0.3449	0.2975	15	AVG
cis-1,4-Dichloro-2-butene	5.2133	6.5575	5.7841	6.3089	6.6892	8.3296		6.4804	16	AVG
Dimethyl ether	0.4698	0.4127	0.4096	0.3895	0.3934	0.4015	0.3872	0.4091	7	AVG

Average %RSD 12

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

FORM VI VOA

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Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/17oct22a.b/hc22i01.d	VSTD025
/chem2/HP19094.i/17oct22a.b/hc22i02.d	VSTD010
/chem2/HP19094.i/17oct22a.b/hc22i03.d	VSTD005
/chem2/HP19094.i/17oct22a.b/hc22i04.d	VSTD002
/chem2/HP19094.i/17oct22a.b/hc22i05.d	VSTD001
/chem2/HP19094.i/17oct22a.b/hc22i06.d	VSTD0.5
/chem2/HP19094.i/17oct22a.b/hc22i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hc22i01.d	hc22i02.d	hc22i03.d	hc22i04.d	hc22i05.d	hc22i06.d	hc22i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	75207	82634	89780	84908	77557	61182	76990	78323	12	Yes
Fluorobenzene	2353181	2369752	2333487	2308116	2268467	2269053	2227999	2304294	2	Yes
1,4-Dichlorobenzene-d4	707468	704226	660423	631958	607360	593747	587302	641783	8	Yes
Chlorobenzene-d5	1684749	1665519	1611708	1562255	1509017	1489327	1454020	1568085	6	Yes

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

RT Summary

File ID:

Internal Standard Name	hc22i01.d	hc22i02.d	hc22i03.d	hc22i04.d	hc22i05.d	hc22i06.d	hc22i07.d	Avg. RT
t-Butyl Alcohol-d10	4.245	4.226	4.263	4.275	4.245	4.269	4.251	4.254
Fluorobenzene	7.787	7.781	7.781	7.787	7.787	7.787	7.787	7.785
1,4-Dichlorobenzene-d4	13.133	13.133	13.133	13.139	13.133	13.139	13.133	13.135
Chlorobenzene-d5	11.250	11.249	11.250	11.250	11.250	11.249	11.250	11.250

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

Report generated on 10/22/2017 at 21:56.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 ICV Date: 10/22/17 Time: 21:44

Lab File ID: hc22v01.d Init. Calib. Date(s): 10/22/17 10/22/17

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

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
1-Chlorobutane	0.5049	0.5817	5.76	5	15
2-Chloroethyl vinyl ether	0.1038	0.1081	5.21	5	4
Acetonitrile	2.1249	2.4533	43.30	37.5	15
Chloroacetonitrile	0.0055	0.0050	226.38	250	-9
Cyclohexanone	0.5446	0.4898	112.41	125	-10
Hexachloroethane	0.6537	0.7275	5.56	5	11
Methyl Acrylate	0.1090	0.1168	26.78	25	7
Vinyl Acetate	0.2975	0.3370	14.16	12.5	13
cis-1,4-Dichloro-2-butene	6.4804	8.4181	16.24	12.5	30
Dimethyl ether	0.4091	0.3934	4.81	5	-4
			Average %Drift		12

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

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/17oct16a.b/hc16i07.d
/chem2/HP19094.i/17oct16a.b/hc16i06.d
/chem2/HP19094.i/17oct16a.b/hc16i05.d
/chem2/HP19094.i/17oct16a.b/hc16i04.d
/chem2/HP19094.i/17oct16a.b/hc16i03.d
/chem2/HP19094.i/17oct16a.b/hc16i02.d
/chem2/HP19094.i/17oct16a.b/hc16i01.d

File /chem2/HP19094.i/17oct16a.b/hc16i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/17oct22a.b/hc22c01.d

RT Summary

Internal Standard Name	File ID: hc22c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.233	4.251	Yes
Fluorobenzene	7.781	7.787	Yes
Chlorobenzene-d5	11.249	11.250	Yes
1,4-Dichlorobenzene-d4	13.133	13.133	Yes

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

Area Summary

Internal Standard Name	File ID: hc22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	85025	93229	46614	186458	Yes
Fluorobenzene	2432302	2332021	1166010	4664042	Yes
Chlorobenzene-d5	1721860	1624059	812030	3248118	Yes
1,4-Dichlorobenzene-d4	788649	729300	364650	1458600	Yes

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

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 Calibration Date: 10/22/17 Time: 22:45

Lab File ID: hc22c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.4399	0.3866	8.79	10	-12	#
#	Chloromethane	0.4343	0.3847	8.86	10	-11	#
#	Vinyl Chloride	0.3992	0.3746	9.38	10	-6	#
	1,3-Butadiene	0.3773	0.3746	9.93	10	-1	
#	Bromomethane	0.2715	0.2622	9.66	10	-3	#
#	Chloroethane	0.2273	0.2241	9.86	10	-1	#
	Dichlorofluoromethane	0.6655	0.6250	9.39	10	-6	
#	Trichlorofluoromethane	0.5317	0.5073	9.54	10	-5	#
	Ethyl ether	0.1697	0.1698	10.01	10	0	
	Freon 123a	0.3327	0.3455	10.38	10	4	
	Acrolein	3.1413	3.2559	518.25	500	4	
#	1,1-Dichloroethene	0.2128	0.2258	10.61	10	6	#
#	Freon 113	0.2369	0.2641	11.15	10	11	#
#	Acetone	4.0227	4.7351	117.71	100	18	#
	Methyl Iodide	0.4238	0.4549	10.73	10	7	
#	Carbon Disulfide	0.6809	0.6424	9.44	10	-6	#
	Allyl Chloride	0.4827	0.4473	9.27	10	-7	
#	Methyl Acetate	12.1100	12.8458	10.61	10	6	#
#	Methylene Chloride	0.2427	0.2458	10.13	10	1	#
	t-Butyl Alcohol	1.3622	1.4037	206.09	200	3	
	Acrylonitrile	4.9350	5.8489	59.26	50	19	
#	trans-1,2-Dichloroethene	0.2405	0.2602	10.82	10	8	#
#	Methyl Tertiary Butyl Ether	0.5254	0.5458	10.39	10	4	#
	n-Hexane	0.4248	0.4190	9.86	10	-1	
#	1,1-Dichloroethane	0.4948	0.5216	10.54	10	5	#
	di-Isopropyl Ether	0.9338	0.9147	9.80	10	-2	
	2-Chloro-1,3-Butadiene	0.4642	0.4855	10.46	10	5	
	Ethyl t-butyl ether	0.7492	0.7458	9.95	10	0	
#	cis-1,2-Dichloroethene	0.2751	0.2941	10.69	10	7	#
	2,2-Dichloropropane	0.4179	0.4398	10.52	10	5	
#	2-Butanone	7.9017	8.3497	105.67	100	6	#
	Propionitrile	1.8225	2.1823	239.49	200	20	
	Methacrylonitrile	6.6231	7.7033	116.31	100	16	
	Bromochloromethane	0.1082	0.1186	10.96	10	10	
	Tetrahydrofuran	1.7920	2.0141	112.39	100	12	
#	Chloroform	0.4778	0.5205	10.89	10	9	#

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: 10/22/17 Time: 22:45

Lab File ID: hc22c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4308	0.4698	10.90	10	9	#
# Cyclohexane	0.5266	0.5206	9.89	10	-1	#
# Cyclohexane(2)	0.4049	0.4976	12.29	10	23	#<-
# Cyclohexane(3)	0.1501	0.1504	10.02	10	0	#
1,1-Dichloropropene	0.3810	0.4127	10.83	10	8	
# Carbon Tetrachloride	0.3763	0.4121	10.95	10	10	#
Isobutyl Alcohol	0.5508	0.5627	510.78	500	2	
# Benzene	1.0421	1.1233	10.78	10	8	#
# 1,2-Dichloroethane	0.2915	0.3108	10.66	10	7	#
t-Amyl methyl ether	0.6081	0.6282	10.33	10	3	
n-Heptane	0.5072	0.4811	9.49	10	-5	
n-Butanol	0.4052	0.4372	1079.04	1000	8	
# Trichloroethene	0.2792	0.3056	10.95	10	9	#
# Methylcyclohexane	0.4799	0.5144	10.72	10	7	#
# 1,2-Dichloropropane	0.2704	0.2881	10.65	10	7	#
Methyl Methacrylate	13.1590	15.6272	11.88	10	19	
Dibromomethane	0.1132	0.1246	11.01	10	10	
1,4-Dioxane	0.0904	0.1101	609.24	500	22	<-
# Bromodichloromethane	0.3265	0.3562	10.91	10	9	#
2-Nitropropane	4.4868	5.3681	119.64	100	20	
# cis-1,3-Dichloropropene	0.3790	0.4058	10.71	10	7	#
# 4-Methyl-2-Pentanone	19.3600	21.5686	111.41	100	11	#
# Toluene	0.9496	1.0192	10.73	10	7	#
# trans-1,3-Dichloropropene	0.4337	0.4423	10.20	10	2	#
Ethyl Methacrylate	0.3240	0.3221	9.94	10	-1	
# 1,1,2-Trichloroethane	0.2217	0.2375	10.71	10	7	#
# Tetrachloroethene	0.4457	0.4963	11.14	10	11	#
1,3-Dichloropropane	0.3943	0.4194	10.64	10	6	
# 2-Hexanone	13.9490	14.8889	106.73	100	7	#
# Dibromochloromethane	0.2896	0.3142	10.85	10	9	#
# 1,2-Dibromoethane	0.2095	0.2236	10.67	10	7	#
# Chlorobenzene	1.0120	1.1031	10.90	10	9	#
1,1,1,2-Tetrachloroethane	0.3564	0.3920	11.00	10	10	
# Ethylbenzene	1.9098	2.0901	10.94	10	9	#
# m+p-Xylene	0.7196	0.7966	22.14	20	11	#
# o-Xylene	0.7037	0.7721	10.97	10	10	#

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: 10/22/17 Time: 22:45

Lab File ID: hc22c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.0992	1.2238	11.13	10	11	#
# Bromoform	0.1571	0.1778	11.31	10	13	#
# Isopropylbenzene	1.8892	2.0982	11.11	10	11	#
# 1,1,2,2-Tetrachloroethane	0.6166	0.6354	10.30	10	3	#
Bromobenzene	0.9726	1.0315	10.61	10	6	
trans-1,4-Dichloro-2-butene	5.9893	7.4737	124.78	100	25	<-
1,2,3-Trichloropropane	0.1572	0.1685	10.72	10	7	
n-Propylbenzene	5.3157	5.6117	10.56	10	6	
2-Chlorotoluene	0.9962	1.0486	10.53	10	5	
1,3,5-Trimethylbenzene	3.6833	3.9155	10.63	10	6	
4-Chlorotoluene	1.0139	1.0666	10.52	10	5	
tert-Butylbenzene	0.7831	0.8059	10.29	10	3	
Pentachloroethane	0.6093	0.6529	10.72	10	7	
1,2,4-Trimethylbenzene	3.6995	3.9288	10.62	10	6	
sec-Butylbenzene	4.7694	5.0290	10.54	10	5	
# 1,3-Dichlorobenzene	1.8938	2.0646	10.90	10	9	#
p-Isopropyltoluene	3.9793	4.3179	10.85	10	9	
# 1,4-Dichlorobenzene	1.9721	2.0343	10.32	10	3	#
1,2,3-Trimethylbenzene	1.5696	1.6133	10.28	10	3	
Benzyl Chloride	0.2198	0.2386	10.85	10	9	
n-Butylbenzene	1.9950	2.1559	10.81	10	8	
# 1,2-Dichlorobenzene	1.6876	1.8306	10.85	10	8	#
# 1,2-Dibromo-3-chloropropane	2.8977	3.6081	12.45	10	25	#<-
1,3,5-Trichlorobenzene	1.4037	1.4859	10.59	10	6	
# 1,2,4-Trichlorobenzene	1.1562	1.1717	10.13	10	1	#
Hexachlorobutadiene	0.5455	0.5467	10.02	10	0	
Naphthalene	1.8813	1.6695	8.87	10	-11	
1,2,3-Trichlorobenzene	0.9734	0.8943	9.19	10	-8	
Dibromofluoromethane	0.2415	0.2395	9.92	10	-1	
Dibromofluoromethane(2)	0.2480	0.2467	9.95	10	-1	
1,2-Dichloroethane-d4	0.0378	0.0369	9.77	10	-2	
1,2-Dichloroethane-d4(2)	0.2069	0.2042	9.87	10	-1	
1,2-Dichloroethane-d4(3)	0.0238	0.0235	9.89	10	-1	
Toluene-d8	1.4533	1.4296	9.84	10	-2	
Toluene-d8(2)	0.9200	0.9060	9.85	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: 10/22/17 Time: 22:45

Lab File ID: hc22c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene	0.4414	0.4304	9.75	10	-3
4-Bromofluorobenzene(2)	0.3882	0.3988	10.27	10	3

Average %Drift 7

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

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/17oct16a.b/hc16i07.d
/chem2/HP19094.i/17oct16a.b/hc16i06.d
/chem2/HP19094.i/17oct16a.b/hc16i05.d
/chem2/HP19094.i/17oct16a.b/hc16i04.d
/chem2/HP19094.i/17oct16a.b/hc16i03.d
/chem2/HP19094.i/17oct16a.b/hc16i02.d
/chem2/HP19094.i/17oct16a.b/hc16i01.d

File /chem2/HP19094.i/17oct16a.b/hc16i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/17oct23a.b/hc23c01.d

RT Summary

Internal Standard Name	File ID: hc23c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.239	4.251	Yes
Fluorobenzene	7.787	7.787	Yes
Chlorobenzene-d5	11.250	11.250	Yes
1,4-Dichlorobenzene-d4	13.133	13.133	Yes

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

Area Summary

Internal Standard Name	File ID: hc23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	87681	93229	46614	186458	Yes
Fluorobenzene	2436907	2332021	1166010	4664042	Yes
Chlorobenzene-d5	1752116	1624059	812030	3248118	Yes
1,4-Dichlorobenzene-d4	804266	729300	364650	1458600	Yes

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

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 Calibration Date: 10/23/17 Time: 09:11

Lab File ID: hc23c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4399	0.3667	8.34	10	-17	#
# Chloromethane	0.4343	0.3596	8.28	10	-17	#
# Vinyl Chloride	0.3992	0.3535	8.85	10	-11	#
1,3-Butadiene	0.3773	0.5059	13.41	10	34	<-
# Bromomethane	0.2715	0.2519	9.28	10	-7	#
# Chloroethane	0.2273	0.2136	9.40	10	-6	#
Dichlorofluoromethane	0.6655	0.5714	8.59	10	-14	
# Trichlorofluoromethane	0.5317	0.4724	8.88	10	-11	#
Ethyl ether	0.1697	0.1639	9.66	10	-3	
Freon 123a	0.3327	0.3368	10.12	10	1	
Acrolein	3.1413	3.2383	515.43	500	3	
# 1,1-Dichloroethene	0.2128	0.2214	10.41	10	4	#
# Freon 113	0.2369	0.2601	10.98	10	10	#
# Acetone	4.0227	4.7921	119.13	100	19	#
Methyl Iodide	0.4238	0.4386	10.35	10	3	
# Carbon Disulfide	0.6809	0.6082	8.93	10	-11	#
Allyl Chloride	0.4827	0.4151	8.60	10	-14	
# Methyl Acetate	12.110	12.3559	10.20	10	2	#
# Methylene Chloride	0.2427	0.2399	9.88	10	-1	#
t-Butyl Alcohol	1.3622	1.4681	215.55	200	8	
Acrylonitrile	4.9350	5.7251	58.01	50	16	
# trans-1,2-Dichloroethene	0.2405	0.2492	10.36	10	4	#
# Methyl Tertiary Butyl Ether	0.5254	0.5405	10.29	10	3	#
n-Hexane	0.4248	0.4121	9.70	10	-3	
# 1,1-Dichloroethane	0.4948	0.5124	10.36	10	4	#
di-Isopropyl Ether	0.9338	0.8998	9.64	10	-4	
2-Chloro-1,3-Butadiene	0.4642	0.4673	10.07	10	1	
Ethyl t-butyl ether	0.7492	0.7345	9.80	10	-2	
# cis-1,2-Dichloroethene	0.2751	0.2887	10.50	10	5	#
2,2-Dichloropropane	0.4179	0.4209	10.07	10	1	
# 2-Butanone	7.9017	8.2059	103.85	100	4	#
Propionitrile	1.8225	2.1481	235.73	200	18	
Methacrylonitrile	6.6231	7.6430	115.40	100	15	
Bromochloromethane	0.1082	0.1149	10.62	10	6	
Tetrahydrofuran	1.7920	1.9890	110.99	100	11	
# Chloroform	0.4778	0.5109	10.69	10	7	#

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: 10/23/17 Time: 09:11

Lab File ID: hc23c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4308	0.4519	10.49	10	5	#
# Cyclohexane	0.5266	0.5115	9.71	10	-3	#
# Cyclohexane(2)	0.4049	0.4043	9.99	10	0	#
# Cyclohexane(3)	0.1501	0.1471	9.80	10	-2	#
1,1-Dichloropropene	0.3810	0.4002	10.50	10	5	
# Carbon Tetrachloride	0.3763	0.4059	10.79	10	8	#
Isobutyl Alcohol	0.5508	0.5925	537.85	500	8	
# Benzene	1.0421	1.0956	10.51	10	5	#
# 1,2-Dichloroethane	0.2915	0.3112	10.68	10	7	#
t-Amyl methyl ether	0.6081	0.6204	10.20	10	2	
n-Heptane	0.5072	0.4729	9.32	10	-7	
n-Butanol	0.4052	0.4496	1109.62	1000	11	
# Trichloroethene	0.2792	0.3000	10.75	10	7	#
# Methylcyclohexane	0.4799	0.4944	10.30	10	3	#
# 1,2-Dichloropropane	0.2704	0.2857	10.56	10	6	#
Methyl Methacrylate	13.1590	15.0572	11.44	10	14	
Dibromomethane	0.1132	0.1249	11.04	10	10	
1,4-Dioxane	0.0904	0.1173	648.74	500	30	<-
# Bromodichloromethane	0.3265	0.3449	10.56	10	6	#
2-Nitropropane	4.4868	5.1905	115.68	100	16	
# cis-1,3-Dichloropropene	0.3790	0.3830	10.10	10	1	#
# 4-Methyl-2-Pentanone	19.3600	21.3428	110.24	100	10	#
# Toluene	0.9496	0.9778	10.30	10	3	#
# trans-1,3-Dichloropropene	0.4337	0.4225	9.74	10	-3	#
Ethyl Methacrylate	0.3240	0.3181	9.82	10	-2	
# 1,1,2-Trichloroethane	0.2217	0.2294	10.35	10	3	#
# Tetrachloroethene	0.4457	0.4759	10.68	10	7	#
1,3-Dichloropropane	0.3943	0.4090	10.37	10	4	
# 2-Hexanone	13.9490	14.6636	105.12	100	5	#
# Dibromochloromethane	0.2896	0.2930	10.12	10	1	#
# 1,2-Dibromoethane	0.2095	0.2187	10.44	10	4	#
# Chlorobenzene	1.0120	1.0811	10.68	10	7	#
1,1,1,2-Tetrachloroethane	0.3564	0.3797	10.65	10	7	
# Ethylbenzene	1.9098	1.9986	10.47	10	5	#
# m+p-Xylene	0.7196	0.7654	21.27	20	6	#
# o-Xylene	0.7037	0.7522	10.69	10	7	#

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: 10/23/17 Time: 09:11

Lab File ID: hc23c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.0992	1.1855	10.78	10	8	#
# Bromoform	0.1571	0.1657	10.55	10	5	#
# Isopropylbenzene	1.8892	2.0265	10.73	10	7	#
# 1,1,2,2-Tetrachloroethane	0.6166	0.6075	9.85	10	-1	#
Bromobenzene	0.9726	1.0033	10.32	10	3	
trans-1,4-Dichloro-2-butene	5.9893	6.8675	114.66	100	15	
1,2,3-Trichloropropane	0.1572	0.1703	10.83	10	8	
n-Propylbenzene	5.3157	5.3764	10.11	10	1	
2-Chlorotoluene	0.9962	1.0180	10.22	10	2	
1,3,5-Trimethylbenzene	3.6833	3.7641	10.22	10	2	
4-Chlorotoluene	1.0139	1.0319	10.18	10	2	
tert-Butylbenzene	0.7831	0.8564	10.94	10	9	
Pentachloroethane	0.6093	0.6200	10.18	10	2	
1,2,4-Trimethylbenzene	3.6995	3.8155	10.31	10	3	
sec-Butylbenzene	4.7694	4.8482	10.17	10	2	
# 1,3-Dichlorobenzene	1.8938	2.0069	10.60	10	6	#
p-Isopropyltoluene	3.9793	4.1788	10.50	10	5	
# 1,4-Dichlorobenzene	1.9721	1.9725	10.00	10	0	#
1,2,3-Trimethylbenzene	1.5696	1.5282	9.74	10	-3	
Benzyl Chloride	0.2198	0.2313	10.52	10	5	
n-Butylbenzene	1.9950	2.0858	10.45	10	5	
# 1,2-Dichlorobenzene	1.6876	1.7823	10.56	10	6	#
# 1,2-Dibromo-3-chloropropane	2.8977	3.4924	12.05	10	21	#<-
1,3,5-Trichlorobenzene	1.4037	1.4511	10.34	10	3	
# 1,2,4-Trichlorobenzene	1.1562	1.1511	9.96	10	0	#
Hexachlorobutadiene	0.5455	0.5418	9.93	10	-1	
Naphthalene	1.8813	1.6747	8.90	10	-11	
1,2,3-Trichlorobenzene	0.9734	0.8986	9.23	10	-8	
Dibromofluoromethane	0.2415	0.2419	10.02	10	0	
Dibromofluoromethane(2)	0.2480	0.2502	10.09	10	1	
1,2-Dichloroethane-d4	0.0378	0.0376	9.94	10	-1	
1,2-Dichloroethane-d4(2)	0.2069	0.2060	9.96	10	0	
1,2-Dichloroethane-d4(3)	0.0238	0.0243	10.21	10	2	
Toluene-d8	1.4533	1.4180	9.76	10	-2	
Toluene-d8(2)	0.9200	0.8920	9.70	10	-3	

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: 10/23/17 Time: 09:11

Lab File ID: hc23c01.d Init. Calib. Date(s): 10/16/17 10/16/17

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

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene	0.4414	0.4416	10.00	10	0
4-Bromofluorobenzene(2)	0.3882	0.4006	10.32	10	3

Average %Drift 6

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

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/17oct22a.b/hc22i07.d
/chem2/HP19094.i/17oct22a.b/hc22i06.d
/chem2/HP19094.i/17oct22a.b/hc22i05.d
/chem2/HP19094.i/17oct22a.b/hc22i04.d
/chem2/HP19094.i/17oct22a.b/hc22i03.d
/chem2/HP19094.i/17oct22a.b/hc22i02.d
/chem2/HP19094.i/17oct22a.b/hc22i01.d

File /chem2/HP19094.i/17oct22a.b/hc22i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/17oct23a.b/hc23c02.d

RT Summary

Internal Standard Name	File ID: hc23c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.239	4.226	Yes
Fluorobenzene	7.787	7.781	Yes
1,4-Dichlorobenzene-d4	13.133	13.133	Yes
Chlorobenzene-d5	11.250	11.249	Yes

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

Area Summary

Internal Standard Name	File ID: hc23c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	91462	82634	41317	165268	Yes
Fluorobenzene	2416272	2369752	1184876	4739504	Yes
1,4-Dichlorobenzene-d4	701869	704226	352113	1408452	Yes
Chlorobenzene-d5	1693195	1665519	832760	3331038	Yes

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

Comments: _____

report generated on 10/23/2017 at 10:40

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19094 Calibration Date: 10/23/17 Time: 09:31

Lab File ID: hc23c02.d Init. Calib. Date(s): 10/22/17 10/22/17

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

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
1-Chlorobutane	0.5049	0.5177	10.25	10	3
2-Chloroethyl vinyl ether	0.1038	0.1106	10.65	10	7
Hexachloroethane	0.6537	0.6982	10.68	10	7
Vinyl Acetate	0.2975	0.3288	11.05	10	11
cis-1,4-Dichloro-2-butene	6.4804	6.7976	20.98	20	5
Methyl Acrylate	0.1090	0.1170	53.63	50	7
Acetonitrile	2.1249	1.7911	337.15	400	-16
Cyclohexanone	0.5446	0.4990	458.17	500	-8
Chloroacetonitrile	0.0055	0.0063	575.77	500	15
Dimethyl ether	0.4091	0.3506	8.57	10	-14

Average %Drift 9

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.:_____ SDG No.:_RAE95___

Lab File ID (Standard): hc22c01.d Date Analyzed: 10/22/17

Instrument ID: HP19094 Time Analyzed: 22:45

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	85025	4.232	2432302	7.781	1721860	11.249	788649	13.133
UPPER LIMIT	170050	4.732	4864604	8.281	3443720	11.749	1577298	13.633
LOWER LIMIT	42512	3.732	1216151	7.281	860930	10.749	394324	12.633
LAB SAMPLE ID								
01 MDL0.1 - MD	87399	4.257	2251679	7.787	1491069	11.250	609828	13.133
02 LCSHSM	67388	4.263	2236670	7.787	1468248	11.250	595301	13.139
03 LCSH97	67388	4.263	2239738	7.787	1468248	11.250	595301	13.139
04 LCSH96	81932	4.238	2430888	7.787	1647790	11.249	726039	13.133
05 LCDH96	72110	4.263	2445336	7.787	1665006	11.249	737098	13.133
06 LCSH94	72110	4.263	2445336	7.787	1665006	11.249	737098	13.133
07 LCDH97	81836	4.245	2379888	7.787	1594868	11.250	640929	13.139
08 LCSH95	81836	4.245	2379888	7.787	1594868	11.250	640929	13.139
09 VBLKH94	72221	4.269	2325630	7.787	1524958	11.249	605917	13.139
10 VBLKH96	72221	4.269	2325630	7.787	1524958	11.249	605917	13.139
11 9262030	96319	4.251	2299021	7.781	1473854	11.250	600024	13.133
12 9262031	79991	4.281	2270878	7.787	1451849	11.250	580094	13.133
13 9262035	84407	4.251	2232288	7.781	1467321	11.250	587748	13.140
14 9262036	76090	4.257	2212238	7.787	1422740	11.250	571430	13.139
15 9262025	83642	4.263	2262190	7.787	1515169	11.250	621126	13.140
16 9262026MS	76202	4.263	2337853	7.787	1581016	11.249	697068	13.133
17 9262027MSD	75204	4.263	2410284	7.787	1662071	11.250	740020	13.133
18 9262026MS1	73441	4.257	2359358	7.787	1596648	11.249	651759	13.139
19 9262027MSD1	88023	4.239	2386188	7.787	1612545	11.249	650789	13.139
20 9262022	81297	4.245	2286339	7.781	1471457	11.250	596566	13.133
21 9262023	52557	4.263	2211970	7.787	1444452	11.249	590202	13.139
22 9262024	84808	4.239	2207199	7.787	1427789	11.249	575882	13.139

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID (Standard): hc22c01.d Date Analyzed: 10/22/17

Instrument ID: HP19094 Time Analyzed: 22:45

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	85025	4.232	2432302	7.781	1721860	11.249	788649	13.133
UPPER LIMIT	170050	4.732	4864604	8.281	3443720	11.749	1577298	13.633
LOWER LIMIT	42512	3.732	1216151	7.281	860930	10.749	394324	12.633
LAB SAMPLE ID								
23 9262028	81763	4.251	2193386	7.787	1452035	11.249	579381	13.139
24 9262029	78123	4.263	2208153	7.787	1454768	11.250	593946	13.139

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID (Standard): hc23c01.d Date Analyzed: 10/23/17

Instrument ID: HP19094 Time Analyzed: 09:11

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	87681	4.239	2436907	7.787	1752116	11.250	804266	13.133
UPPER LIMIT	175362	4.739	4873814	8.287	3504232	11.750	1608532	13.633
LOWER LIMIT	43840	3.739	1218454	7.287	876058	10.750	402133	12.633
LAB SAMPLE ID								
01 LCSH98	76752	4.251	2397091	7.787	1613713	11.249	707063	13.133
02 LCSH01	76752	4.251	2397091	7.787	1613713	11.249	707063	13.133
03 LCDH98	88618	4.233	2435413	7.787	1658737	11.250	738925	13.133
04 LCDH01	88618	4.233	2435413	7.787	1658737	11.250	738925	13.133
05 LCSH99	72116	4.245	2401889	7.787	1613293	11.250	660916	13.140
06 LCDH99	82443	4.245	2377411	7.781	1607332	11.250	652147	13.133
07 VBLKH98	87488	4.275	2314281	7.787	1525878	11.250	626275	13.139
08 VBLKH01	87488	4.275	2314281	7.787	1525878	11.250	626275	13.139
09 9262022DL	94735	4.257	2358464	7.781	1553766	11.250	640899	13.133
10 9262024DL	81022	4.263	2255115	7.787	1485838	11.249	602132	13.139
11 9262032	80710	4.263	2258684	7.787	1534196	11.250	619255	13.140
12 9262033	64968	4.239	2251697	7.787	1539304	11.250	630414	13.133
13 9262034	83033	4.263	2265452	7.787	1542667	11.249	634968	13.139
14 9264000	77414	4.245	2275424	7.787	1535793	11.250	620984	13.133
15 9265683	69748	4.251	2223679	7.787	1480139	11.250	591788	13.139
16 9264021	78915	4.239	2233527	7.781	1497025	11.249	603295	13.139
17 9264022MS	80465	4.239	2309340	7.787	1561749	11.249	699297	13.133
18 9264023MSD	91246	4.245	2379472	7.787	1629142	11.249	730576	13.133
19 9264019	77075	4.257	2284162	7.787	1485194	11.250	584739	13.139
20 9264024	69251	4.251	2277423	7.787	1531728	11.250	619132	13.139
21 9264024DL	79255	4.257	2239642	7.787	1507485	11.250	605107	13.139
22 9264025	66680	4.257	2267441	7.787	1545703	11.250	632885	13.139

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE95___

Lab File ID (Standard): hc23c01.d Date Analyzed: 10/23/17

Instrument ID: HP19094 Time Analyzed: 09:11

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	87681	4.239	2436907	7.787	1752116	11.250	804266	13.133
UPPER LIMIT	175362	4.739	4873814	8.287	3504232	11.750	1608532	13.633
LOWER LIMIT	43840	3.739	1218454	7.287	876058	10.750	402133	12.633
LAB SAMPLE ID								
23 9264025DL	72225	4.269	2229094	7.787	1511547	11.250	607074	13.140
24 9264026	79732	4.239	2222425	7.787	1498452	11.250	614363	13.133
25 9264026DL	72415	4.239	2193021	7.787	1461246	11.250	593120	13.140
26 9264027	73832	4.245	2218088	7.787	1501627	11.249	614472	13.139
27 9264027DL	60188	4.263	2197450	7.787	1461329	11.249	589602	13.139

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

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.1	1.0	ug/l
Chloromethane	0.2	1.0	ug/l
Chloroethane	0.1	1.0	ug/l
Trichlorofluoromethane	0.1	1.0	ug/l
Ethyl ether	0.1	13	ug/l
1,1-Dichloroethene	0.1	1.0	ug/l
Freon 113	0.2	1.0	ug/l
Methylene Chloride	0.2	1.0	ug/l
1,1-Dichloroethane	0.1	1.0	ug/l
2-Butanone	1.0	10	ug/l
Tetrahydrofuran	2.0	25	ug/l
1,1,1-Trichloroethane	0.1	1.0	ug/l
Carbon Tetrachloride	0.1	1.0	ug/l
Benzene	0.1	1.0	ug/l
Trichloroethene	0.1	1.0	ug/l
Toluene	0.1	1.0	ug/l
Tetrachloroethene	0.1	1.0	ug/l
Ethylbenzene	0.1	1.0	ug/l
Xylene (Total)	0.1	3.0	ug/l
Dimethyl ether	0.1	13	ug/l

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s11.d Injection date and time: **23-OCT-2017 04:02**
Data file Sample Info. Line: 16C1-;9262022;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.245 (-0.012)	436	65	81297 (-4)	50.00	
63) Fluorobenzene	7.781 (0.000)	1016	96	2286339 (-6)	10.00	
97) Chlorobenzene-d5	11.250 (0.000)	1585	117	1471457 (-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133 (0.000)	1894	152	596566 (-24)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879 (-0.001)	113	524701	9.504	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336 (0.001)	102	83405	9.647	96%		80 - 120
82) Toluene-d8	(3)	9.799 (0.000)	98	2248395	10.514	105%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256 (-0.001)	95	608272	9.364	94%		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)	2.001 (0.000)	85	15258M	0.152	0.15		J	0.1	1
4) Dimethyl ether	(2)	2.081 (0.000)	45	693281	7.412	7.41		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)	2.721 (-0.000)	64	220795	4.249	4.25			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)	3.288 (0.000)	59	1895832	48.856	48.86		E	0.1	13
15) 1,1-Dichloroethene	(2)	3.605 (0.000)	96	11793	0.242	0.24		J	0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)	4.263 (-0.000)	84	53002	0.955	0.96		J	0.2	1
33) 1,1-Dichloroethane	(2)	5.354 (-0.000)	63	706007	6.241	6.24			0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)	6.531 (0.003)	71	44027	15.110	15.11		J	2	25
51) 1,1,1-Trichloroethane	(2)	6.903 (-0.000)	97	15752	0.160	0.16		J	0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)	7.391 (-0.000)	78	72866	0.306	0.31		J	0.1	1
67) Trichloroethene	(2)	8.275 (-0.000)	95	14998	0.235	0.23		J	0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.427 (0.000)	166	19820	0.302	0.30		J	0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s11.d Injection date and time: **23-OCT-2017 04:02**
Data file Sample Info. Line: 16C1-;9262022;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

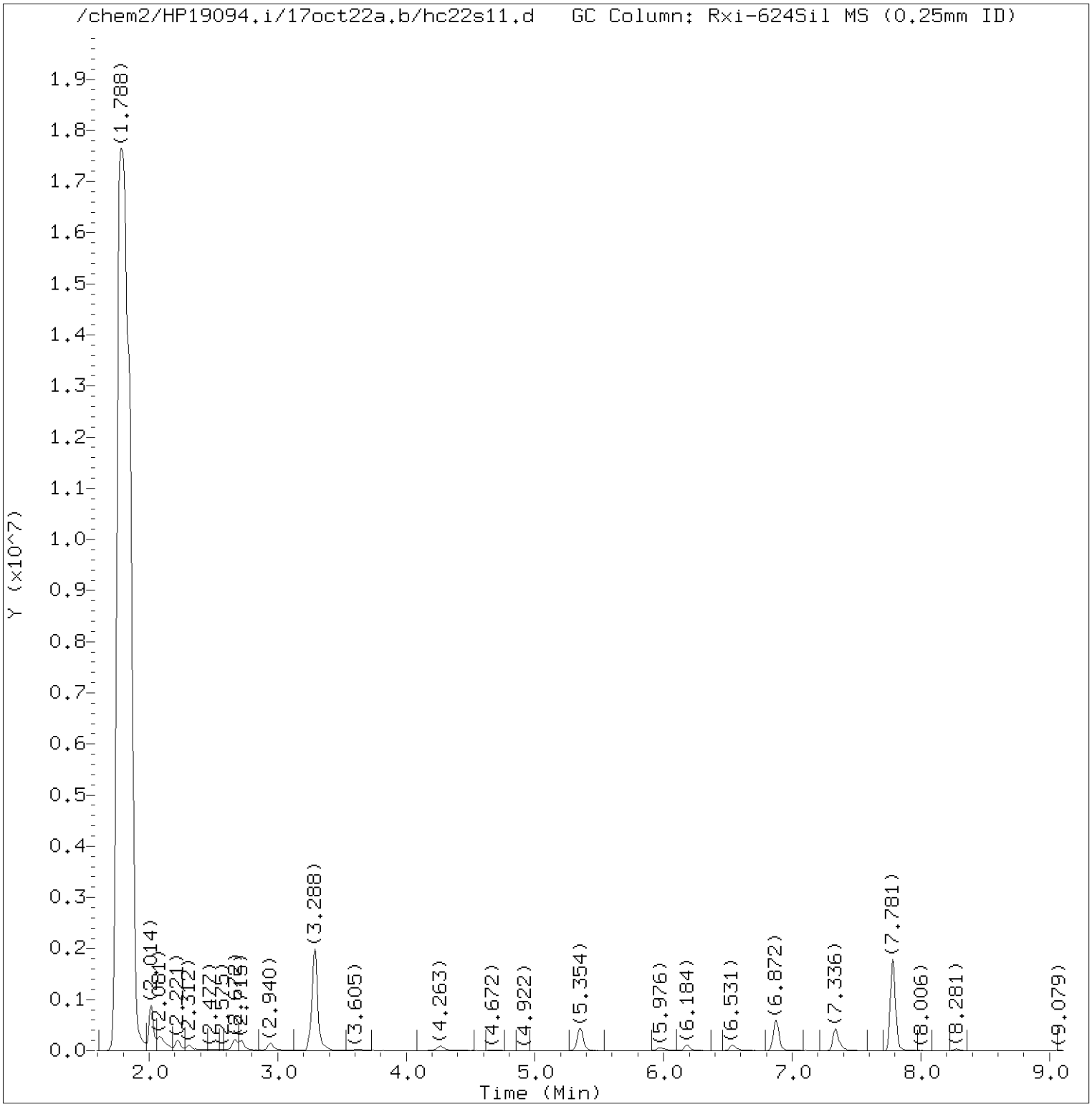
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

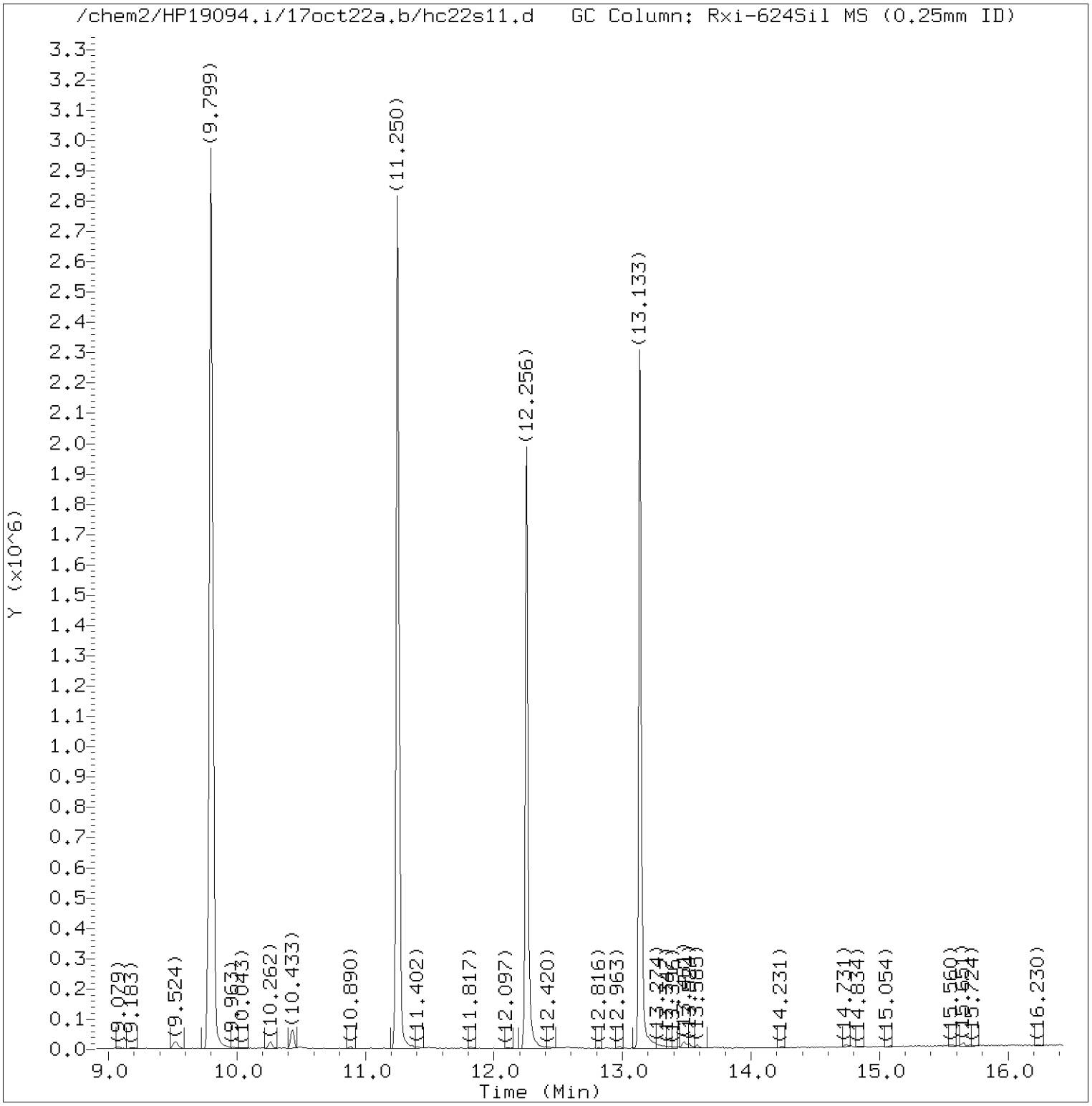
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

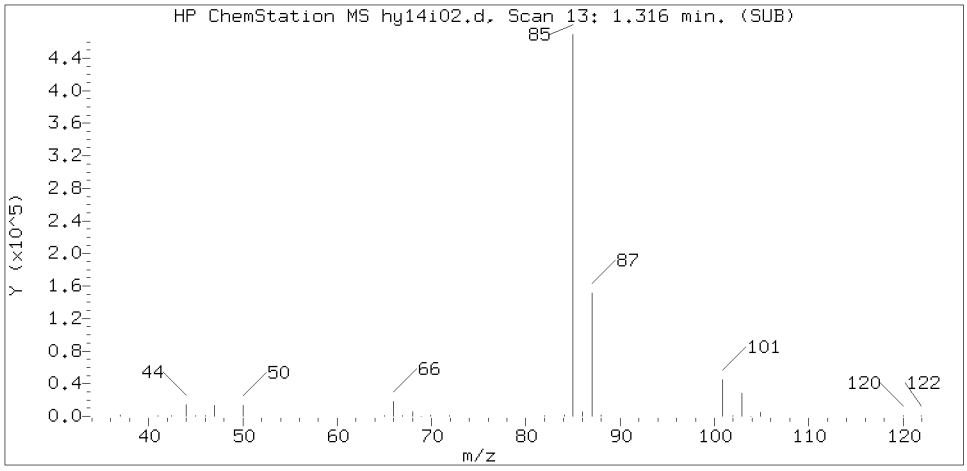
Sample Name: 16C1- Lab Sample ID: 9262022

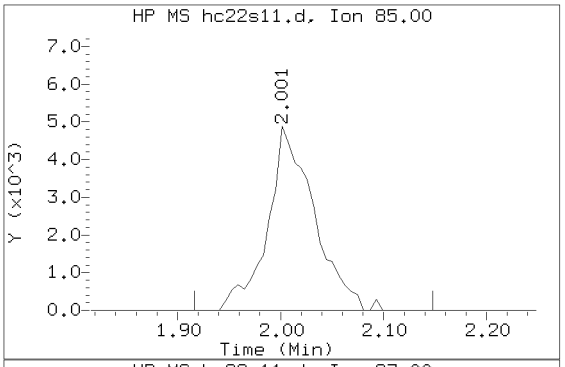
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.001	85	15258M	0.152
4) Dimethyl ether	(2)	2.081	45	693281	7.412
8) Chloroethane	(2)	2.721	64	220795	4.249
11) Ethyl ether	(2)	3.288	59	1895832	48.856
15) 1,1-Dichloroethene	(2)	3.605	96	11793	0.242
26)*t-Butyl Alcohol-d10	(1)	4.245	65	81297	50.000
23) Methylene Chloride	(2)	4.263	84	53002	0.955
33) 1,1-Dichloroethane	(2)	5.354	63	706007	6.241
48) Tetrahydrofuran	(1)	6.531	71	44027	15.110
50)$Dibromofluoromethane	(2)	6.879	113	524701	9.504
51) 1,1,1-Trichloroethane	(2)	6.903	97	15752	0.160
57)$1,2-Dichloroethane-d4	(2)	7.336	102	83405	9.647
58) Benzene	(2)	7.391	78	72866	0.306
63)*Fluorobenzene	(2)	7.781	96	2286339	10.000
67) Trichloroethene	(2)	8.275	95	14998	0.235
82)$Toluene-d8	(3)	9.799	98	2248395	10.514
89) Tetrachloroethene	(3)	10.427	166	19820	0.302
97)*Chlorobenzene-d5	(3)	11.250	117	1471457	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	608272	9.364
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	596566	10.000

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

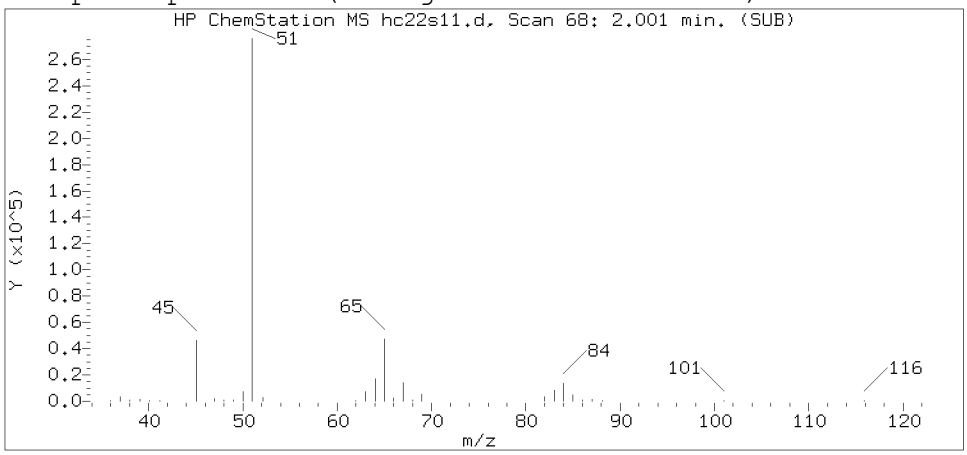
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

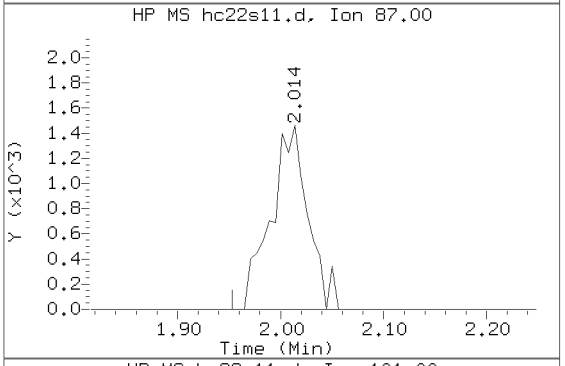
Reference Standard Spectrum for Dichlorodifluoromethane

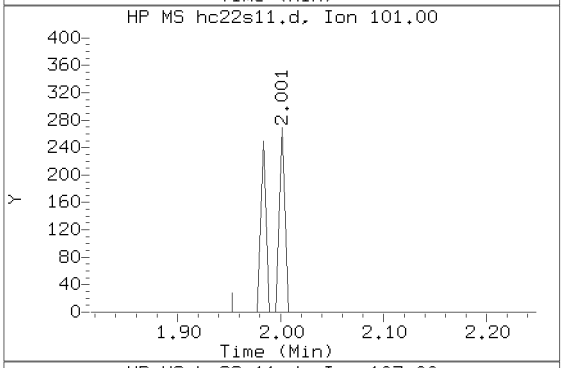




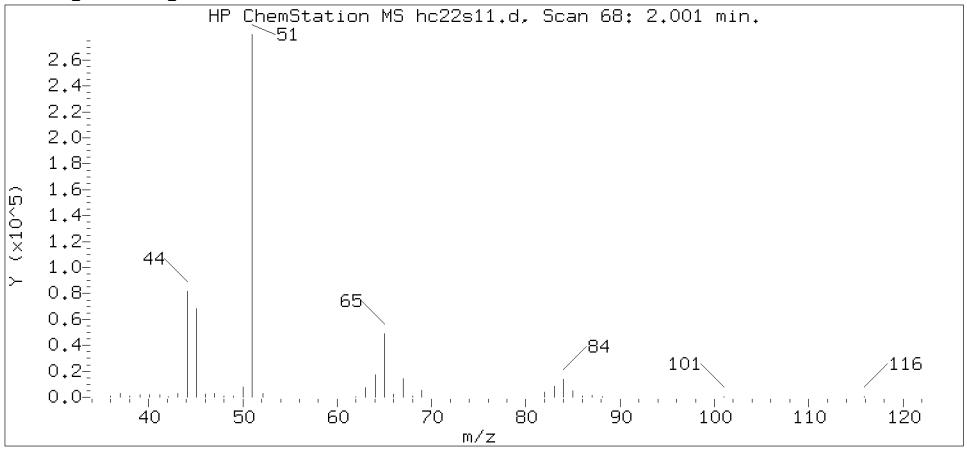
Sample Spectrum (Background Subtracted)

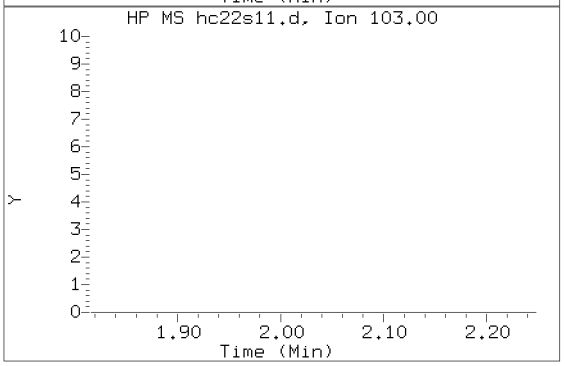






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

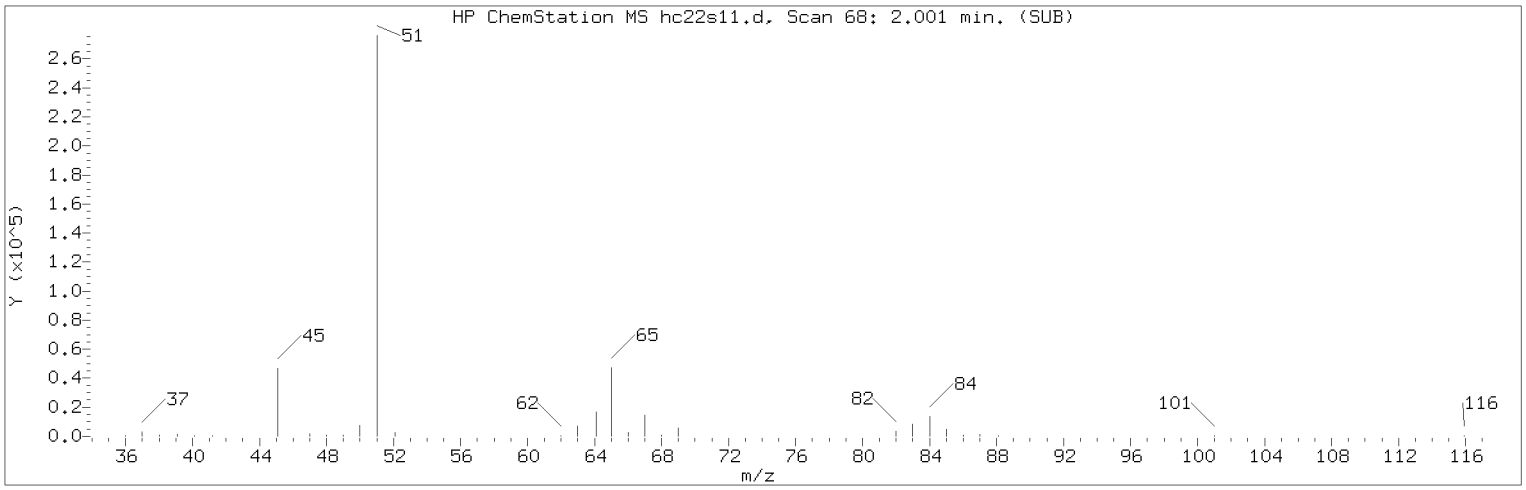
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

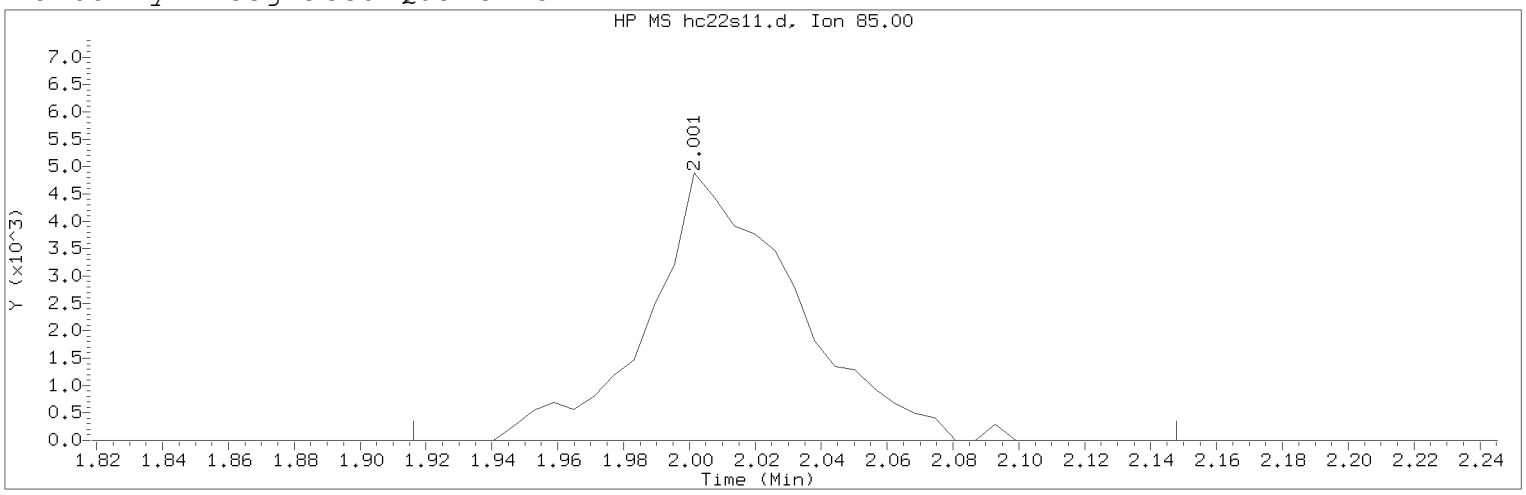
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 2.001
Relative Retention Time : 0.00076
Quant Ion : 85.00
Area (flag) : 15258M
On-Column Amount (ng) : 0.1517

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

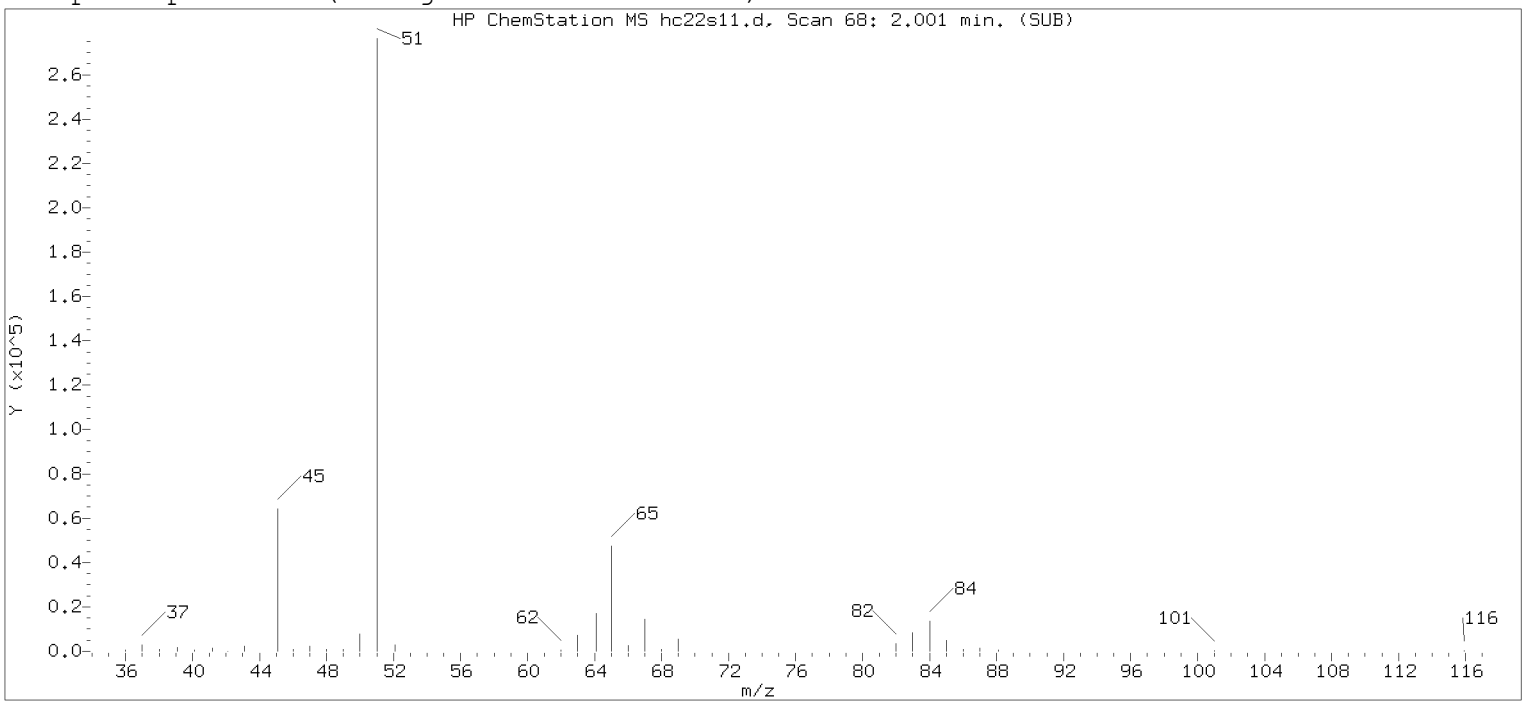
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 2.001
Quant Ion : 85.00
Area (flag) : 15258M
On-Column Amount (ng) : 0.1517
Integration start scan : 53 Integration stop scan: 91
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

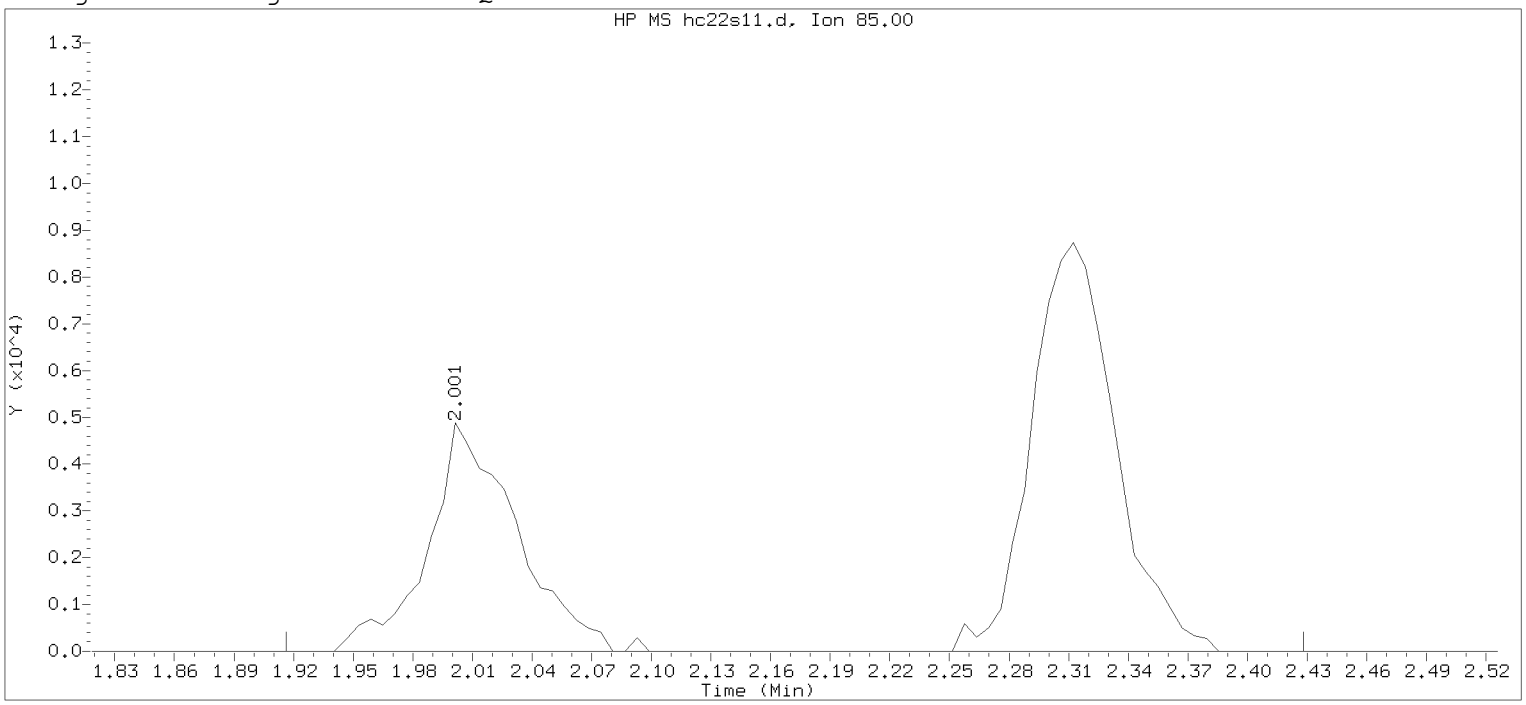
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

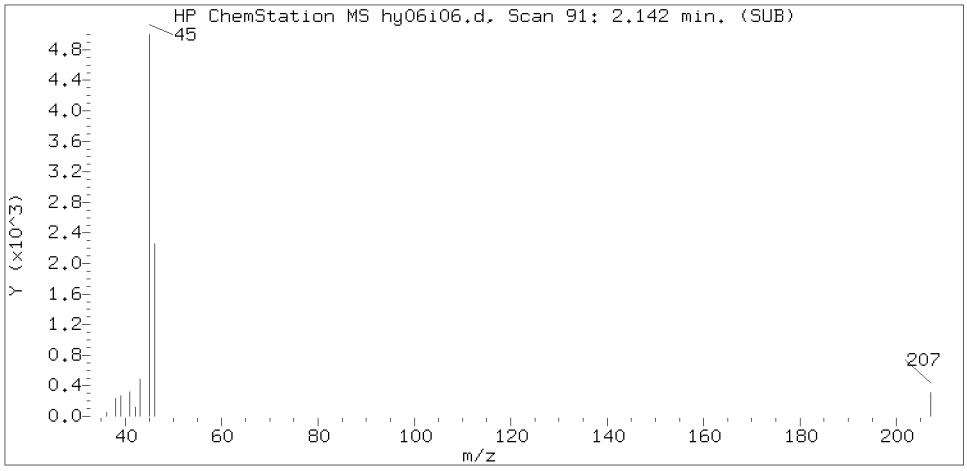
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 04:20 Automation

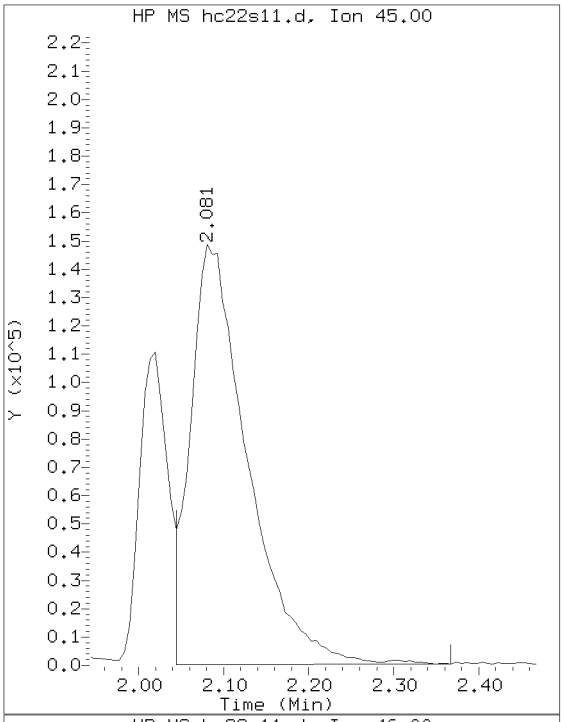
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 2.001
Quant Ion : 85.00
Area : 40866
On-column Amount (ng) : 0.4064
Integration start scan : 53 Integration stop scan: 137
Y at integration start : 0 Y at integration end: 0

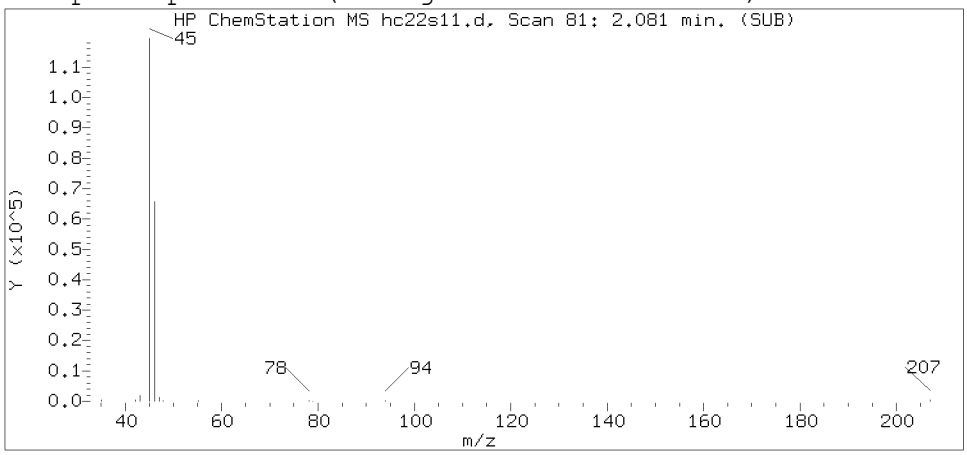
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user Kevin A. Sposito

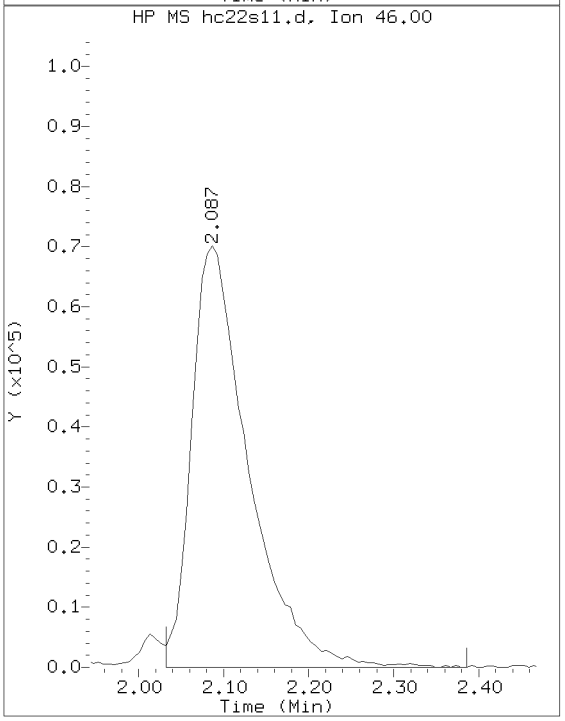
Reference Standard Spectrum for Dimethyl ether



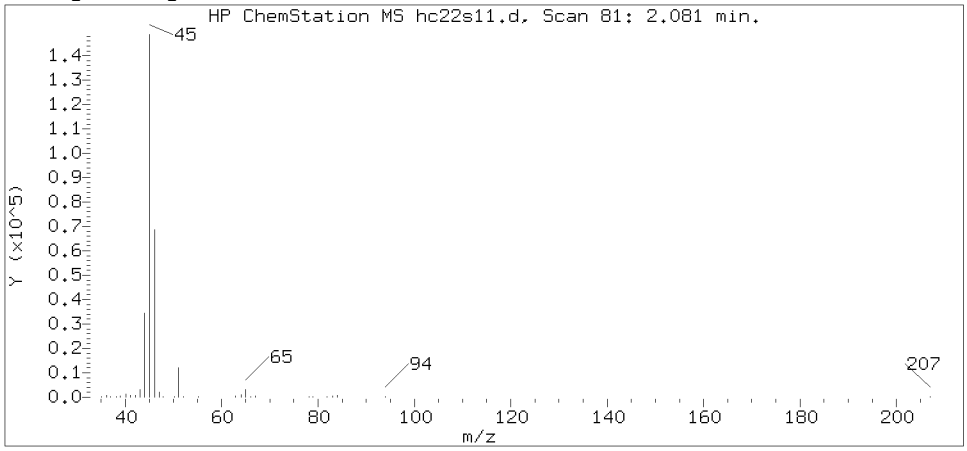


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

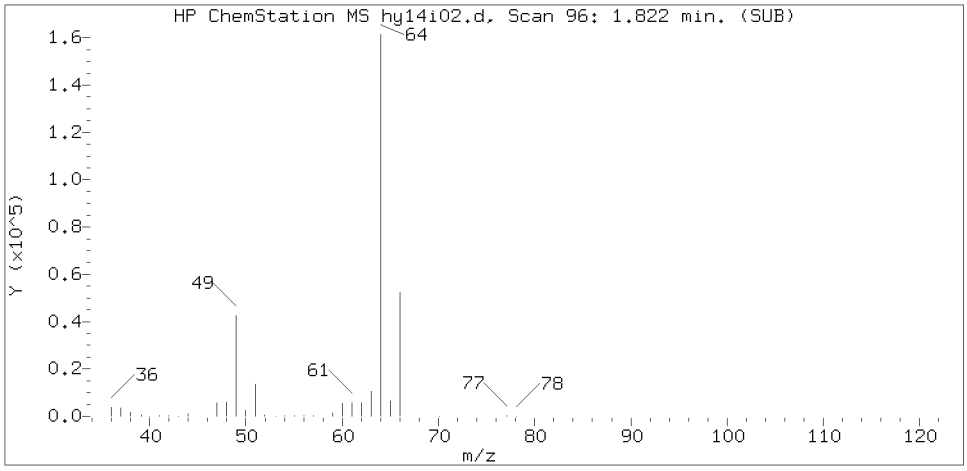
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

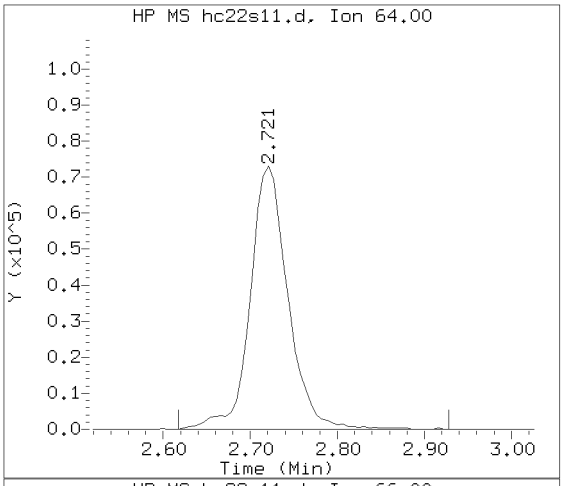
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 81
Retention Time (minutes)	: 2.081
Relative Retention Time	: 0.00077
Quant Ion	: 45.00
Area (flag)	: 693281
On-Column Amount (ng)	: 7.4116

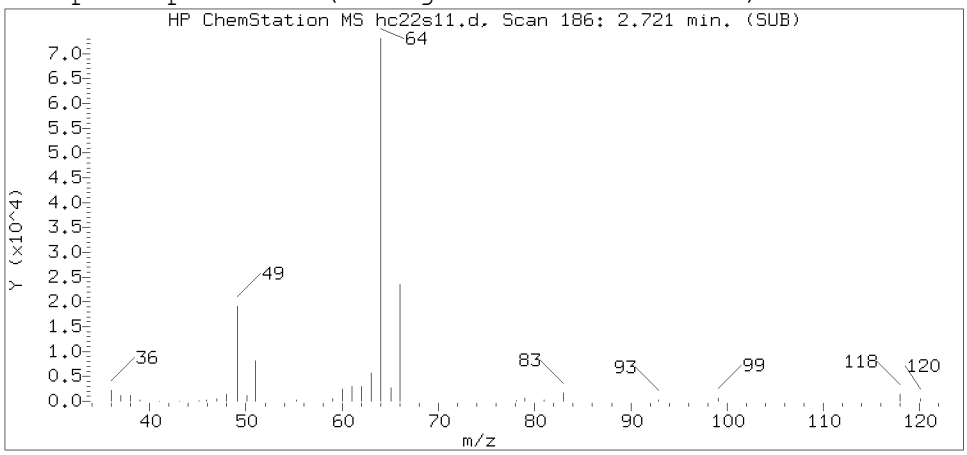
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

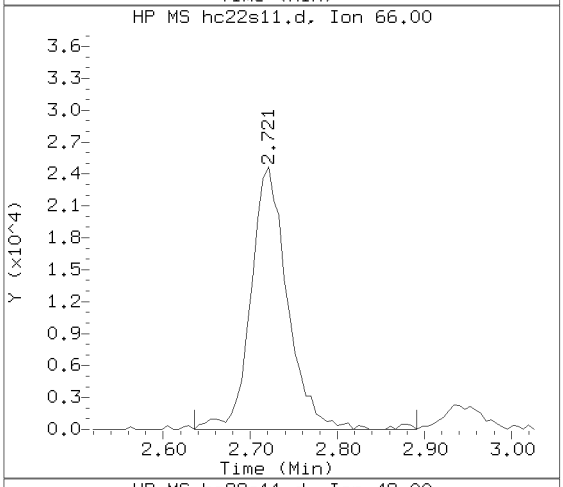
Reference Standard Spectrum for Chloroethane



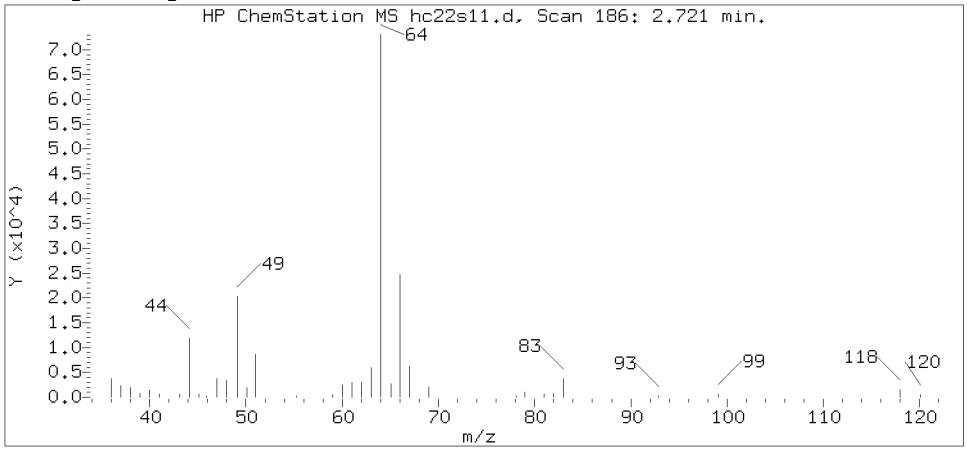


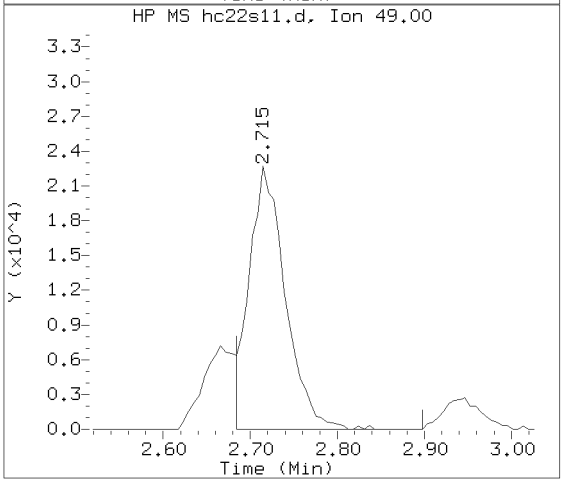
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

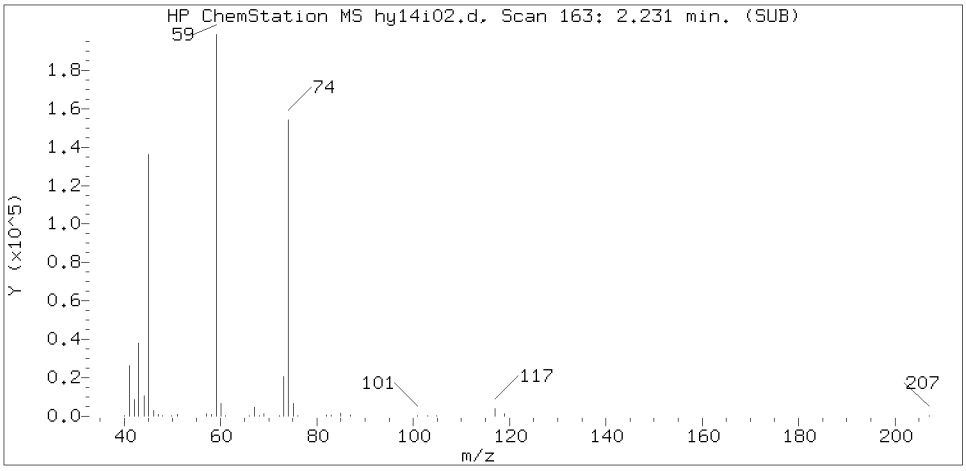
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

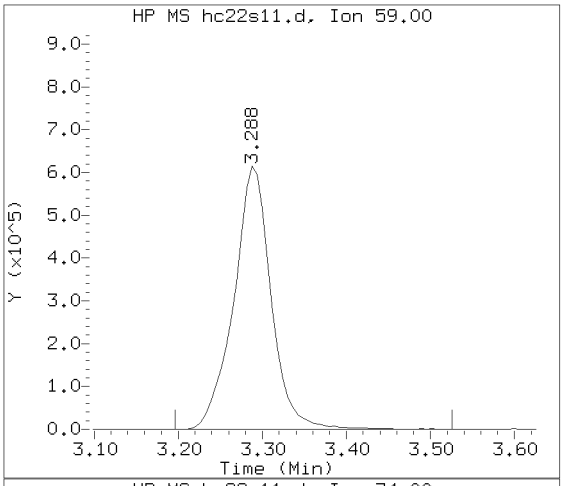
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 186
Retention Time (minutes)	: 2.721
Relative Retention Time	:-0.00002
Quant Ion	: 64.00
Area (flag)	: 220795
On-Column Amount (ng)	: 4.2493

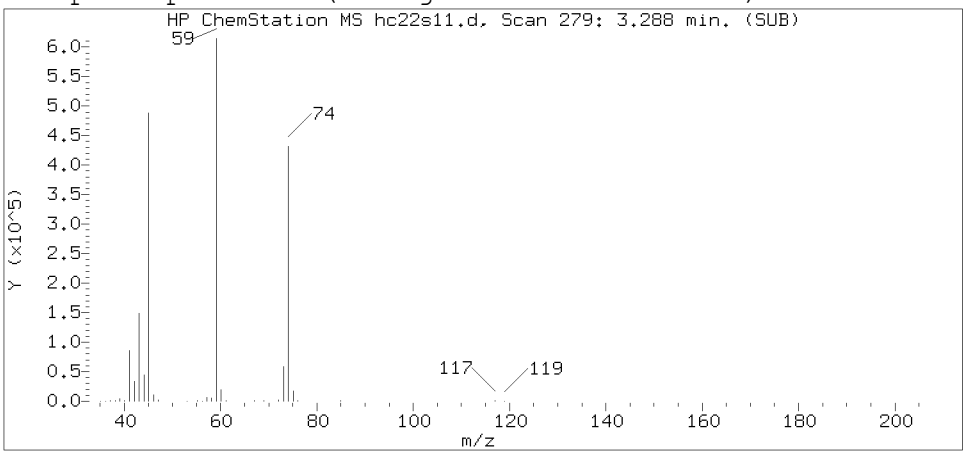
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

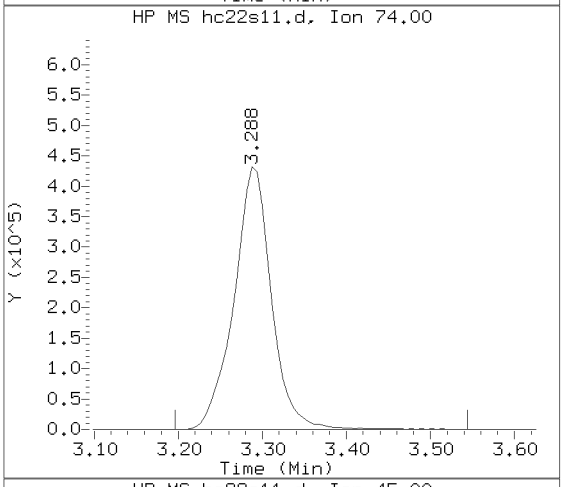
Reference Standard Spectrum for Ethyl ether



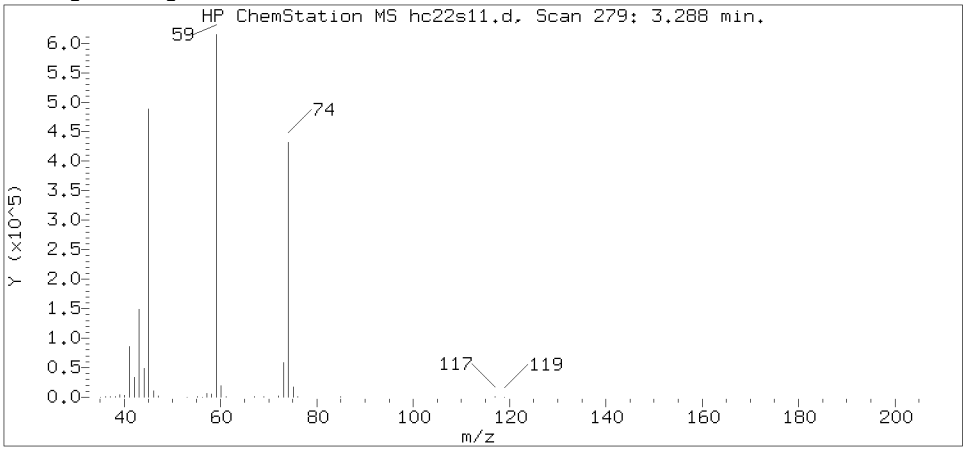


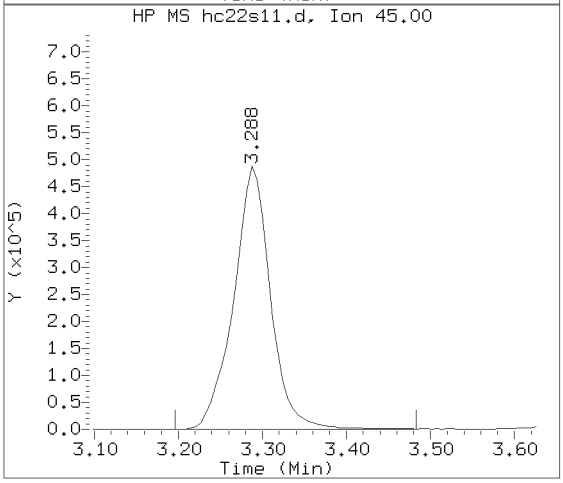
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

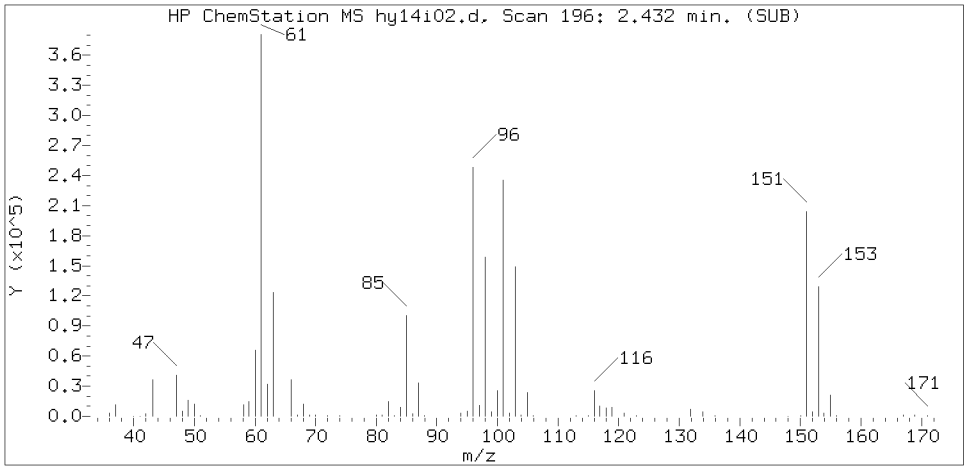
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

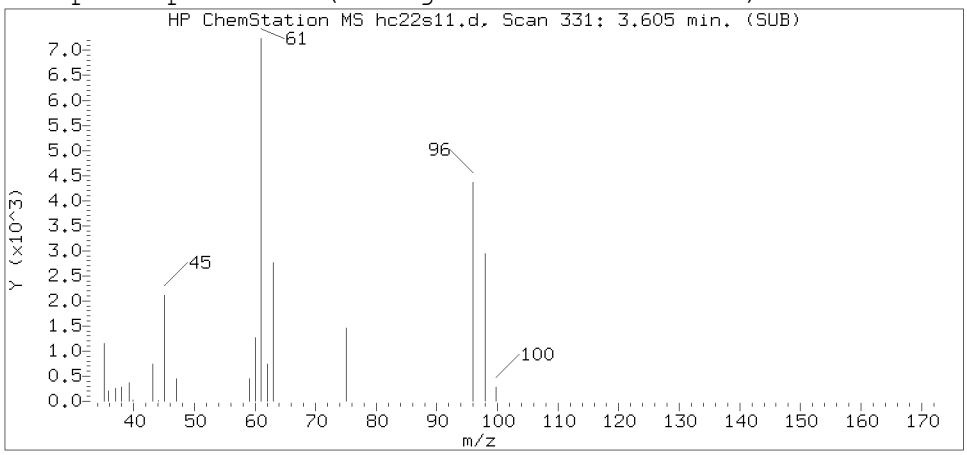
Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 279
Retention Time (minutes)	: 3.288
Relative Retention Time	: 0.00077
Quant Ion	: 59.00
Area (flag)	: 1895832
On-Column Amount (ng)	: 48.8557

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Target 3.5 esignature user ID: kas02648

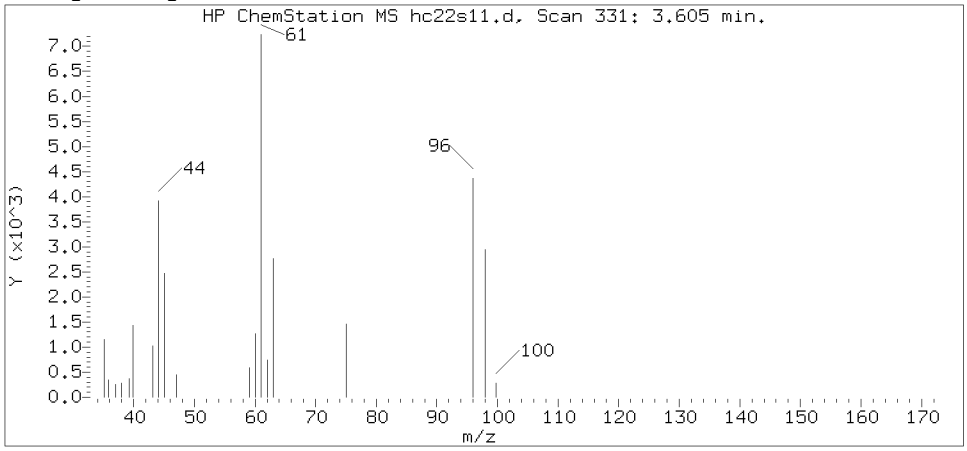
Reference Standard Spectrum for 1,1-Dichloroethene

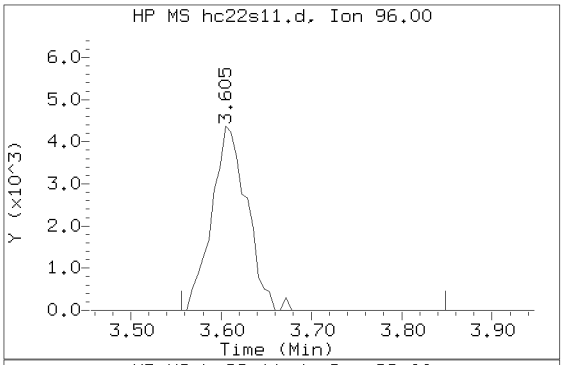


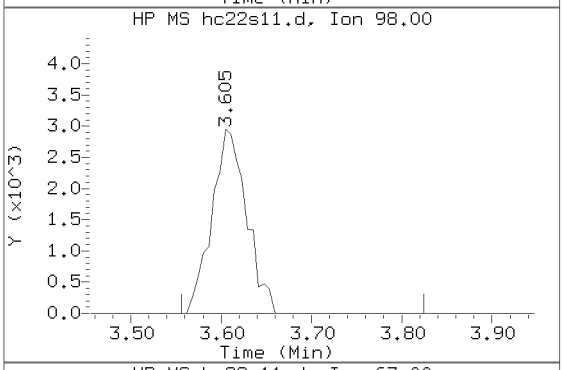
Sample Spectrum (Background Subtracted)

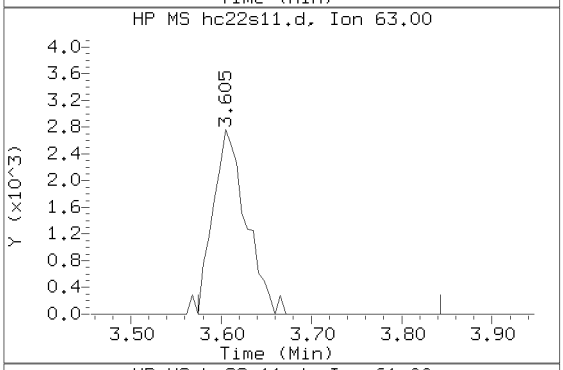


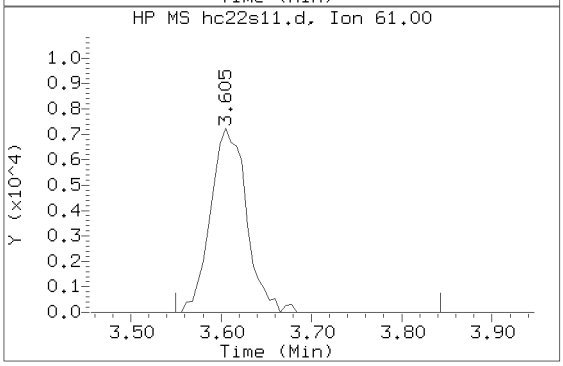
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

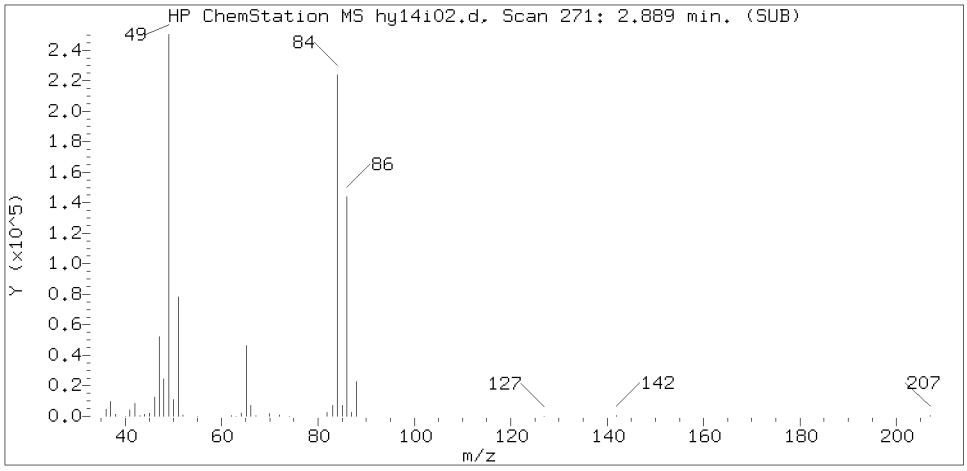
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Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

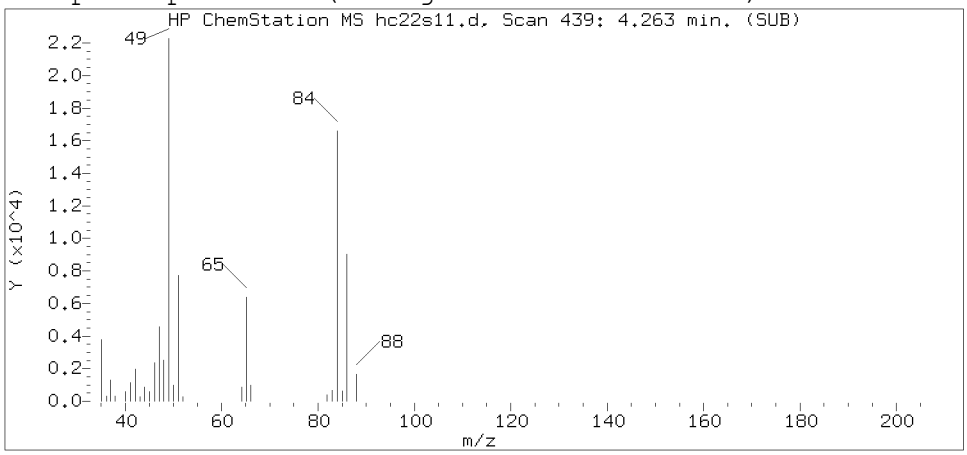
Compound Number	: 15
Compound Name	: 1,1-Dichloroethene
Scan Number	: 331
Retention Time (minutes)	: 3.605
Relative Retention Time	: 0.00077
Quant Ion	: 96.00
Area (flag)	: 11793
On-Column Amount (ng)	: 0.2424

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Target 3.5 esignature user ID: kas02648

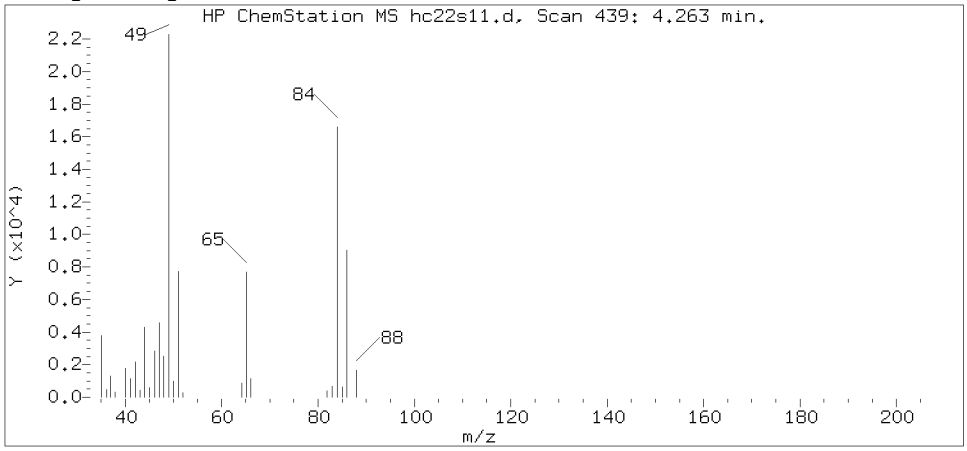
Reference Standard Spectrum for Methylene Chloride

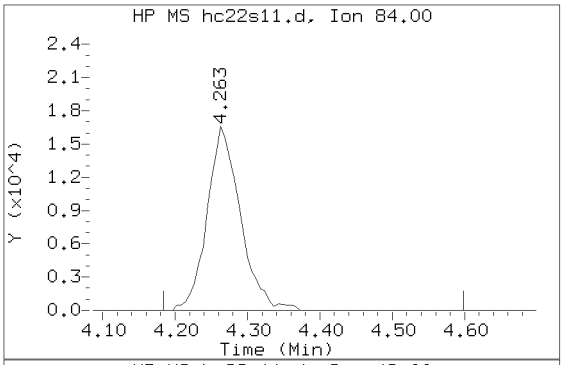


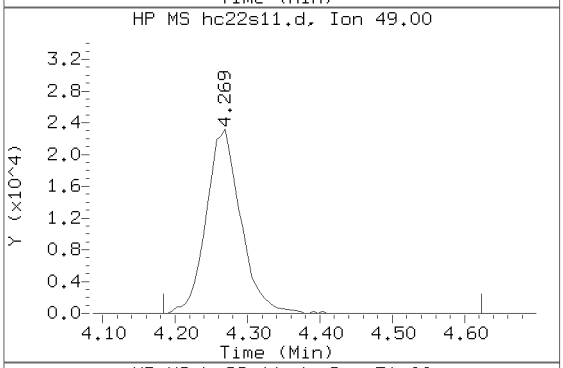
Sample Spectrum (Background Subtracted)

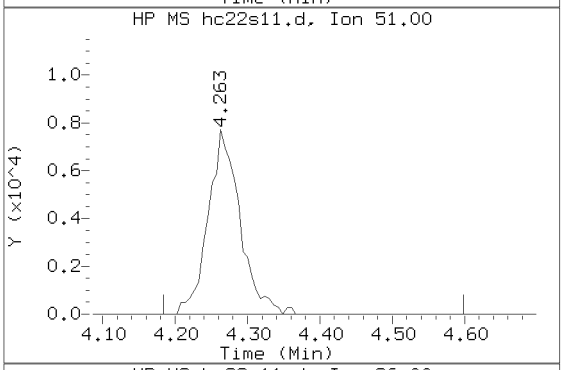


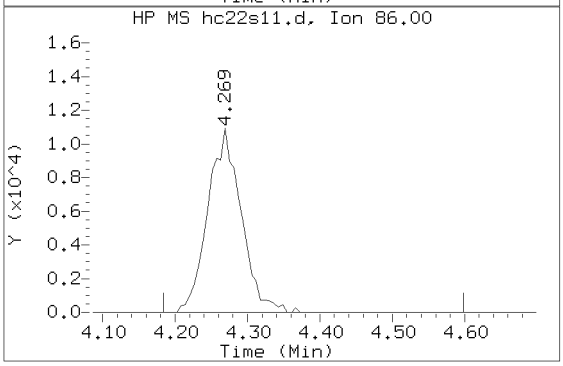
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

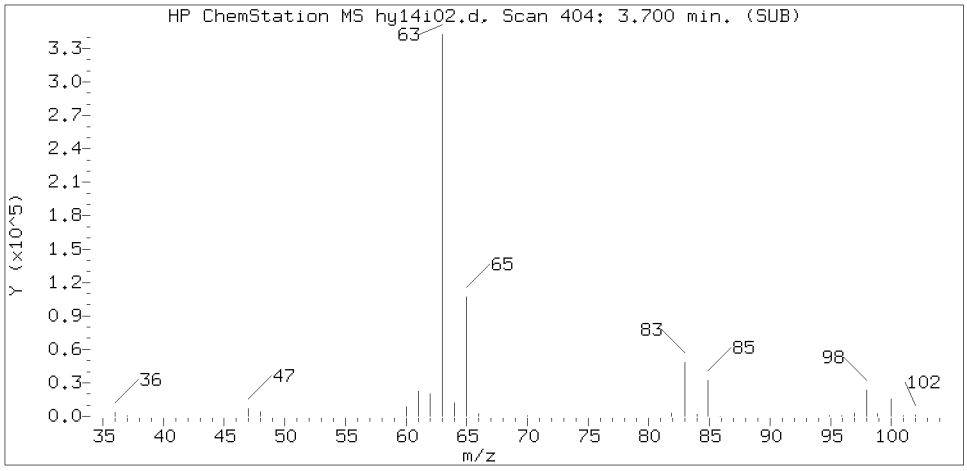
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

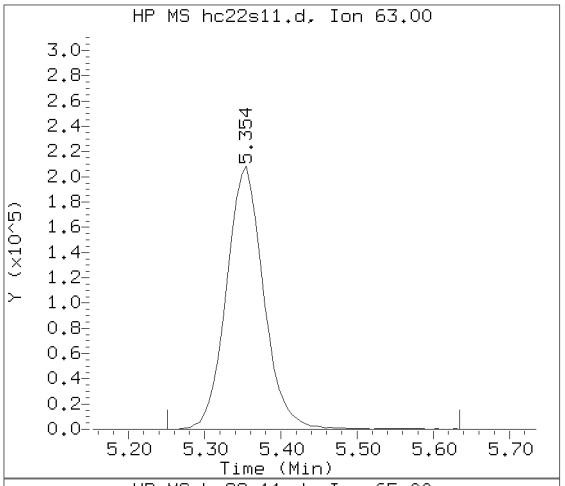
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 439
Retention Time (minutes): 4.263
Relative Retention Time :-0.00001
Quant Ion : 84.00
Area (flag) : 53002
On-Column Amount (ng) : 0.9552

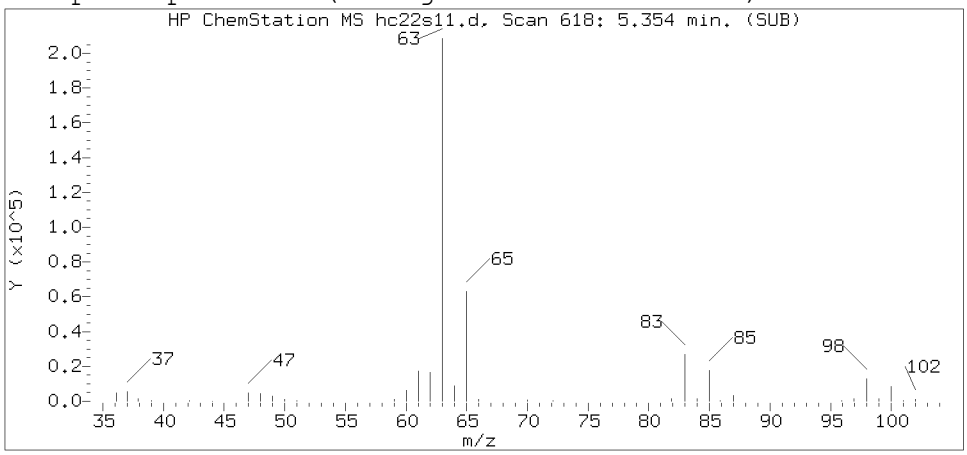
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Target 3.5 esignature user ID: kas02648

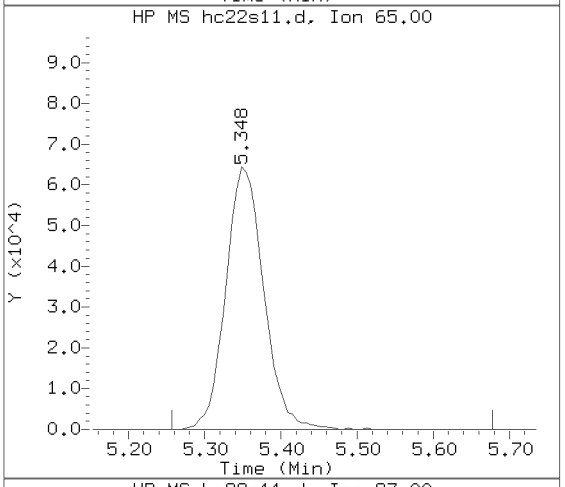
Reference Standard Spectrum for 1,1-Dichloroethane



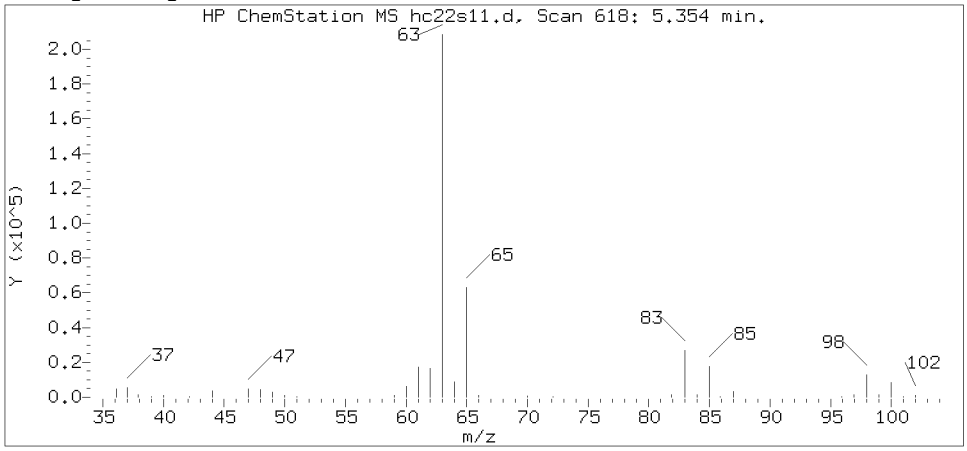


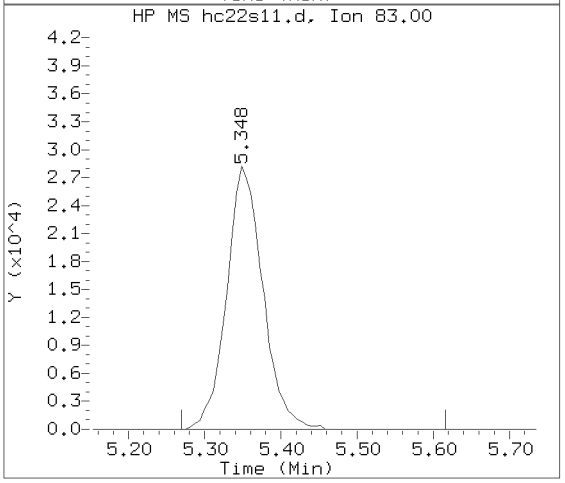
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

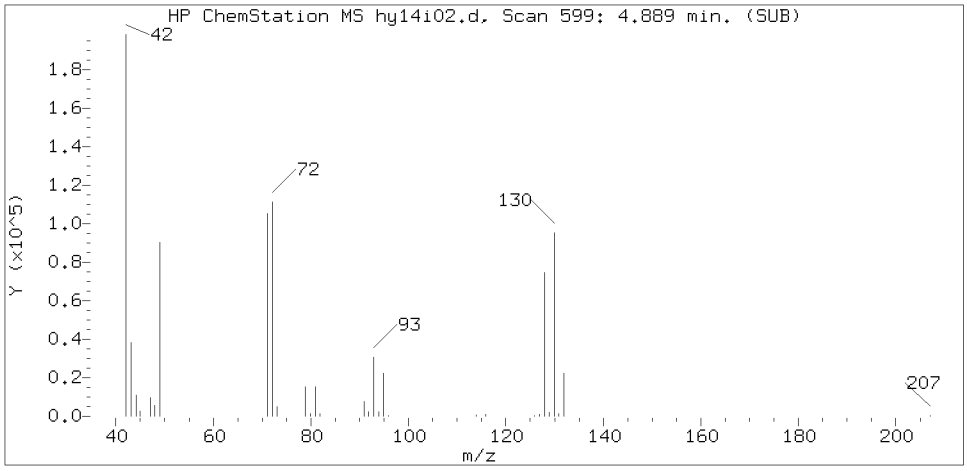
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

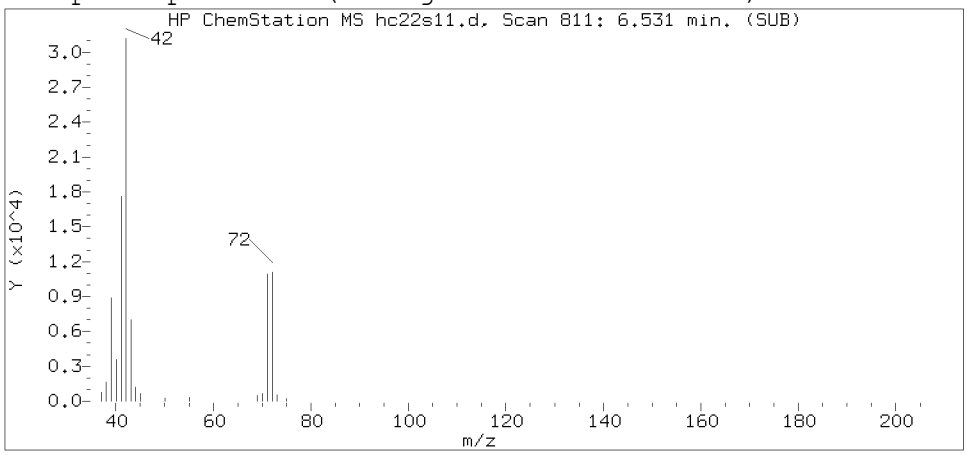
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 618
Retention Time (minutes): 5.354
Relative Retention Time :-0.00001
Quant Ion : 63.00
Area (flag) : 706007
On-Column Amount (ng) : 6.2408

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

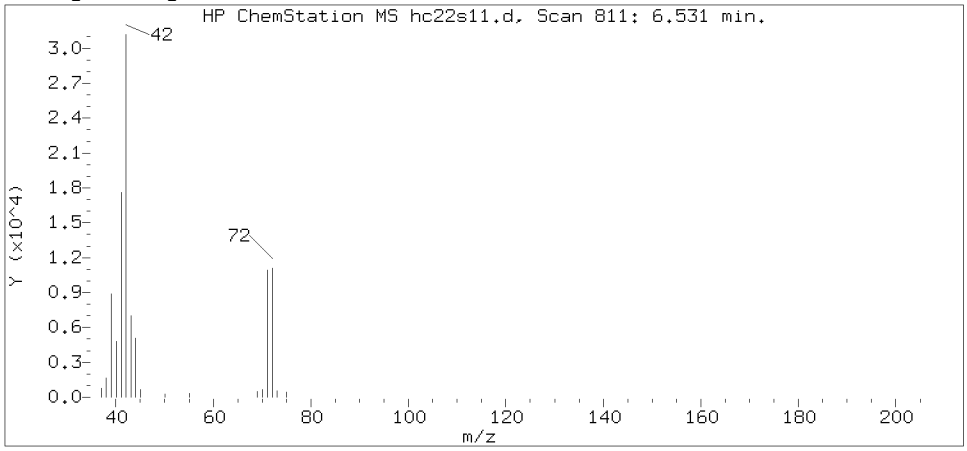
Reference Standard Spectrum for Tetrahydrofuran

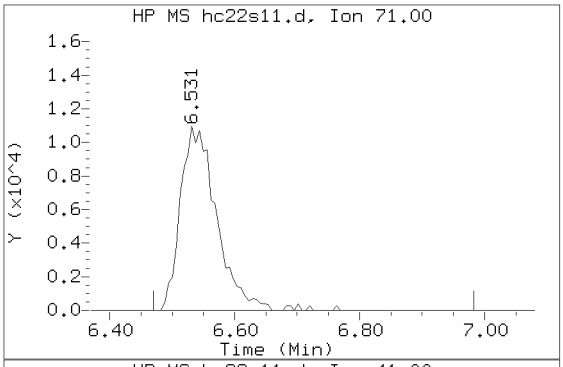


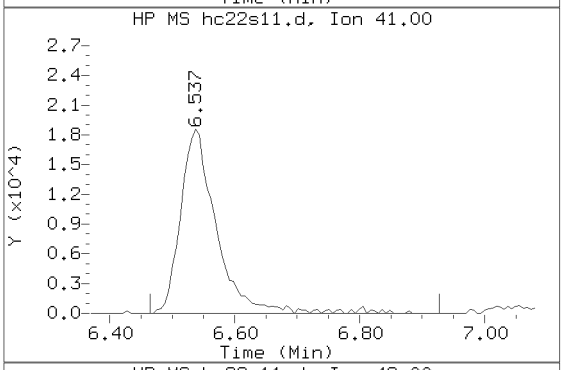
Sample Spectrum (Background Subtracted)

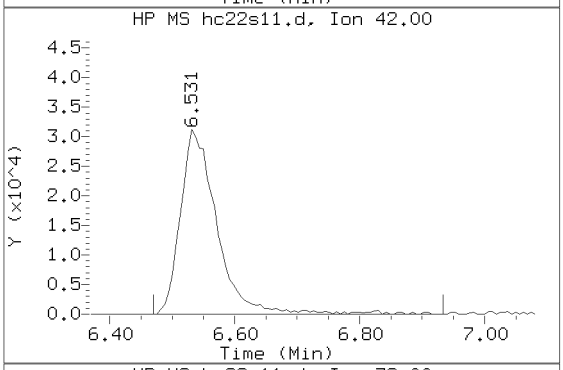


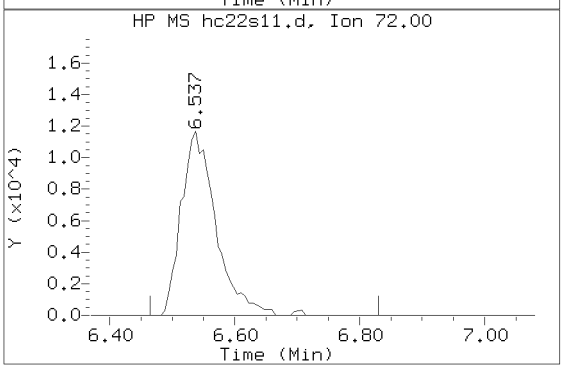
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

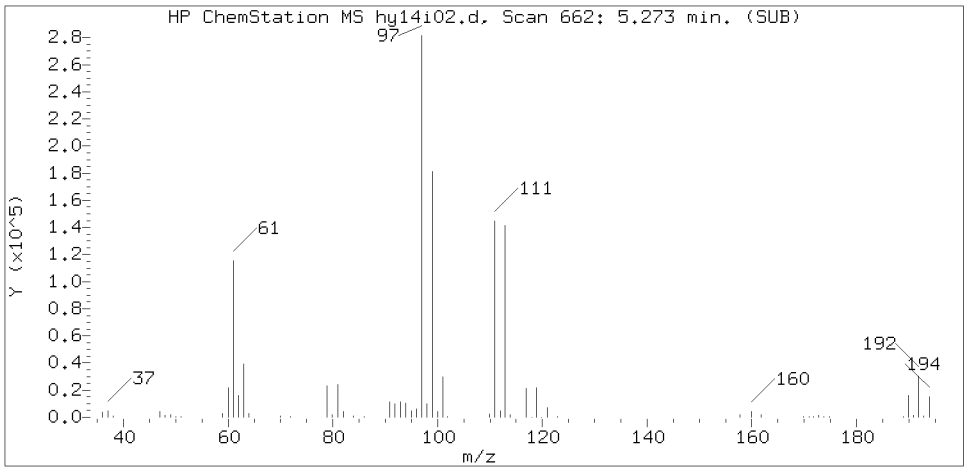
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

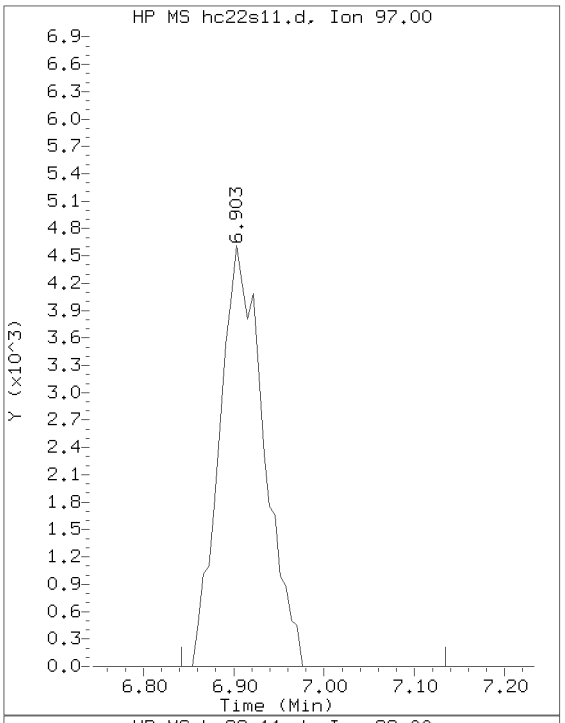
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 811
Retention Time (minutes): 6.531
Relative Retention Time : 0.00302
Quant Ion : 71.00
Area (flag) : 44027
On-Column Amount (ng) : 15.1100

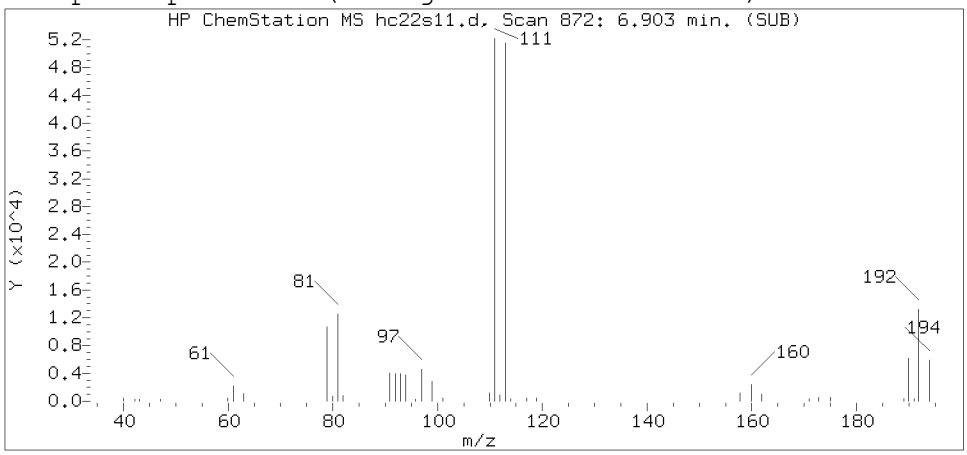
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

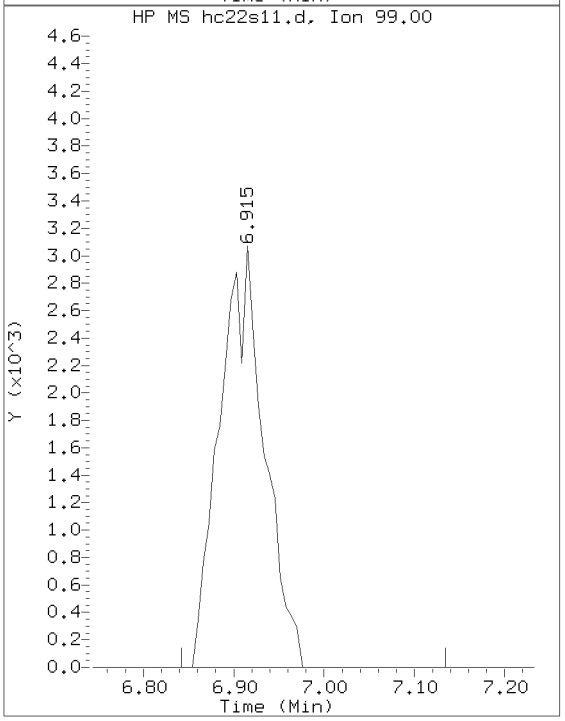
Reference Standard Spectrum for 1,1,1-Trichloroethane



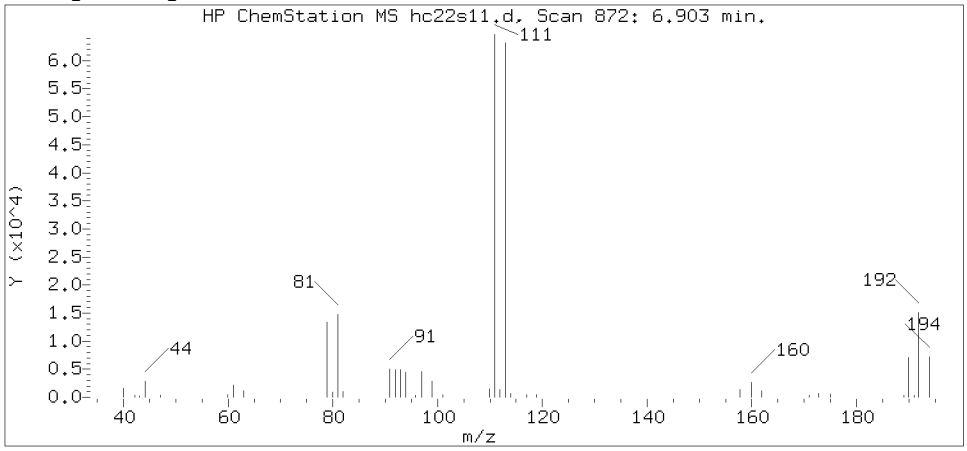


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

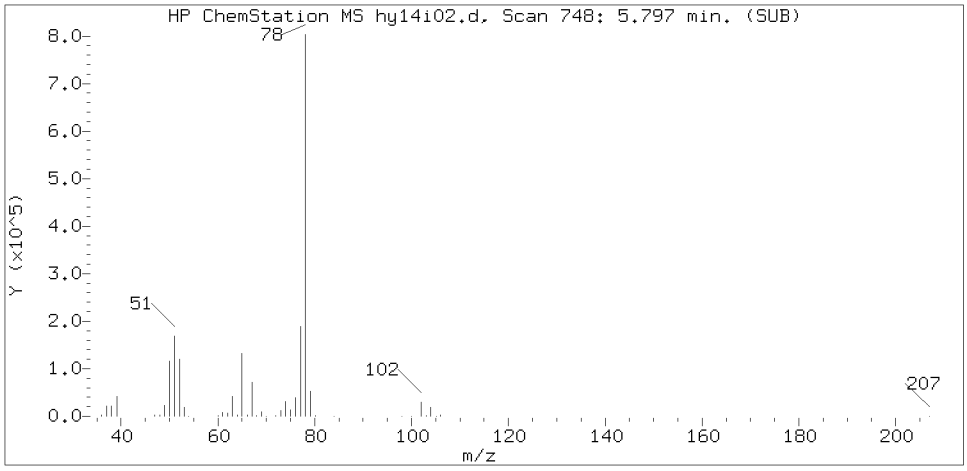
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

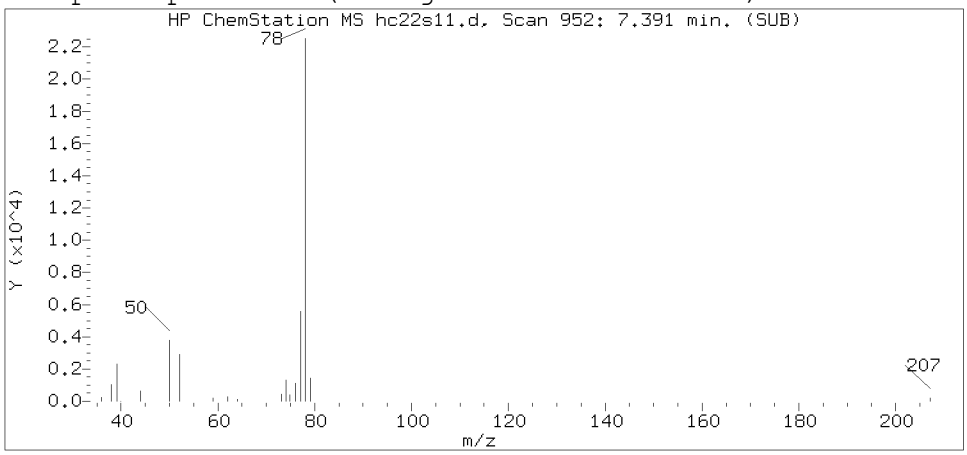
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 872
Retention Time (minutes): 6.903
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 15752
On-Column Amount (ng) : 0.1599

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

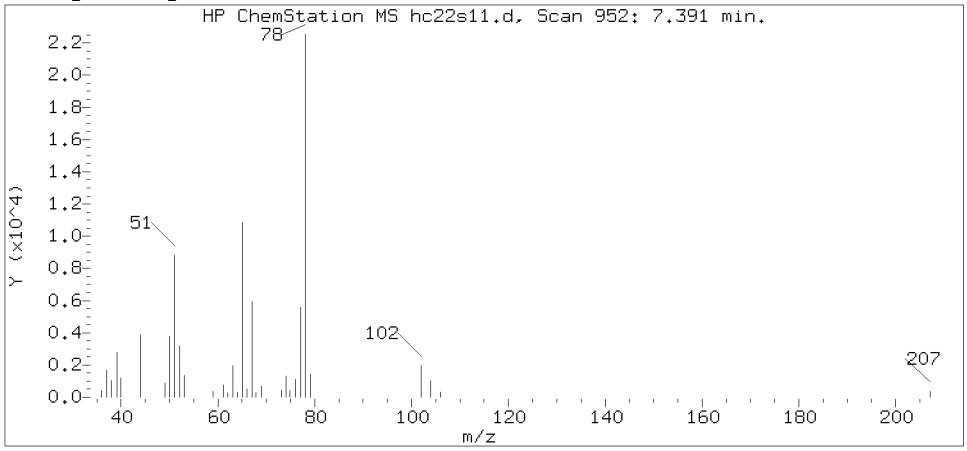
Reference Standard Spectrum for Benzene

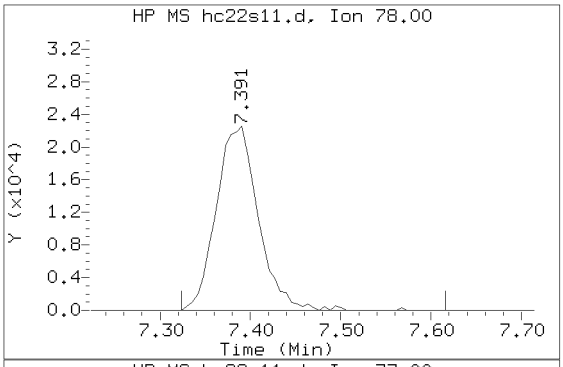


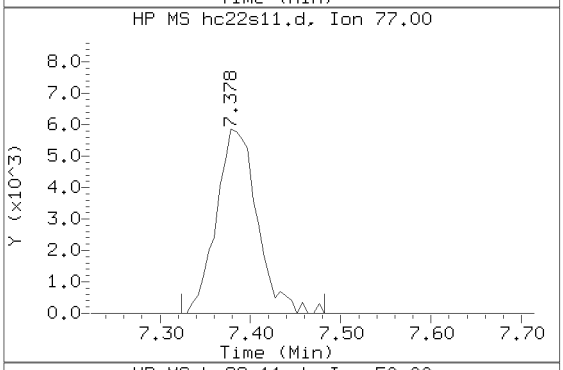
Sample Spectrum (Background Subtracted)

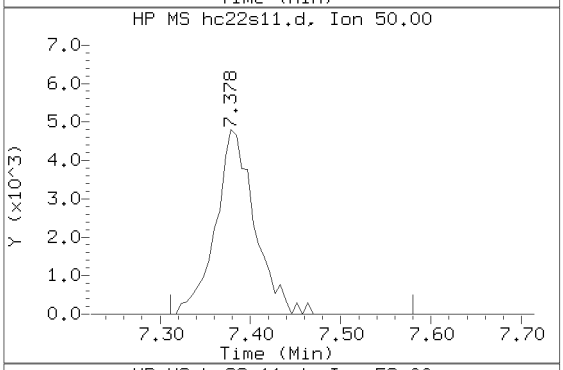


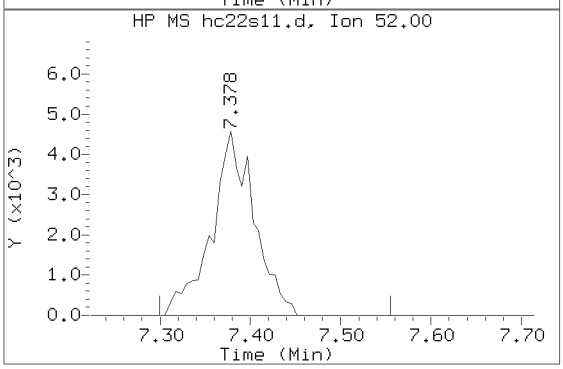
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

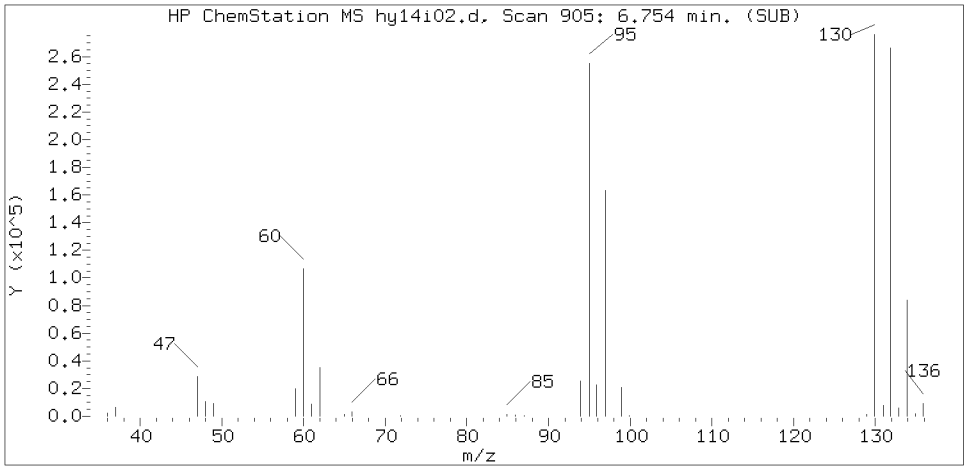
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

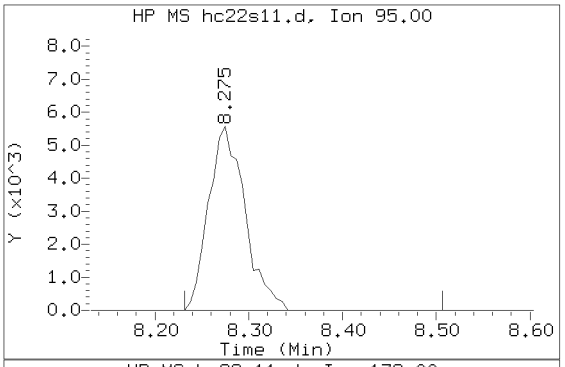
Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number : 58
Compound Name : Benzene
Scan Number : 952
Retention Time (minutes): 7.391
Relative Retention Time :-0.00078
Quant Ion : 78.00
Area (flag) : 72866
On-Column Amount (ng) : 0.3058

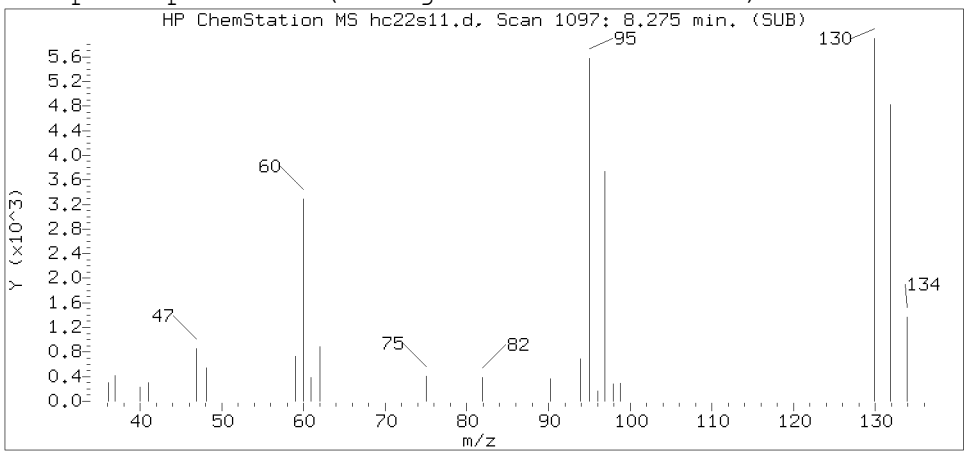
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

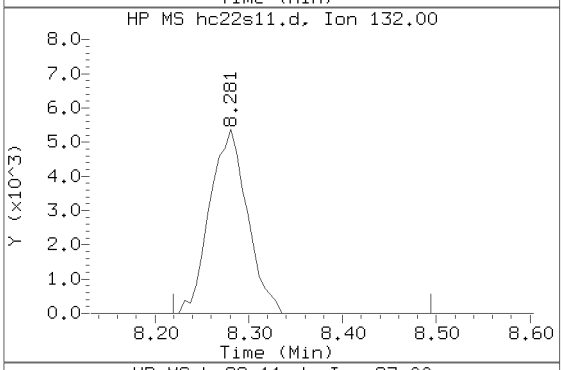
Reference Standard Spectrum for Trichloroethene

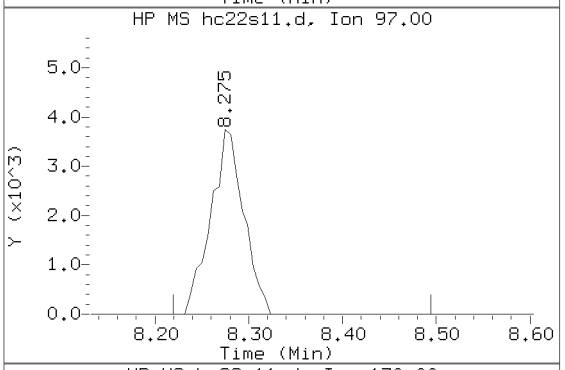




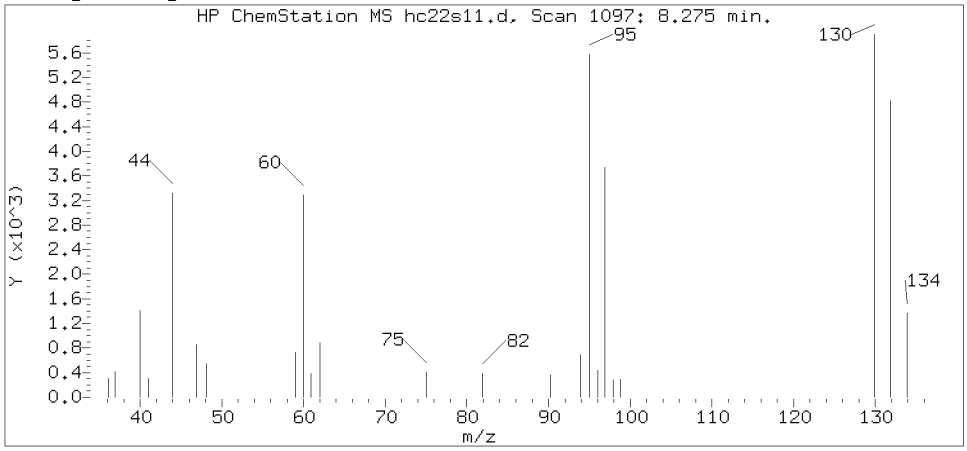
Sample Spectrum (Background Subtracted)

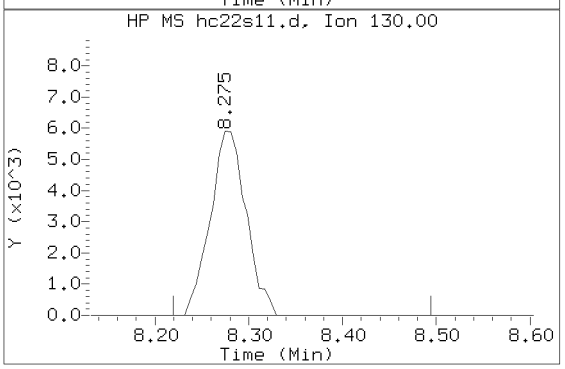






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

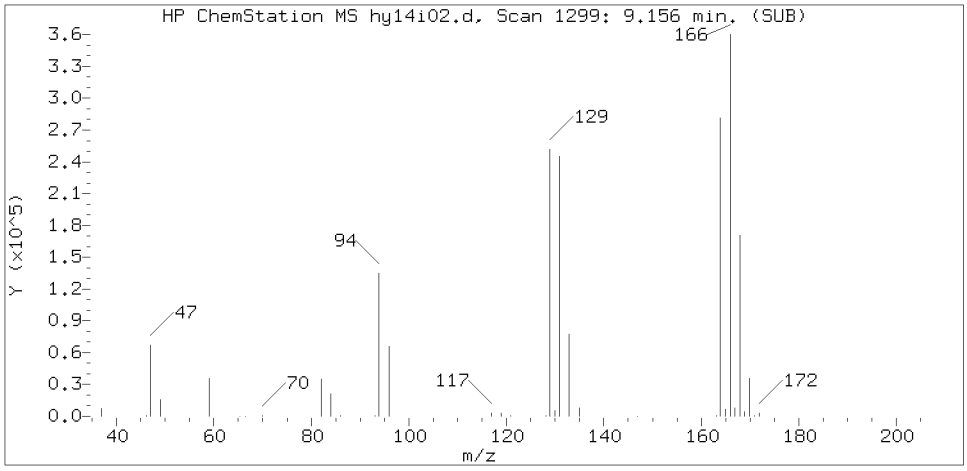
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

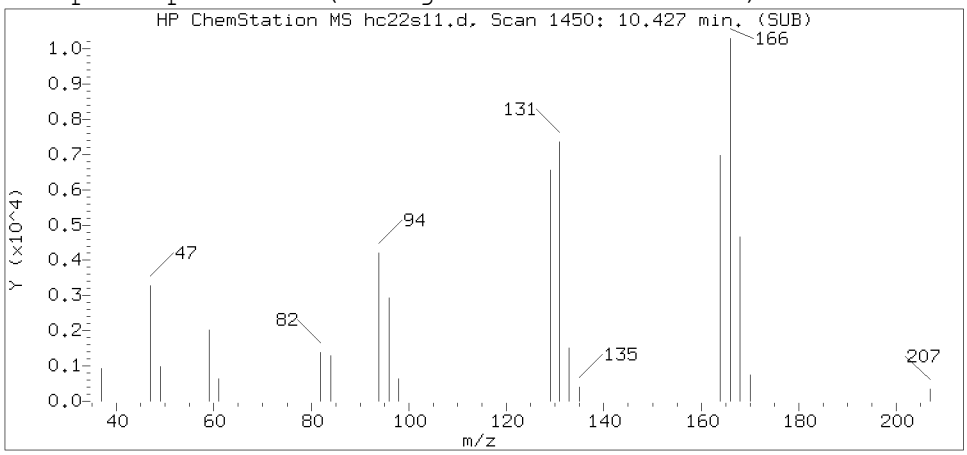
Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.275
Relative Retention Time :-0.00078
Quant Ion : 95.00
Area (flag) : 14998
On-Column Amount (ng) : 0.2350

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

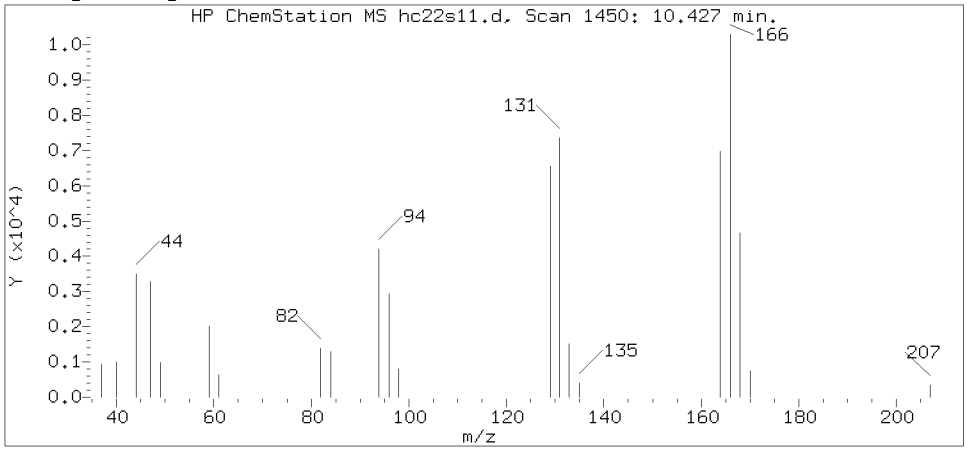
Reference Standard Spectrum for Tetrachloroethene

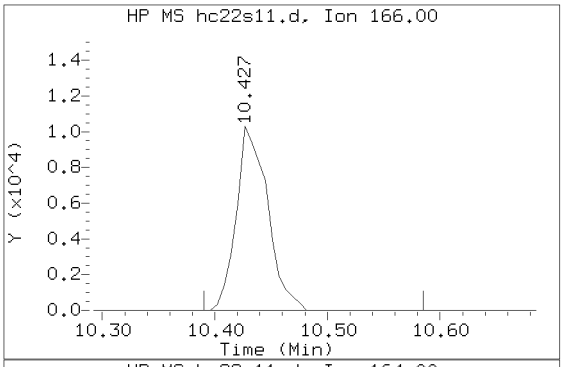


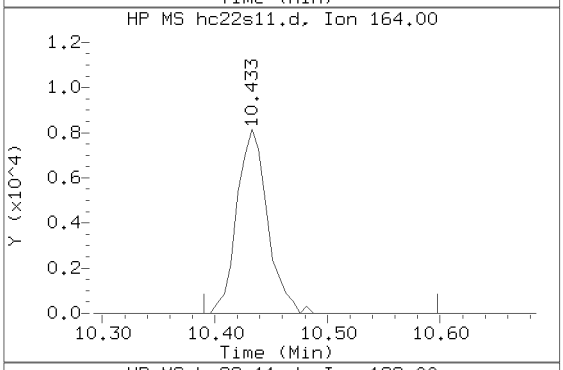
Sample Spectrum (Background Subtracted)

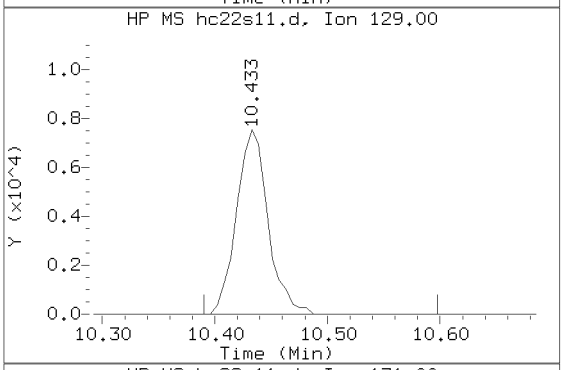


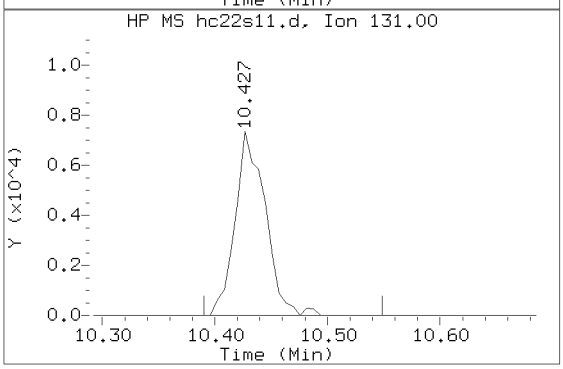
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16C1- Lab Sample ID: 9262022

Compound Number	: 89
Compound Name	: Tetrachloroethene
Scan Number	: 1450
Retention Time (minutes)	: 10.427
Relative Retention Time	: 0.00054
Quant Ion	: 166.00
Area (flag)	: 19820
On-Column Amount (ng)	: 0.3022

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct23a.b/hc23s05.d Injection date and time: **23-OCT-2017 12:11**
Data file Sample Info. Line: 16C1-DL;9262022DL;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.d**

Bottle Code: **038C** 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: **2.50**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Analysis Comments:1511

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.257	(-0.018)	438	65	94735	(8)	50.00	
63) Fluorobenzene	7.781	(0.006)	1016	96	2358464	(-3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1553766	(-11)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	640899	(-20)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.000)	113	555492	9.754	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(-0.001)	102	89332	10.016	100%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2316471	10.259	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	641227	9.349	93%		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)				Not Detected					0.3	3
4) Dimethyl ether	(2)	2.099	(-0.000)	45	264057	2.737	6.84		J	0.3	31
2) Chloromethane	(2)				Not Detected					0.5	3
8) Chloroethane	(2)	2.733	(-0.001)	64	78477	1.464	3.66			0.3	3
10) Trichlorofluoromethane	(2)				Not Detected					0.3	3
11) Ethyl ether	(2)	3.300	(-0.001)	59	735744	18.380	45.95			0.3	31
15) 1,1-Dichloroethene	(2)				Not Detected					0.3	3
16) Freon 113	(2)				Not Detected					0.5	3
23) Methylene Chloride	(2)	4.269	(-0.000)	84	21292	0.372	0.93		J	0.5	3
33) 1,1-Dichloroethane	(2)	5.354	(-0.000)	63	253832	2.175	5.44			0.3	3
38) 2-Butanone	(1)				Not Detected					3	25
48) Tetrahydrofuran	(1)	6.543	(0.003)	71	17145	5.049	12.62		J	5	63
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	3
54) Carbon Tetrachloride	(2)				Not Detected					0.3	3
58) Benzene	(2)	7.384	(-0.000)	78	29491	0.120	0.30		J	0.3	3
67) Trichloroethene	(2)				Not Detected					0.3	3
83) Toluene	(3)				Not Detected					0.3	3
89) Tetrachloroethene	(3)	10.439	(-0.001)	166	7218	0.104	0.26		J	0.3	3
100) Ethylbenzene	(3)				Not Detected					0.3	3
101) m+p-Xylene	(3)				Not Detected					0.3	1
104) o-Xylene	(3)				Not Detected					0.3	1
105) Xylene (Total)	(3)				Not Detected					0.3	8

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct23a.b/hc23s05.d Injection date and time: **23-OCT-2017 12:11**
Data file Sample Info. Line: 16C1-DL;9262022DL;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.d**

Bottle Code: **038C** 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: **2.50**

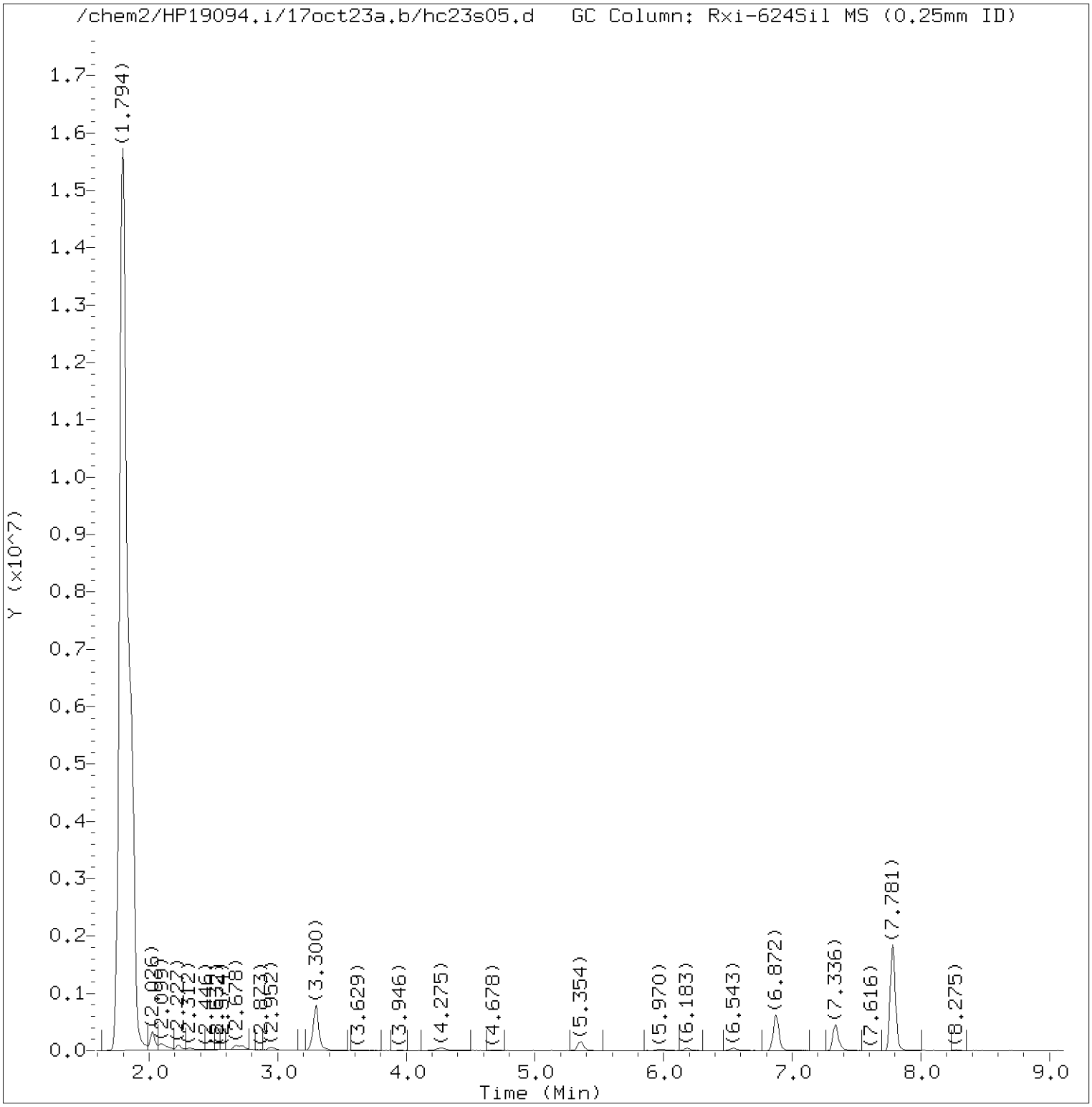
Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

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BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

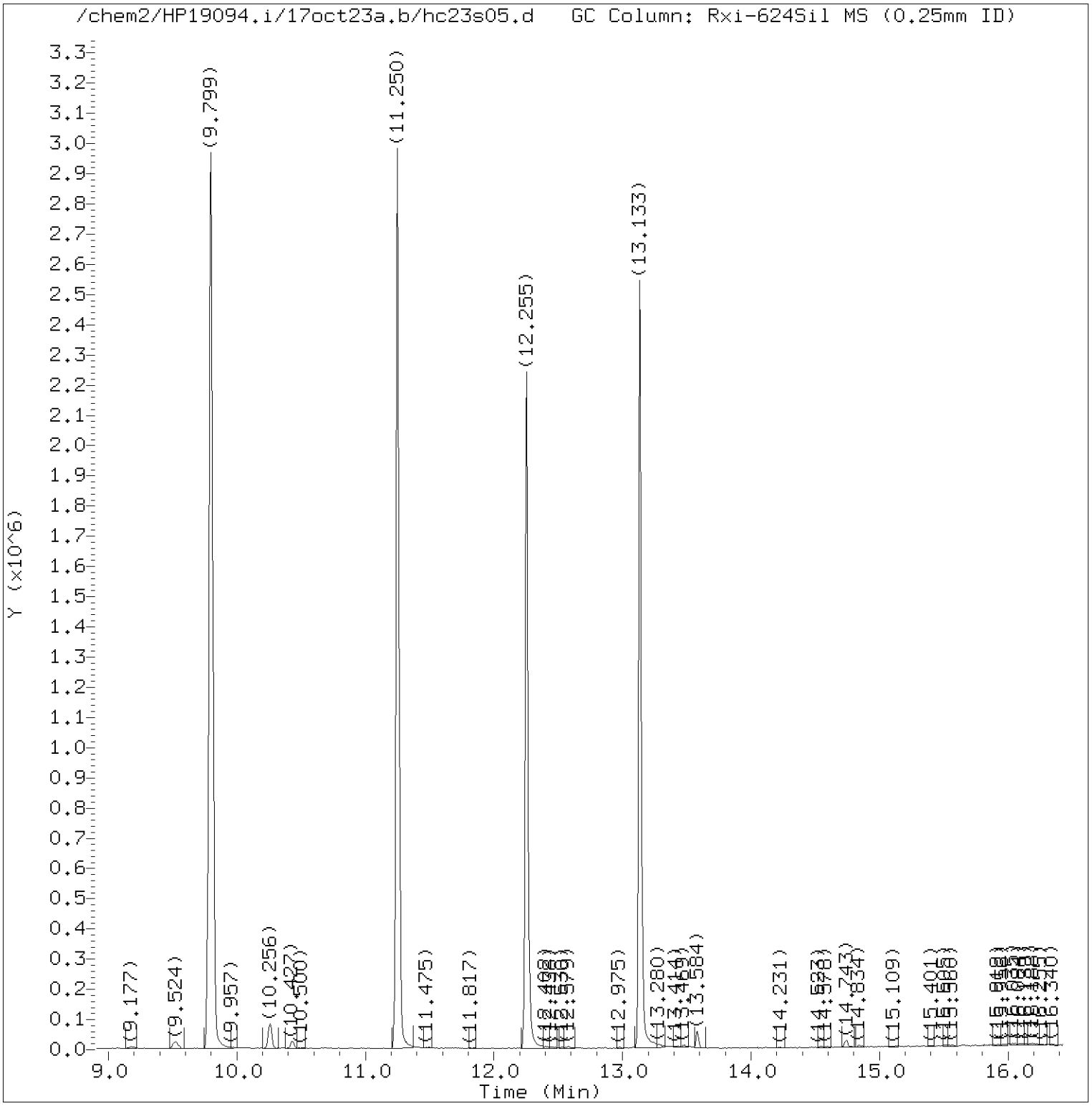
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

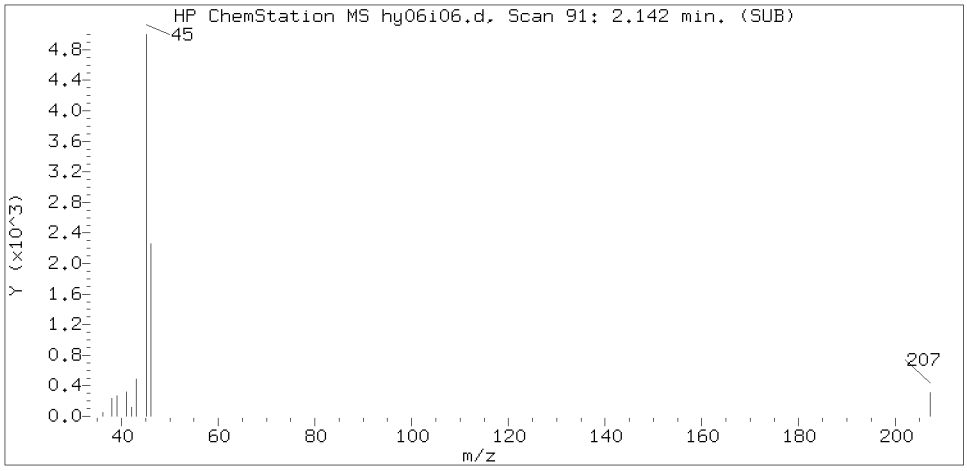
Sample Name: 16C1-DL Lab Sample ID: 9262022DL

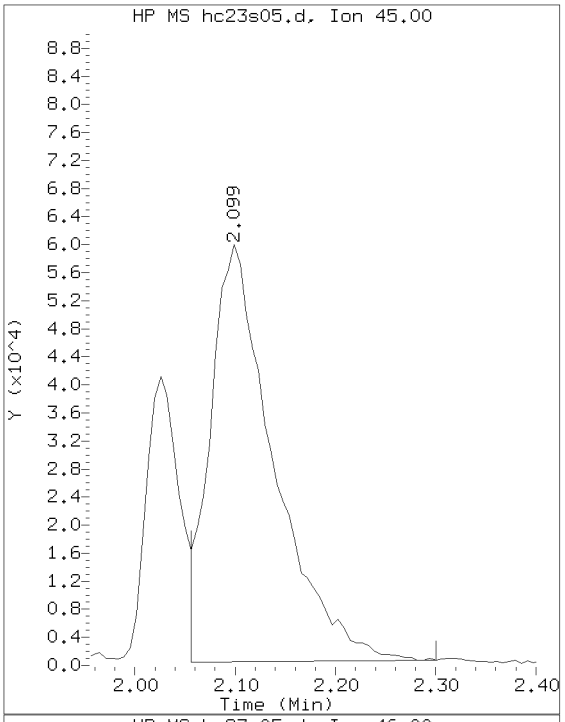
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	264057	2.737
8) Chloroethane	(2)	2.733	64	78477	1.464
11) Ethyl ether	(2)	3.300	59	735744	18.380
26)*t-Butyl Alcohol-d10	(1)	4.257	65	94735	50.000
23) Methylene Chloride	(2)	4.269	84	21292	0.372
33) 1,1-Dichloroethane	(2)	5.354	63	253832	2.175
48) Tetrahydrofuran	(1)	6.543	71	17145	5.049
50)$Dibromofluoromethane	(2)	6.872	113	555492	9.754
57)$1,2-Dichloroethane-d4	(2)	7.336	102	89332	10.016
58) Benzene	(2)	7.384	78	29491	0.120
63)*Fluorobenzene	(2)	7.781	96	2358464	10.000
82)$Toluene-d8	(3)	9.799	98	2316471	10.259
89) Tetrachloroethene	(3)	10.439	166	7218	0.104
97)*Chlorobenzene-d5	(3)	11.250	117	1553766	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	641227	9.349
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	640899	10.000

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

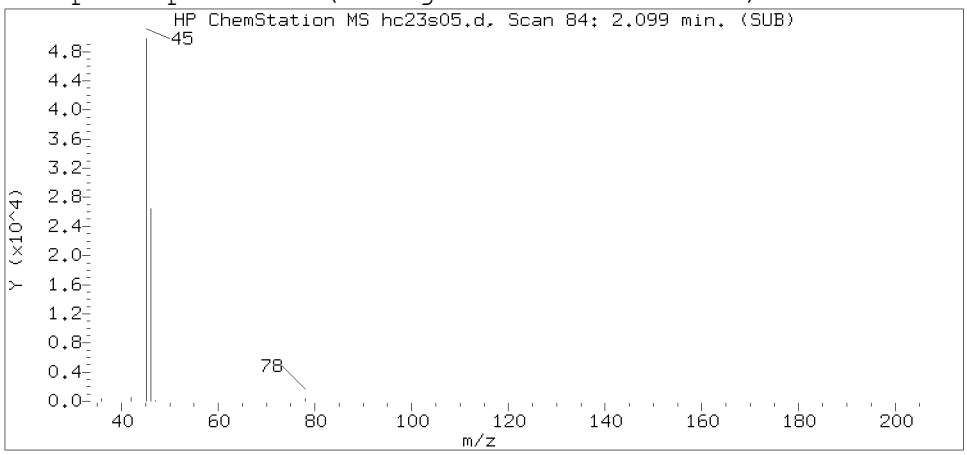
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

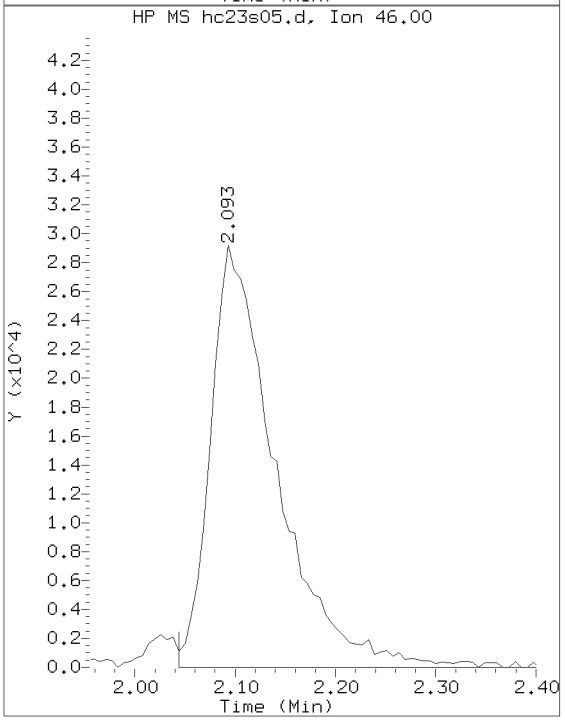
Reference Standard Spectrum for Dimethyl ether



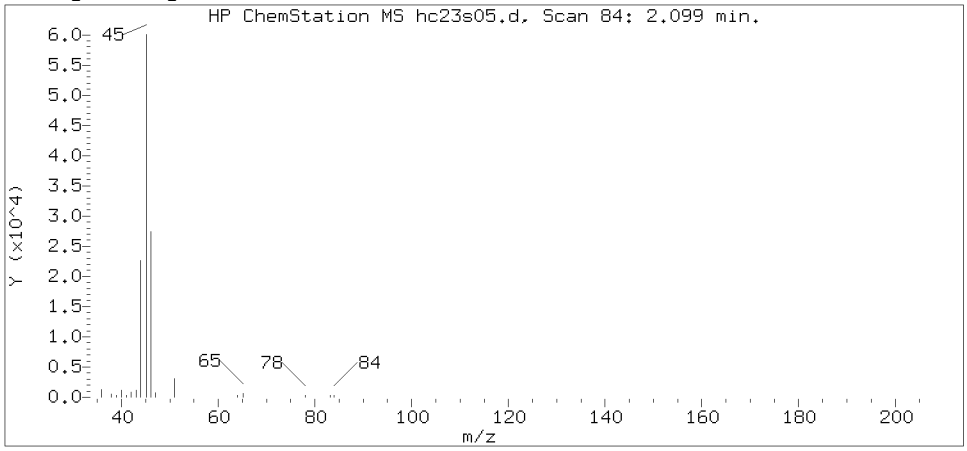


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

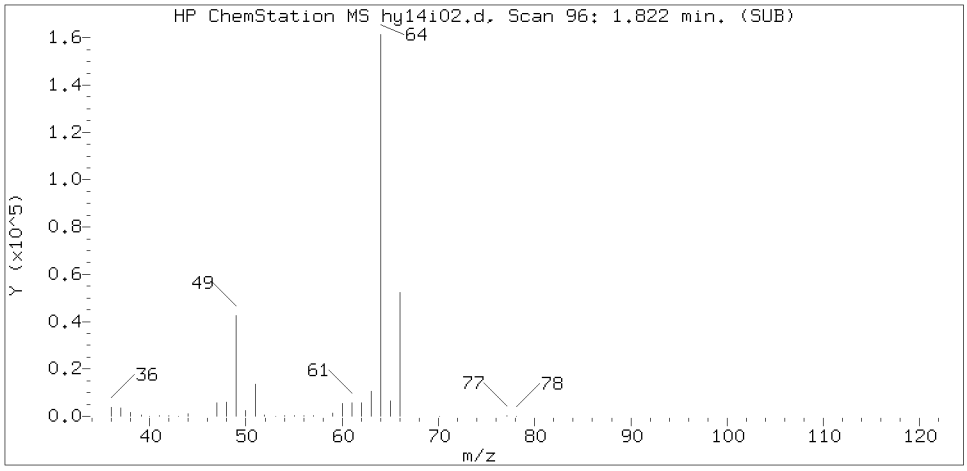
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

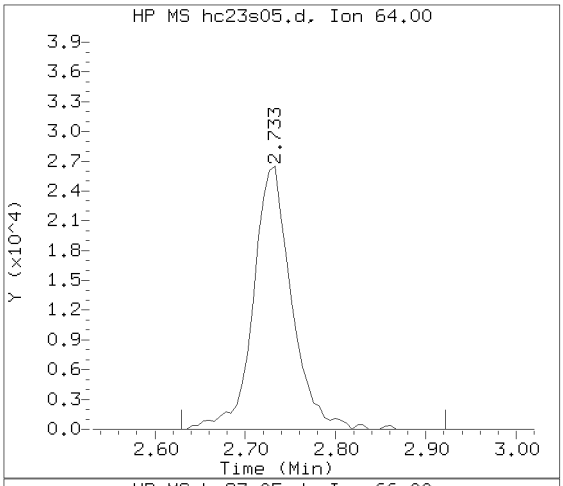
Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Relative Retention Time :-0.00099
Quant Ion : 45.00
Area (flag) : 264057
On-Column Amount (ng) : 2.7366

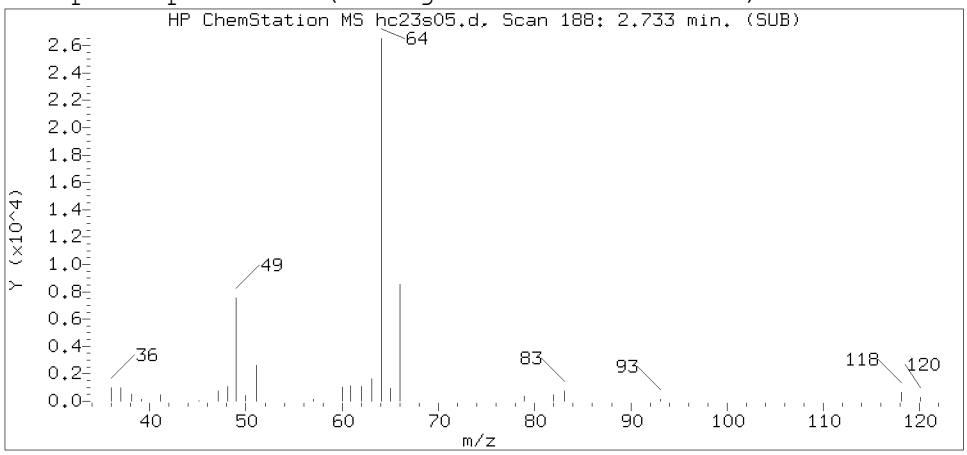
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

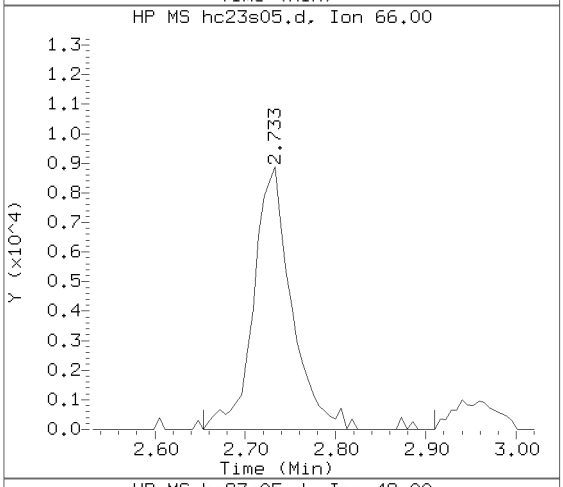
Reference Standard Spectrum for Chloroethane



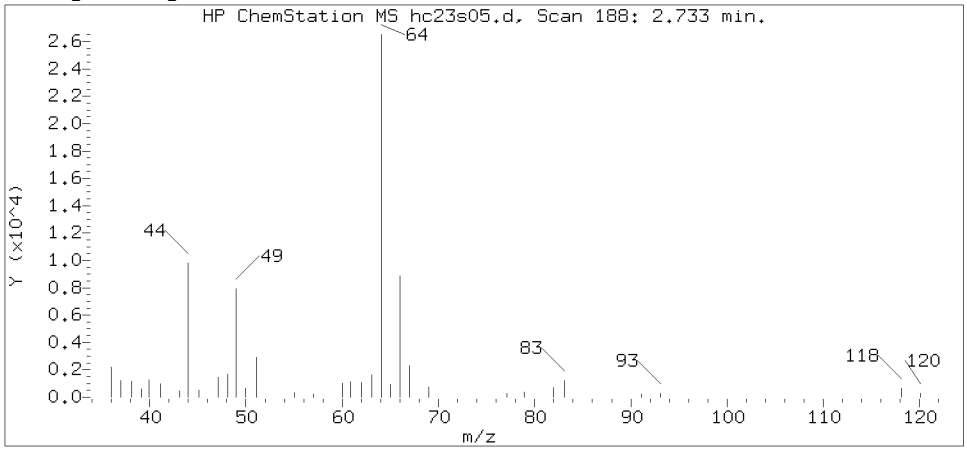


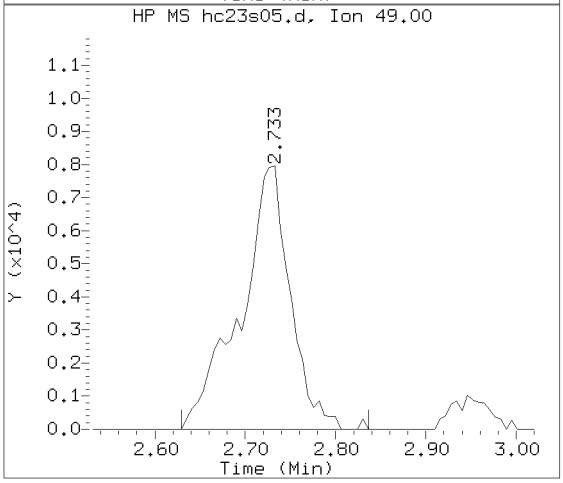
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

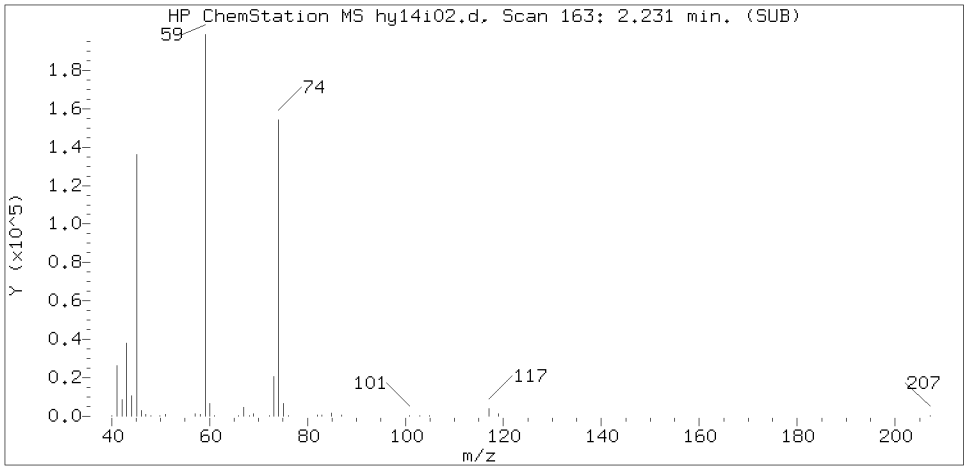
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

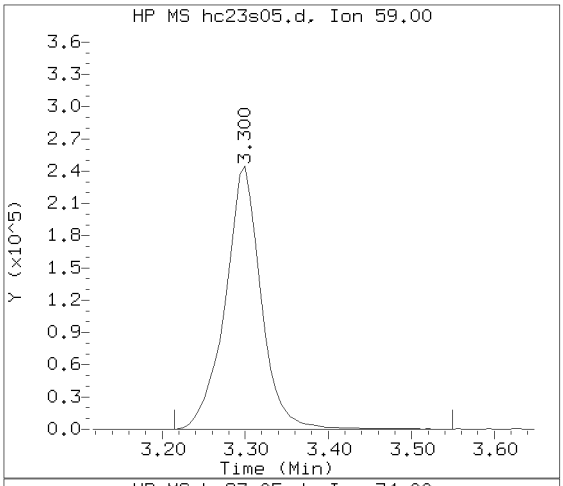
Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00105
Quant Ion : 64.00
Area (flag) : 78477
On-Column Amount (ng) : 1.4641

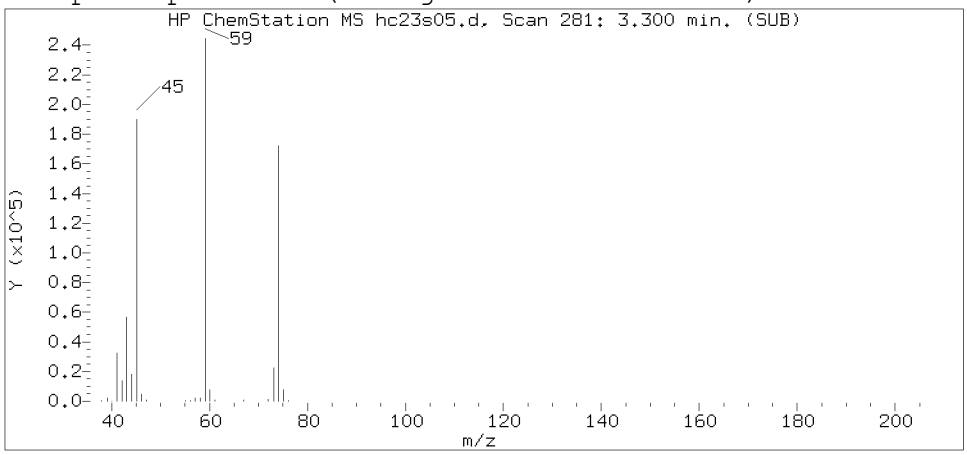
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

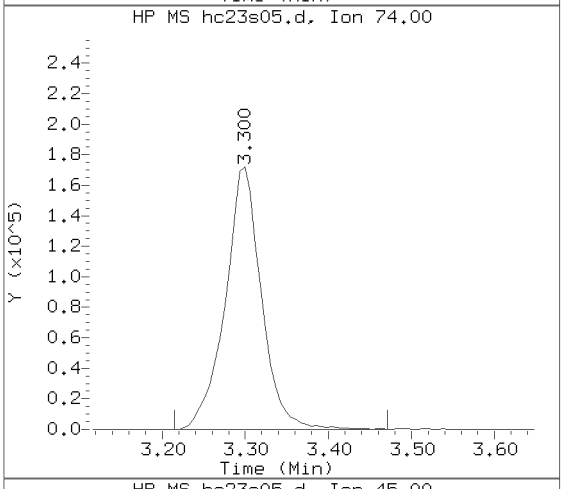
Reference Standard Spectrum for Ethyl ether



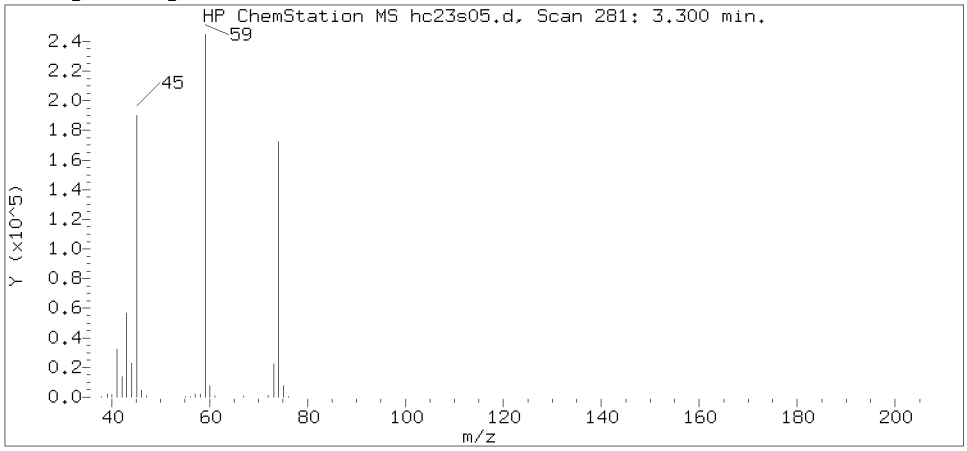


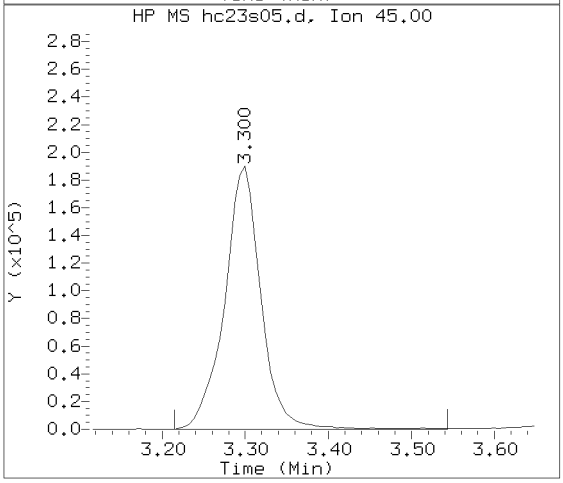
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

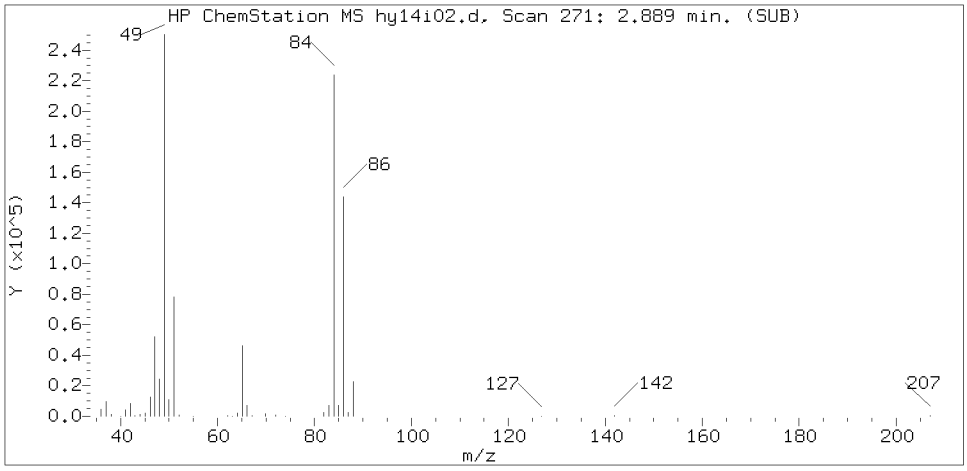
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Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

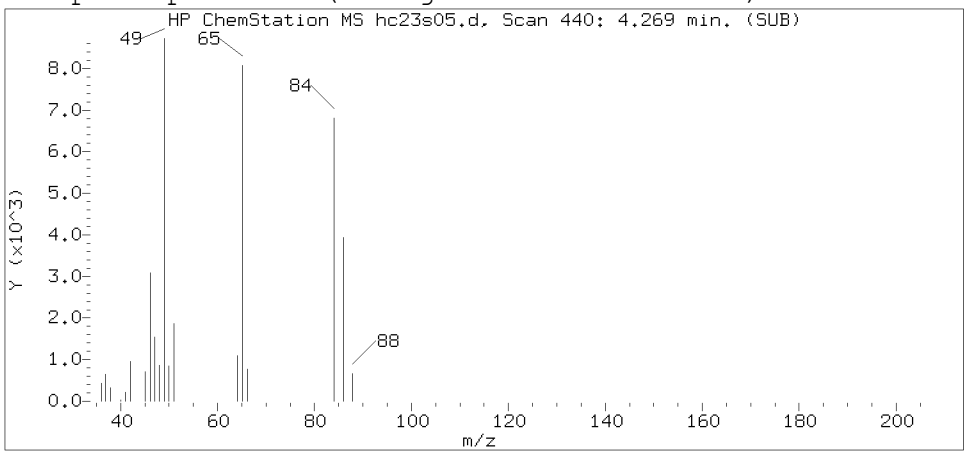
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 281
Retention Time (minutes): 3.300
Relative Retention Time :-0.00111
Quant Ion : 59.00
Area (flag) : 735744
On-Column Amount (ng) : 18.3803

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

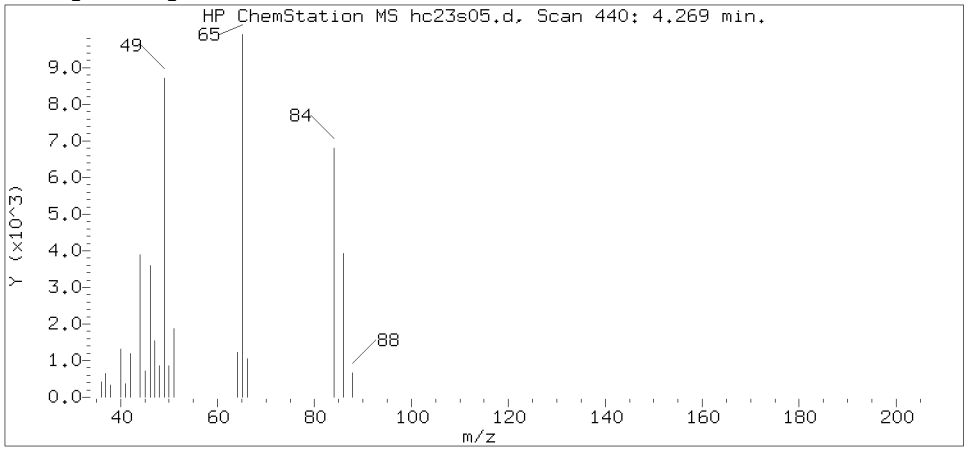
Reference Standard Spectrum for Methylene Chloride

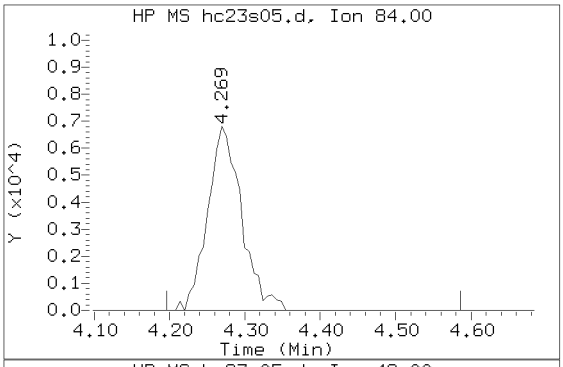


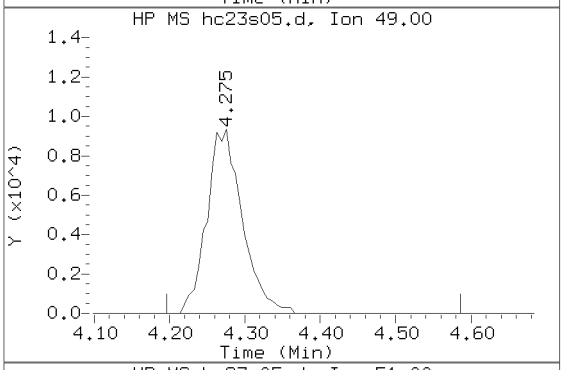
Sample Spectrum (Background Subtracted)

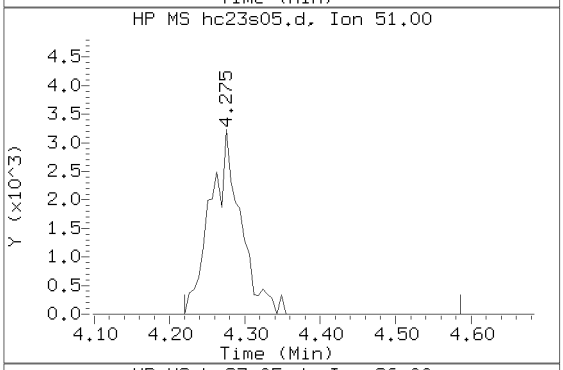


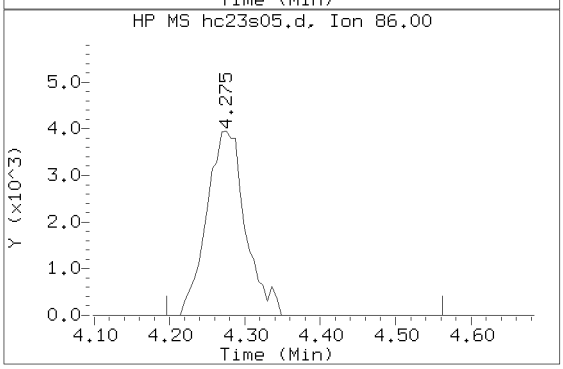
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

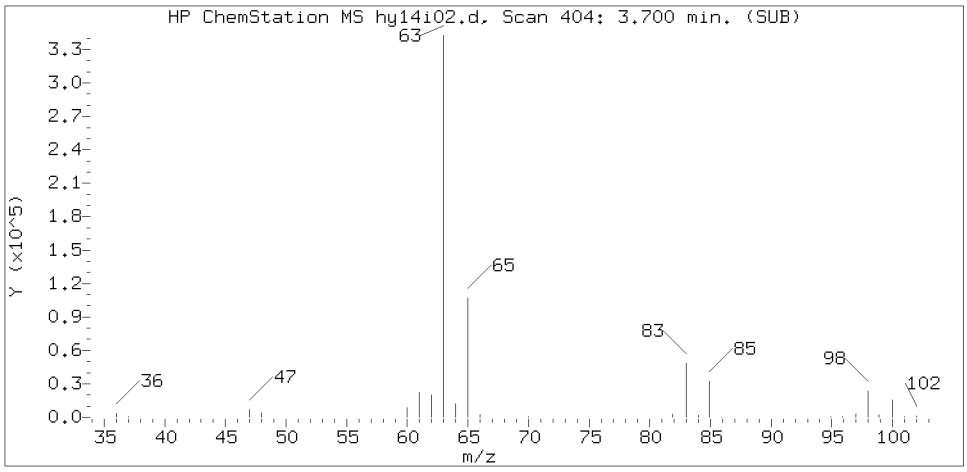
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

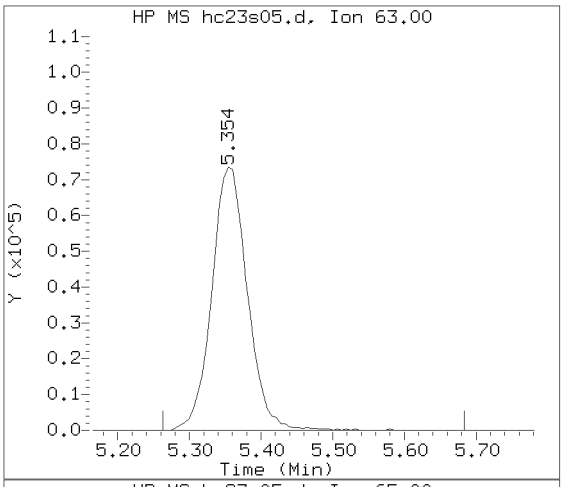
Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 440
Retention Time (minutes): 4.269
Relative Retention Time :-0.00043
Quant Ion : 84.00
Area (flag) : 21292
On-Column Amount (ng) : 0.3720

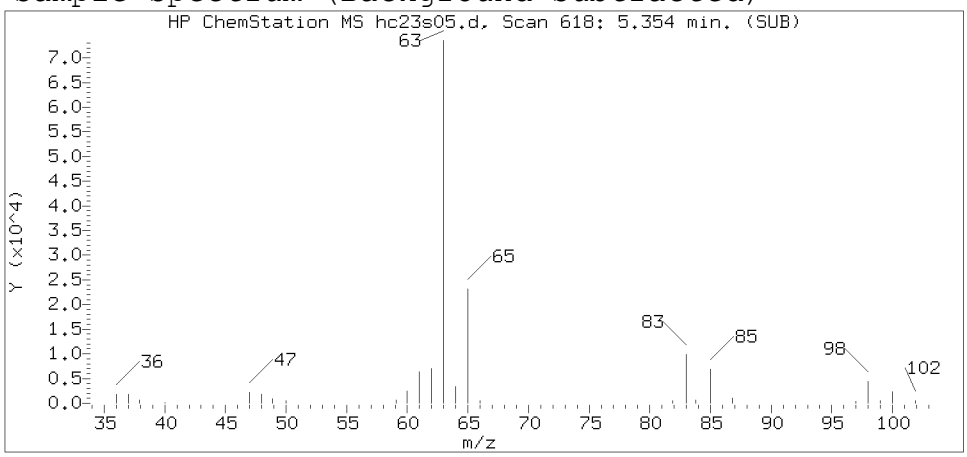
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

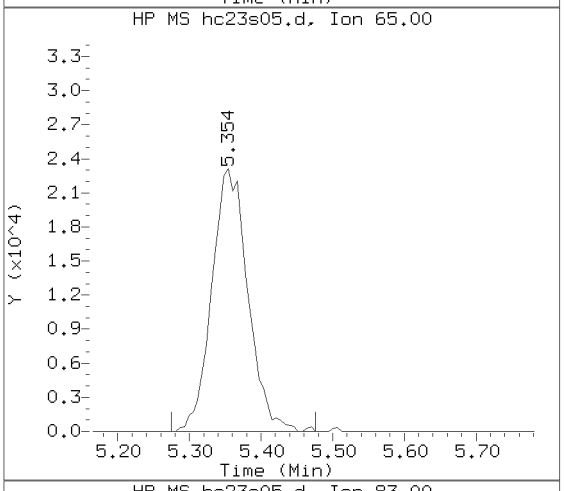
Reference Standard Spectrum for 1,1-Dichloroethane



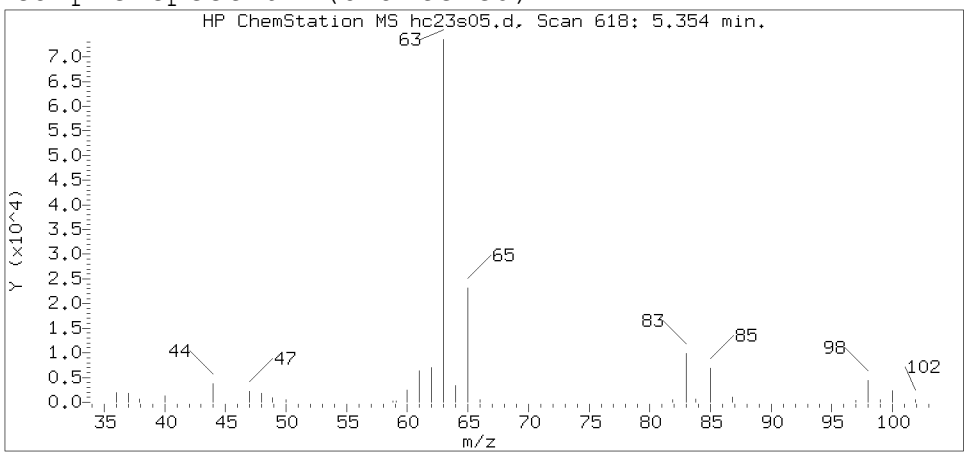


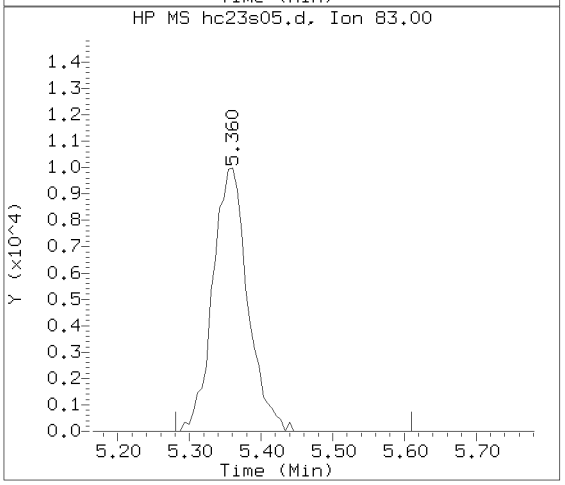
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

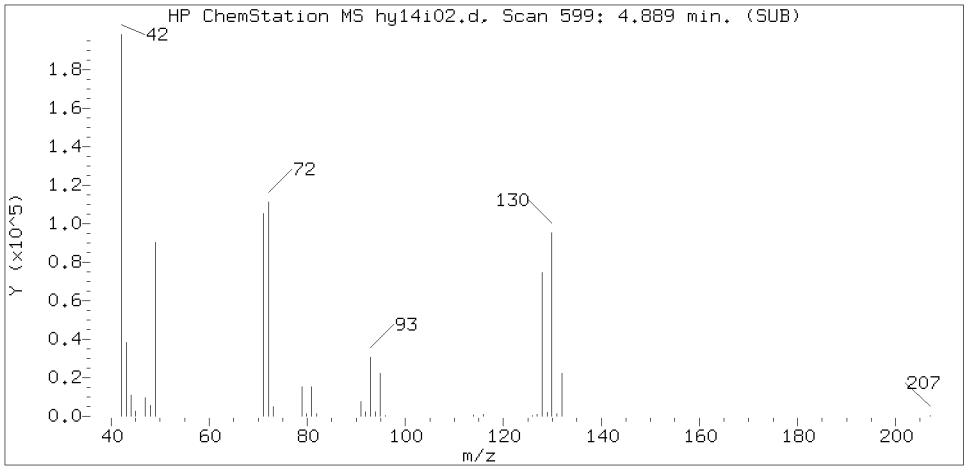
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Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

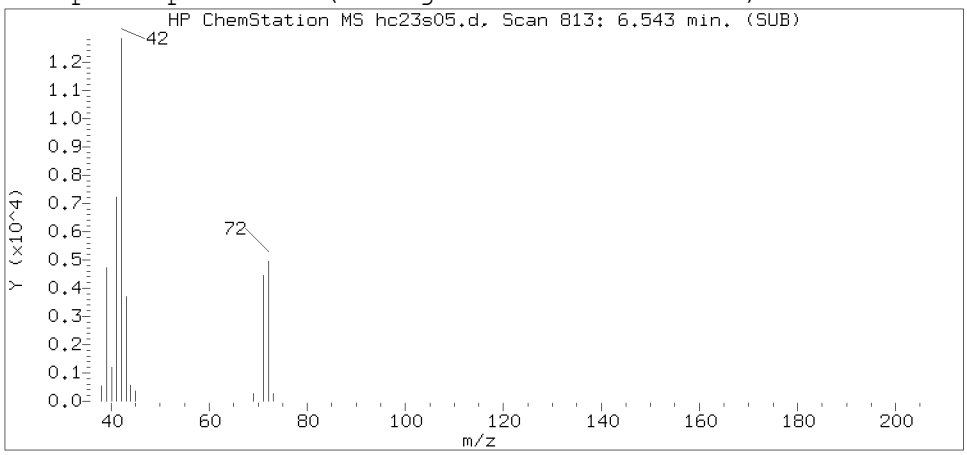
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 618
Retention Time (minutes): 5.354
Relative Retention Time :-0.00054
Quant Ion : 63.00
Area (flag) : 253832
On-Column Amount (ng) : 2.1752

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

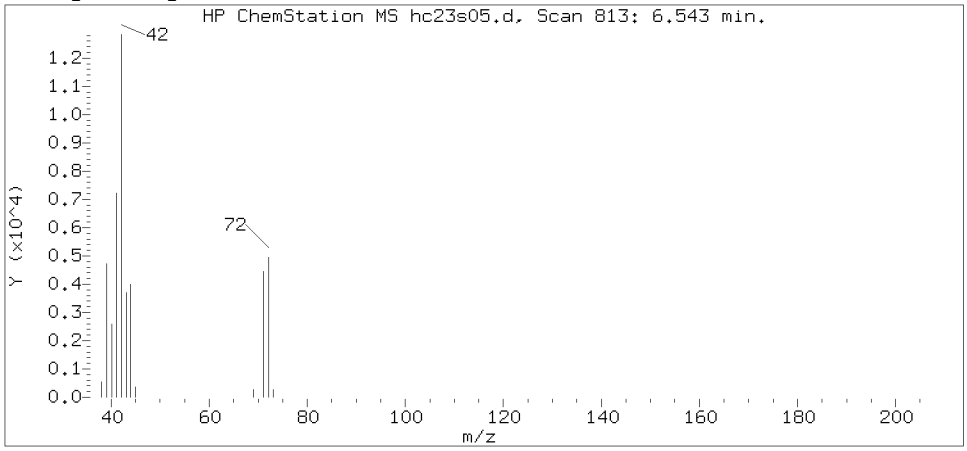
Reference Standard Spectrum for Tetrahydrofuran

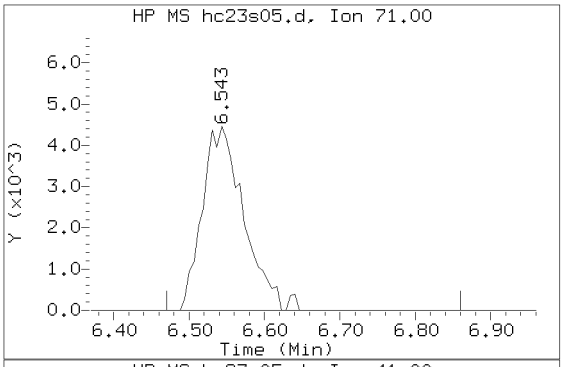


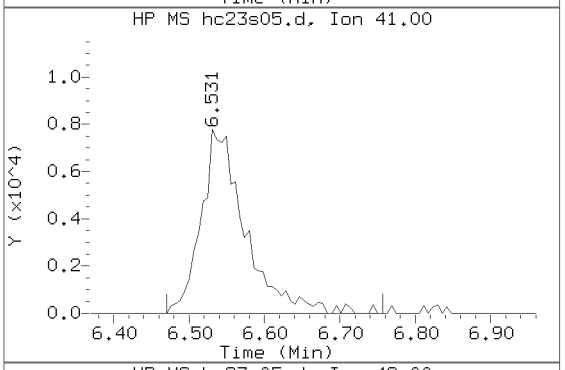
Sample Spectrum (Background Subtracted)

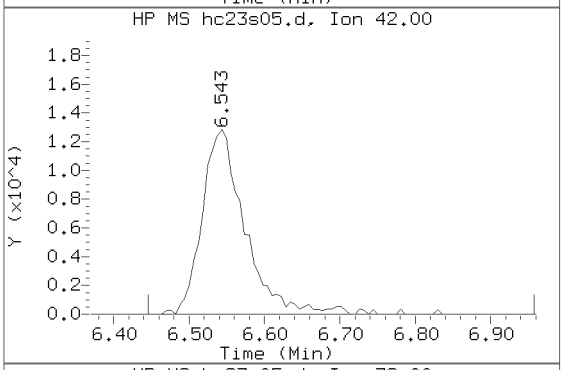


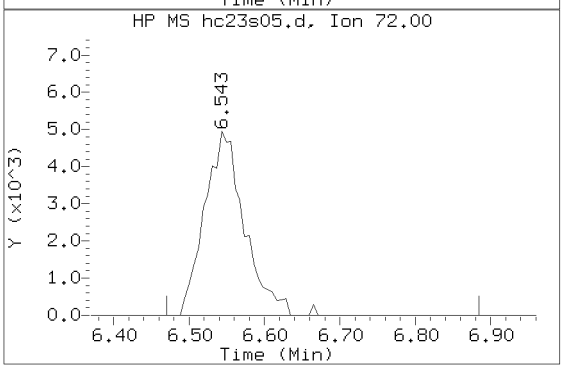
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

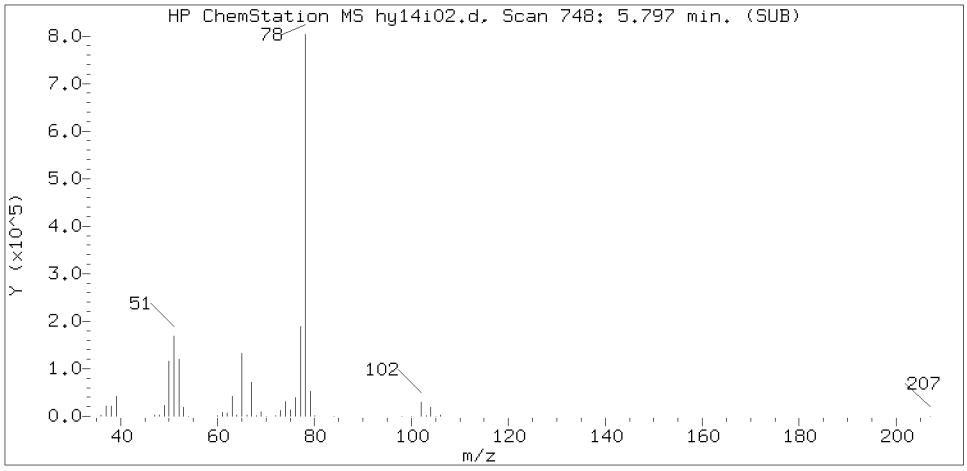
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

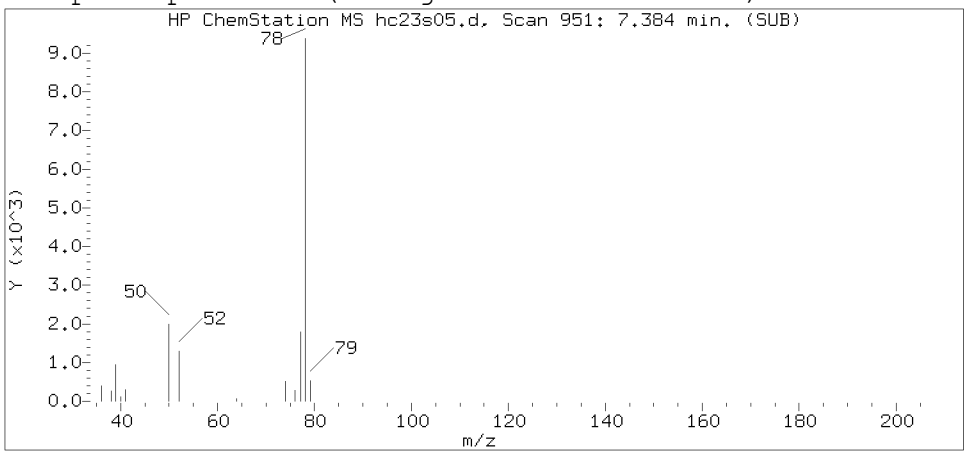
Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 813
Retention Time (minutes)	: 6.543
Relative Retention Time	: 0.00375
Quant Ion	: 71.00
Area (flag)	: 17145
On-Column Amount (ng)	: 5.0495

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

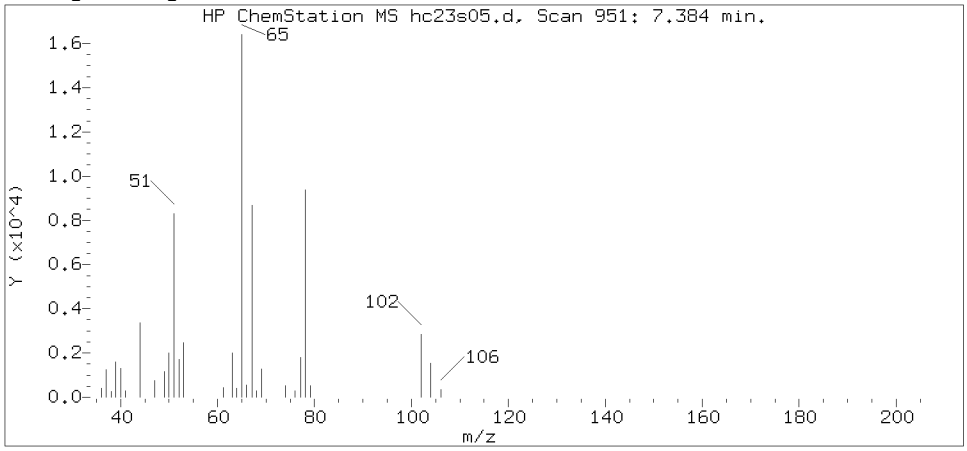
Reference Standard Spectrum for Benzene

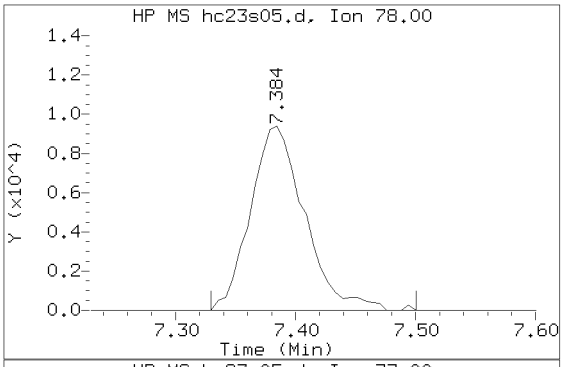


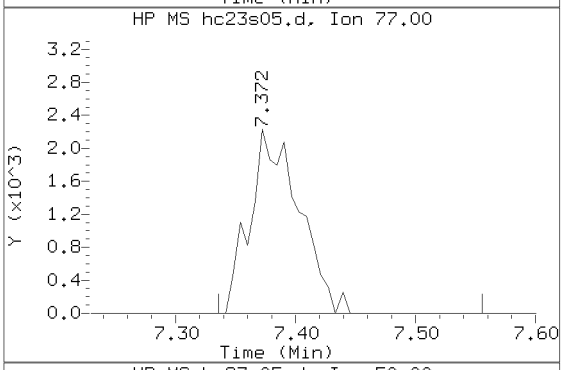
Sample Spectrum (Background Subtracted)

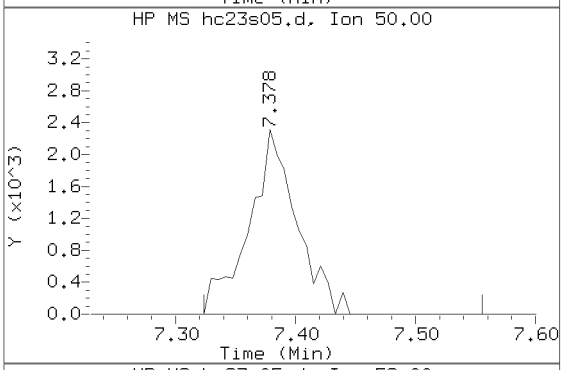


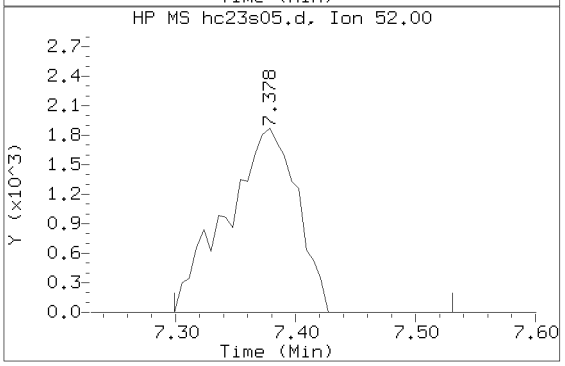
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

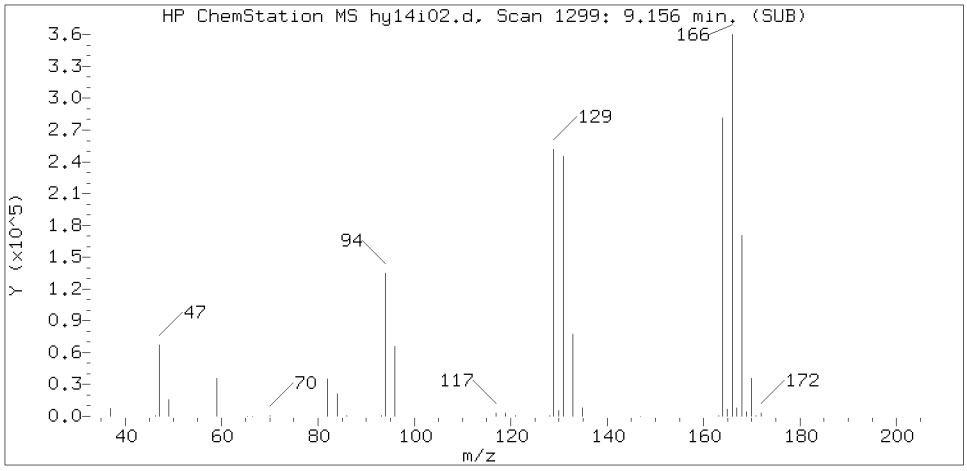
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

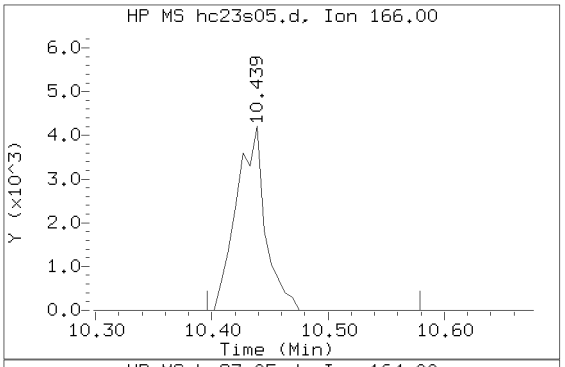
Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Compound Number : 58
Compound Name : Benzene
Scan Number : 951
Retention Time (minutes): 7.384
Relative Retention Time :-0.00074
Quant Ion : 78.00
Area (flag) : 29491
On-Column Amount (ng) : 0.1200

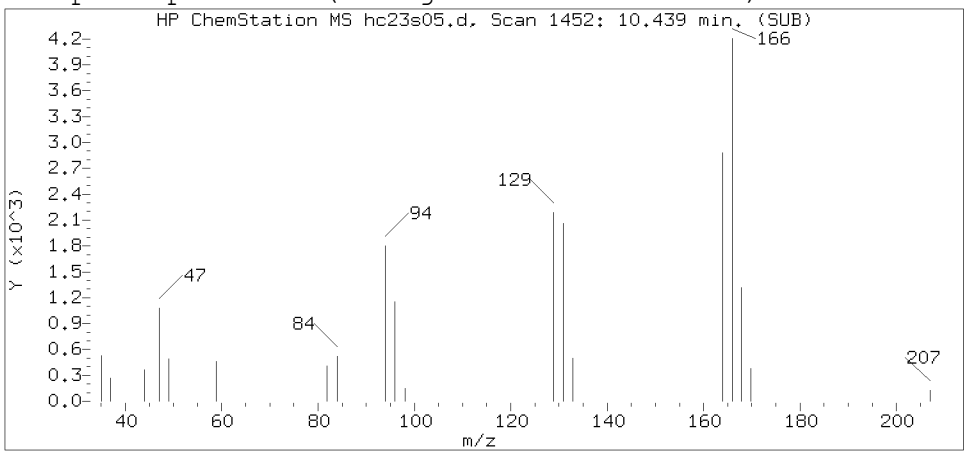
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

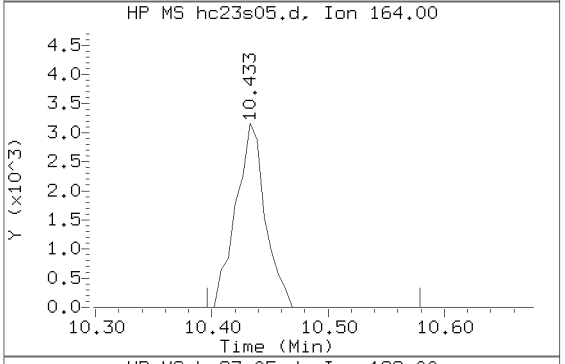
Reference Standard Spectrum for Tetrachloroethene

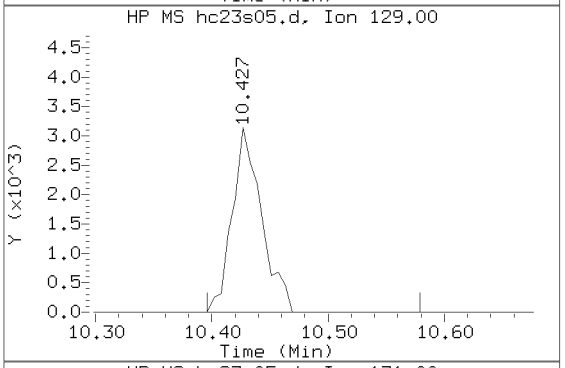




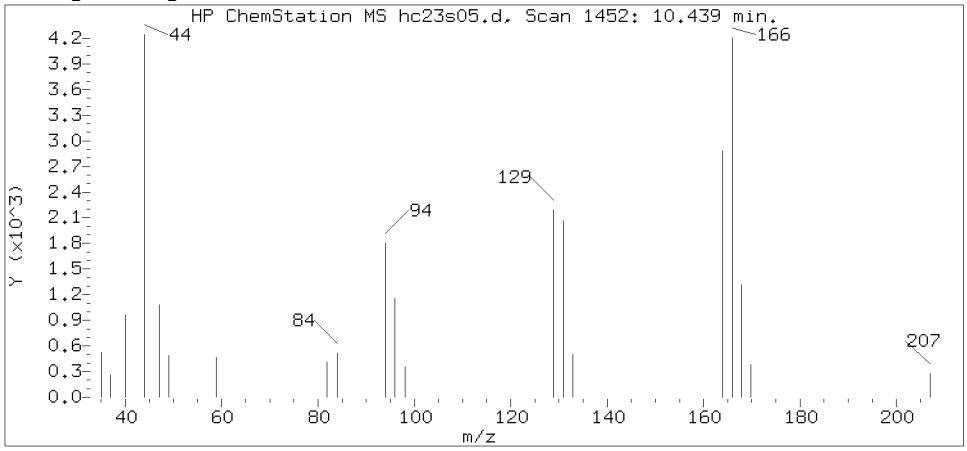
Sample Spectrum (Background Subtracted)

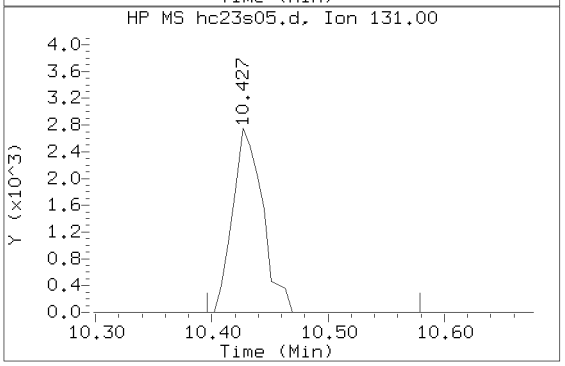






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:31 kas02648

Sample Name: 16C1-DL Lab Sample ID: 9262022DL

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1452
Retention Time (minutes): 10.439
Relative Retention Time :-0.00108
Quant Ion : 166.00
Area (flag) : 7218
On-Column Amount (ng) : 0.1042

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:31.
Target 3.5 esignature user ID: kas02648

16MW8 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9262023

Data file: /chem2/HP19094.i/17oct22a.b/hc22s13.d Injection date and time: **23-OCT-2017 04:43**
Data file Sample Info. Line: 16MW8;9262023;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.030)	439	65	52557	(-38)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2211970	(-9)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1444452	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	590202	(-25)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	509678	9.542	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.002)	102	79775	9.537	95%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2180094	10.385	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	585473	9.182	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					0.1	1
4) Dimethyl ether	(2)	2.099	(-0.001)	45	12372	0.137	0.14		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.312	(-0.002)	59	124376	3.313	3.31		J	0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.366	(-0.001)	63	20509	0.187	0.19		J	0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s13.d Injection date and time: **23-OCT-2017 04:43**
Data file Sample Info. Line: 16MW8;9262023;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

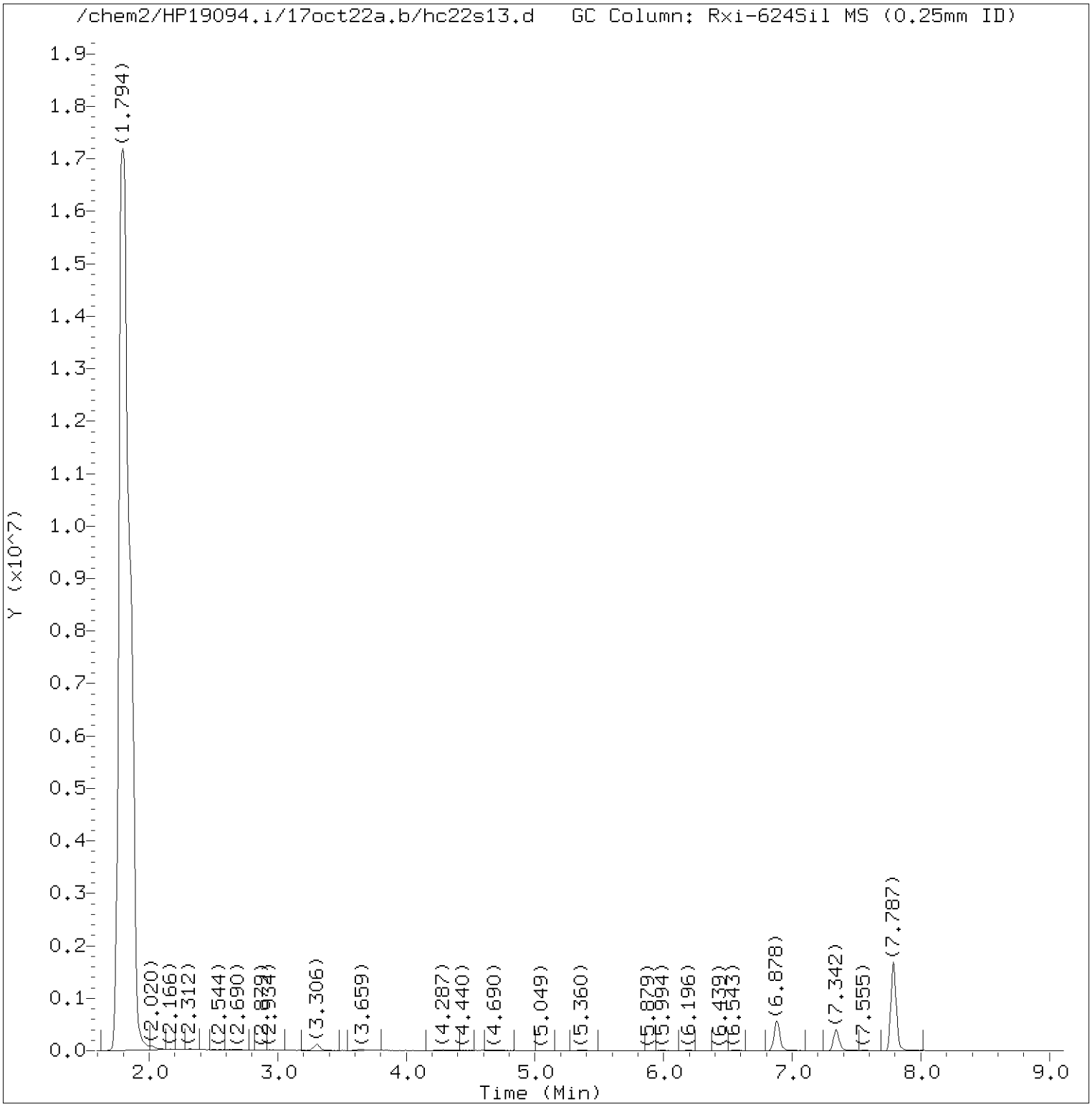
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

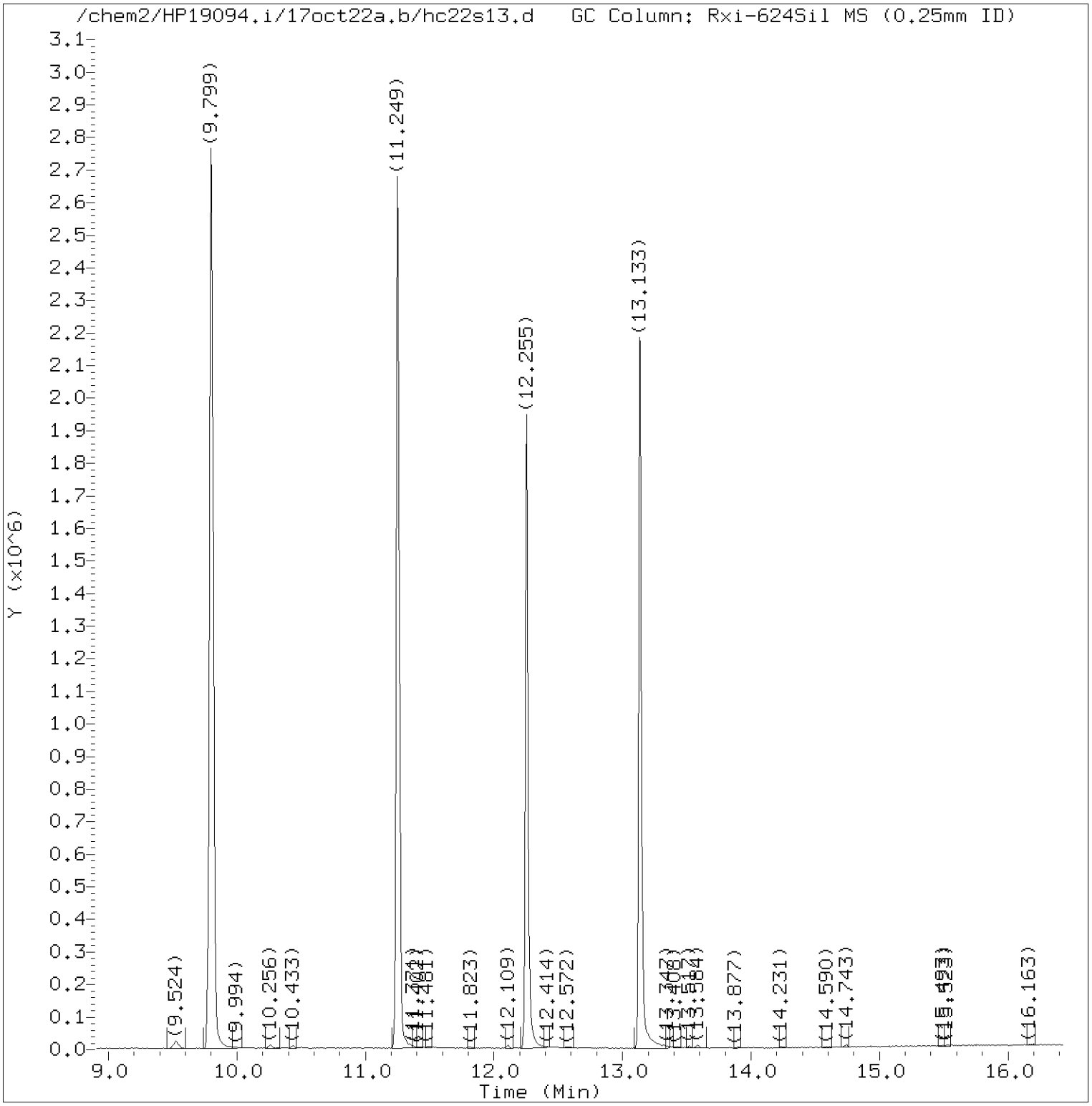
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW8 Lab Sample ID: 9262023

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW8 Lab Sample ID: 9262023

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

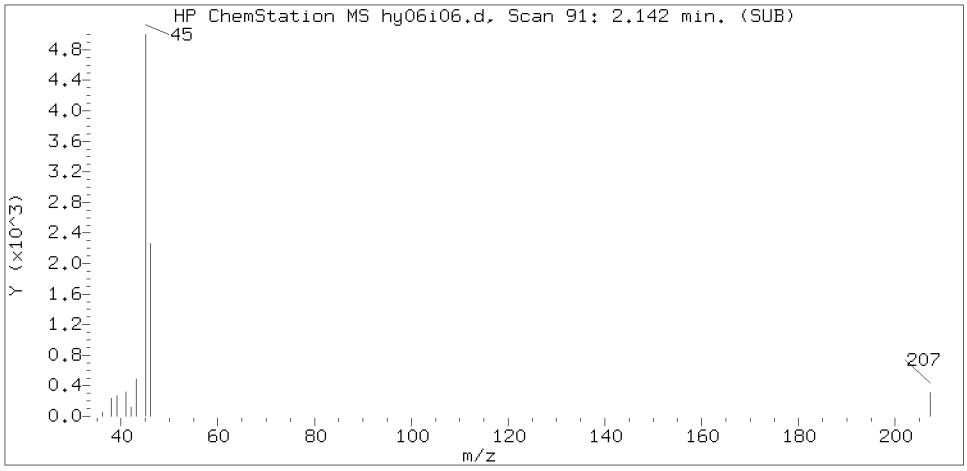
Sample Name: 16MW8 Lab Sample ID: 9262023

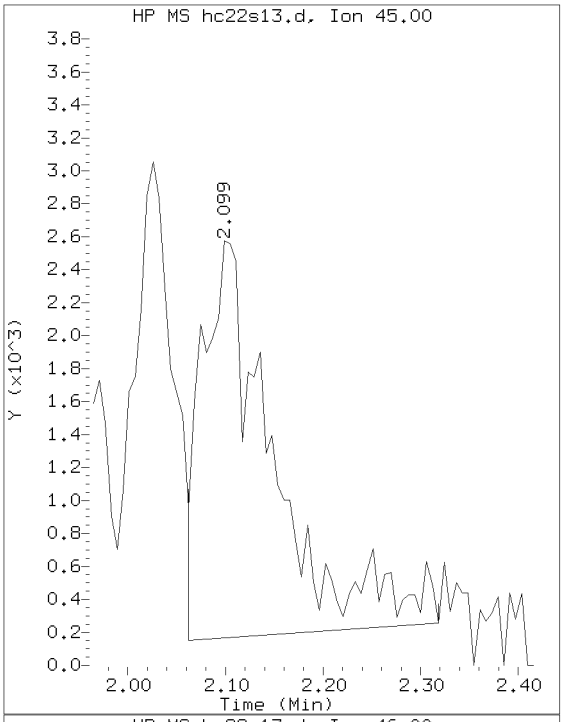
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	12372	0.137
11) Ethyl ether	(2)	3.312	59	124376	3.313
26)*t-Butyl Alcohol-d10	(1)	4.263	65	52557	50.000
33) 1,1-Dichloroethane	(2)	5.366	63	20509	0.187
50)$Dibromofluoromethane	(2)	6.878	113	509678	9.542
57)$1,2-Dichloroethane-d4	(2)	7.336	102	79775	9.537
63)*Fluorobenzene	(2)	7.787	96	2211970	10.000
82)$Toluene-d8	(3)	9.799	98	2180094	10.385
97)*Chlorobenzene-d5	(3)	11.249	117	1444452	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	585473	9.182
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	590202	10.000

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

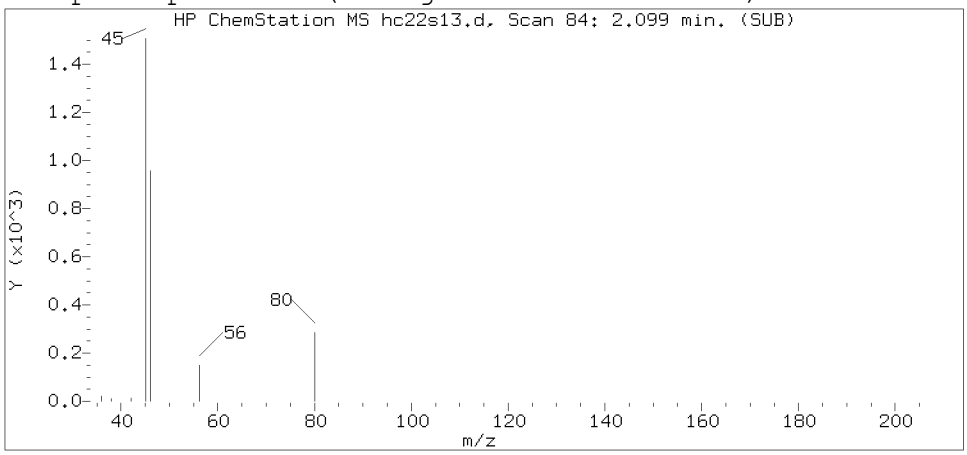
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

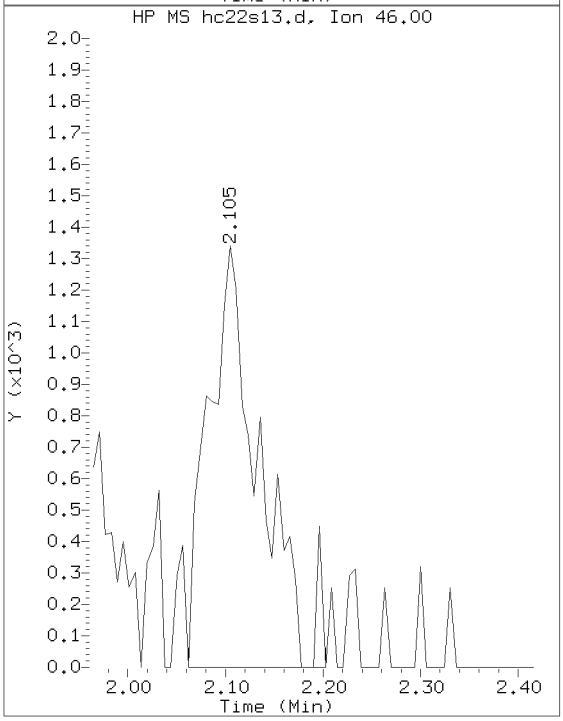
Reference Standard Spectrum for Dimethyl ether



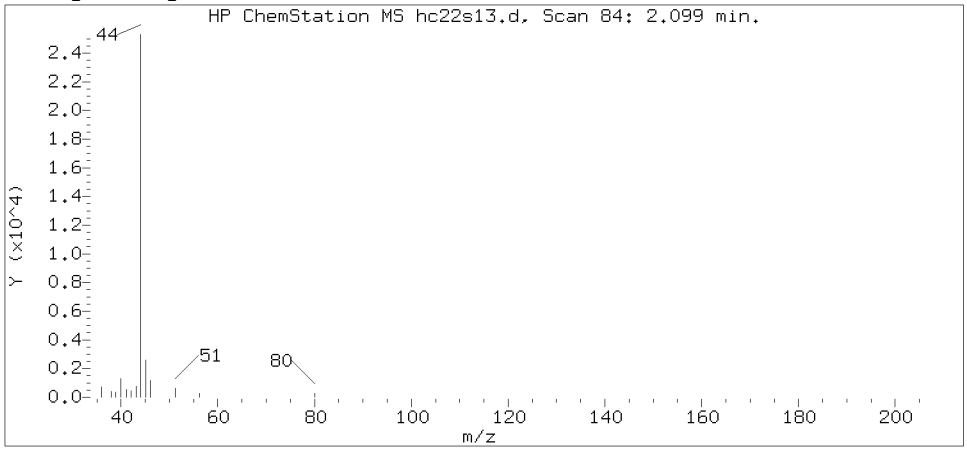


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

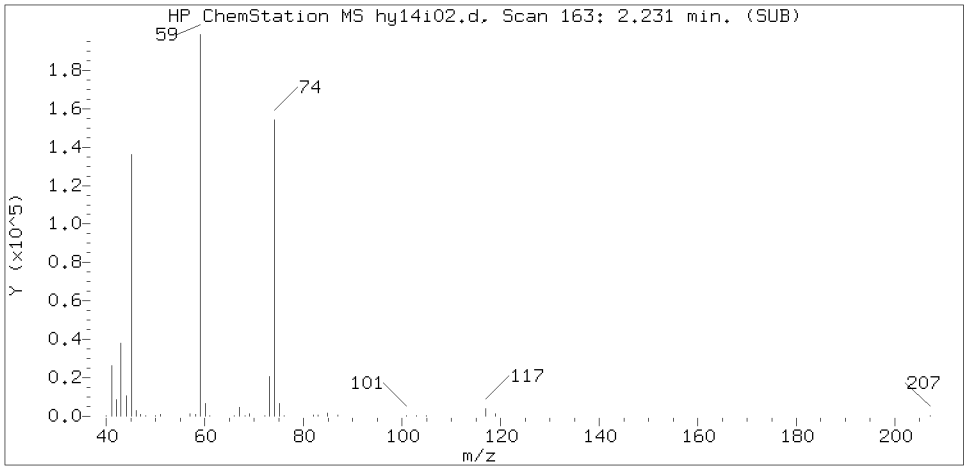
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

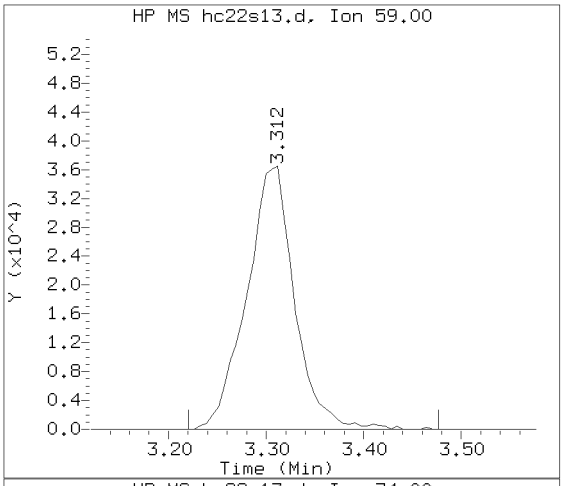
Sample Name: 16MW8 Lab Sample ID: 9262023

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Relative Retention Time :-0.00136
Quant Ion : 45.00
Area (flag) : 12372
On-Column Amount (ng) : 0.1367

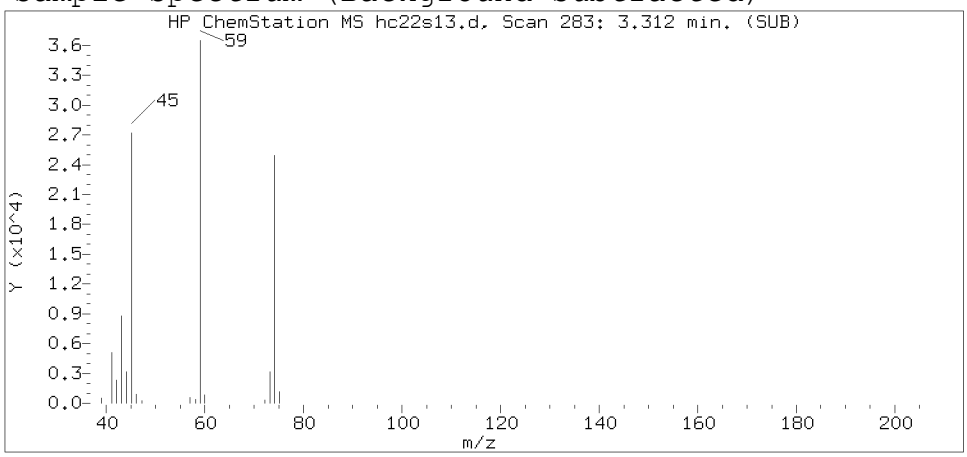
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

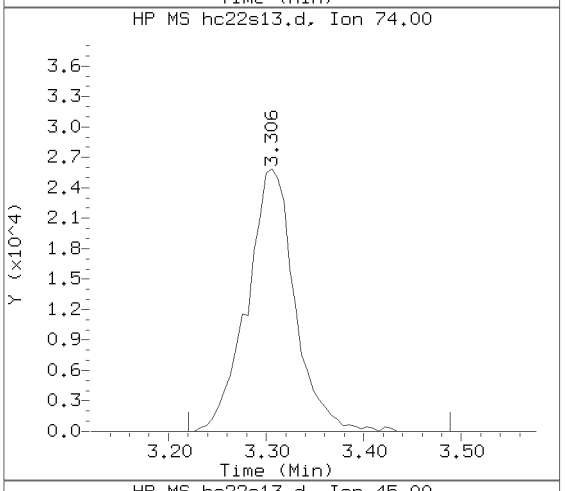
Reference Standard Spectrum for Ethyl ether



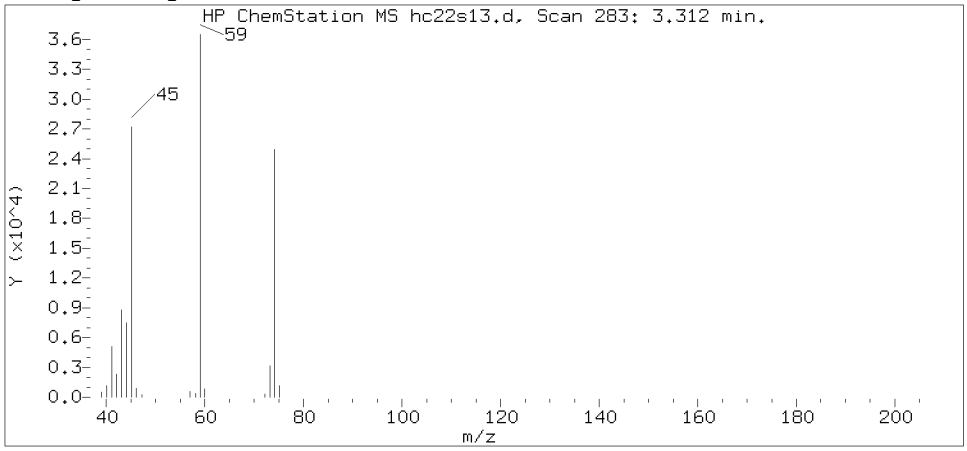


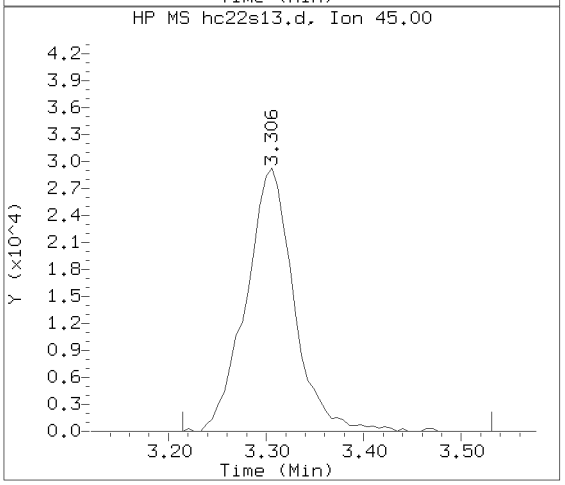
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

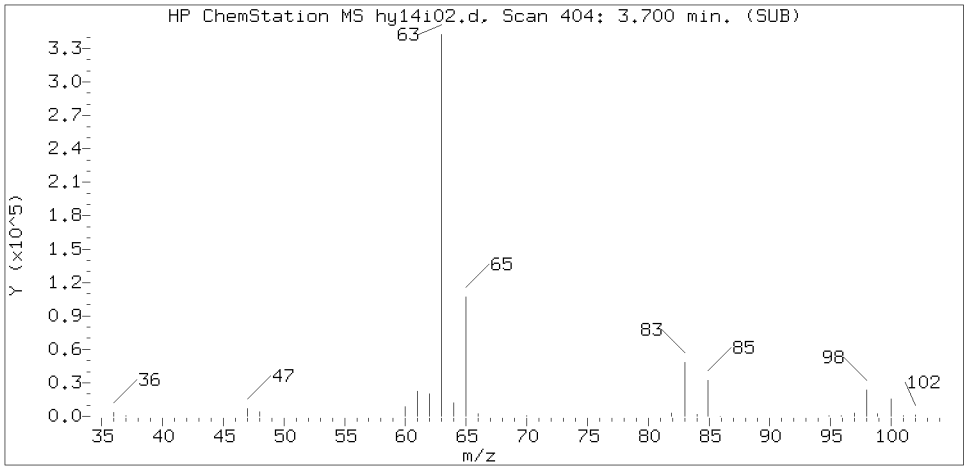
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

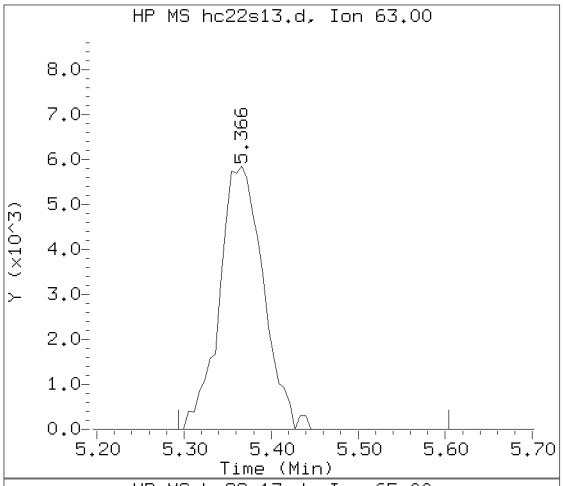
Sample Name: 16MW8 Lab Sample ID: 9262023

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 283
Retention Time (minutes)	: 3.312
Relative Retention Time	:-0.00202
Quant Ion	: 59.00
Area (flag)	: 124376
On-Column Amount (ng)	: 3.3129

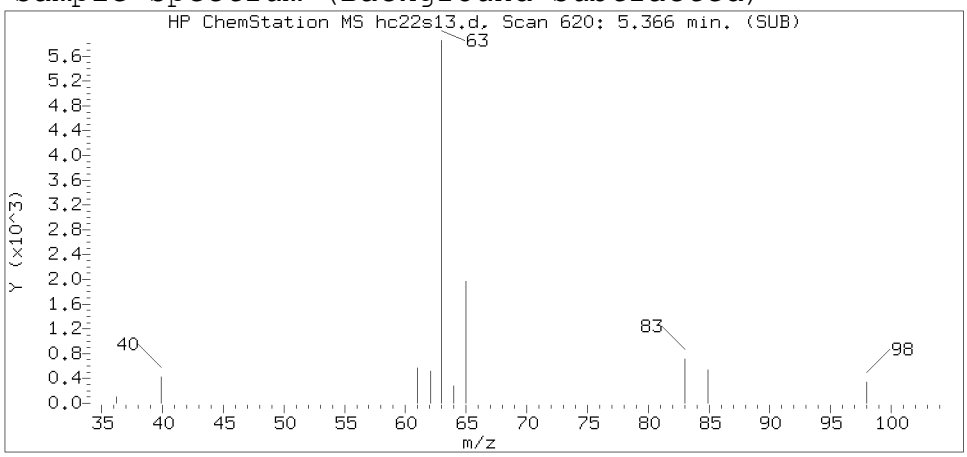
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

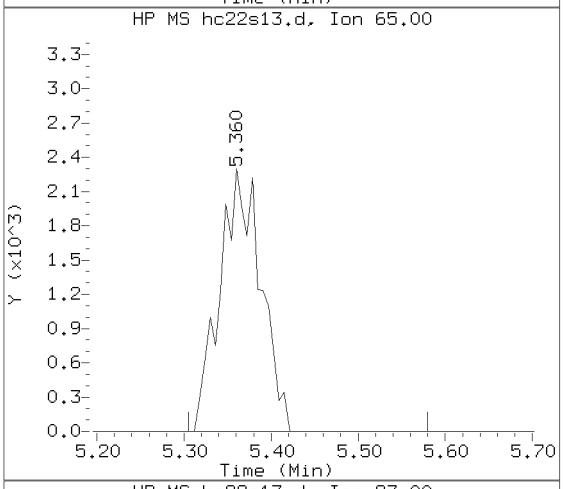
Reference Standard Spectrum for 1,1-Dichloroethane



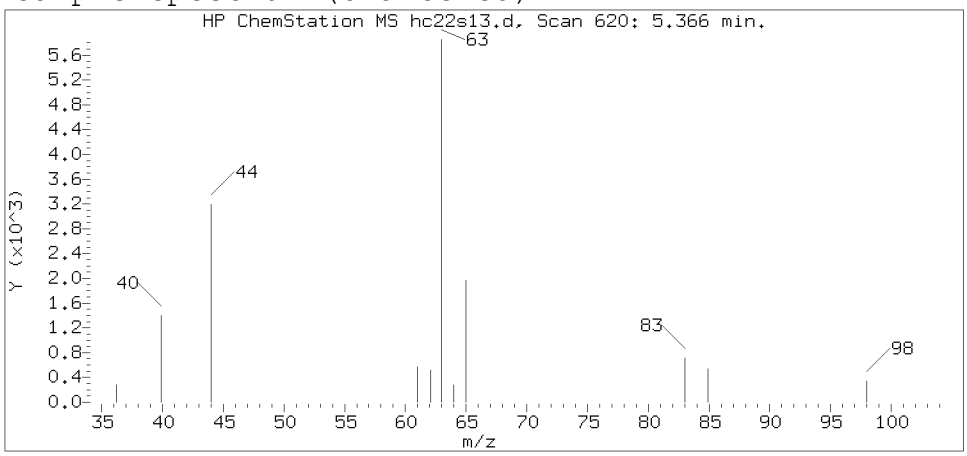


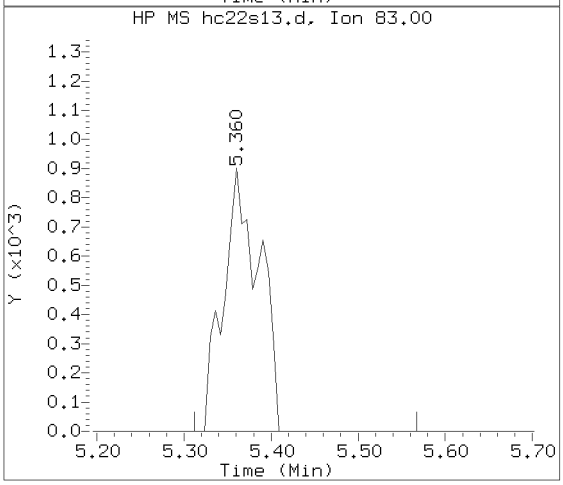
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 04:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW8 Lab Sample ID: 9262023

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 620
Retention Time (minutes): 5.366
Relative Retention Time :-0.00103
Quant Ion : 63.00
Area (flag) : 20509
On-Column Amount (ng) : 0.1874

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

16MW9 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9262024

Data file: /chem2/HP19094.i/17oct22a.b/hc22s14.d Injection date and time: **23-OCT-2017 05:03**
Data file Sample Info. Line: 16MW9;9262024;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.239 (-0.006)	435	65	84808 (0)	50.00	
63) Fluorobenzene	7.787 (-0.006)	1017	96	2207199 (-9)	10.00	
97) Chlorobenzene-d5	11.249 (0.000)	1585	117	1427789 (-17)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139 (-0.006)	1895	152	575882 (-27)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878 (0.000)	113	514206	9.647	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342 (0.001)	102	80551	9.650	97%		80 - 120
82) Toluene-d8	(3)	9.799 (0.000)	98	2164490	10.431	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255 (-0.001)	95	572822	9.088	91%		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)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.093 (-0.000)	45	34366M	0.381	0.38		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)	2.721 (0.000)	64	106609	2.125	2.13			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)	3.294 (0.000)	59	2103056	56.139	56.14		E	0.1	13
15) 1,1-Dichloroethene	(2)	3.611 (0.000)	96	10479	0.223	0.22		J	0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.354 (0.000)	63	739380	6.770	6.77			0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)	7.384 (0.000)	78	66799	0.290	0.29		J	0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s14.d Injection date and time: **23-OCT-2017 05:03**
Data file Sample Info. Line: 16MW9;9262024;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

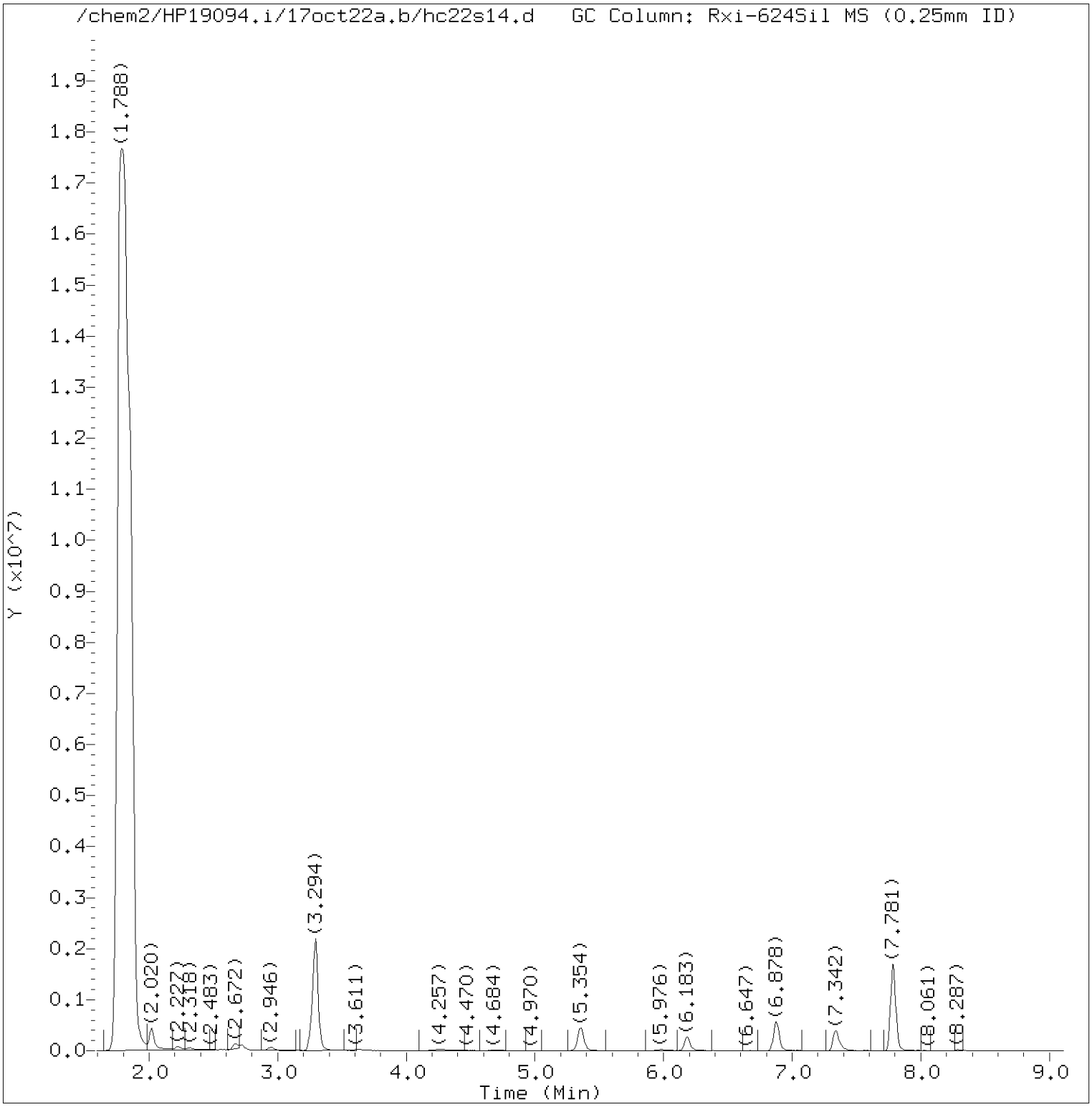
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

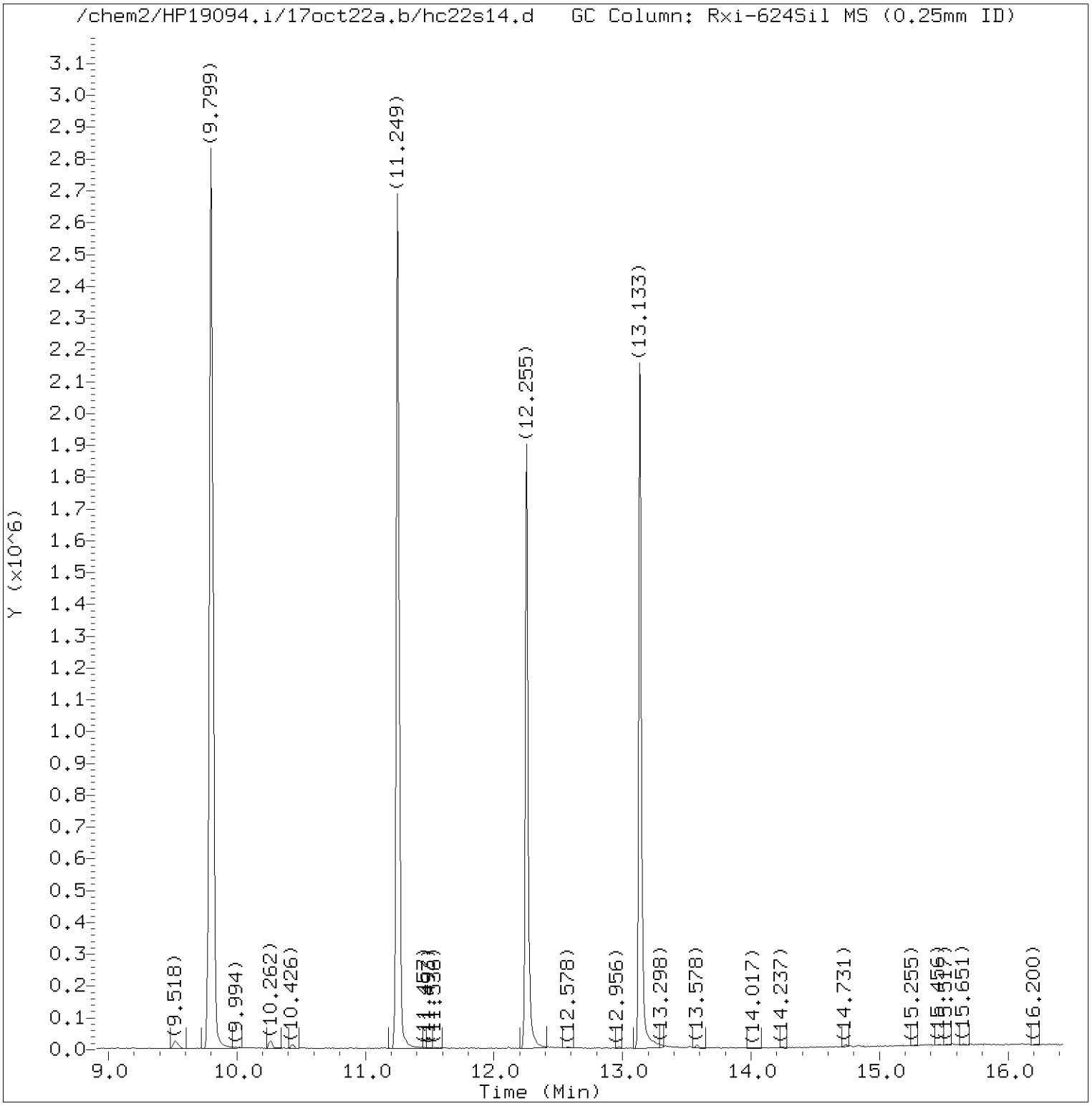
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

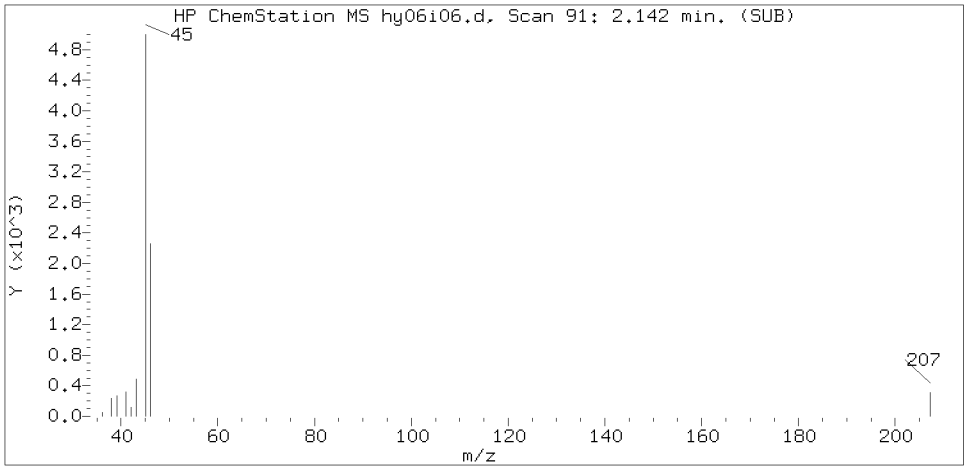
Sample Name: 16MW9 Lab Sample ID: 9262024

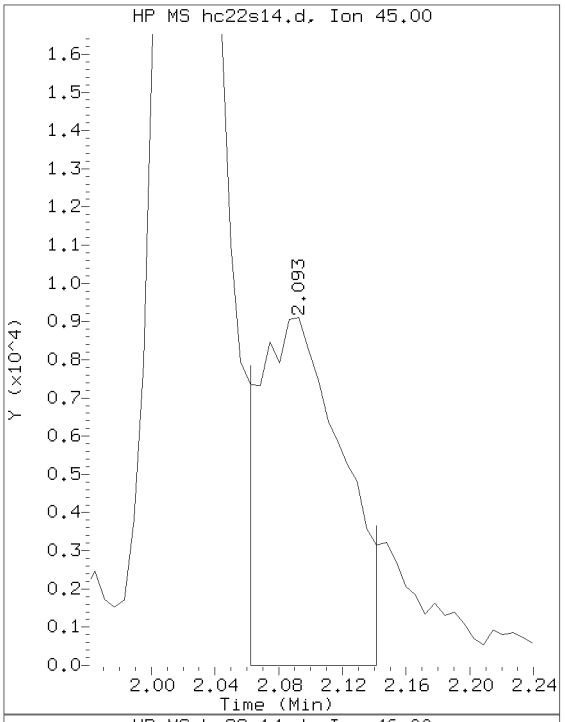
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	34366M	0.381
8) Chloroethane	(2)	2.721	64	106609	2.125
11) Ethyl ether	(2)	3.294	59	2103056	56.139
15) 1,1-Dichloroethene	(2)	3.611	96	10479	0.223
26)*t-Butyl Alcohol-d10	(1)	4.239	65	84808	50.000
33) 1,1-Dichloroethane	(2)	5.354	63	739380	6.770
50)$Dibromofluoromethane	(2)	6.878	113	514206	9.647
57)$1,2-Dichloroethane-d4	(2)	7.342	102	80551	9.650
58) Benzene	(2)	7.384	78	66799	0.290
63)*Fluorobenzene	(2)	7.787	96	2207199	10.000
82)$Toluene-d8	(3)	9.799	98	2164490	10.431
97)*Chlorobenzene-d5	(3)	11.249	117	1427789	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	572822	9.088
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	575882	10.000

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

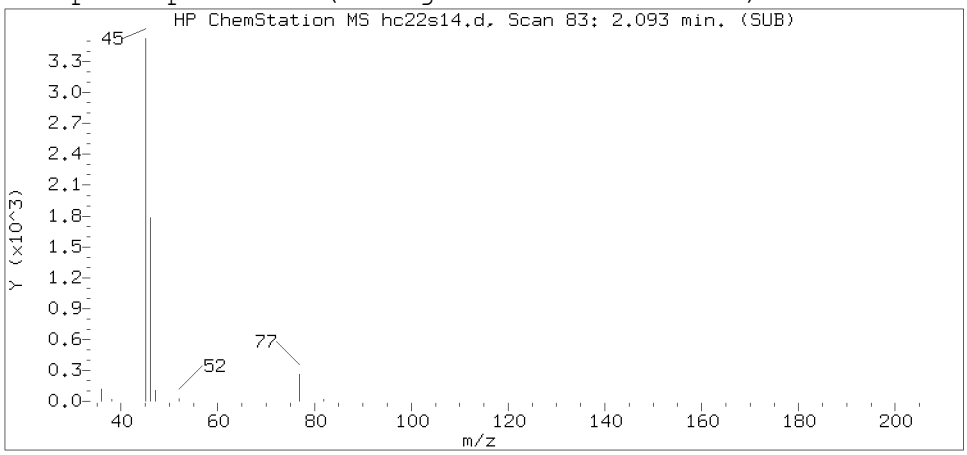
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

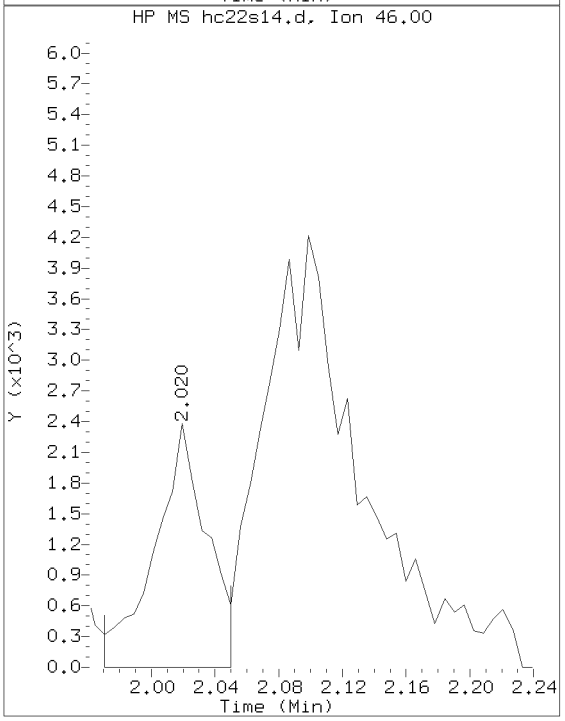
Reference Standard Spectrum for Dimethyl ether



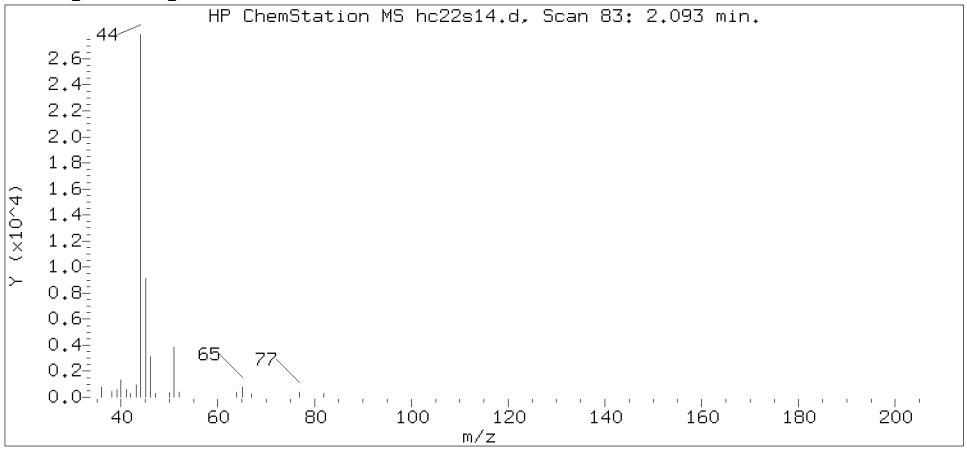


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

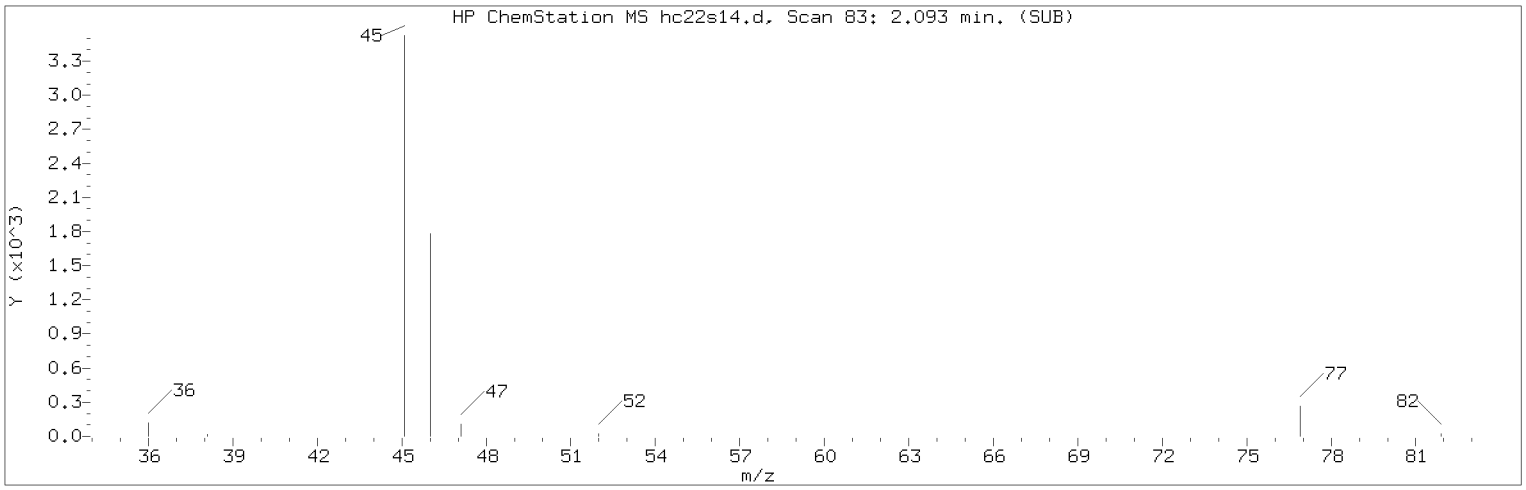
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

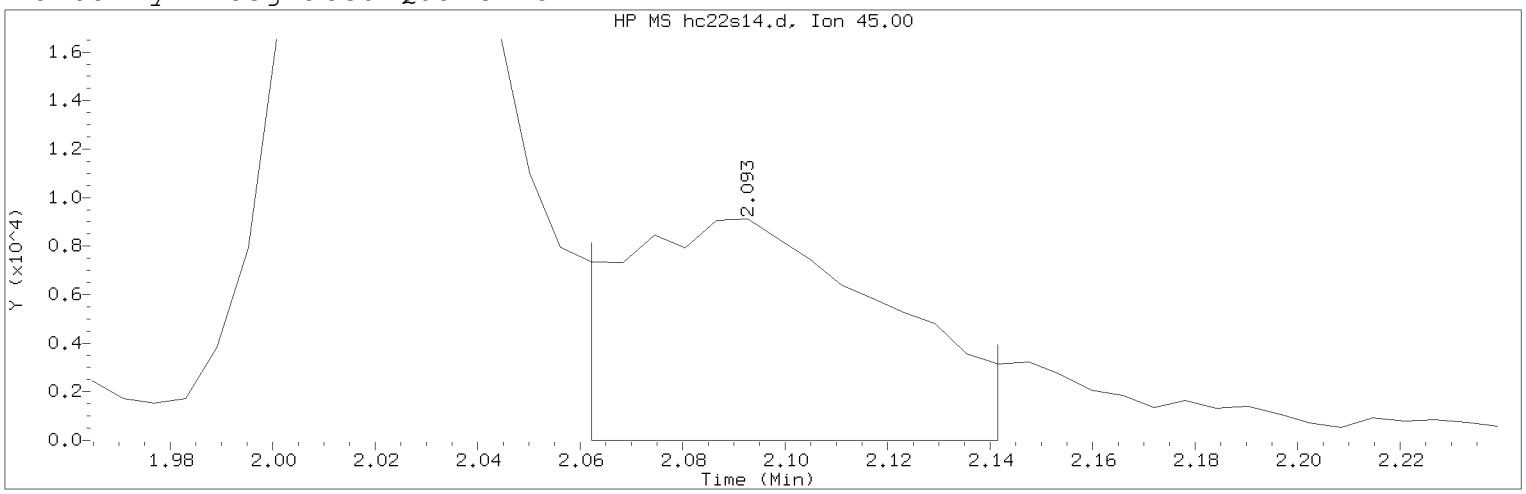
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Relative Retention Time :-0.00057
Quant Ion : 45.00
Area (flag) : 34366M
On-Column Amount (ng) : 0.3806

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

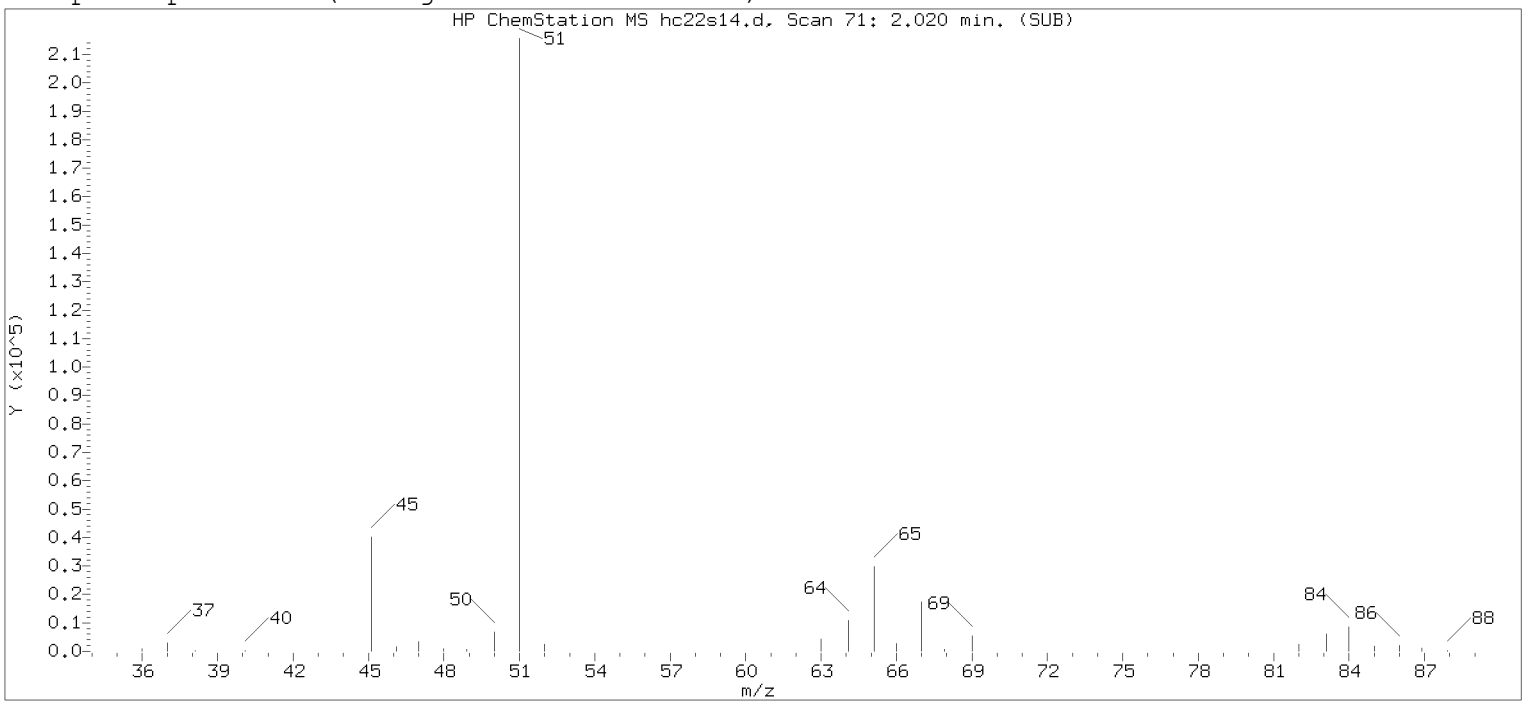
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 34366M
On-Column Amount (ng) : 0.3806
Integration start scan : 77 Integration stop scan: 90
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

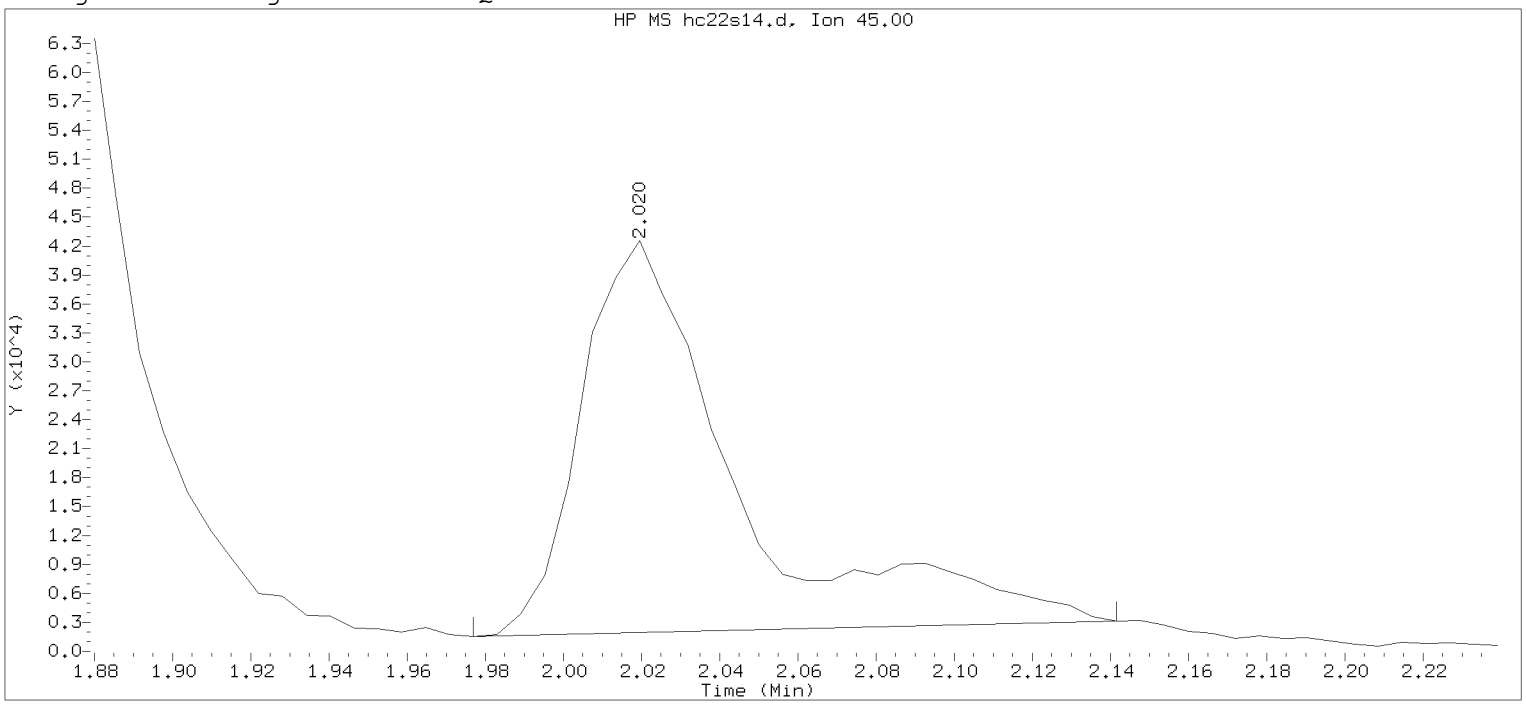
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

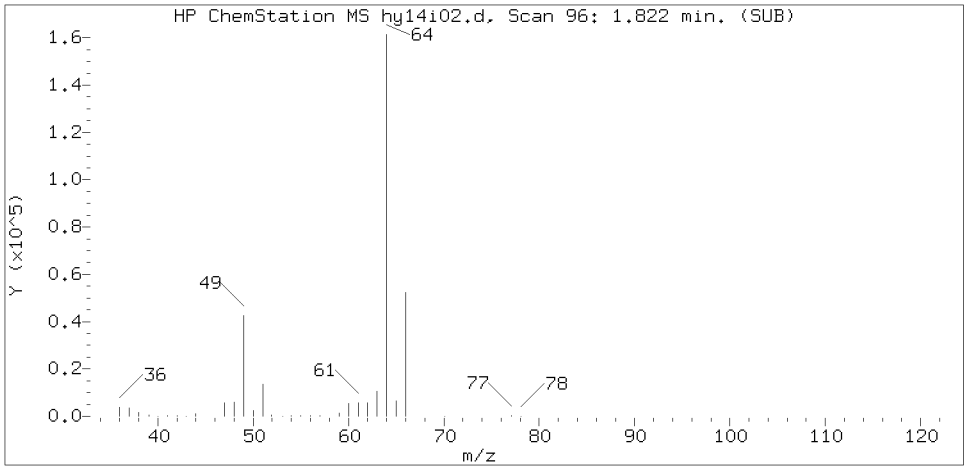
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 05:21 Automation

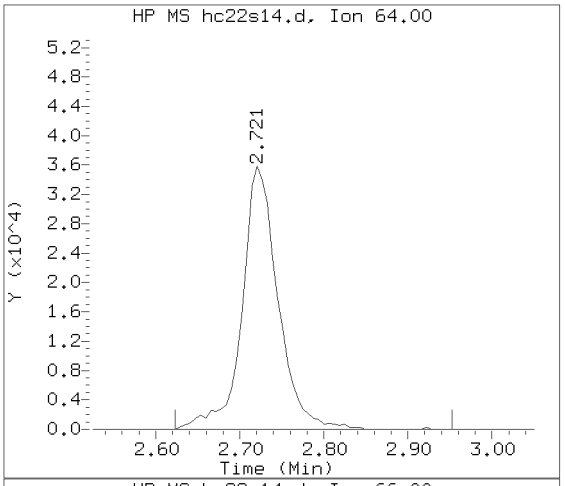
Sample Name: 16MW9 Lab Sample ID: 9262024

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 71		
Retention Time (minutes)	: 2.020		
Quant Ion	: 45.00		
Area	: 110855		
On-column Amount (ng)	: 1.2276		
Integration start scan	: 63	Integration stop scan:	90
Y at integration start	: 1521	Y at integration end:	3149

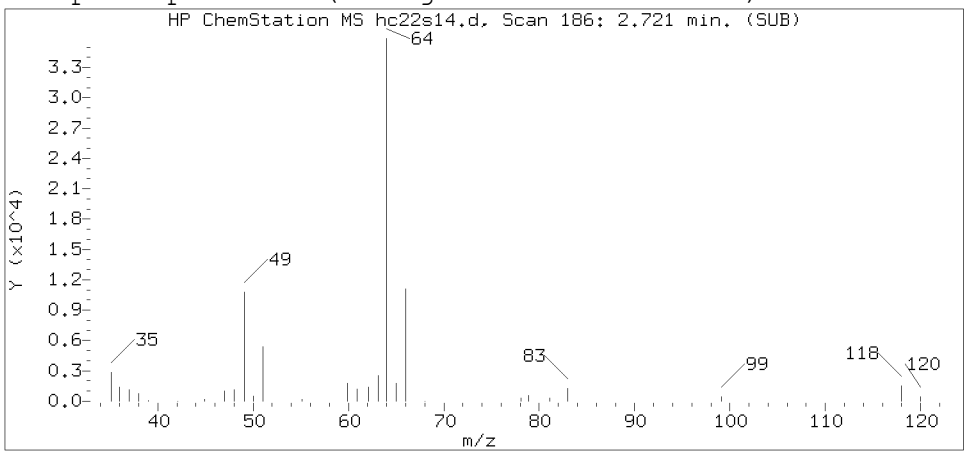
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature used. Key: 2018

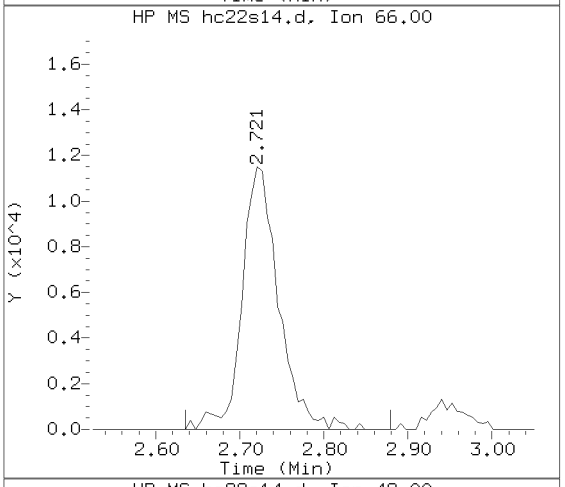
Reference Standard Spectrum for Chloroethane



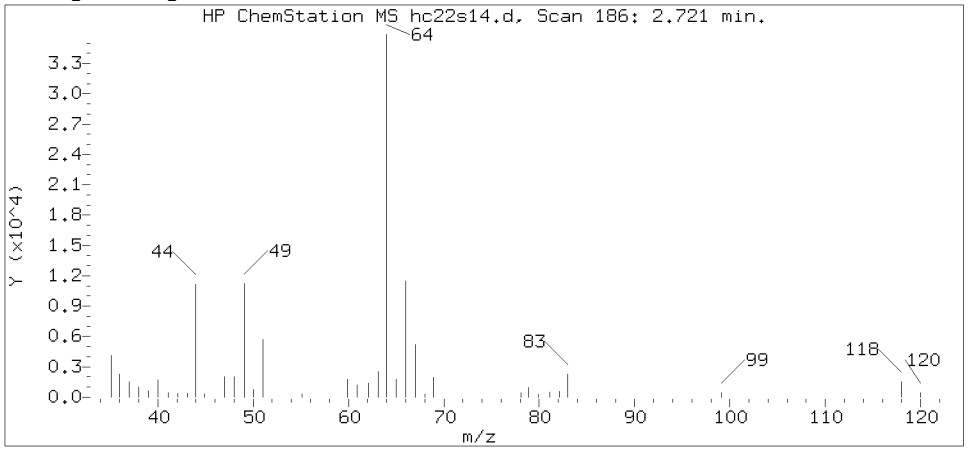


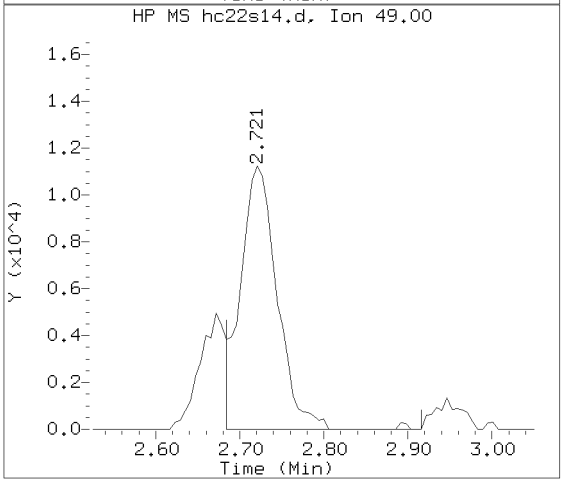
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

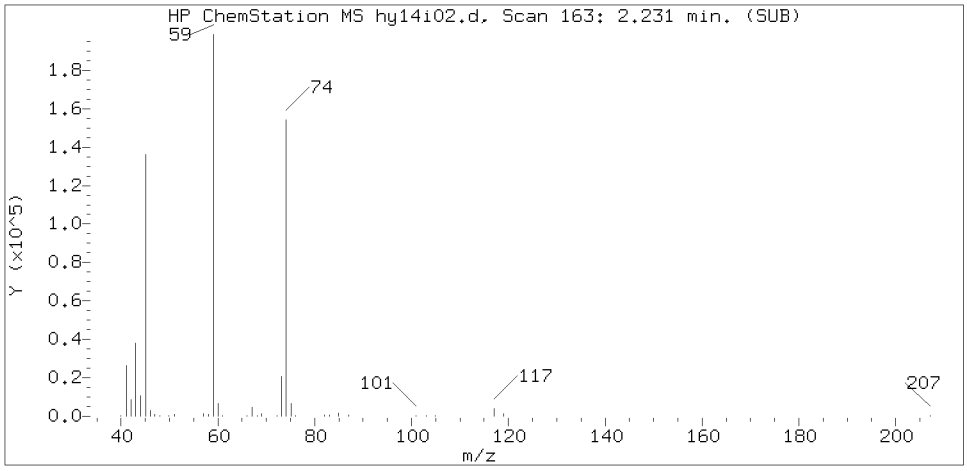
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

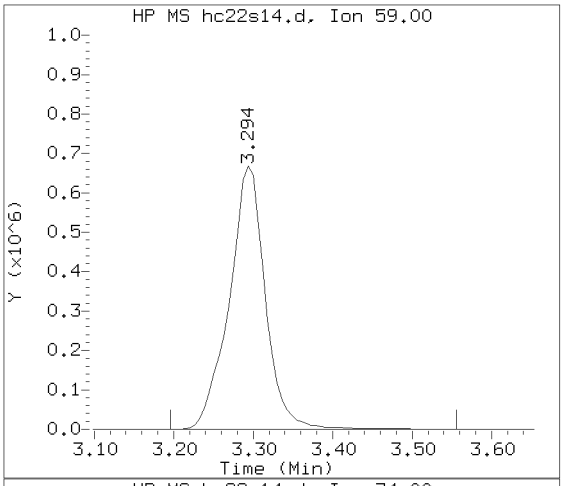
Sample Name: 16MW9 Lab Sample ID: 9262024

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 186
Retention Time (minutes)	: 2.721
Relative Retention Time	: 0.00027
Quant Ion	: 64.00
Area (flag)	: 106609
On-Column Amount (ng)	: 2.1253

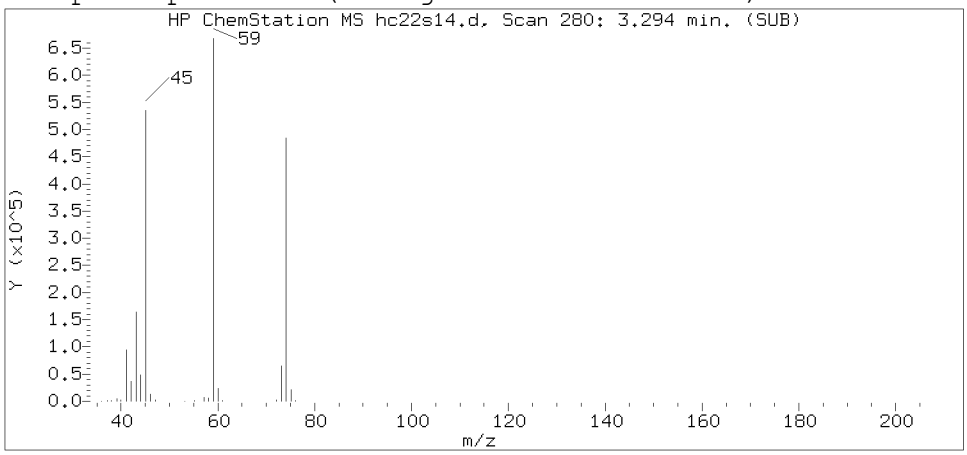
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

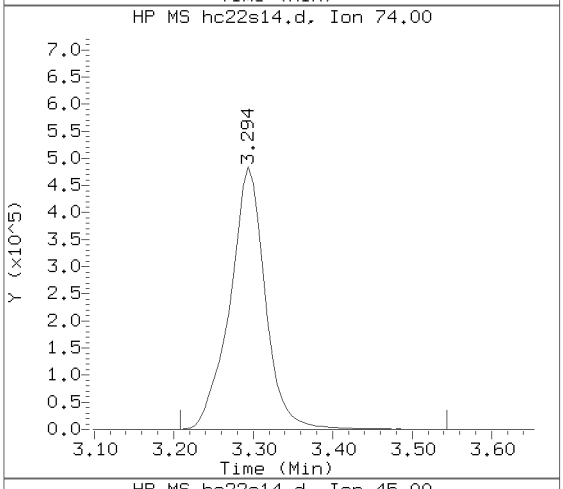
Reference Standard Spectrum for Ethyl ether



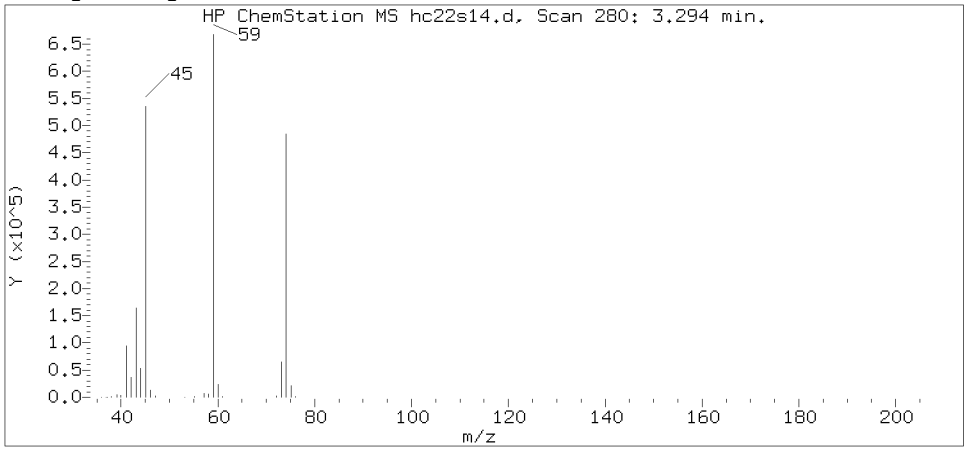


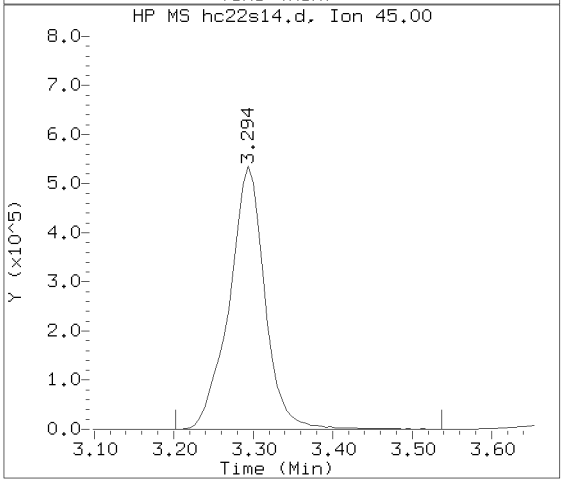
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

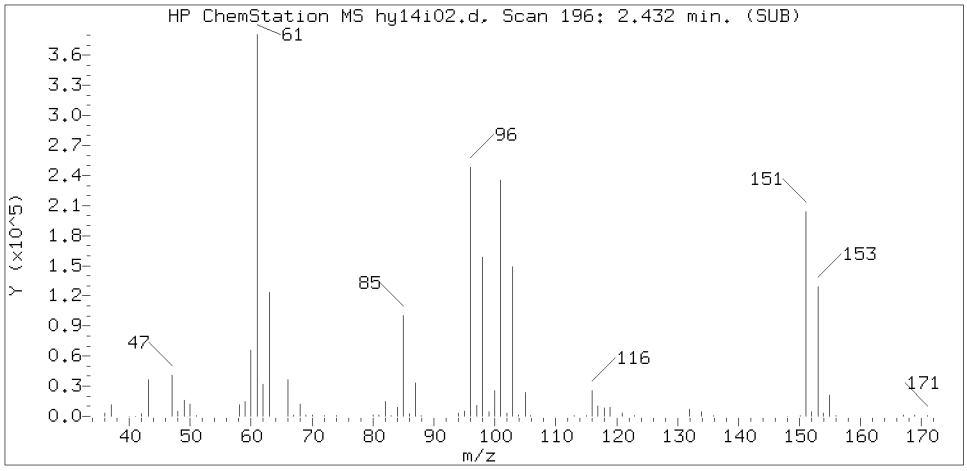
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

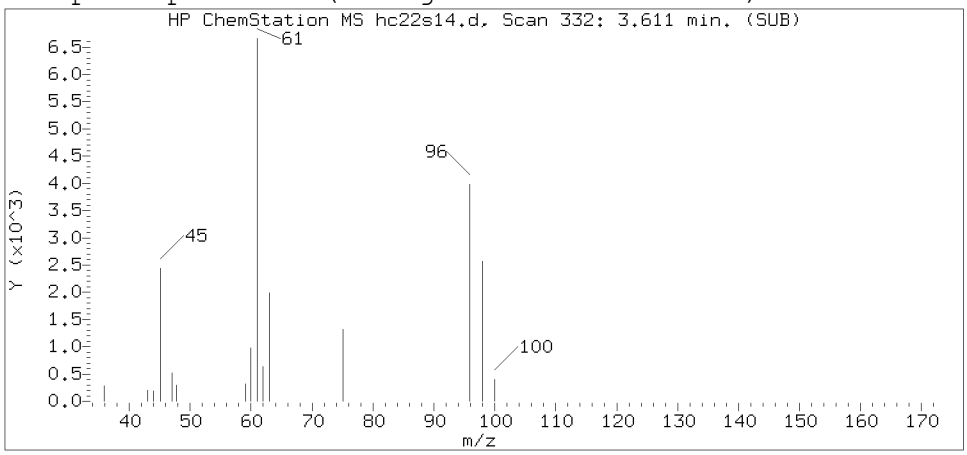
Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 280
Retention Time (minutes)	: 3.294
Relative Retention Time	: 0.00033
Quant Ion	: 59.00
Area (flag)	: 2103056
On-Column Amount (ng)	: 56.1391

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

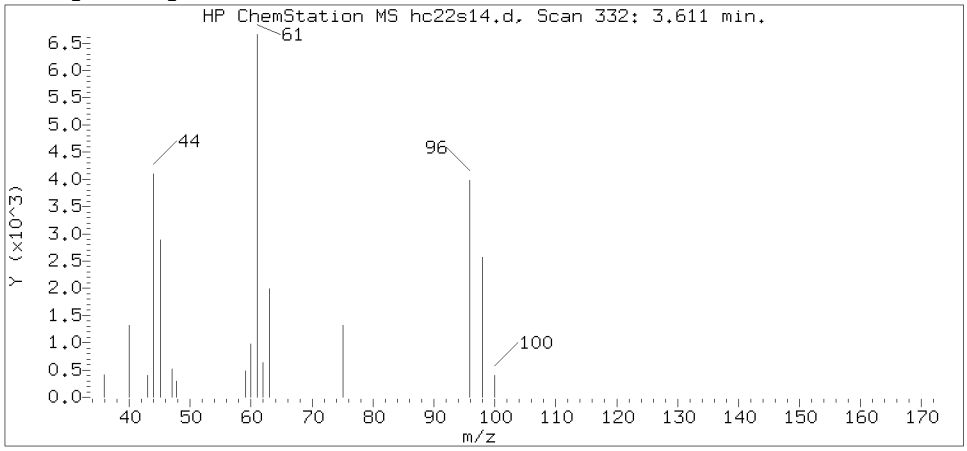
Reference Standard Spectrum for 1,1-Dichloroethene

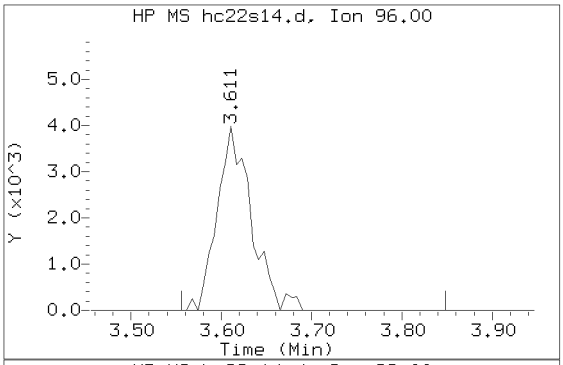


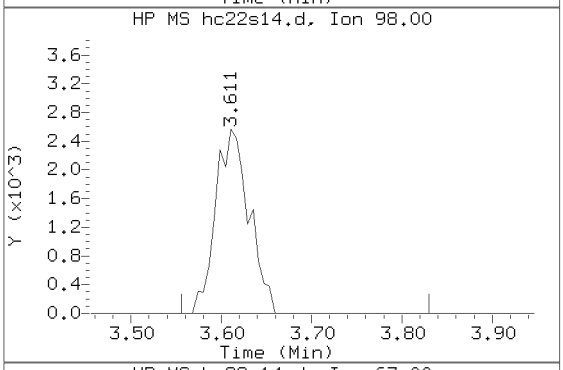
Sample Spectrum (Background Subtracted)

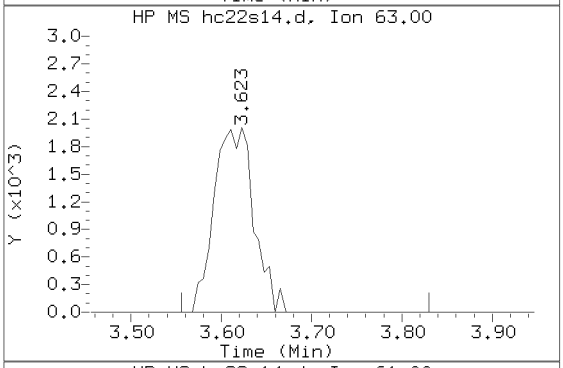


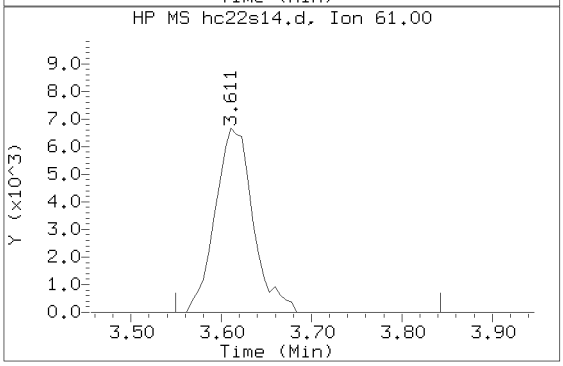
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

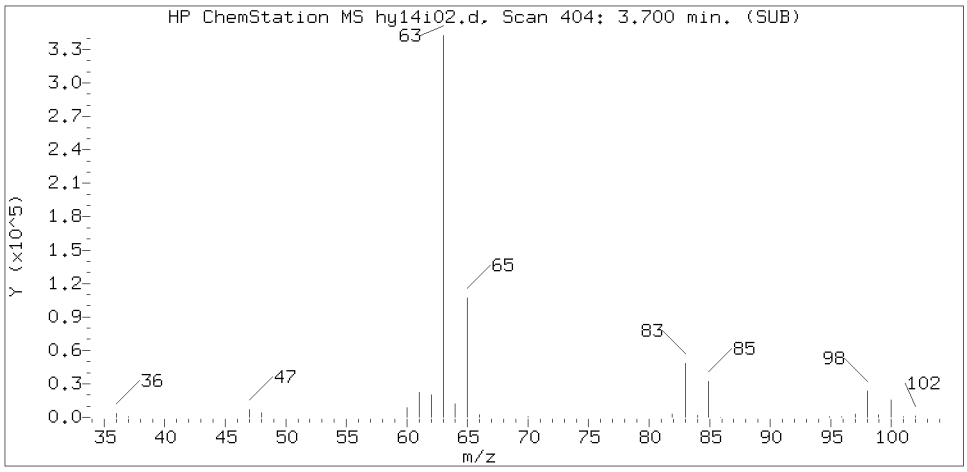
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

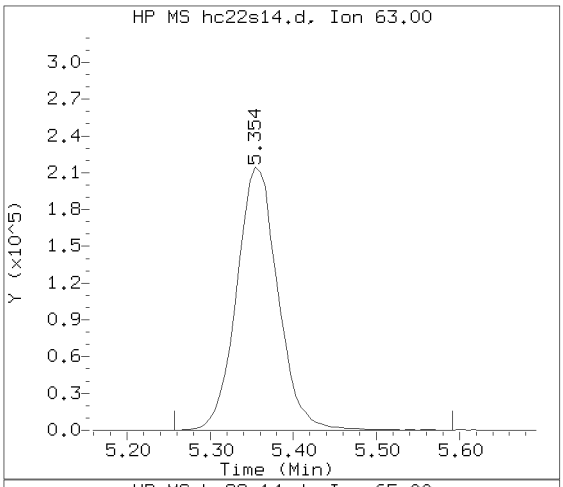
Sample Name: 16MW9 Lab Sample ID: 9262024

Compound Number	: 15
Compound Name	: 1,1-Dichloroethene
Scan Number	: 332
Retention Time (minutes)	: 3.611
Relative Retention Time	: 0.00036
Quant Ion	: 96.00
Area (flag)	: 10479
On-Column Amount (ng)	: 0.2232

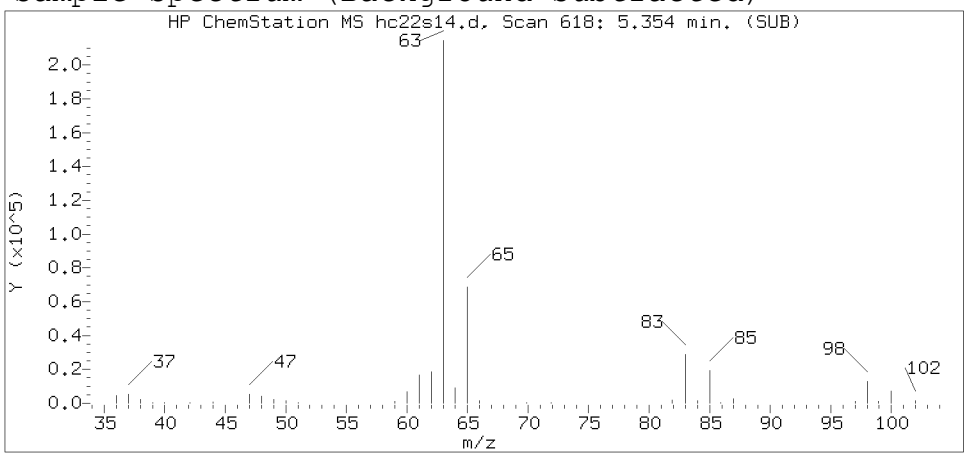
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

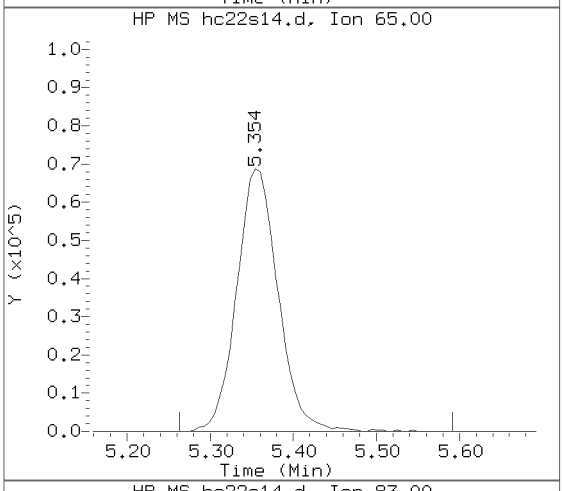
Reference Standard Spectrum for 1,1-Dichloroethane



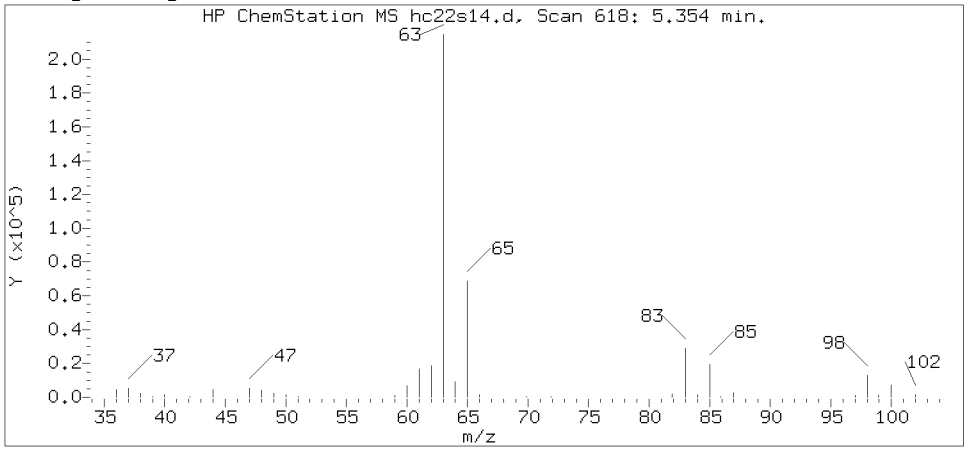


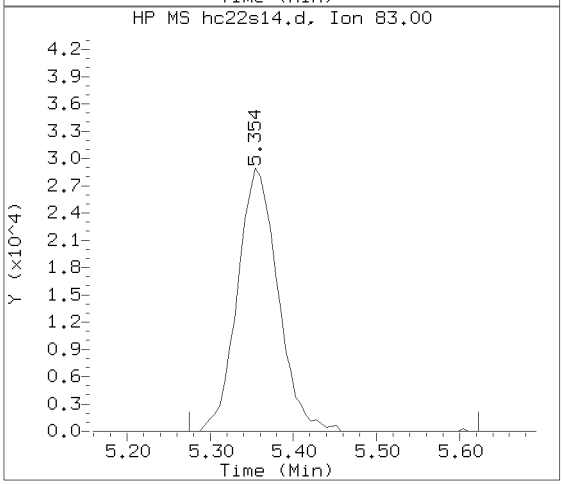
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

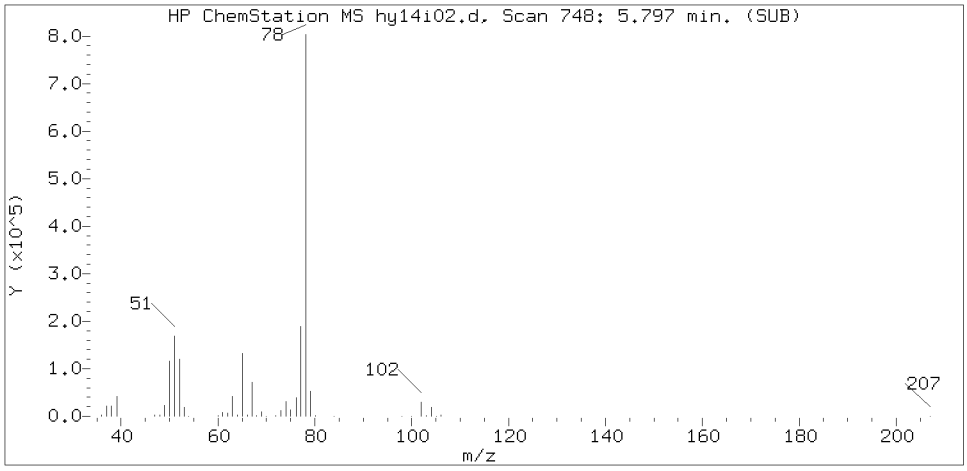
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

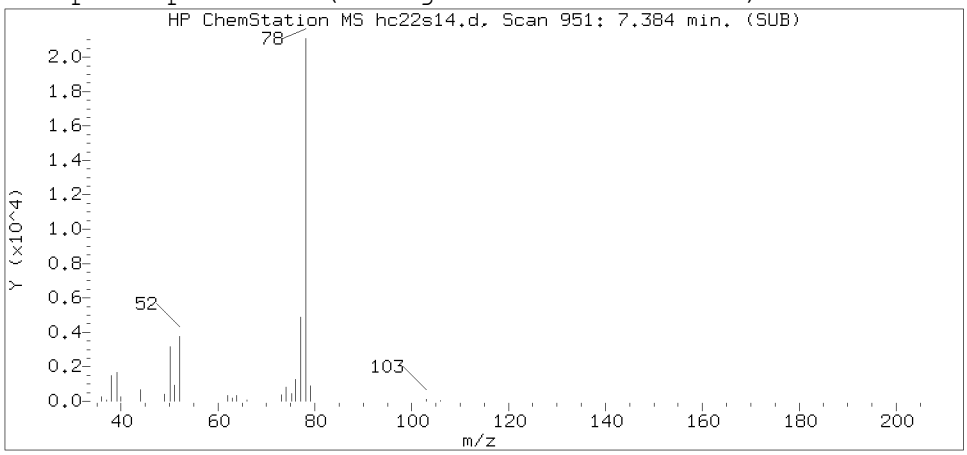
Compound Number	: 33
Compound Name	: 1,1-Dichloroethane
Scan Number	: 618
Retention Time (minutes)	: 5.354
Relative Retention Time	: 0.00054
Quant Ion	: 63.00
Area (flag)	: 739380
On-Column Amount (ng)	: 6.7702

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Target 3.5 esignature user ID: kas02648

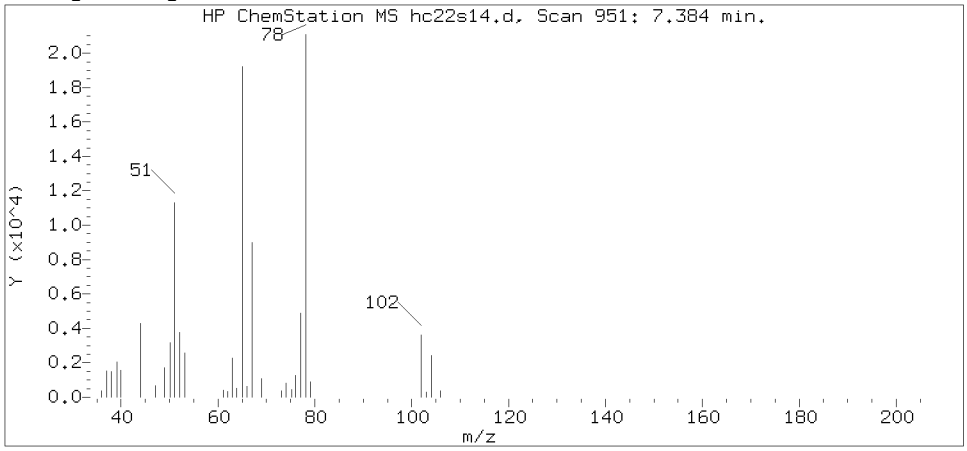
Reference Standard Spectrum for Benzene

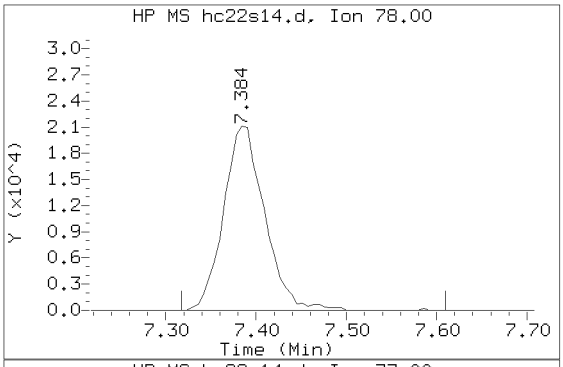


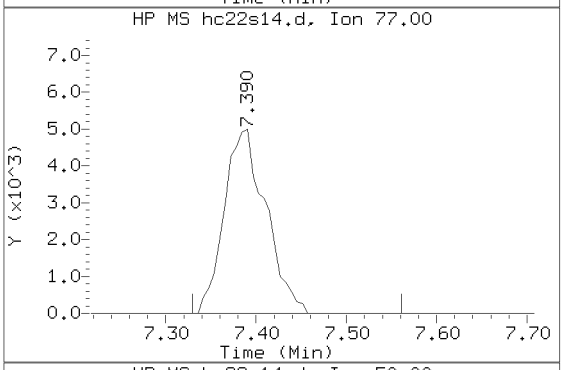
Sample Spectrum (Background Subtracted)

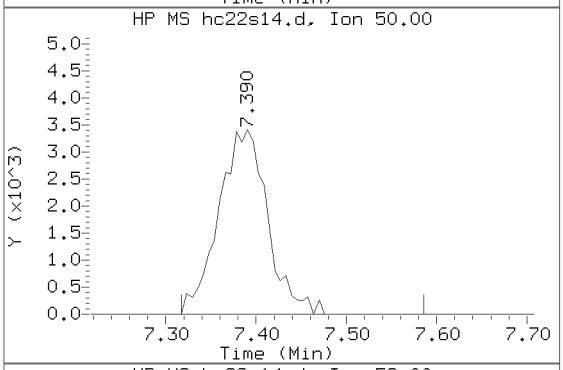


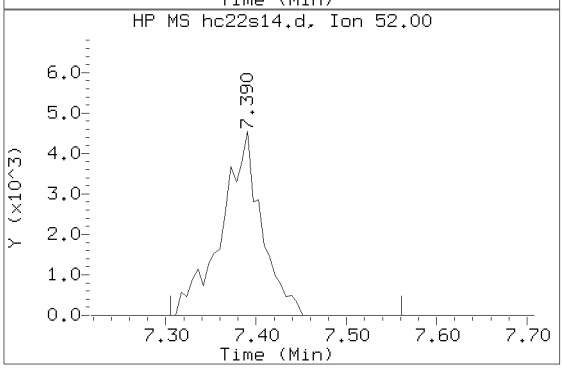
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16MW9 Lab Sample ID: 9262024

Compound Number	: 58
Compound Name	: Benzene
Scan Number	: 951
Retention Time (minutes)	: 7.384
Relative Retention Time	: 0.00074
Quant Ion	: 78.00
Area (flag)	: 66799
On-Column Amount (ng)	: 0.2904

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Target 3.5 esignature user ID: kas02648

16MW9DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9262024DL

Data file: /chem2/HP19094.i/17oct23a.b/hc23s06.d Injection date and time: **23-OCT-2017 12:32**
Data file Sample Info. Line: 16MW9DL;9262024DL;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.d**

Bottle Code: **038B** 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: **2.50**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Analysis Comments:1511

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.024)	439	65	81022	(-8)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2255115	(-7)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1485838	(-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	602132	(-25)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	527367	9.684	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(-0.001)	102	82732	9.701	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2233495	10.343	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	604735	9.220	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
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	3
4) Dimethyl ether	(2)				Not Detected					0.3	31
2) Chloromethane	(2)				Not Detected					0.5	3
8) Chloroethane	(2)	2.727	(0.000)	64	39187	0.765	1.91		J	0.3	3
10) Trichlorofluoromethane	(2)				Not Detected					0.3	3
11) Ethyl ether	(2)	3.300	(-0.000)	59	798279	20.857	52.14			0.3	31
15) 1,1-Dichloroethene	(2)				Not Detected					0.3	3
16) Freon 113	(2)				Not Detected					0.5	3
23) Methylene Chloride	(2)				Not Detected					0.5	3
33) 1,1-Dichloroethane	(2)	5.360	(-0.000)	63	278692	2.498	6.24			0.3	3
38) 2-Butanone	(1)				Not Detected					3	25
48) Tetrahydrofuran	(1)				Not Detected					5	63
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	3
54) Carbon Tetrachloride	(2)				Not Detected					0.3	3
58) Benzene	(2)	7.378	(0.000)	78	43169	0.184	0.46		J	0.3	3
67) Trichloroethene	(2)				Not Detected					0.3	3
83) Toluene	(3)				Not Detected					0.3	3
89) Tetrachloroethene	(3)				Not Detected					0.3	3
100) Ethylbenzene	(3)				Not Detected					0.3	3
101) m+p-Xylene	(3)				Not Detected					0.3	1
104) o-Xylene	(3)				Not Detected					0.3	1
105) Xylene (Total)	(3)				Not Detected					0.3	8

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Data file: /chem2/HP19094.i/17oct23a.b/hc23s06.d Injection date and time: **23-OCT-2017 12:32**
Data file Sample Info. Line: 16MW9DL;9262024DL;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.d**

Bottle Code: **038B** 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: **2.50**

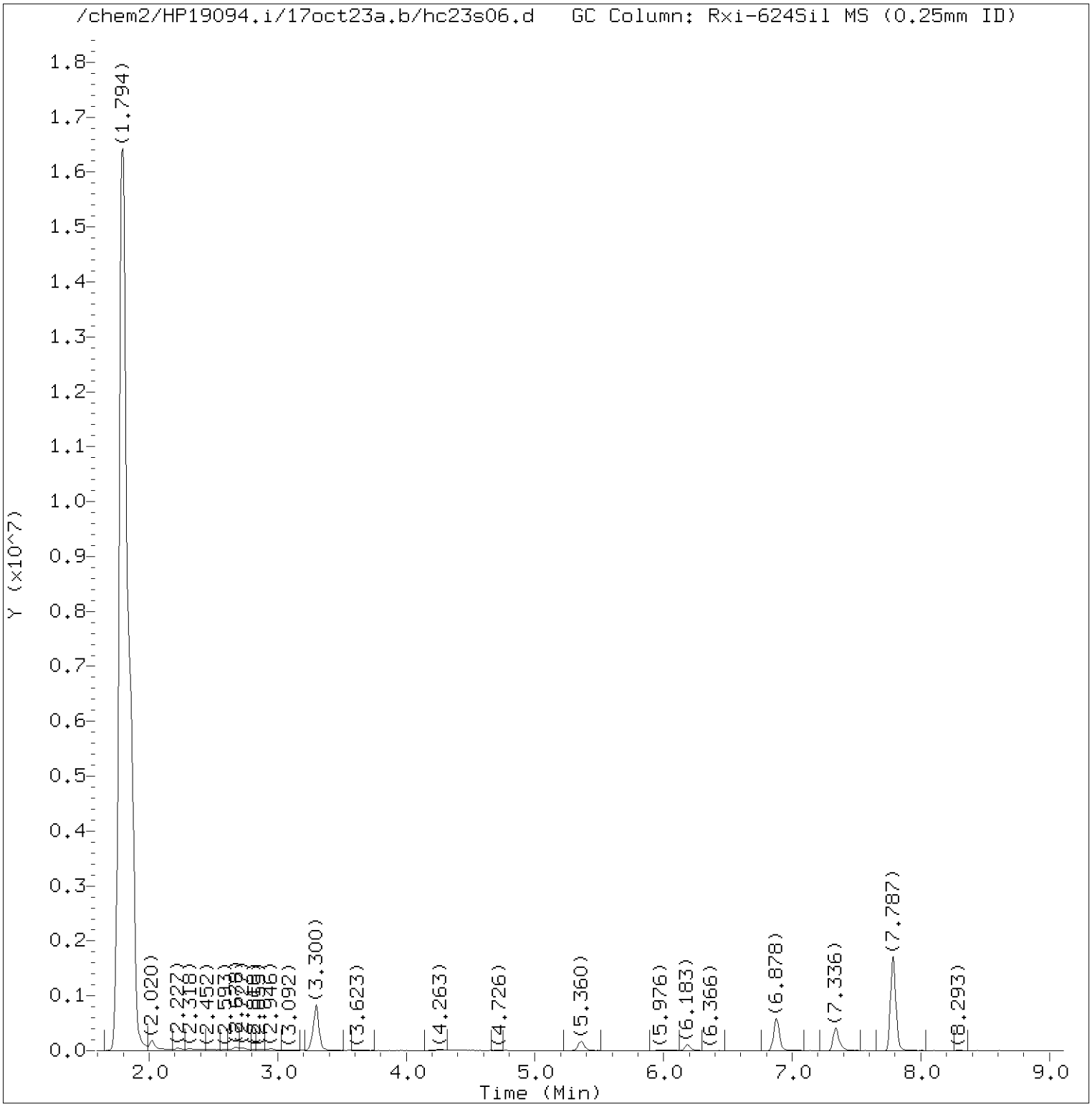
Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:32. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

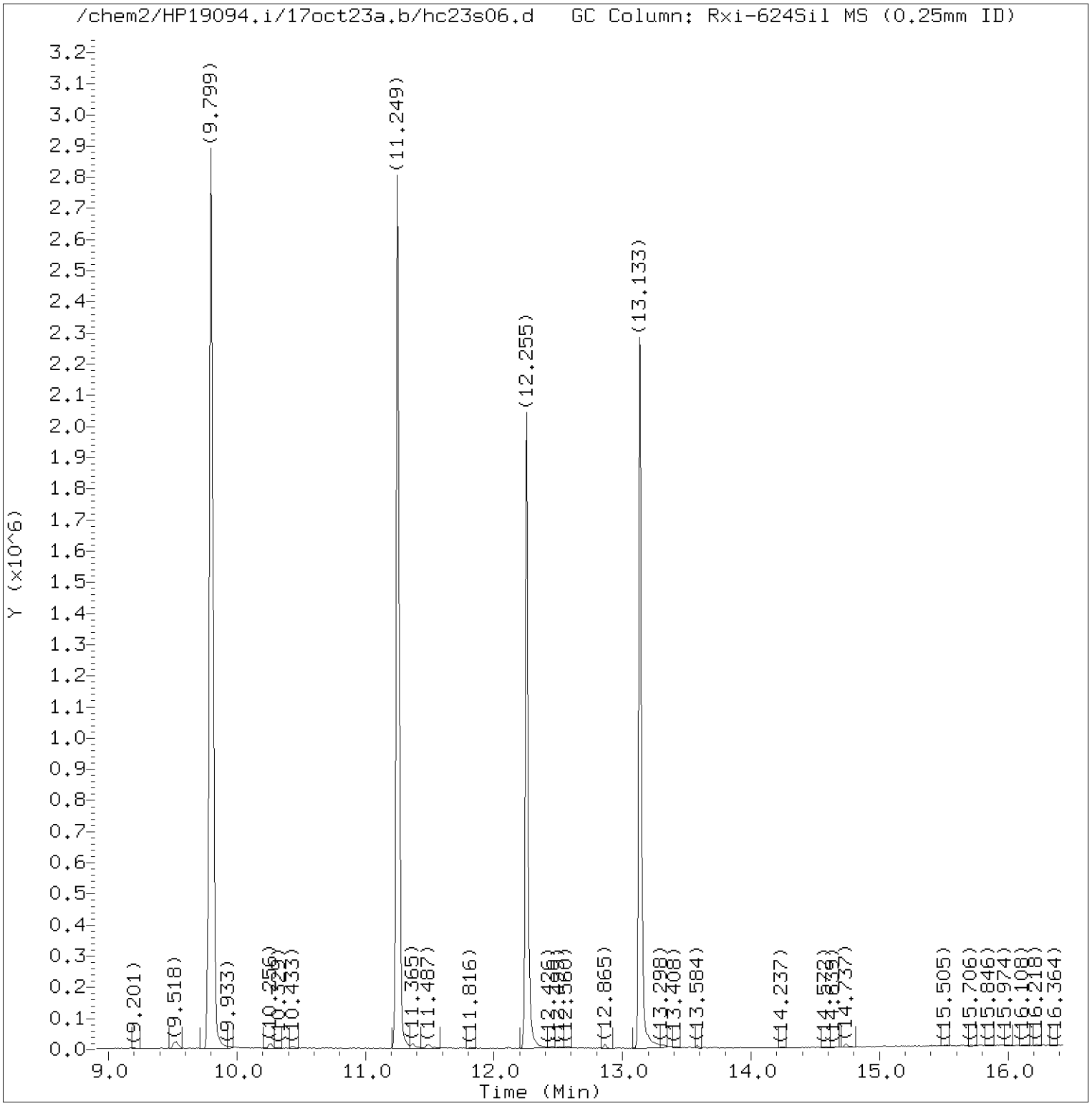
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Sample Name: 16MW9DL Lab Sample ID: 9262024DL

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Sample Name: 16MW9DL Lab Sample ID: 9262024DL

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

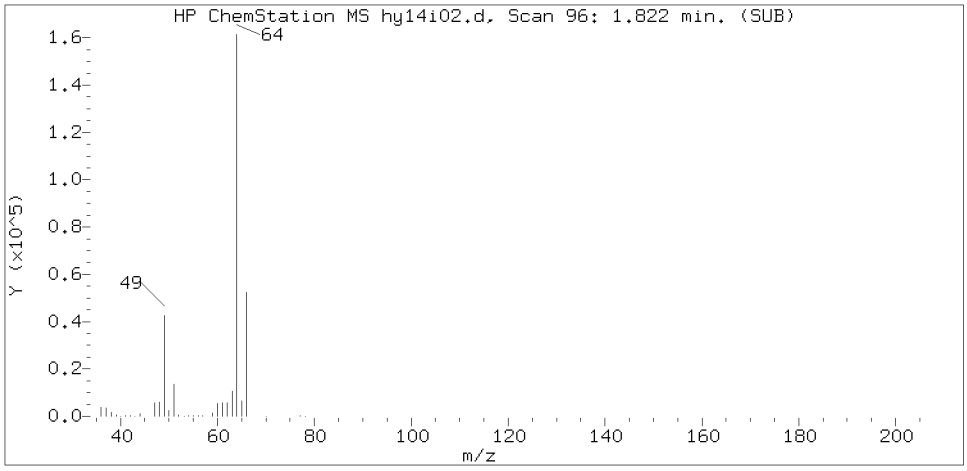
Sample Name: 16MW9DL Lab Sample ID: 9262024DL

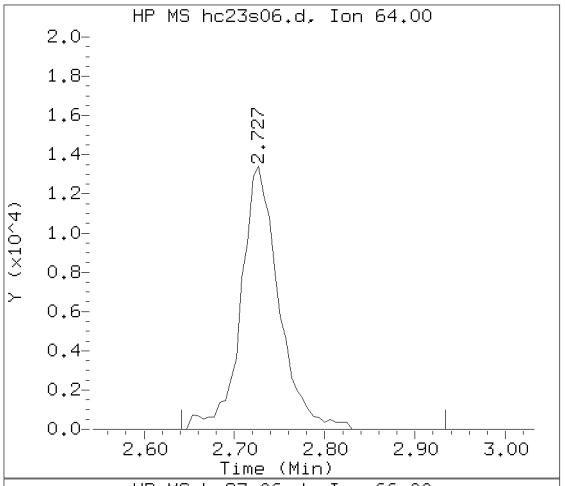
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
8) Chloroethane	(2)	2.727	64	39187	0.765
11) Ethyl ether	(2)	3.300	59	798279	20.857
26)*t-Butyl Alcohol-d10	(1)	4.263	65	81022	50.000
33) 1,1-Dichloroethane	(2)	5.360	63	278692	2.498
50)$Dibromofluoromethane	(2)	6.878	113	527367	9.684
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82732	9.701
58) Benzene	(2)	7.378	78	43169	0.184
63)*Fluorobenzene	(2)	7.787	96	2255115	10.000
82)$Toluene-d8	(3)	9.799	98	2233495	10.343
97)*Chlorobenzene-d5	(3)	11.249	117	1485838	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	604735	9.220
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	602132	10.000

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

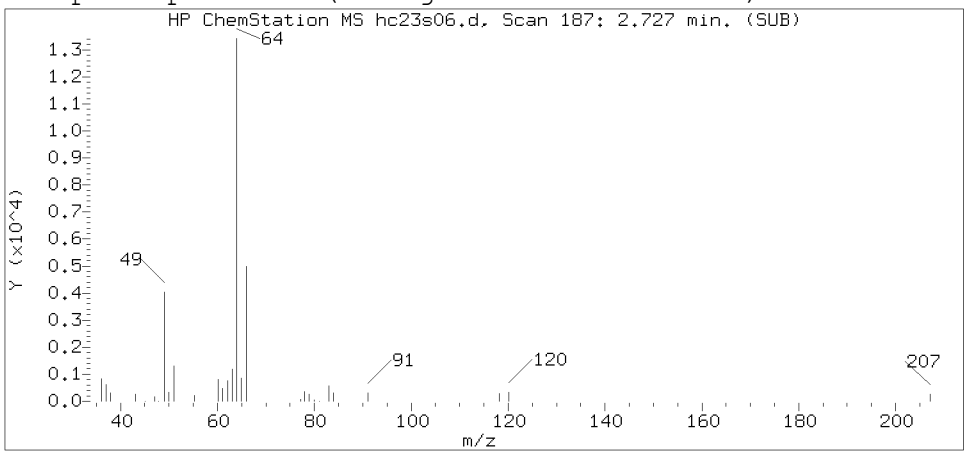
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648

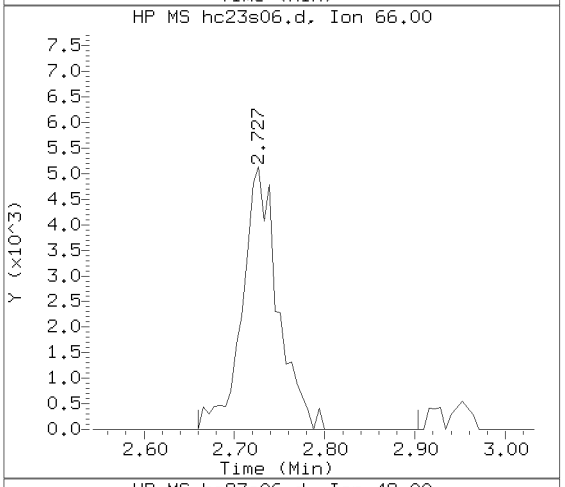
Reference Standard Spectrum for Chloroethane



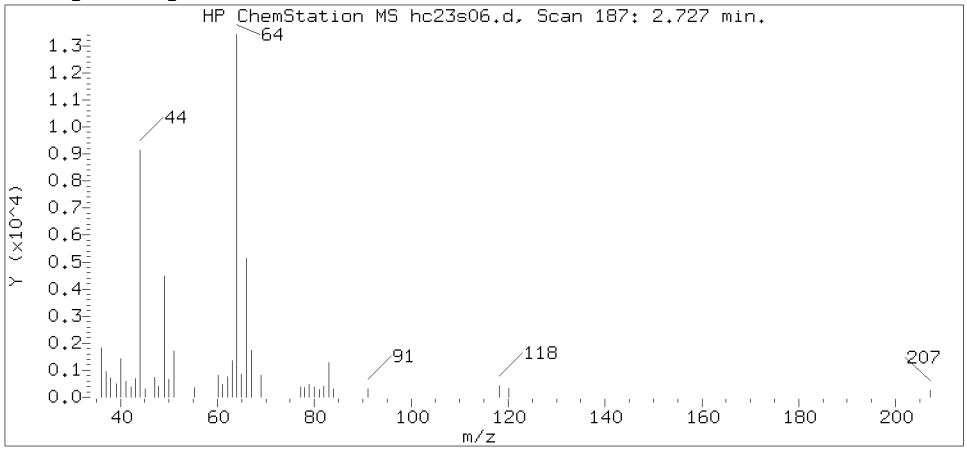


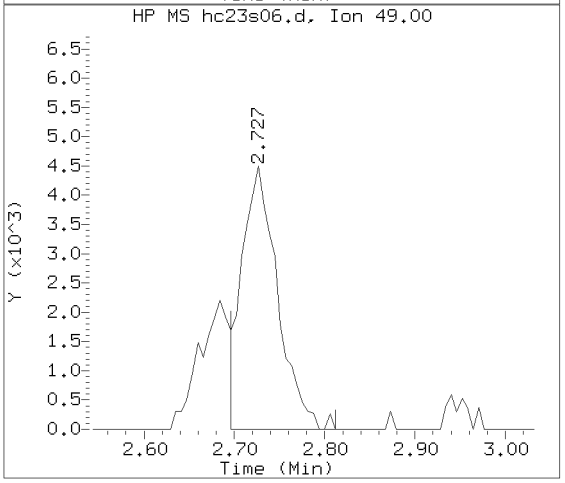
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

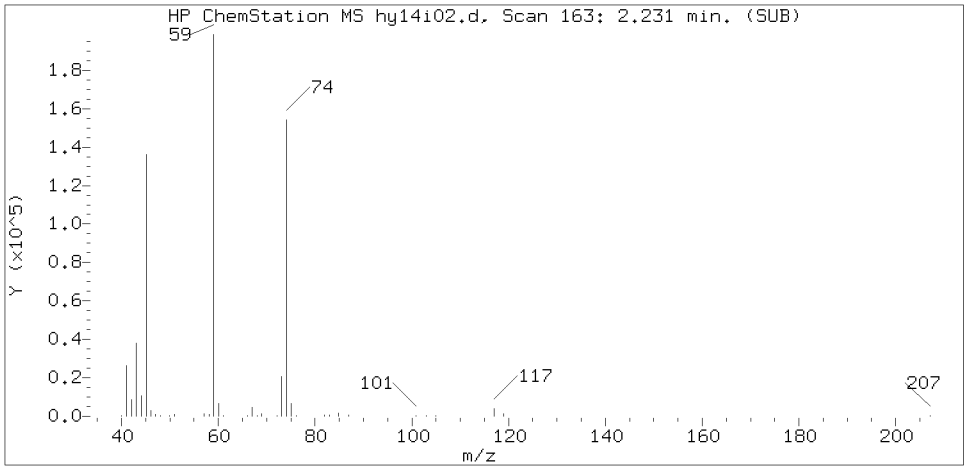
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

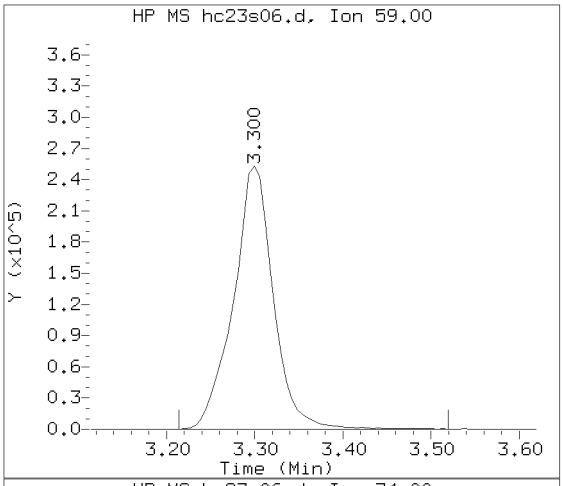
Sample Name: 16MW9DL Lab Sample ID: 9262024DL

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 187
Retention Time (minutes)	: 2.727
Relative Retention Time	: 0.00002
Quant Ion	: 64.00
Area (flag)	: 39187
On-Column Amount (ng)	: 0.7646

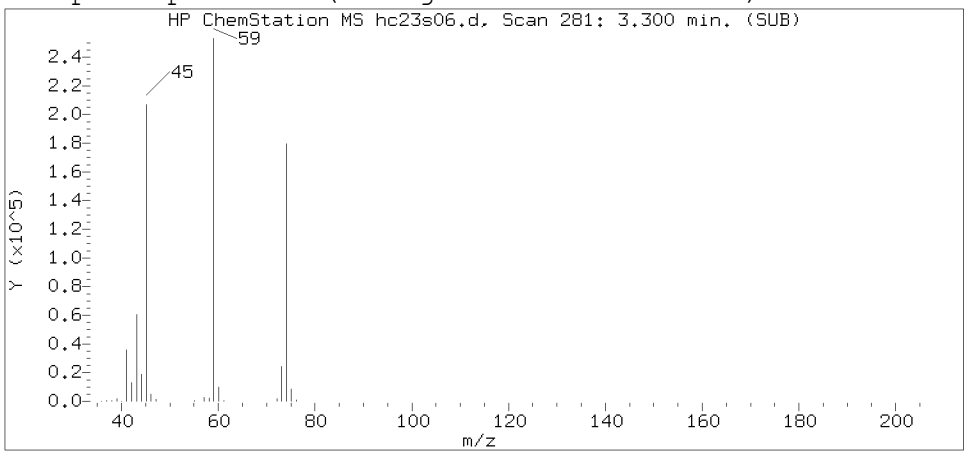
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648

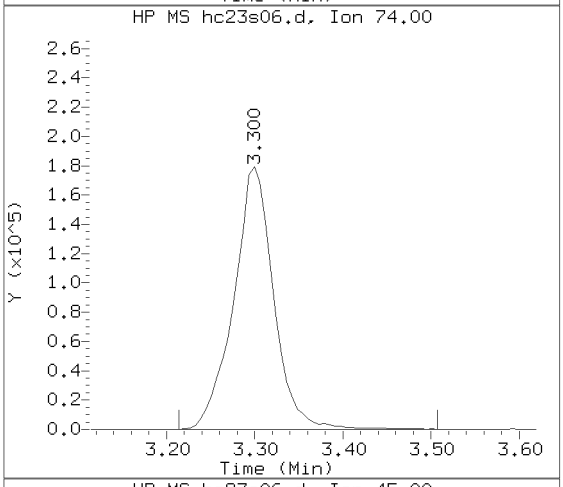
Reference Standard Spectrum for Ethyl ether



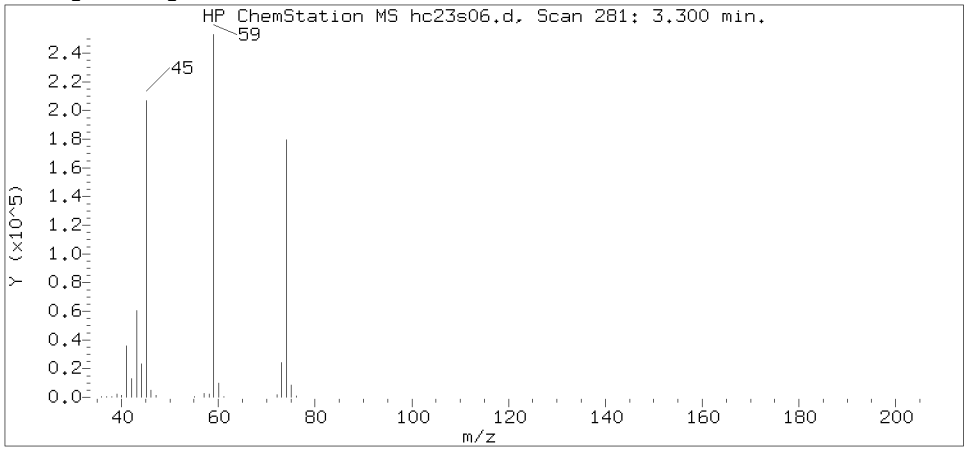


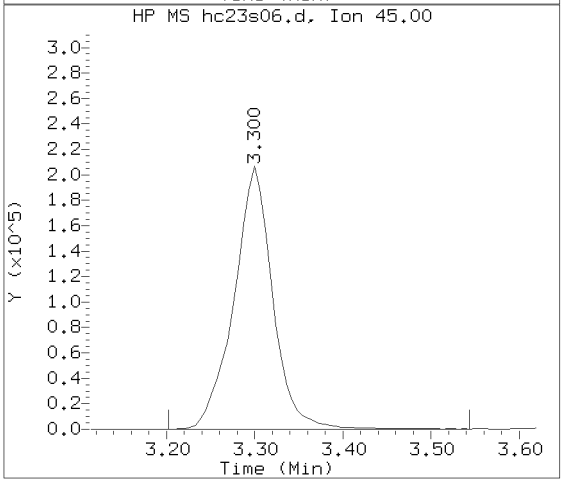
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

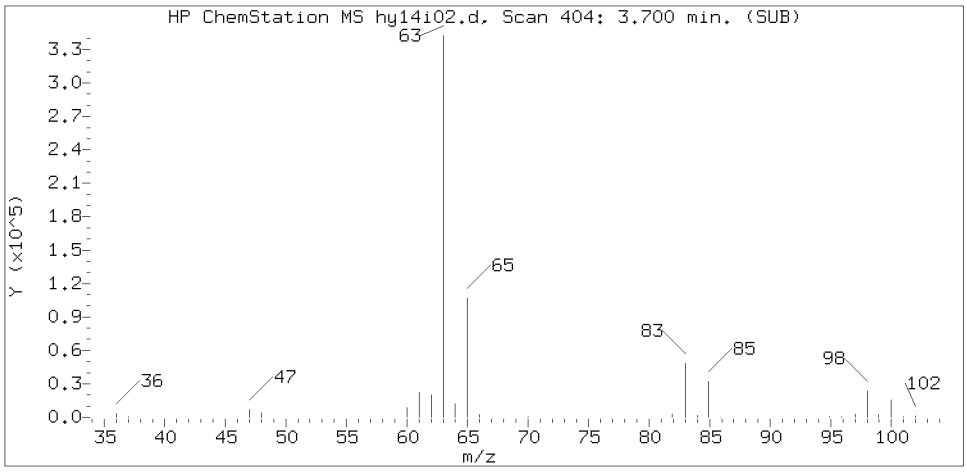
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

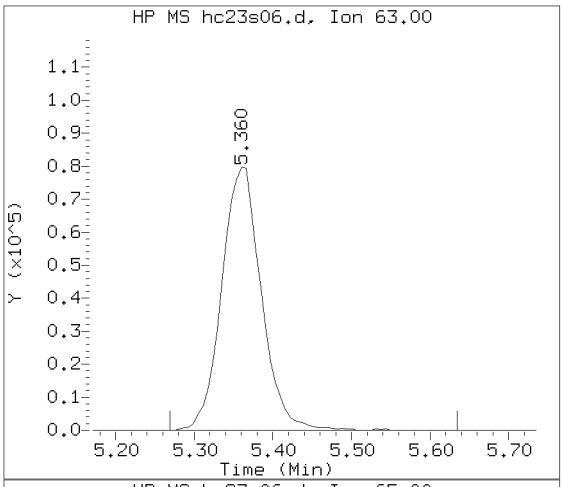
Sample Name: 16MW9DL Lab Sample ID: 9262024DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 281
Retention Time (minutes): 3.300
Relative Retention Time :-0.00077
Quant Ion : 59.00
Area (flag) : 798279
On-Column Amount (ng) : 20.8565

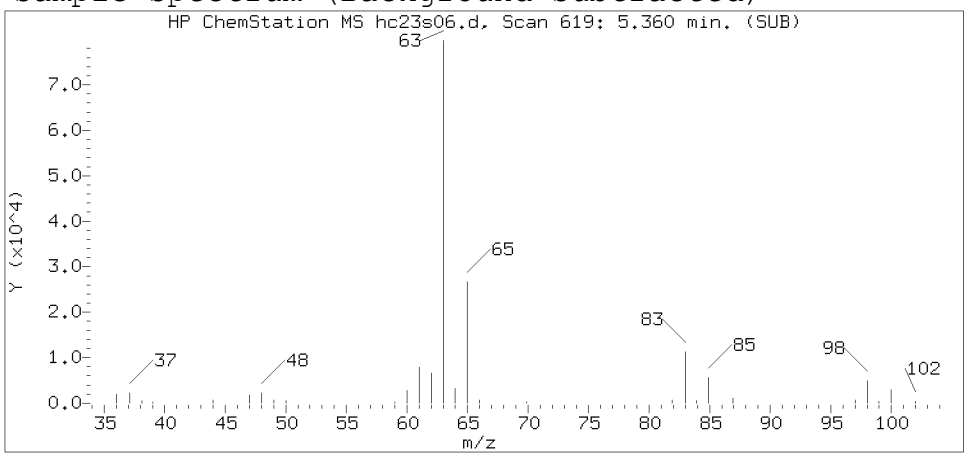
Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648

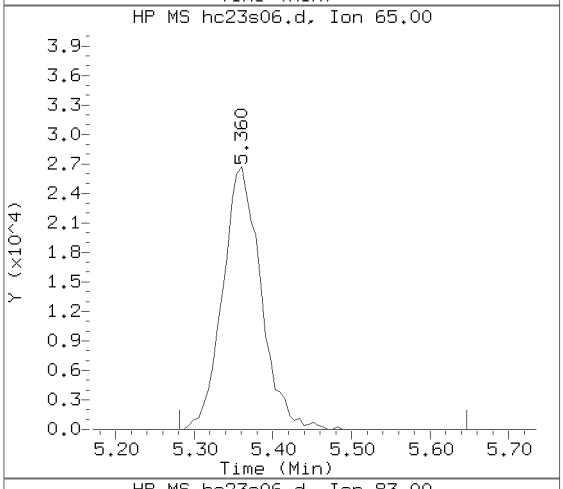
Reference Standard Spectrum for 1,1-Dichloroethane



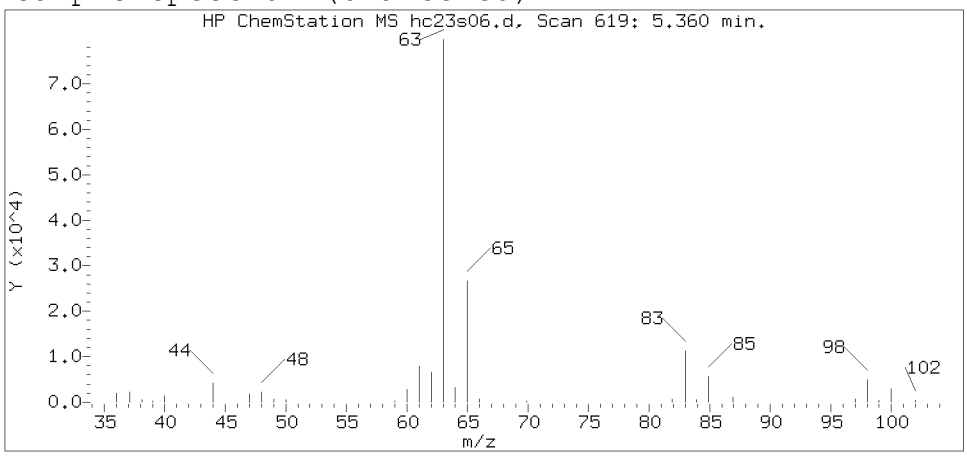


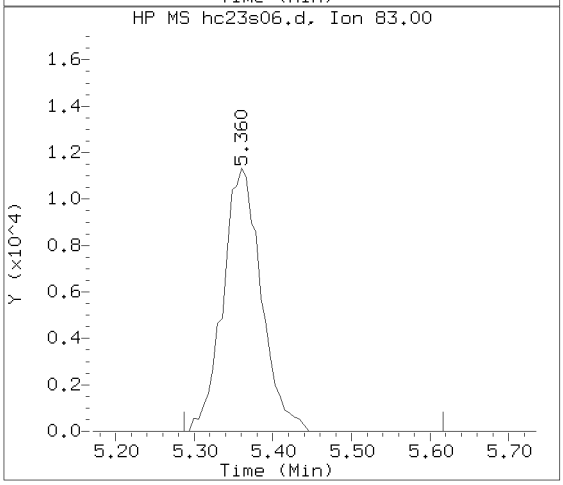
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

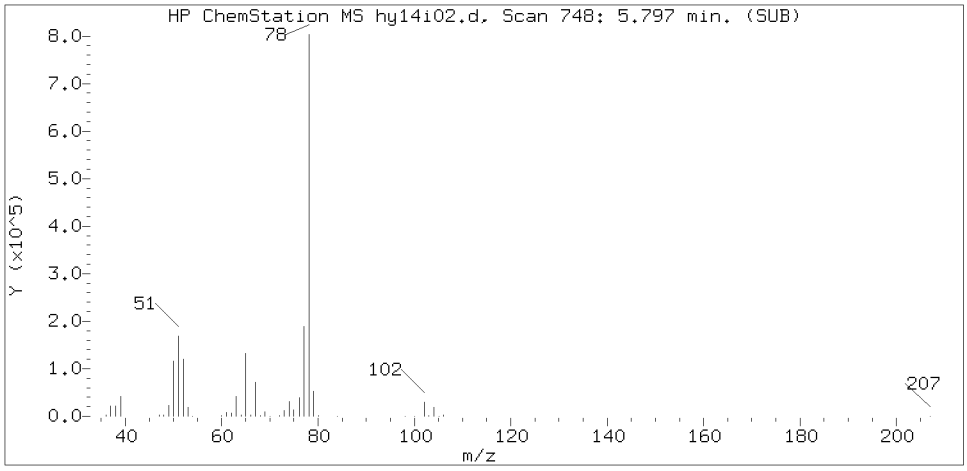
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Sample Name: 16MW9DL Lab Sample ID: 9262024DL

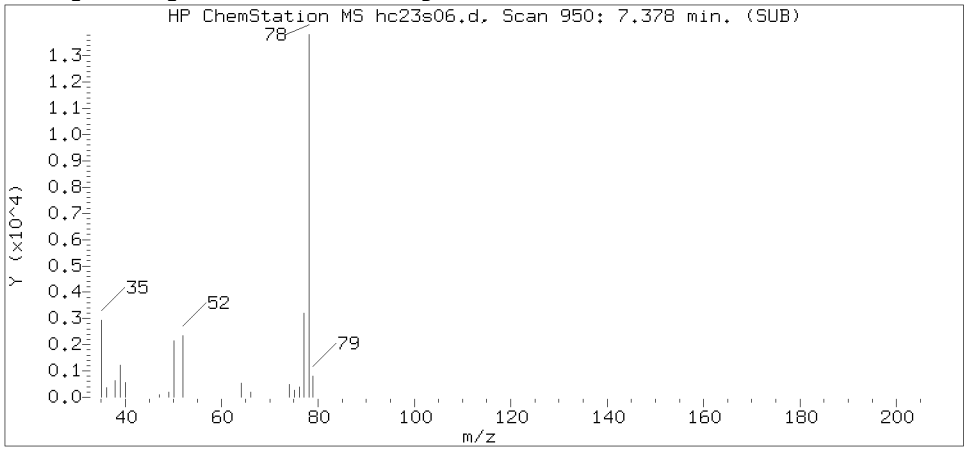
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 619
Retention Time (minutes): 5.360
Relative Retention Time :-0.00078
Quant Ion : 63.00
Area (flag) : 278692
On-Column Amount (ng) : 2.4976

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Target 3.5 esignature user ID: kas02648

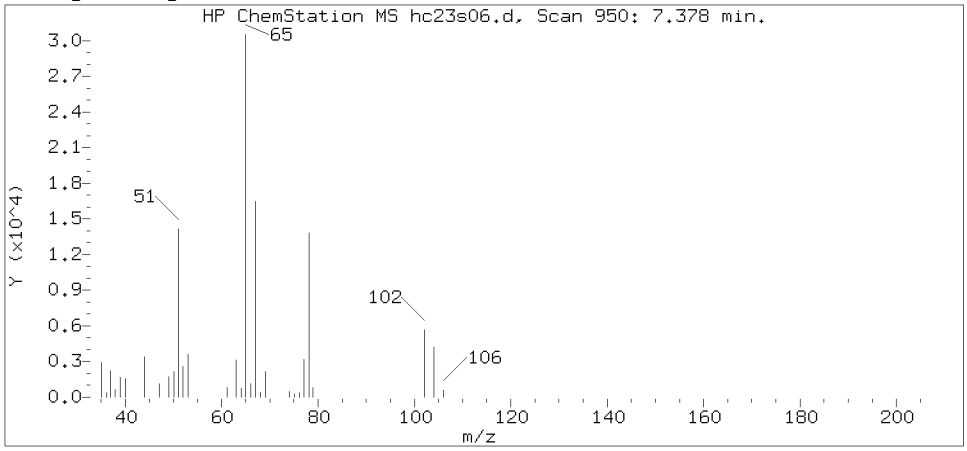
Reference Standard Spectrum for Benzene

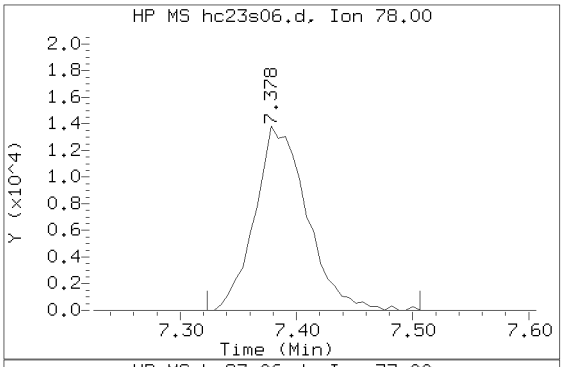


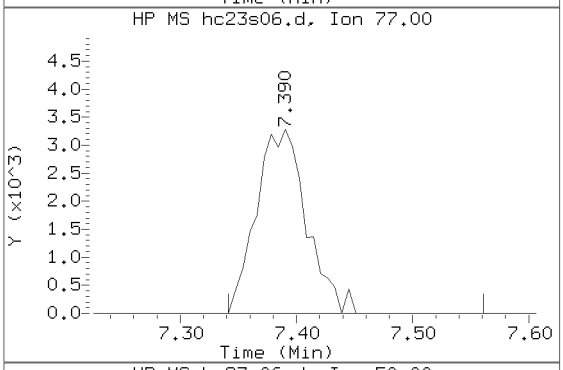
Sample Spectrum (Background Subtracted)

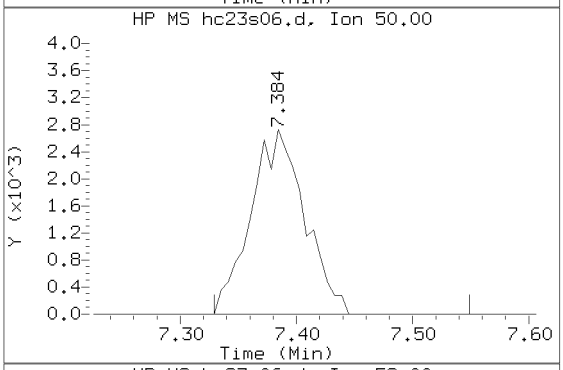


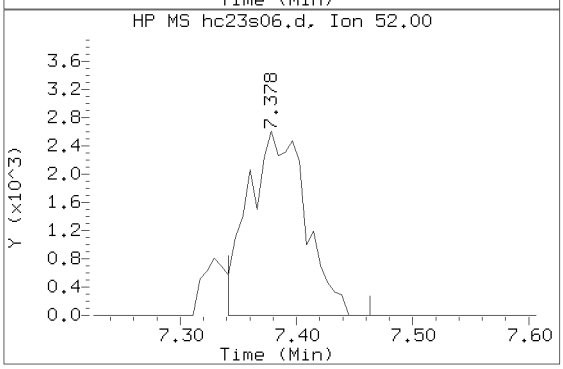
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct23a.b/hc23s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:32 kas02648

Sample Name: 16MW9DL Lab Sample ID: 9262024DL

Compound Number	: 58
Compound Name	: Benzene
Scan Number	: 950
Retention Time (minutes)	: 7.378
Relative Retention Time	: 0.00078
Quant Ion	: 78.00
Area (flag)	: 43169
On-Column Amount (ng)	: 0.1837

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:32.
Target 3.5 esignature user ID: kas02648

16WC1 Lancaster Laboratories 9262025
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s05.d Injection date and time: **23-OCT-2017 02:00**
Data file Sample Info. Line: 16WC1;9262025;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263(-0.031)	439	65	83642 (-2)	50.00	
63) Fluorobenzene	7.787(-0.006)	1017	96	2262190 (-7)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1515169 (-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140(-0.006)	1895	152	621126 (-21)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879(0.000)	113	541542	9.913	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342(0.001)	102	83331	9.741	97%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2245683	10.199	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256(-0.001)	95	611651	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					0.1	1
4) Dimethyl ether	(2)	2.093(-0.000)	45	56750	0.613	0.61		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)	2.733(-0.001)	64	75036	1.460	1.46			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)	3.306(-0.001)	59	925795	24.112	24.11			0.1	13
15) 1,1-Dichloroethene	(2)	3.623(-0.001)	96	8107	0.168	0.17		J	0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.367(-0.001)	63	397859	3.554	3.55			0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)	7.391(-0.000)	78	47870	0.203	0.20		J	0.1	1
67) Trichloroethene	(2)	8.275(0.000)	95	6395	0.101	0.10		J	0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.427(0.000)	166	11027	0.163	0.16		J	0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s05.d Injection date and time: **23-OCT-2017 02:00**
Data file Sample Info. Line: 16WC1;9262025;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

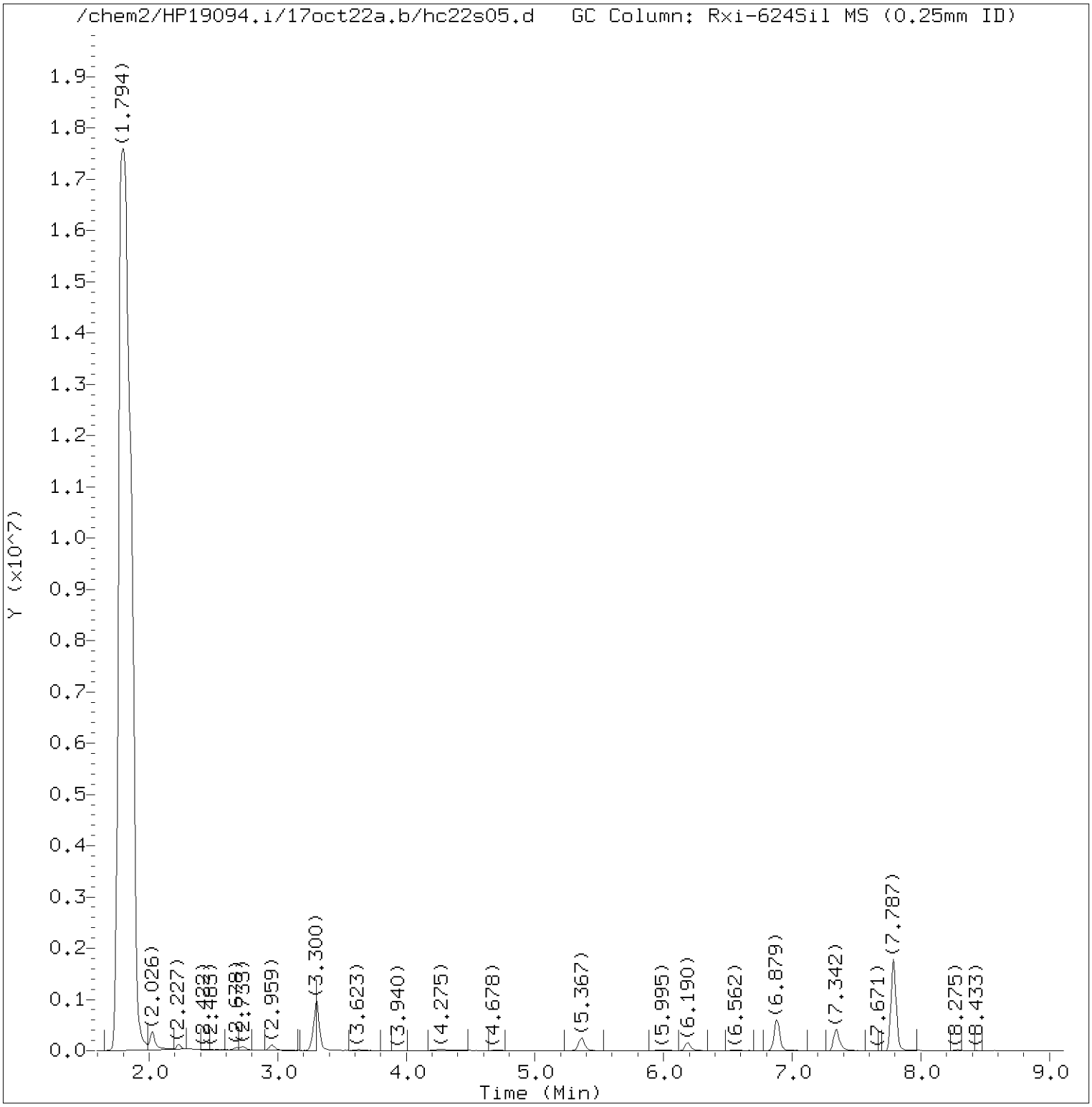
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

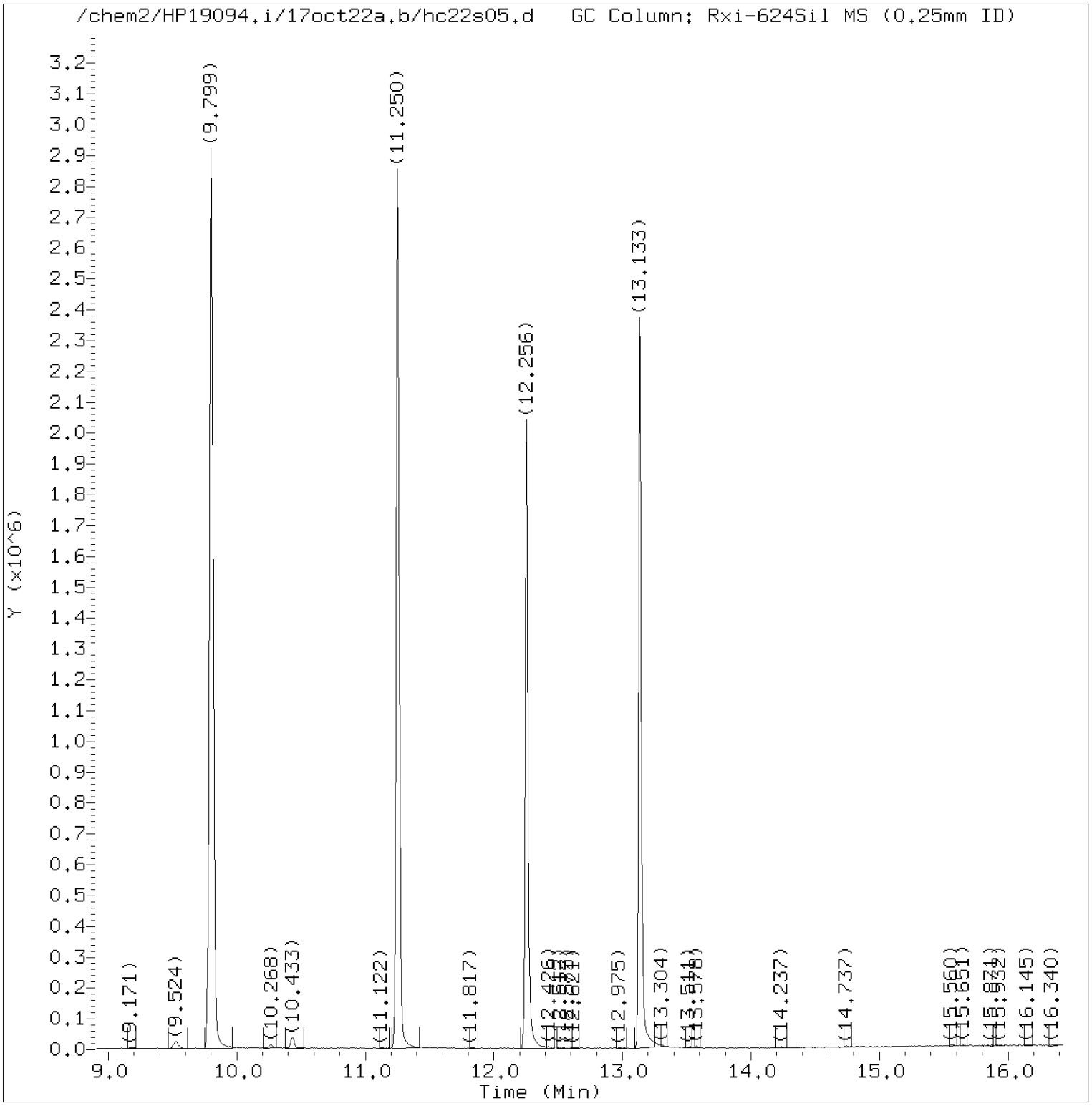
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

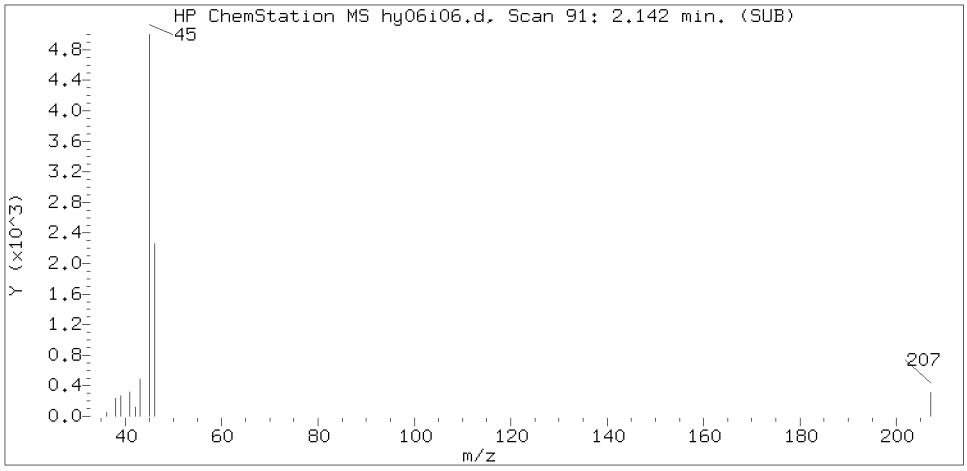
Sample Name: 16WC1 Lab Sample ID: 9262025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	56750	0.613
8) Chloroethane	(2)	2.733	64	75036	1.460
11) Ethyl ether	(2)	3.306	59	925795	24.112
15) 1,1-Dichloroethene	(2)	3.623	96	8107	0.168
26)*t-Butyl Alcohol-d10	(1)	4.263	65	83642	50.000
33) 1,1-Dichloroethane	(2)	5.367	63	397859	3.554
50)$Dibromofluoromethane	(2)	6.879	113	541542	9.913
57)$1,2-Dichloroethane-d4	(2)	7.342	102	83331	9.741
58) Benzene	(2)	7.391	78	47870	0.203
63)*Fluorobenzene	(2)	7.787	96	2262190	10.000
67) Trichloroethene	(2)	8.275	95	6395	0.101
82)$Toluene-d8	(3)	9.799	98	2245683	10.199
89) Tetrachloroethene	(3)	10.427	166	11027	0.163
97)*Chlorobenzene-d5	(3)	11.250	117	1515169	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	611651	9.145
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	621126	10.000

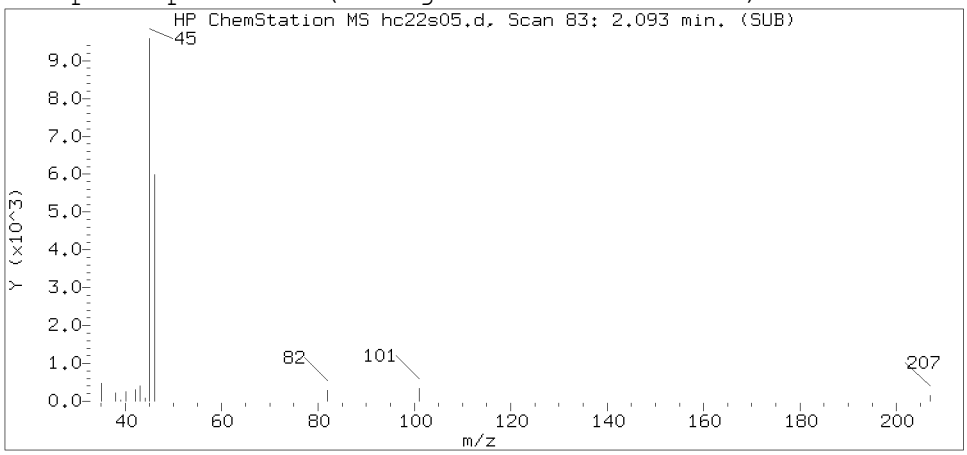
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

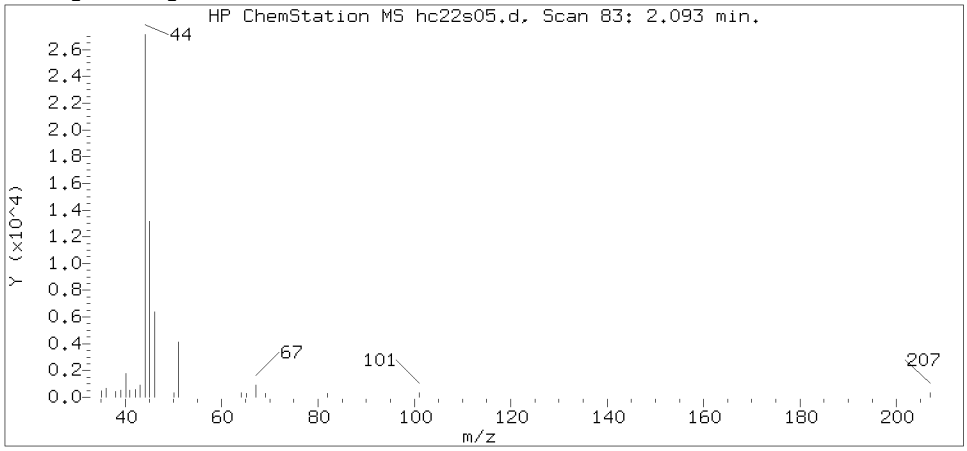
Reference Standard Spectrum for Dimethyl ether

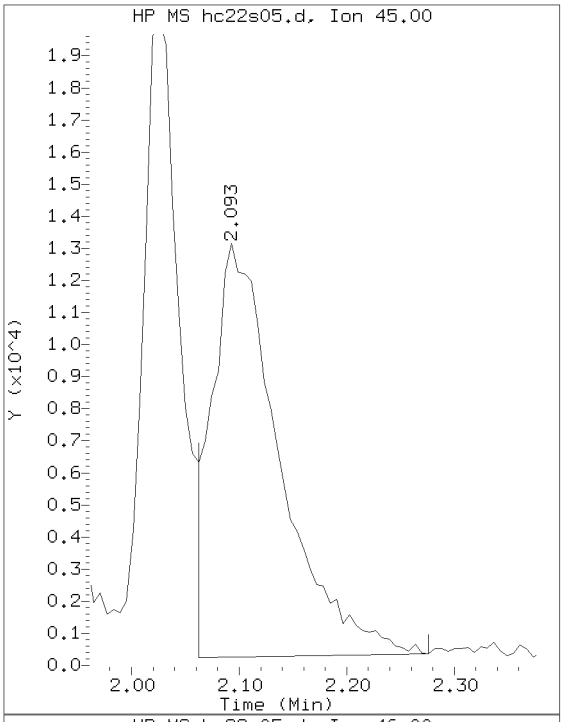


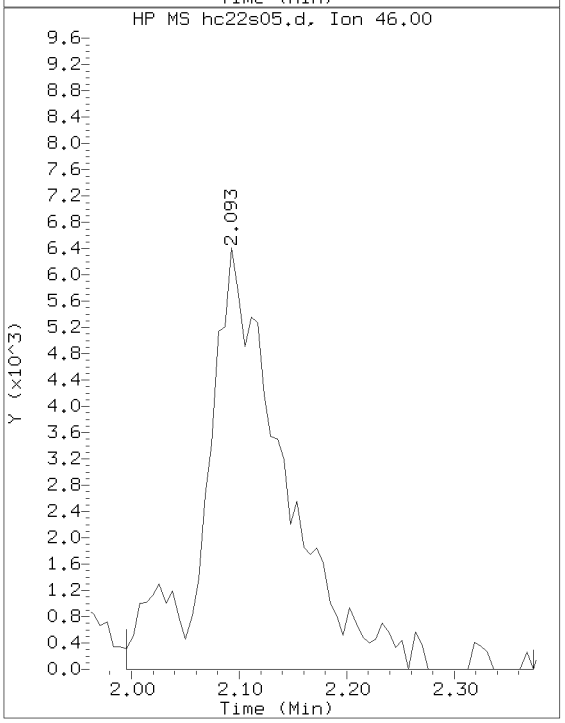
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

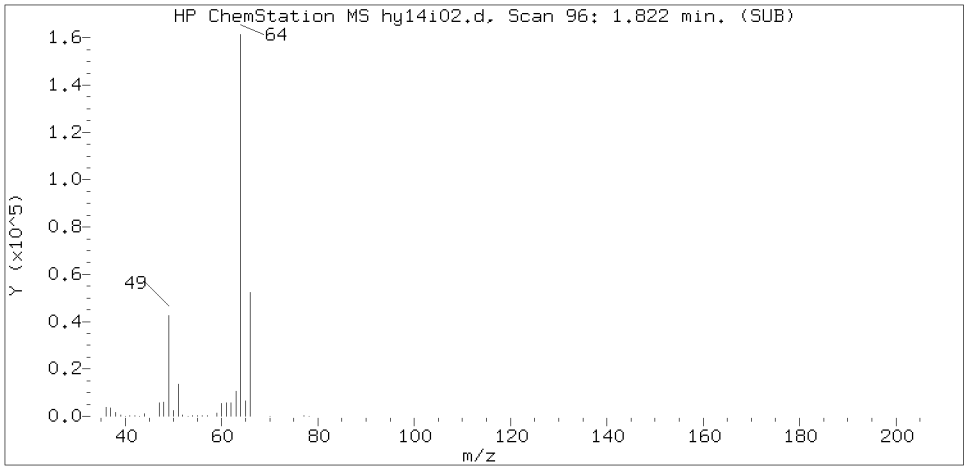
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

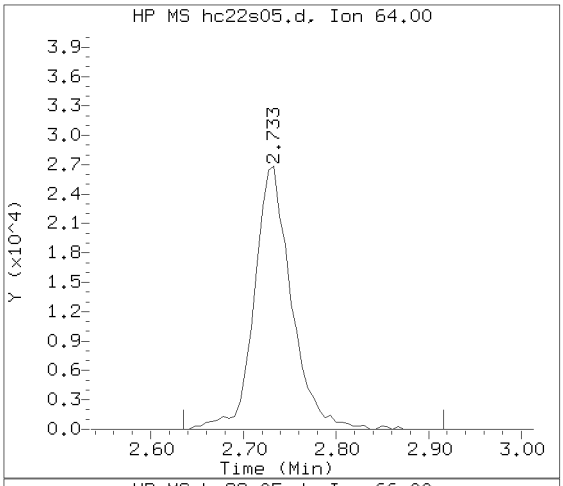
Sample Name: 16WC1 Lab Sample ID: 9262025

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Relative Retention Time :-0.00059
Quant Ion : 45.00
Area (flag) : 56750
On-Column Amount (ng) : 0.6132

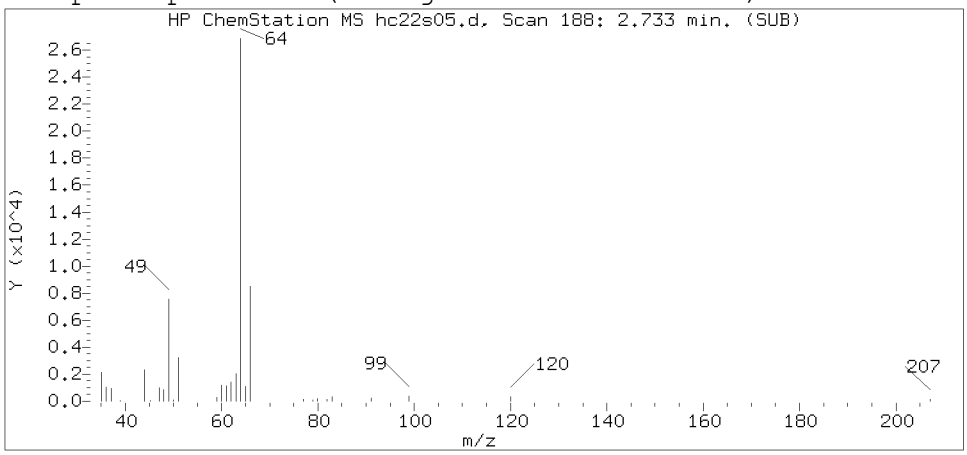
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

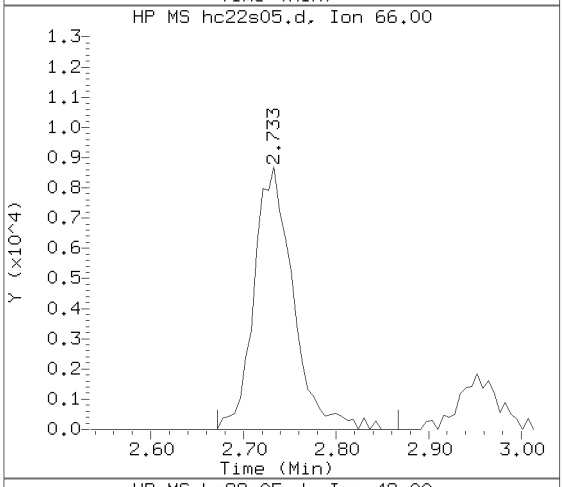
Reference Standard Spectrum for Chloroethane



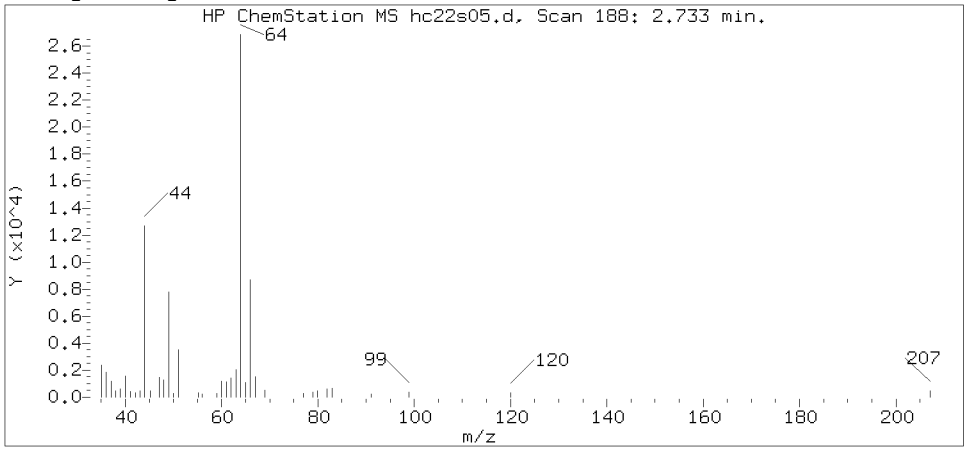


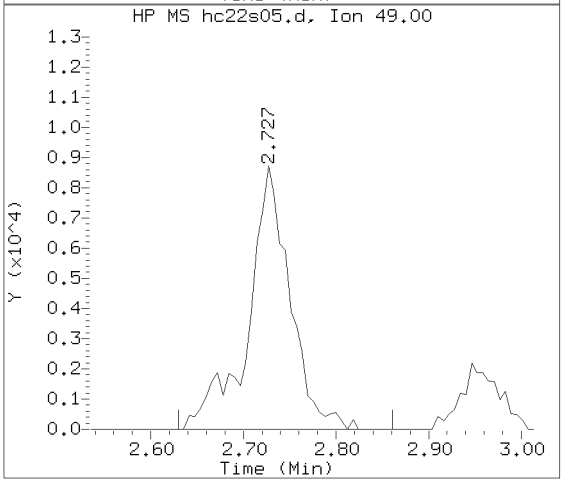
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

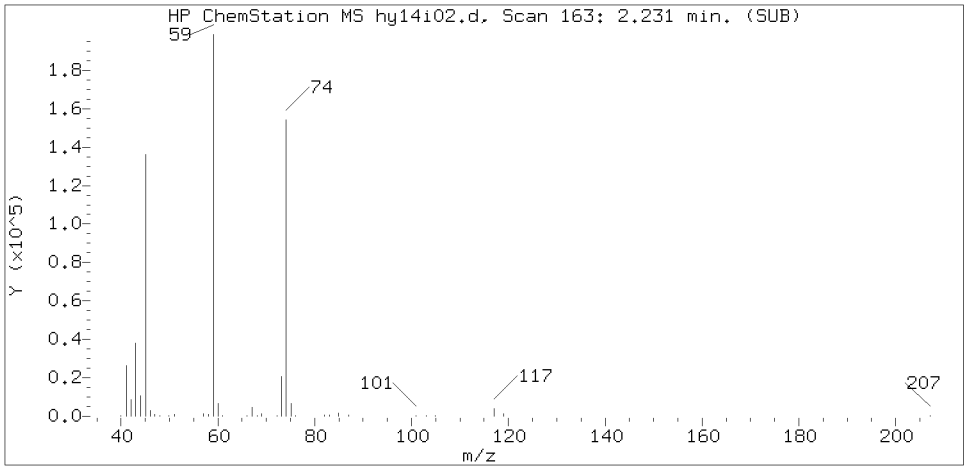
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

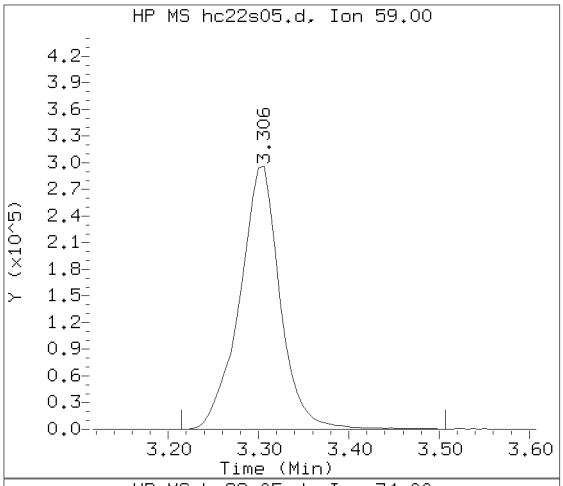
Sample Name: 16WC1 Lab Sample ID: 9262025

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00131
Quant Ion : 64.00
Area (flag) : 75036
On-Column Amount (ng) : 1.4595

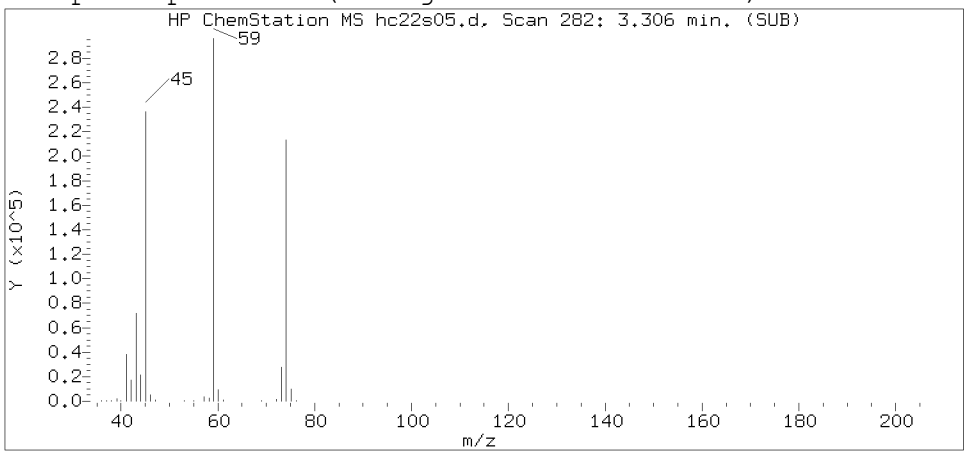
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

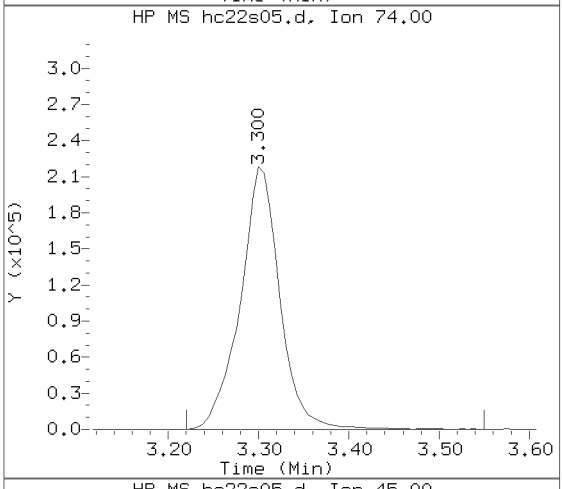
Reference Standard Spectrum for Ethyl ether



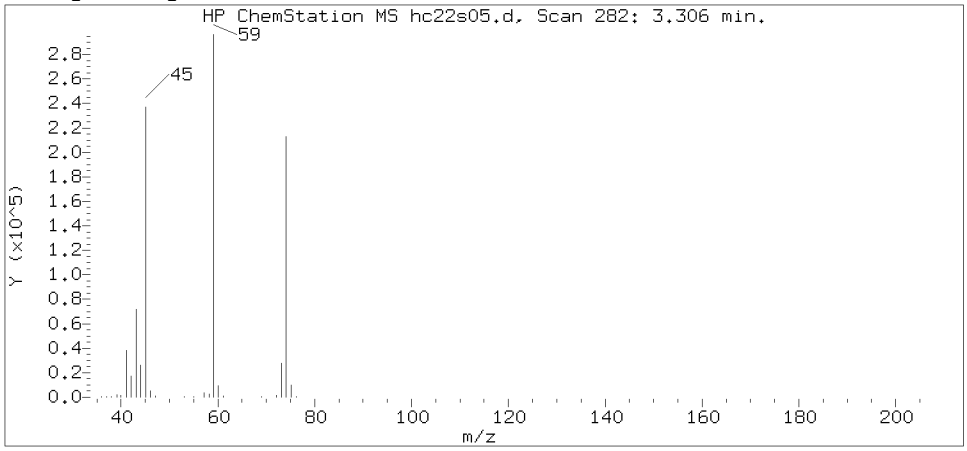


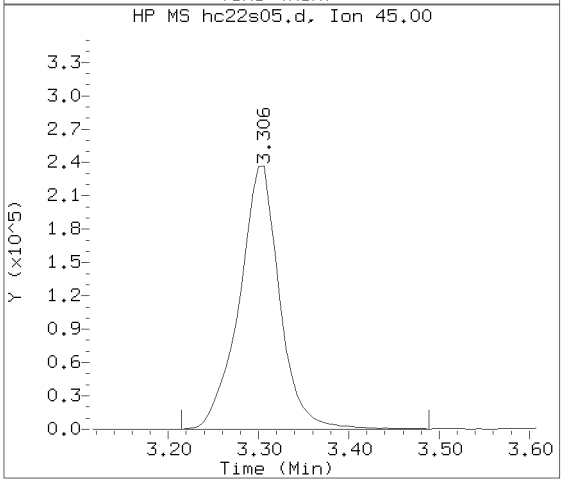
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

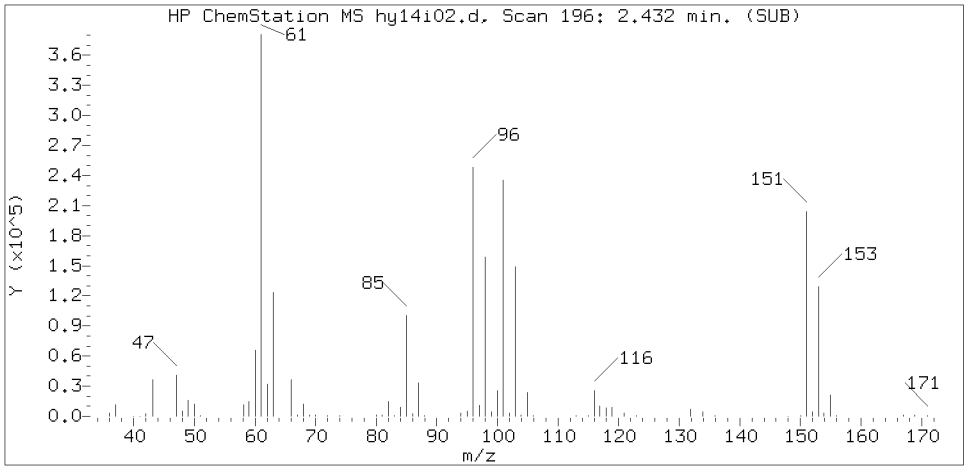
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

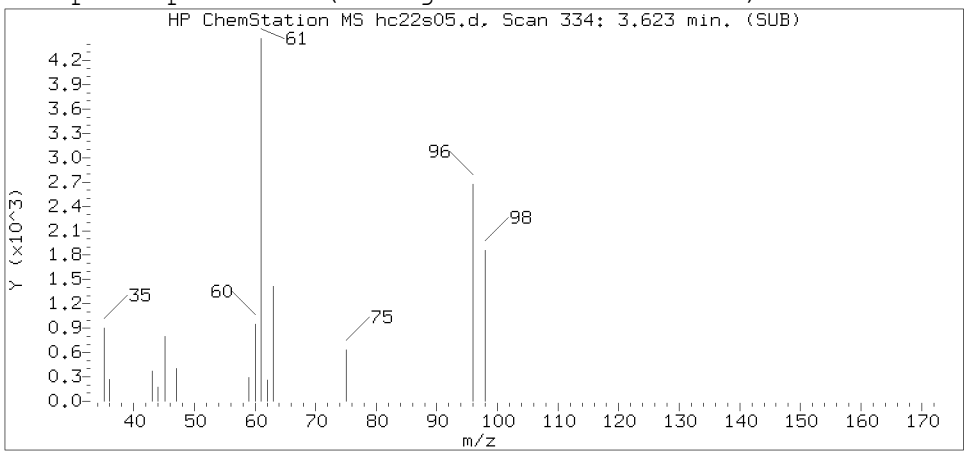
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00125
Quant Ion : 59.00
Area (flag) : 925795
On-Column Amount (ng) : 24.1125

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Target 3.5 esignature user ID: kas02648

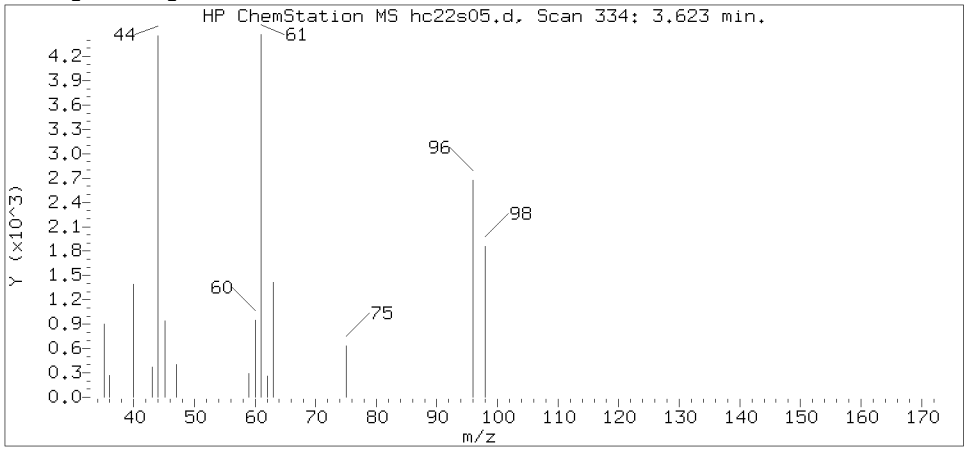
Reference Standard Spectrum for 1,1-Dichloroethene

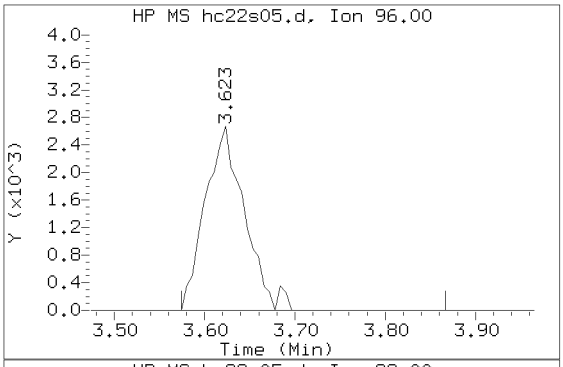


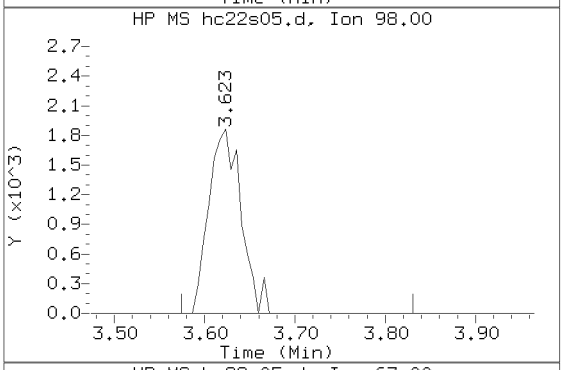
Sample Spectrum (Background Subtracted)

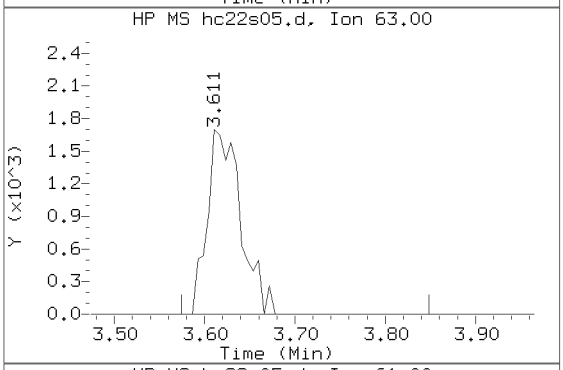


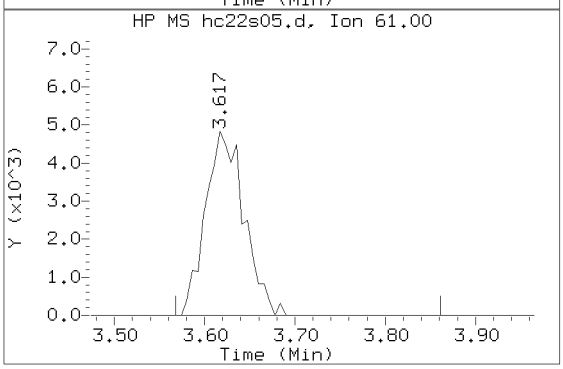
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

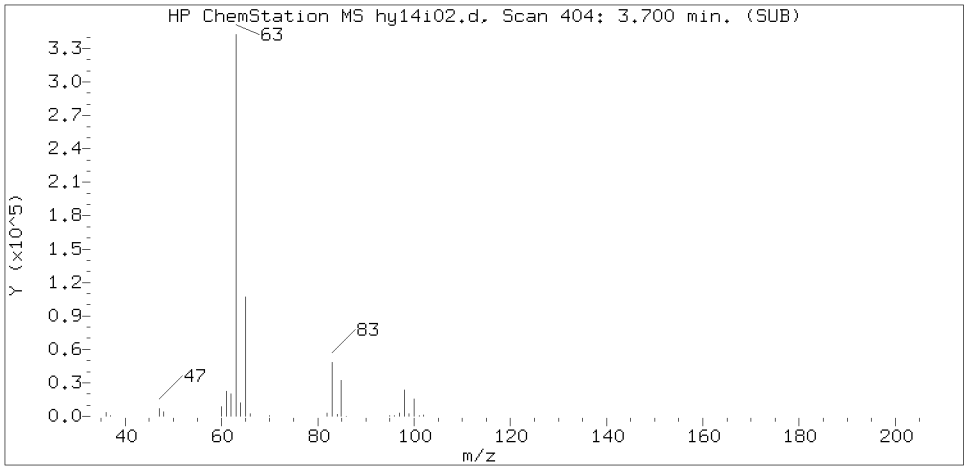
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

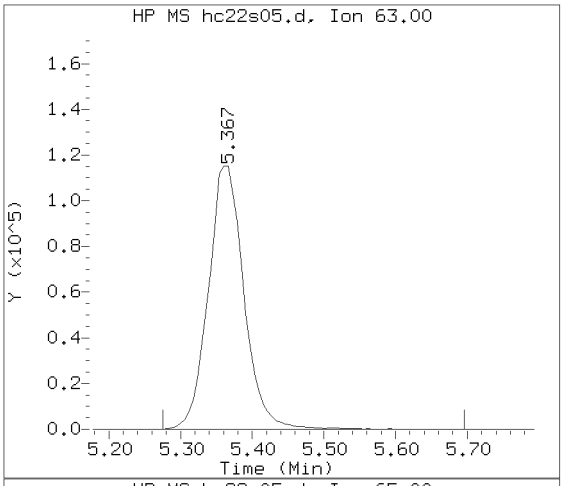
Sample Name: 16WC1 Lab Sample ID: 9262025

Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 334
Retention Time (minutes): 3.623
Relative Retention Time :-0.00122
Quant Ion : 96.00
Area (flag) : 8107
On-Column Amount (ng) : 0.1684

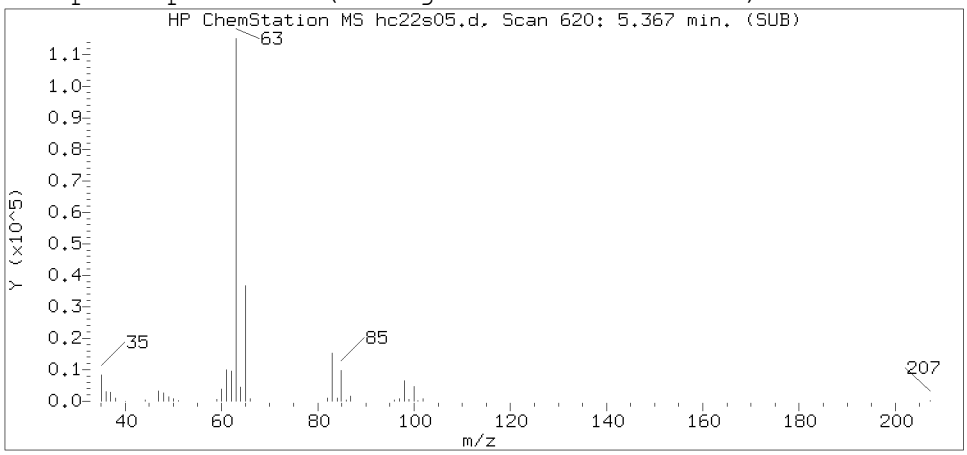
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

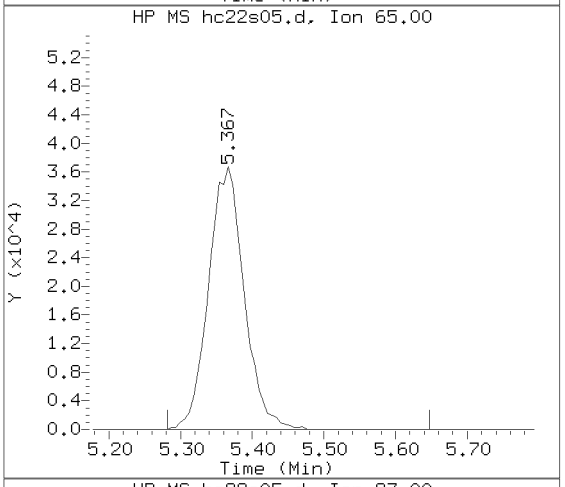
Reference Standard Spectrum for 1,1-Dichloroethane



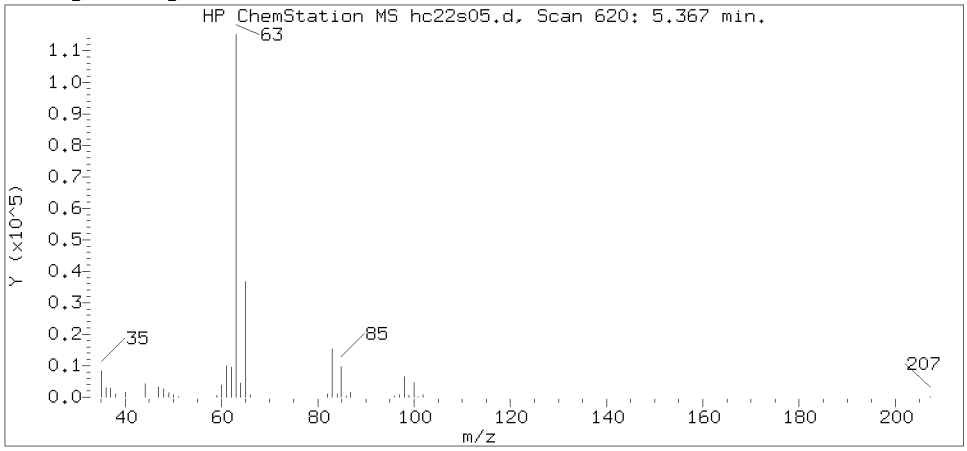


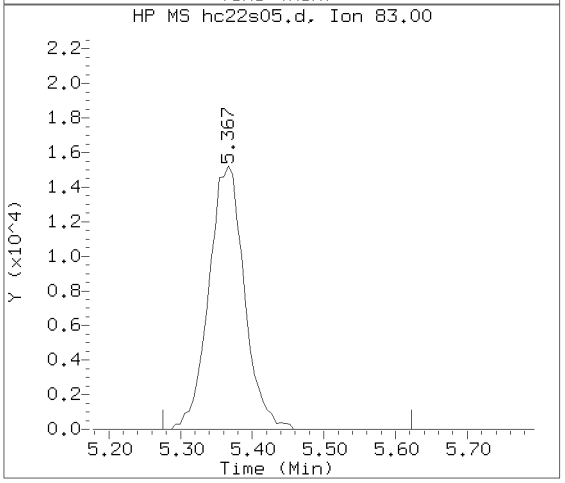
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

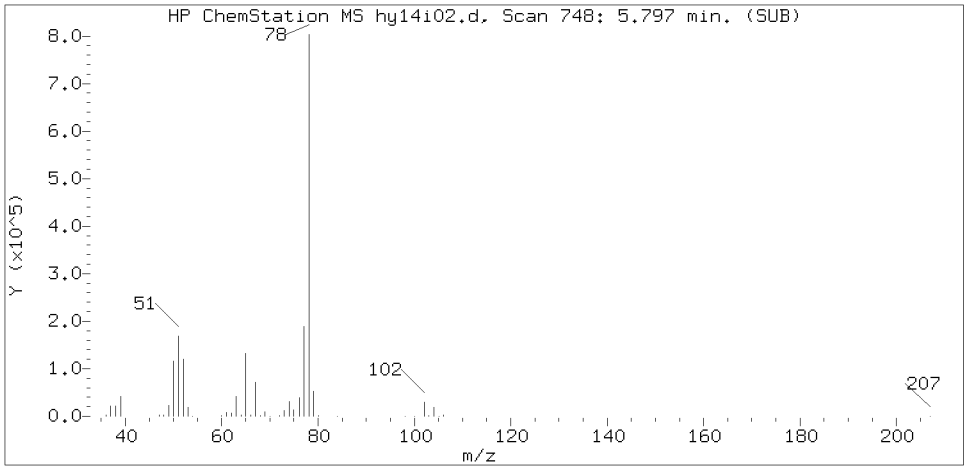
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

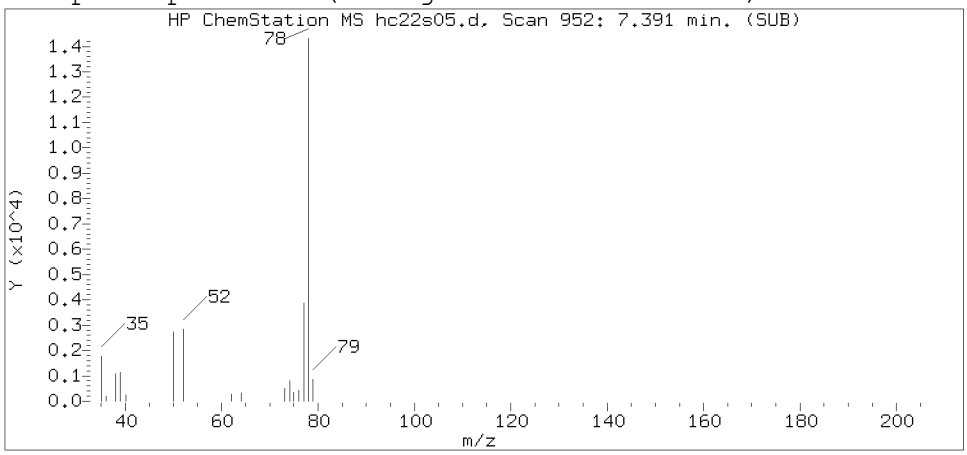
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 620
Retention Time (minutes): 5.367
Relative Retention Time :-0.00104
Quant Ion : 63.00
Area (flag) : 397859
On-Column Amount (ng) : 3.5544

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

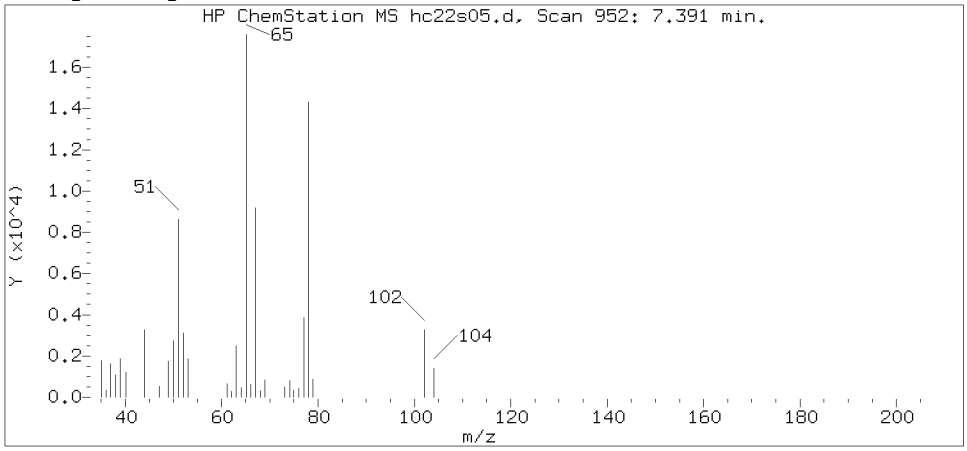
Reference Standard Spectrum for Benzene

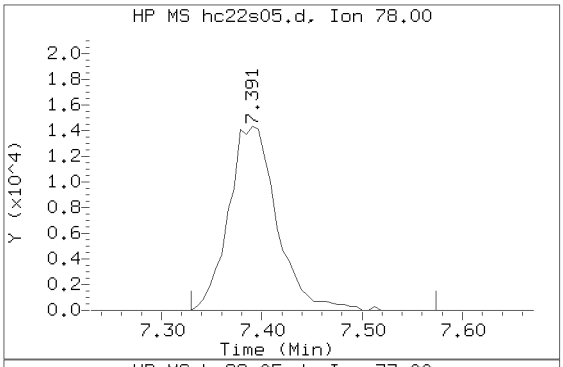


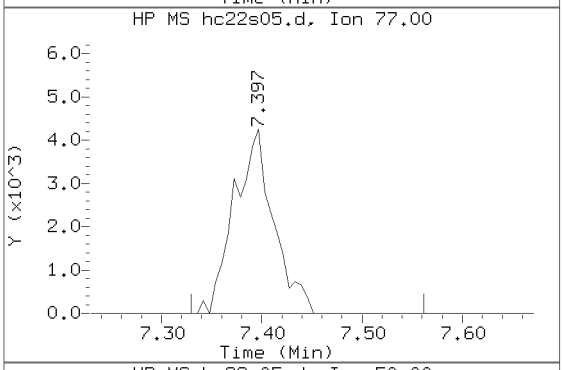
Sample Spectrum (Background Subtracted)

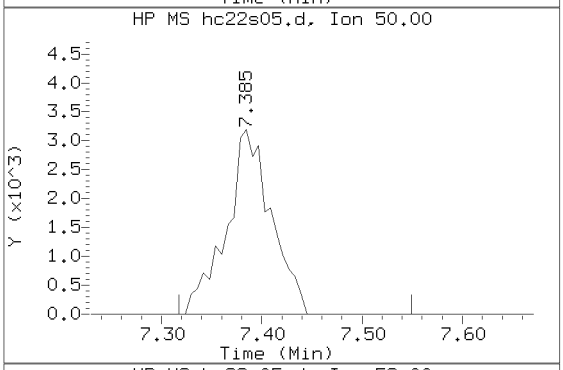


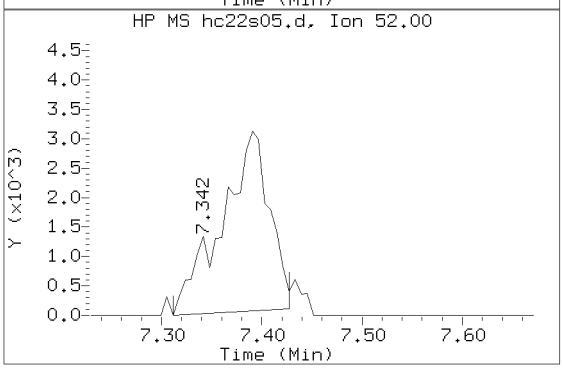
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

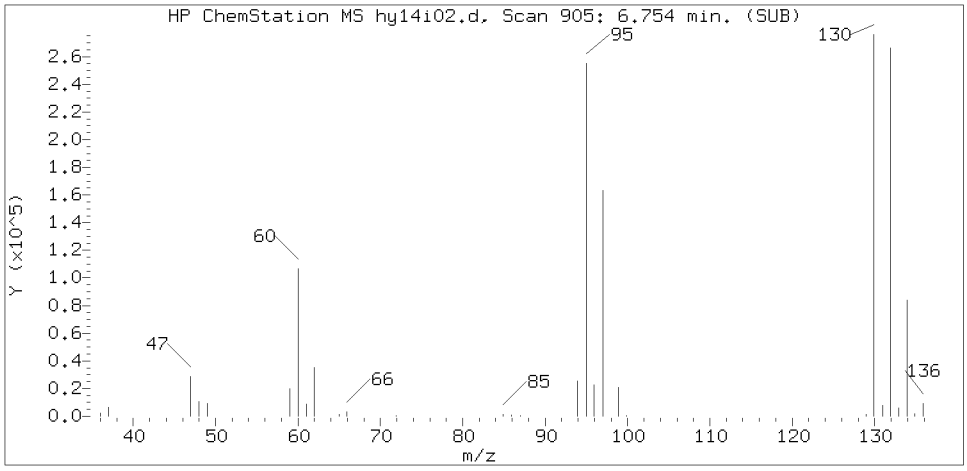
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

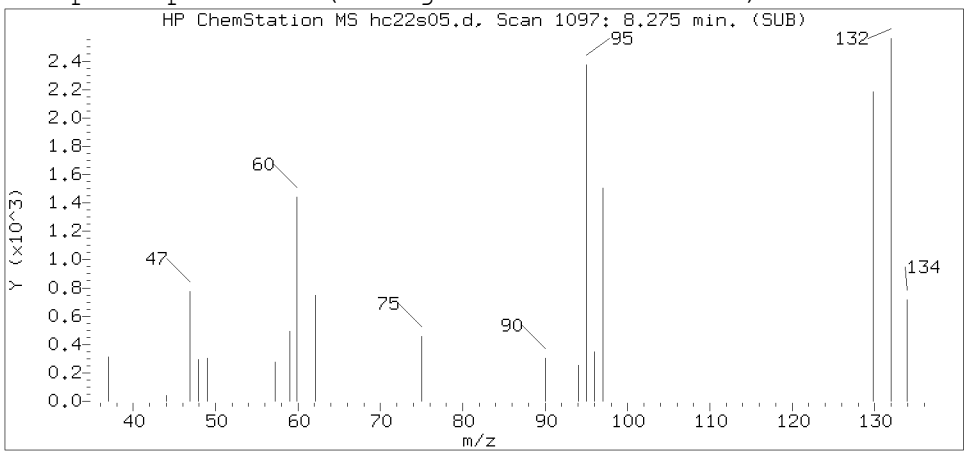
Compound Number : 58
Compound Name : Benzene
Scan Number : 952
Retention Time (minutes): 7.391
Relative Retention Time :-0.00004
Quant Ion : 78.00
Area (flag) : 47870
On-Column Amount (ng) : 0.2031

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

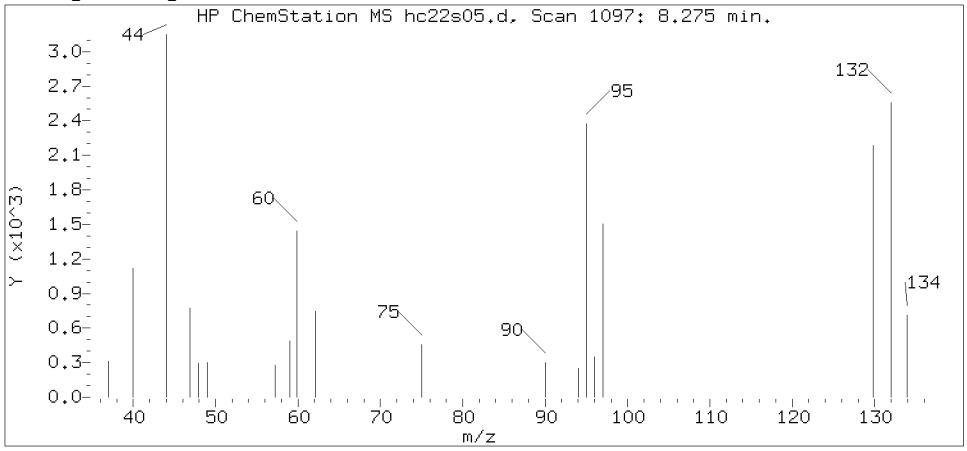
Reference Standard Spectrum for Trichloroethene

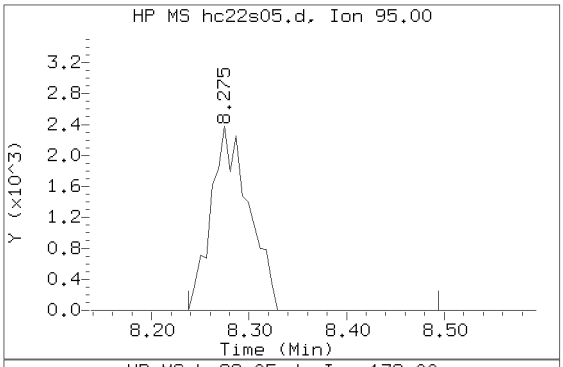


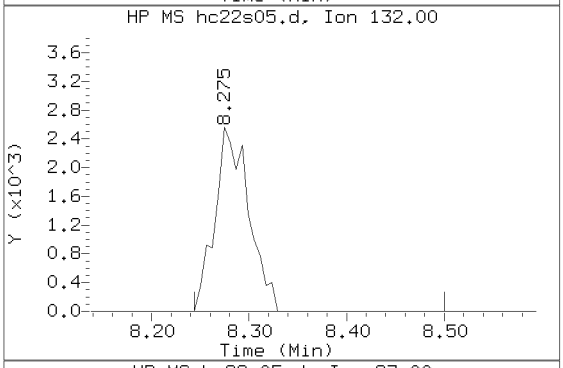
Sample Spectrum (Background Subtracted)

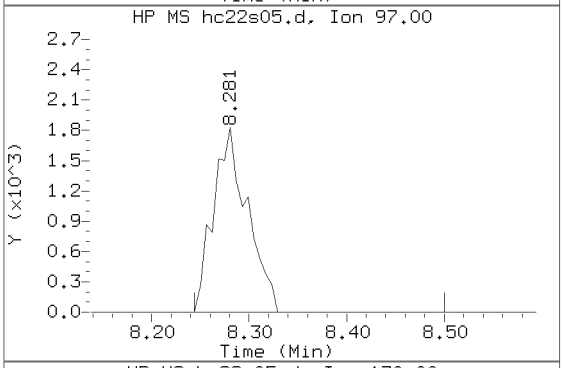


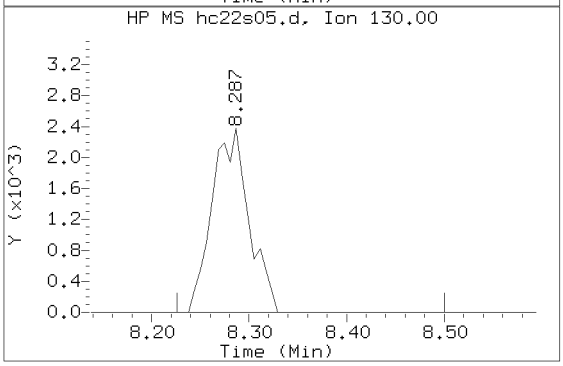
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

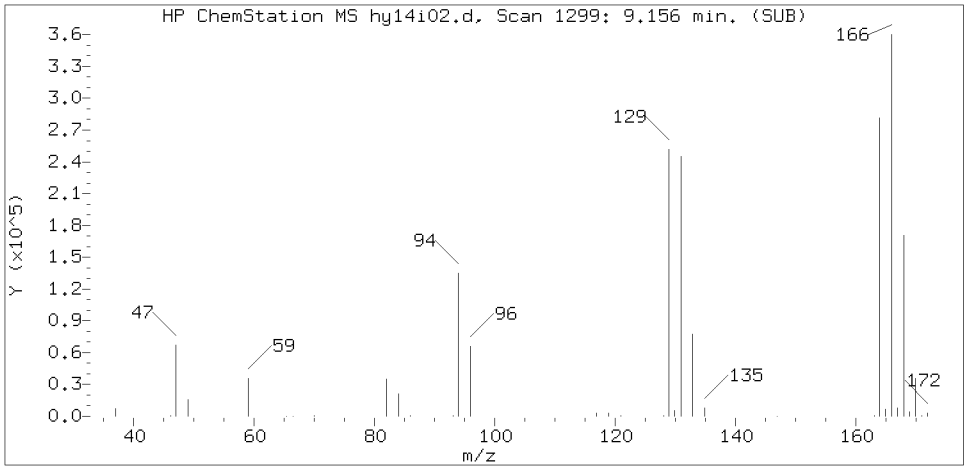
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

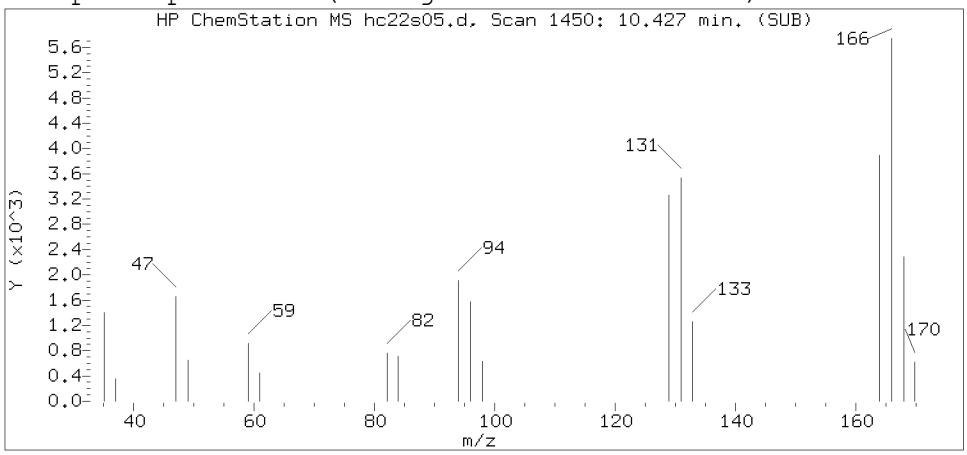
Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1097
Retention Time (minutes)	: 8.275
Relative Retention Time	: 0.00005
Quant Ion	: 95.00
Area (flag)	: 6395
On-Column Amount (ng)	: 0.1013

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Target 3.5 esignature user ID: kas02648

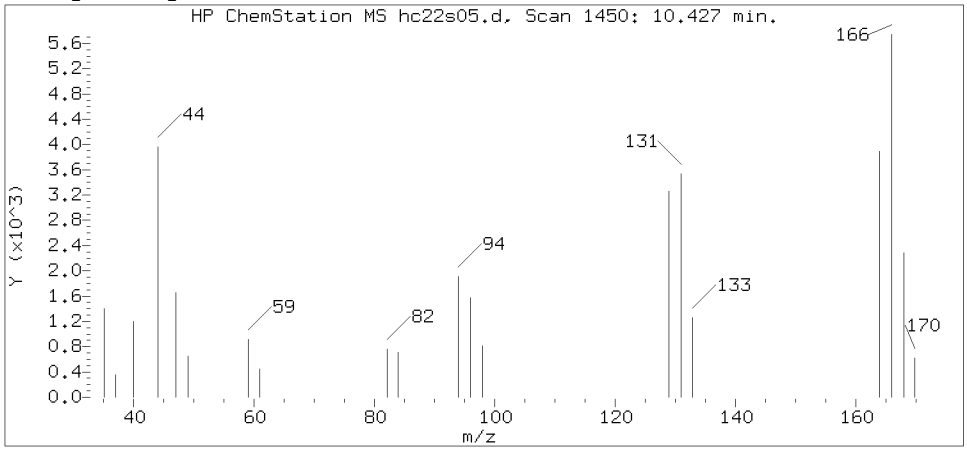
Reference Standard Spectrum for Tetrachloroethene

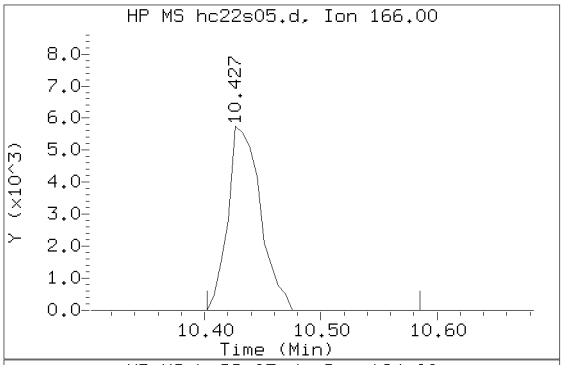


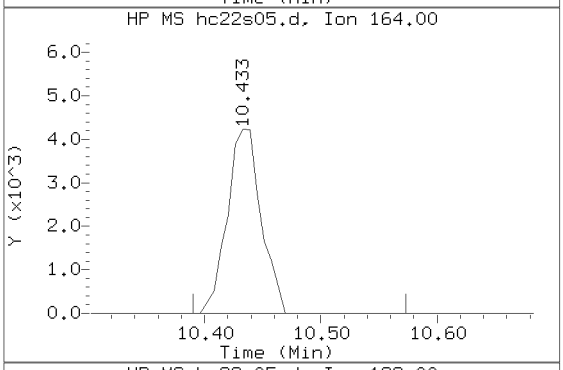
Sample Spectrum (Background Subtracted)

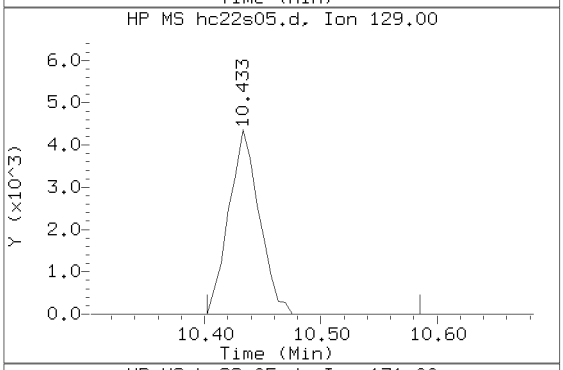


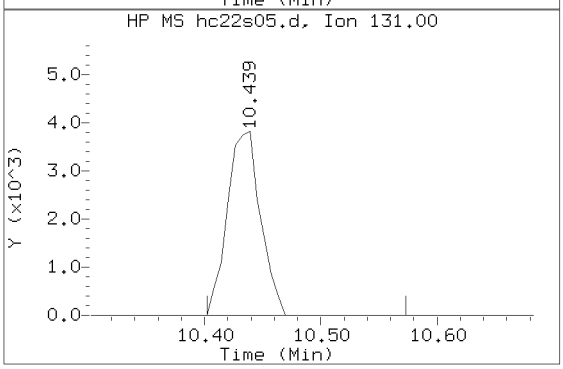
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1 Lab Sample ID: 9262025

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1450
Retention Time (minutes): 10.427
Relative Retention Time : 0.00054
Quant Ion : 166.00
Area (flag) : 11027
On-Column Amount (ng) : 0.1633

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Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s16.d Injection date and time: **23-OCT-2017 05:44**
Data file Sample Info. Line: 16WFD;9262028;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.251(-0.018)	437	65	81763 (-4)	50.00	
63) Fluorobenzene	7.787(-0.006)	1017	96	2193386 (-10)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1452035 (-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139(-0.006)	1895	152	579381 (-27)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872(0.001)	113	519956	9.817	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342(0.001)	102	82297	9.922	99%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2166048	10.265	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255(-0.001)	95	584482	9.118	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					0.1	1
4) Dimethyl ether	(2)	2.087(0.000)	45	57071	0.636	0.64		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)	2.721(0.000)	64	74944	1.503	1.50			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)	3.294(0.000)	59	918629	24.676	24.68			0.1	13
15) 1,1-Dichloroethene	(2)	3.611(0.000)	96	7234	0.155	0.16		J	0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.354(0.000)	63	397506	3.663	3.66			0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)	7.390(-0.000)	78	48347	0.212	0.21		J	0.1	1
67) Trichloroethene	(2)	8.280(-0.000)	95	6767	0.111	0.11		J	0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.439(-0.000)	166	11407	0.176	0.18		J	0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

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Data file: /chem2/HP19094.i/17oct22a.b/hc22s16.d Injection date and time: **23-OCT-2017 05:44**
Data file Sample Info. Line: 16WFD;9262028;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

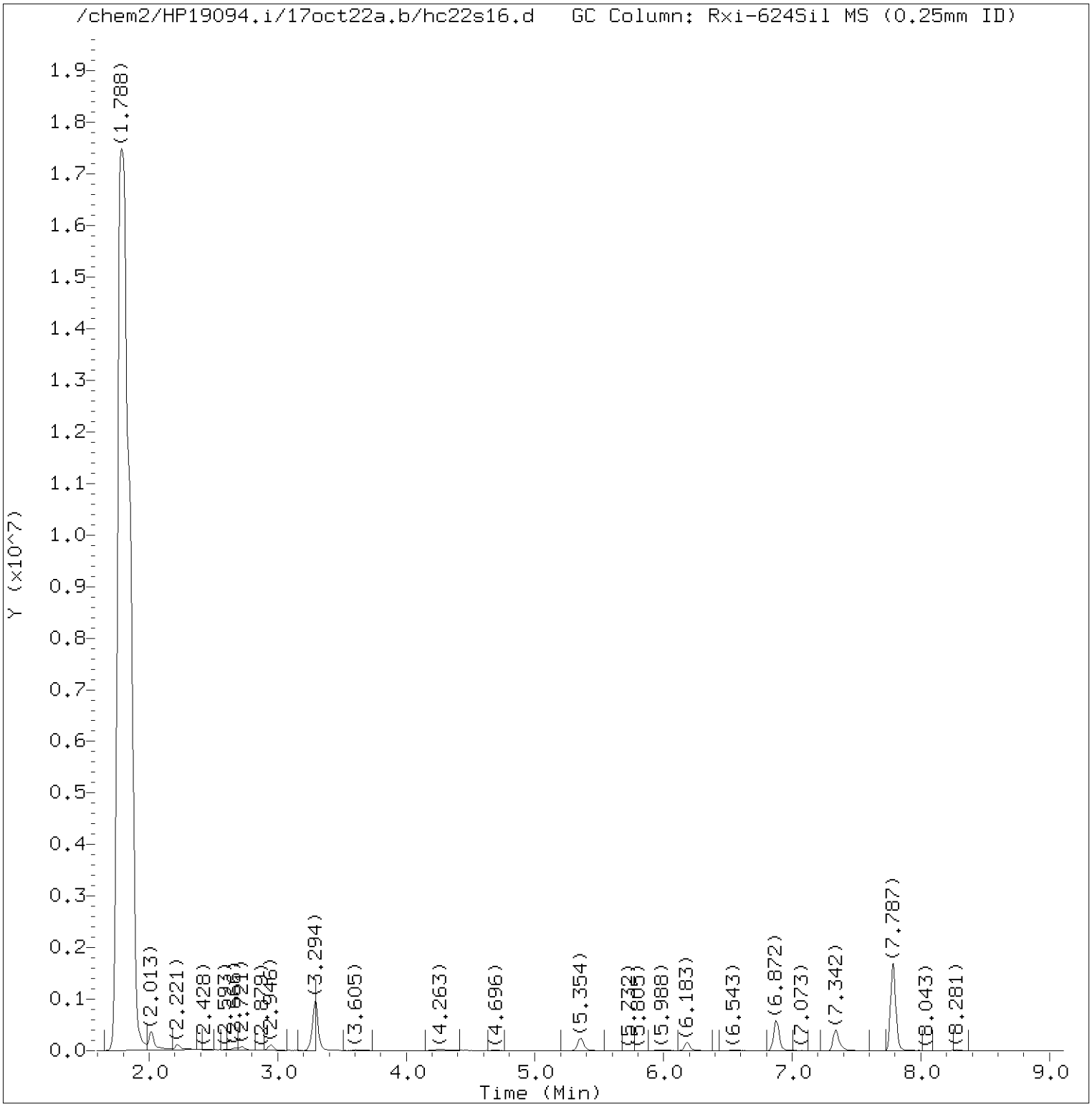
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

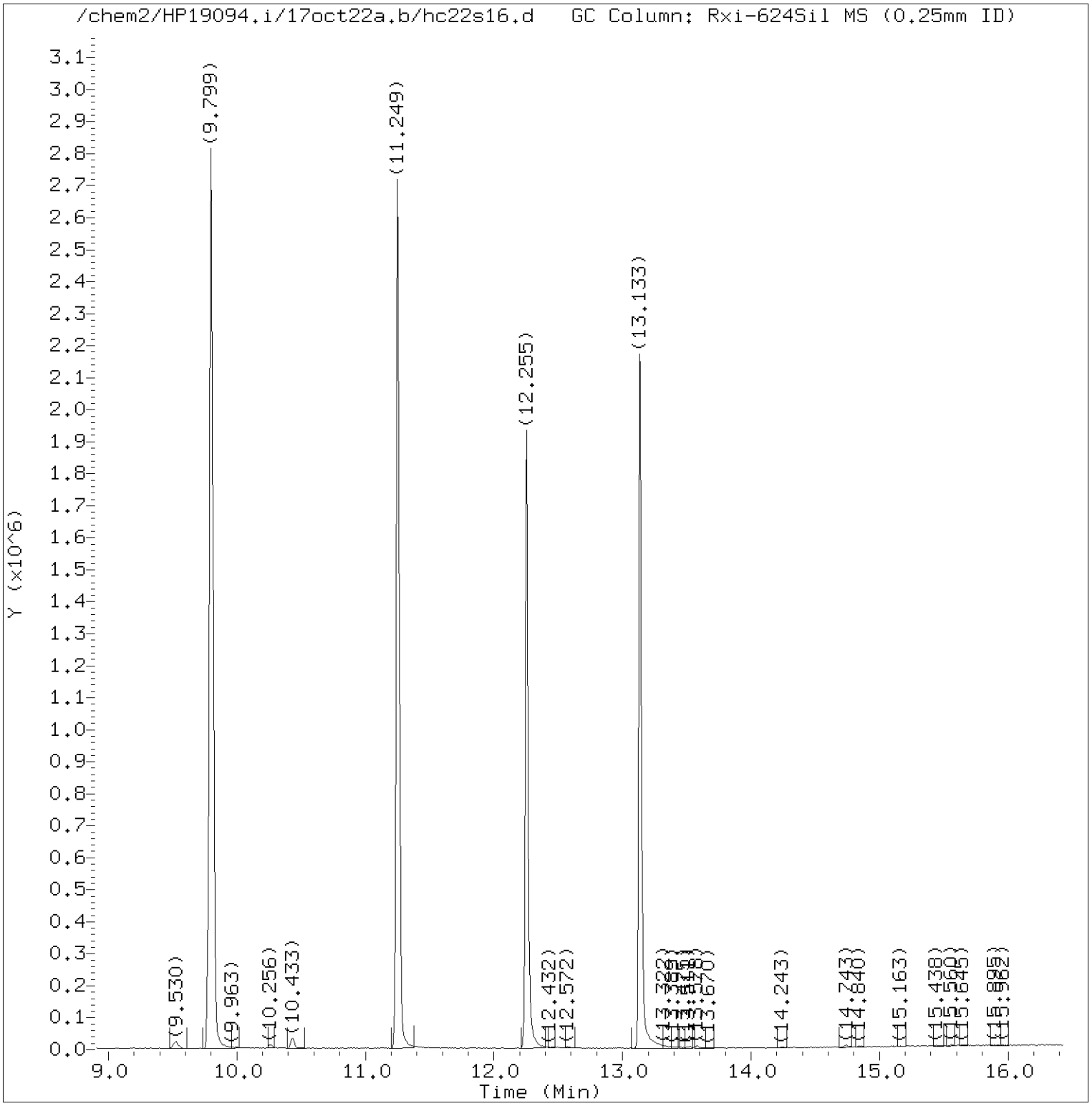
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

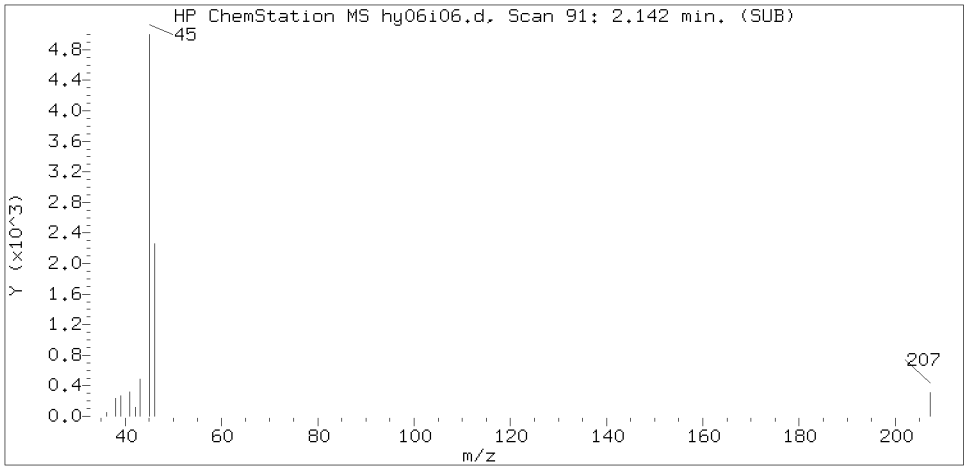
Sample Name: 16WFD Lab Sample ID: 9262028

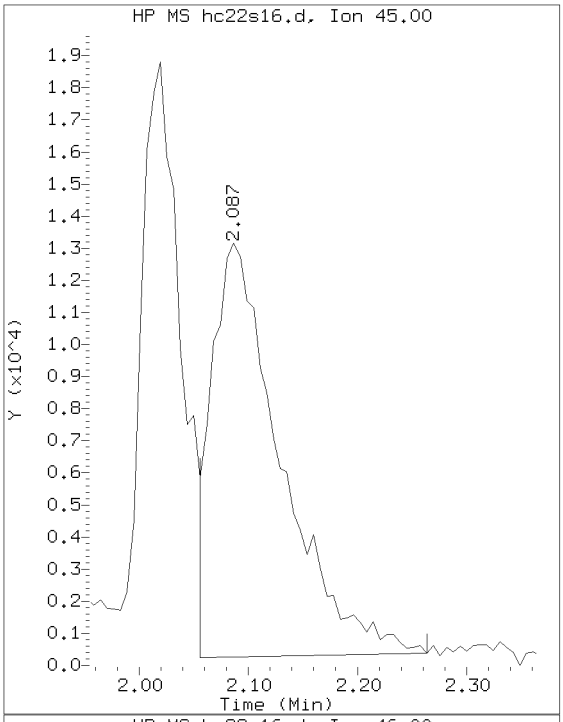
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	57071	0.636
8) Chloroethane	(2)	2.721	64	74944	1.503
11) Ethyl ether	(2)	3.294	59	918629	24.676
15) 1,1-Dichloroethene	(2)	3.611	96	7234	0.155
26)*t-Butyl Alcohol-d10	(1)	4.251	65	81763	50.000
33) 1,1-Dichloroethane	(2)	5.354	63	397506	3.663
50)$Dibromofluoromethane	(2)	6.872	113	519956	9.817
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82297	9.922
58) Benzene	(2)	7.390	78	48347	0.212
63)*Fluorobenzene	(2)	7.787	96	2193386	10.000
67) Trichloroethene	(2)	8.281	95	6767	0.111
82)$Toluene-d8	(3)	9.799	98	2166048	10.265
89) Tetrachloroethene	(3)	10.439	166	11407	0.176
97)*Chlorobenzene-d5	(3)	11.249	117	1452035	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	584482	9.118
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	579381	10.000

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

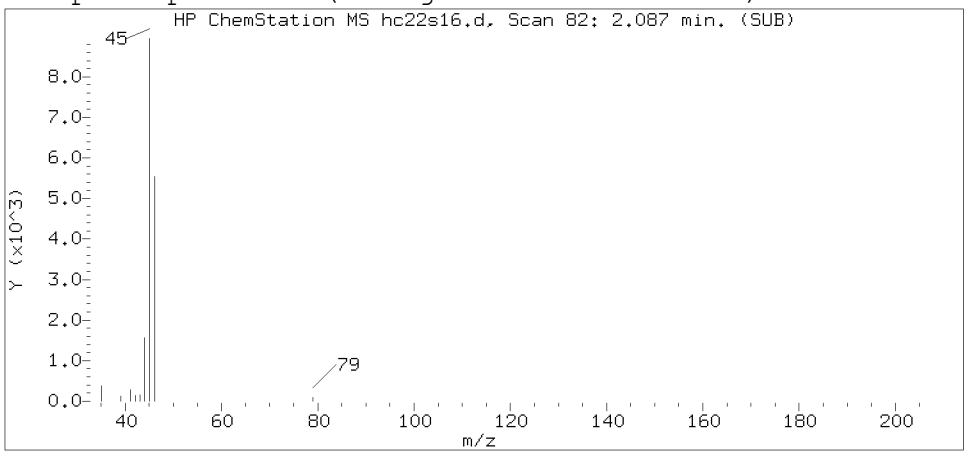
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

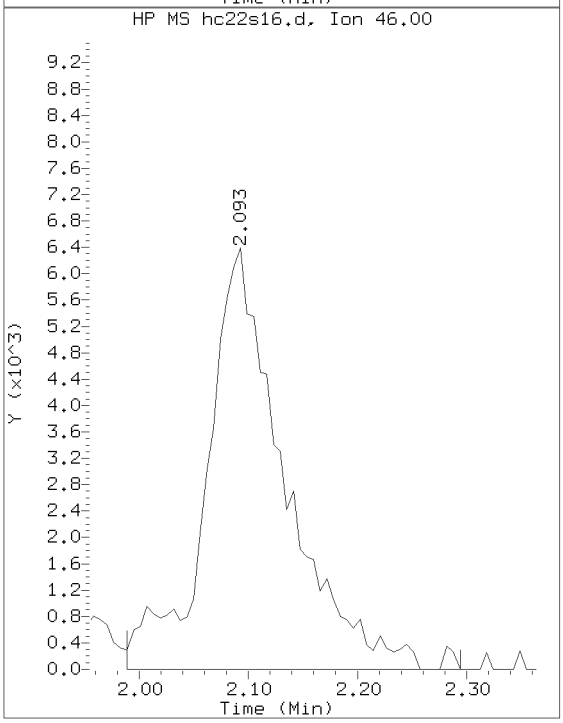
Reference Standard Spectrum for Dimethyl ether



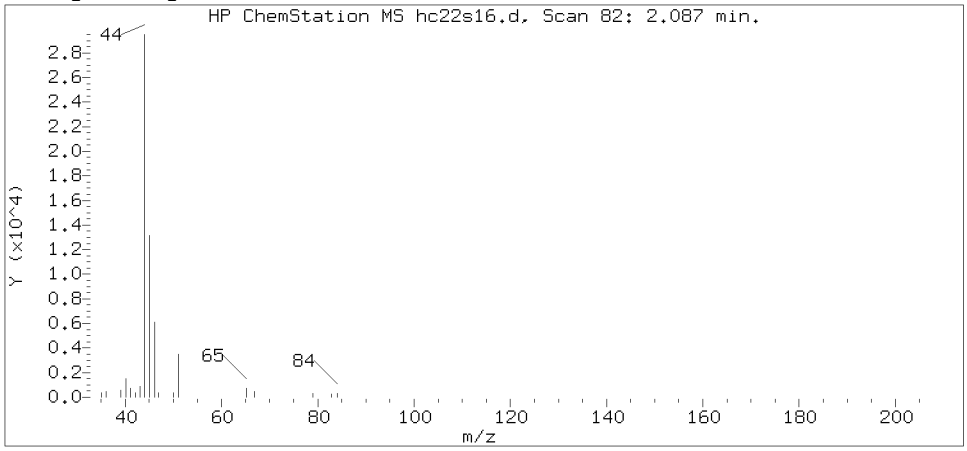


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

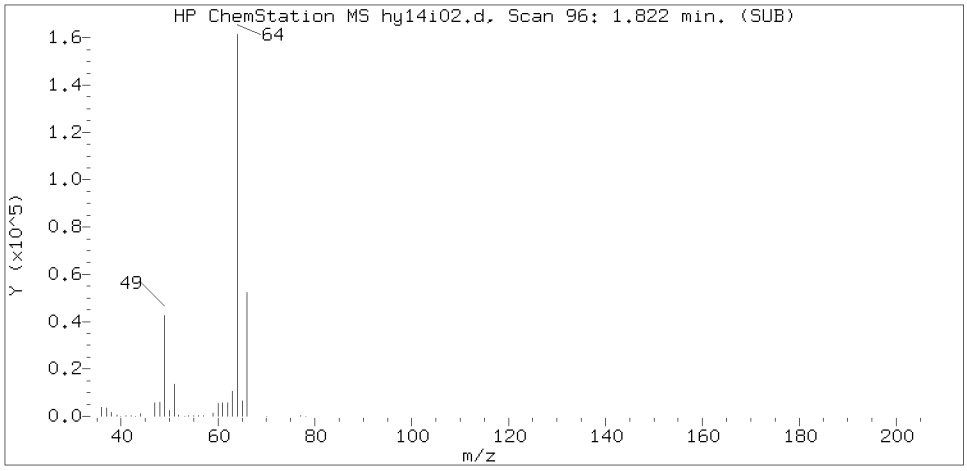
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

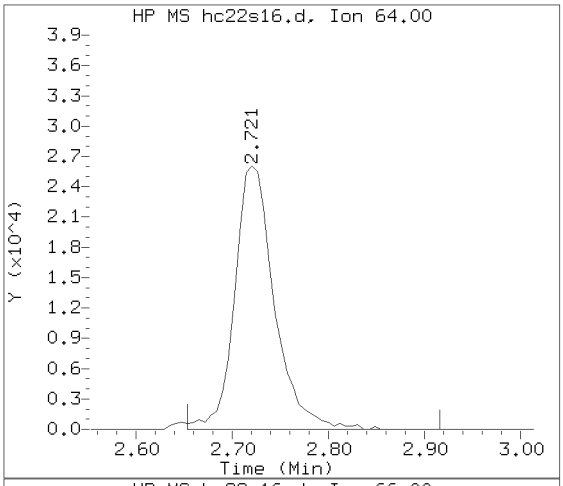
Sample Name: 16WFD Lab Sample ID: 9262028

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 82
Retention Time (minutes)	: 2.087
Relative Retention Time	: 0.00021
Quant Ion	: 45.00
Area (flag)	: 57071
On-Column Amount (ng)	: 0.6360

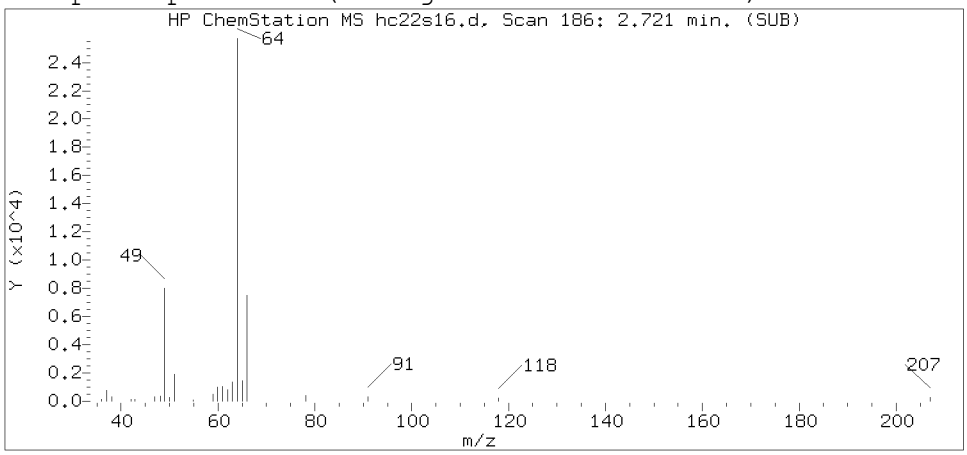
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

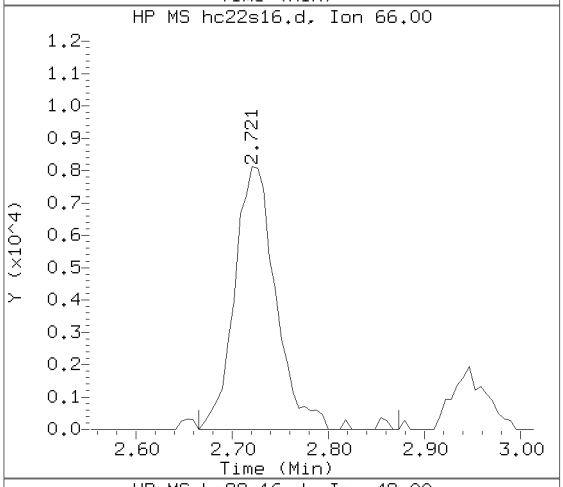
Reference Standard Spectrum for Chloroethane



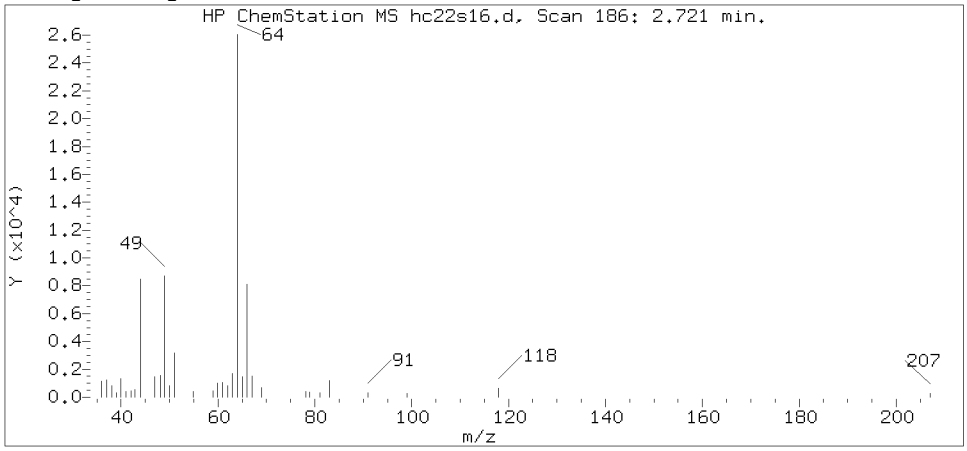


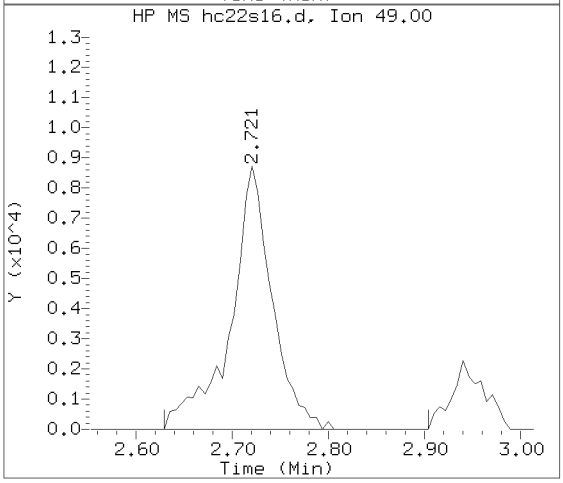
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

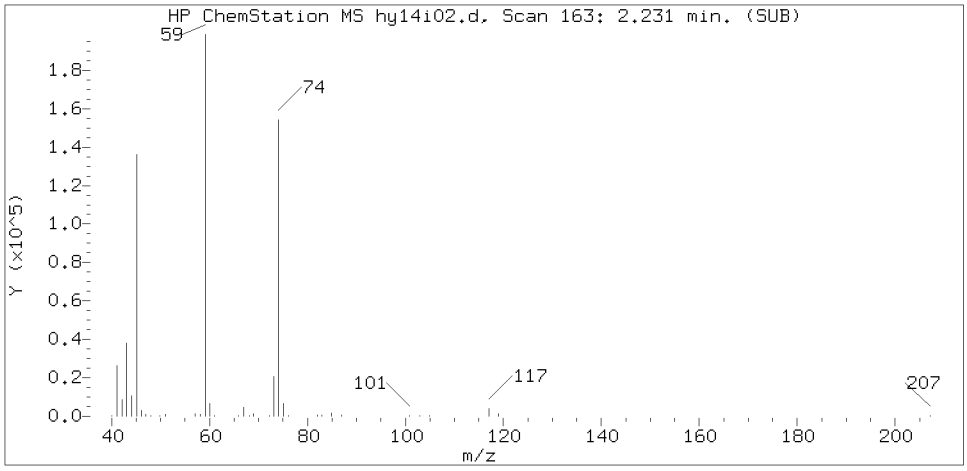
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

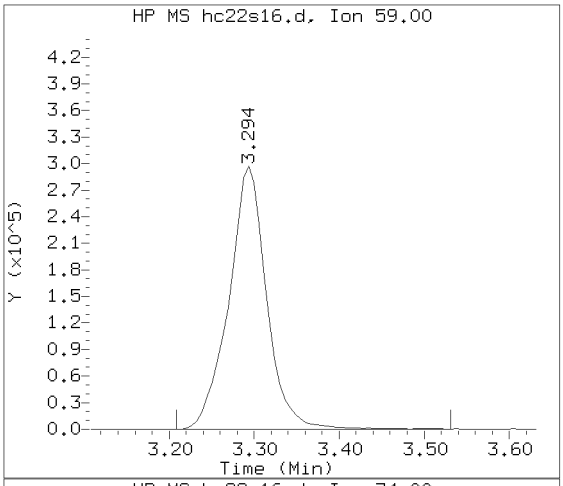
Sample Name: 16WFD Lab Sample ID: 9262028

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 186
Retention Time (minutes)	: 2.721
Relative Retention Time	: 0.00027
Quant Ion	: 64.00
Area (flag)	: 74944
On-Column Amount (ng)	: 1.5035

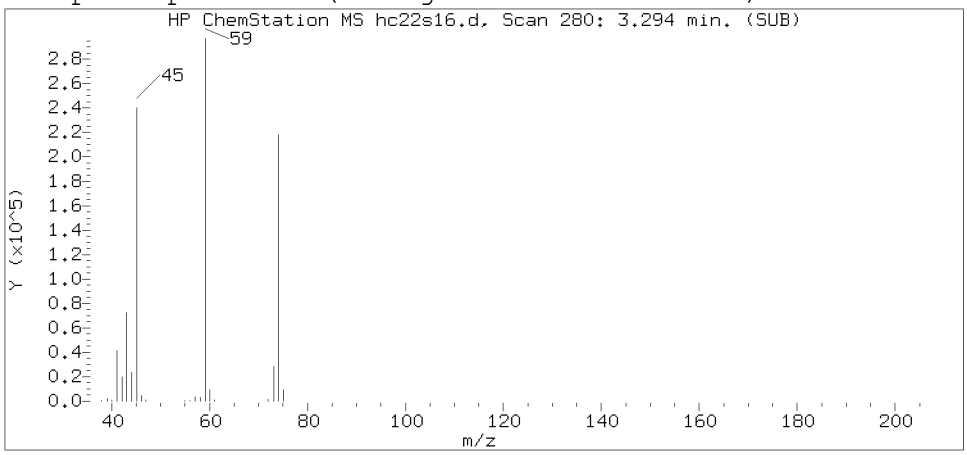
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

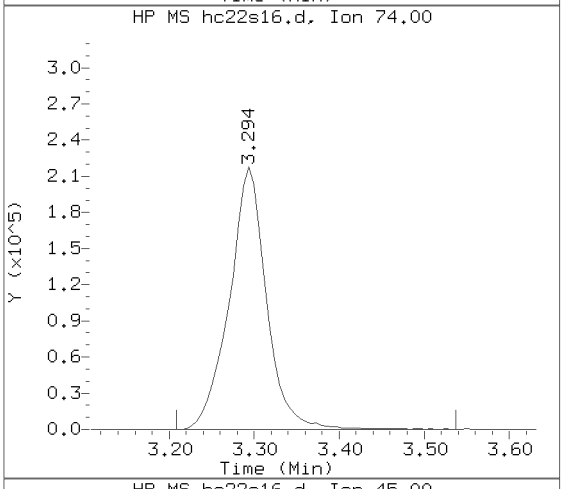
Reference Standard Spectrum for Ethyl ether



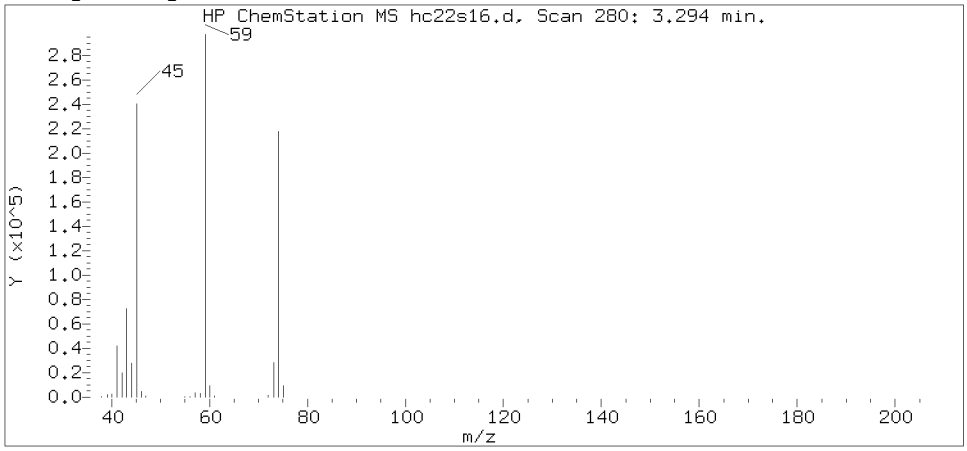


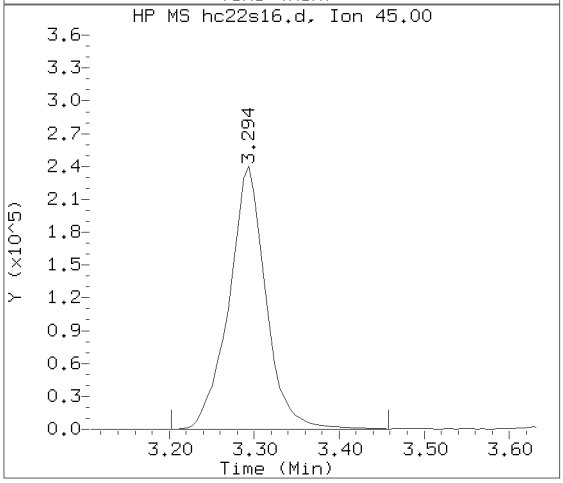
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

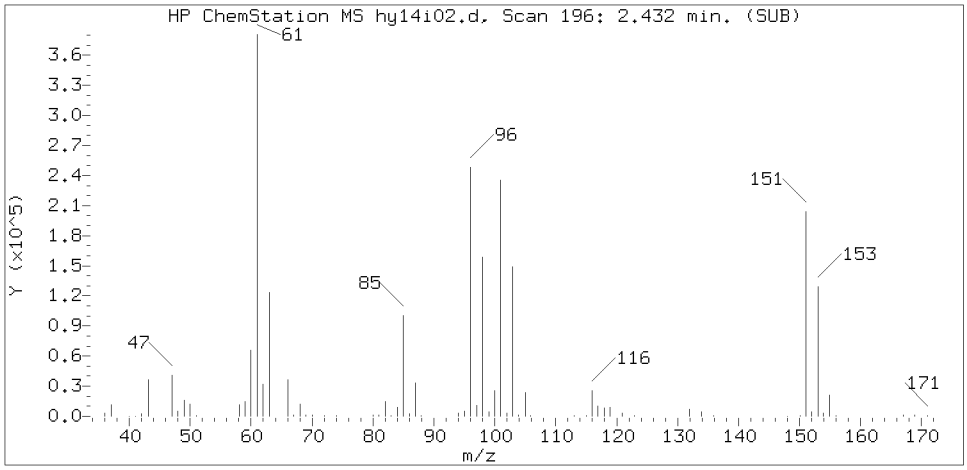
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

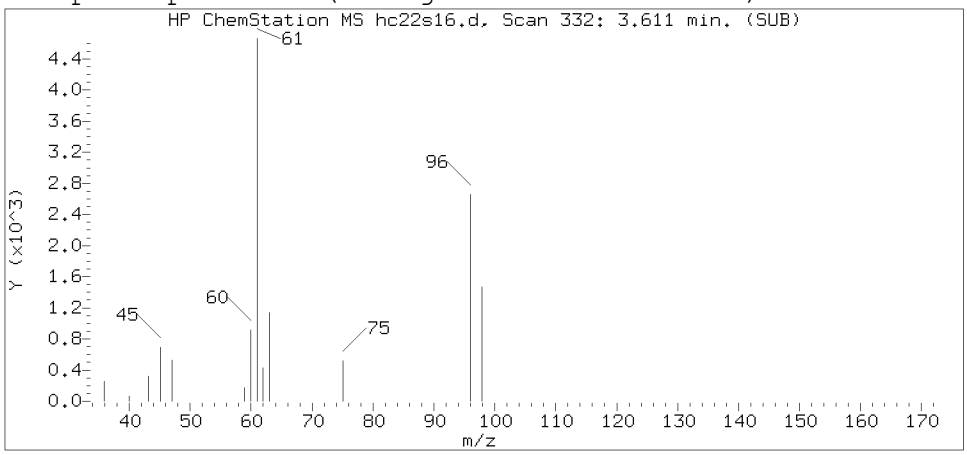
Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 280
Retention Time (minutes)	: 3.294
Relative Retention Time	: 0.00033
Quant Ion	: 59.00
Area (flag)	: 918629
On-Column Amount (ng)	: 24.6764

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

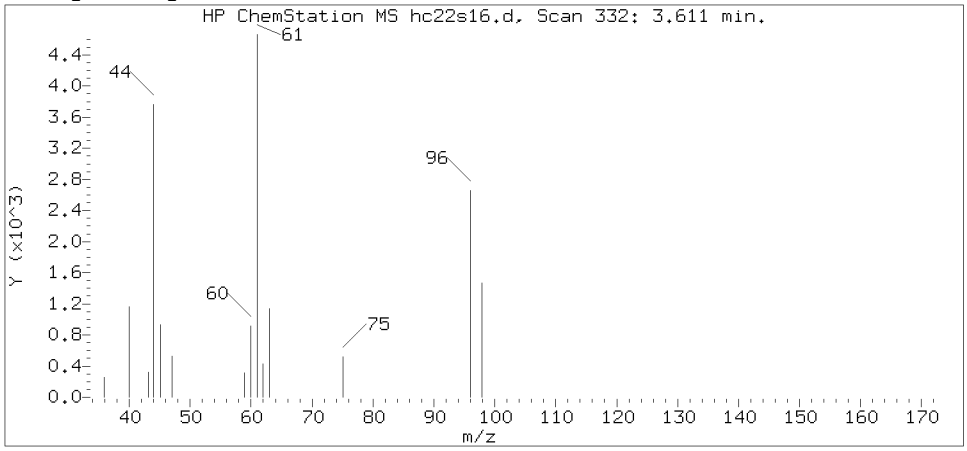
Reference Standard Spectrum for 1,1-Dichloroethene

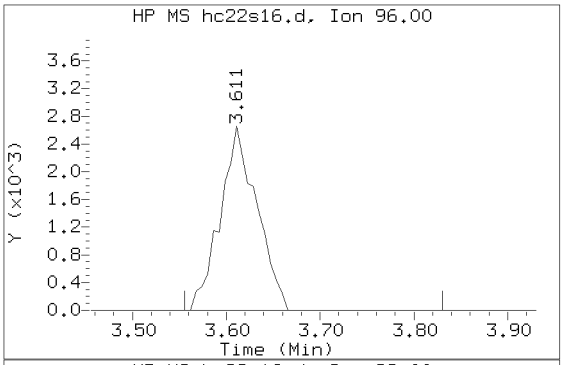


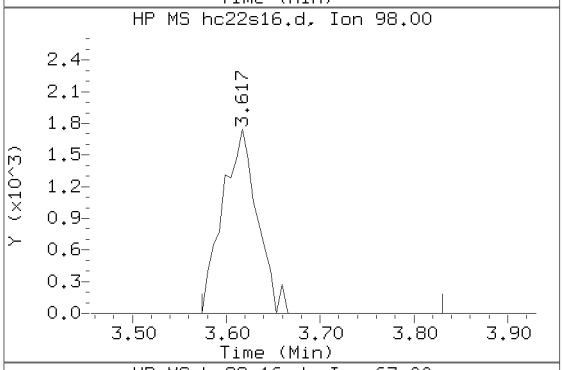
Sample Spectrum (Background Subtracted)

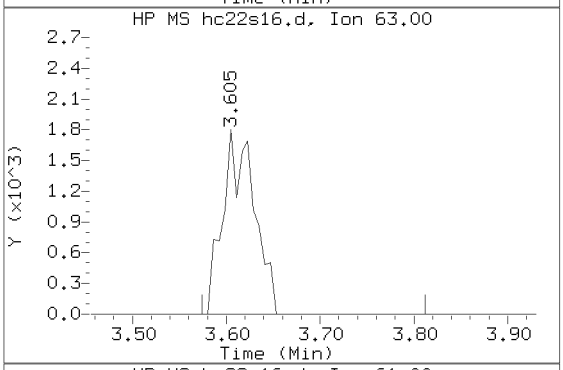


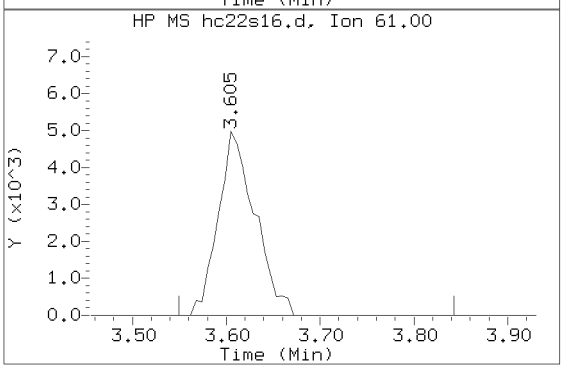
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

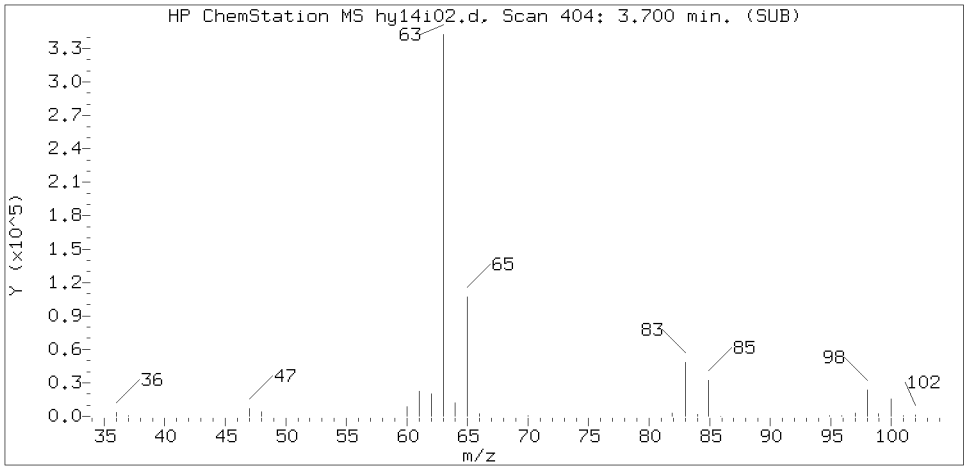
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

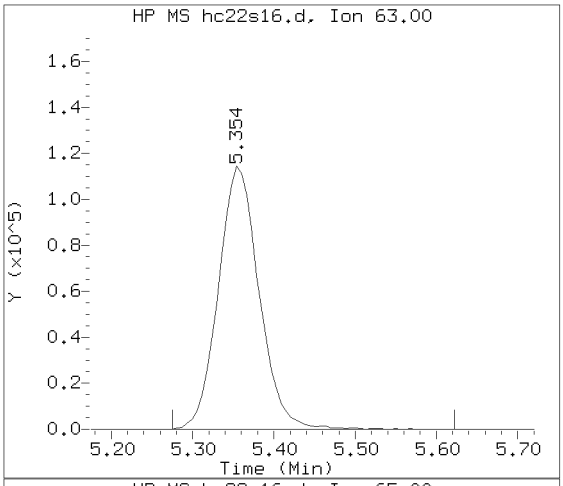
Sample Name: 16WFD Lab Sample ID: 9262028

Compound Number	: 15
Compound Name	: 1,1-Dichloroethene
Scan Number	: 332
Retention Time (minutes)	: 3.611
Relative Retention Time	: 0.00036
Quant Ion	: 96.00
Area (flag)	: 7234
On-Column Amount (ng)	: 0.1550

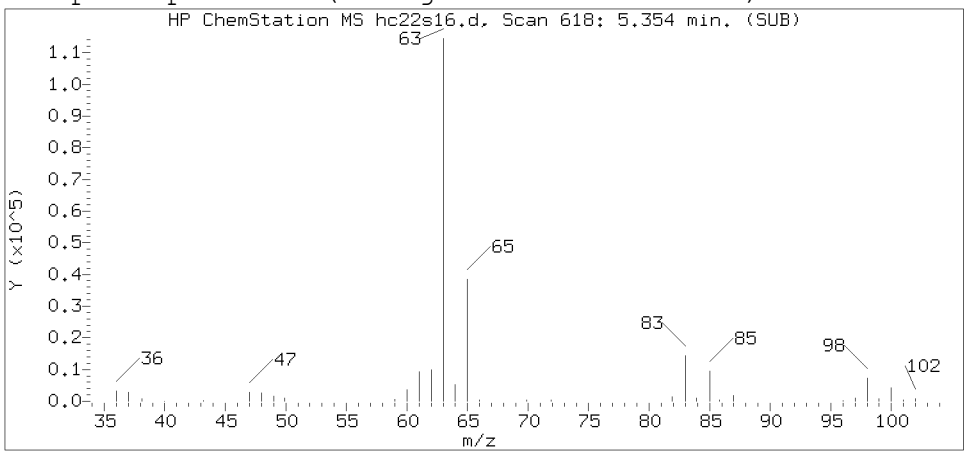
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

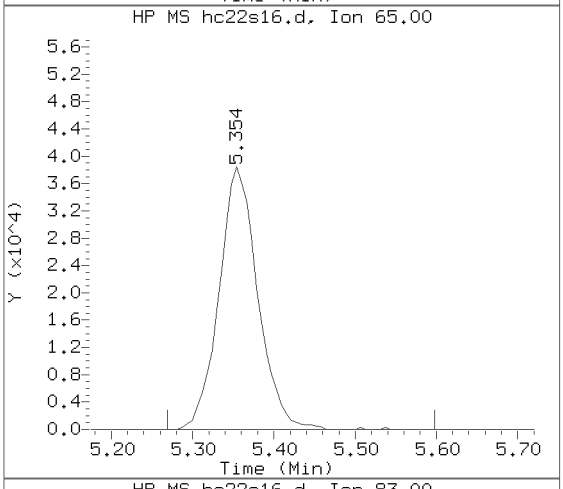
Reference Standard Spectrum for 1,1-Dichloroethane



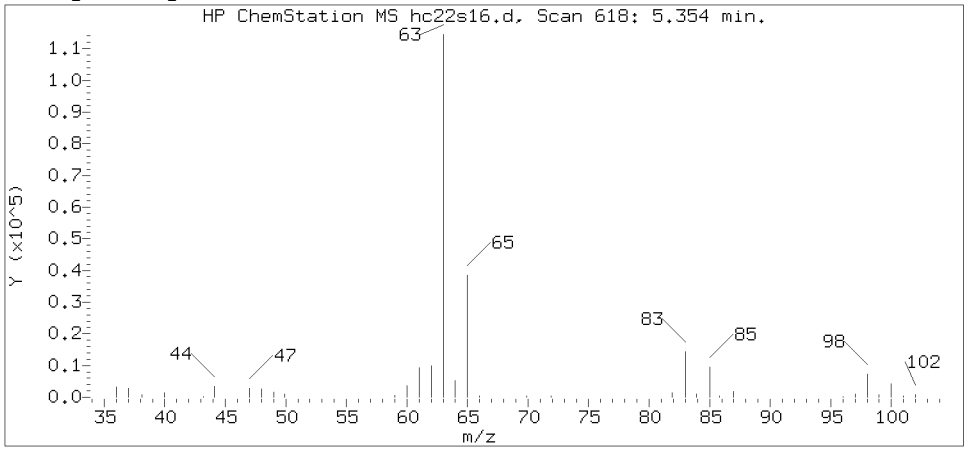


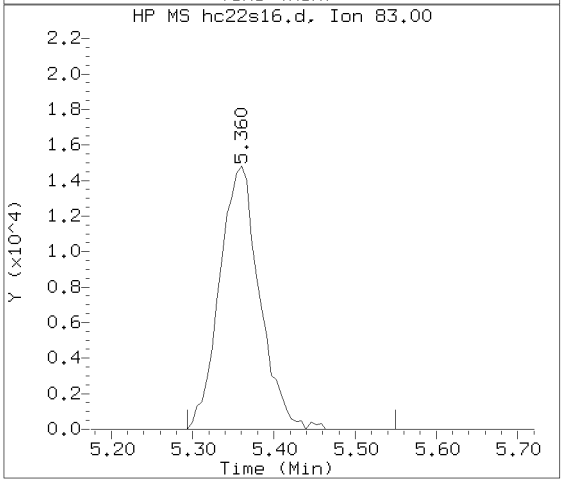
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

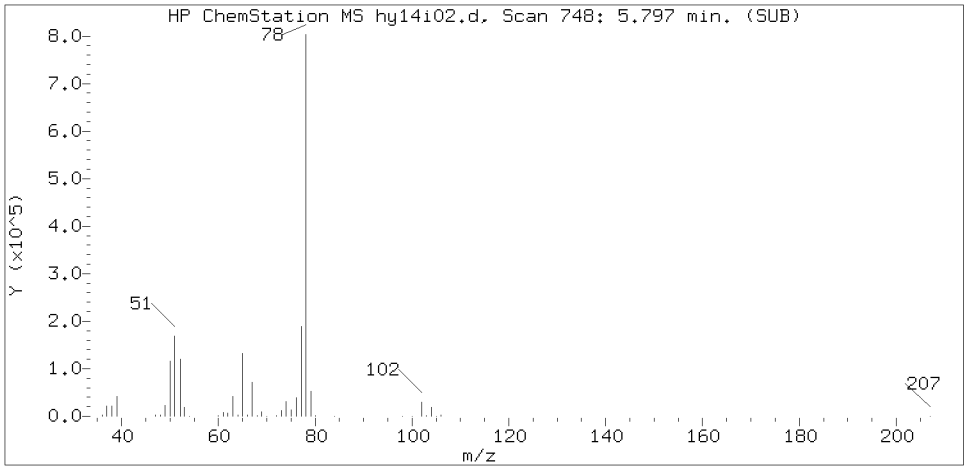
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

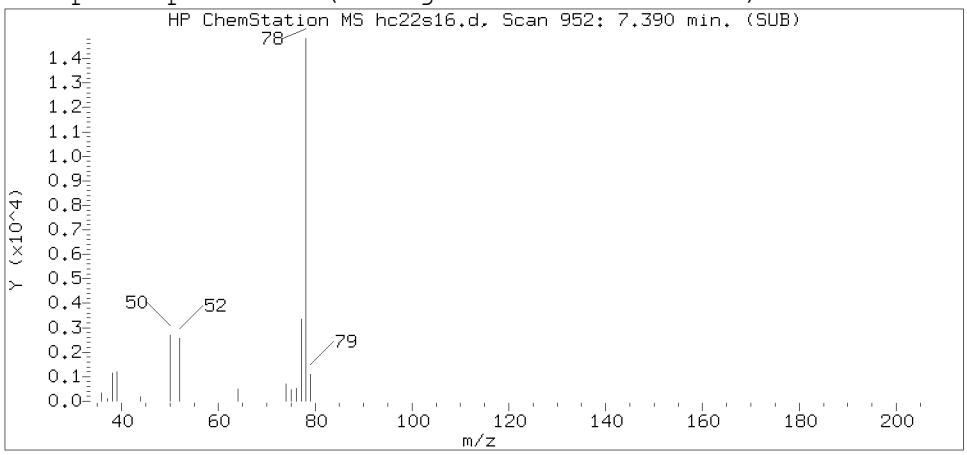
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 618
Retention Time (minutes): 5.354
Relative Retention Time : 0.00054
Quant Ion : 63.00
Area (flag) : 397506
On-Column Amount (ng) : 3.6627

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Target 3.5 esignature user ID: kas02648

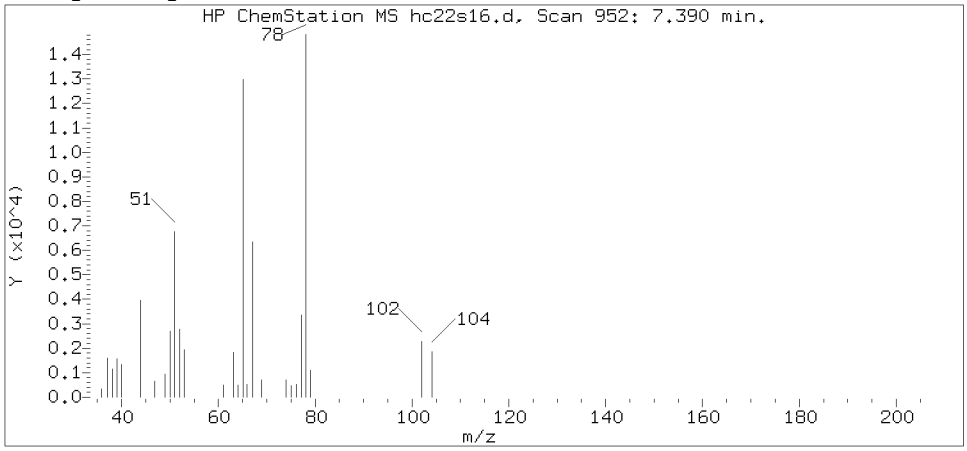
Reference Standard Spectrum for Benzene

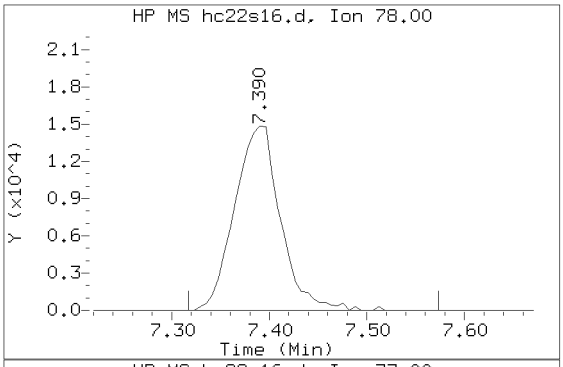


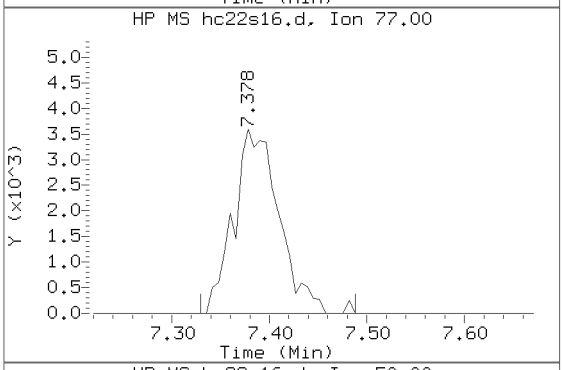
Sample Spectrum (Background Subtracted)

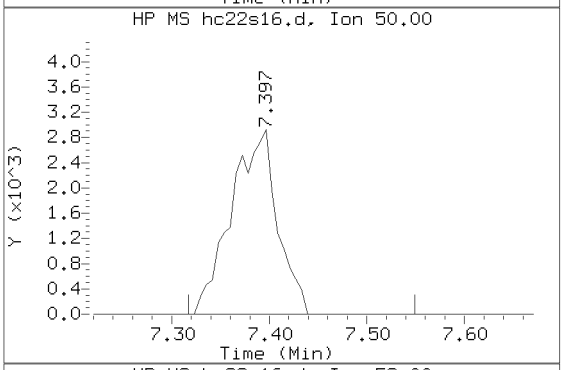


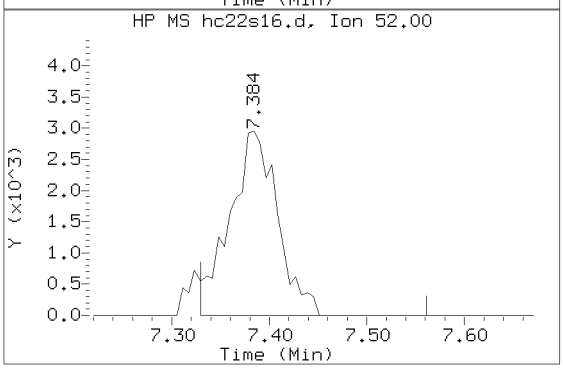
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

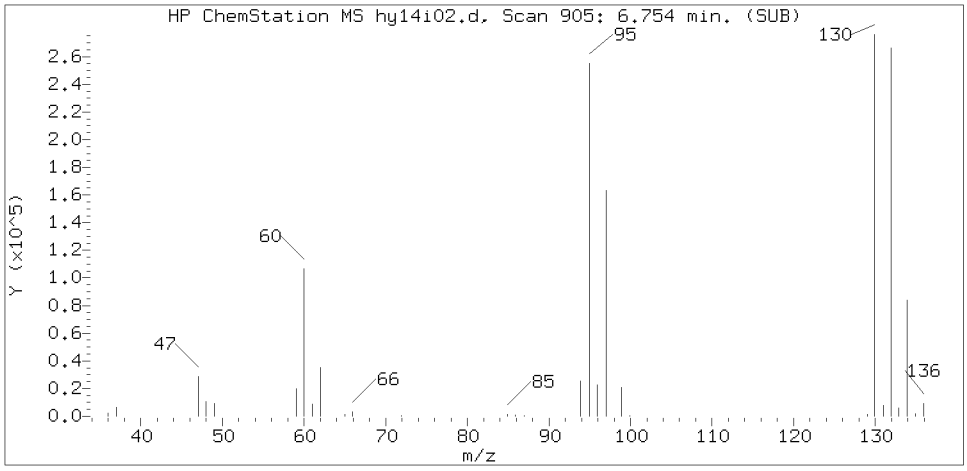
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

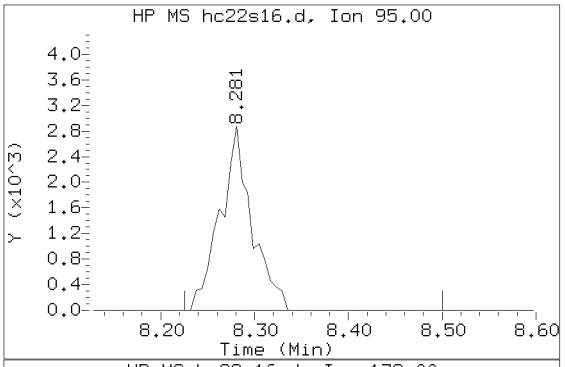
Sample Name: 16WFD Lab Sample ID: 9262028

Compound Number : 58
Compound Name : Benzene
Scan Number : 952
Retention Time (minutes): 7.390
Relative Retention Time :-0.00004
Quant Ion : 78.00
Area (flag) : 48347
On-Column Amount (ng) : 0.2115

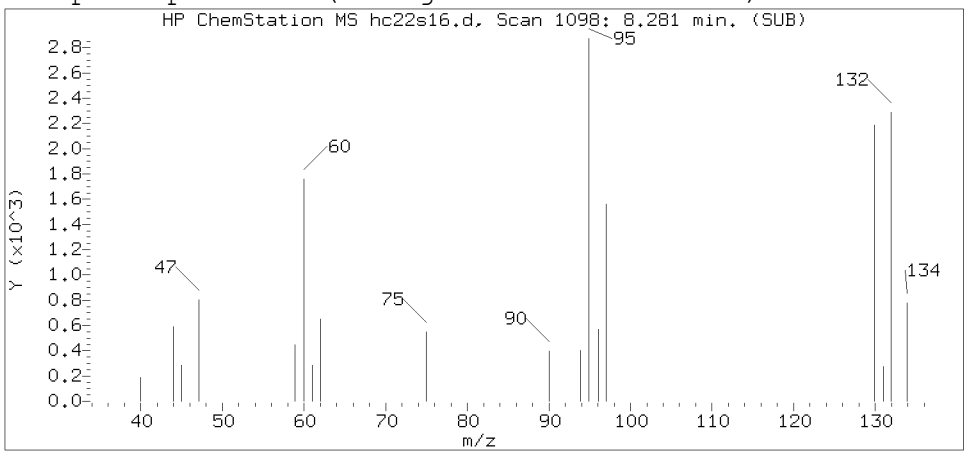
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

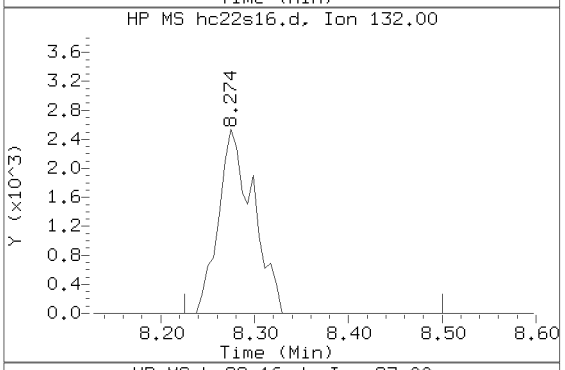
Reference Standard Spectrum for Trichloroethene

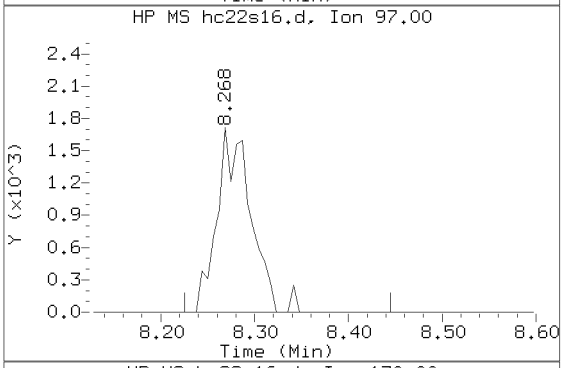




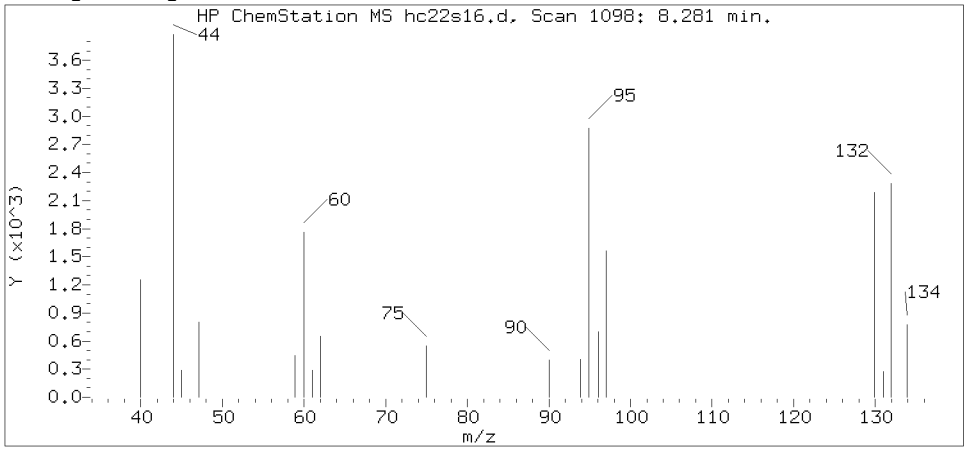
Sample Spectrum (Background Subtracted)

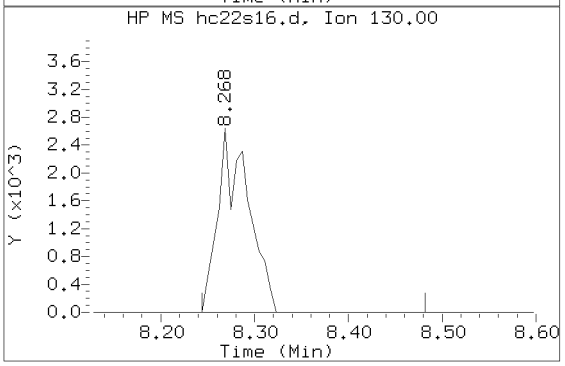






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

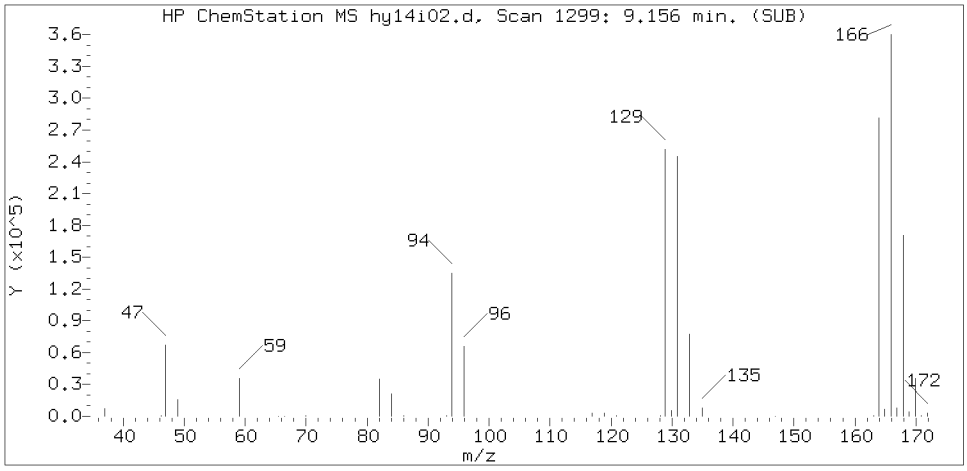
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

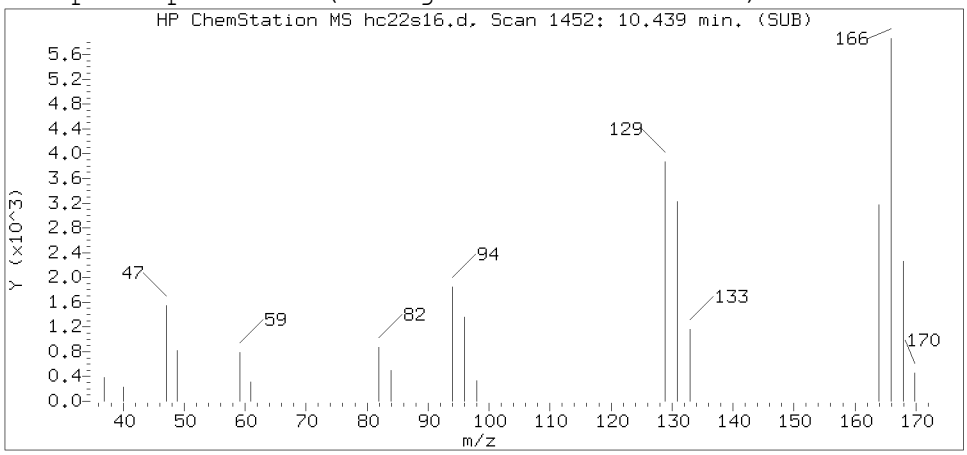
Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1098
Retention Time (minutes): 8.281
Relative Retention Time :-0.00073
Quant Ion : 95.00
Area (flag) : 6767
On-Column Amount (ng) : 0.1105

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Target 3.5 esignature user ID: kas02648

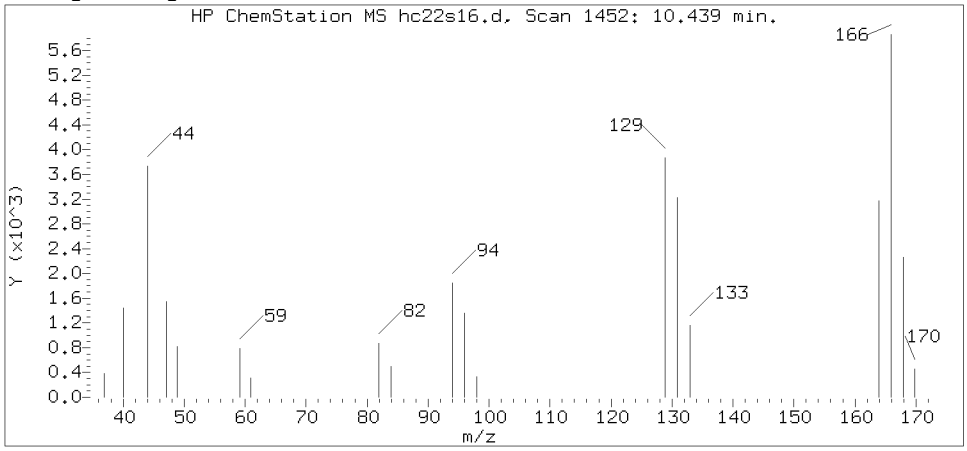
Reference Standard Spectrum for Tetrachloroethene

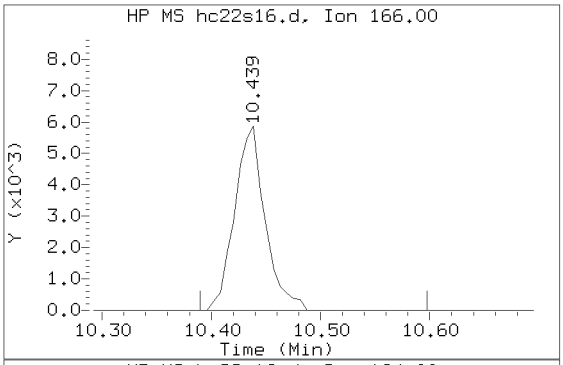


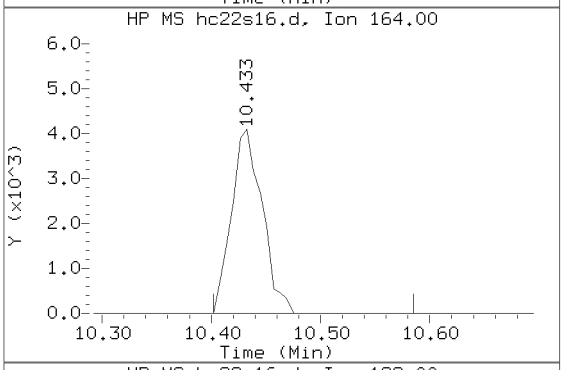
Sample Spectrum (Background Subtracted)

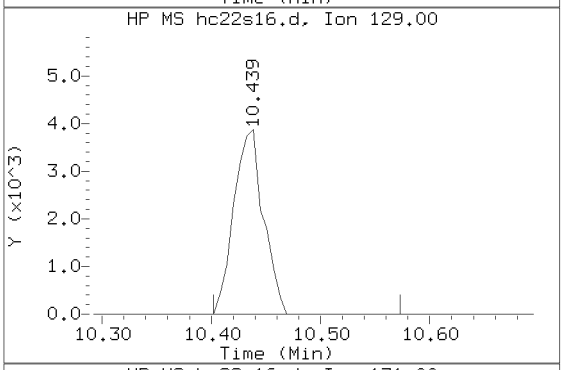


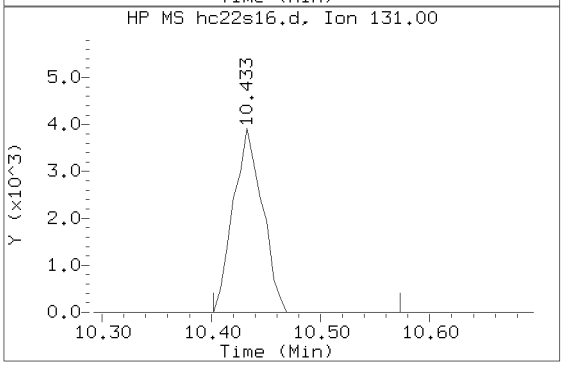
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WFD Lab Sample ID: 9262028

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1452
Retention Time (minutes): 10.439
Relative Retention Time :-0.00054
Quant Ion : 166.00
Area (flag) : 11407
On-Column Amount (ng) : 0.1763

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

16WCB

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9262029

Data file: /chem2/HP19094.i/17oct22a.b/hc22s17.d Injection date and time: **23-OCT-2017 06:04**
Data file Sample Info. Line: 16WCB;9262029;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.031)	439	65	78123	(-8)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2208153	(-9)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1454768	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	593946	(-25)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	517838	9.711	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	83368	9.984	100%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2195471	10.384	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	590691	9.198	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					0.1	1
4) Dimethyl ether	(2)	2.099	(-0.001)	45	57389	0.635	0.64		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)	2.733	(-0.001)	64	11818	0.235	0.24		J	0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.306	(-0.001)	59	339996	9.072	9.07		J	0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.366	(-0.001)	63	89388	0.818	0.82		J	0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)	7.397	(-0.000)	78	34261	0.149	0.15		J	0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s17.d Injection date and time: **23-OCT-2017 06:04**
Data file Sample Info. Line: 16WCB;9262029;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

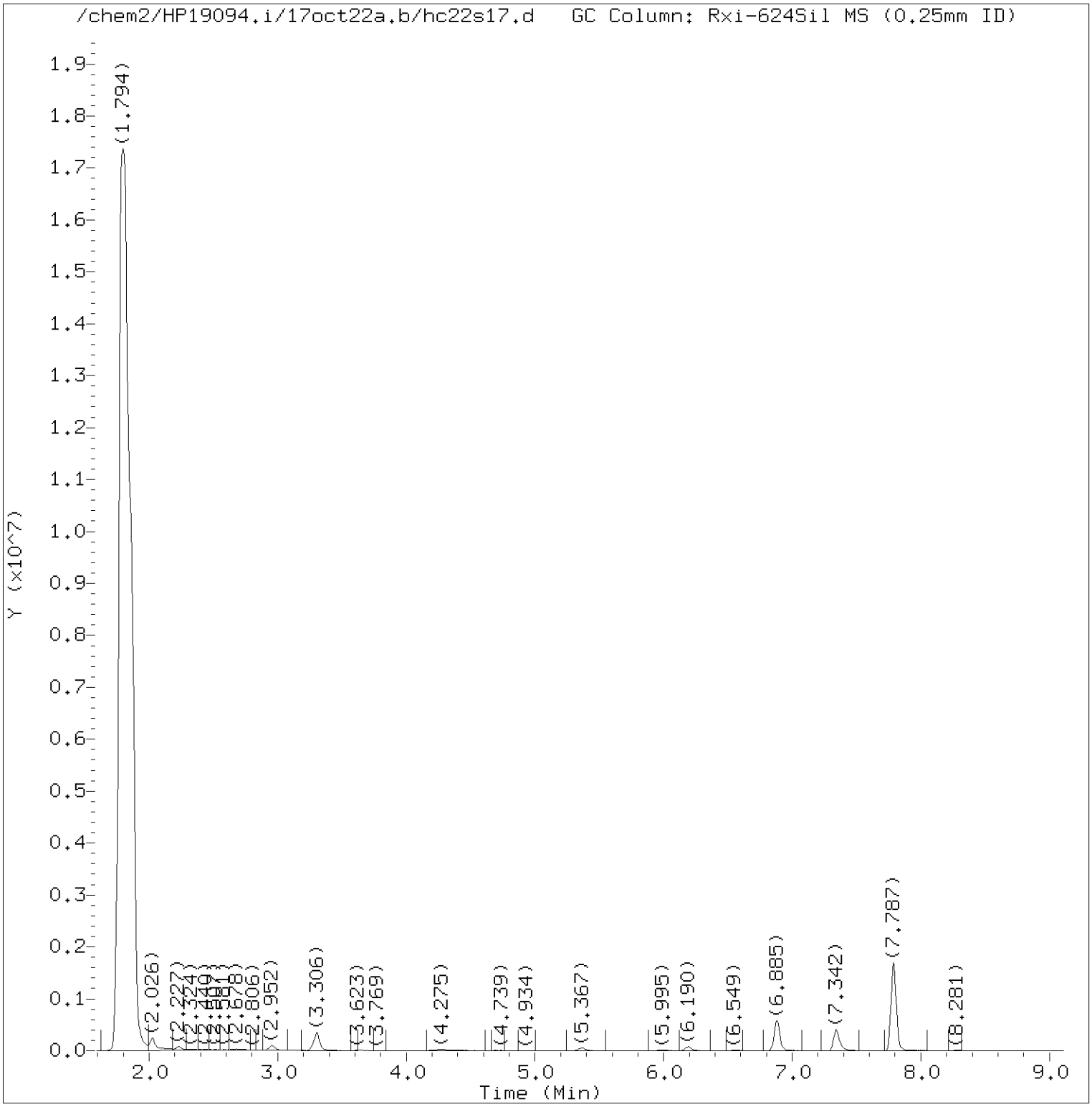
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:34. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

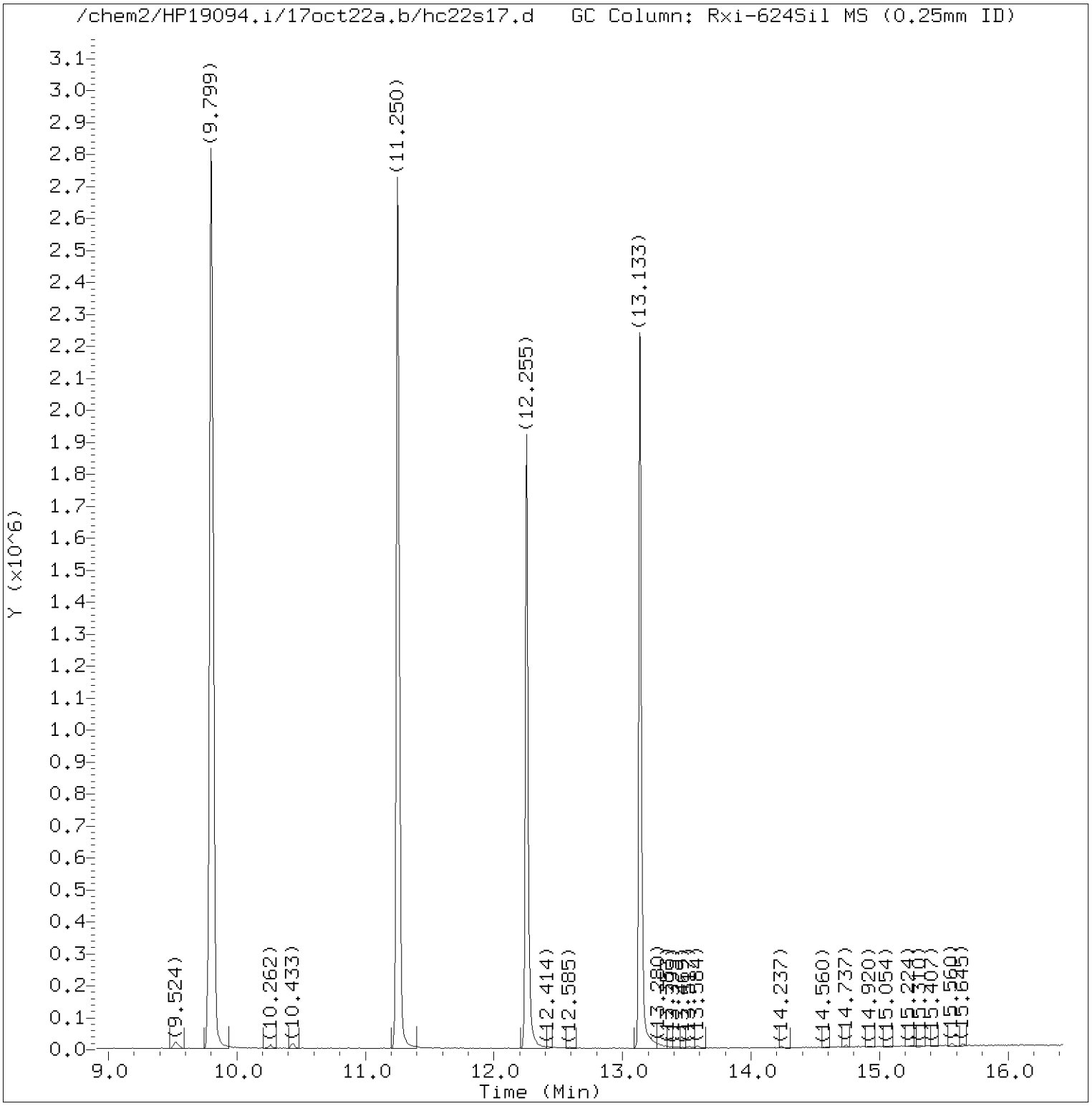
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WCB Lab Sample ID: 9262029

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WCB Lab Sample ID: 9262029

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

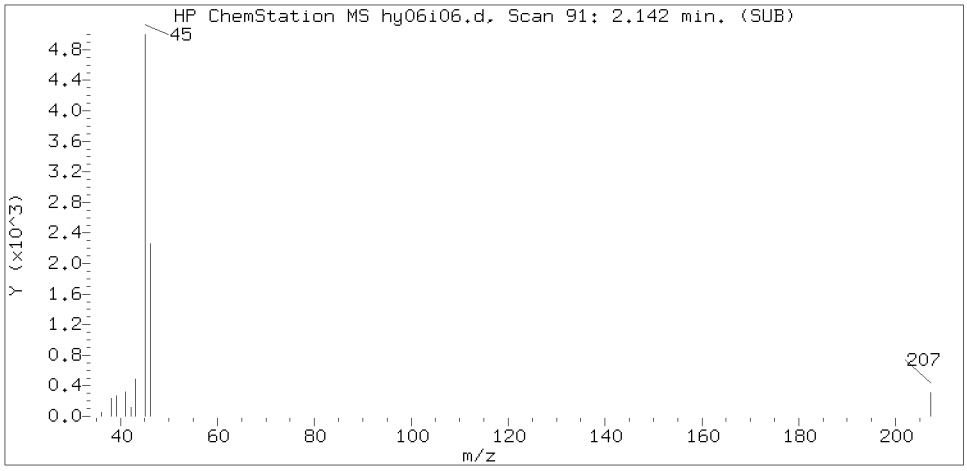
Sample Name: 16WCB Lab Sample ID: 9262029

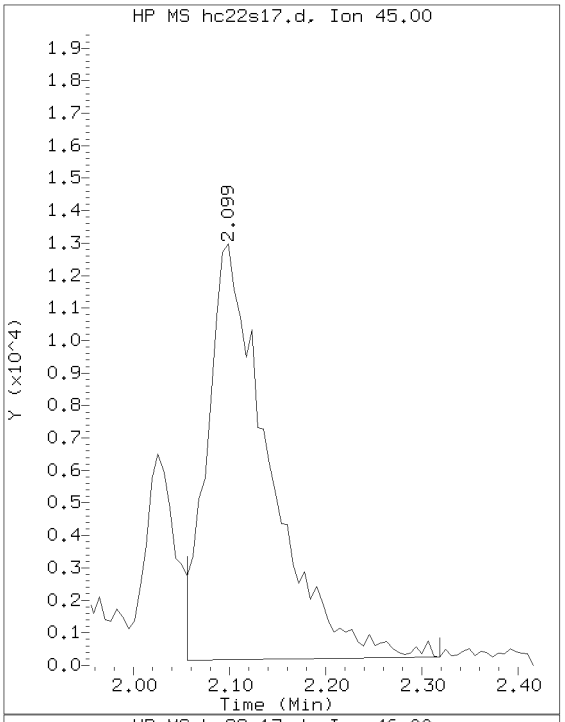
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	57389	0.635
8) Chloroethane	(2)	2.733	64	11818	0.235
11) Ethyl ether	(2)	3.306	59	339996	9.072
26)*t-Butyl Alcohol-d10	(1)	4.263	65	78123	50.000
33) 1,1-Dichloroethane	(2)	5.367	63	89388	0.818
50)$Dibromofluoromethane	(2)	6.878	113	517838	9.711
57)$1,2-Dichloroethane-d4	(2)	7.342	102	83368	9.984
58) Benzene	(2)	7.397	78	34261	0.149
63)*Fluorobenzene	(2)	7.787	96	2208153	10.000
82)$Toluene-d8	(3)	9.799	98	2195471	10.384
97)*Chlorobenzene-d5	(3)	11.250	117	1454768	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	590691	9.198
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	593946	10.000

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

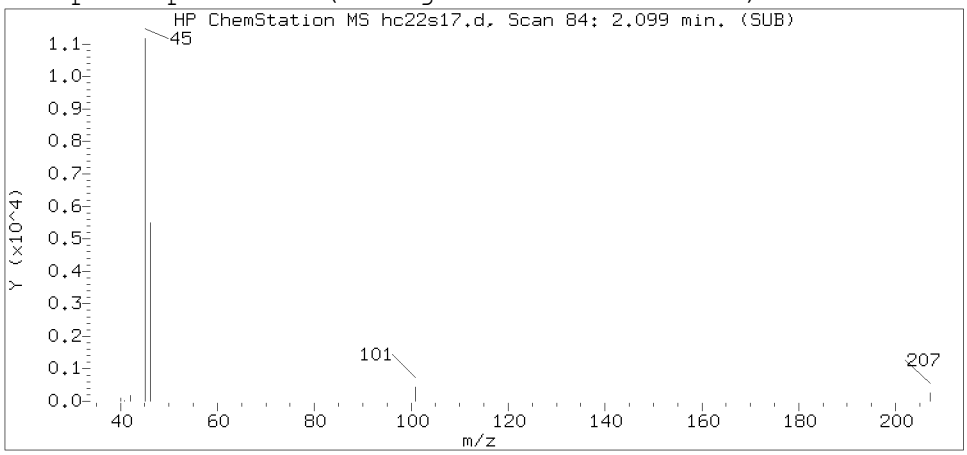
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

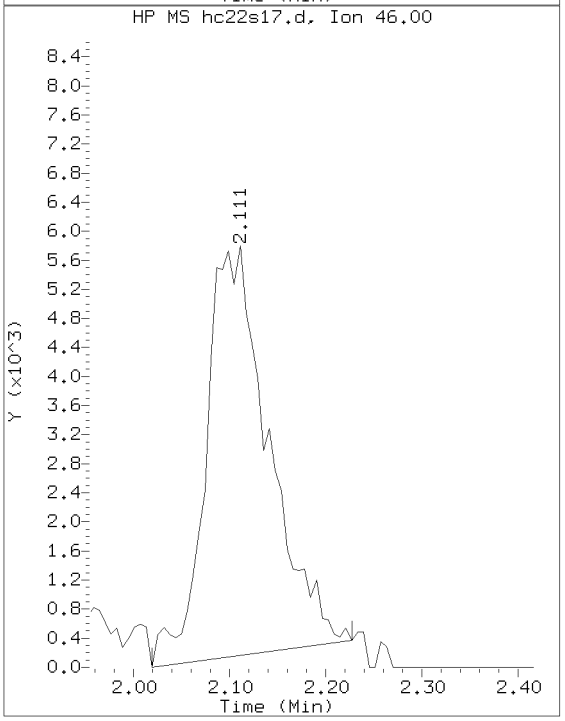
Reference Standard Spectrum for Dimethyl ether



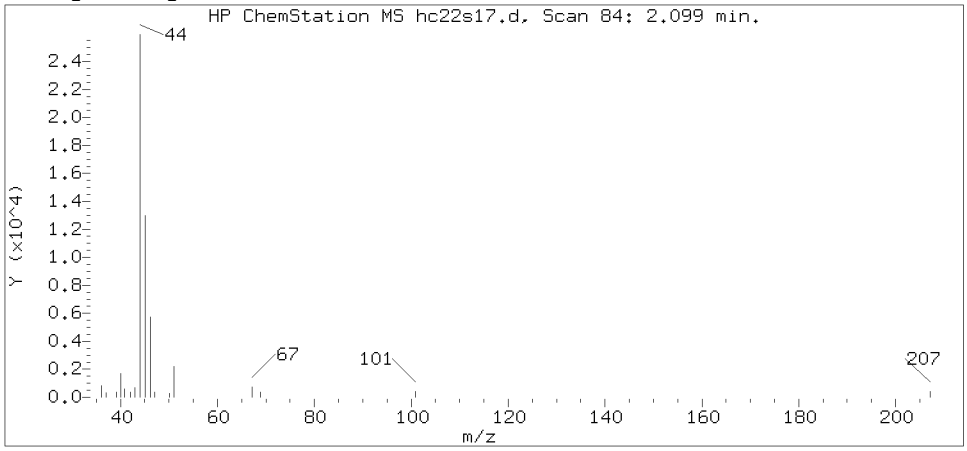


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

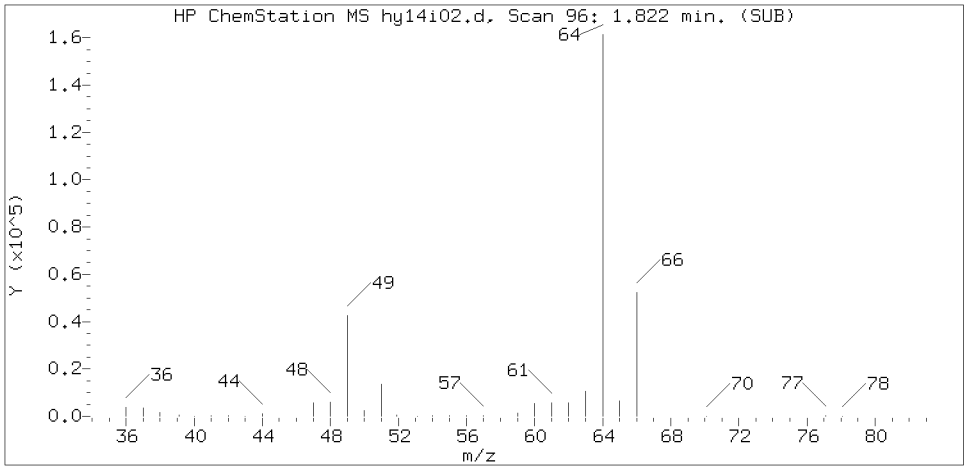
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

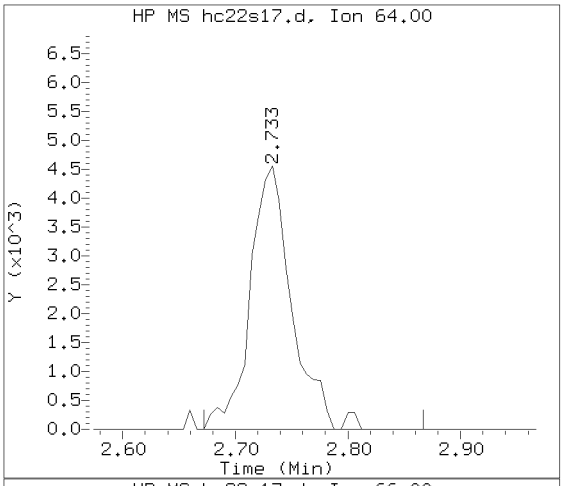
Sample Name: 16WCB Lab Sample ID: 9262029

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 84
Retention Time (minutes)	: 2.099
Relative Retention Time	:-0.00136
Quant Ion	: 45.00
Area (flag)	: 57389
On-Column Amount (ng)	: 0.6352

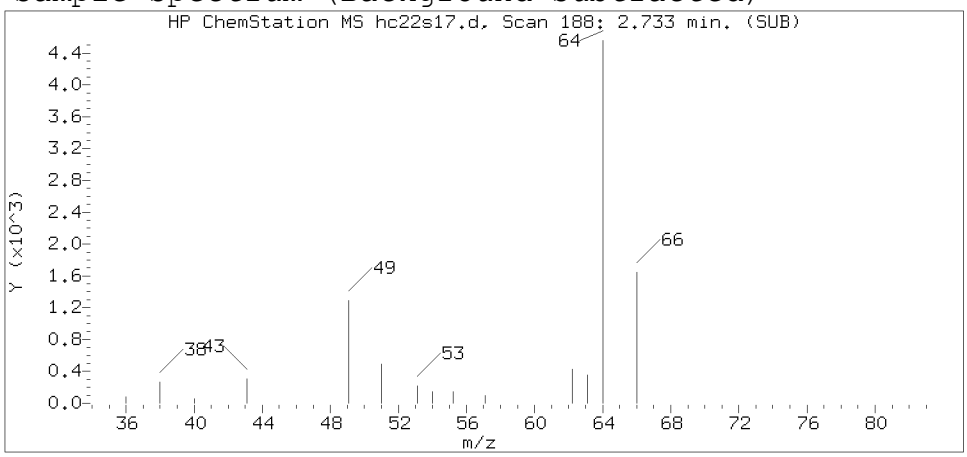
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

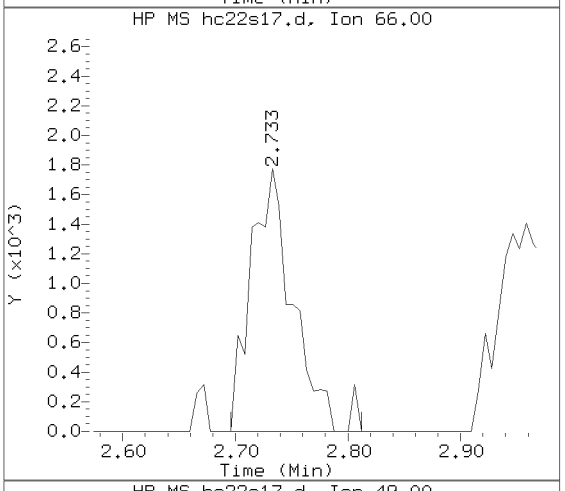
Reference Standard Spectrum for Chloroethane



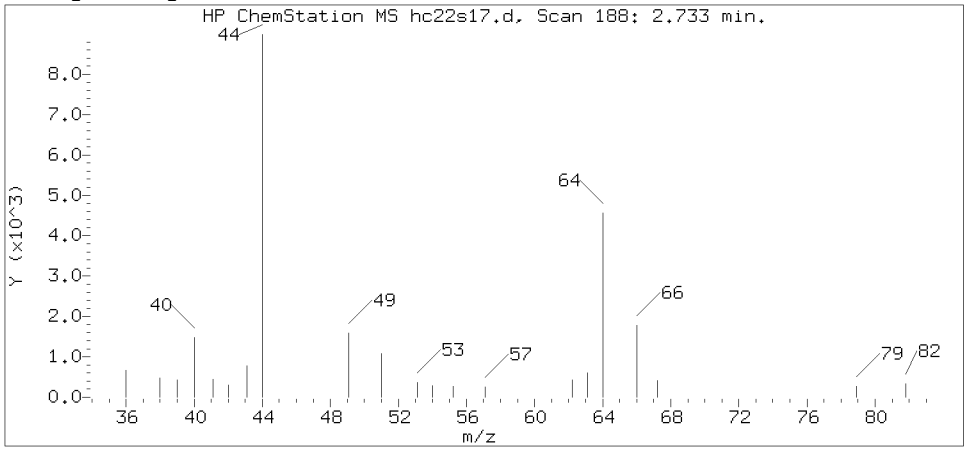


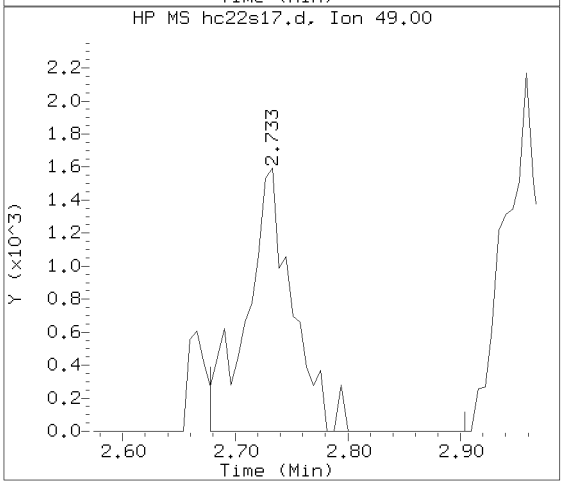
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

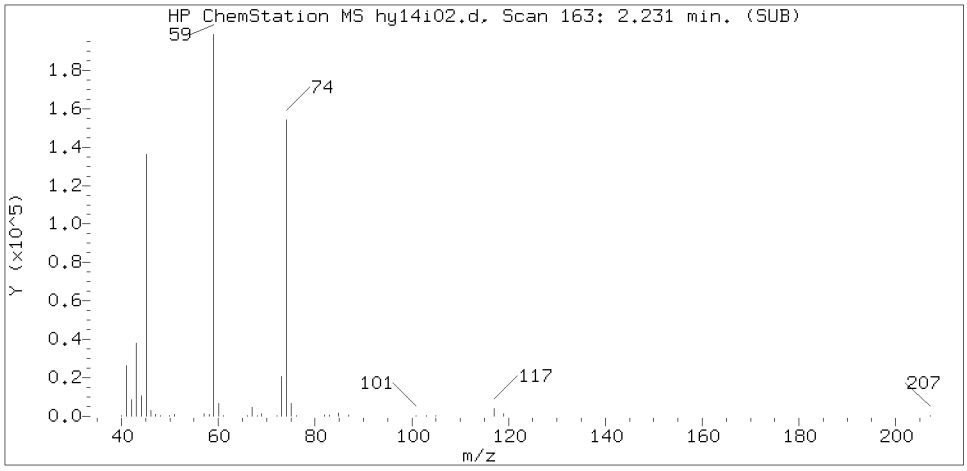
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

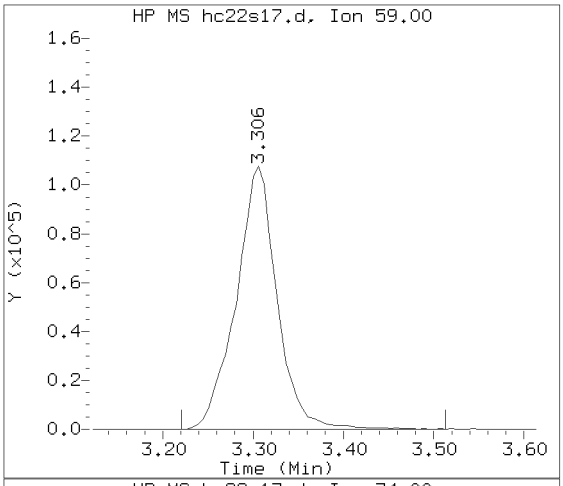
Sample Name: 16WCB Lab Sample ID: 9262029

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 188
Retention Time (minutes)	: 2.733
Relative Retention Time	:-0.00130
Quant Ion	: 64.00
Area (flag)	: 11818
On-Column Amount (ng)	: 0.2355

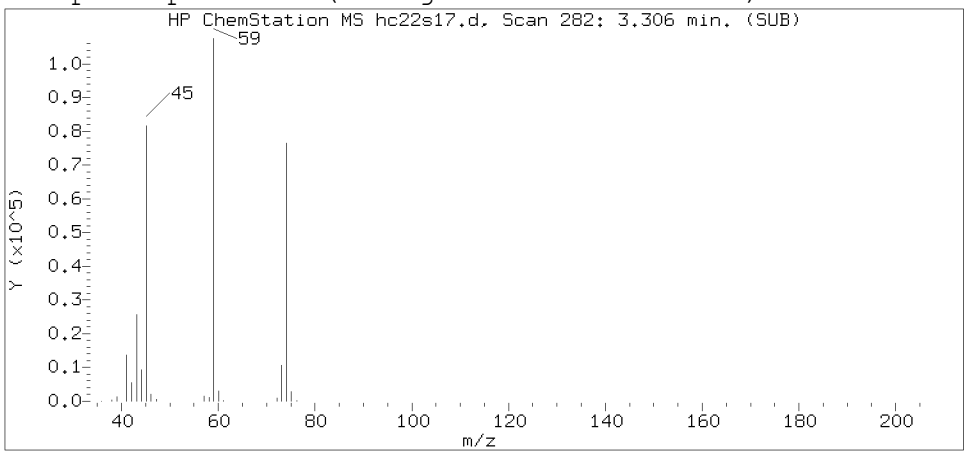
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

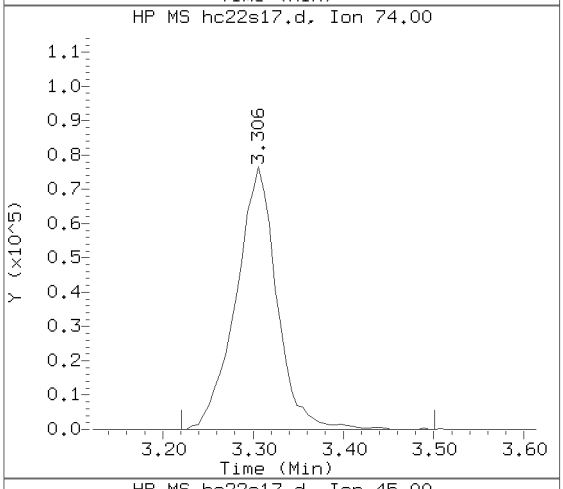
Reference Standard Spectrum for Ethyl ether



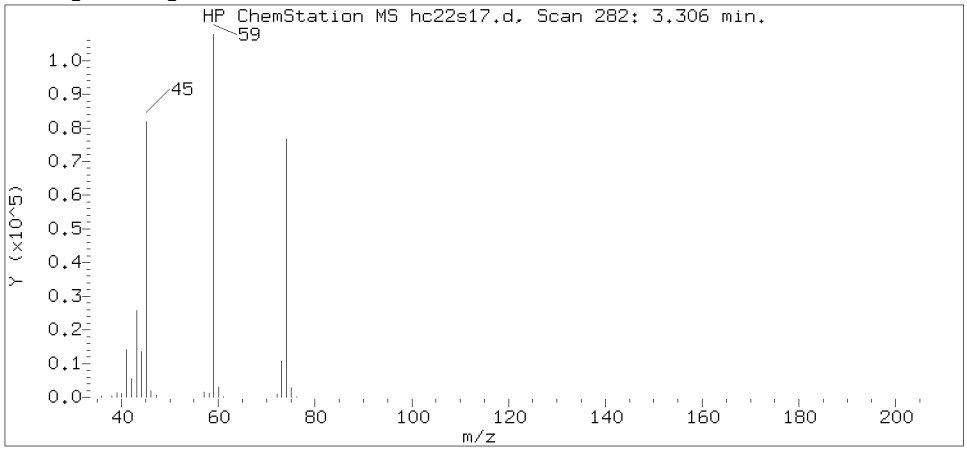


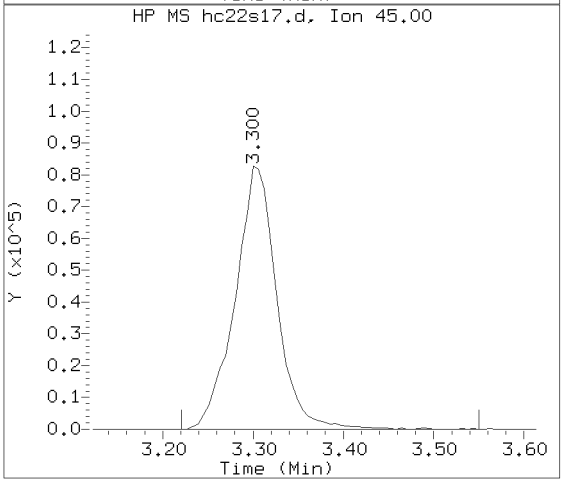
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

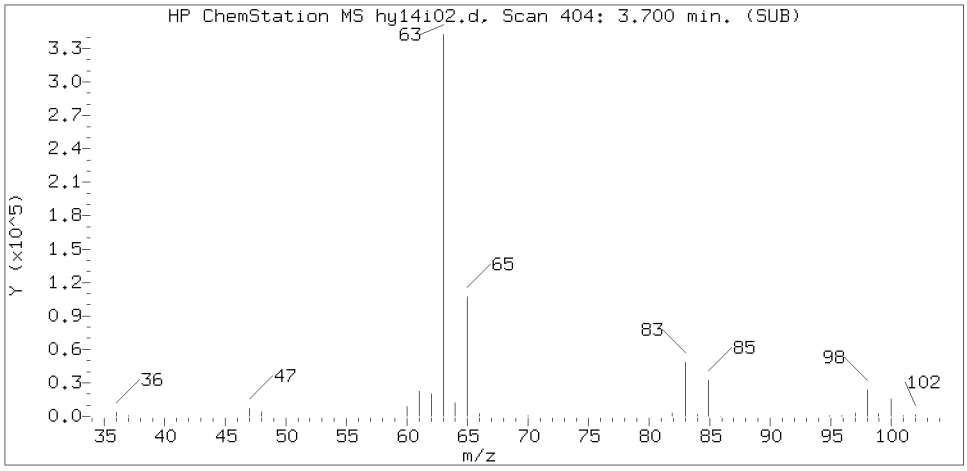
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

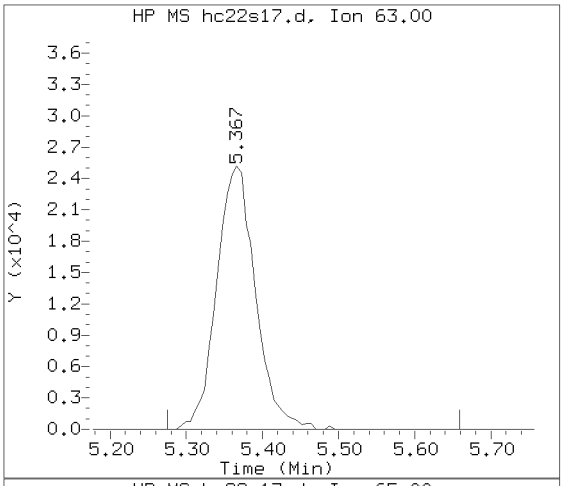
Sample Name: 16WCB Lab Sample ID: 9262029

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00124
Quant Ion : 59.00
Area (flag) : 339996
On-Column Amount (ng) : 9.0720

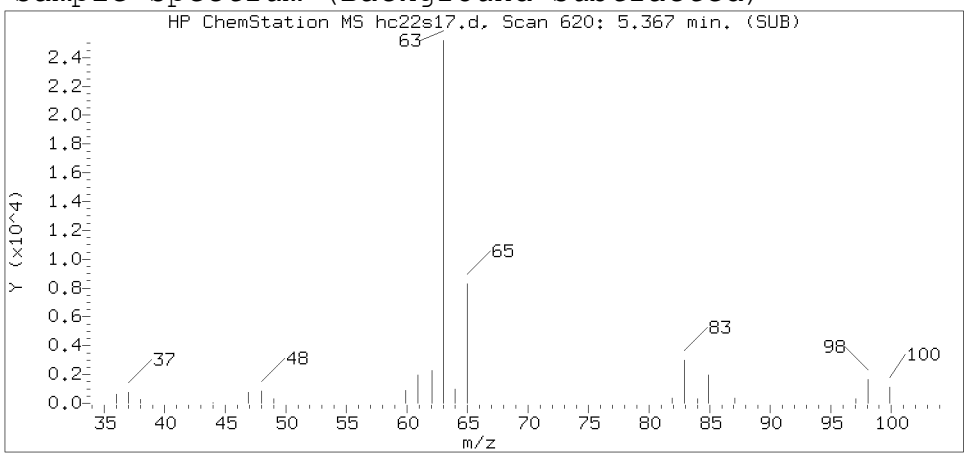
Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

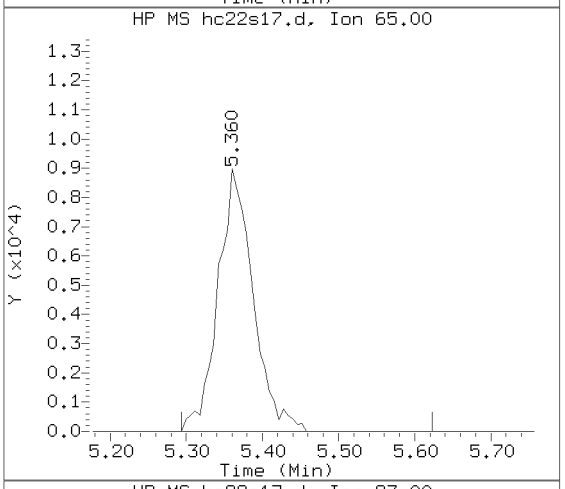
Reference Standard Spectrum for 1,1-Dichloroethane



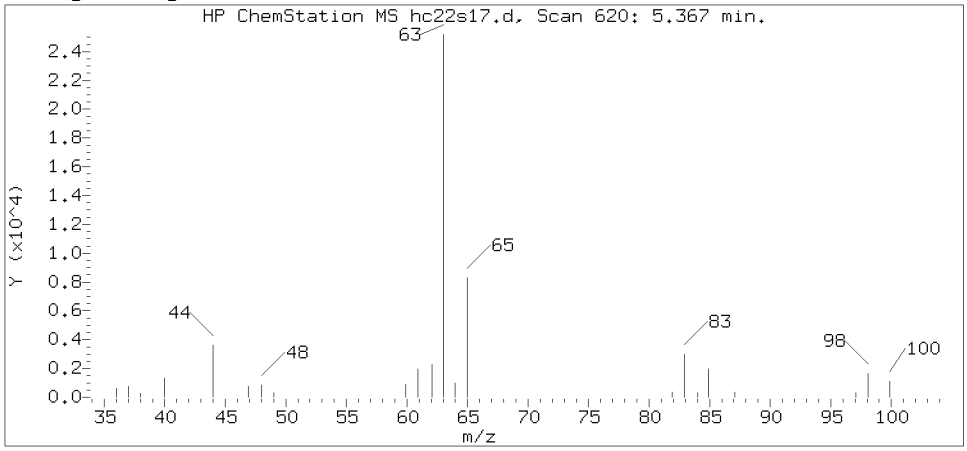


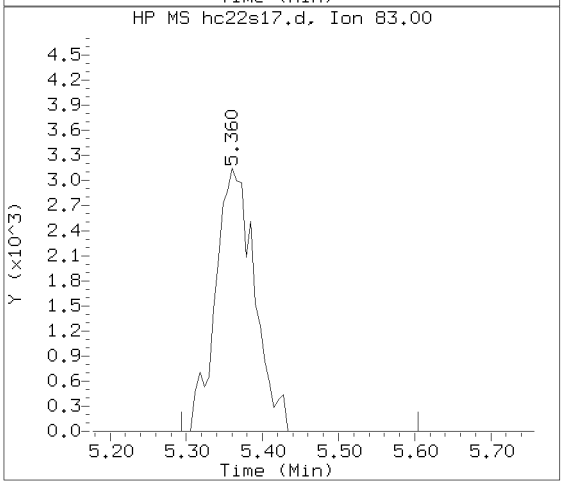
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

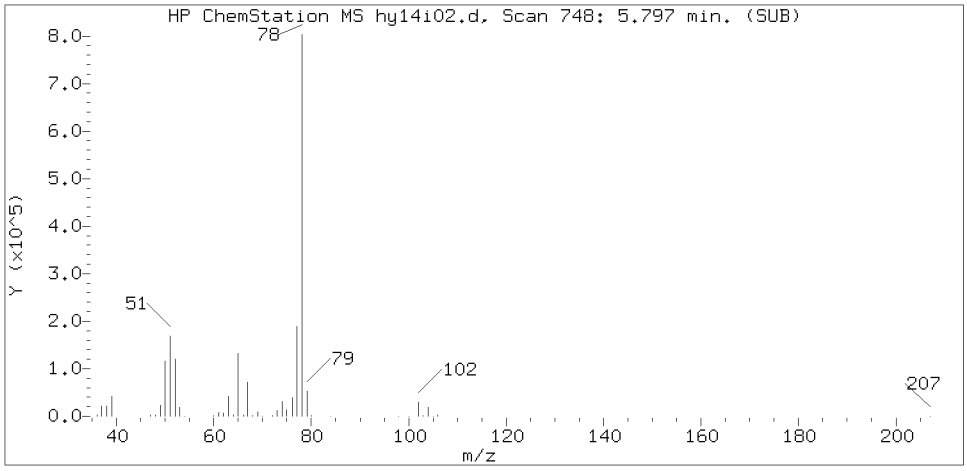
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WCB Lab Sample ID: 9262029

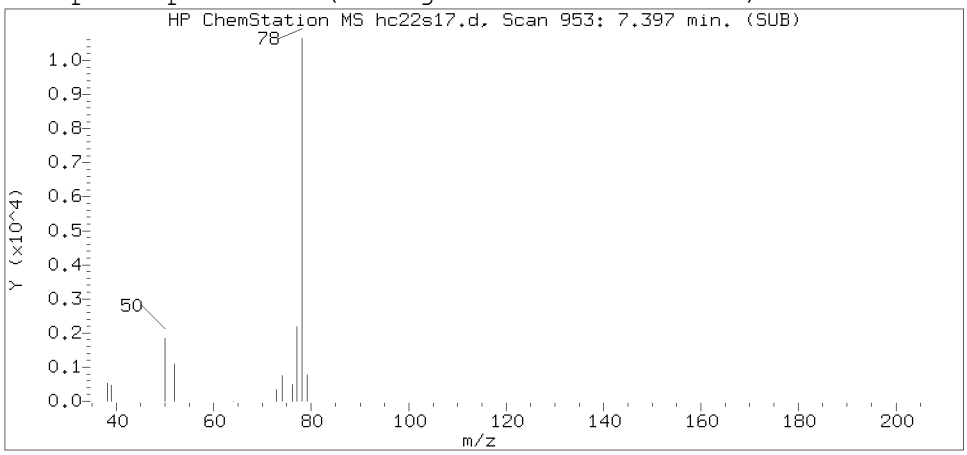
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 620
Retention Time (minutes): 5.367
Relative Retention Time :-0.00103
Quant Ion : 63.00
Area (flag) : 89388
On-Column Amount (ng) : 0.8181

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

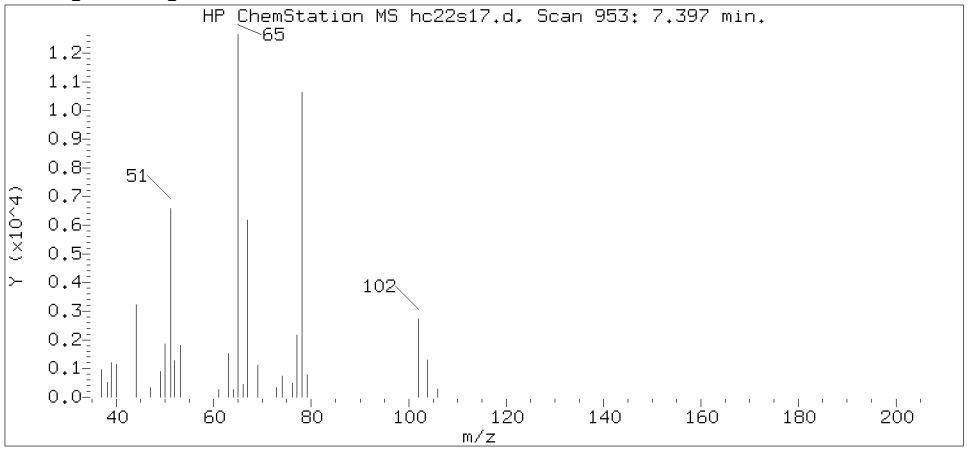
Reference Standard Spectrum for Benzene

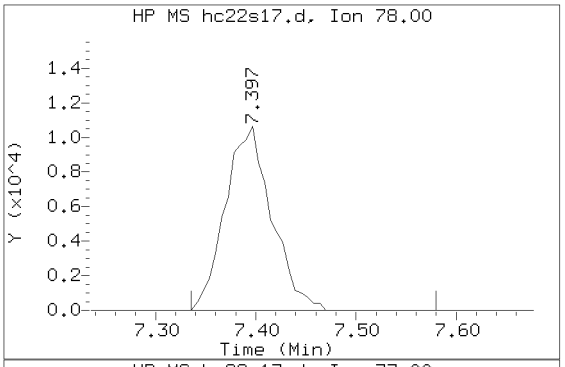


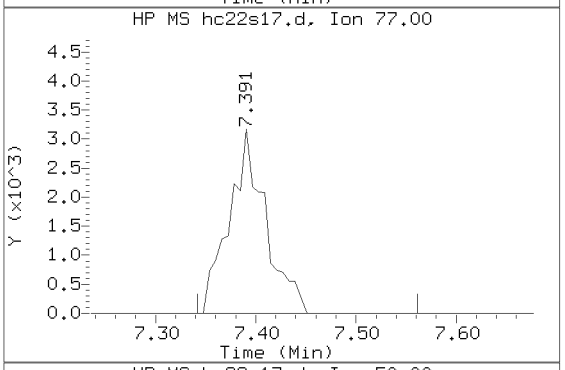
Sample Spectrum (Background Subtracted)

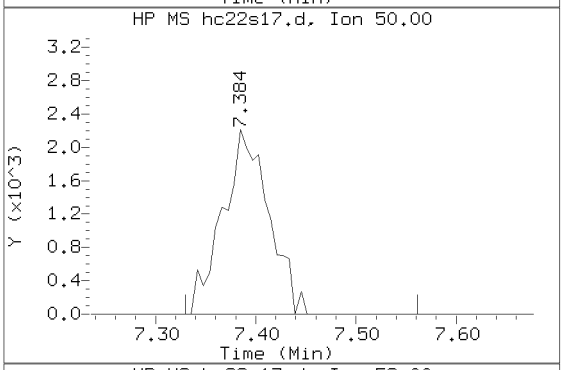


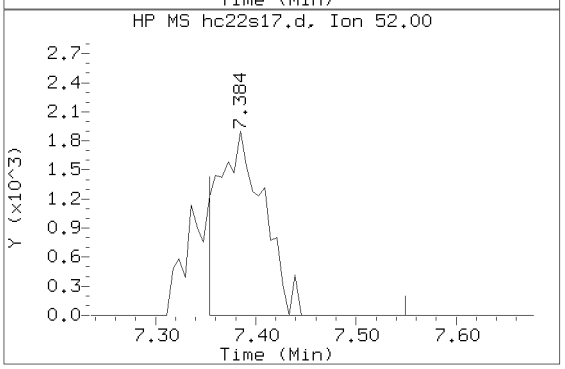
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 06:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WCB Lab Sample ID: 9262029

Compound Number : 58
Compound Name : Benzene
Scan Number : 953
Retention Time (minutes): 7.397
Relative Retention Time :-0.00082
Quant Ion : 78.00
Area (flag) : 34261
On-Column Amount (ng) : 0.1489

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9262030

Data file: /chem2/HP19094.i/17oct22a.b/hc22s35.d Injection date and time: **23-OCT-2017 00:39**
Data file Sample Info. Line: 16-2-;9262030;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:57 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.251	(-0.018)	437	65	96319	(13)	50.00	
63) Fluorobenzene	7.781	(0.000)	1016	96	2299021	(-5)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1473854	(-14)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	600024	(-24)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.000)	113	529578	9.539	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.001)	102	87667	10.084	101%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2249982	10.505	105%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	606390	9.320	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 07:20. Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9262030

Data file: /chem2/HP19094.i/17oct22a.b/hc22s35.d Injection date and time: **23-OCT-2017 00:39**
Data file Sample Info. Line: 16-2-;9262030;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:57 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

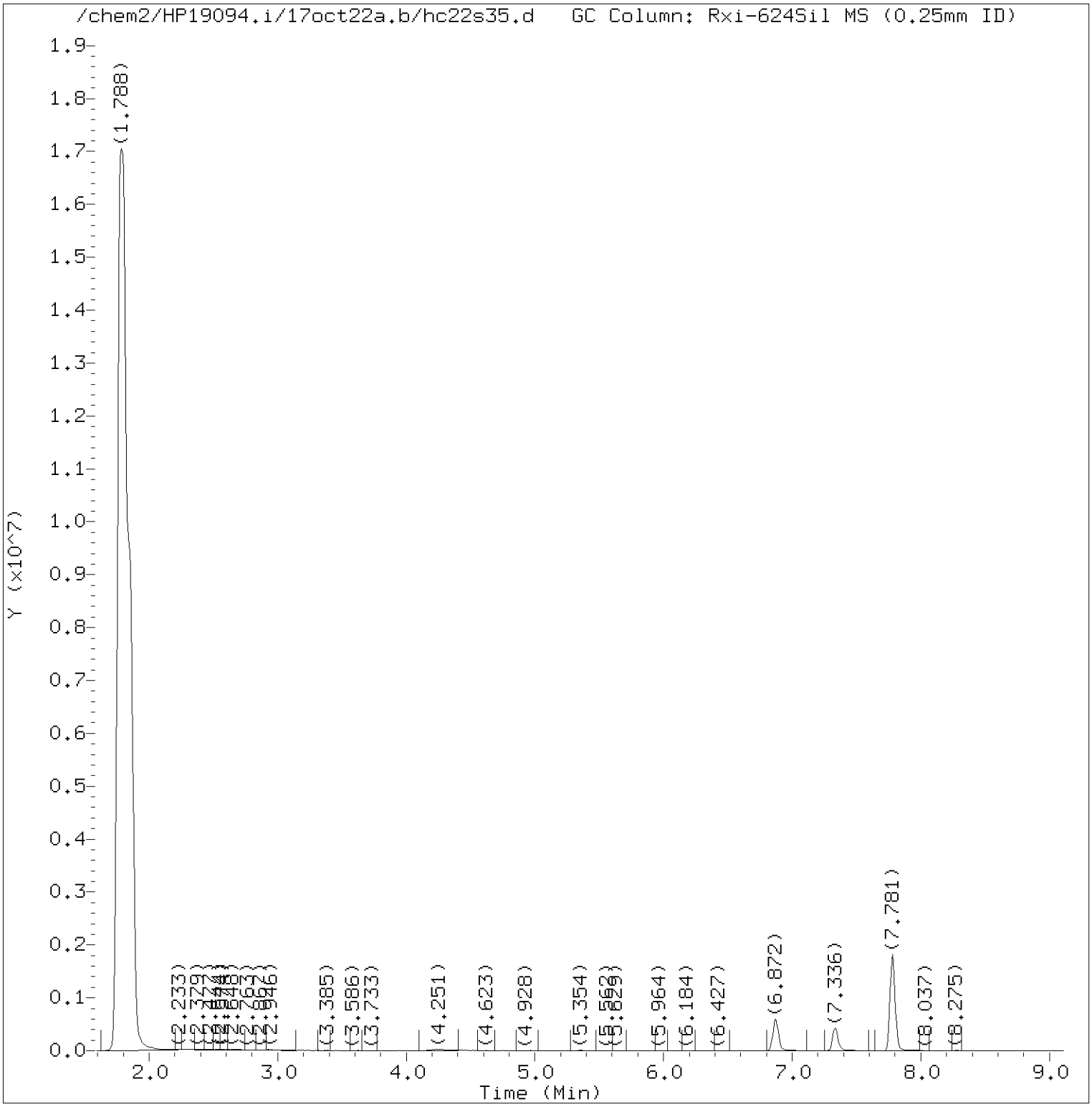
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 07:20. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

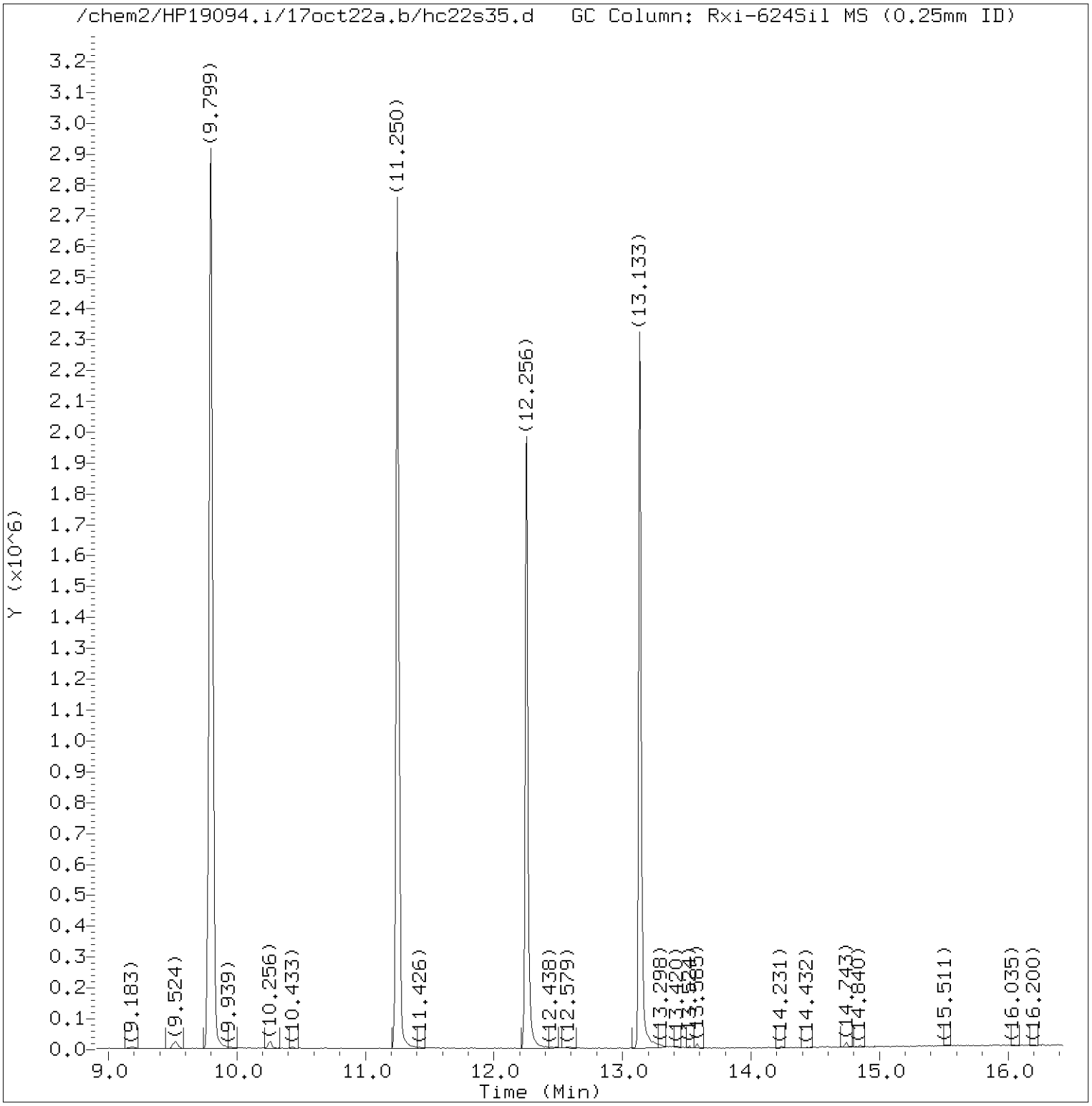
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s35.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:39 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:57 Automation

Sample Name: 16-2- Lab Sample ID: 9262030

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s35.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:39 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:57 Automation

Sample Name: 16-2- Lab Sample ID: 9262030

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s35.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:39 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:57 Automation

Sample Name: 16-2- Lab Sample ID: 9262030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.251	65	96319	50.000
50)$Dibromofluoromethane	(2)	6.872	113	529578	9.539
57)$1,2-Dichloroethane-d4	(2)	7.336	102	87667	10.084
63)*Fluorobenzene	(2)	7.781	96	2299021	10.000
82)$Toluene-d8	(3)	9.799	98	2249982	10.505
97)*Chlorobenzene-d5	(3)	11.250	117	1473854	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	606390	9.320
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	600024	10.000

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

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on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9262031

Data file: /chem2/HP19094.i/17oct22a.b/hc22s36.d Injection date and time: **23-OCT-2017 01:00**
Data file Sample Info. Line: 16--3;9262031;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.281	(-0.049)	442	65	79991	(-6)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2270878	(-7)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1451849	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	580094	(-26)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	519061	9.465	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	79575	9.266	93%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2223332	10.537	105%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	586418	9.150	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)	2.014	(-0.000)	85	31414	0.315	0.31		J	0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 07:20. Target 3.5 esignature user ID: kas02648

16--3 Lancaster Laboratories 9262031
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s36.d Injection date and time: **23-OCT-2017 01:00**
Data file Sample Info. Line: 16--3;9262031;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

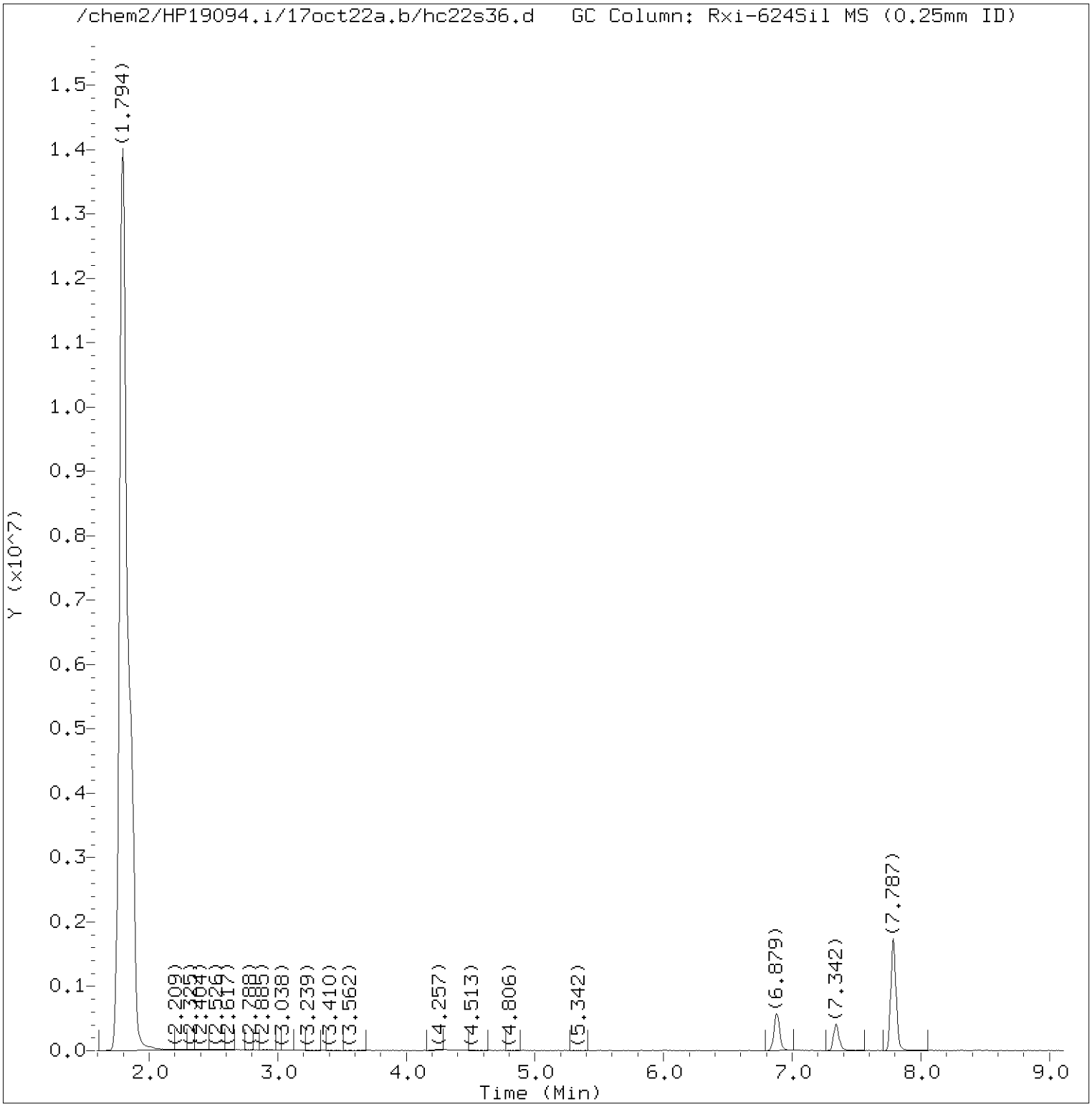
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 07:20. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

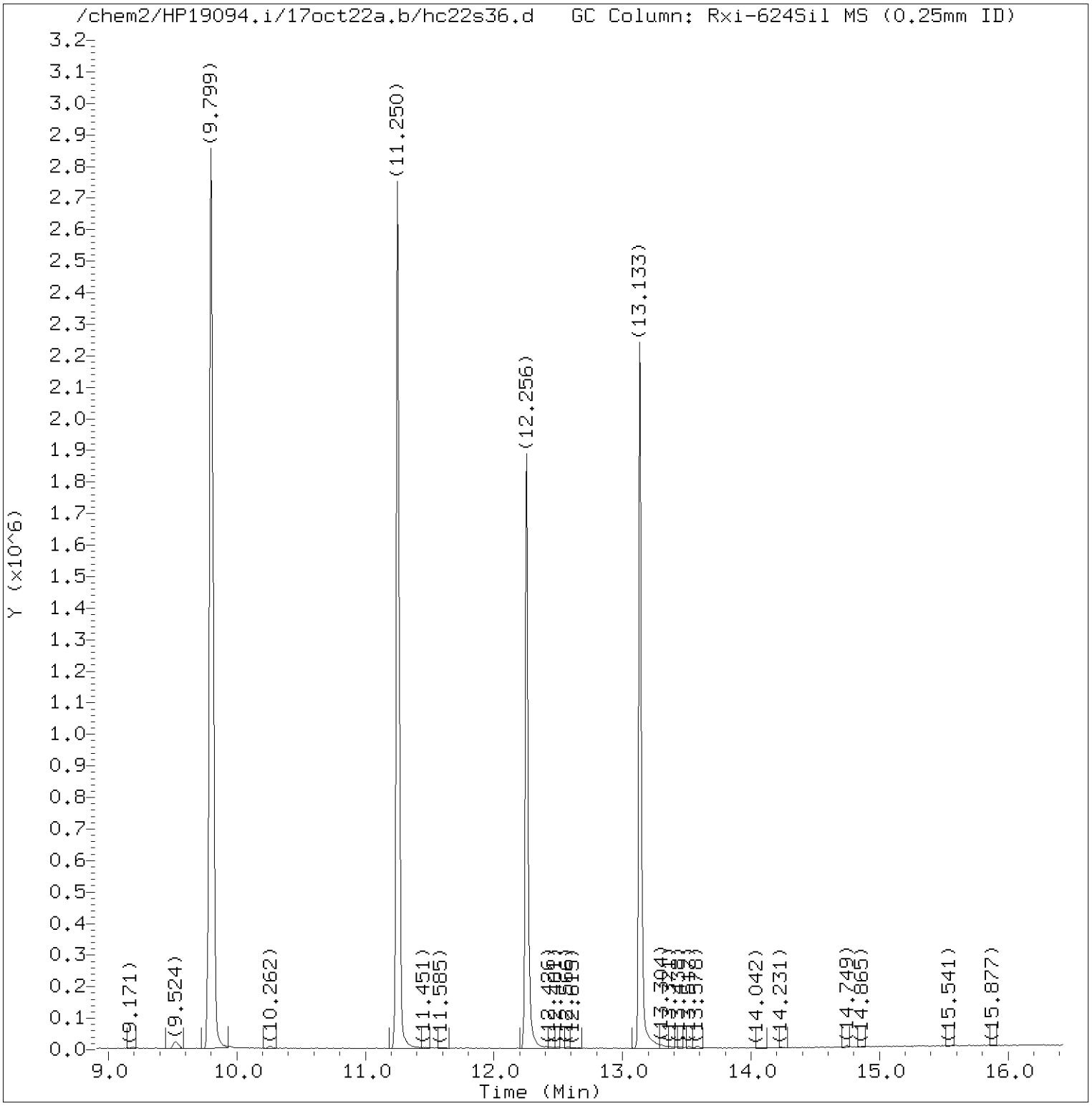
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s36.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

Sample Name: 16--3 Lab Sample ID: 9262031

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s36.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

Sample Name: 16--3 Lab Sample ID: 9262031

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s36.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

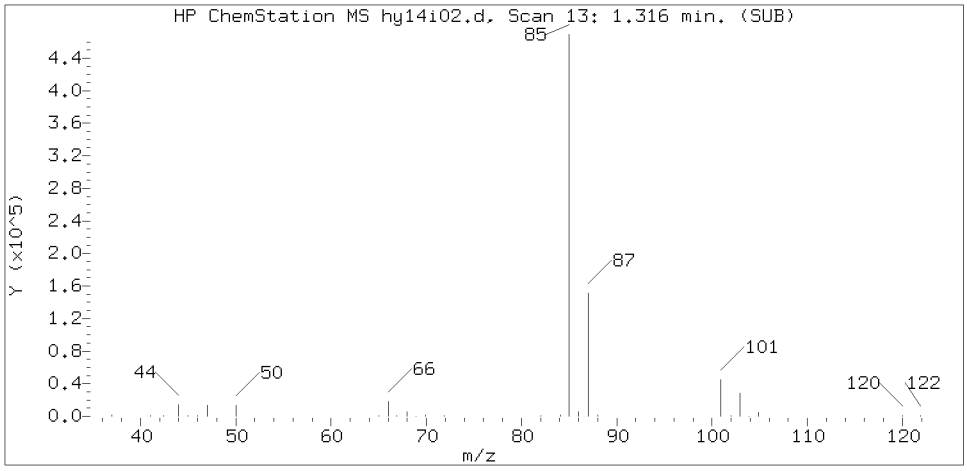
Sample Name: 16--3 Lab Sample ID: 9262031

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	31414	0.315
26)*t-Butyl Alcohol-d10	(1)	4.281	65	79991	50.000
50)$Dibromofluoromethane	(2)	6.879	113	519061	9.465
57)$1,2-Dichloroethane-d4	(2)	7.342	102	79575	9.266
63)*Fluorobenzene	(2)	7.787	96	2270878	10.000
82)$Toluene-d8	(3)	9.799	98	2223332	10.537
97)*Chlorobenzene-d5	(3)	11.250	117	1451849	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	586418	9.150
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	580094	10.000

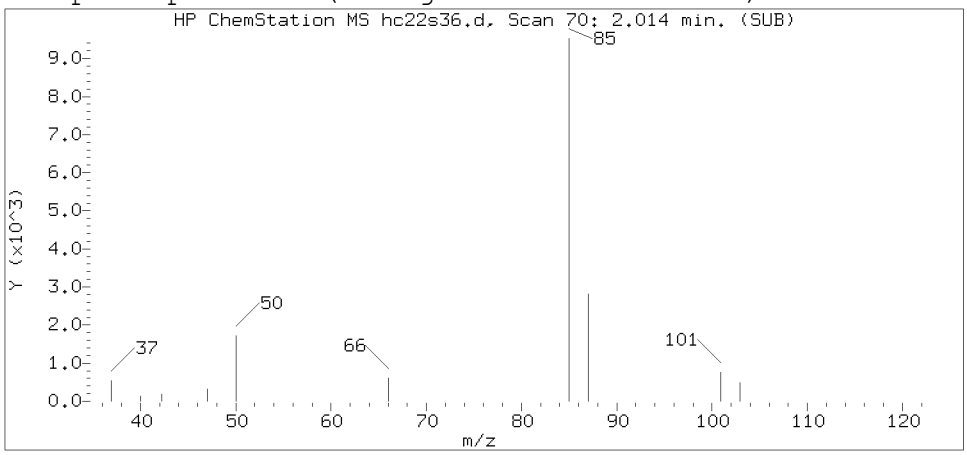
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648

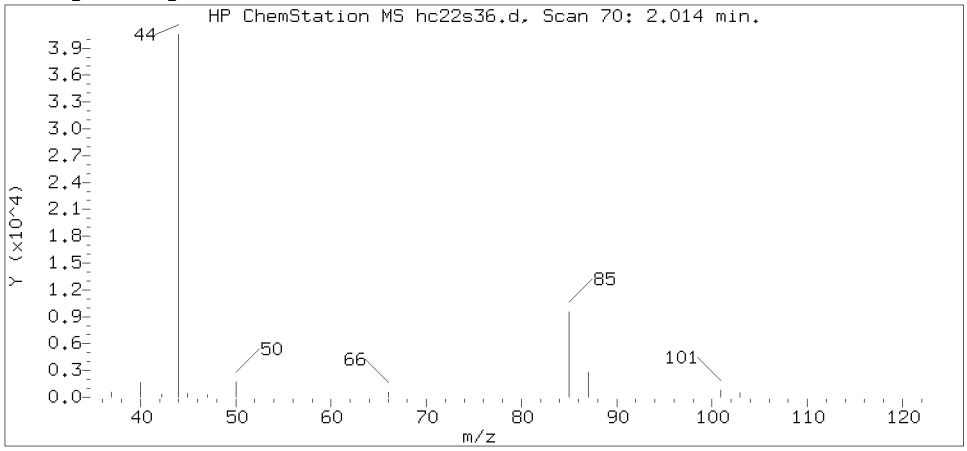
Reference Standard Spectrum for Dichlorodifluoromethane

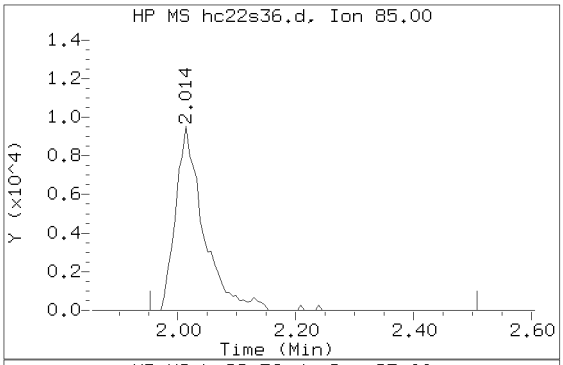


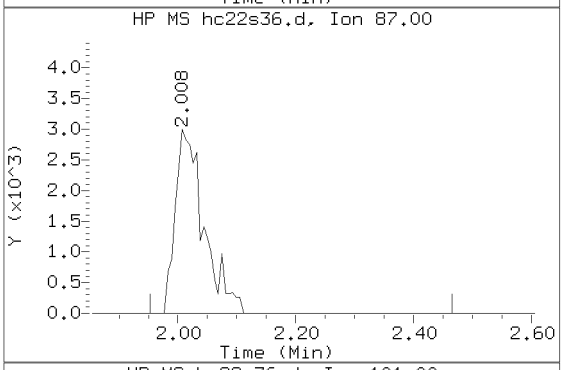
Sample Spectrum (Background Subtracted)

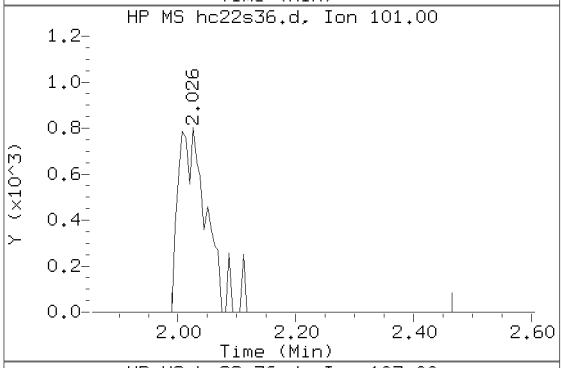


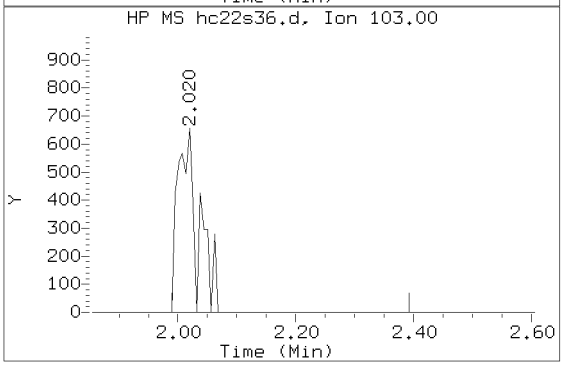
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/17oct22a.b/hc22s36.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:00 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 01:18 Automation

Sample Name: 16--3 Lab Sample ID: 9262031

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 70
Retention Time (minutes): 2.014
Relative Retention Time :-0.00059
Quant Ion : 85.00
Area (flag) : 31414
On-Column Amount (ng) : 0.3145

Digitally signed by Kevin A. Sposito on 10/23/2017 at 07:20.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s07.d Injection date and time: **23-OCT-2017 12:52**
Data file Sample Info. Line: 16-5-;9262032;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.024)	439	65	80710	(-8)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2258684	(-7)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1534196	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140	(-0.006)	1895	152	619255	(-23)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(-0.001)	113	545496	10.001	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(-0.001)	102	81423	9.533	95%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2253486	10.107	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	622274	9.188	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.373	(-0.002)	63	13873	0.124	0.12		J	0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s07.d Injection date and time: **23-OCT-2017 12:52**
Data file Sample Info. Line: 16-5-;9262032;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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**

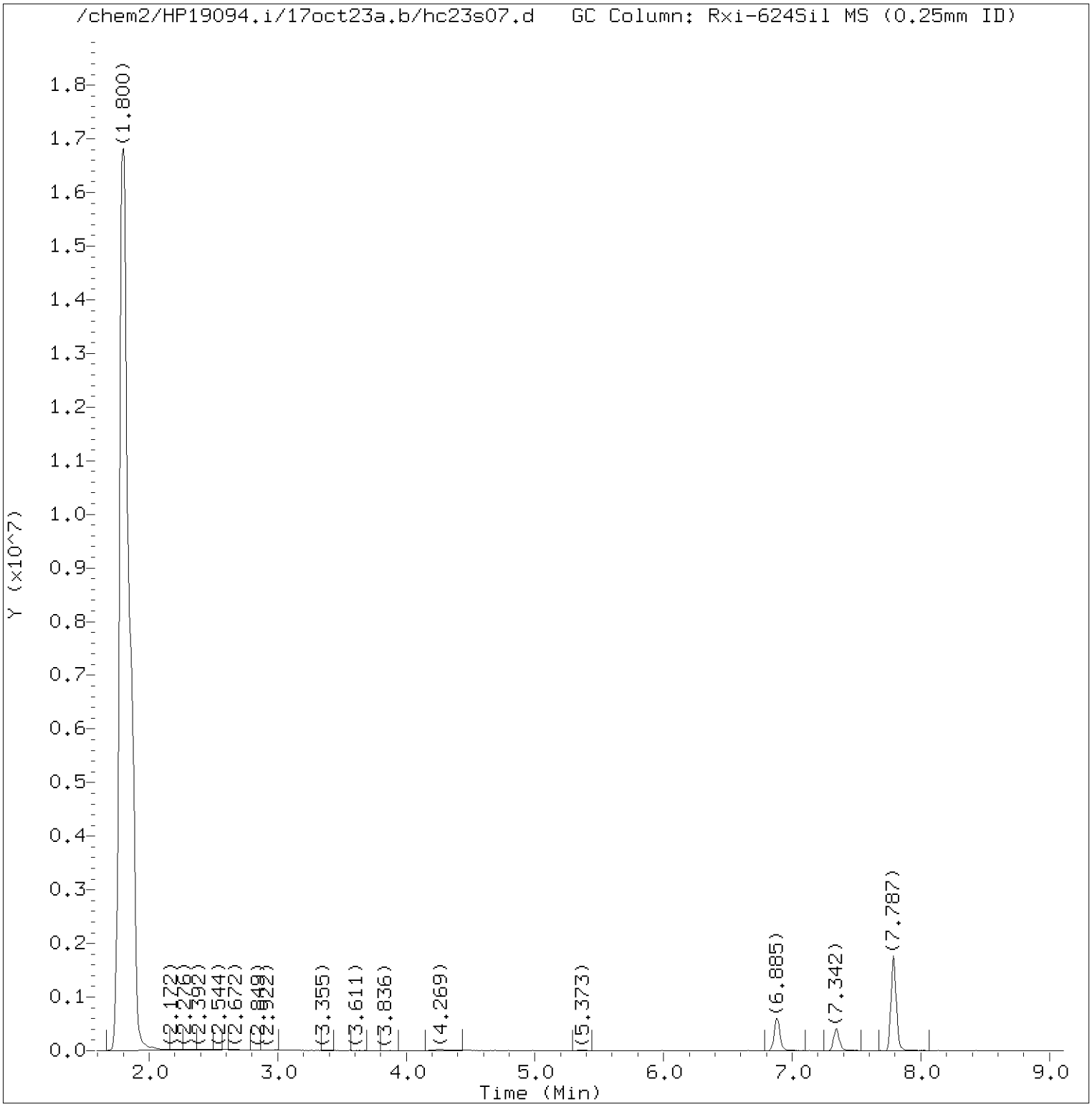
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

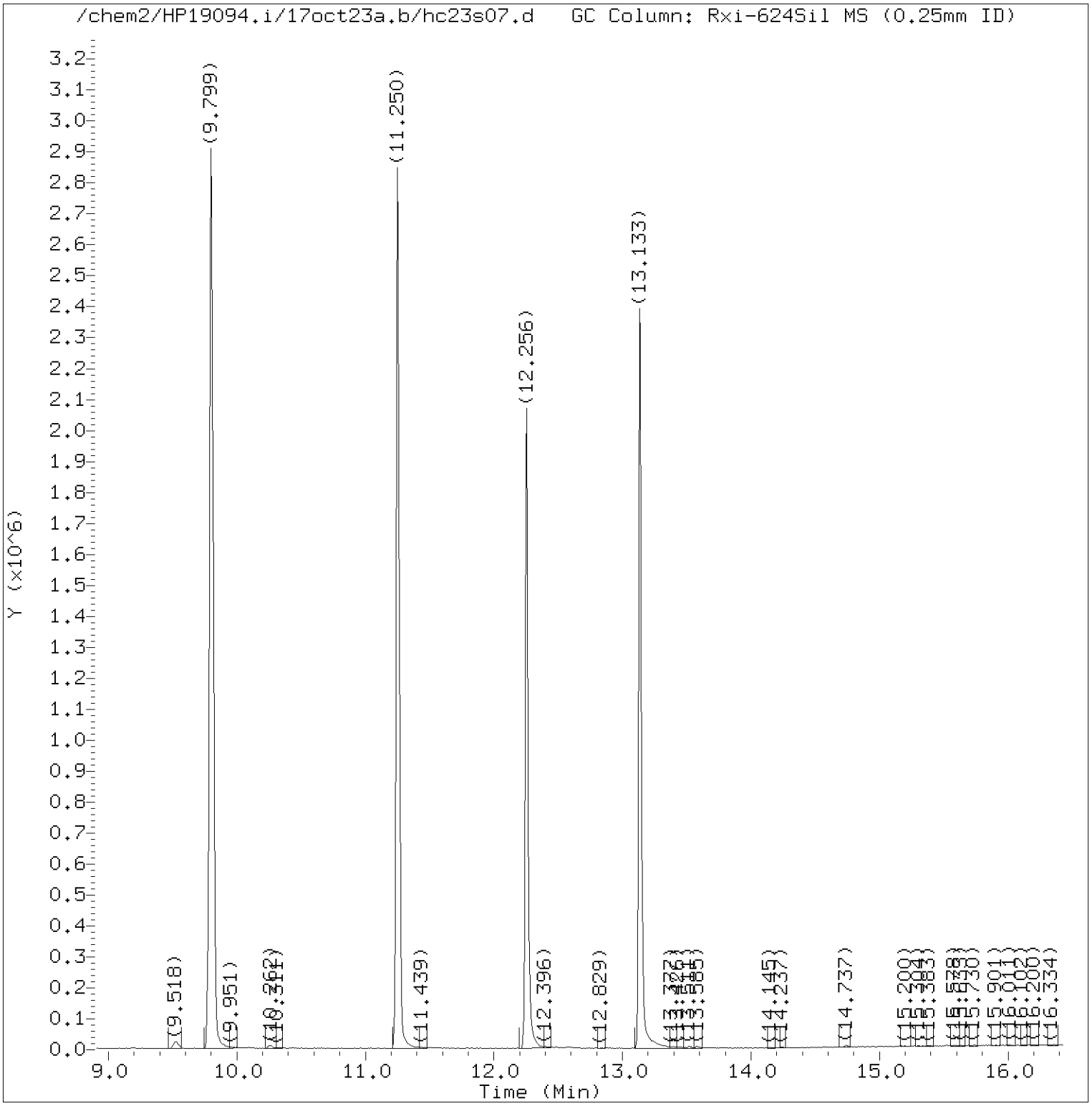
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16-5- Lab Sample ID: 9262032

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16-5- Lab Sample ID: 9262032

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

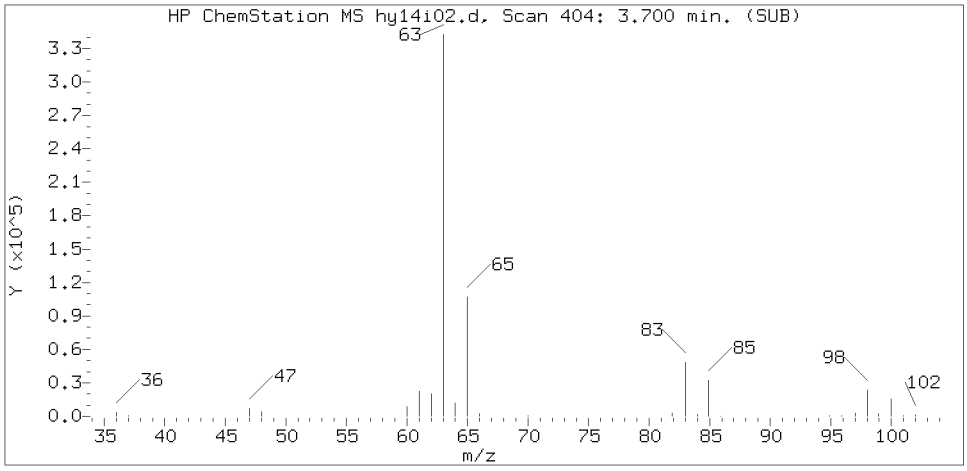
Sample Name: 16-5- Lab Sample ID: 9262032

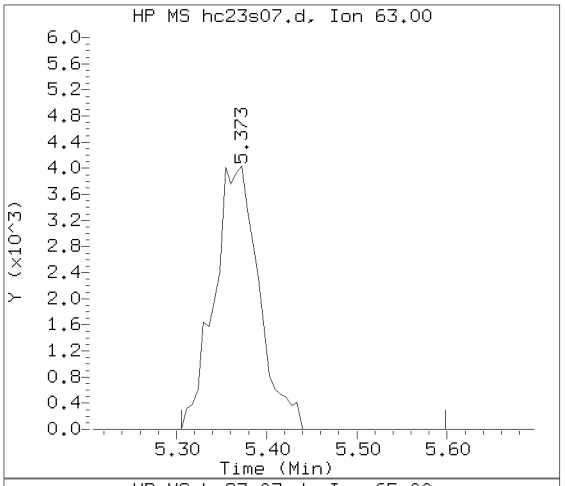
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.263	65	80710	50.000
33) 1,1-Dichloroethane	(2)	5.373	63	13873	0.124
50)$Dibromofluoromethane	(2)	6.885	113	545496	10.001
57)$1,2-Dichloroethane-d4	(2)	7.342	102	81423	9.533
63)*Fluorobenzene	(2)	7.787	96	2258684	10.000
82)$Toluene-d8	(3)	9.799	98	2253486	10.107
97)*Chlorobenzene-d5	(3)	11.250	117	1534196	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	622274	9.188
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	619255	10.000

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

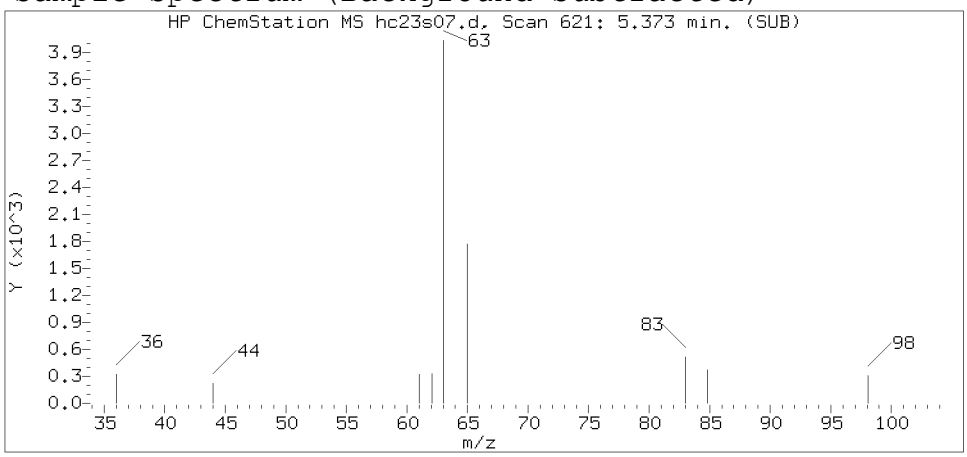
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

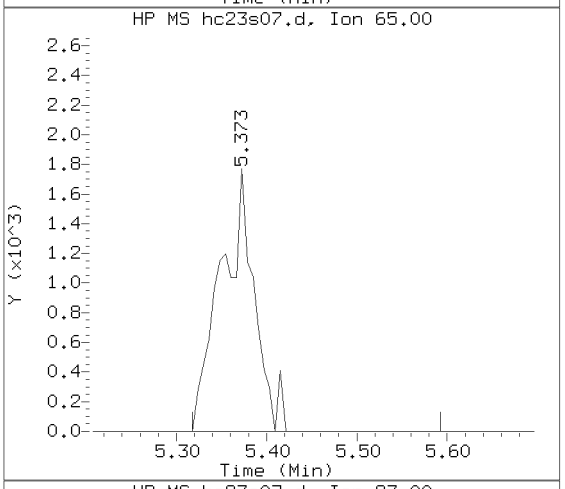
Reference Standard Spectrum for 1,1-Dichloroethane



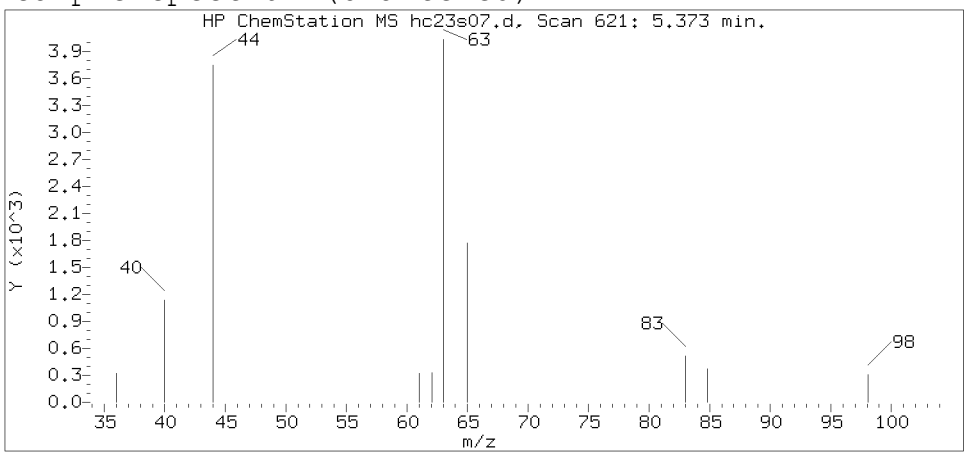


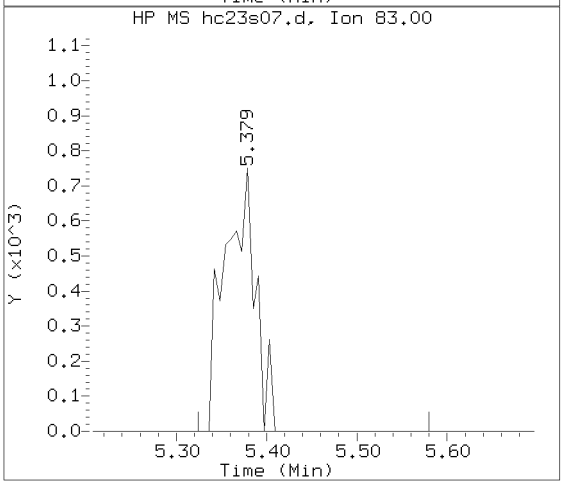
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 12:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16-5- Lab Sample ID: 9262032

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 621
Retention Time (minutes): 5.373
Relative Retention Time :-0.00235
Quant Ion : 63.00
Area (flag) : 13873
On-Column Amount (ng) : 0.1241

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Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s08.d Injection date and time: **23-OCT-2017 13:12**
Data file Sample Info. Line: 16WC2;9262033;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.239	(0.000)	435	65	64968	(-26)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2251697	(-8)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1539304	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	630414	(-22)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	547051	10.061	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.000)	102	84712	9.948	99%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2254041	10.076	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	628110	9.243	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)	6.915	(-0.000)	97	22963	0.237	0.24		J	0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct23a.b/hc23s08.d Injection date and time: **23-OCT-2017 13:12**
Data file Sample Info. Line: 16WC2;9262033;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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**

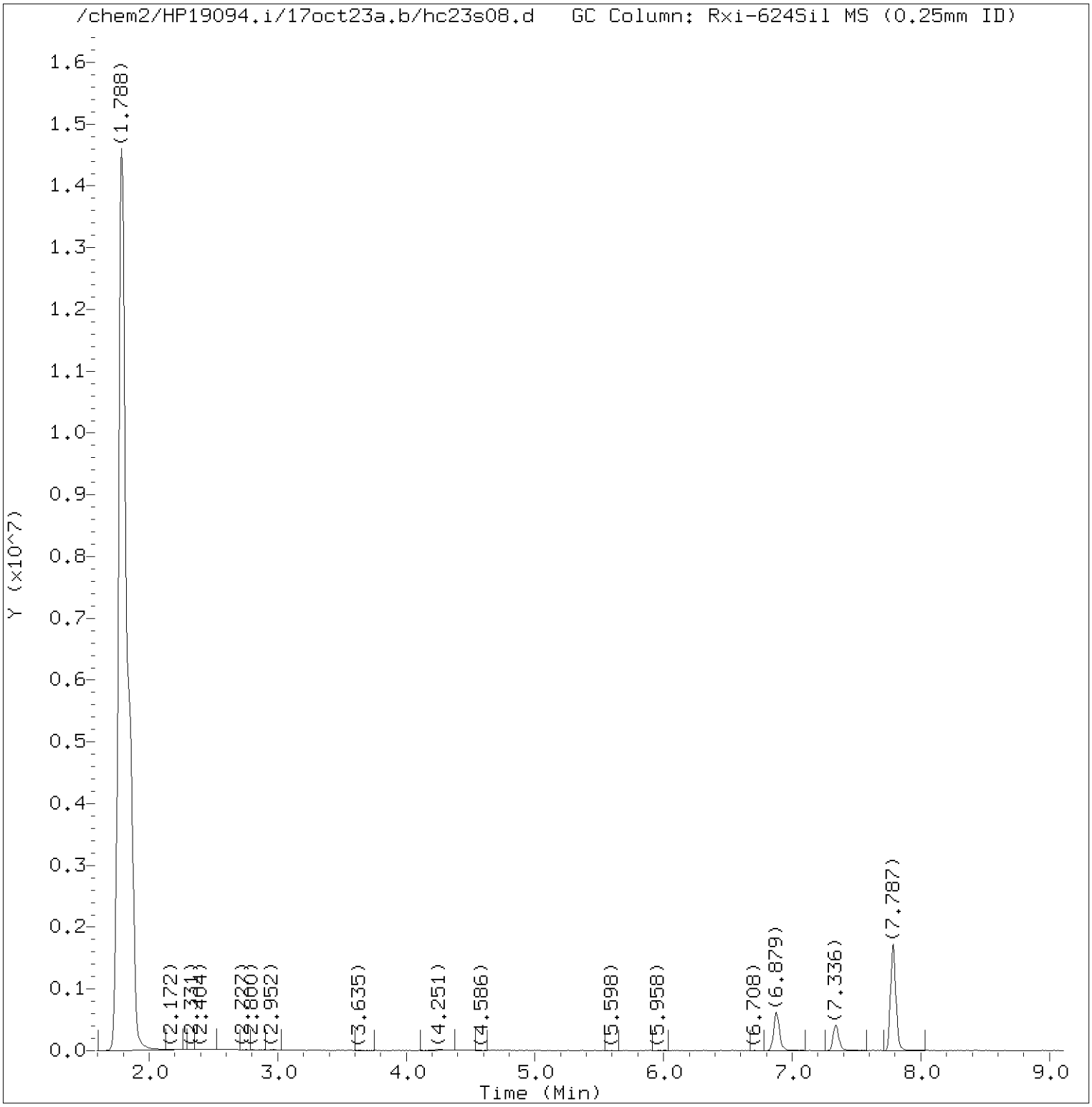
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

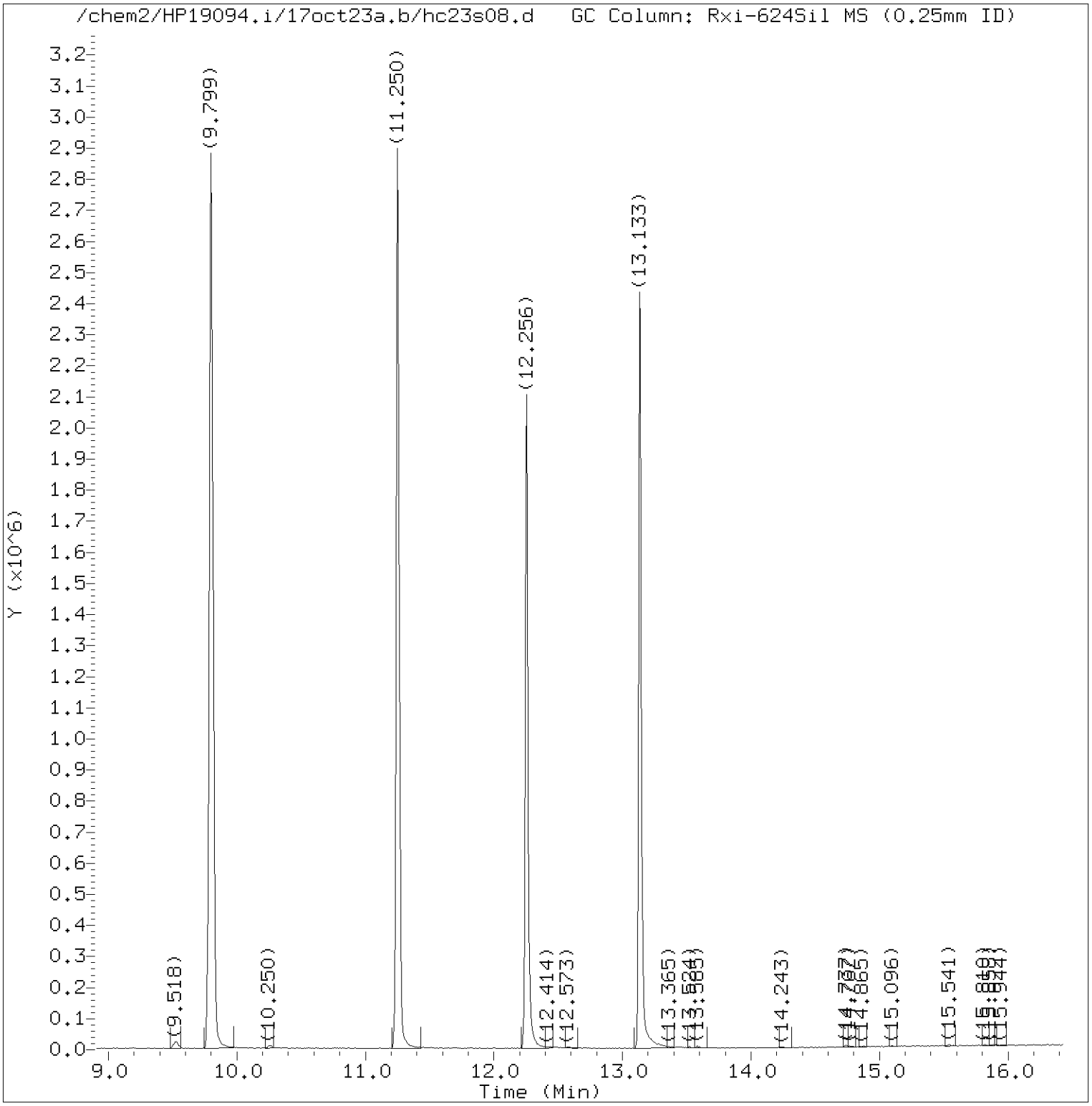
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:12 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16WC2 Lab Sample ID: 9262033

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:12 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16WC2 Lab Sample ID: 9262033

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:12 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

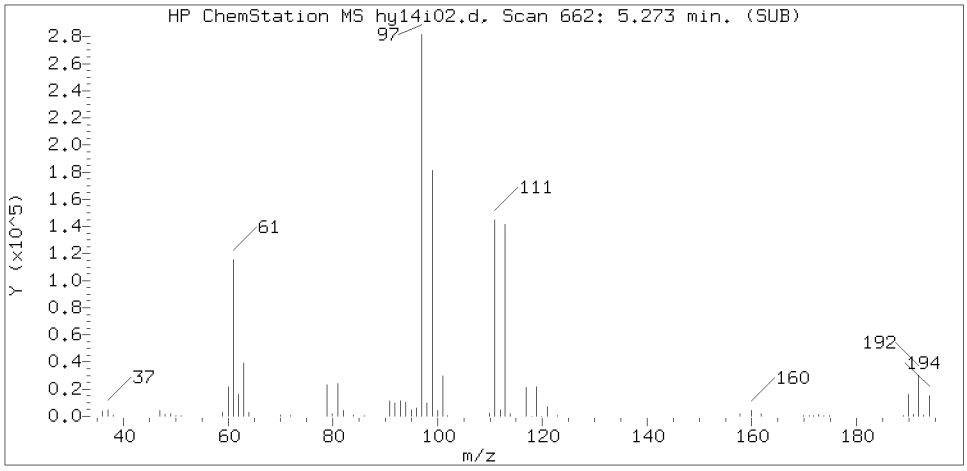
Sample Name: 16WC2 Lab Sample ID: 9262033

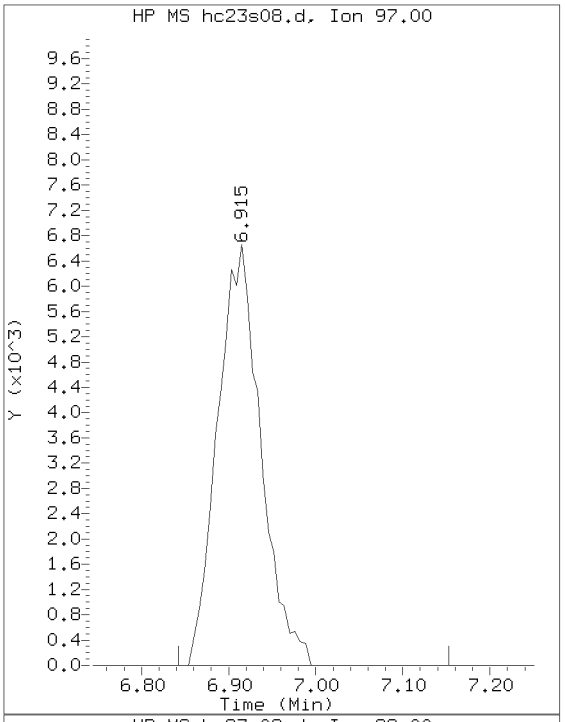
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.239	65	64968	50.000
50)$Dibromofluoromethane	(2)	6.879	113	547051	10.061
51) 1,1,1-Trichloroethane	(2)	6.915	97	22963	0.237
57)$1,2-Dichloroethane-d4	(2)	7.336	102	84712	9.948
63)*Fluorobenzene	(2)	7.787	96	2251697	10.000
82)$Toluene-d8	(3)	9.799	98	2254041	10.076
97)*Chlorobenzene-d5	(3)	11.250	117	1539304	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	628110	9.243
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	630414	10.000

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

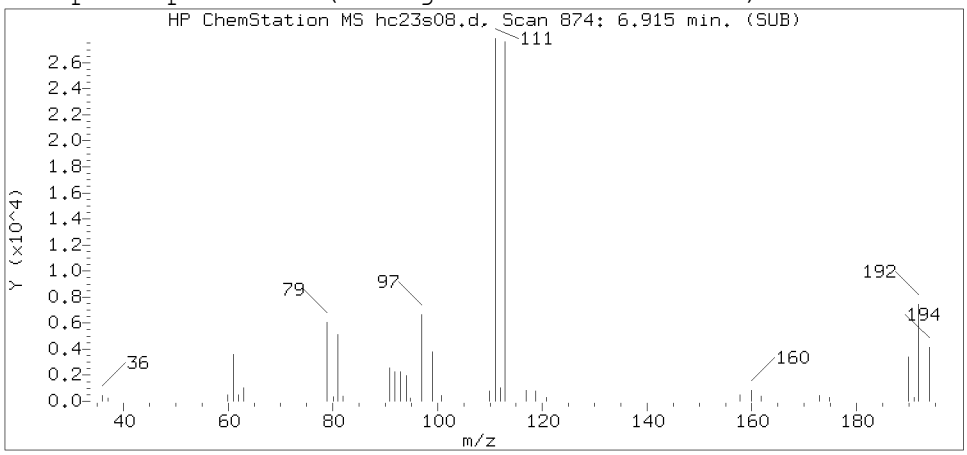
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

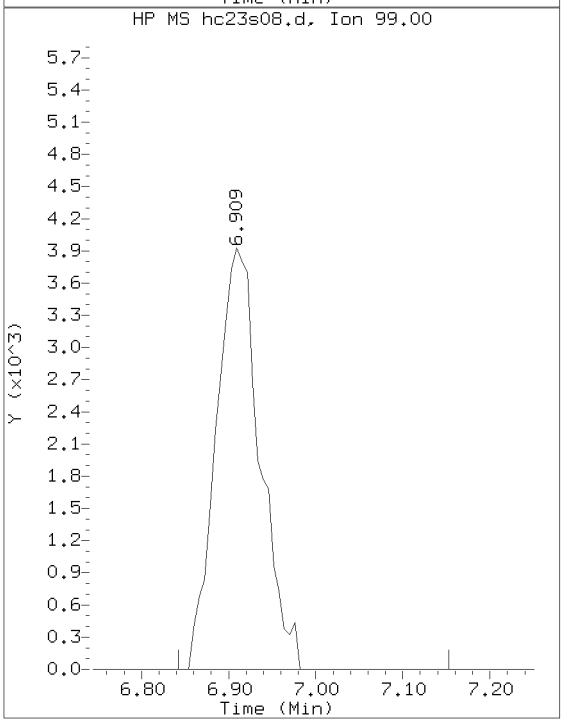
Reference Standard Spectrum for 1,1,1-Trichloroethane



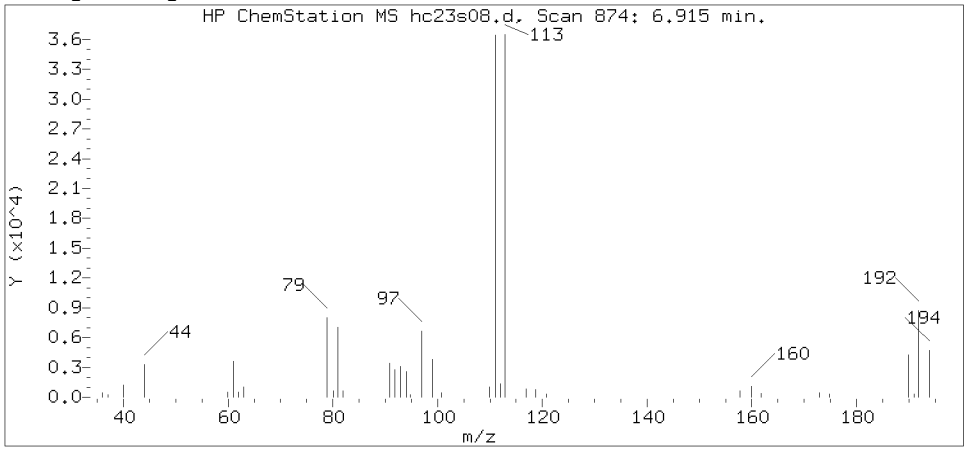


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/17oct23a.b/hc23s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:12 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16WC2 Lab Sample ID: 9262033

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 874
Retention Time (minutes): 6.915
Relative Retention Time :-0.00078
Quant Ion : 97.00
Area (flag) : 22963
On-Column Amount (ng) : 0.2367

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9262034

Data file: /chem2/HP19094.i/17oct23a.b/hc23s09.d Injection date and time: **23-OCT-2017 13:32**
Data file Sample Info. Line: 16SPR;9262034;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.263(-0.024)	439	65	83033 (-5)	50.00	
63) Fluorobenzene	7.787(0.000)	1017	96	2265452 (-7)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1542667 (-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139(-0.006)	1895	152	634968 (-21)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878(0.000)	113	545234	9.966	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342(-0.001)	102	85099	9.933	99%		80 - 120
82) Toluene-d8	(3)	9.798(0.000)	98	2257367	10.069	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255(-0.001)	95	632666	9.290	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					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.360(-0.000)	63	35670	0.318	0.32		J	0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct23a.b/hc23s09.d Injection date and time: **23-OCT-2017 13:32**
Data file Sample Info. Line: 16SPR;9262034;1;0;;RAE95;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 11:39
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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**

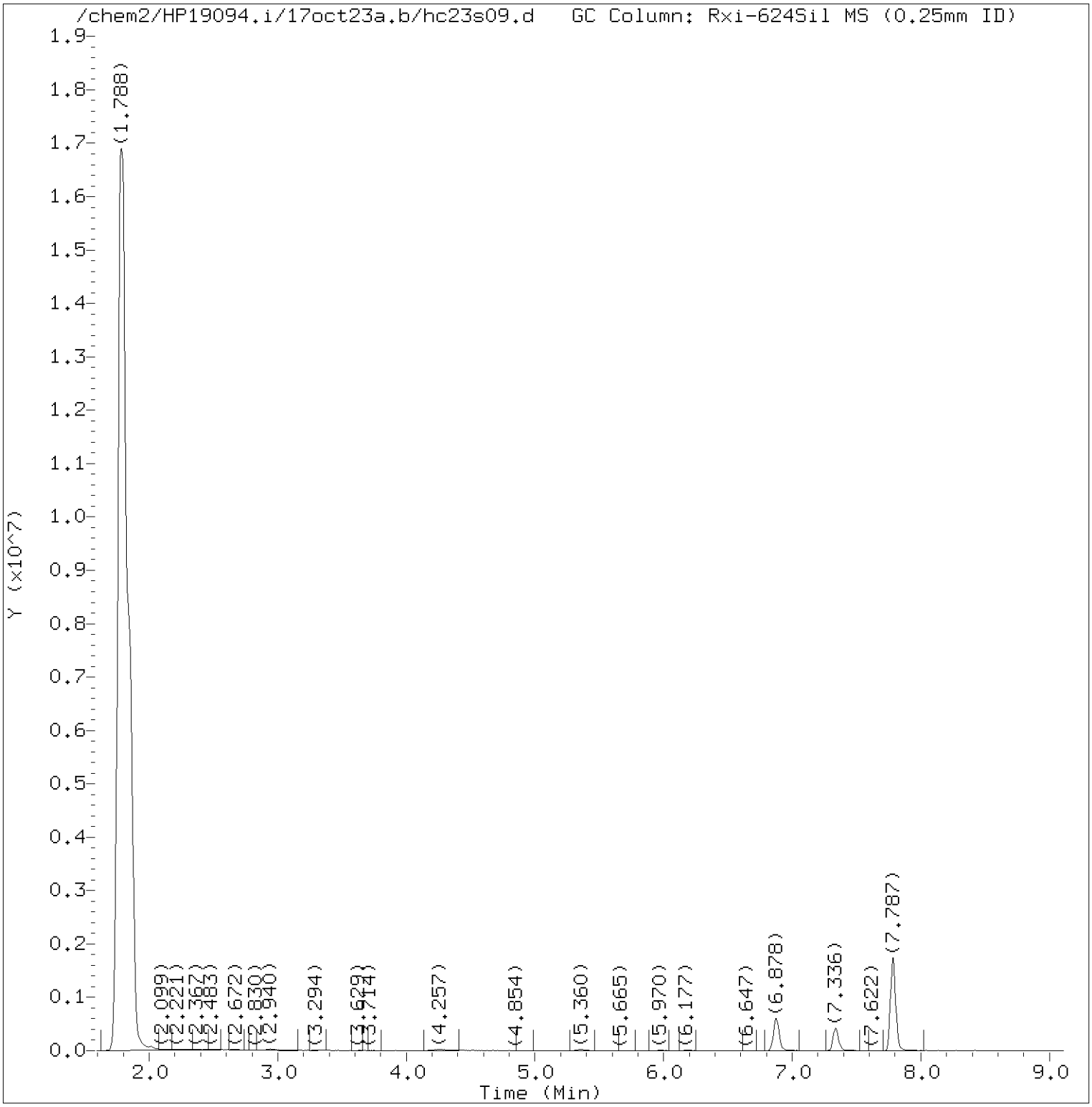
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

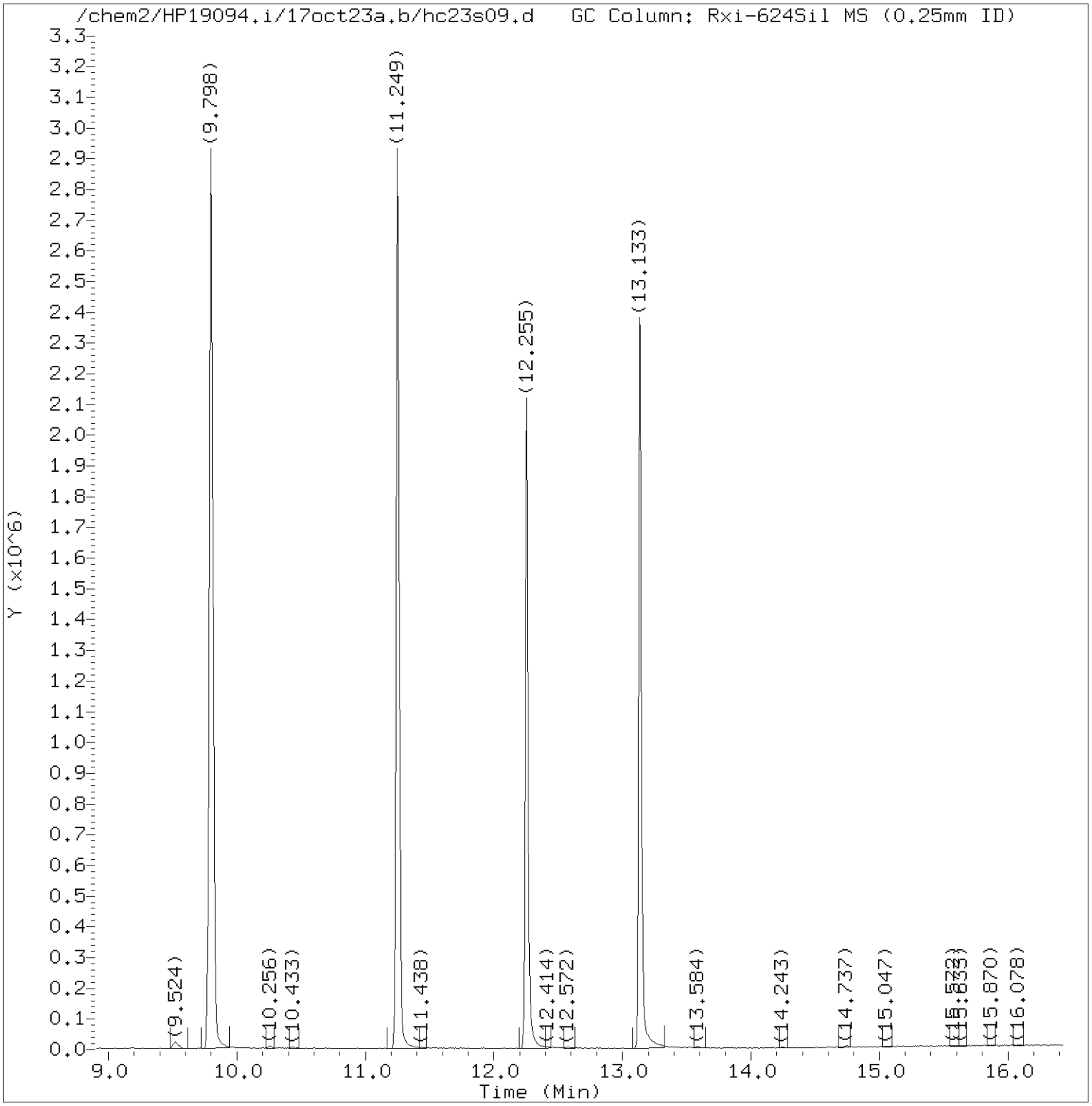
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16SPR Lab Sample ID: 9262034

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16SPR Lab Sample ID: 9262034

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

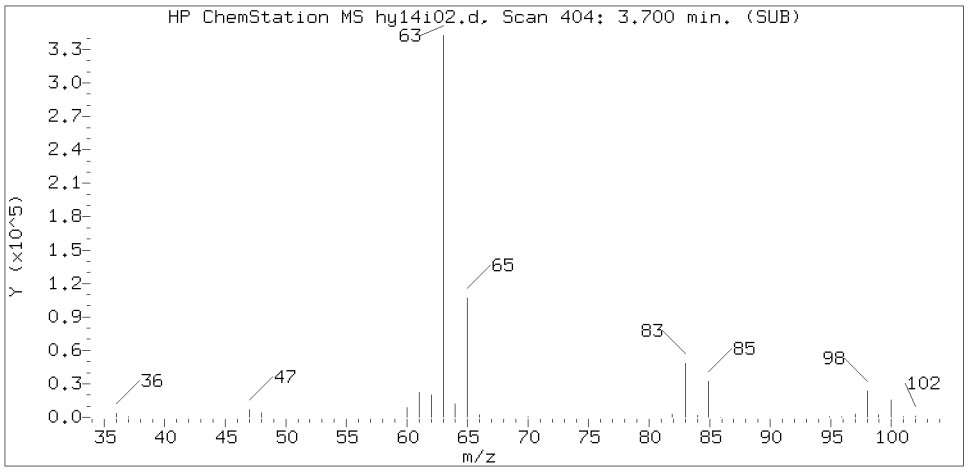
Sample Name: 16SPR Lab Sample ID: 9262034

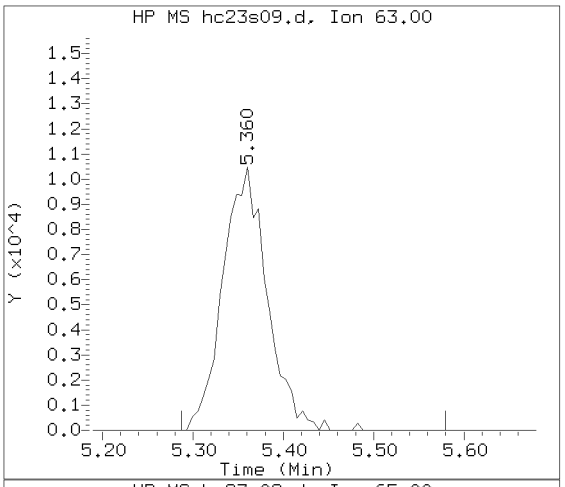
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.263	65	83033	50.000
33) 1,1-Dichloroethane	(2)	5.360	63	35670	0.318
50)$Dibromofluoromethane	(2)	6.878	113	545234	9.966
57)$1,2-Dichloroethane-d4	(2)	7.342	102	85099	9.933
63)*Fluorobenzene	(2)	7.787	96	2265452	10.000
82)$Toluene-d8	(3)	9.798	98	2257367	10.069
97)*Chlorobenzene-d5	(3)	11.249	117	1542667	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	632666	9.290
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	634968	10.000

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

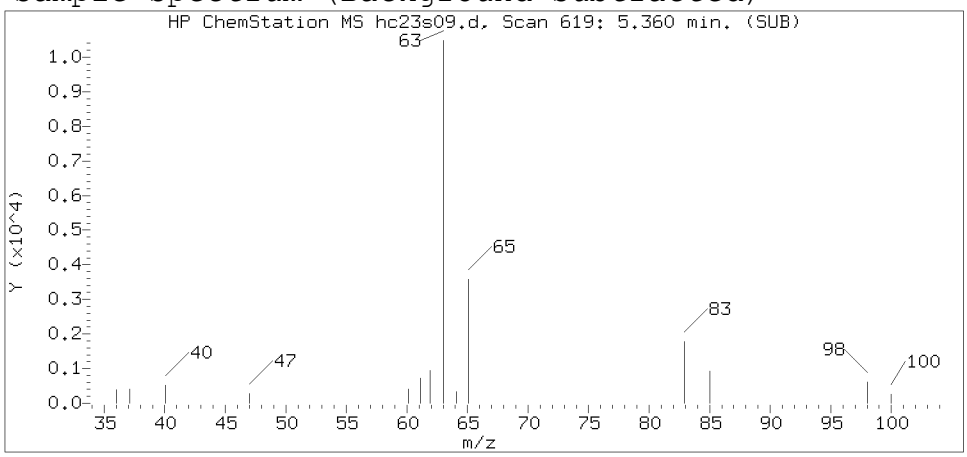
Digitally signed by Kevin A. Sposito
on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

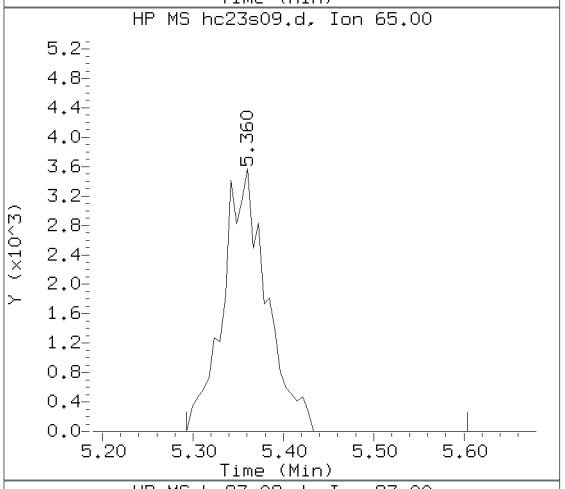
Reference Standard Spectrum for 1,1-Dichloroethane



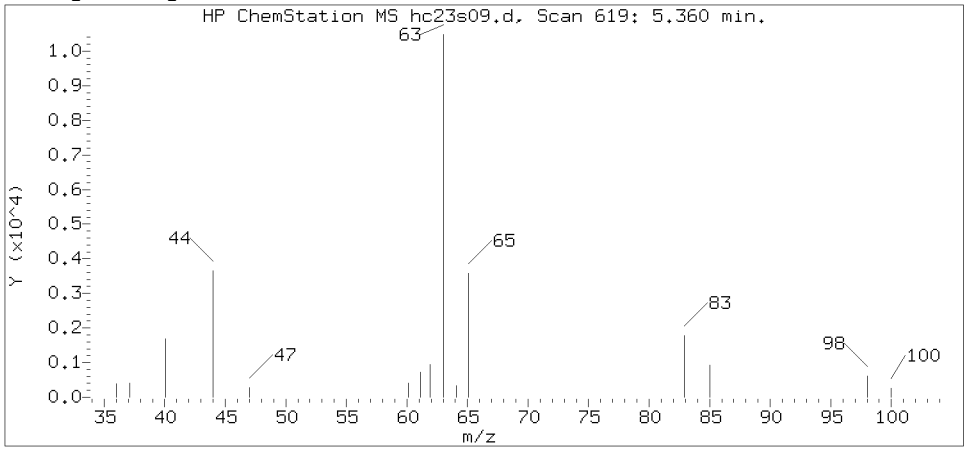


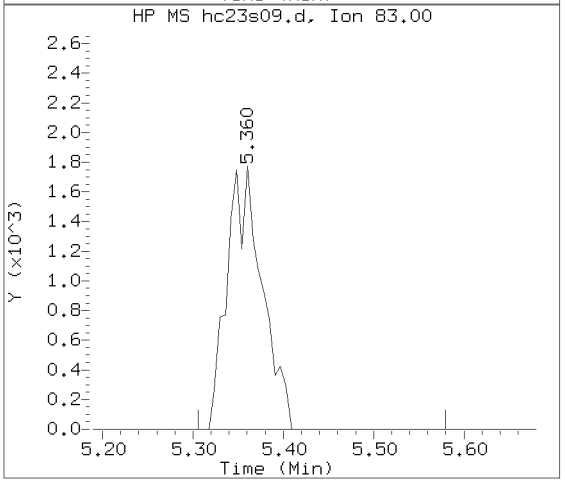
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/17oct23a.b/hc23s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 13:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 11:39
Date, time and analyst ID of latest file update: 23-Oct-2017 14:33 kas02648

Sample Name: 16SPR Lab Sample ID: 9262034

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 619
Retention Time (minutes): 5.360
Relative Retention Time :-0.00078
Quant Ion : 63.00
Area (flag) : 35670
On-Column Amount (ng) : 0.3182

Digitally signed by Kevin A. Sposito on 10/23/2017 at 14:34.
Target 3.5 esignature user ID: kas02648

16TB1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9262035

Data file: /chem2/HP19094.i/17oct22a.b/hc22s03.d Injection date and time: **23-OCT-2017 01:20**
Data file Sample Info. Line: 16TB1;9262035;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.251	(-0.019)	437	65	84407	(-1)	50.00	
63) Fluorobenzene	7.781	(0.000)	1016	96	2232288	(-8)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1467321	(-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140	(-0.006)	1895	152	587748	(-25)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.000)	113	517853	9.607	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	80909	9.584	96%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2220014	10.411	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	593542	9.163	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s03.d Injection date and time: **23-OCT-2017 01:20**
Data file Sample Info. Line: 16TB1;9262035;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

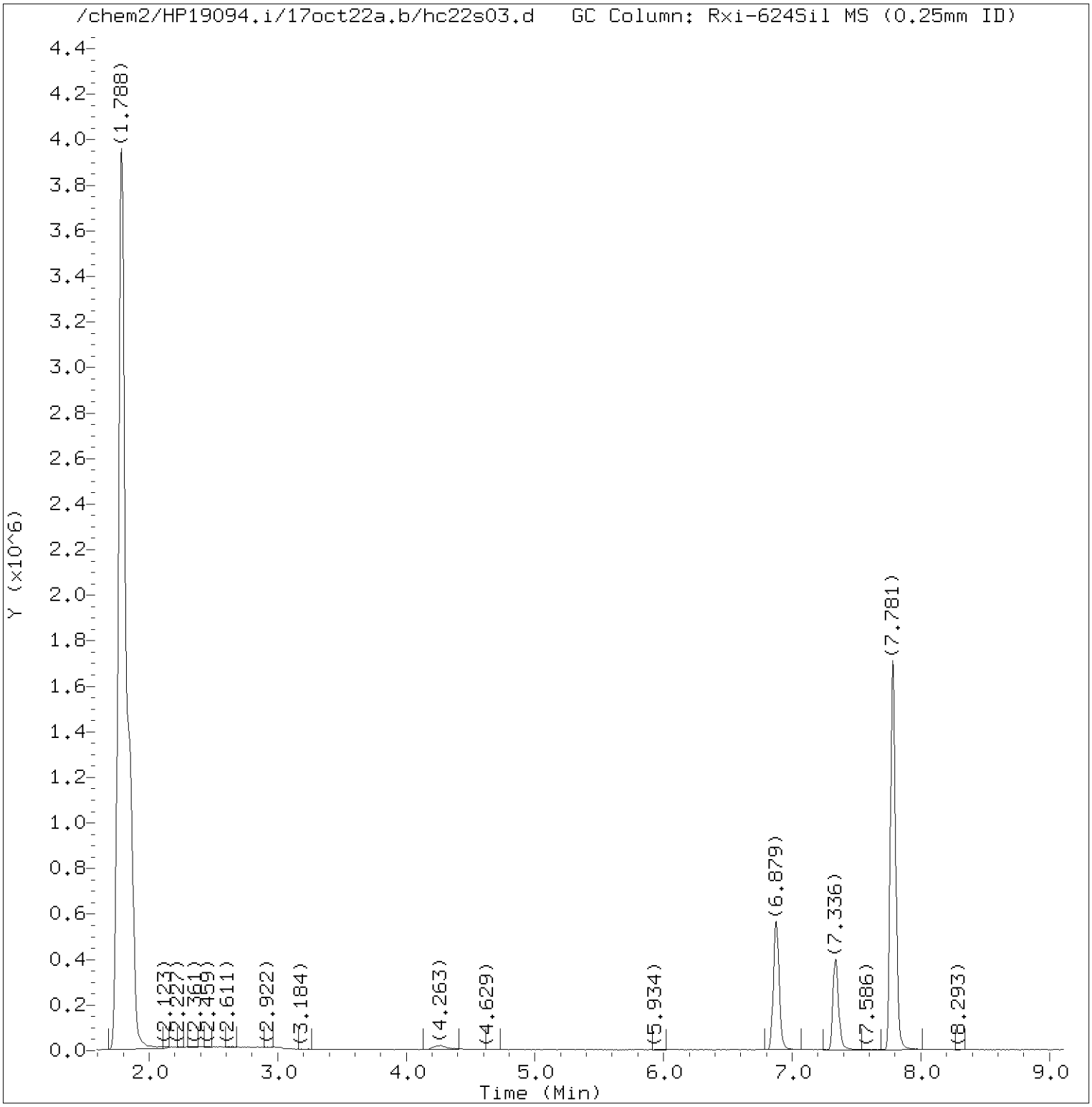
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

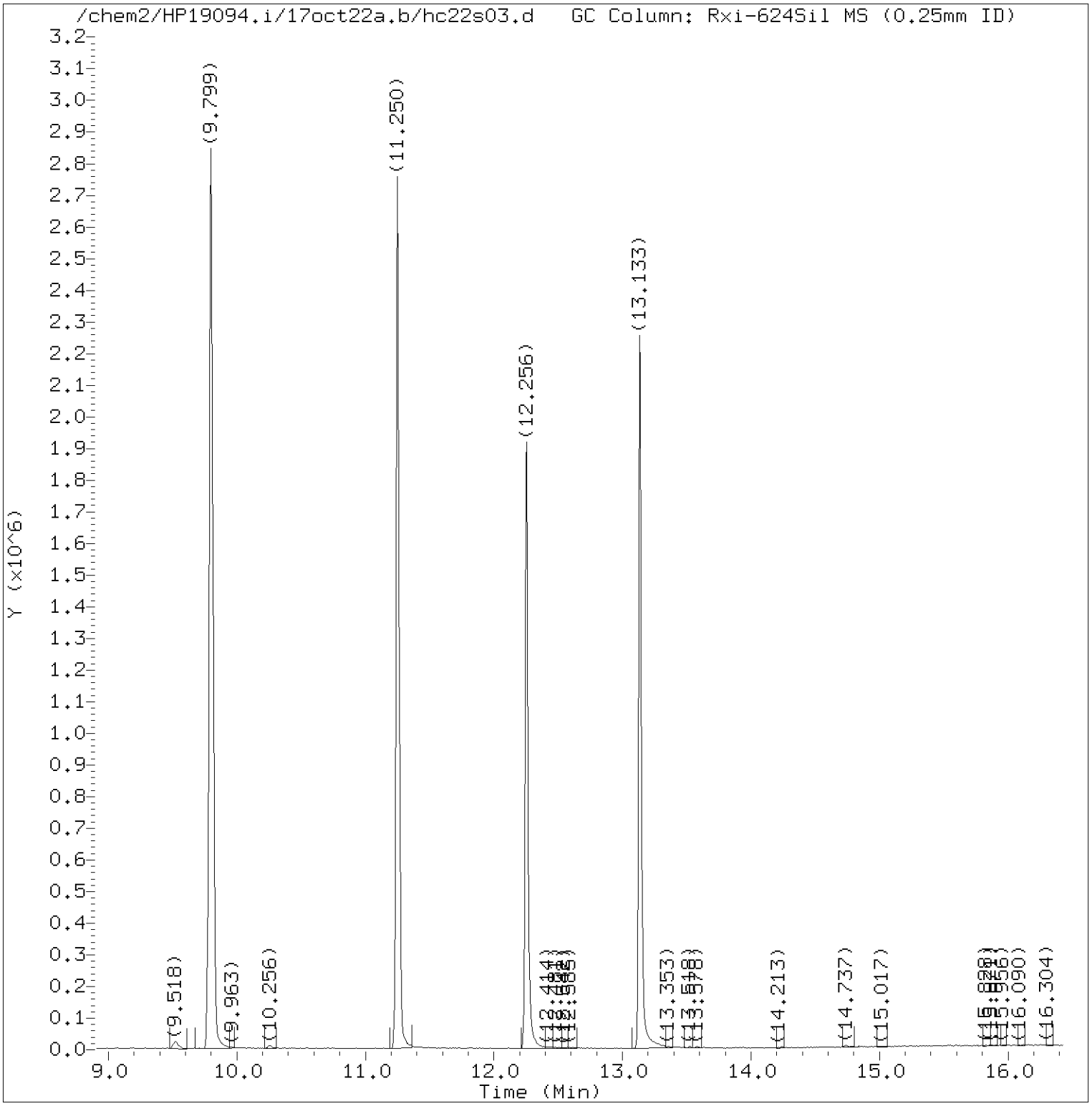
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:20 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB1 Lab Sample ID: 9262035

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:20 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB1 Lab Sample ID: 9262035

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:20 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB1 Lab Sample ID: 9262035

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.251	65	84407	50.000
50)$Dibromofluoromethane	(2)	6.872	113	517853	9.607
57)$1,2-Dichloroethane-d4	(2)	7.342	102	80909	9.584
63)*Fluorobenzene	(2)	7.781	96	2232288	10.000
82)$Toluene-d8	(3)	9.799	98	2220014	10.411
97)*Chlorobenzene-d5	(3)	11.250	117	1467321	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	593542	9.163
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	587748	10.000

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

16TB2 Lancaster Laboratories 9262036
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s04.d Injection date and time: **23-OCT-2017 01:40**
Data file Sample Info. Line: 16TB2;9262036;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.257	(-0.024)	438	65	76090	(-11)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2212238	(-9)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1422740	(-17)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	571430	(-28)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	510729	9.560	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	78967	9.439	94%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2172053	10.505	105%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	581160	9.253	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s04.d Injection date and time: **23-OCT-2017 01:40**
Data file Sample Info. Line: 16TB2;9262036;1;0;;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

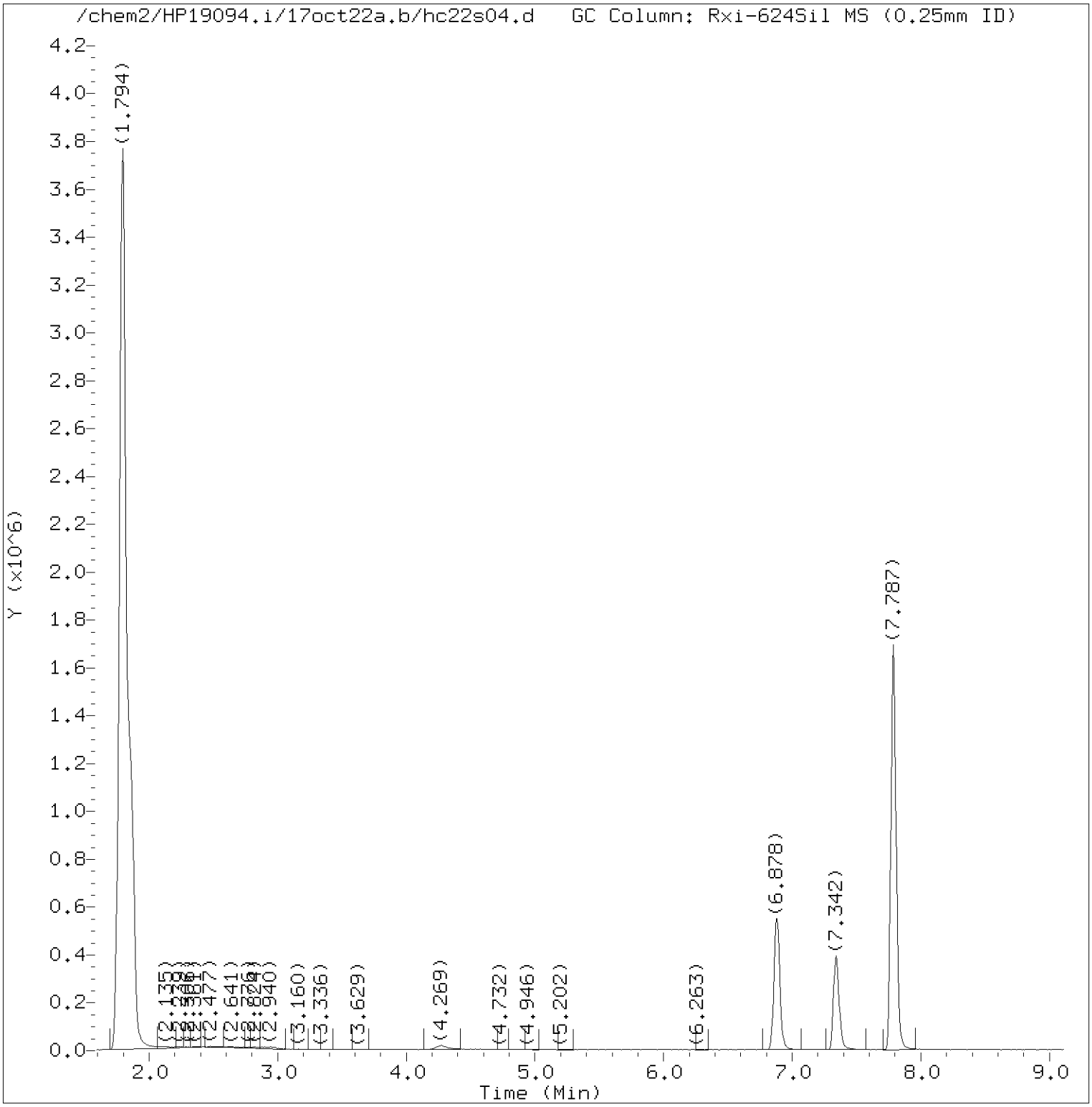
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

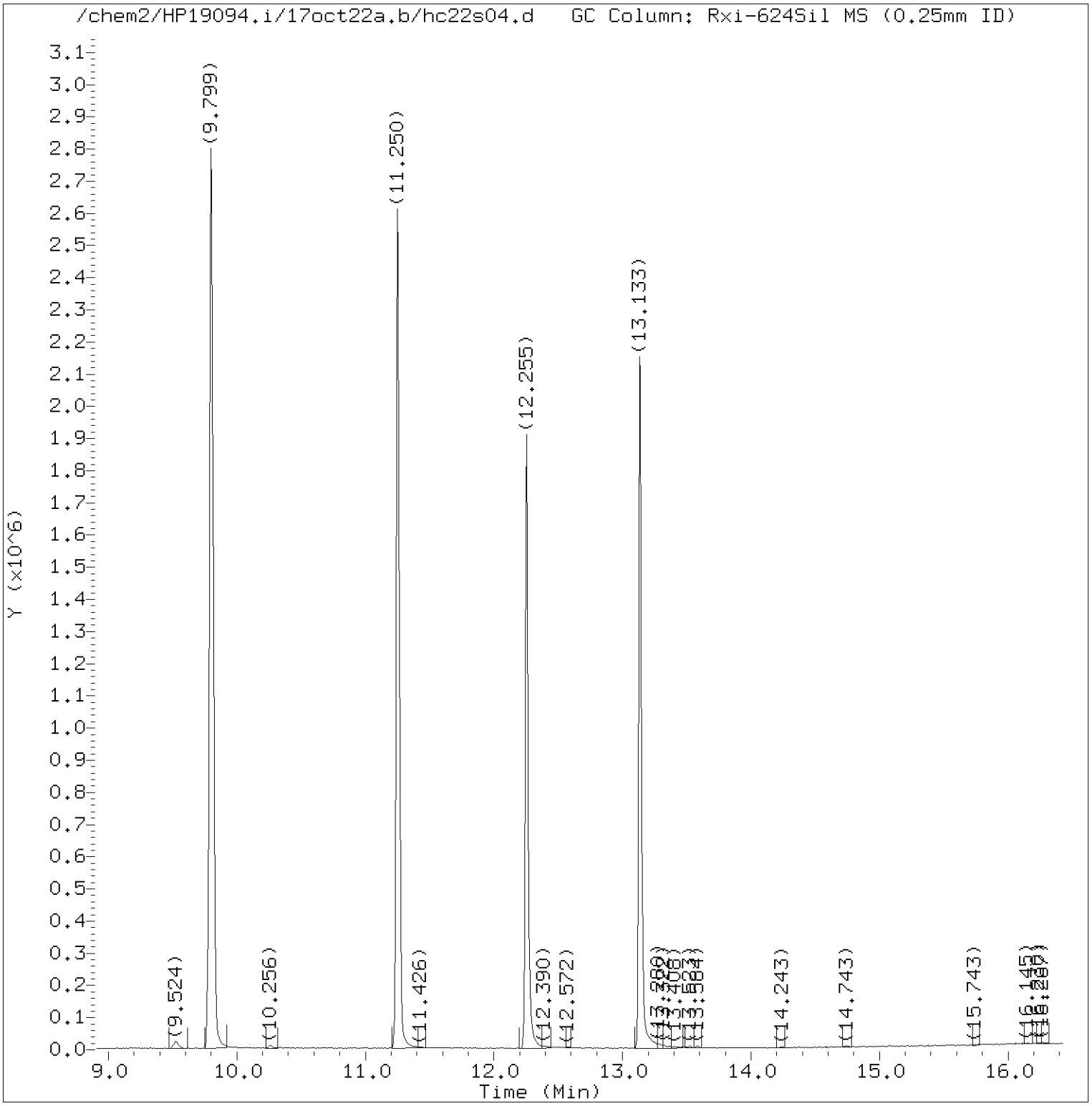
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB2 Lab Sample ID: 9262036

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB2 Lab Sample ID: 9262036

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 01:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16TB2 Lab Sample ID: 9262036

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	76090	50.000
50)$Dibromofluoromethane	(2)	6.878	113	510729	9.560
57)$1,2-Dichloroethane-d4	(2)	7.342	102	78967	9.439
63)*Fluorobenzene	(2)	7.787	96	2212238	10.000
82)$Toluene-d8	(3)	9.799	98	2172053	10.505
97)*Chlorobenzene-d5	(3)	11.250	117	1422740	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	581160	9.253
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	571430	10.000

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

Standards Data

Volatiles by GC/MS

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

Data Directory Path is - D:\DATA\17OCT16a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	HC16T01.D	bfb 08-14-17	10/16/2017	10:07		
KAS02648	HC16X01.D	BLK	10/16/2017	10:23		
KAS02648	HC16I01.D	VSTD025	10/16/2017	10:43		
KAS02648	HC16I02.D	VSTD010	10/16/2017	11:03		
KAS02648	HC16I03.D	VSTD005	10/16/2017	11:23		
KAS02648	HC16I04.D	VSTD002	10/16/2017	11:44		
KAS02648	HC16I05.D	VSTD001	10/16/2017	12:04		
KAS02648	HC16I06.D	VSTD0.5	10/16/2017	12:24		
KAS02648	HC16I07.D	VSTD0.2	10/16/2017	12:45		
KAS02648	HC16M01.D	MDL0.1	10/16/2017	13:05		
KAS02648	HC16M02.D	MDL0.4	10/16/2017	13:28		
KAS02648	HC16V01.D	LCSHSM	10/16/2017	13:48		
KAS02648	HC16X11.D	BLK	10/16/2017	14:44		
KAS02648	HC16I11.D	VSTD025	10/16/2017	15:04		
KAS02648	HC16I12.D	VSTD010	10/16/2017	15:25		
KAS02648	HC16I13.D	VSTD005	10/16/2017	15:45		
KAS02648	HC16I14.D	VSTD002	10/16/2017	16:05		
KAS02648	HC16I15.D	VSTD001	10/16/2017	16:26		
KAS02648	HC16I16.D	VSTD0.5	10/16/2017	16:46		
KAS02648	HC16I17.D	VSTD0.2	10/16/2017	17:06		
KAS02648	HC16M11.D	MDL0.1	10/16/2017	17:27		
KAS02648	HC16V11.D	LCSHSM	10/16/2017	17:47		
KAS02648	HC16I18.D	VSTD001	10/16/2017	18:51		
KAS02648	HC16I19.D	VSTD0.5	10/16/2017	19:11		
KAS02648	HC16I20.D	VSTD0.2	10/16/2017	19:31		
KAS02648	HC16M15.D	MDL0.1	10/16/2017	19:52		

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

Data Directory Path is - D:\DATA\17OCT22A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	HC22T01.D	bfb 08-14-17	10/22/2017	18:21		
DVV10203	HC22X01.D	BLK	10/22/2017	18:42		
DVV10203	HC22I01.D	VSTD025	10/22/2017	19:02		
DVV10203	HC22I02.D	VSTD010	10/22/2017	19:23		
DVV10203	HC22I03.D	VSTD005	10/22/2017	19:43		
DVV10203	HC22I04.D	VSTD002	10/22/2017	20:03		
DVV10203	HC22I05.D	VSTD001	10/22/2017	20:23		
DVV10203	HC22I06.D	VSTD0.5	10/22/2017	20:44		
DVV10203	HC22I07.D	VSTD0.2	10/22/2017	21:04		
DVV10203	HC22M01.D	MDL0.1	10/22/2017	21:24		
DVV10203	HC22V01.D	LCSHSM	10/22/2017	21:44		
DVV10203	HC22X10.D	BLK	10/22/2017	22:25	H172951AA	
DVV10203	HC22C01.D	VSTD010	10/22/2017	22:45	H172951AA	
DVV10203	HC22S01.D	LCSH94	10/22/2017	23:05	H172951AA	
DVV10203	HC22S02.D	LCSH95	10/22/2017	23:25	H172951AA	
DVV10203	HC22S34.D	LCDH97	10/22/2017	23:45	H172952AA	
DVV10203	HC22B01.D	VBLKH94	10/23/2017	00:06	H172951AA	
DVV10203	HC22S35.D	9262030	10/23/2017	00:39	H172952AA	
DVV10203	HC22S36.D	9262031	10/23/2017	01:00	H172952AA	
DVV10203	HC22S03.D	9262035	10/23/2017	01:20	H172951AA	
DVV10203	HC22S04.D	9262036	10/23/2017	01:40	H172951AA	
DVV10203	HC22S05.D	9262025	10/23/2017	02:00	H172951AA	
DVV10203	HC22S06.D	9262026MS	10/23/2017	02:21	H172951AA	
DVV10203	HC22S07.D	9262027MSD	10/23/2017	02:41	H172951AA	
DVV10203	HC22S08.D	9262026MS	10/23/2017	03:01	H172951AA	
DVV10203	HC22S09.D	9262027MSD	10/23/2017	03:21	H172951AA	
DVV10203	HC22S10.D	9262025DL	10/23/2017	03:42	H172951AA	10
DVV10203	HC22S11.D	9262022	10/23/2017	04:02	H172951AA	
DVV10203	HC22S12.D	9262022DL	10/23/2017	04:22	H172951AA	10
DVV10203	HC22S13.D	9262023	10/23/2017	04:43	H172951AA	
DVV10203	HC22S14.D	9262024	10/23/2017	05:03	H172951AA	
DVV10203	HC22S15.D	9262024DL	10/23/2017	05:23	H172951AA	10
DVV10203	HC22S16.D	9262028	10/23/2017	05:44	H172951AA	
DVV10203	HC22S17.D	9262029	10/23/2017	06:04	H172951AA	

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

Data Directory Path is - D:\DATA\17OCT22A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	HC22T01.D	bfb 08-14-17	10/22/2017	18:21		
DVV10203	HC22X01.D	BLK	10/22/2017	18:42		
DVV10203	HC22I01.D	VSTD025	10/22/2017	19:02		
DVV10203	HC22I02.D	VSTD010	10/22/2017	19:23		
DVV10203	HC22I03.D	VSTD005	10/22/2017	19:43		
DVV10203	HC22I04.D	VSTD002	10/22/2017	20:03		
DVV10203	HC22I05.D	VSTD001	10/22/2017	20:23		
DVV10203	HC22I06.D	VSTD0.5	10/22/2017	20:44		
DVV10203	HC22I07.D	VSTD0.2	10/22/2017	21:04		
DVV10203	HC22M01.D	MDL0.1	10/22/2017	21:24		
DVV10203	HC22V01.D	LCSHSM	10/22/2017	21:44		
DVV10203	HC22X10.D	BLK	10/22/2017	22:25	H172951AA	
DVV10203	HC22C01.D	VSTD010	10/22/2017	22:45	H172951AA	
DVV10203	HC22S01.D	LCSH94	10/22/2017	23:05	H172951AA	
DVV10203	HC22S02.D	LCSH95	10/22/2017	23:25	H172951AA	
DVV10203	HC22S34.D	LCDH97	10/22/2017	23:45	H172952AA	
DVV10203	HC22B01.D	VBLKH94	10/23/2017	00:06	H172951AA	
DVV10203	HC22S35.D	9262030	10/23/2017	00:39	H172952AA	
DVV10203	HC22S36.D	9262031	10/23/2017	01:00	H172952AA	
DVV10203	HC22S03.D	9262035	10/23/2017	01:20	H172951AA	
DVV10203	HC22S04.D	9262036	10/23/2017	01:40	H172951AA	
DVV10203	HC22S05.D	9262025	10/23/2017	02:00	H172951AA	
DVV10203	HC22S06.D	9262026MS	10/23/2017	02:21	H172951AA	
DVV10203	HC22S07.D	9262027MSD	10/23/2017	02:41	H172951AA	
DVV10203	HC22S08.D	9262026MS	10/23/2017	03:01	H172951AA	
DVV10203	HC22S09.D	9262027MSD	10/23/2017	03:21	H172951AA	
DVV10203	HC22S10.D	9262025DL	10/23/2017	03:42	H172951AA	10
DVV10203	HC22S11.D	9262022	10/23/2017	04:02	H172951AA	
DVV10203	HC22S12.D	9262022DL	10/23/2017	04:22	H172951AA	10
DVV10203	HC22S13.D	9262023	10/23/2017	04:43	H172951AA	
DVV10203	HC22S14.D	9262024	10/23/2017	05:03	H172951AA	
DVV10203	HC22S15.D	9262024DL	10/23/2017	05:23	H172951AA	10
DVV10203	HC22S16.D	9262028	10/23/2017	05:44	H172951AA	
DVV10203	HC22S17.D	9262029	10/23/2017	06:04	H172951AA	

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

Data Directory Path is - d:\data\17OCT23A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	HC23T01.D	50NGBFB	10/23/2017	08:03	H172961AA	
KAS02648	HC23X01.D	BLANK	10/23/2017	08:50		
KAS02648	HC23C01.D	VSTD010	10/23/2017	09:11	H172961AA	
KAS02648	HC23C02.D	VSTD010	10/23/2017	09:31	H172961AA	
KAS02648	HC23S01.D	LCSH98	10/23/2017	09:51	H172961AA	
KAS02648	HC23S02.D	LCDH98	10/23/2017	10:11	H172961AA	
KAS02648	HC23S03.D	LCSH99	10/23/2017	10:32	H172961AA	
KAS02648	HC23S04.D	LCDH99	10/23/2017	10:52	H172961AA	
KAS02648	HC23B01.D	VBLKH98	10/23/2017	11:13	H172961AA	
KAS02648	HC23S05.D	9262022DL	10/23/2017	12:11	H172961AA	2.5
KAS02648	HC23S06.D	9262024DL	10/23/2017	12:32	H172961AA	2.5
KAS02648	HC23S07.D	9262032	10/23/2017	12:52	H172961AA	
KAS02648	HC23S08.D	9262033	10/23/2017	13:12	H172961AA	
KAS02648	HC23S09.D	9262034	10/23/2017	13:32	H172961AA	
KAS02648	HC23S33.D	9264000	10/23/2017	13:53	H172963AA	
KAS02648	HC23S34.D	9265683	10/23/2017	14:13	H172963AA	
KAS02648	HC23S35.D	9264021	10/23/2017	14:33	H172963AA	
KAS02648	HC23S36.D	9264022MS	10/23/2017	14:54	H172963AA	
KAS02648	HC23S37.D	9264023MSD	10/23/2017	15:14	H172963AA	
KAS02648	HC23S38.D	9264019	10/23/2017	15:34	H172963AA	10
KAS02648	HC23S39.D	9264019DL	10/23/2017	15:55	H172963AA	100
KAS02648	HC23S40.D	9264024	10/23/2017	16:15	H172963AA	500
KAS02648	HC23S41.D	9264024DL	10/23/2017	16:36	H172963AA	5000
KAS02648	HC23S42.D	9264025	10/23/2017	16:56	H172963AA	50
KAS02648	HC23S43.D	9264025DL	10/23/2017	17:16	H172963AA	500
KAS02648	HC23S44.D	9264026	10/23/2017	17:37	H172963AA	50
KAS02648	HC23S45.D	9264026DL	10/23/2017	17:57	H172963AA	500
KAS02648	HC23S46.D	9264027	10/23/2017	18:17	H172963AA	20
KAS02648	HC23S47.D	9264027DL	10/23/2017	18:37	H172963AA	200

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

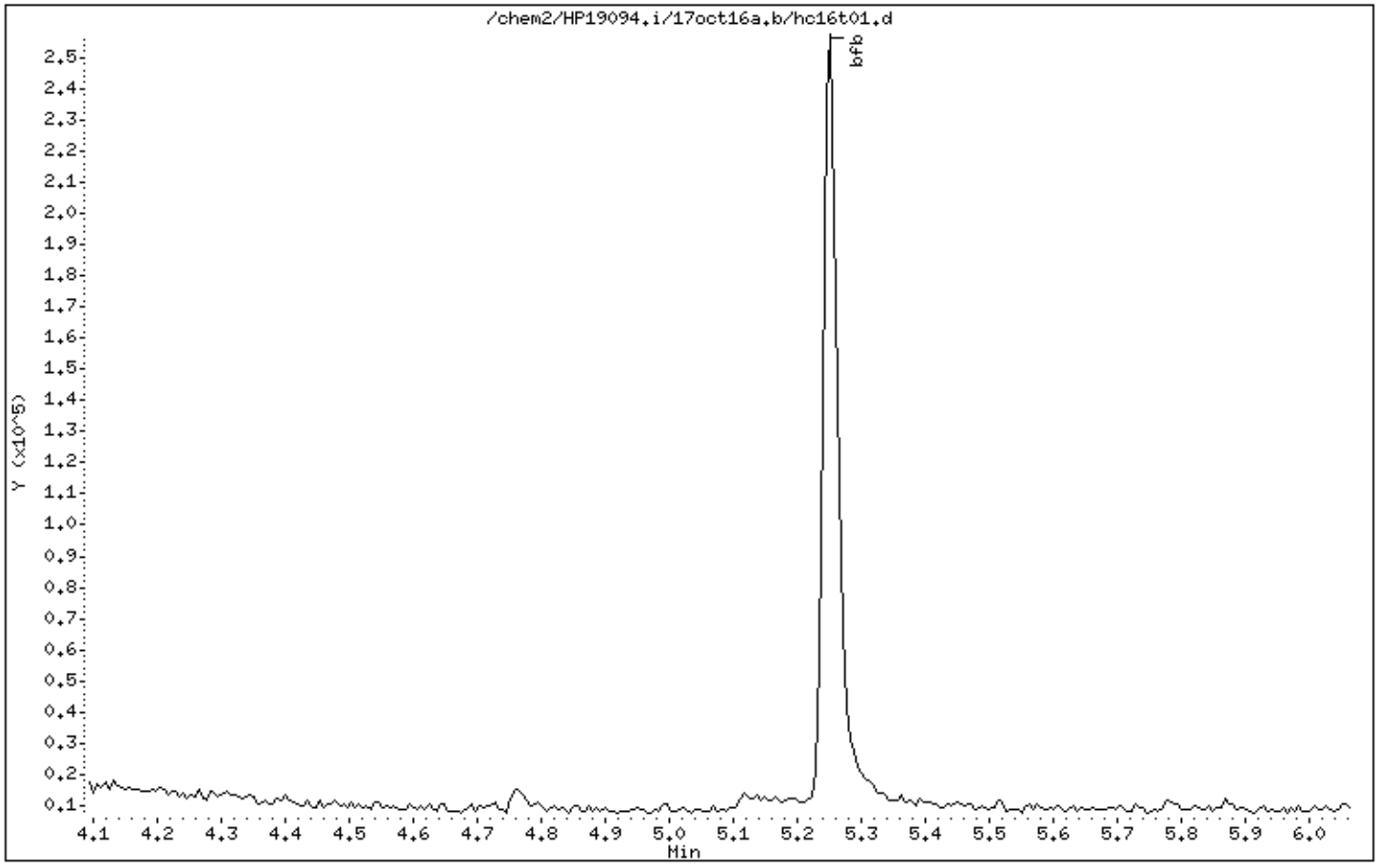
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

Instrument: HP19094.i

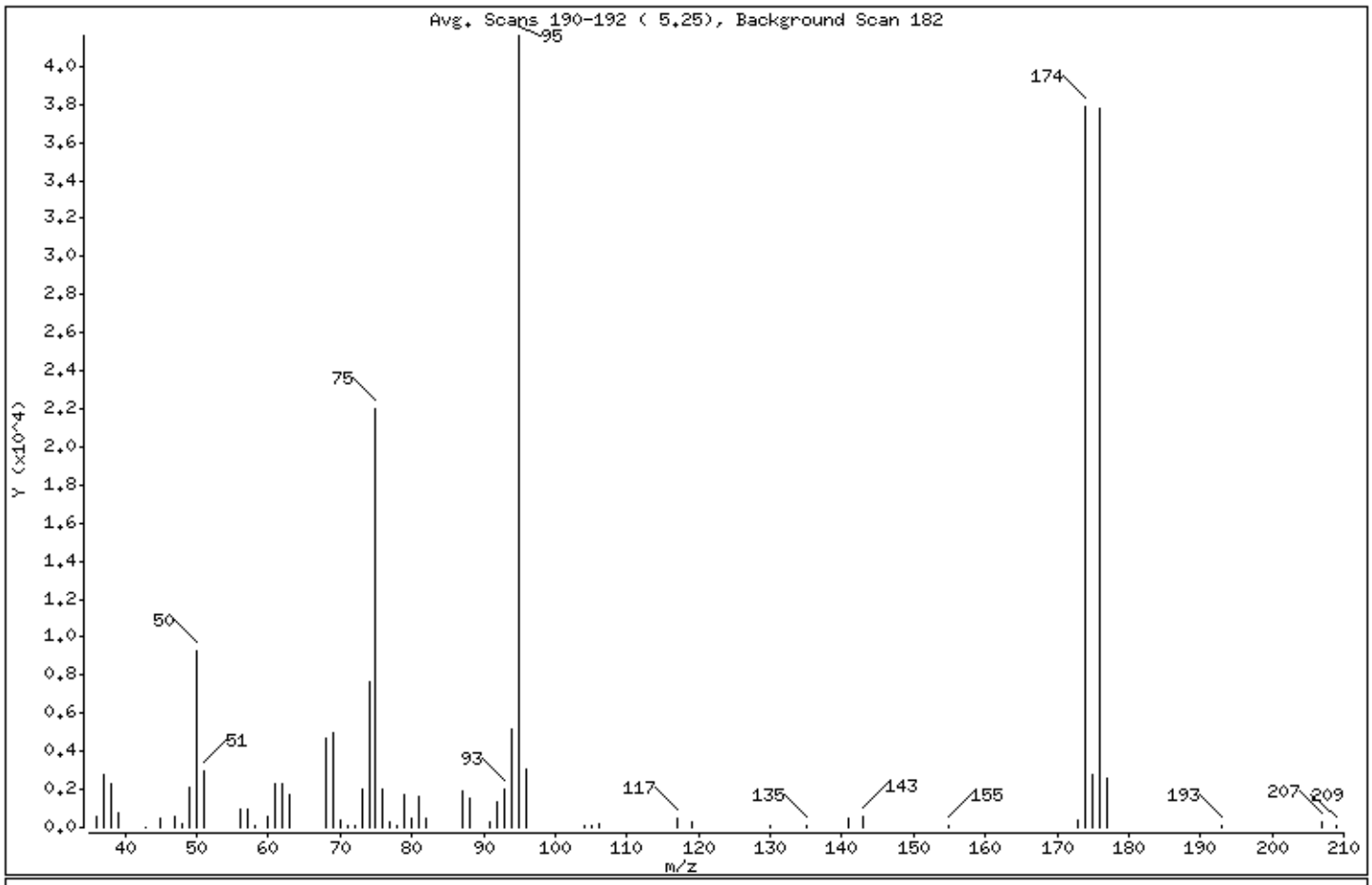
Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

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	22.28
75	30.00 - 60.00% of mass 95	52.78
96	5.00 - 9.00% of mass 95	7.42
173	Less than 2.00% of mass 174	0.87 (0.95)
174	50.00 - 100.00% of mass 95	90.93
175	5.00 - 9.00% of mass 174	6.63 (7.29)
176	95.00 - 101.00% of mass 174	90.78 (99.83)
177	5.00 - 9.00% of mass 176	6.25 (6.89)

Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct16a.b/hc16t01.d

Date : 16-OCT-2017 10:07

Client ID: bfb 50ng

Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: KAS02648

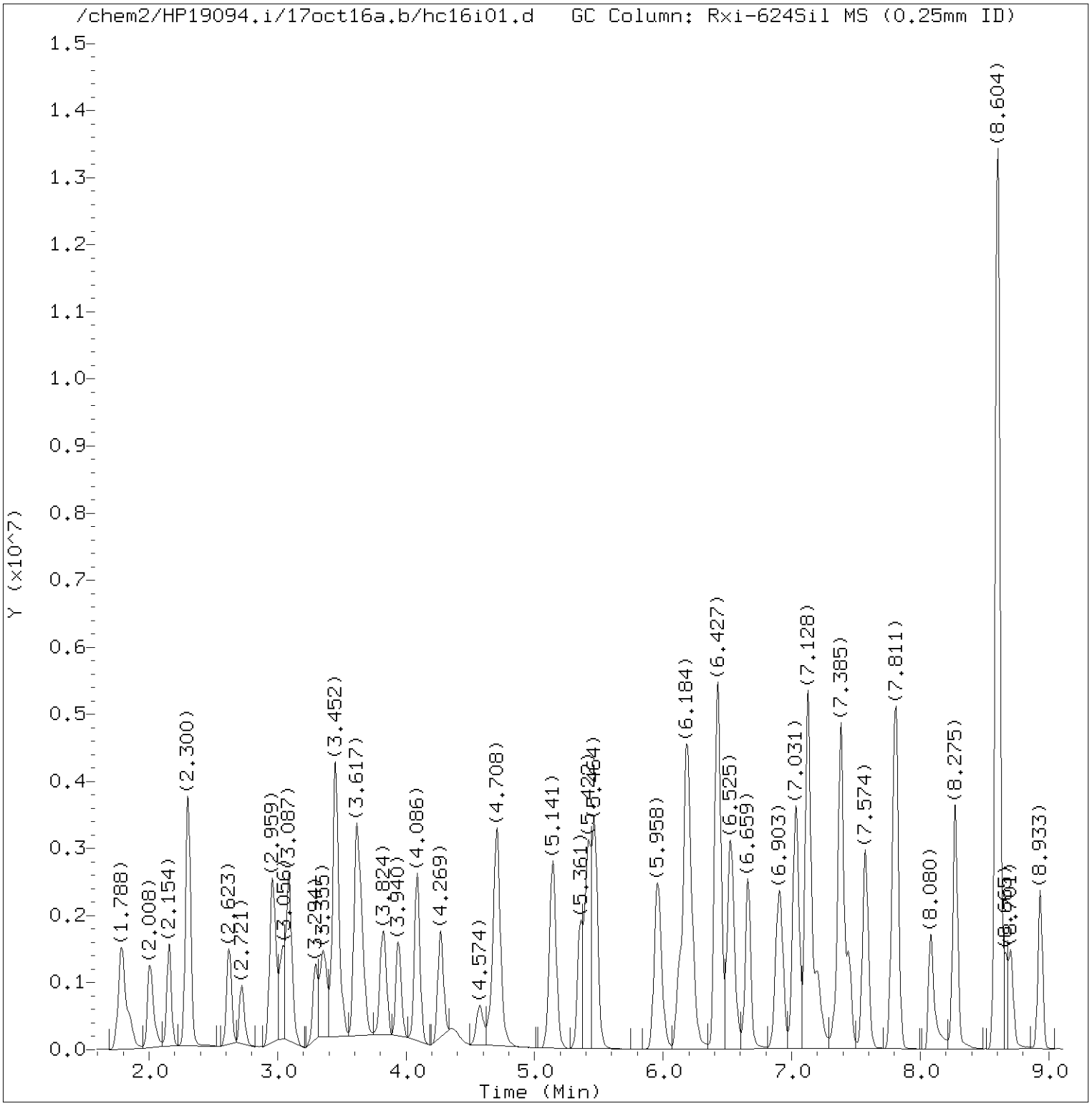
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hc16t01.d
Spectrum: Avg. Scans 190-192 (5.25), Background Scan 182
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	578	61.00	2328	80.00	505	119.00	261
37.00	2772	62.00	2285	81.00	1668	130.00	84
38.00	2303	63.00	1753	82.00	485	135.00	103
39.00	798	68.00	4686	87.00	1898	141.00	510
43.00	12	69.00	4939	88.00	1565	143.00	529
45.00	436	70.00	408	91.00	324	155.00	86
47.00	544	71.00	97	92.00	1351	173.00	360
48.00	187	72.00	94	93.00	2038	174.00	37840
49.00	2073	73.00	2025	94.00	5193	175.00	2757
50.00	9270	74.00	7636	95.00	41608	176.00	37776
51.00	2934	75.00	21960	96.00	3088	177.00	2602
56.00	961	76.00	1984	104.00	95	193.00	113
57.00	939	77.00	289	105.00	90	207.00	254
58.00	96	78.00	105	106.00	198	209.00	97
60.00	591	79.00	1735	117.00	455		

Digitally signed by Kevin A. Sposito on 10/16/2017 at 10:19.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

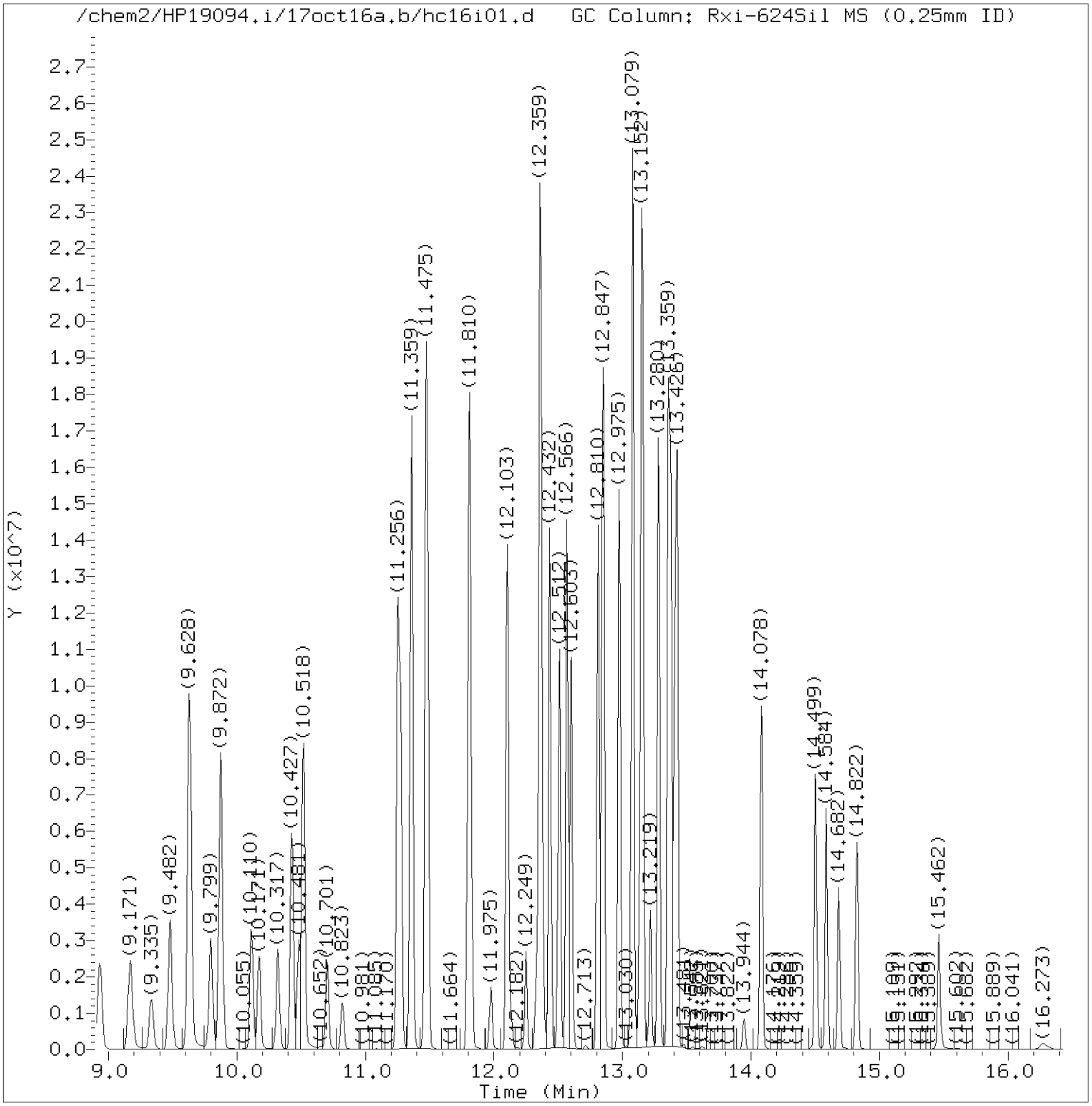
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	2457572	24.493
2) Chloromethane	(2)	2.154	50	2319776	23.413
5) Vinyl Chloride	(2)	2.288	62	2231657	24.507
6) 1,3-Butadiene	(2)	2.306	39	2037236	23.671
7) Bromomethane	(2)	2.623	94	1489312	24.045
8) Chloroethane	(2)	2.721	64	1232099	23.766
9) Dichlorofluoromethane	(2)	2.959	67	3519372	23.183
10) Trichlorofluoromethane	(2)	3.038	101	3109531	25.636
11) Ethyl ether	(2)	3.294	59	993448	25.659
12) Freon 123a	(2)	3.361	67	1853598	24.424
13) Acrolein	(1)	3.452	56	7105454	1270.457
14) Acetone	(1)	3.611	43	1675733M	233.972
15) 1,1-Dichloroethene	(2)	3.611	96	1225800	25.257
16) Freon 113	(2)	3.647	101	1417681	26.234
17) Methyl Iodide	(2)	3.812	142	2421914	25.052
18) Carbon Disulfide	(2)	3.940	76	3773365	24.295
21) Methyl Acetate	(1)	4.050	43	556859	25.827
22) Allyl Chloride	(2)	4.086	41	2710146	24.613
26)*t-Butyl Alcohol-d10	(1)	4.245	65	89021M	50.000
23) Methylene Chloride	(2)	4.269	84	1326578	23.961
28) t-Butyl Alcohol	(1)	4.373	59	1173829	483.994
29) Acrylonitrile	(1)	4.574	53	1192615	135.735
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	3062929	25.555
31) trans-1,2-Dichloroethene	(2)	4.708	96	1368875	24.948
32) n-Hexane	(2)	5.141	57	2506668	25.869
33) 1,1-Dichloroethane	(2)	5.354	63	2860784	25.346
34) di-Isopropyl Ether	(2)	5.415	45	5382775	25.269
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	2720487	25.692
37) Ethyl t-butyl ether	(2)	5.958	59	4358629	25.502
40) 1,2-Dichloroethene (Total)	(2)		96	2945548	50.076
38) 2-Butanone	(1)	6.129	43	3469543	246.622
39) cis-1,2-Dichloroethene	(2)	6.177	96	1576673	25.128
42) Propionitrile	(1)	6.190	54	1736254	535.083
41) 2,2-Dichloropropane	(2)	6.202	77	2411181	25.293
45) Methacrylonitrile	(1)	6.427	67	3097577	262.688
47) Bromochloromethane	(2)	6.519	128	636472	25.790
48) Tetrahydrofuran	(1)	6.537	71	811958	254.485
49) Chloroform	(2)	6.659	83	2771504	25.426

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

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	560949	10.183
50)$Dibromofluoromethane	(2)	6.879	111	577365	10.208
51) 1,1,1-Trichloroethane	(2)	6.909	97	2485505	25.289
52) Cyclohexane	(2)	7.031	56	3035427	25.269
52) Cyclohexane	(2)	7.037	84	2309414	25.003
52) Cyclohexane	(2)	7.031	69	871619	25.451
55) 1,1-Dichloropropene	(2)	7.122	75	2250322	25.889
54) Carbon Tetrachloride	(2)	7.135	117	2242696	26.127
56) Isobutyl Alcohol	(1)	7.202	41	1179160	1202.351
57)$1,2-Dichloroethane-d4	(2)	7.342	102	87384	10.130
57)$1,2-Dichloroethane-d4	(2)	7.336	65	491986	10.424
57)$1,2-Dichloroethane-d4	(2)	7.336	104	55468	10.222
58) Benzene	(2)	7.385	78	6003652	25.254
59) 1,2-Dichloroethane	(2)	7.445	62	1683091	25.313
60) t-Amyl methyl ether	(2)	7.574	73	3565667	25.705
63)*Fluorobenzene	(2)	7.787	96	2281153	10.000
62) n-Heptane	(2)	7.811	43	2992254	25.863
65) n-Butanol	(1)	8.080	56	1928740	2673.562
67) Trichloroethene	(2)	8.275	95	1615652	25.370
70) 1,2-Dichloropropane	(2)	8.598	63	1623040	26.307
69) Methylcyclohexane	(2)	8.604	83	2960660	27.045
71) Methyl Methacrylate	(1)	8.665	69	624541	26.657
72) 1,4-Dioxane	(1)	8.677	88	222318M	1510.212
73) Dibromomethane	(2)	8.707	93	657217	25.461
74) Bromodichloromethane	(2)	8.933	83	1986576	26.670
76) 2-Nitropropane	(1)	9.171	41	2152126	269.405
80) cis-1,3-Dichloropropene	(2)	9.482	75	2317432	26.803
81) 4-Methyl-2-Pentanone	(1)	9.628	43	9003062	261.191
82)$Toluene-d8	(3)	9.799	98	2291746	9.607
82)$Toluene-d8	(3)	9.799	100	1449755	9.601
83) Toluene	(3)	9.872	92	3816193	24.483
84) trans-1,3-Dichloropropene	(3)	10.110	75	1847385	25.949
85) 1,3-Dichloropropene (total)	(3)		75	4164817	52.752
86) Ethyl Methacrylate	(3)	10.171	69	1344242	25.274
88) 1,1,2-Trichloroethane	(3)	10.317	97	885368	24.327
89) Tetrachloroethene	(3)	10.427	166	1798605	24.587
90) 1,3-Dichloropropane	(3)	10.481	76	1591912	24.598
91) 2-Hexanone	(1)	10.518	43	6135211M	247.023

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	1237283	26.033
95) 1,2-Dibromoethane	(3)	10.823	107	862854	25.089
97)*Chlorobenzene-d5	(3)	11.250	117	1641394	10.000
98) Chlorobenzene	(3)	11.274	112	4120449	24.805
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	1516938	25.931
100) Ethylbenzene	(3)	11.359	91	7846755	25.032
101) m+p-Xylene	(3)	11.475	106	5918193	50.105
105) Xylene (Total)	(3)		106	8869300	75.647
104) o-Xylene	(3)	11.804	106	2951107	25.550
106) Styrene	(3)	11.817	104	4736548	26.252
107) Bromoform	(3)	11.975	173	725518	28.128
108) Isopropylbenzene	(3)	12.103	105	7809247	25.183
111)$4-Bromofluorobenzene	(3)	12.249	95	747701	10.319
111)$4-Bromofluorobenzene	(3)	12.249	174	655837	10.292
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	1098870	23.455
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	3254819	305.229
114) Bromobenzene	(4)	12.365	156	1755790	23.761
116) 1,2,3-Trichloropropane	(4)	12.384	110	279704	23.416
117) n-Propylbenzene	(4)	12.432	91	9437638	23.368
119) 2-Chlorotoluene	(4)	12.512	126	1769695	23.381
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	6711936	23.985
122) 4-Chlorotoluene	(4)	12.603	126	1820126	23.628
125) tert-Butylbenzene	(4)	12.810	134	1409371M	23.687
126) Pentachloroethane	(4)	12.841	167	1191039	25.729
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	6769415	24.084
128) sec-Butylbenzene	(4)	12.975	105	8646072	23.860
131) 1,3-Dichlorobenzene	(4)	13.079	146	3553965	24.700
132) p-Isopropyltoluene	(4)	13.085	119	7527846	24.899
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	759767	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	3458715	23.083
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	2852829	23.922
136) Benzyl Chloride	(4)	13.219	126	458392	27.449
138) n-Butylbenzene	(4)	13.371	92	3930104	25.928
139) 1,2-Dichlorobenzene	(4)	13.408	146	3049193	23.781
143) 1,2-Dibromo-3-chloropropane	(1)	13.944	155	143162	27.750
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	2618994	24.558
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	2065619	23.514
146) Hexachlorobutadiene	(4)	14.584	225	1072130	25.868

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

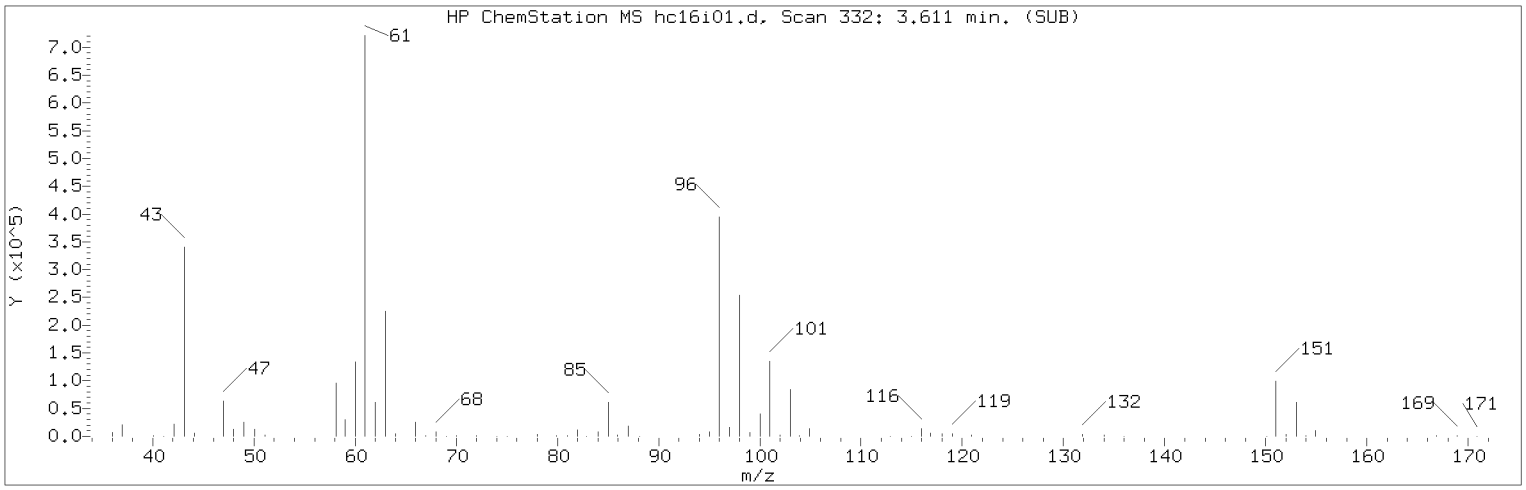
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

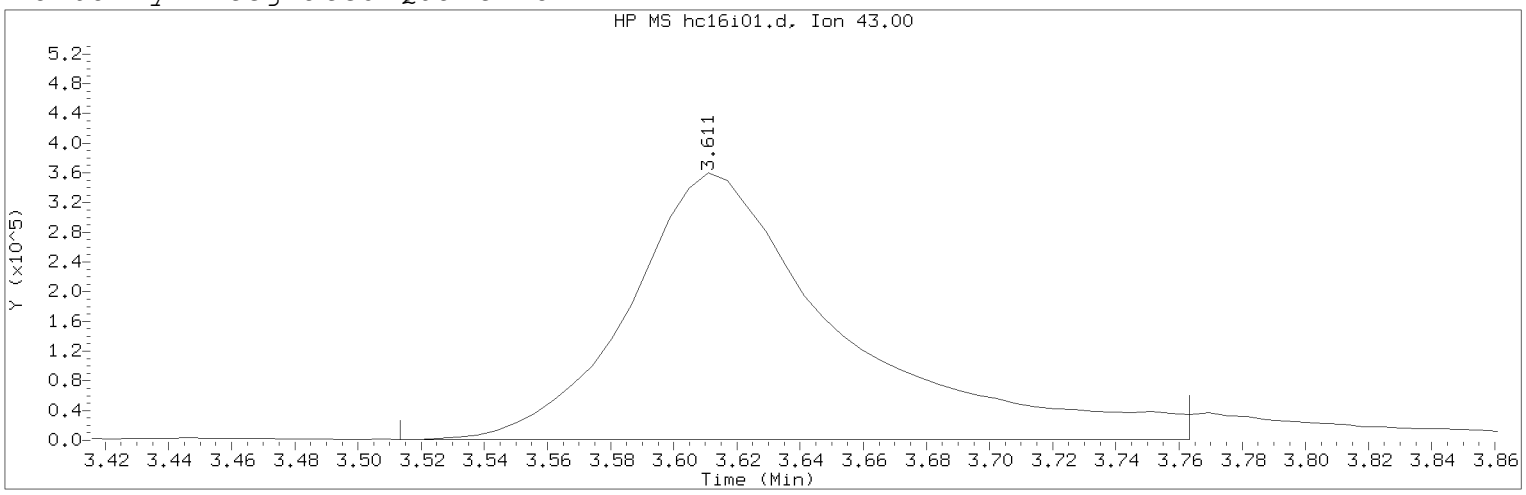
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.682	128	2912957	20.380
148) 1,2,3-Trichlorobenzene	(4)	14.822	180	1559749	21.091

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

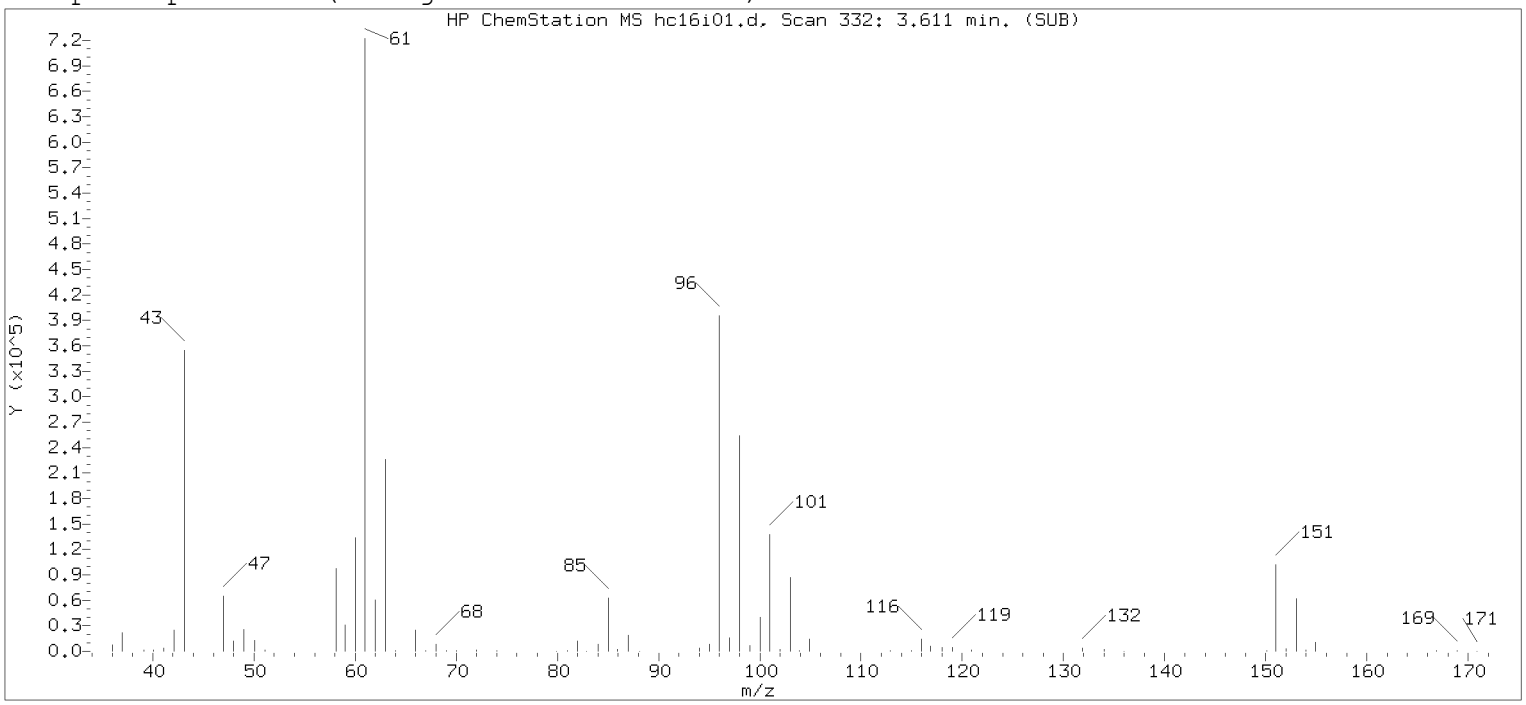
Compound Number : 14
Compound Name : Acetone
Scan Number : 332
Retention Time (minutes): 3.611
Quant Ion : 43.00
Area (flag) : 1675733M
On-Column Amount (ng) : 233.9725
Integration start scan : 315 Integration stop scan: 356
Y at integration start : 1052 Y at integration end: 1139

Reason for manual integration: improper integration

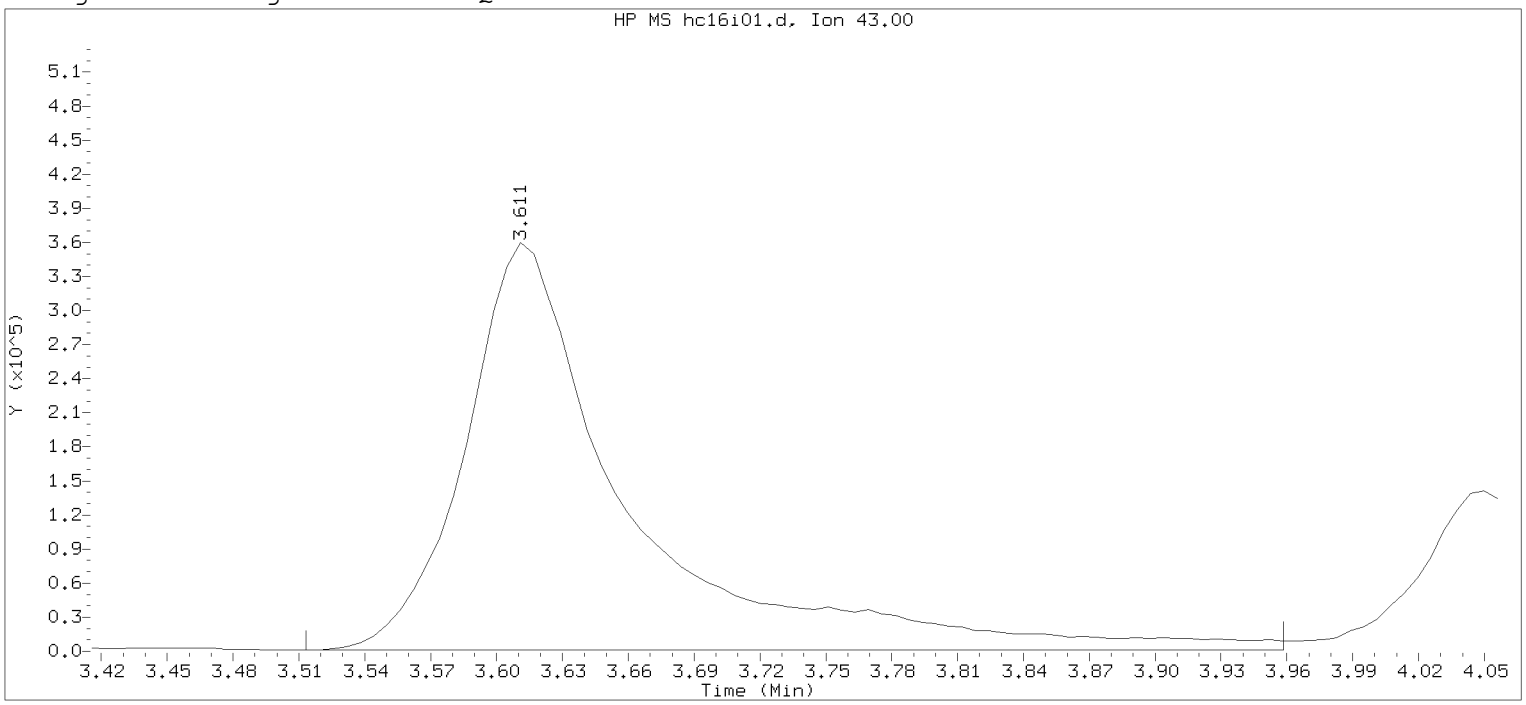
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

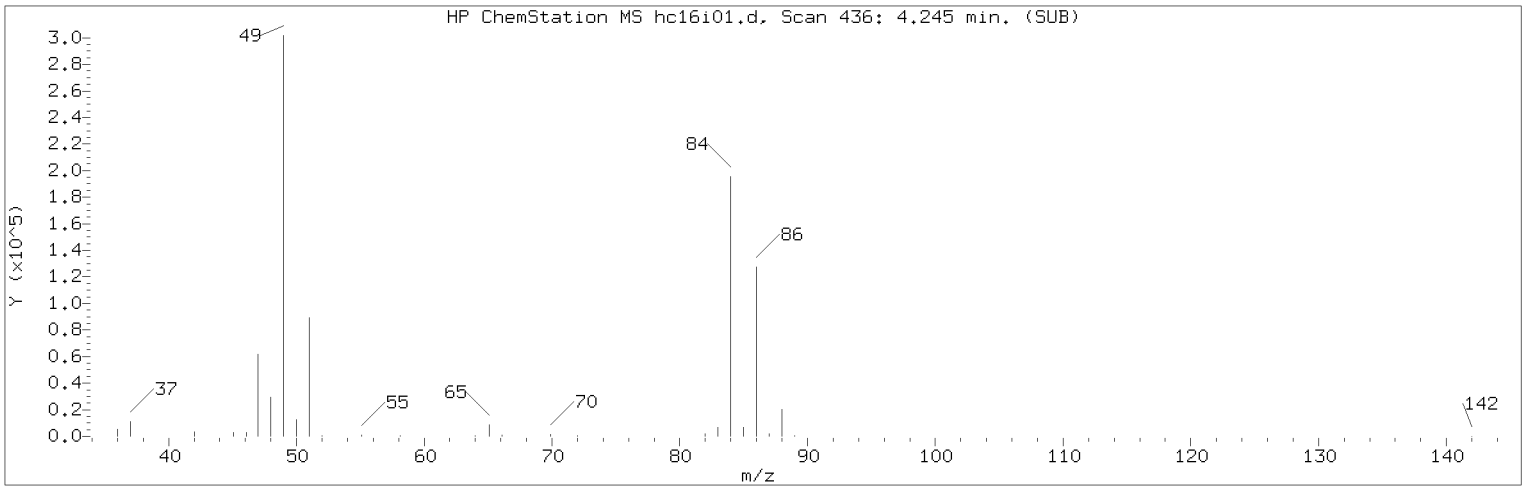
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

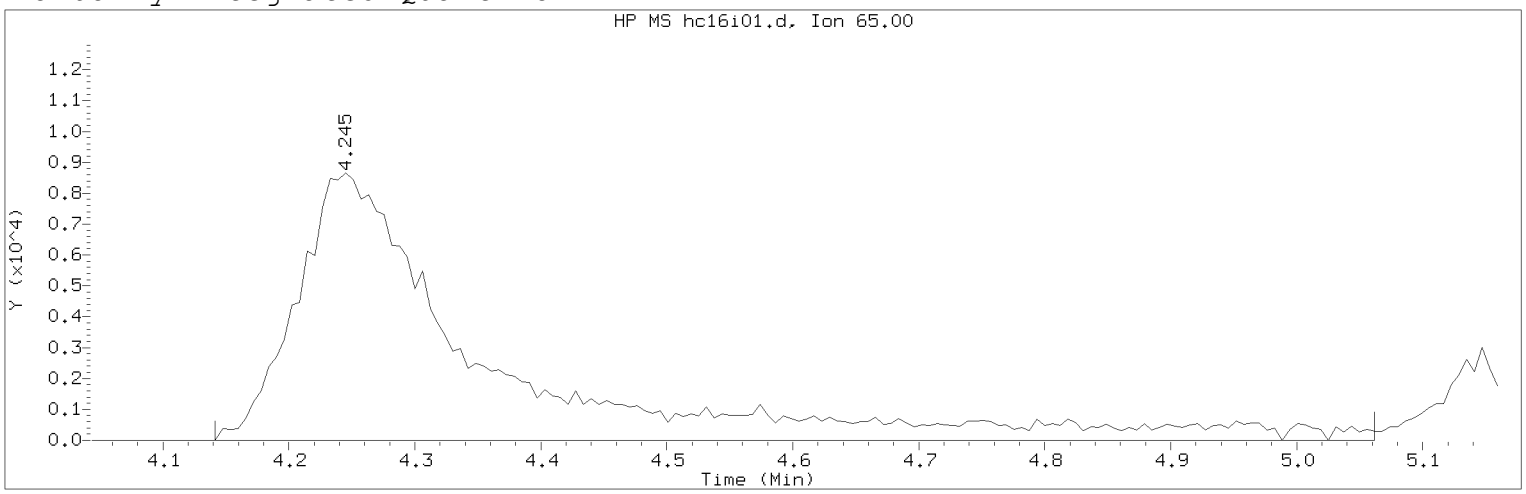
Compound Number : 14
Compound Name : Acetone
Scan Number : 332
Retention Time (minutes): 3.611
Quant Ion : 43.00
Area : 1851697
On-column Amount (ng) : 248.6120
Integration start scan : 315 Integration stop scan: 388
Y at integration start : 1052 Y at integration end: 1207

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Target 3.5 esignature used. Key: 2239

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

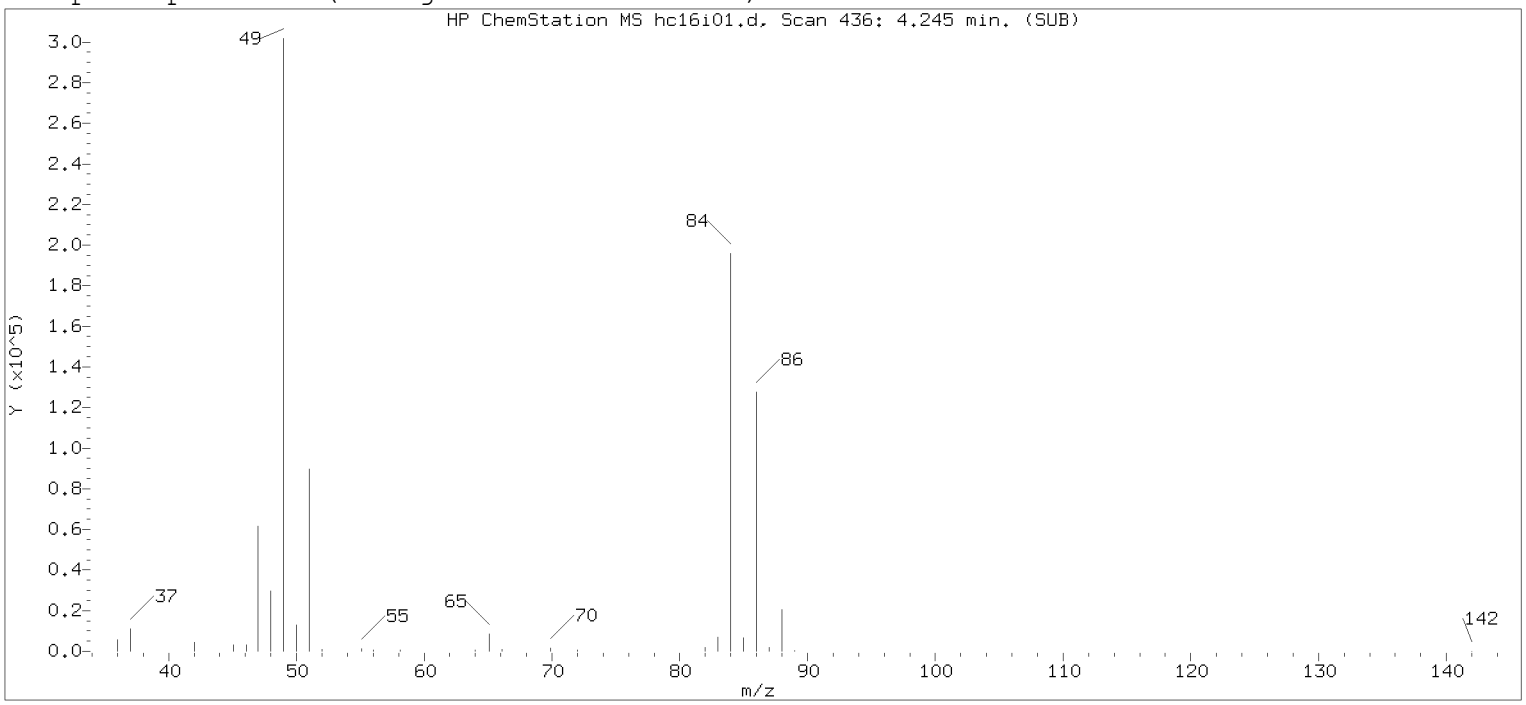
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area (flag) : 89021M
On-Column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 569
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

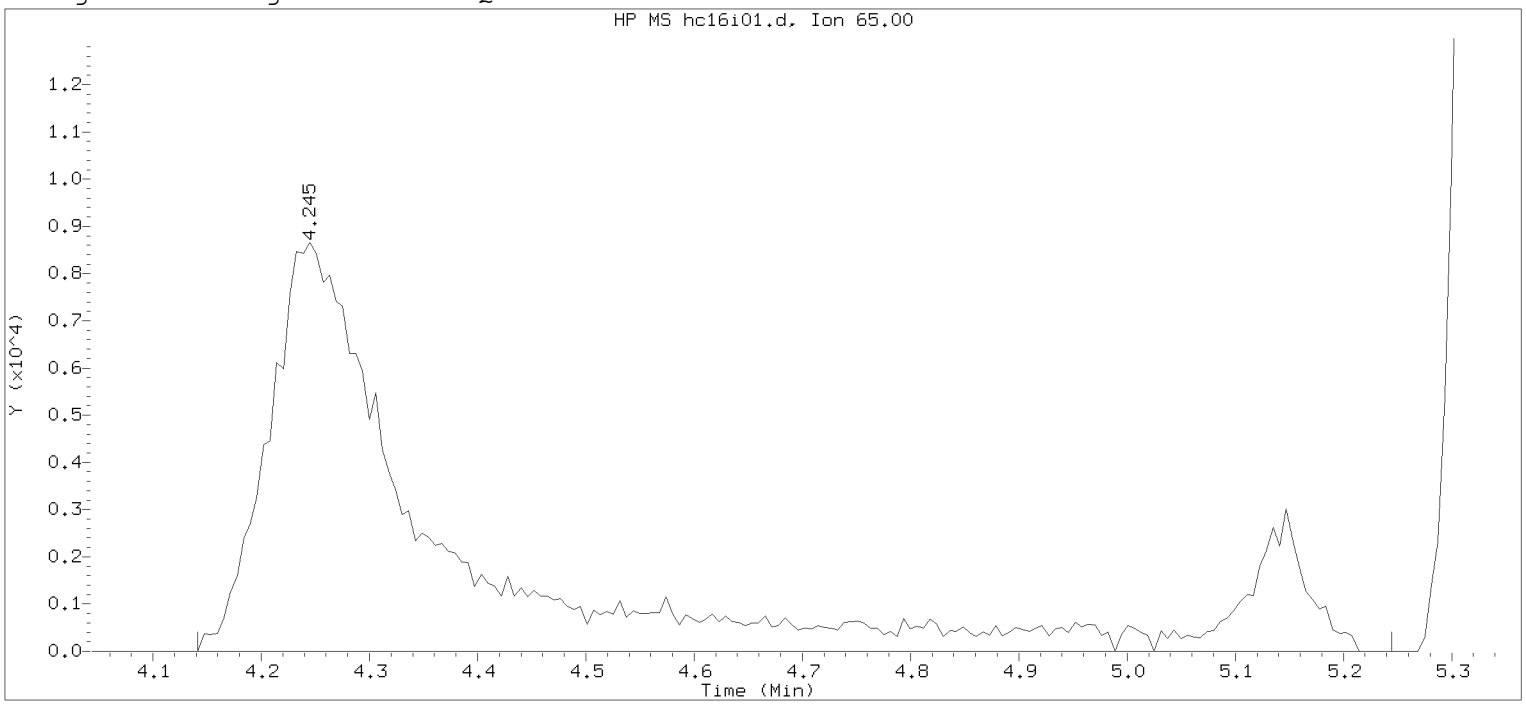
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

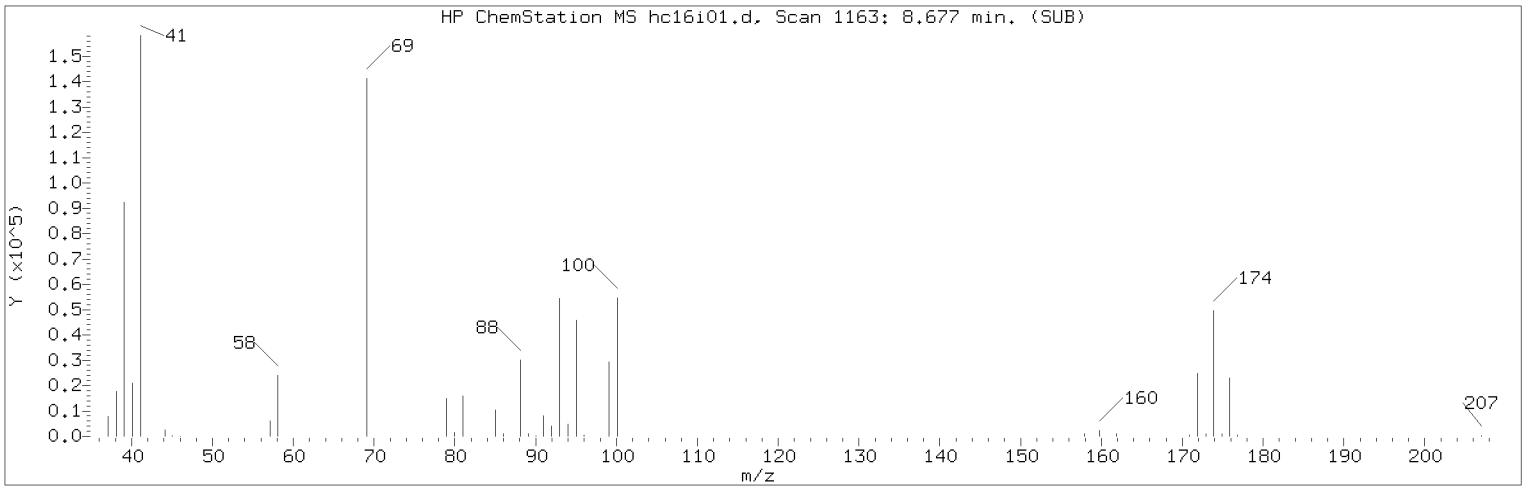
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

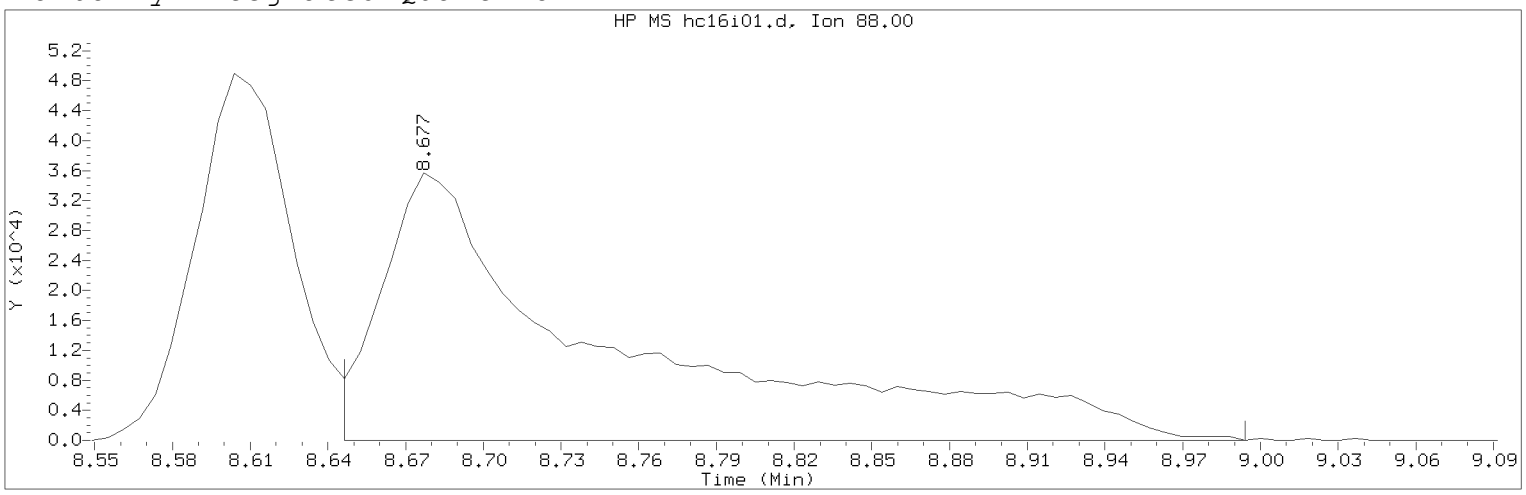
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area : 99413
On-column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature used. Key ID: 0243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

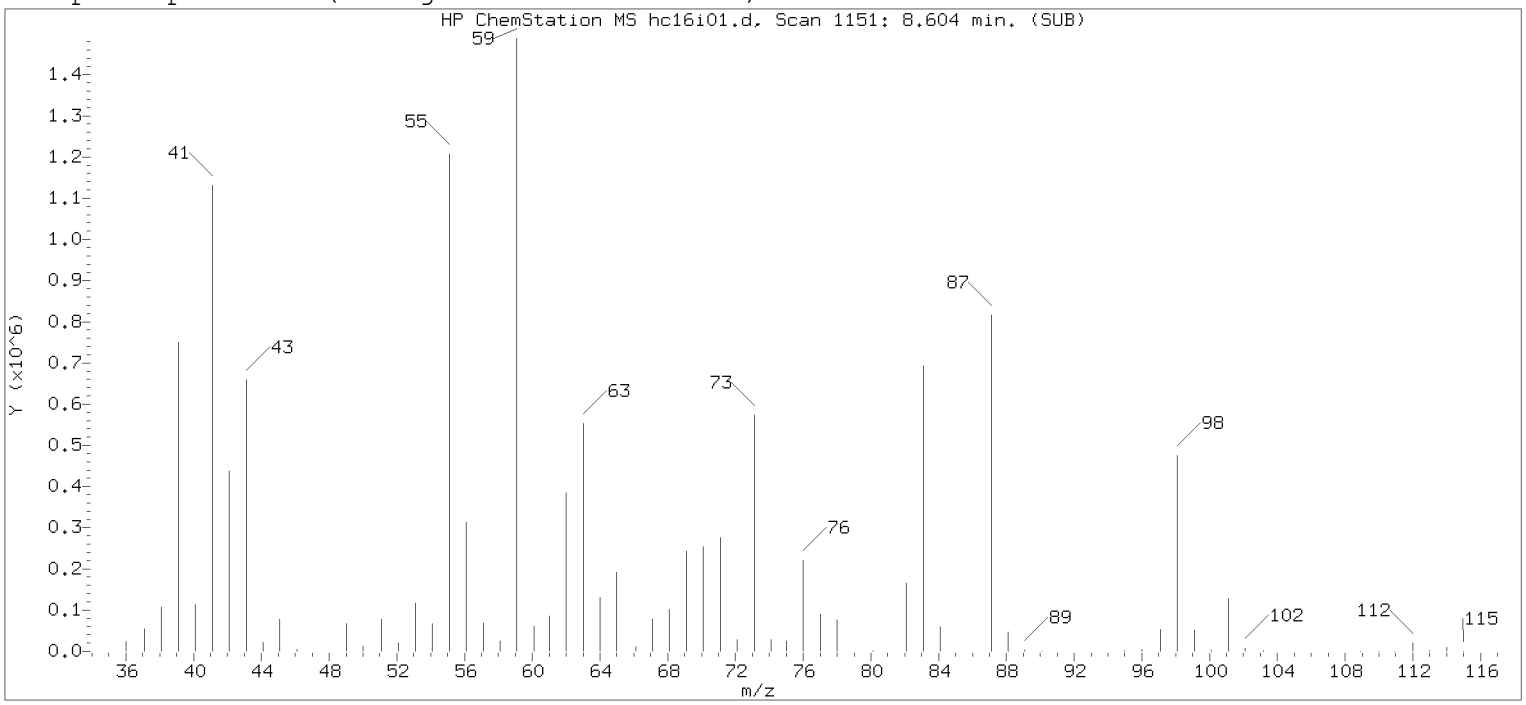
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1163
Retention Time (minutes): 8.677
Quant Ion : 88.00
Area (flag) : 222318M
On-Column Amount (ng) : 1510.2124
Integration start scan : 1157 Integration stop scan: 1214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

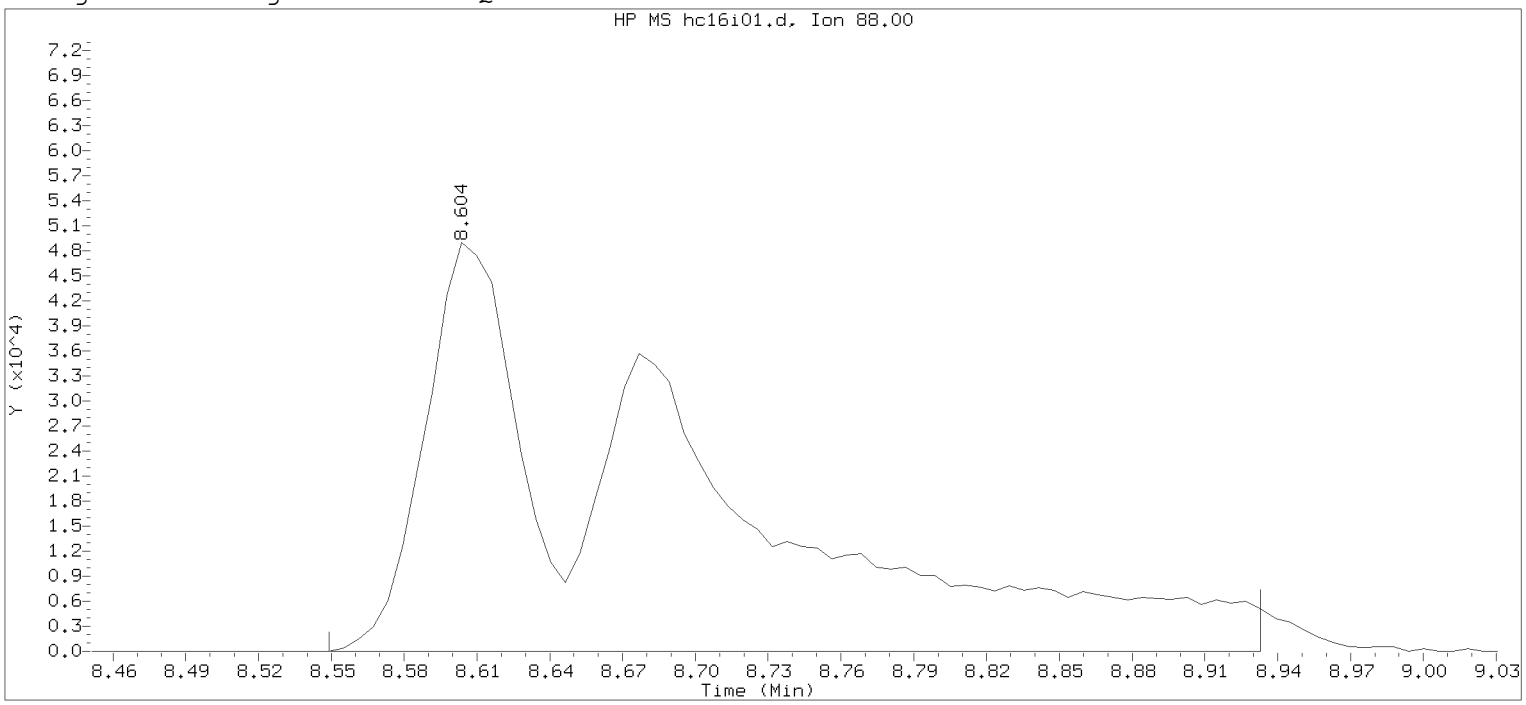
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

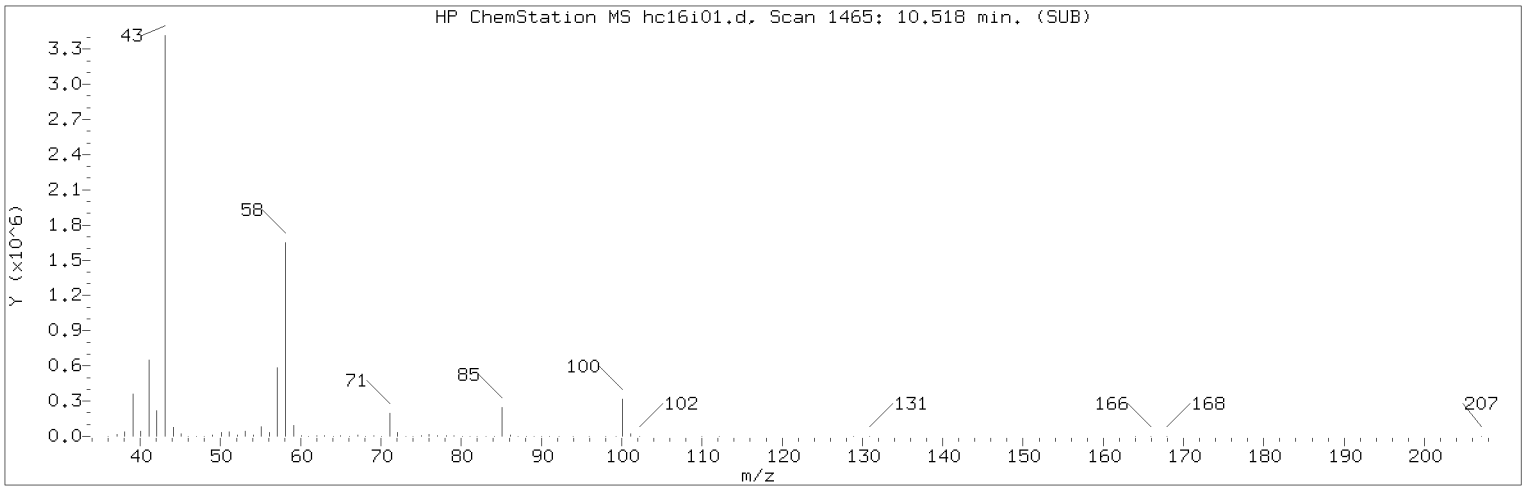
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

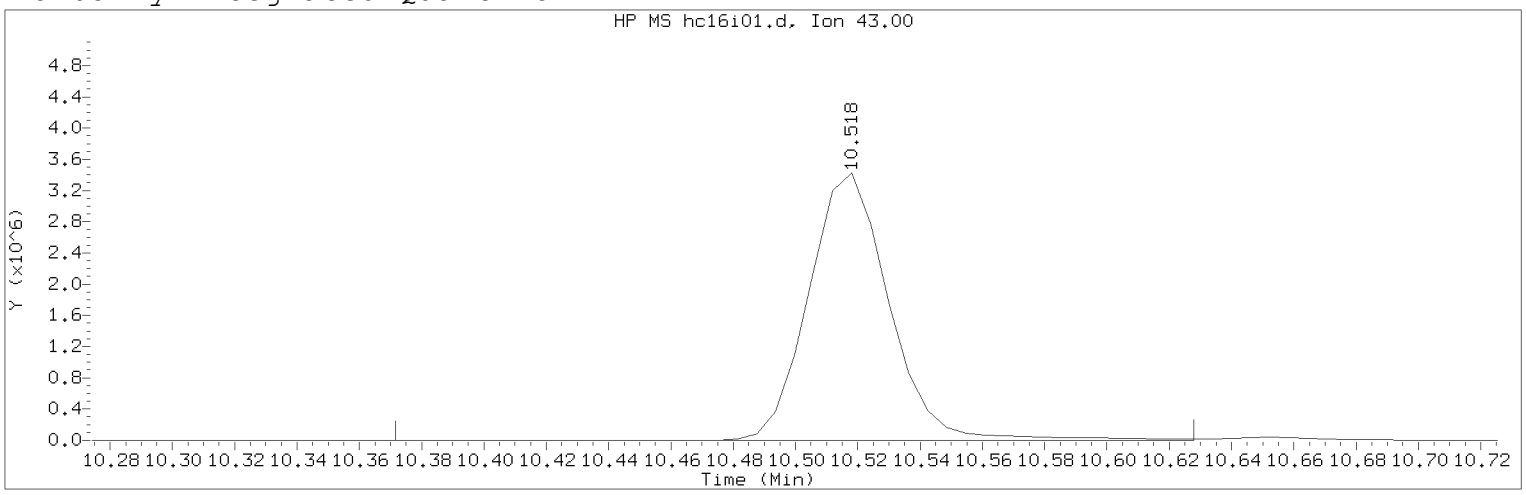
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 88.00
Area : 341639
On-column Amount (ng) : 1447.7858
Integration start scan : 1141 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

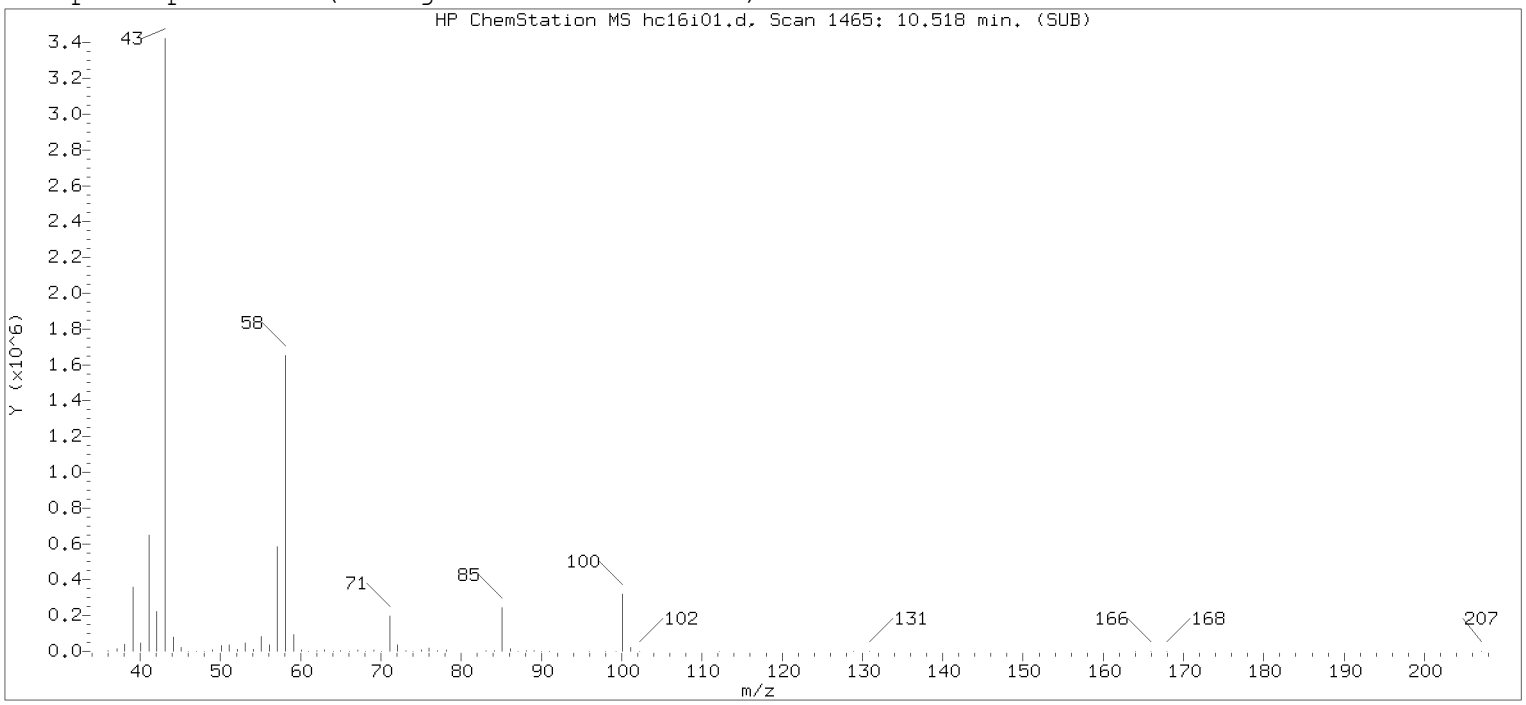
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1465
Retention Time (minutes): 10.518
Quant Ion : 43.00
Area (flag) : 6135211M
On-Column Amount (ng) : 247.0229
Integration start scan : 1440 Integration stop scan: 1482
Y at integration start : 580 Y at integration end: 580

Reason for manual integration: improper integration

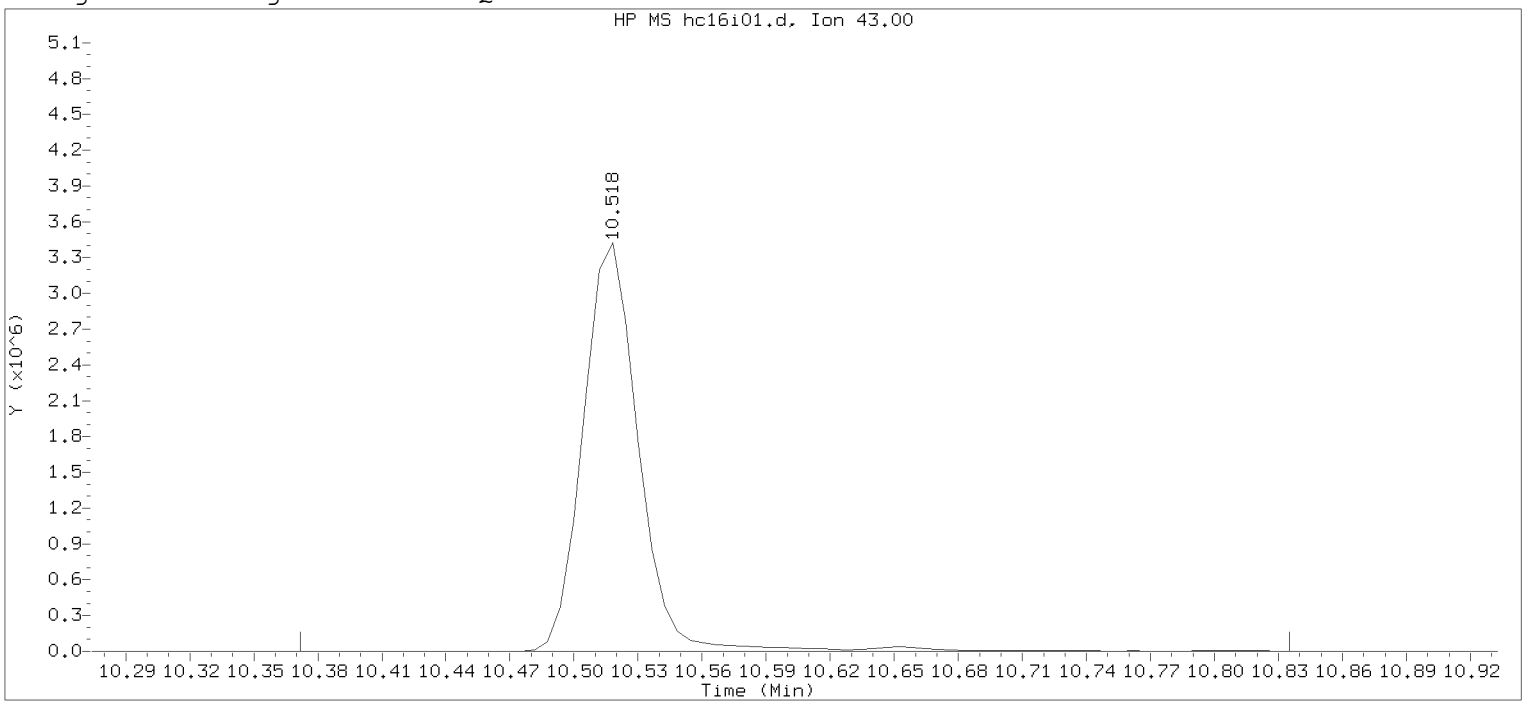
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

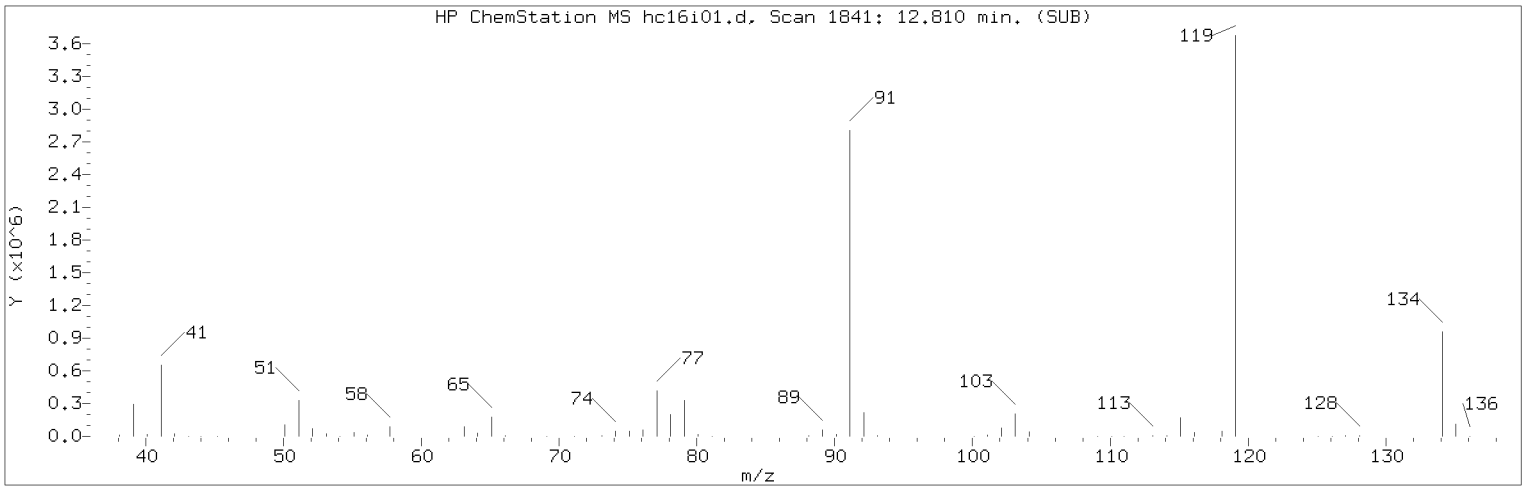
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

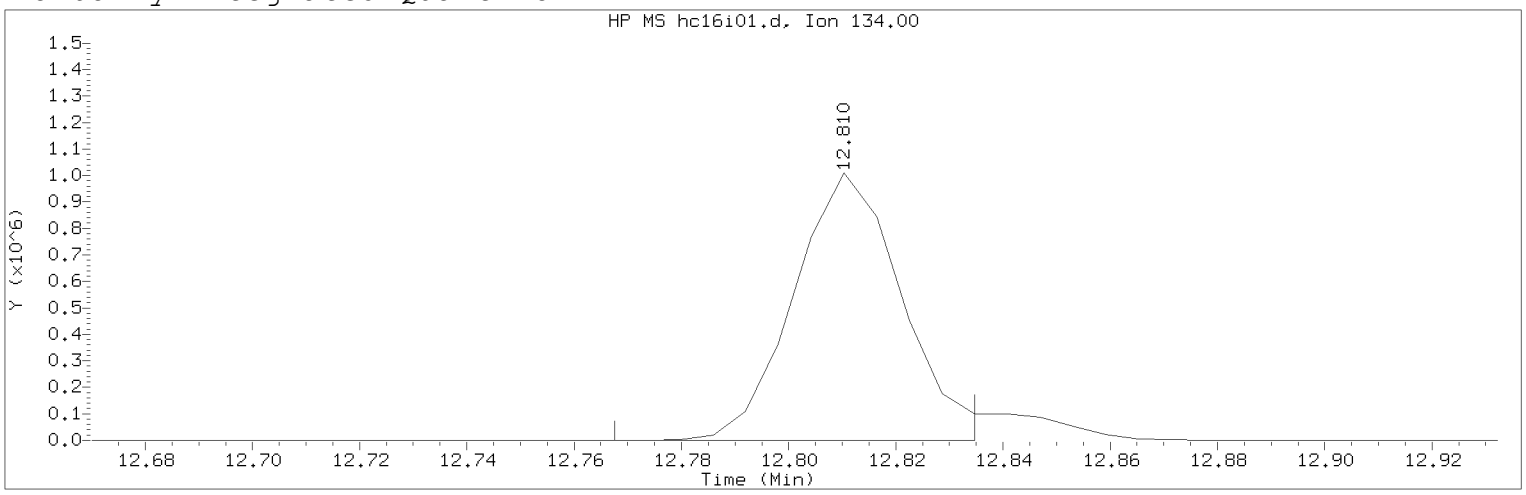
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1465
Retention Time (minutes): 10.518
Quant Ion : 43.00
Area : 6228015
On-column Amount (ng) : 242.4272
Integration start scan : 1440 Integration stop scan: 1516
Y at integration start : 580 Y at integration end: 580

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key: 2243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

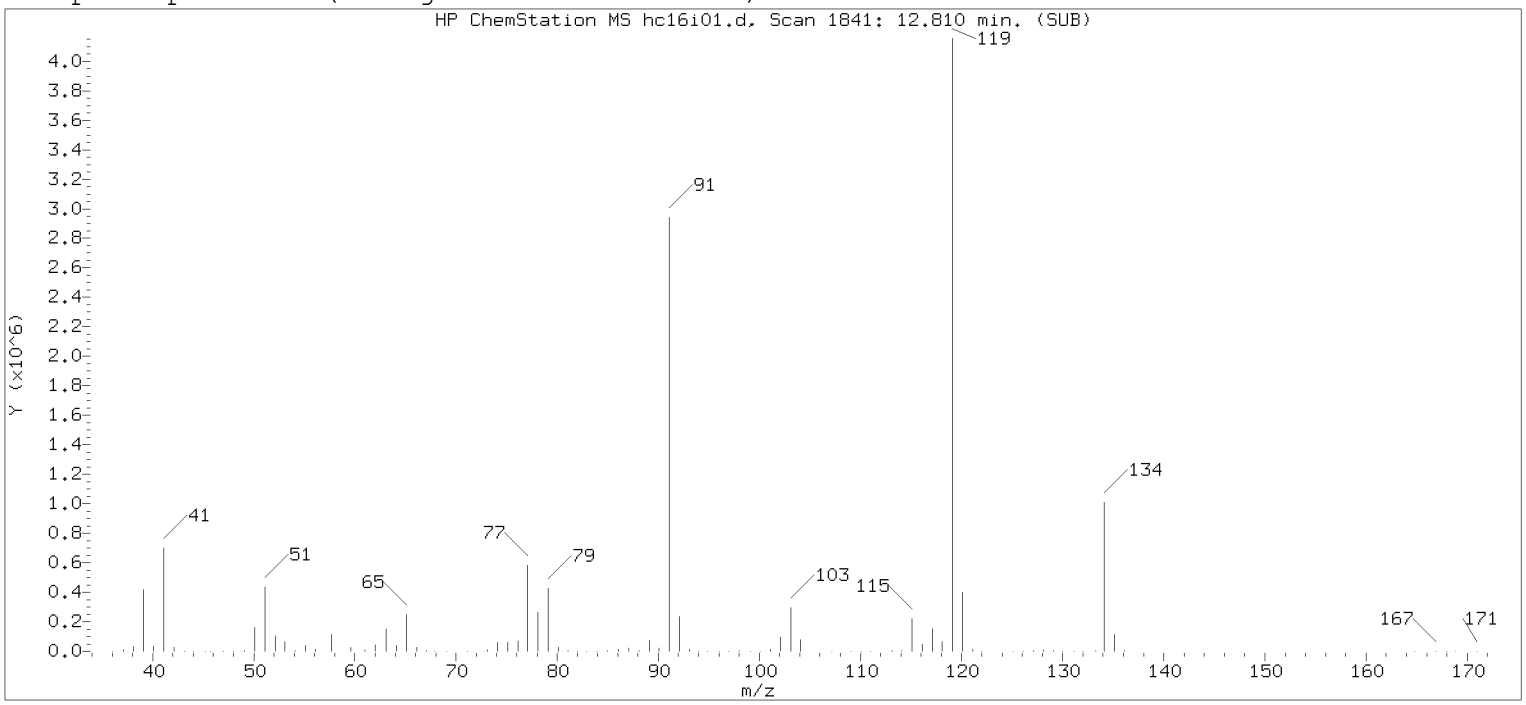
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 1409371M
On-Column Amount (ng) : 23.6872
Integration start scan : 1833 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

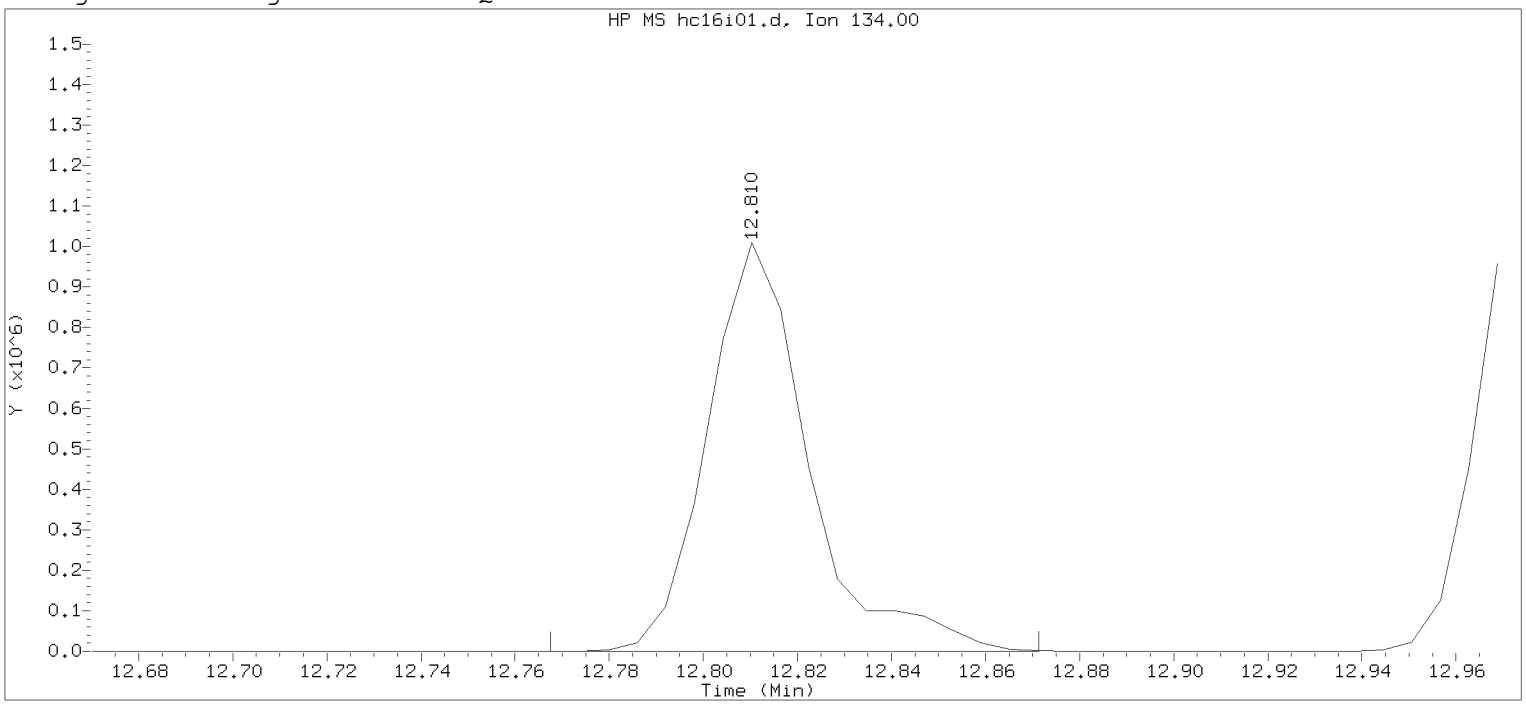
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



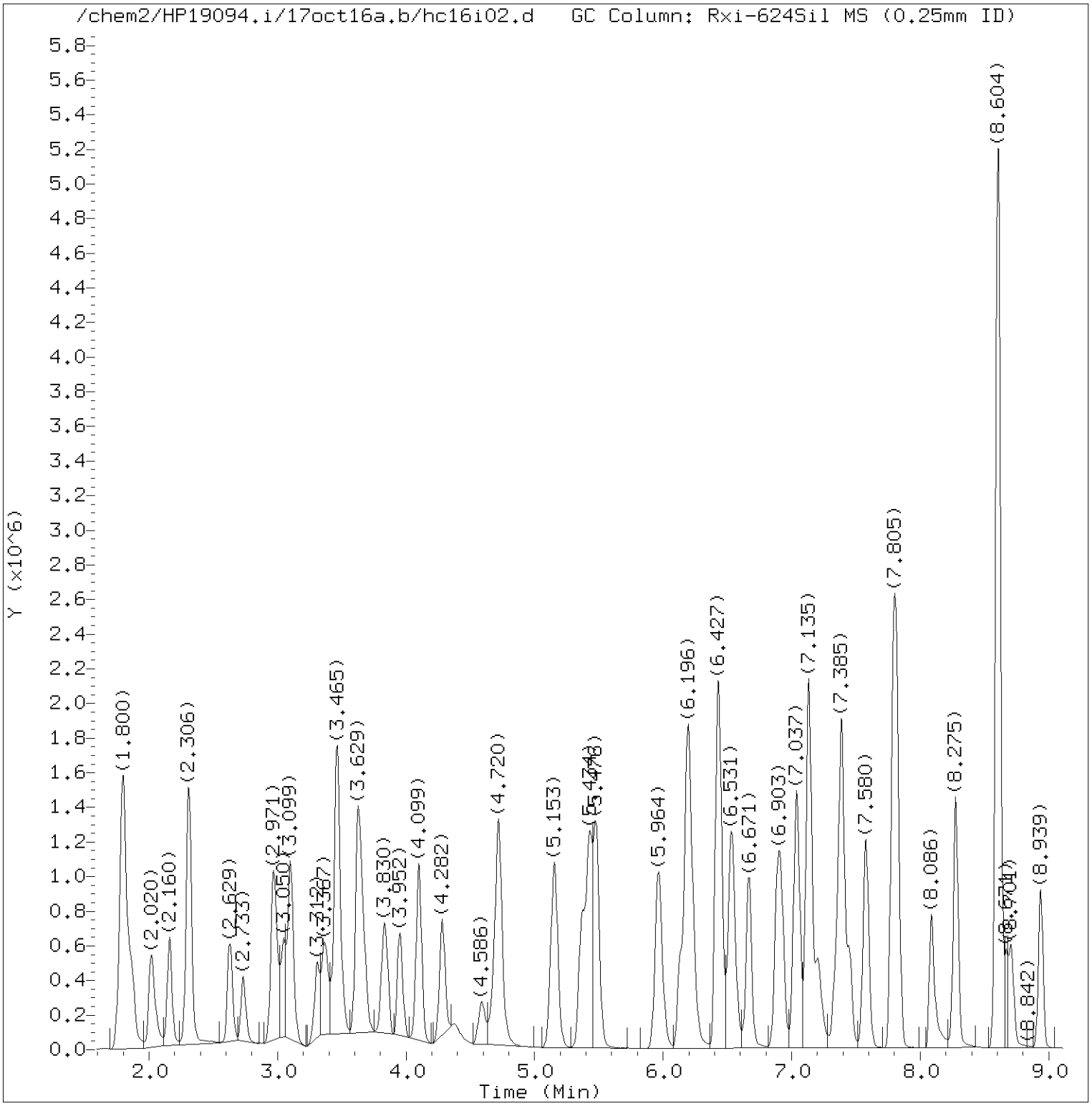
Data File: /chem2/HP19094.i/17oct16a.b/hc16i01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 10:43 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 1506710
On-column Amount (ng) : 25.6522
Integration start scan : 1833 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key: 2018



Total Ion Chromatogram (TIC)

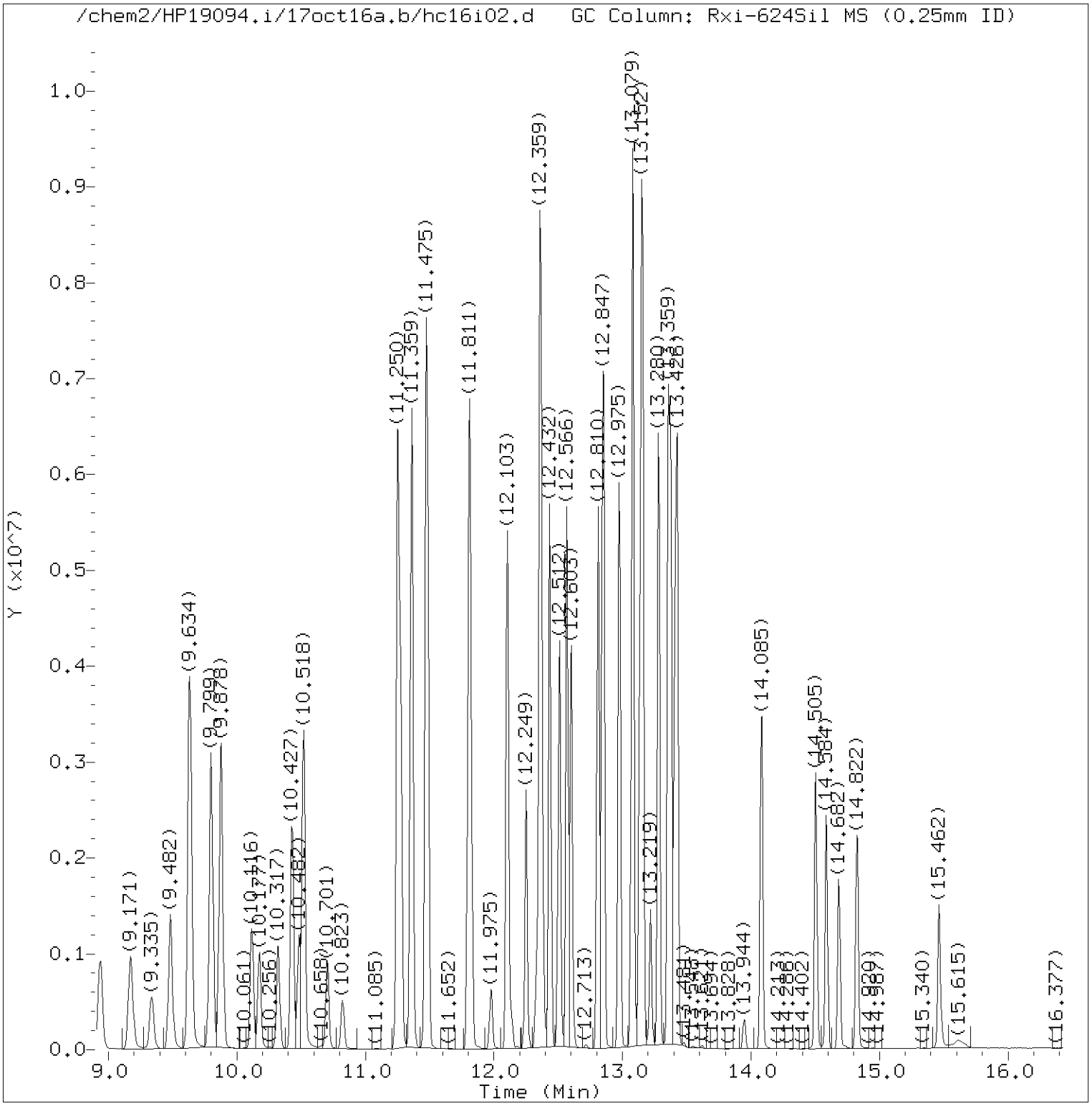
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.020	85	1021064	10.000
2) Chloromethane	(2)	2.160	50	946481	10.000
5) Vinyl Chloride	(2)	2.294	62	905448	10.000
6) 1,3-Butadiene	(2)	2.312	39	811682	10.000
7) Bromomethane	(2)	2.629	94	593154	10.000
8) Chloroethane	(2)	2.733	64	502058	10.000
9) Dichlorofluoromethane	(2)	2.965	67	1424856	10.000
10) Trichlorofluoromethane	(2)	3.050	101	1259182	10.000
11) Ethyl ether	(2)	3.306	59	401580	10.000
12) Freon 123a	(2)	3.367	67	759734	10.000
13) Acrolein	(1)	3.465	56	2872965	500.000
14) Acetone	(1)	3.623	43	702361M	100.000
15) 1,1-Dichloroethene	(2)	3.623	96	499355	10.000
16) Freon 113	(2)	3.660	101	571302	10.000
17) Methyl Iodide	(2)	3.824	142	989922	10.000
18) Carbon Disulfide	(2)	3.952	76	1544275	10.000
21) Methyl Acetate	(1)	4.068	43	215195	10.000
22) Allyl Chloride	(2)	4.099	41	1112069	10.000
26)*t-Butyl Alcohol-d10	(1)	4.251	65	93229M	50.000
23) Methylene Chloride	(2)	4.282	84	539360	10.000
28) t-Butyl Alcohol	(1)	4.379	59	519747	200.000
29) Acrylonitrile	(1)	4.592	53	480578	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	1247658	10.000
31) trans-1,2-Dichloroethene	(2)	4.720	96	558602	10.000
32) n-Hexane	(2)	5.153	57	1012246	10.000
33) 1,1-Dichloroethane	(2)	5.367	63	1140599	10.000
34) di-Isopropyl Ether	(2)	5.428	45	2171028	10.000
35) 2-Chloro-1,3-Butadiene	(2)	5.483	53	1107724	10.000
37) Ethyl t-butyl ether	(2)	5.964	59	1774353	10.000
40) 1,2-Dichloroethene (Total)	(2)		96	1192533	20.000
38) 2-Butanone	(1)	6.135	43	1399461	100.000
39) cis-1,2-Dichloroethene	(2)	6.190	96	633931	10.000
42) Propionitrile	(1)	6.202	54	712868	200.000
41) 2,2-Dichloropropane	(2)	6.214	77	980214	10.000
45) Methacrylonitrile	(1)	6.434	67	1229067	100.000
47) Bromochloromethane	(2)	6.525	128	253104	10.000
48) Tetrahydrofuran	(1)	6.543	71	325254	100.000
49) Chloroform	(2)	6.665	83	1117103	10.000

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.885	113	569586	10.000
50)$Dibromofluoromethane	(2)	6.885	111	588824	10.000
51) 1,1,1-Trichloroethane	(2)	6.915	97	1015267	10.000
52) Cyclohexane	(2)	7.037	56	1225986	10.000
52) Cyclohexane	(2)	7.037	84	926374	10.000
52) Cyclohexane	(2)	7.043	69	349747	10.000
55) 1,1-Dichloropropene	(2)	7.129	75	907493	10.000
54) Carbon Tetrachloride	(2)	7.141	117	902350	10.000
56) Isobutyl Alcohol	(1)	7.214	41	485480	500.000
57)$1,2-Dichloroethane-d4	(2)	7.348	102	87137	10.000
57)$1,2-Dichloroethane-d4	(2)	7.348	65	494919	10.000
57)$1,2-Dichloroethane-d4	(2)	7.348	104	57225	10.000
58) Benzene	(2)	7.391	78	2420089	10.000
59) 1,2-Dichloroethane	(2)	7.446	62	679756	10.000
60) t-Amyl methyl ether	(2)	7.580	73	1439728	10.000
63)*Fluorobenzene	(2)	7.787	96	2332021	10.000
62) n-Heptane	(2)	7.817	43	1186400	10.000
65) n-Butanol	(1)	8.086	56	797425	1000.000
67) Trichloroethene	(2)	8.275	95	649025	10.000
70) 1,2-Dichloropropane	(2)	8.598	63	646809	10.000
69) Methylcyclohexane	(2)	8.604	83	1163027	10.000
71) Methyl Methacrylate	(1)	8.671	69	247352M	10.000
72) 1,4-Dioxane	(1)	8.683	88	93140M	500.000
73) Dibromomethane	(2)	8.707	93	263656	10.000
74) Bromodichloromethane	(2)	8.939	83	787534	10.000
76) 2-Nitropropane	(1)	9.171	41	825937	100.000
80) cis-1,3-Dichloropropene	(2)	9.482	75	915774	10.000
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3565585	100.000
82)$Toluene-d8	(3)	9.799	98	2333343	10.000
82)$Toluene-d8	(3)	9.799	100	1465374	10.000
83) Toluene	(3)	9.878	92	1514967	10.000
84) trans-1,3-Dichloropropene	(3)	10.116	75	722203	10.000
85) 1,3-Dichloropropene (total)	(3)		75	1637977	20.000
86) Ethyl Methacrylate	(3)	10.177	69	534723	10.000
88) 1,1,2-Trichloroethane	(3)	10.323	97	352071	10.000
89) Tetrachloroethene	(3)	10.433	166	721958	10.000
90) 1,3-Dichloropropane	(3)	10.482	76	631241	10.000
91) 2-Hexanone	(1)	10.518	43	2482197	100.000

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	481784	10.000
95) 1,2-Dibromoethane	(3)	10.823	107	340248	10.000
97)*Chlorobenzene-d5	(3)	11.250	117	1624059	10.000
98) Chlorobenzene	(3)	11.274	112	1624792	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	589944	10.000
100) Ethylbenzene	(3)	11.359	91	3075071	10.000
101) m+p-Xylene	(3)	11.475	106	2320055	20.000
105) Xylene (Total)	(3)		106	3463799	30.000
104) o-Xylene	(3)	11.804	106	1143744	10.000
106) Styrene	(3)	11.817	104	1821702	10.000
107) Bromoform	(3)	11.981	173	276043	10.000
108) Isopropylbenzene	(3)	12.103	105	3085397	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	738883	10.000
111)$4-Bromofluorobenzene	(3)	12.249	174	647286	10.000
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	433298	10.000
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	1220077	100.000
114) Bromobenzene	(4)	12.365	156	674707	10.000
116) 1,2,3-Trichloropropane	(4)	12.384	110	110468	10.000
117) n-Propylbenzene	(4)	12.432	91	3769529	10.000
119) 2-Chlorotoluene	(4)	12.512	126	697581	10.000
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	2617121	10.000
122) 4-Chlorotoluene	(4)	12.603	126	708469	10.000
125) tert-Butylbenzene	(4)	12.810	134	549099M	10.000
126) Pentachloroethane	(4)	12.841	167	454911	10.000
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	2665328	10.000
128) sec-Butylbenzene	(4)	12.975	105	3397397	10.000
131) 1,3-Dichlorobenzene	(4)	13.079	146	1347038	10.000
132) p-Isopropyltoluene	(4)	13.085	119	2903991	10.000
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	729300	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	1330084	10.000
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	1107929	10.000
136) Benzyl Chloride	(4)	13.219	126	172866	10.000
138) n-Butylbenzene	(4)	13.377	92	1512807	10.000
139) 1,2-Dichlorobenzene	(4)	13.408	146	1191125	10.000
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	56469	10.000
144) 1,3,5-Trichlorobenzene	(4)	14.085	180	1005643	10.000
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	810765	10.000
146) Hexachlorobutadiene	(4)	14.584	225	403596	10.000

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

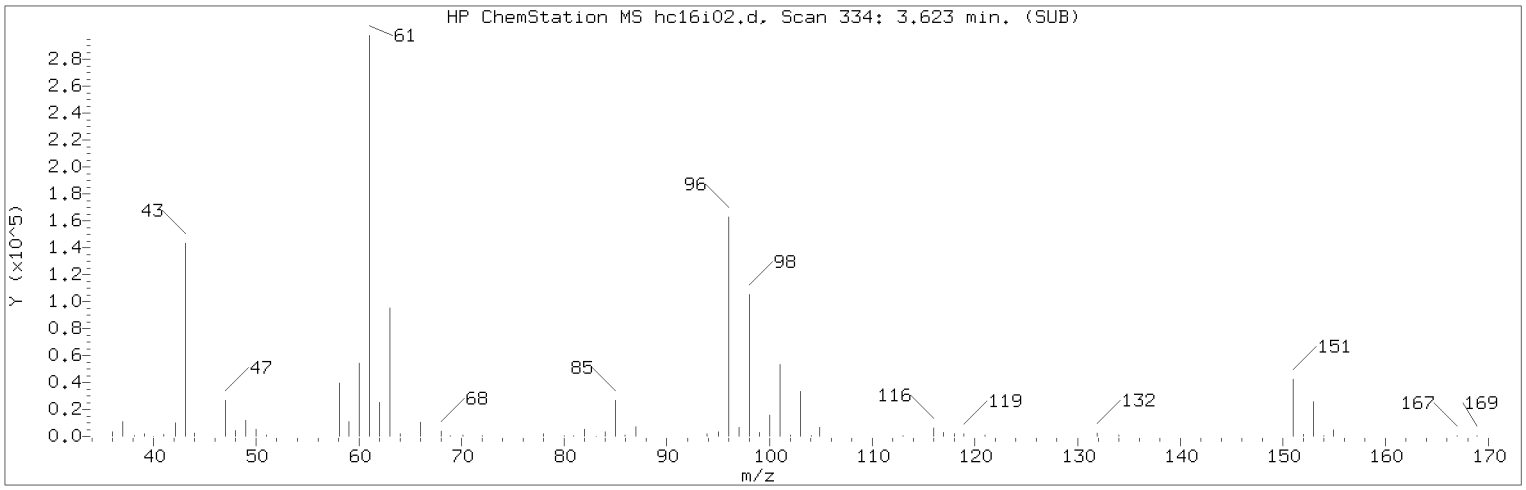
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

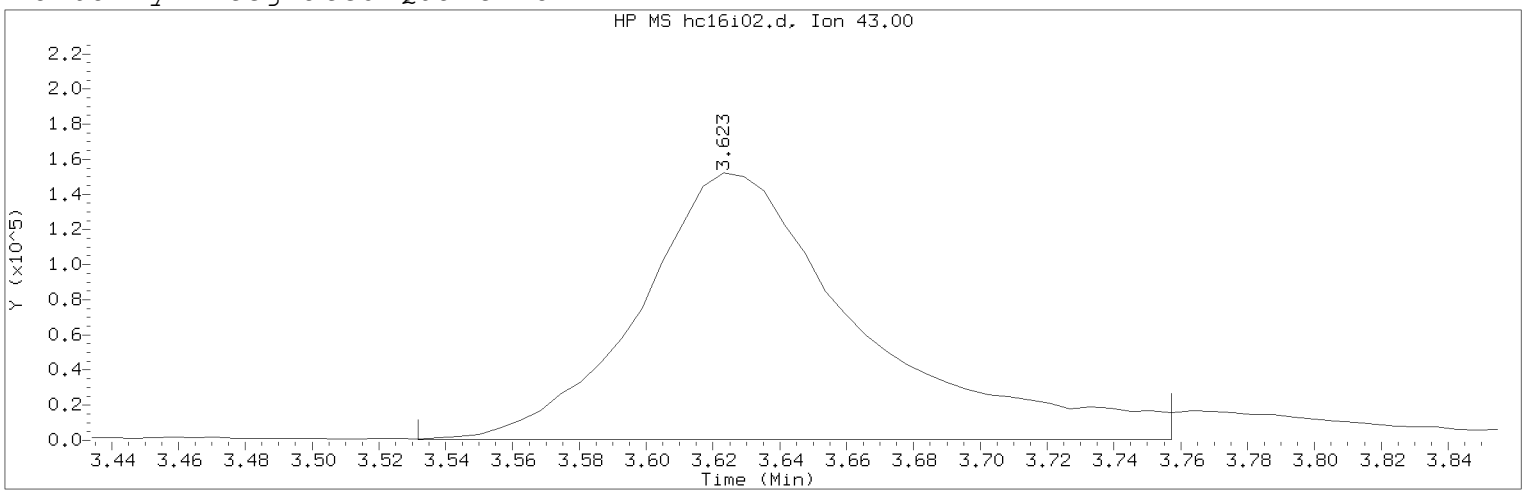
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.682	128	1213534	10.000
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	643771	10.000

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

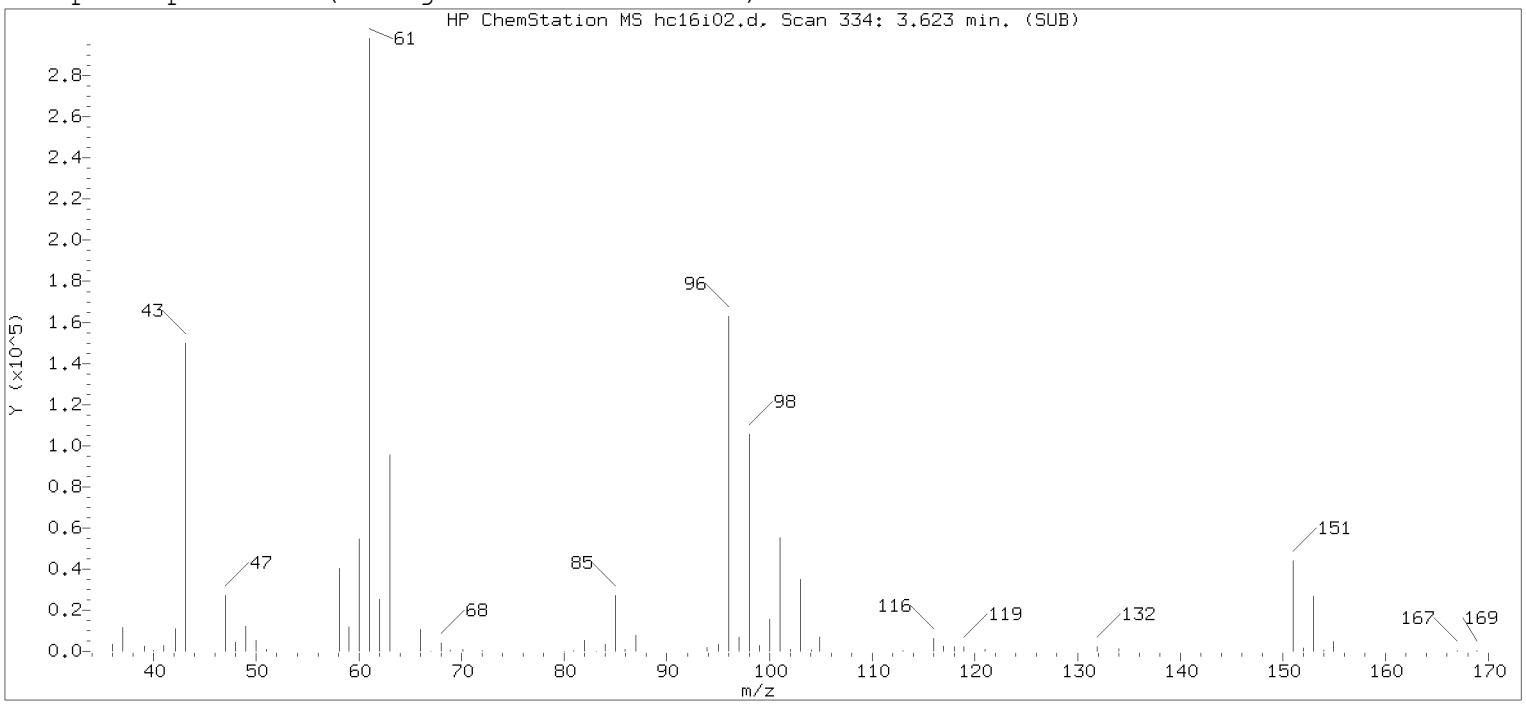
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 702361M
On-Column Amount (ng) : 100.0000
Integration start scan : 318 Integration stop scan: 355
Y at integration start : 281 Y at integration end: 296

Reason for manual integration: improper integration

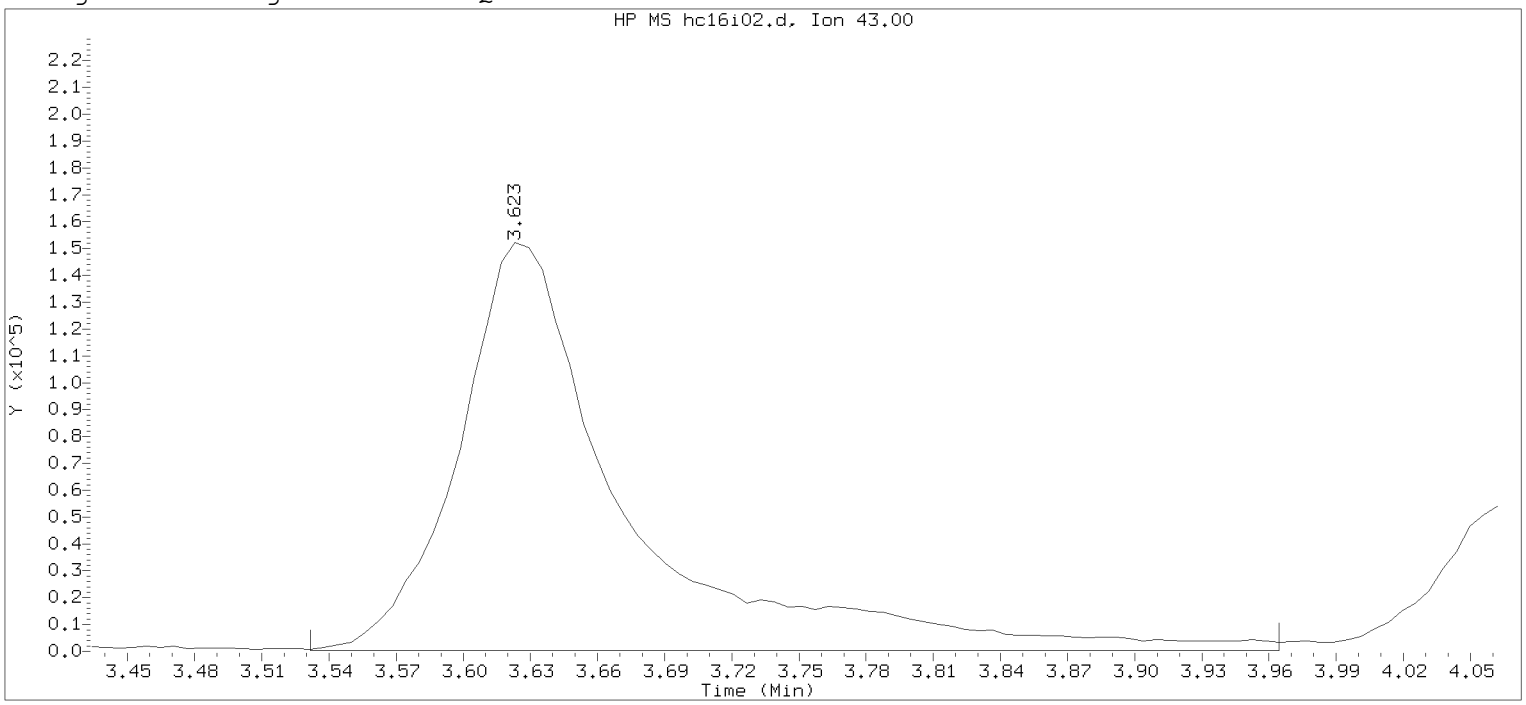
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

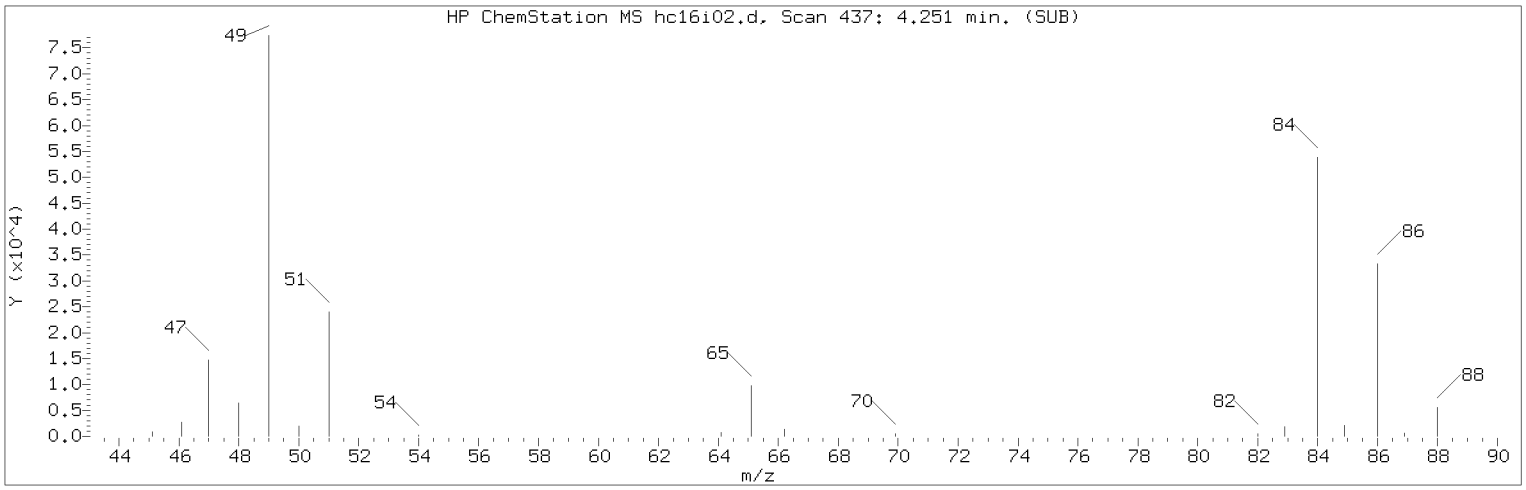
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

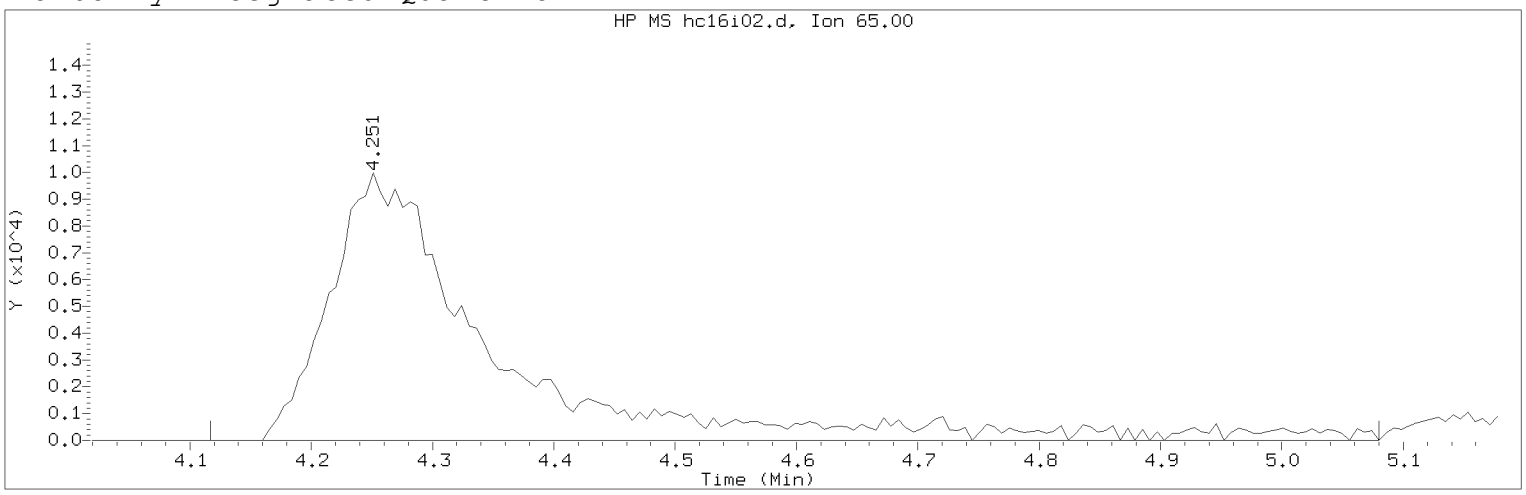
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area : 791194
On-column Amount (ng) : 105.4473
Integration start scan : 318 Integration stop scan: 389
Y at integration start : 281 Y at integration end: 310

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

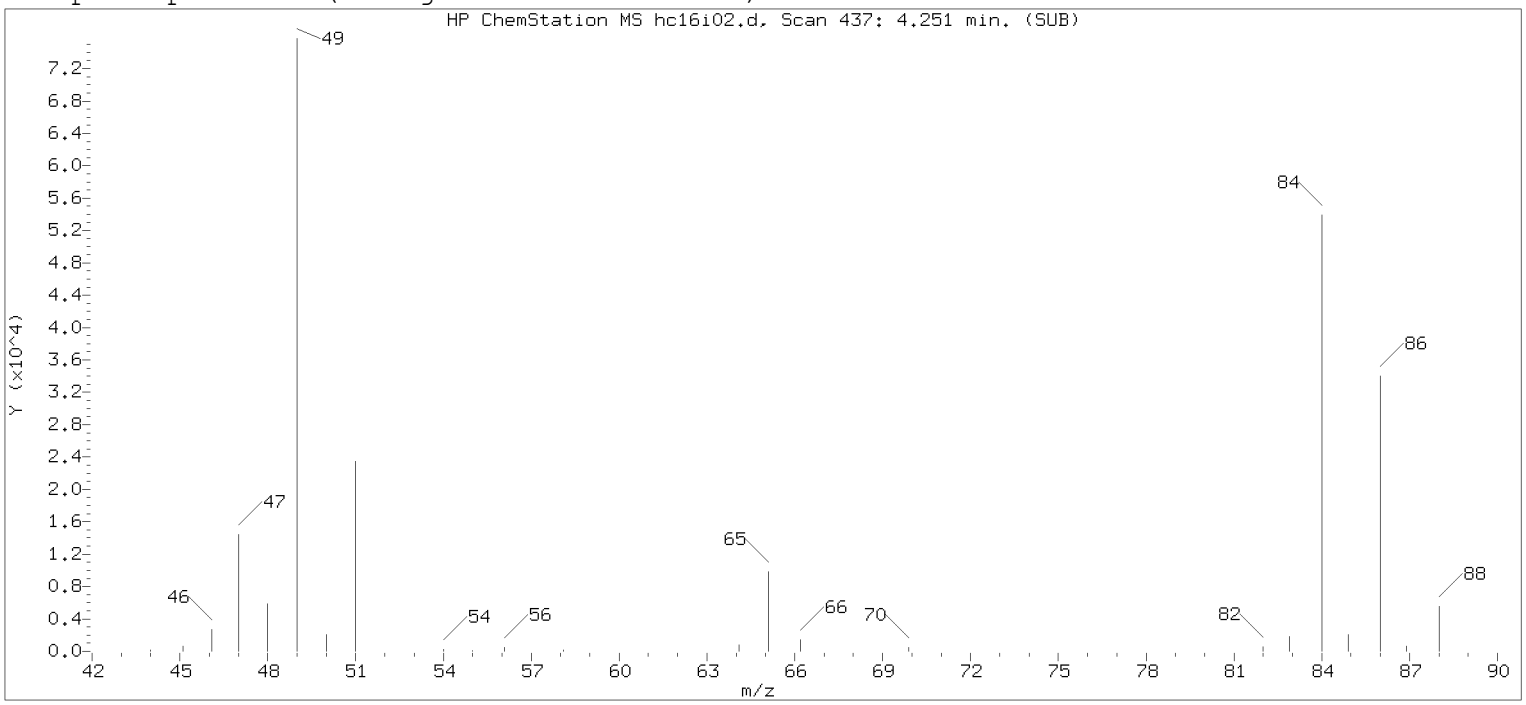
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area (flag) : 93229M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

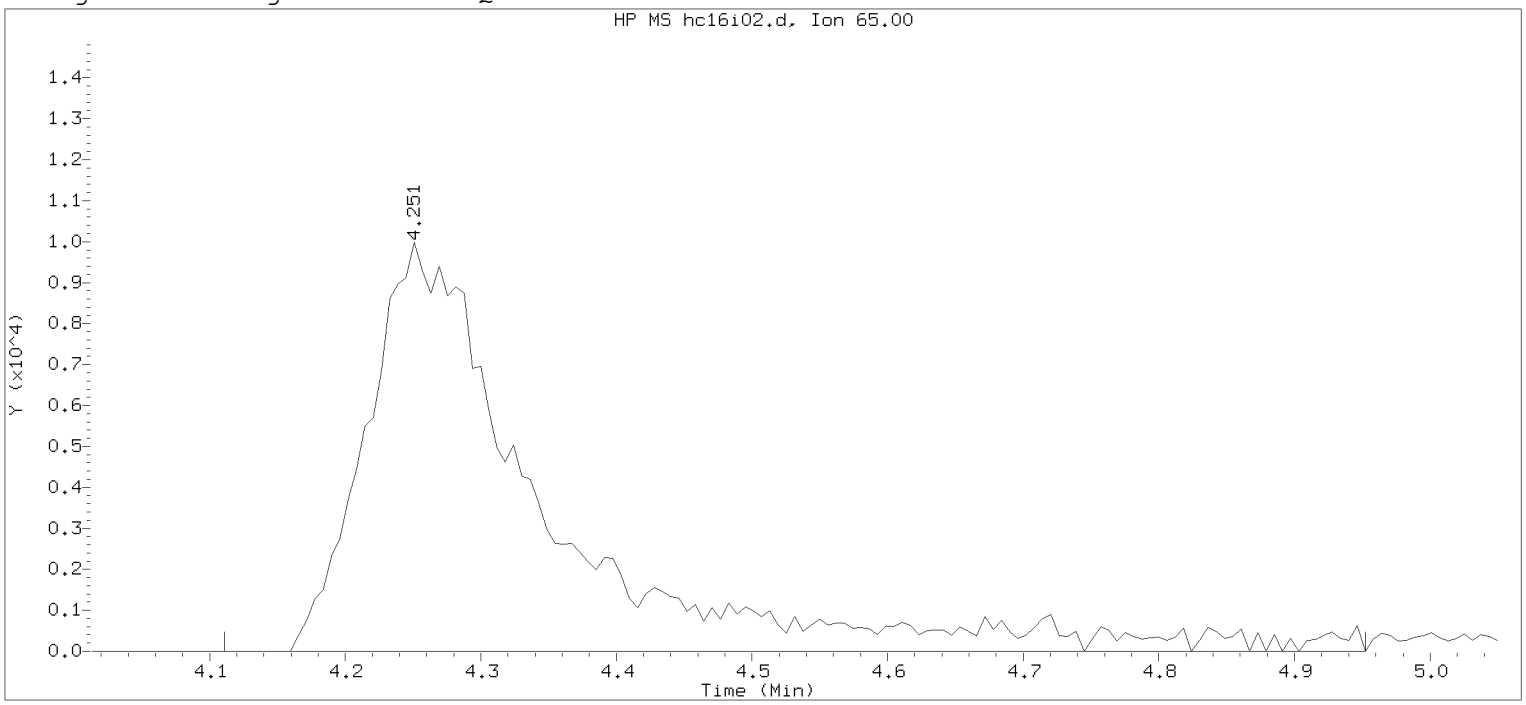
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

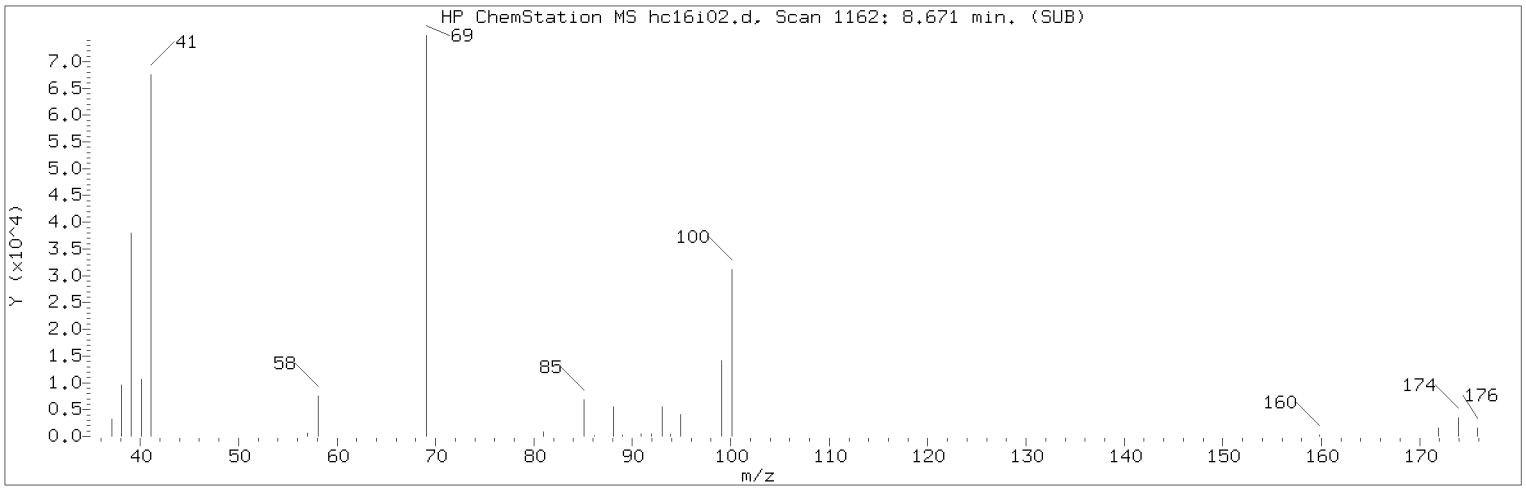
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

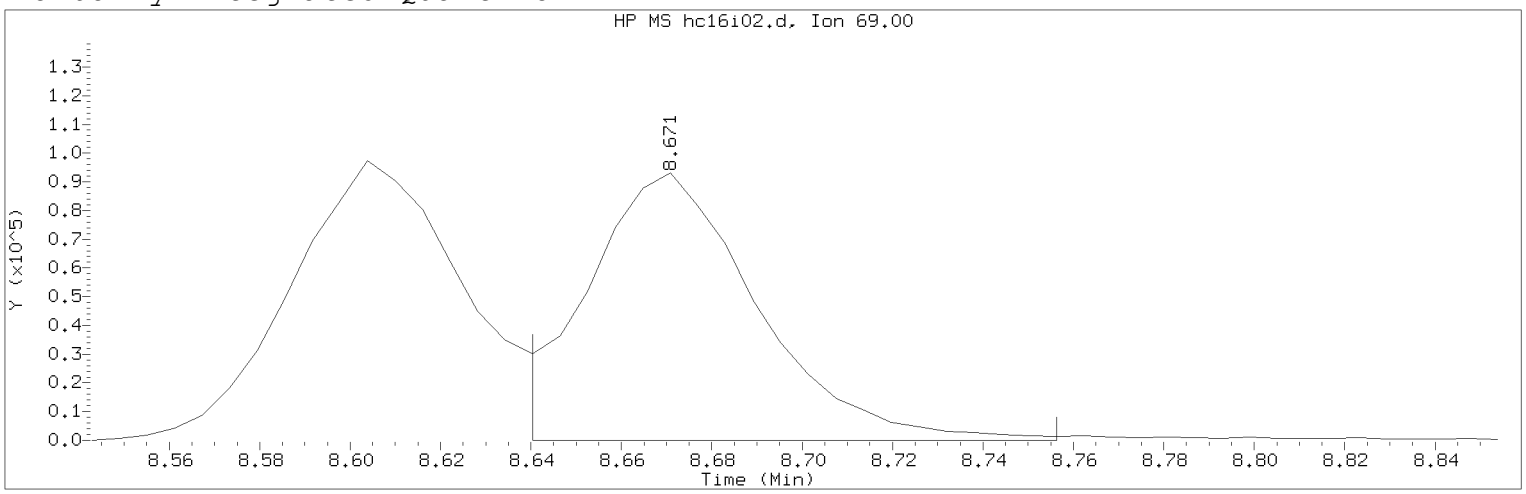
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area : 90841
On-column Amount (ng) : 50.0000
Integration start scan : 413 Integration stop scan: 551
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key: 2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

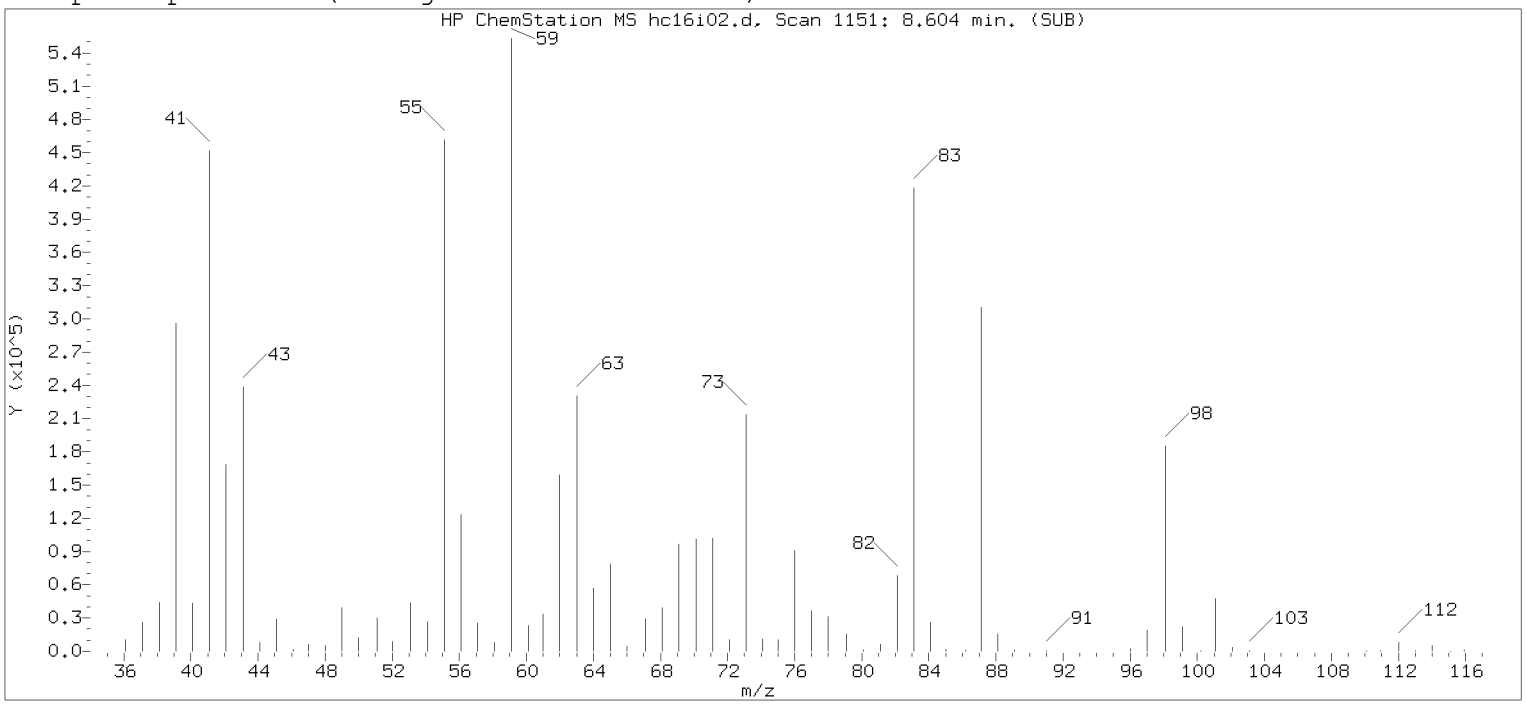
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1162
Retention Time (minutes): 8.671
Quant Ion : 69.00
Area (flag) : 247352M
On-Column Amount (ng) : 10.0000
Integration start scan : 1156 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

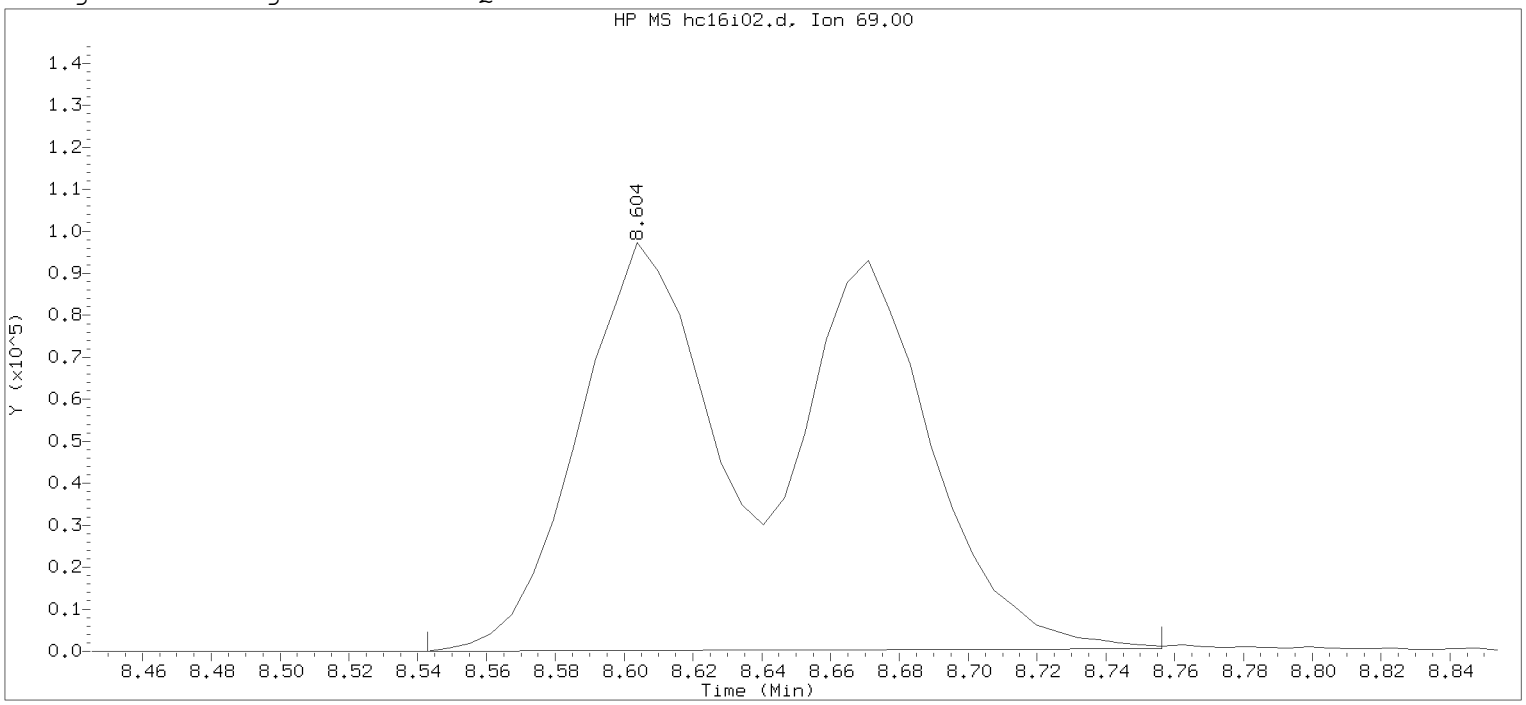
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

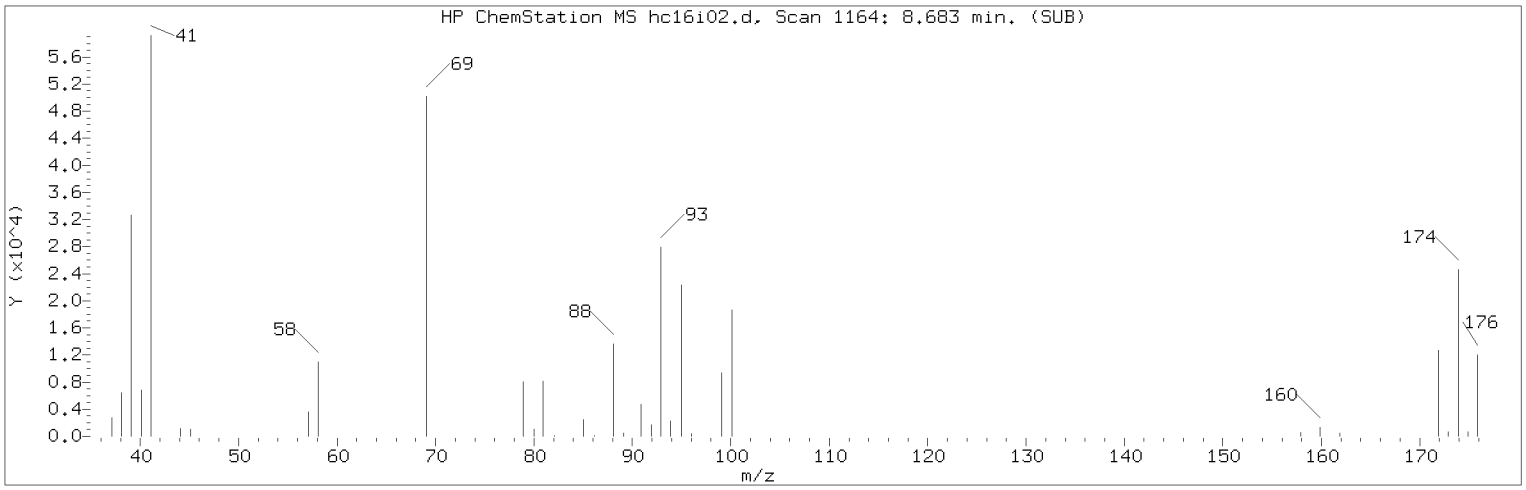
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

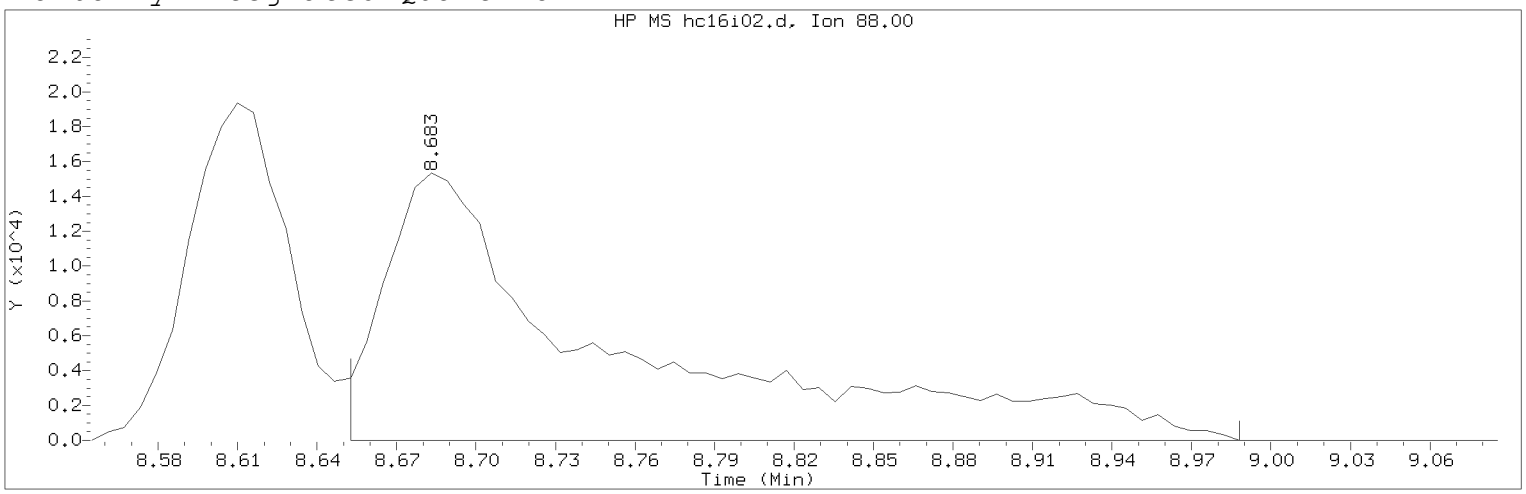
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 490751
On-column Amount (ng) : 19.2009
Integration start scan : 1140 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 621

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Target 3.5 esignature used. Key ID: 0x2239

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

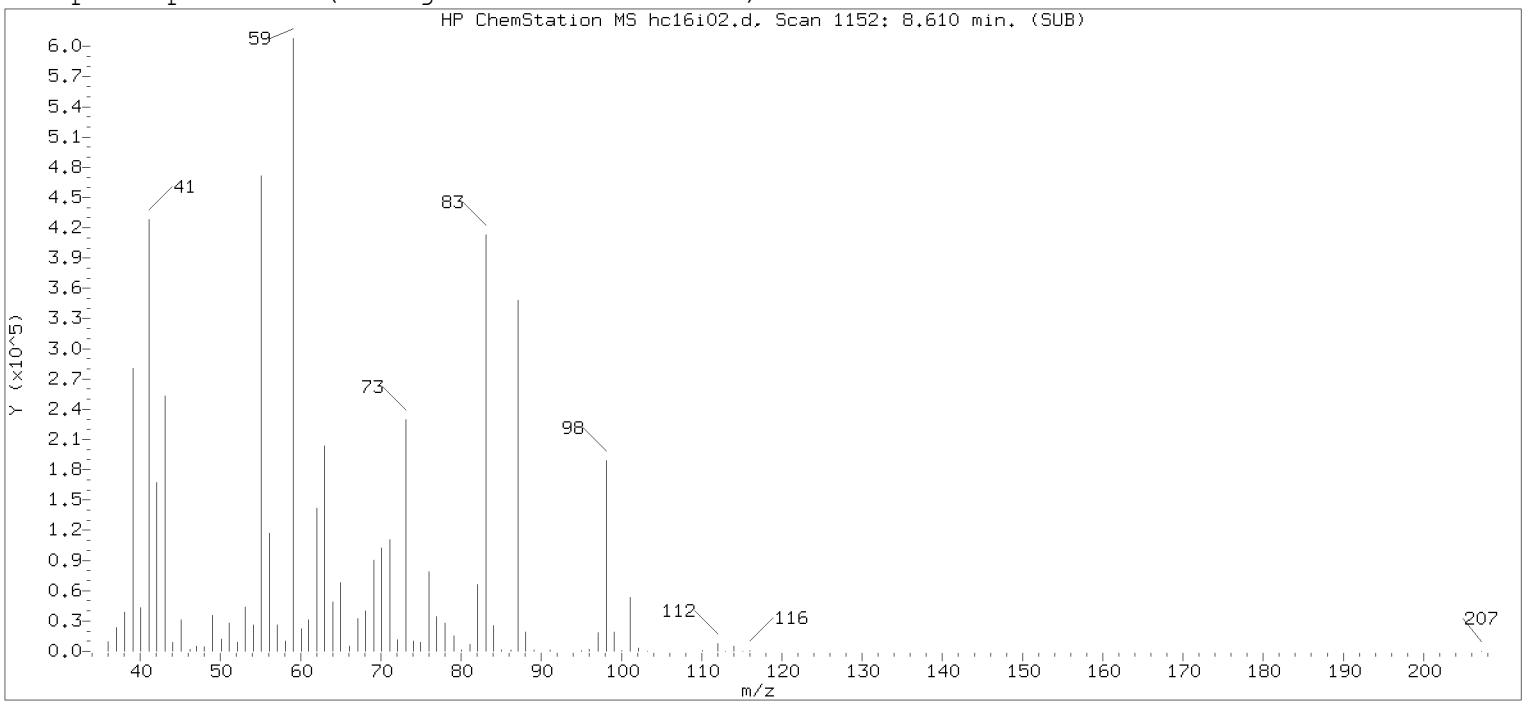
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 93140M
On-Column Amount (ng) : 500.0000
Integration start scan : 1158 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

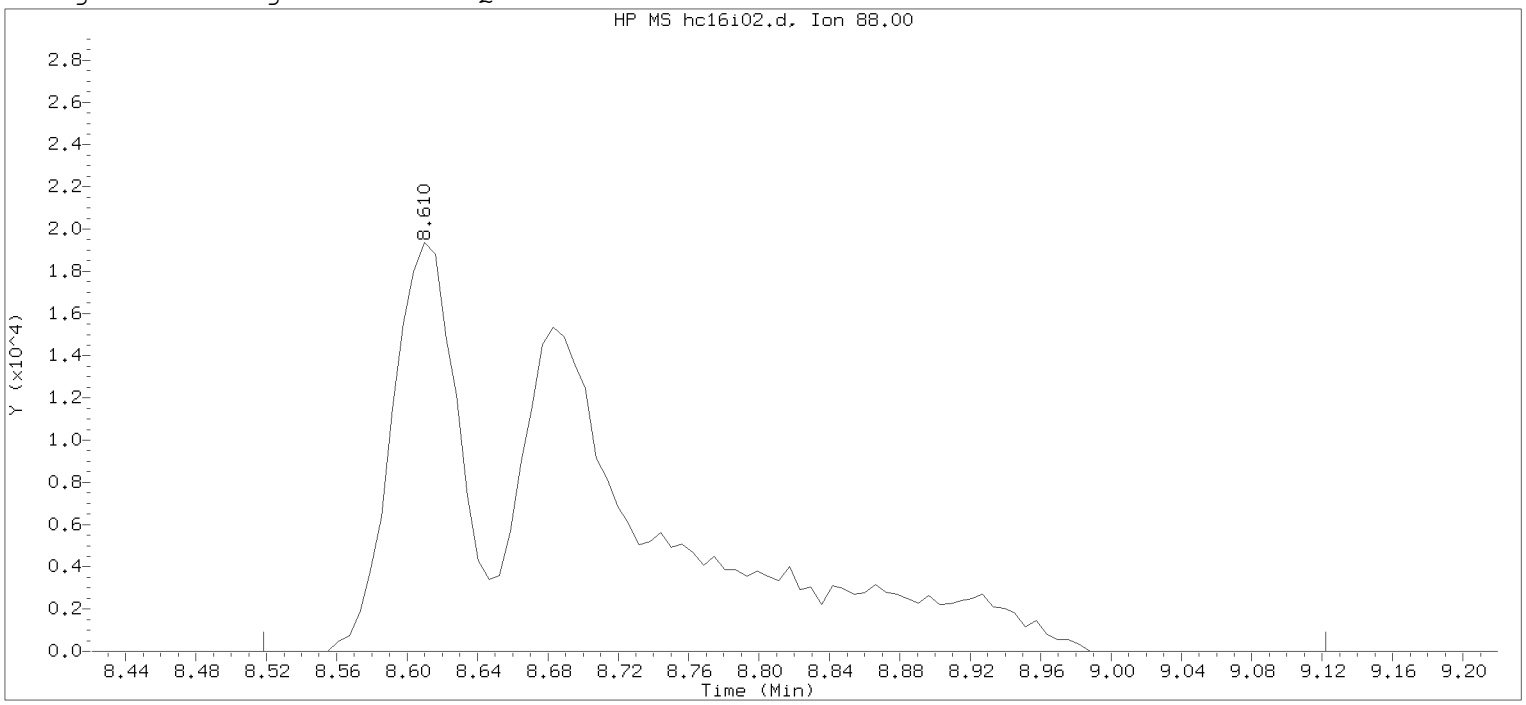
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

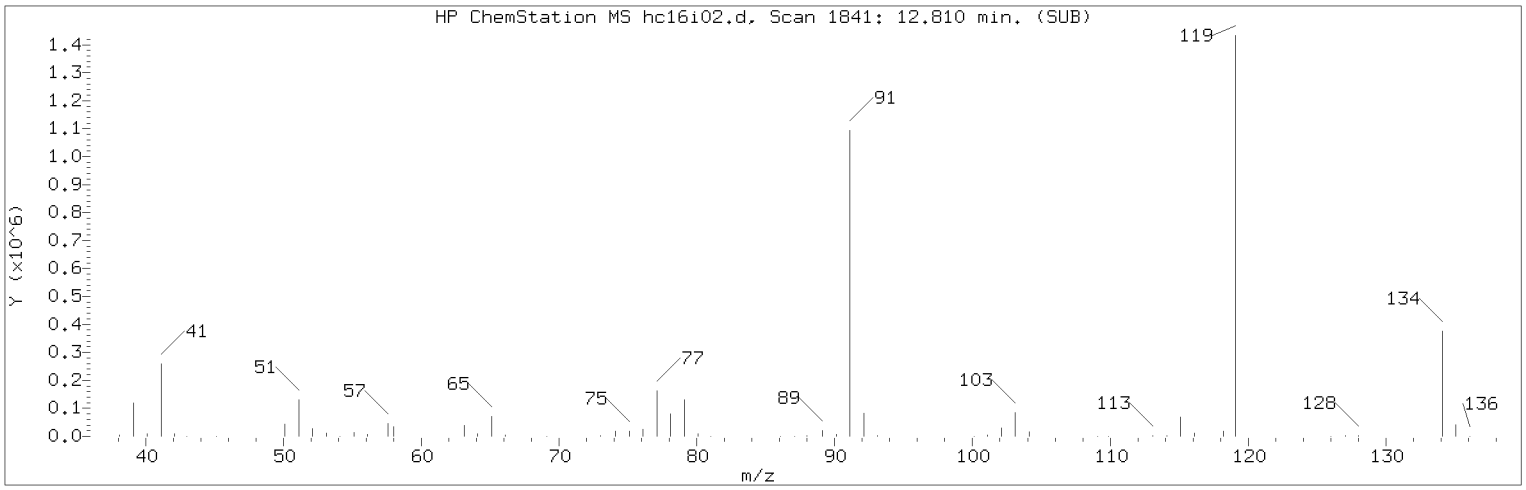
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

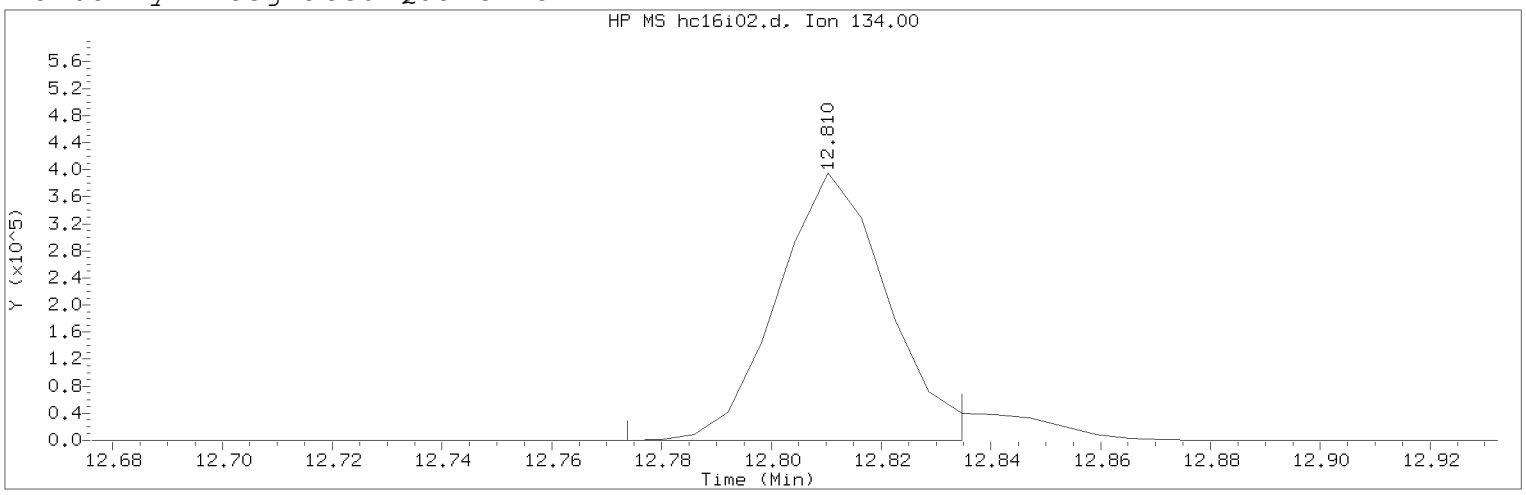
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 143817
On-column Amount (ng) : 605.6751
Integration start scan : 1136 Integration stop scan: 1235
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature used. Key ID: 0x2243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

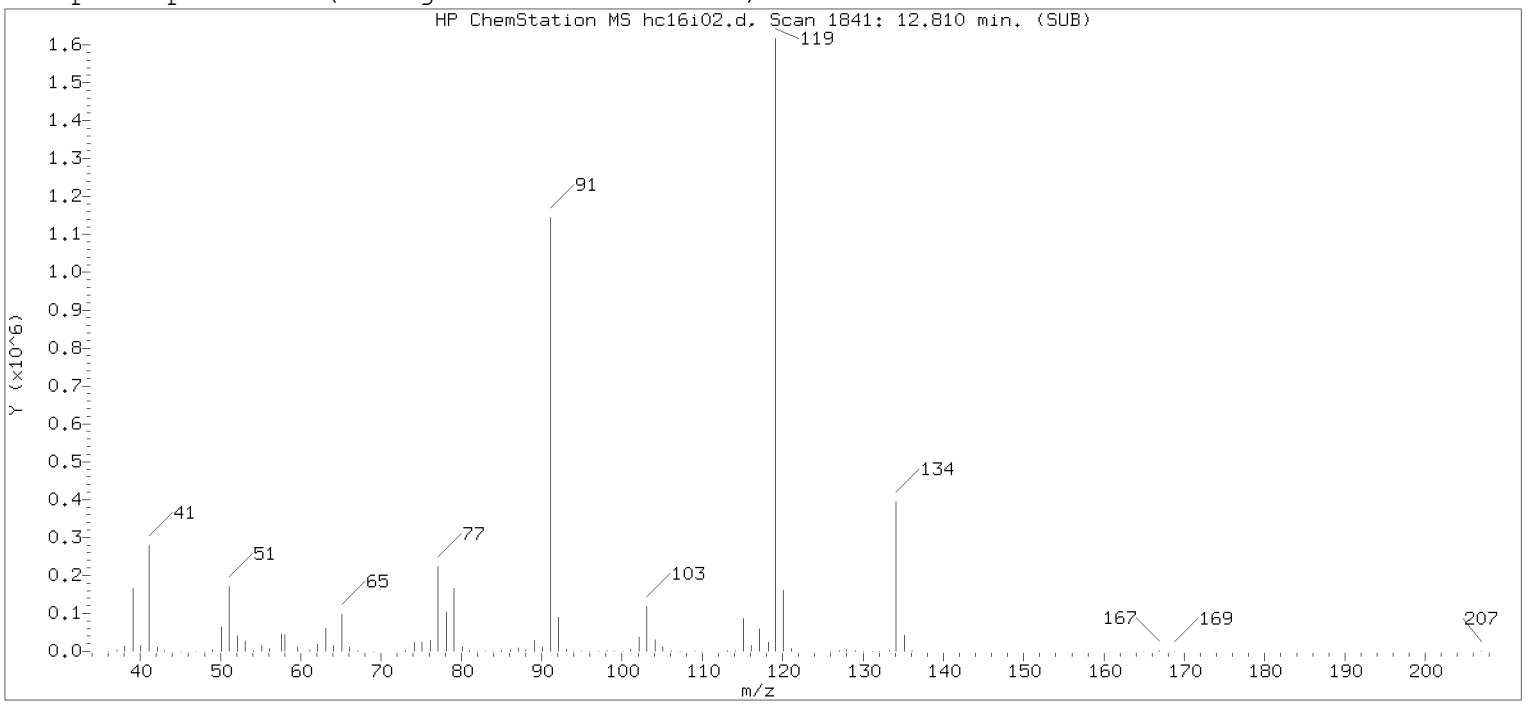
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 549099M
On-Column Amount (ng) : 10.0000
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

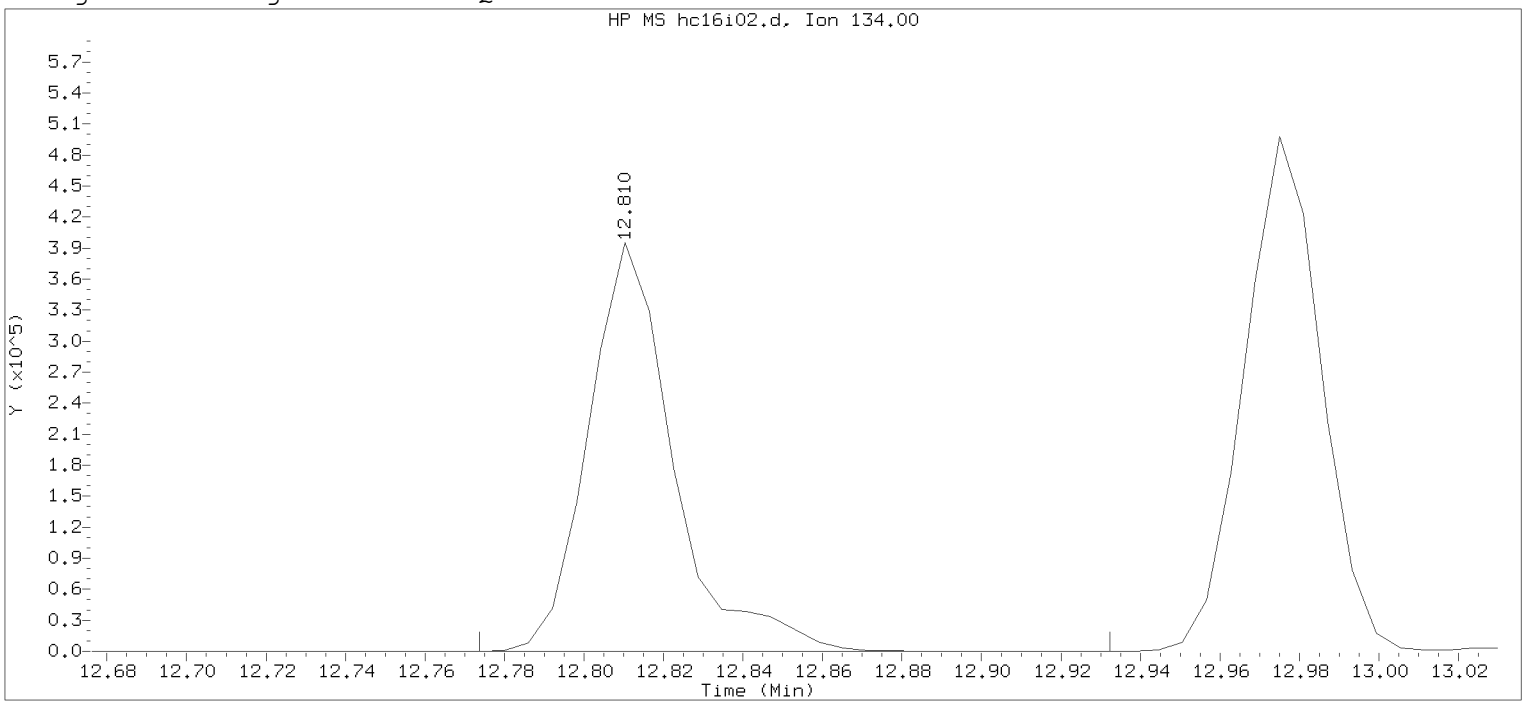
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



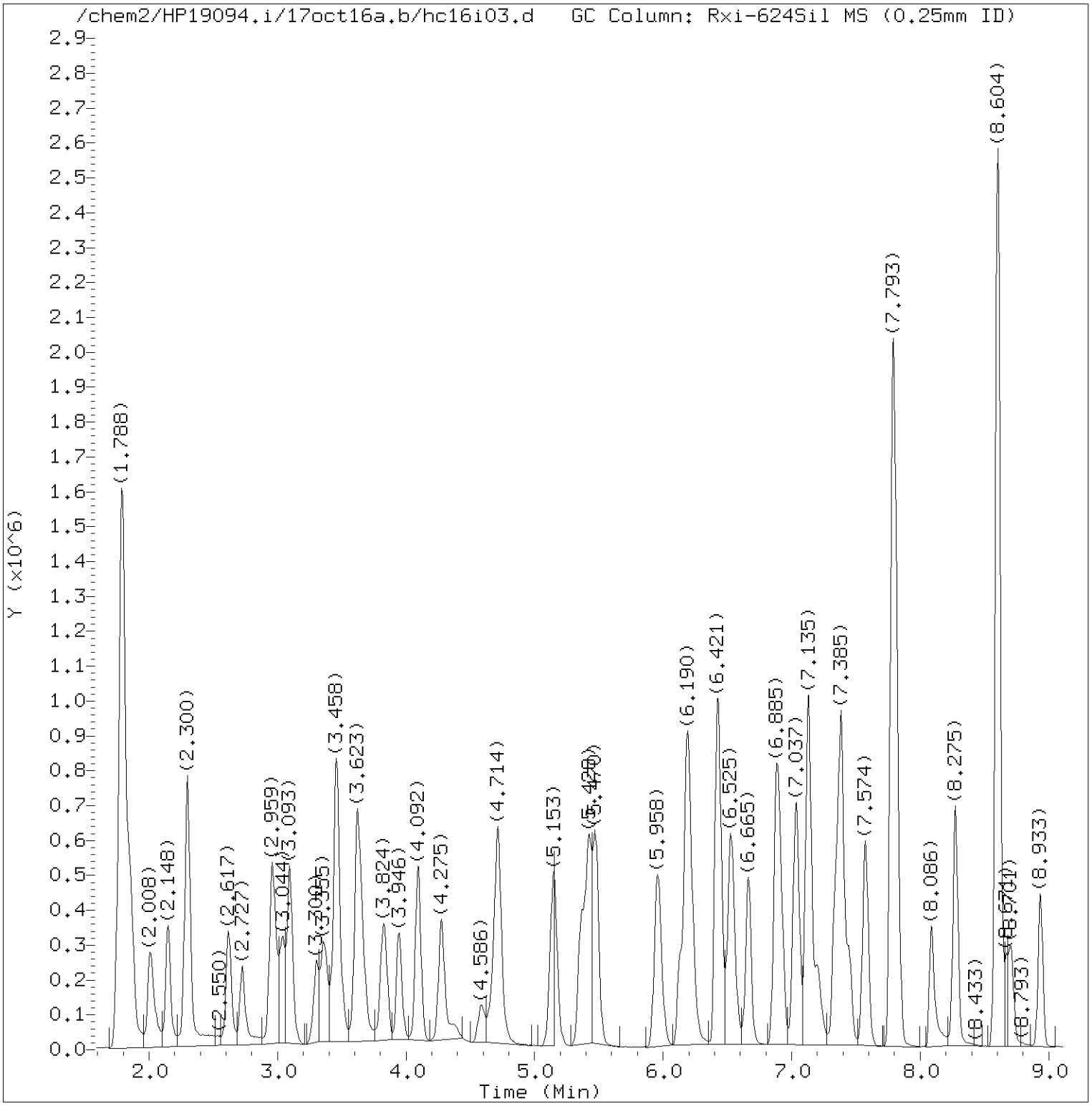
Data File: /chem2/HP19094.i/17oct16a.b/hc16i02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:03 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 11:21
Date, time and analyst ID of latest file update: 16-Oct-2017 11:21 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 587495
On-column Amount (ng) : 9.7153
Integration start scan : 1834 Integration stop scan: 1860
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key ID: 0x2263



Total Ion Chromatogram (TIC)

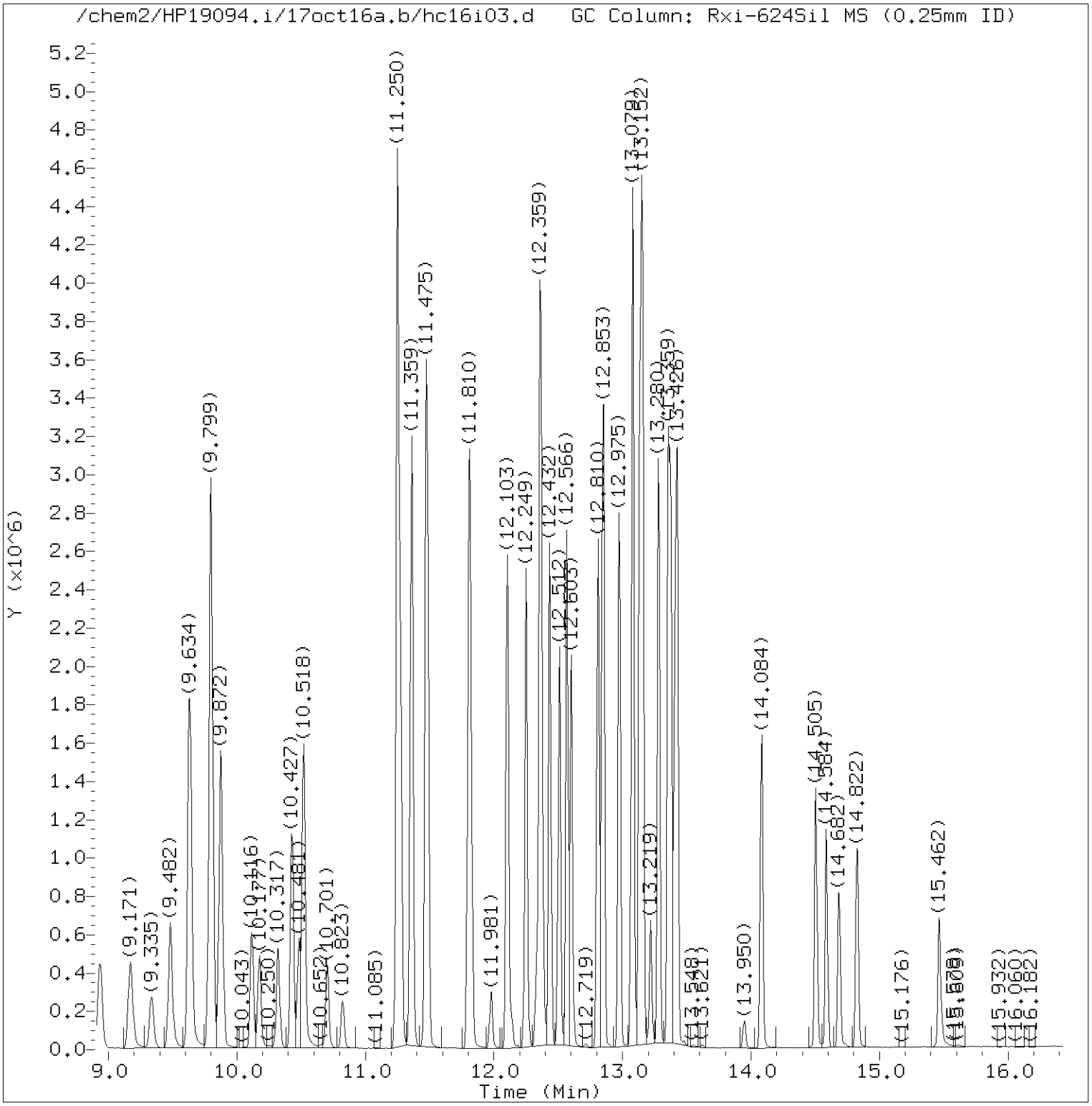
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	495986	4.914
2) Chloromethane	(2)	2.148	50	486622	4.882
5) Vinyl Chloride	(2)	2.282	62	460857	5.031
6) 1,3-Butadiene	(2)	2.300	39	404750	4.675
7) Bromomethane	(2)	2.617	94	306631	4.921
8) Chloroethane	(2)	2.727	64	256892	4.926
9) Dichlorofluoromethane	(2)	2.959	67	736472	4.823
10) Trichlorofluoromethane	(2)	3.044	101	624467	5.118
11) Ethyl ether	(2)	3.300	59	201853	5.183
12) Freon 123a	(2)	3.361	67	371337	4.864
13) Acrolein	(1)	3.458	56	1390698	250.977
15) 1,1-Dichloroethene	(2)	3.617	96	244582	5.010
14) Acetone	(1)	3.623	43	330359M	45.850
16) Freon 113	(2)	3.654	101	272143	5.006
17) Methyl Iodide	(2)	3.818	142	479661	4.932
18) Carbon Disulfide	(2)	3.946	76	745380	4.771
21) Methyl Acetate	(1)	4.068	43	106000	4.018
22) Allyl Chloride	(2)	4.099	41	556857	5.027
26)*t-Butyl Alcohol-d10	(1)	4.245	65	89047	50.000
23) Methylene Chloride	(2)	4.275	84	264607	4.751
28) t-Butyl Alcohol	(1)	4.367	59	236031M	98.179
29) Acrylonitrile	(1)	4.586	53	230985	26.561
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	606929	5.034
31) trans-1,2-Dichloroethene	(2)	4.720	96	268879	4.871
32) n-Hexane	(2)	5.153	57	481360	4.938
33) 1,1-Dichloroethane	(2)	5.361	63	569691	5.017
34) di-Isopropyl Ether	(2)	5.428	45	1065079	4.970
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	532394	4.998
37) Ethyl t-butyl ether	(2)	5.958	59	858586	4.994
40) 1,2-Dichloroethene (Total)	(2)		96	580733	9.812
38) 2-Butanone	(1)	6.129	43	682430	48.942
39) cis-1,2-Dichloroethene	(2)	6.184	96	311854	4.941
42) Propionitrile	(1)	6.196	54	341638	106.382
41) 2,2-Dichloropropane	(2)	6.208	77	474678	4.950
45) Methacrylonitrile	(1)	6.427	67	594453	50.915
47) Bromochloromethane	(2)	6.525	128	126444	5.093
48) Tetrahydrofuran	(1)	6.531	71	159054	50.315
49) Chloroform	(2)	6.665	83	547170	4.990

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	559847	10.103
50)$Dibromofluoromethane	(2)	6.879	111	573246	10.075
51) 1,1,1-Trichloroethane	(2)	6.909	97	484819	4.904
52) Cyclohexane	(2)	7.037	56	587012	4.858
52) Cyclohexane	(2)	7.037	84	442914	4.767
52) Cyclohexane	(2)	7.037	69	170549	4.950
55) 1,1-Dichloropropene	(2)	7.128	75	441655	5.051
54) Carbon Tetrachloride	(2)	7.135	117	430687	4.988
56) Isobutyl Alcohol	(1)	7.202	41	232782	239.503
57)$1,2-Dichloroethane-d4	(2)	7.342	102	90310	10.407
57)$1,2-Dichloroethane-d4	(2)	7.342	65	481950	10.150
57)$1,2-Dichloroethane-d4	(2)	7.342	104	54127	9.916
58) Benzene	(2)	7.385	78	1180956	4.938
59) 1,2-Dichloroethane	(2)	7.445	62	328582	4.912
60) t-Amyl methyl ether	(2)	7.574	73	703690	5.043
63)*Fluorobenzene	(2)	7.787	96	2294767	10.000
62) n-Heptane	(2)	7.817	43	556785	4.784
65) n-Butanol	(1)	8.092	56	382532	535.688
67) Trichloroethene	(2)	8.275	95	314404	4.908
70) 1,2-Dichloropropane	(2)	8.598	63	314823	5.073
69) Methylcyclohexane	(2)	8.604	83	575769	5.228
71) Methyl Methacrylate	(1)	8.671	69	121323	4.577
72) 1,4-Dioxane	(1)	8.683	88	43135M	272.103
73) Dibromomethane	(2)	8.714	93	129119	4.972
74) Bromodichloromethane	(2)	8.933	83	377173	5.034
76) 2-Nitropropane	(1)	9.171	41	388932	49.211
80) cis-1,3-Dichloropropene	(2)	9.482	75	441754	5.079
81) 4-Methyl-2-Pentanone	(1)	9.634	43	1747699	49.487
82)$Toluene-d8	(3)	9.799	98	2285727	9.968
82)$Toluene-d8	(3)	9.799	100	1449068	9.983
83) Toluene	(3)	9.872	92	737573	4.922
84) trans-1,3-Dichloropropene	(3)	10.116	75	348907	5.098
85) 1,3-Dichloropropene (total)	(3)		75	790661	10.177
86) Ethyl Methacrylate	(3)	10.177	69	259567	5.077
88) 1,1,2-Trichloroethane	(3)	10.317	97	170629	4.877
89) Tetrachloroethene	(3)	10.427	166	346840	4.932
90) 1,3-Dichloropropane	(3)	10.481	76	310719	4.995
91) 2-Hexanone	(1)	10.518	43	1224554	49.750

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	229760	5.029
95) 1,2-Dibromoethane	(3)	10.823	107	166258	5.029
97)*Chlorobenzene-d5	(3)	11.250	117	1577860	10.000
98) Chlorobenzene	(3)	11.274	112	786050	4.923
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	280279	4.984
100) Ethylbenzene	(3)	11.359	91	1489379	4.943
101) m+p-Xylene	(3)	11.475	106	1124315	9.902
105) Xylene (Total)	(3)		106	1677781	14.886
104) o-Xylene	(3)	11.804	106	553466	4.985
106) Styrene	(3)	11.817	104	873045	5.034
107) Bromoform	(3)	11.981	173	129397	5.219
108) Isopropylbenzene	(3)	12.103	105	1480246	4.966
111)$4-Bromofluorobenzene	(3)	12.249	95	705791	10.133
111)$4-Bromofluorobenzene	(3)	12.249	174	620160	10.124
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	210231	4.894
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	572603	54.390
114) Bromobenzene	(4)	12.365	156	324016	4.783
116) 1,2,3-Trichloropropane	(4)	12.384	110	54754	5.000
117) n-Propylbenzene	(4)	12.432	91	1813771	4.898
119) 2-Chlorotoluene	(4)	12.512	126	334957	4.827
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	1263292	4.924
122) 4-Chlorotoluene	(4)	12.603	126	338083	4.787
125) tert-Butylbenzene	(4)	12.810	134	262784M	4.659
126) Pentachloroethane	(4)	12.841	167	218166	5.140
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	1260210	4.890
128) sec-Butylbenzene	(4)	12.975	105	1619504	4.875
131) 1,3-Dichlorobenzene	(4)	13.079	146	644750	4.887
132) p-Isopropyltoluene	(4)	13.085	119	1370570	4.944
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	696589	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	641597	4.670
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	540321	4.942
136) Benzyl Chloride	(4)	13.219	126	80545	5.261
138) n-Butylbenzene	(4)	13.377	92	711303	5.118
139) 1,2-Dichlorobenzene	(4)	13.408	146	568933	4.840
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	27188	5.328
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	474447	4.852
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	384232	4.771
146) Hexachlorobutadiene	(4)	14.584	225	186384	4.905

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

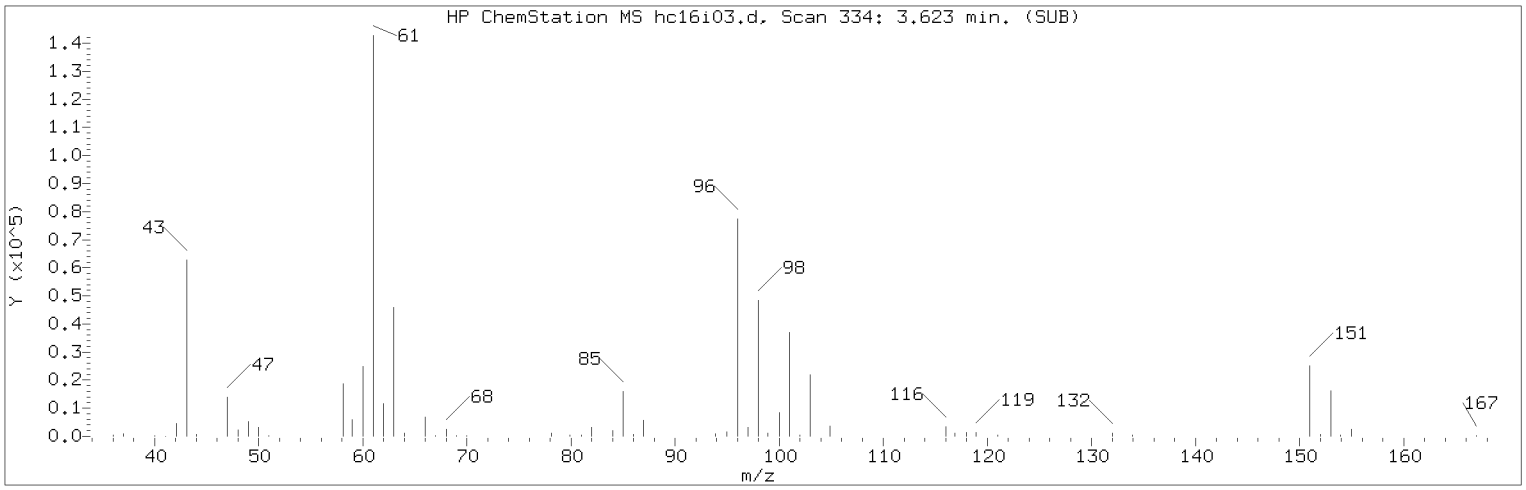
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

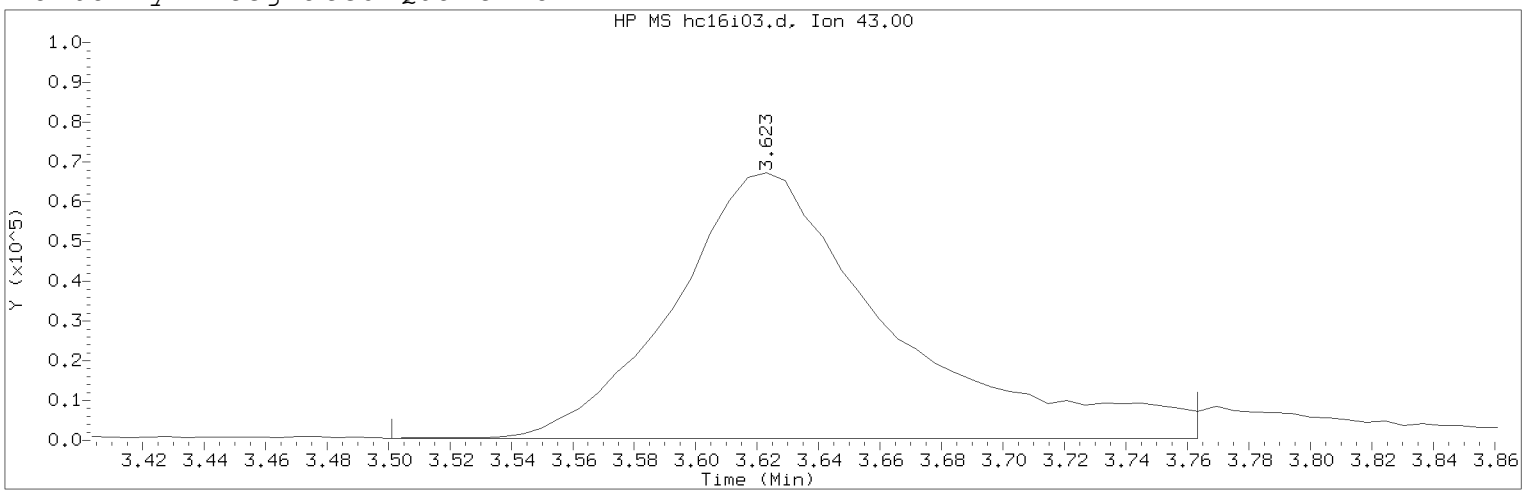
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	593812	4.531
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	302575	4.462

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

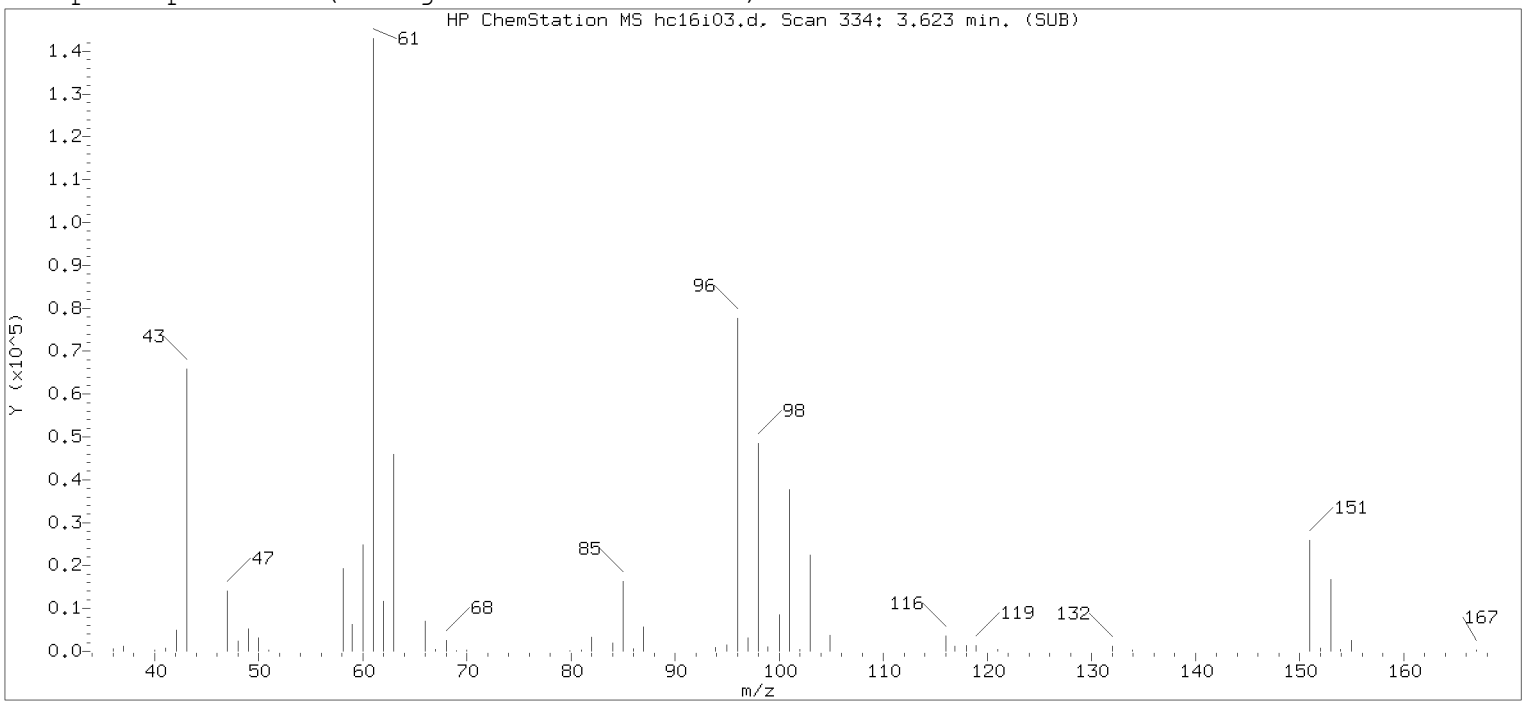
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 330359M
On-Column Amount (ng) : 45.8497
Integration start scan : 313 Integration stop scan: 356
Y at integration start : 411 Y at integration end: 411

Reason for manual integration: improper integration

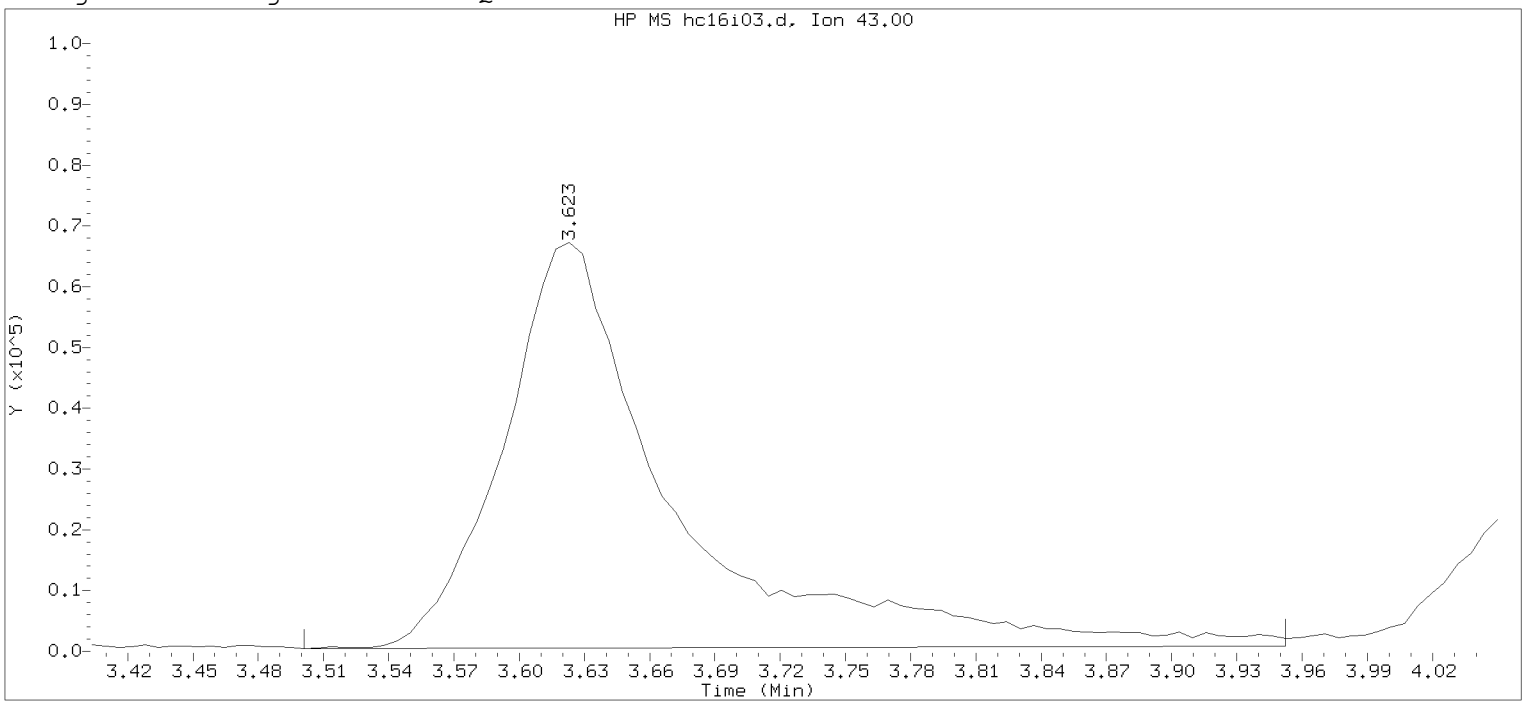
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

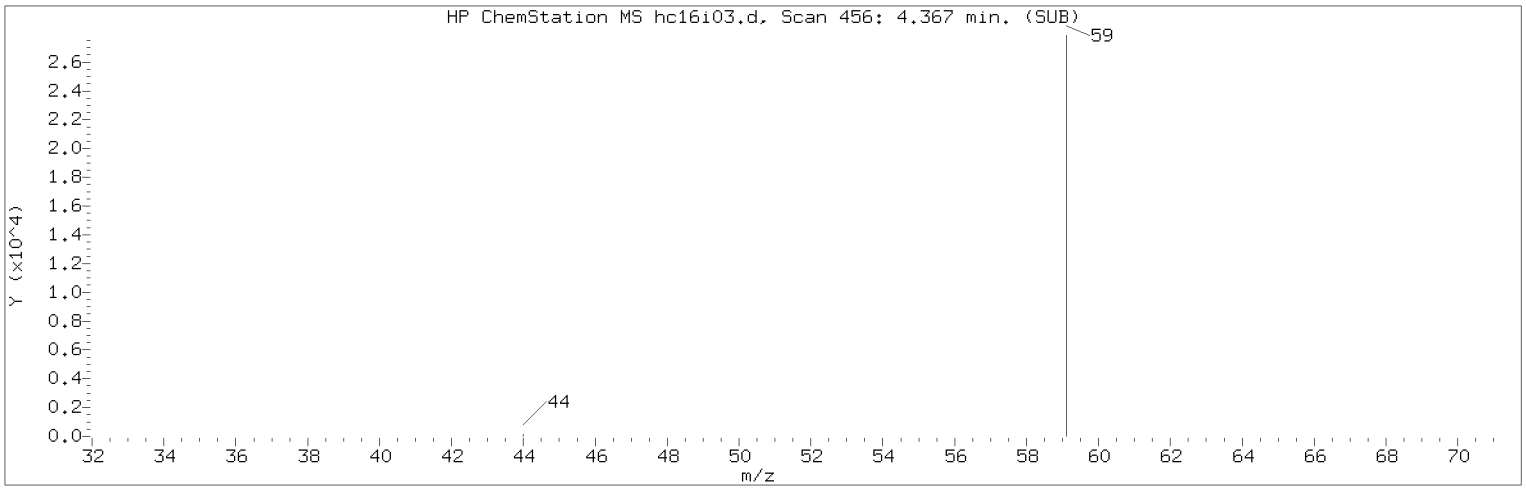
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

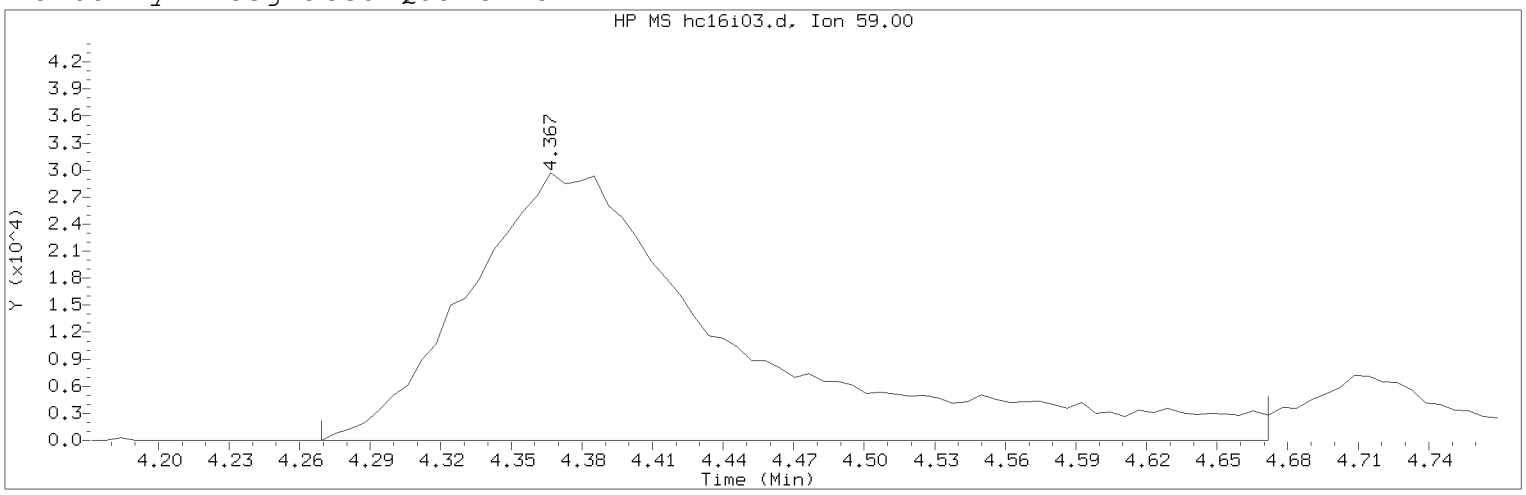
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area : 365147
On-column Amount (ng) : 53.0581
Integration start scan : 313 Integration stop scan: 387
Y at integration start : 422 Y at integration end: 846

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Target 3.5 esignature used. Key: 0243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

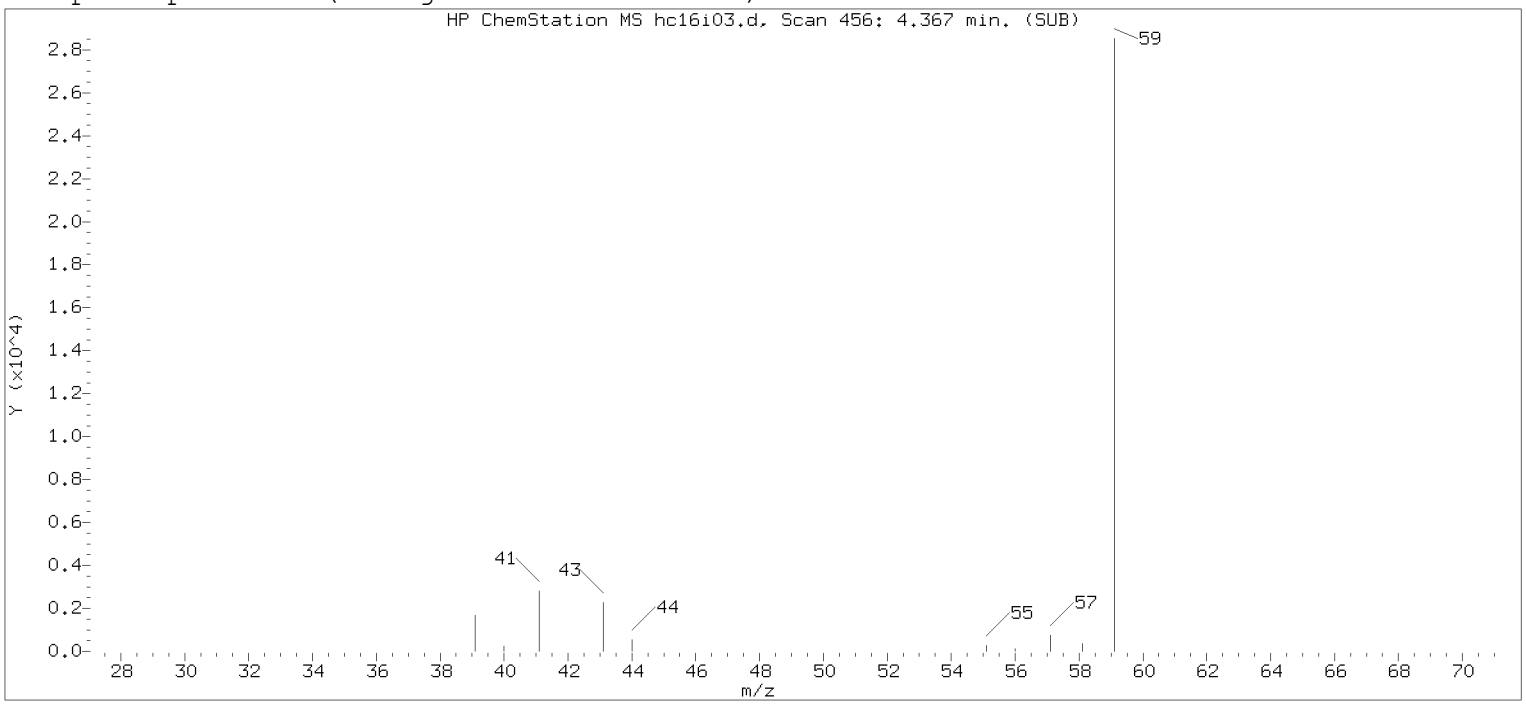
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area (flag) : 236031M
On-Column Amount (ng) : 98.1795
Integration start scan : 439 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

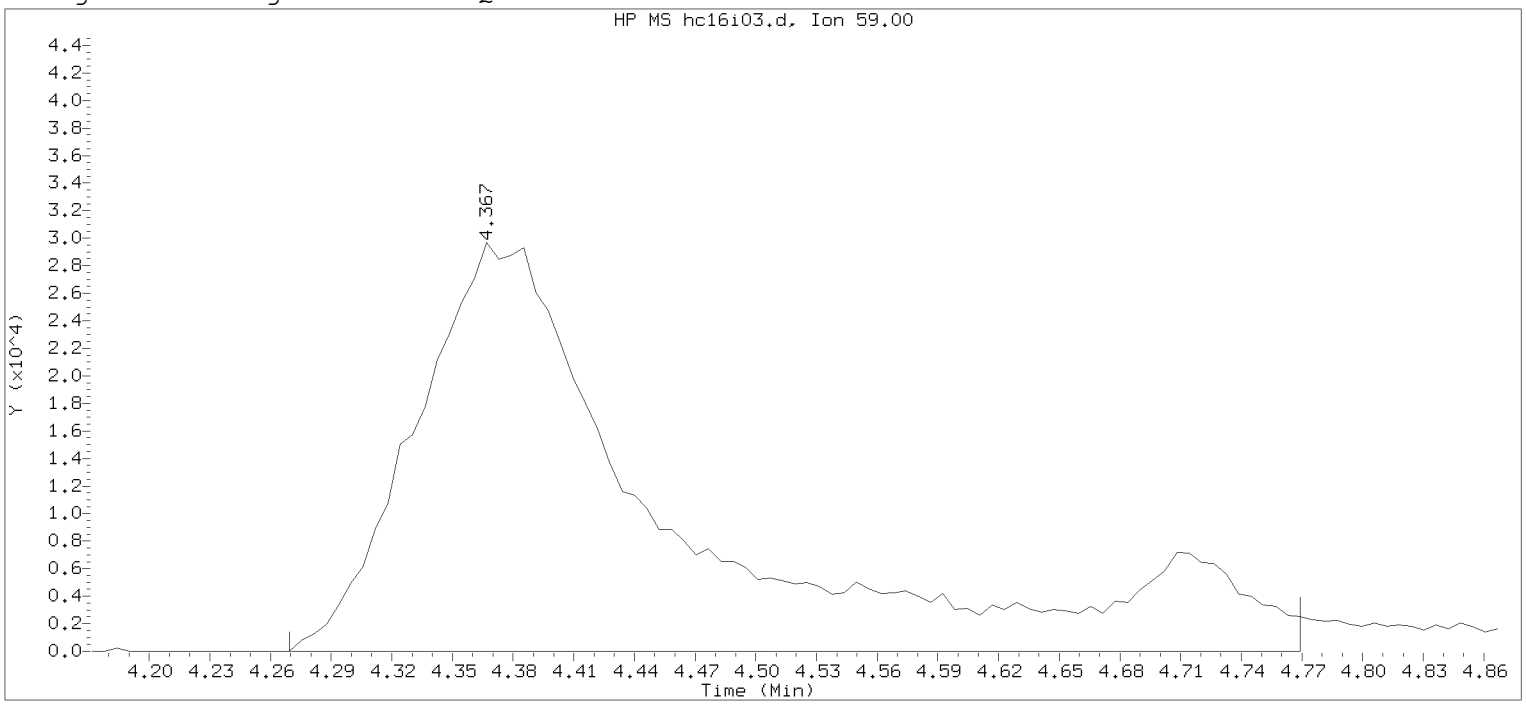
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

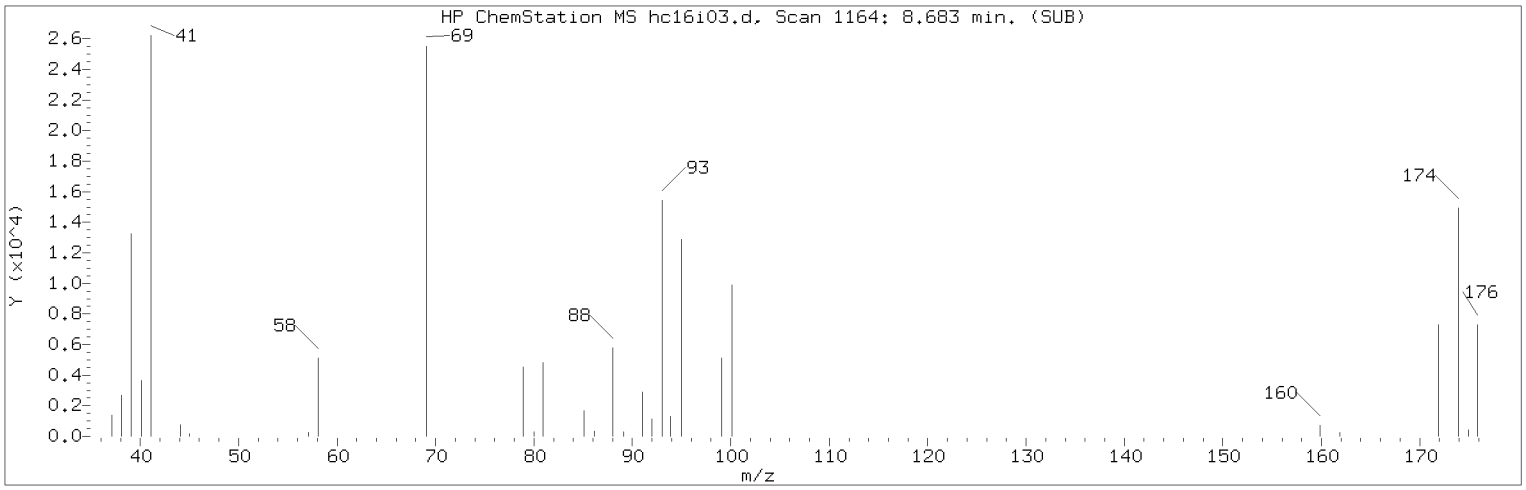
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

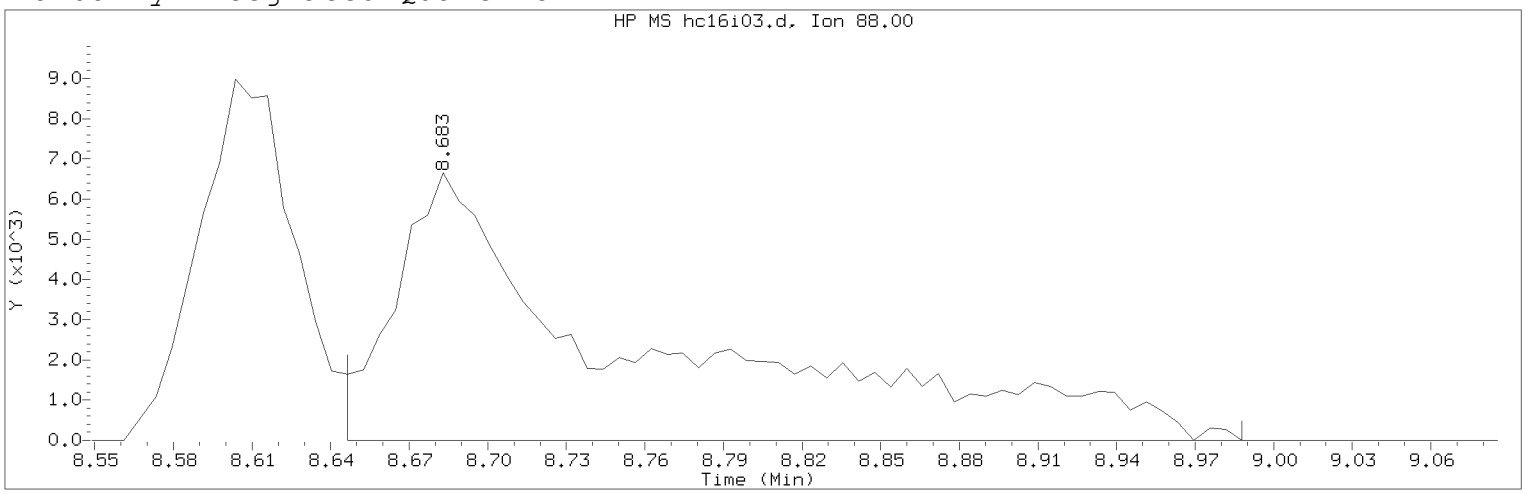
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area : 263091
On-column Amount (ng) : 109.3786
Integration start scan : 439 Integration stop scan: 521
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature used. Key: 2273

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

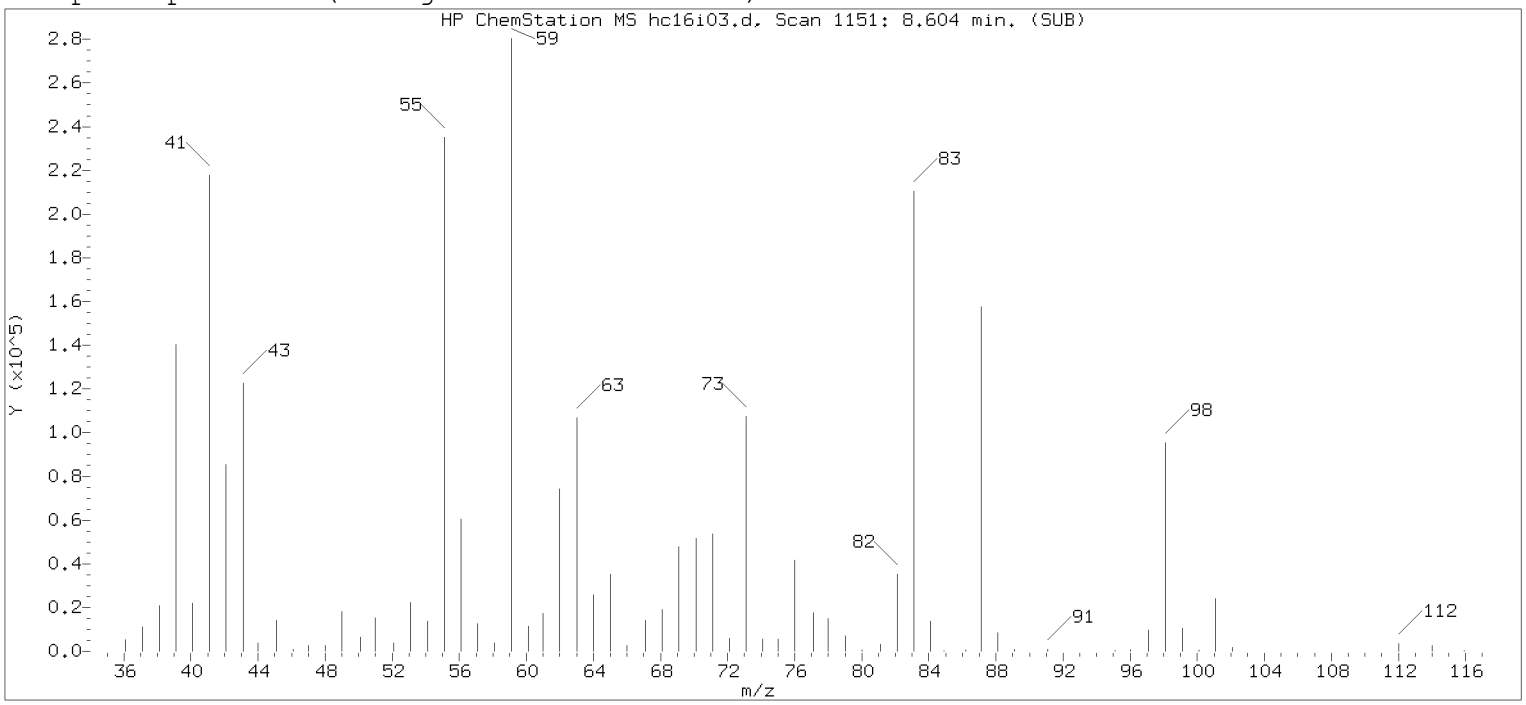
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 43135M
On-Column Amount (ng) : 272.1025
Integration start scan : 1157 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

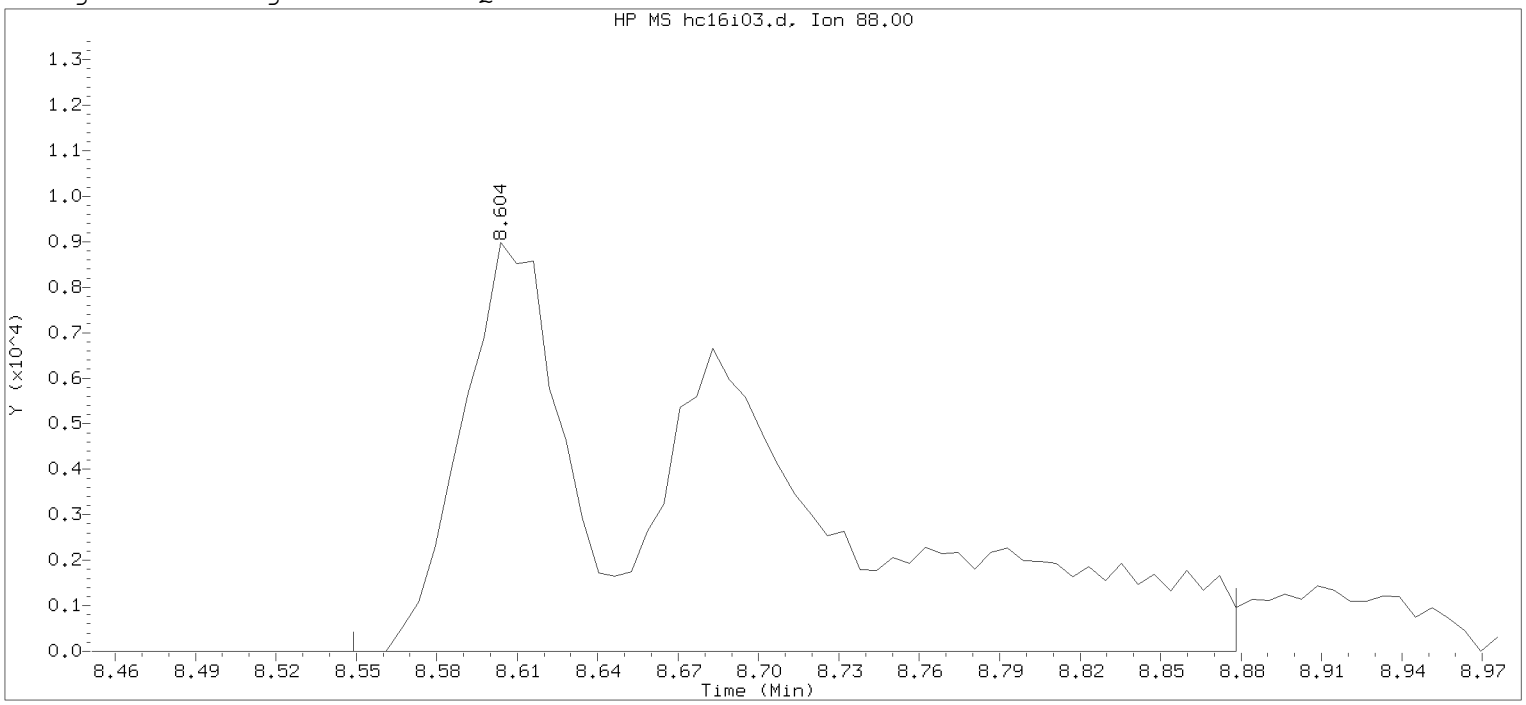
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

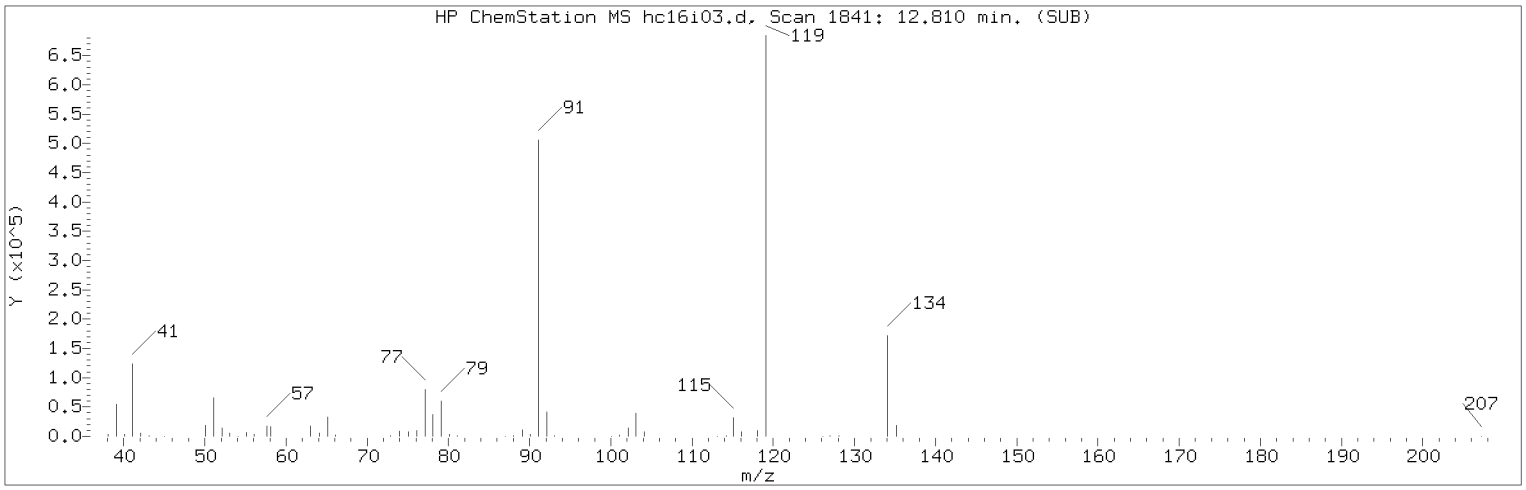
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

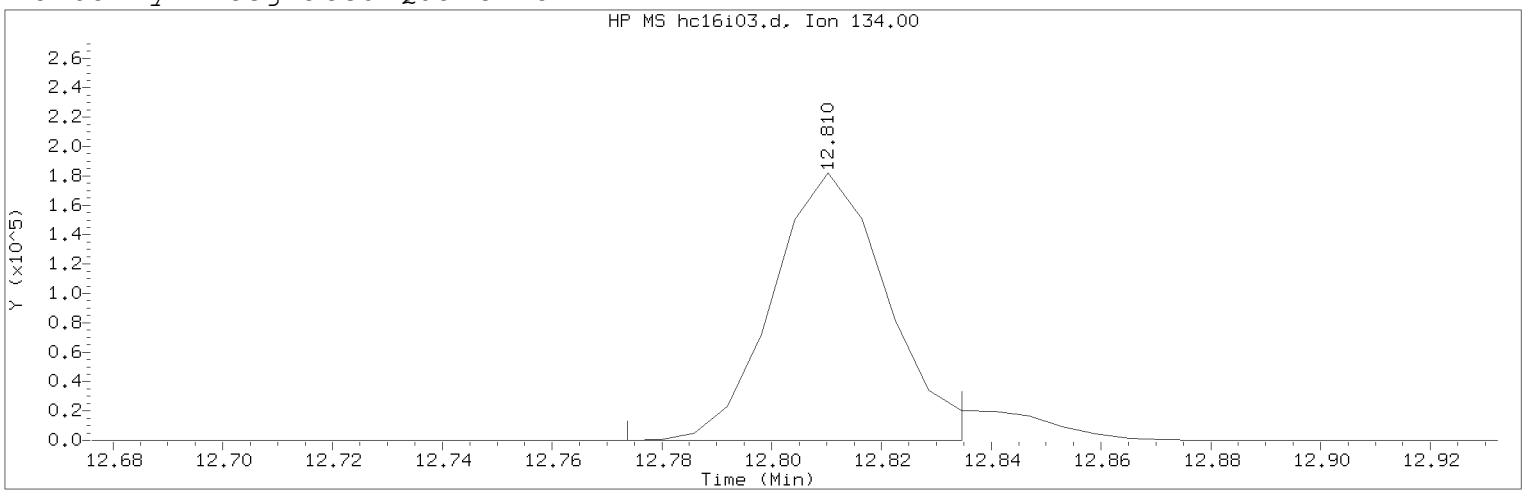
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1151		
Retention Time (minutes)	: 8.604		
Quant Ion	: 88.00		
Area	: 59845		
On-column Amount (ng)	: 271.1536		
Integration start scan	: 1141	Integration stop scan:	1195
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used. Key: 2275

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:44 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

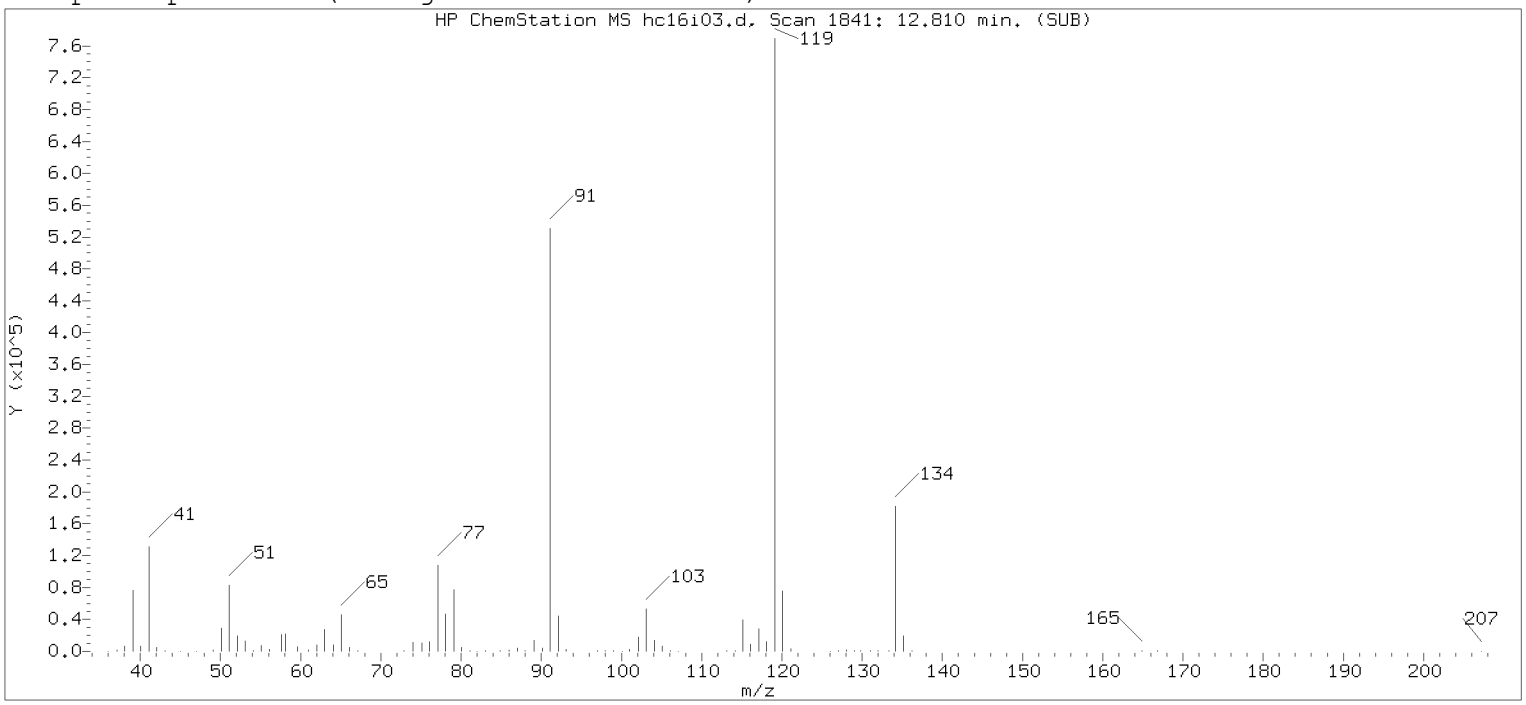
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 262784M
On-Column Amount (ng) : 4.6593
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

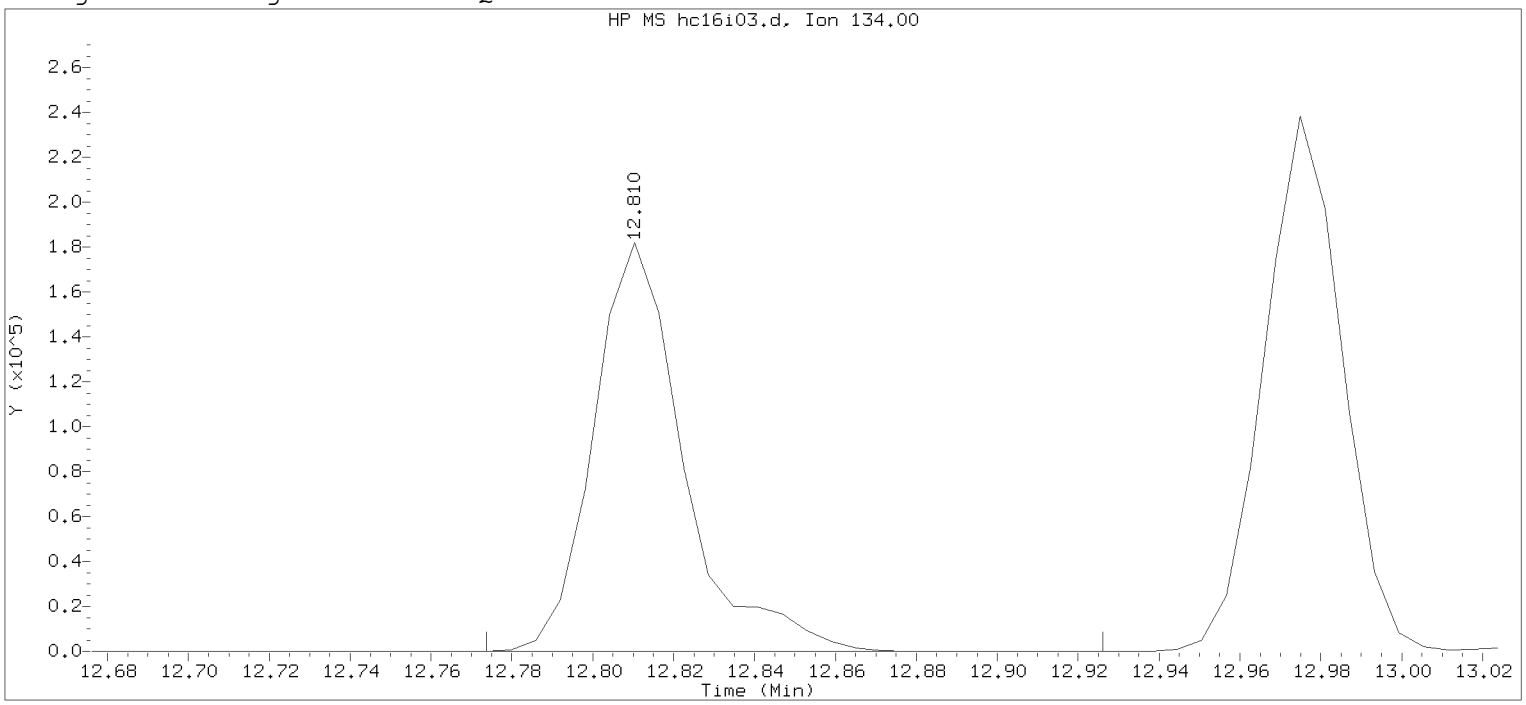
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



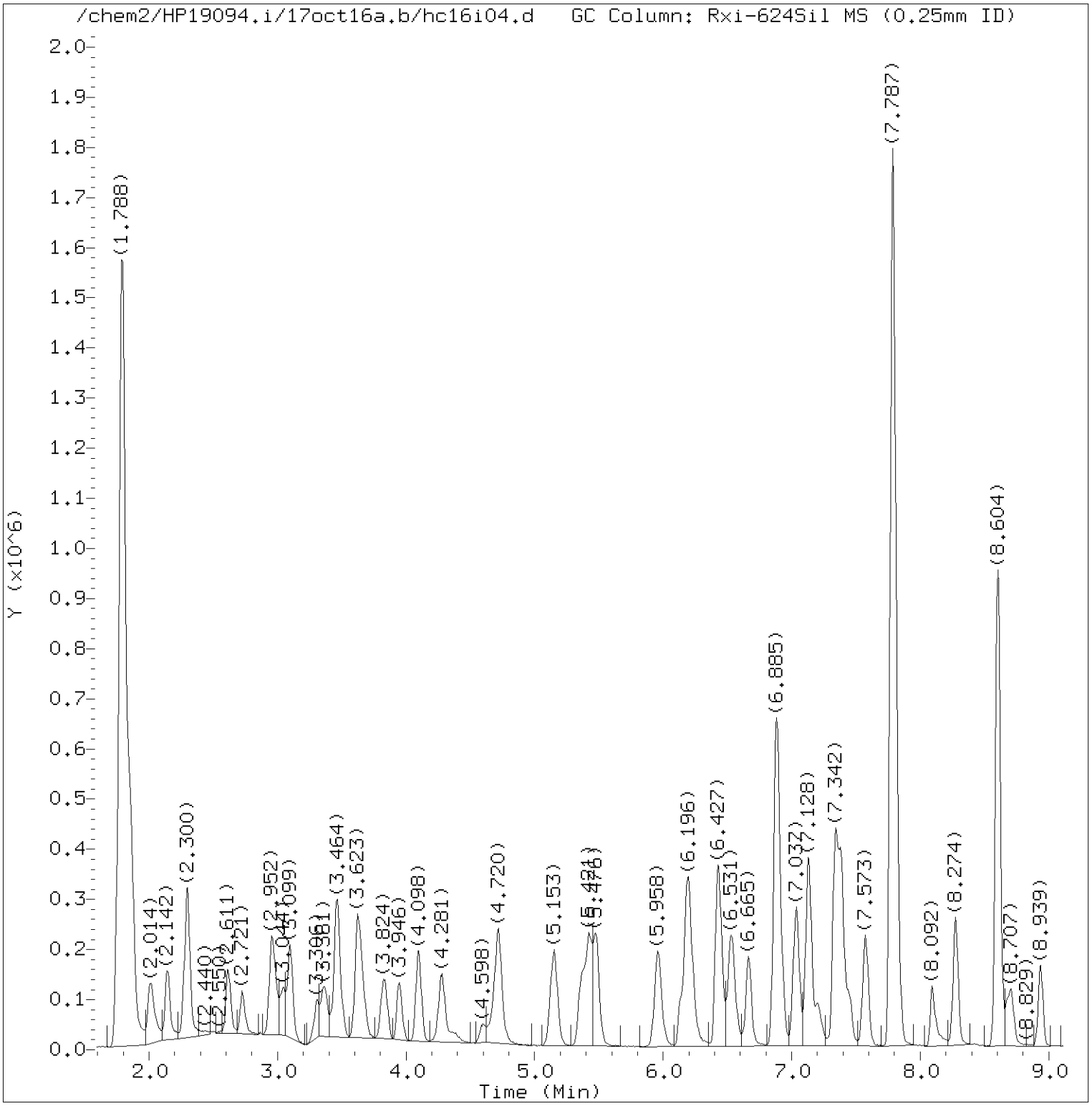
Data File: /chem2/HP19094.i/17oct16a.b/hc16i03.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:23 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 281491
On-column Amount (ng) : 5.1492
Integration start scan : 1834 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. kas02648



Total Ion Chromatogram (TIC)

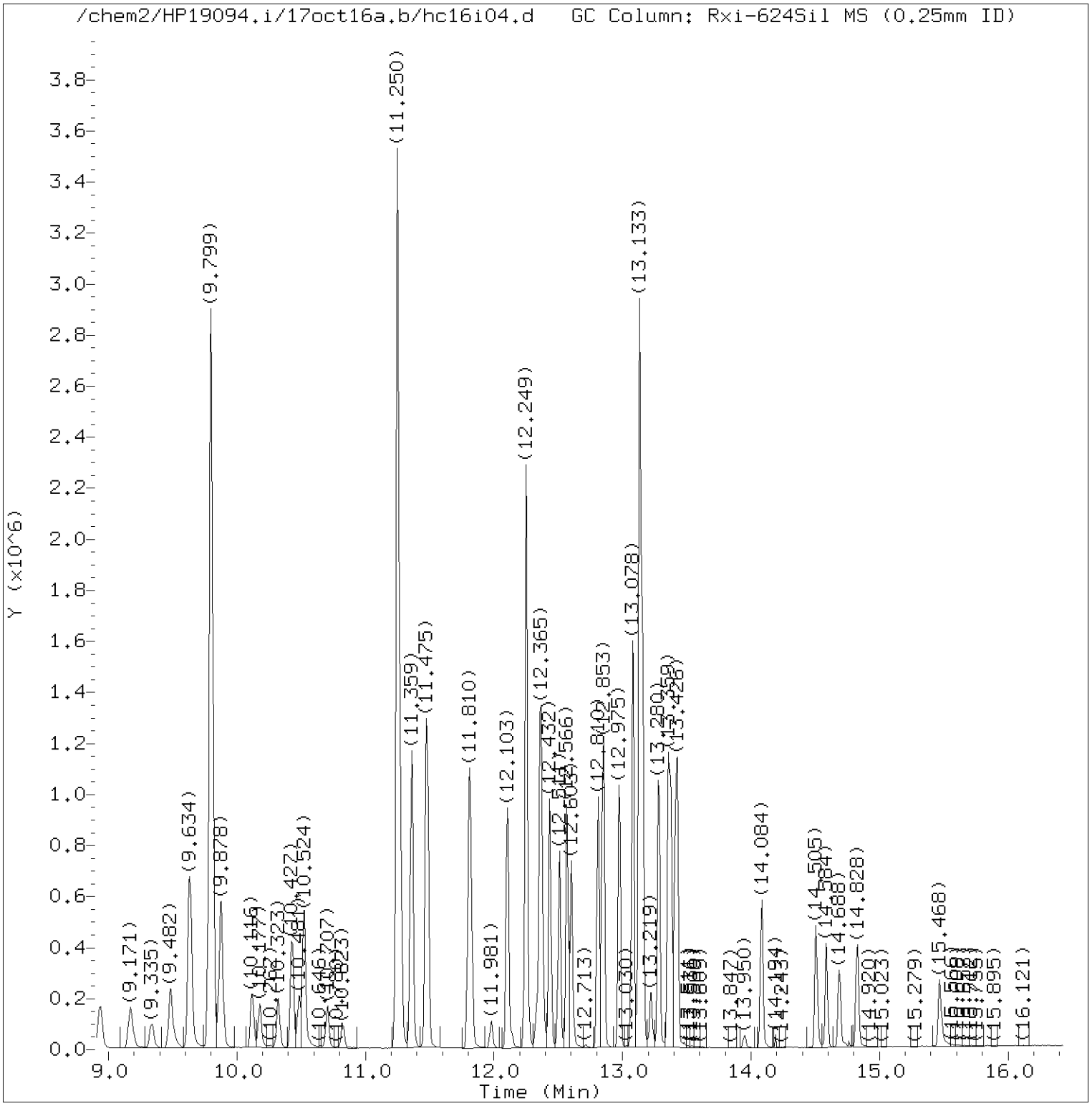
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	206883	2.112
2) Chloromethane	(2)	2.142	50	191700	1.982
5) Vinyl Chloride	(2)	2.276	62	180706	2.033
6) 1,3-Butadiene	(2)	2.300	39	159067	1.893
7) Bromomethane	(2)	2.611	94	119588	1.978
8) Chloroethane	(2)	2.721	64	102030	2.016
9) Dichlorofluoromethane	(2)	2.952	67	291454	1.967
10) Trichlorofluoromethane	(2)	3.038	101	230503	1.947
11) Ethyl ether	(2)	3.306	59	74270	1.965
12) Freon 123a	(2)	3.367	67	142181	1.919
13) Acrolein	(1)	3.464	56	506035	93.846
14) Acetone	(1)	3.623	43	127337M	18.415
15) 1,1-Dichloroethene	(2)	3.623	96	91944	1.941
16) Freon 113	(2)	3.653	101	104004	1.972
17) Methyl Iodide	(2)	3.818	142	182139	1.930
18) Carbon Disulfide	(2)	3.946	76	288566	1.903
21) Methyl Acetate	(1)	4.068	43	41676	1.624
22) Allyl Chloride	(2)	4.098	41	204732	1.905
26)*t-Butyl Alcohol-d10	(1)	4.257	65	86653	50.000
23) Methylene Chloride	(2)	4.281	84	102048	1.888
28) t-Butyl Alcohol	(1)	4.379	59	86041	36.778
29) Acrylonitrile	(1)	4.598	53	81659	9.649
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	223327	1.909
31) trans-1,2-Dichloroethene	(2)	4.720	96	102593	1.915
32) n-Hexane	(2)	5.147	57	188380	1.992
33) 1,1-Dichloroethane	(2)	5.367	63	212771	1.931
34) di-Isopropyl Ether	(2)	5.421	45	399704	1.922
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	200830	1.943
37) Ethyl t-butyl ether	(2)	5.958	59	320689	1.922
40) 1,2-Dichloroethene (Total)	(2)		96	221414	3.855
38) 2-Butanone	(1)	6.135	43	249784	18.409
39) cis-1,2-Dichloroethene	(2)	6.190	96	118821	1.940
42) Propionitrile	(1)	6.208	54	117622	37.638
41) 2,2-Dichloropropane	(2)	6.208	77	177657	1.909
45) Methacrylonitrile	(1)	6.427	67	223566	19.677
47) Bromochloromethane	(2)	6.525	128	45800	1.901
48) Tetrahydrofuran	(1)	6.543	71	57943	18.836
49) Chloroform	(2)	6.665	83	201088	1.890

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

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	538012	10.006
50)$Dibromofluoromethane	(2)	6.878	111	552062	9.999
51) 1,1,1-Trichloroethane	(2)	6.915	97	189098	1.971
52) Cyclohexane	(2)	7.037	56	227474	1.940
52) Cyclohexane	(2)	7.037	84	202944	2.251
52) Cyclohexane	(2)	7.037	69	63933	1.912
55) 1,1-Dichloropropene	(2)	7.128	75	167018	1.968
54) Carbon Tetrachloride	(2)	7.141	117	163454	1.951
56) Isobutyl Alcohol	(1)	7.202	41	81940	86.635
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82581	9.807
57)$1,2-Dichloroethane-d4	(2)	7.342	65	453387	9.841
57)$1,2-Dichloroethane-d4	(2)	7.342	104	52242	9.863
58) Benzene	(2)	7.384	78	447418	1.928
59) 1,2-Dichloroethane	(2)	7.445	62	122488	1.887
60) t-Amyl methyl ether	(2)	7.573	73	260831	1.926
63)*Fluorobenzene	(2)	7.787	96	2226720	10.000
62) n-Heptane	(2)	7.817	43	214090	1.896
65) n-Butanol	(1)	8.092	56	132962	191.341
67) Trichloroethene	(2)	8.274	95	118114	1.900
70) 1,2-Dichloropropane	(2)	8.598	63	115891	1.924
69) Methylcyclohexane	(2)	8.604	83	215678	2.018
71) Methyl Methacrylate	(1)	8.677	69	43151	1.673
72) 1,4-Dioxane	(1)	8.689	88	16029M	97.677
73) Dibromomethane	(2)	8.707	93	47557	1.887
74) Bromodichloromethane	(2)	8.939	83	139011	1.912
76) 2-Nitropropane	(1)	9.171	41	136363	17.731
80) cis-1,3-Dichloropropene	(2)	9.488	75	162374	1.924
81) 4-Methyl-2-Pentanone	(1)	9.634	43	635486	18.491
82)$Toluene-d8	(3)	9.799	98	2219837	10.113
82)$Toluene-d8	(3)	9.799	100	1412063	10.163
83) Toluene	(3)	9.878	92	277306	1.933
84) trans-1,3-Dichloropropene	(3)	10.116	75	123172	1.880
85) 1,3-Dichloropropene (total)	(3)		75	285546	3.804
86) Ethyl Methacrylate	(3)	10.177	69	94971	1.941
88) 1,1,2-Trichloroethane	(3)	10.323	97	65410	1.953
89) Tetrachloroethene	(3)	10.433	166	131425	1.952
90) 1,3-Dichloropropane	(3)	10.481	76	117184	1.968
91) 2-Hexanone	(1)	10.524	43	444086	18.540

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Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	84787	1.939
95) 1,2-Dibromoethane	(3)	10.823	107	61285	1.937
97)*Chlorobenzene-d5	(3)	11.250	117	1510352	10.000
98) Chlorobenzene	(3)	11.274	112	293900	1.923
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	103261	1.918
100) Ethylbenzene	(3)	11.359	91	559794	1.941
101) m+p-Xylene	(3)	11.475	106	421356	3.877
105) Xylene (Total)	(3)		106	627514	5.817
104) o-Xylene	(3)	11.804	106	206158	1.940
106) Styrene	(3)	11.823	104	318794	1.920
107) Bromoform	(3)	11.981	173	45653	1.924
108) Isopropylbenzene	(3)	12.103	105	555143	1.946
111)$4-Bromofluorobenzene	(3)	12.249	95	649815	9.746
111)$4-Bromofluorobenzene	(3)	12.249	174	576581	9.834
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	76844	1.970
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	198333	19.360
114) Bromobenzene	(4)	12.371	156	118926	1.933
116) 1,2,3-Trichloropropane	(4)	12.383	110	19746	1.985
117) n-Propylbenzene	(4)	12.432	91	668731	1.989
119) 2-Chlorotoluene	(4)	12.511	126	123804	1.964
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	460486	1.976
122) 4-Chlorotoluene	(4)	12.603	126	125728	1.960
125) tert-Butylbenzene	(4)	12.810	134	99006M	1.953
126) Pentachloroethane	(4)	12.841	167	76079	1.974
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	460013	1.966
128) sec-Butylbenzene	(4)	12.975	105	594536	1.971
131) 1,3-Dichlorobenzene	(4)	13.078	146	232835	1.943
132) p-Isopropyltoluene	(4)	13.085	119	499156	1.983
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	632606	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	239923	1.923
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	196021	1.974
136) Benzyl Chloride	(4)	13.219	126	27286	1.962
138) n-Butylbenzene	(4)	13.377	92	246814	1.956
139) 1,2-Dichlorobenzene	(4)	13.408	146	210085	1.968
143) 1,2-Dibromo-3-chloropropane	(1)	13.944	155	8773	1.767
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	172678	1.945
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	141182	1.930
146) Hexachlorobutadiene	(4)	14.590	225	67106	1.945

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

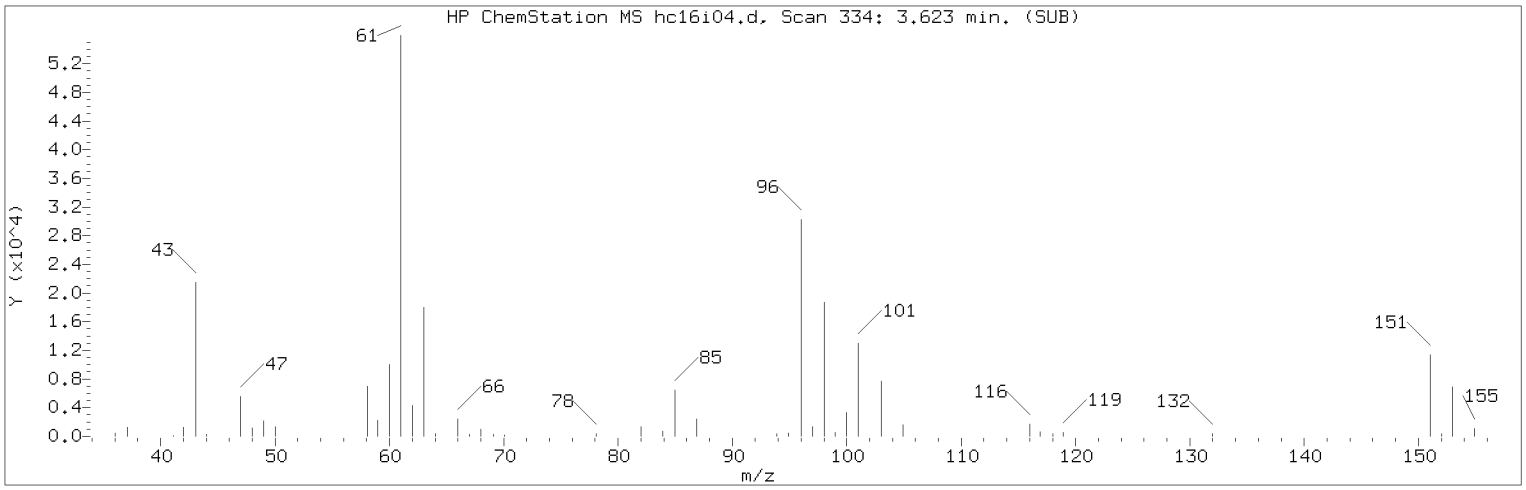
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

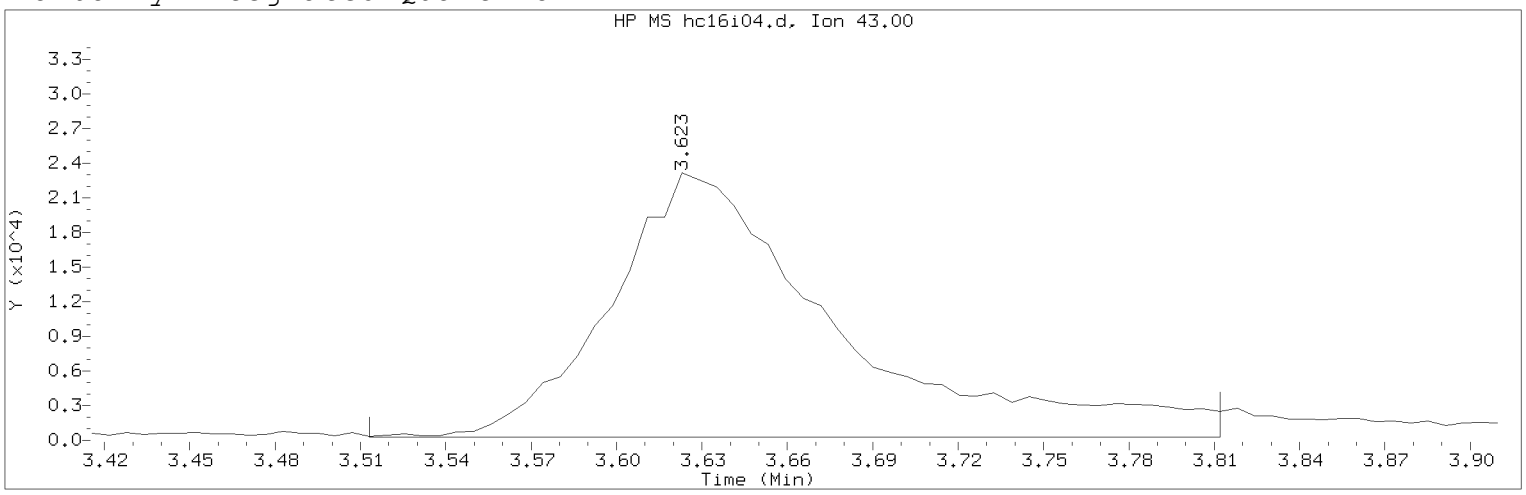
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	231742	1.947
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	120195	1.952

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on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

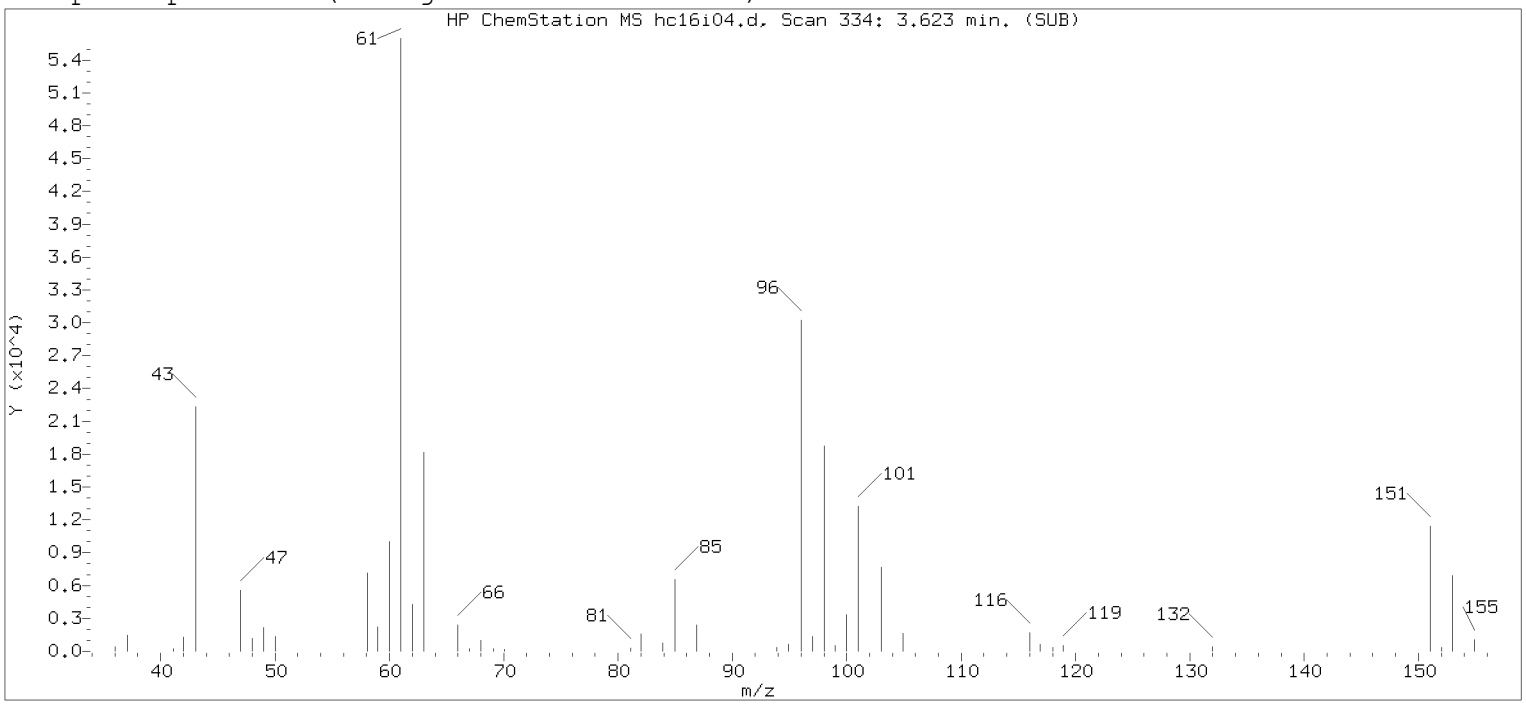
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area (flag) : 127337M
On-Column Amount (ng) : 18.4147
Integration start scan : 315 Integration stop scan: 364
Y at integration start : 258 Y at integration end: 258

Reason for manual integration: improper integration

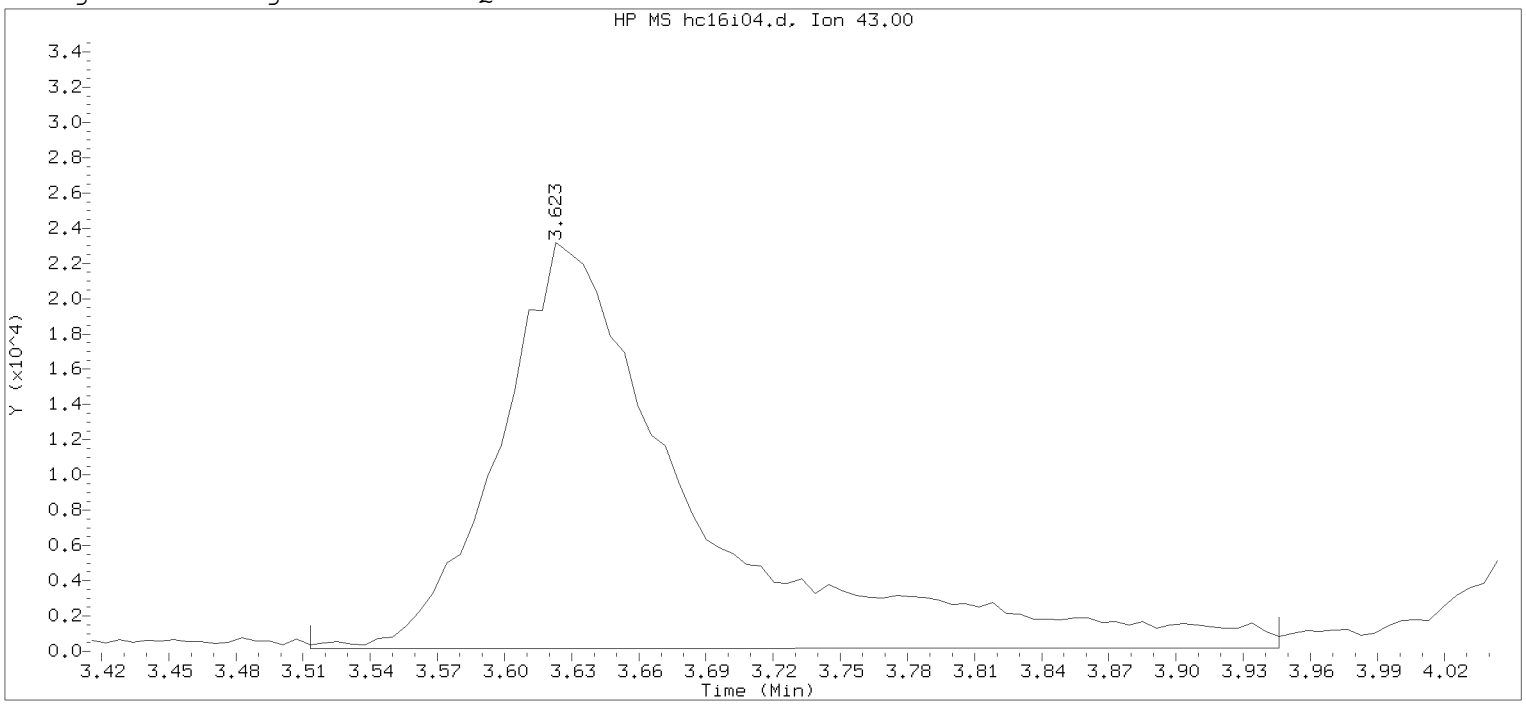
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

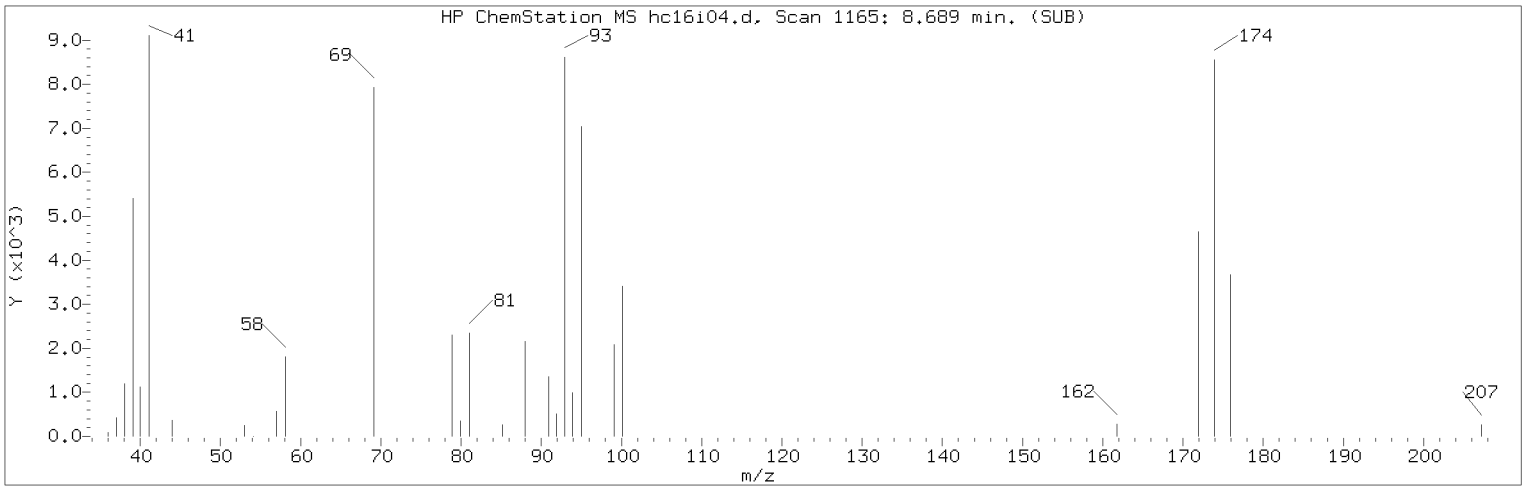
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

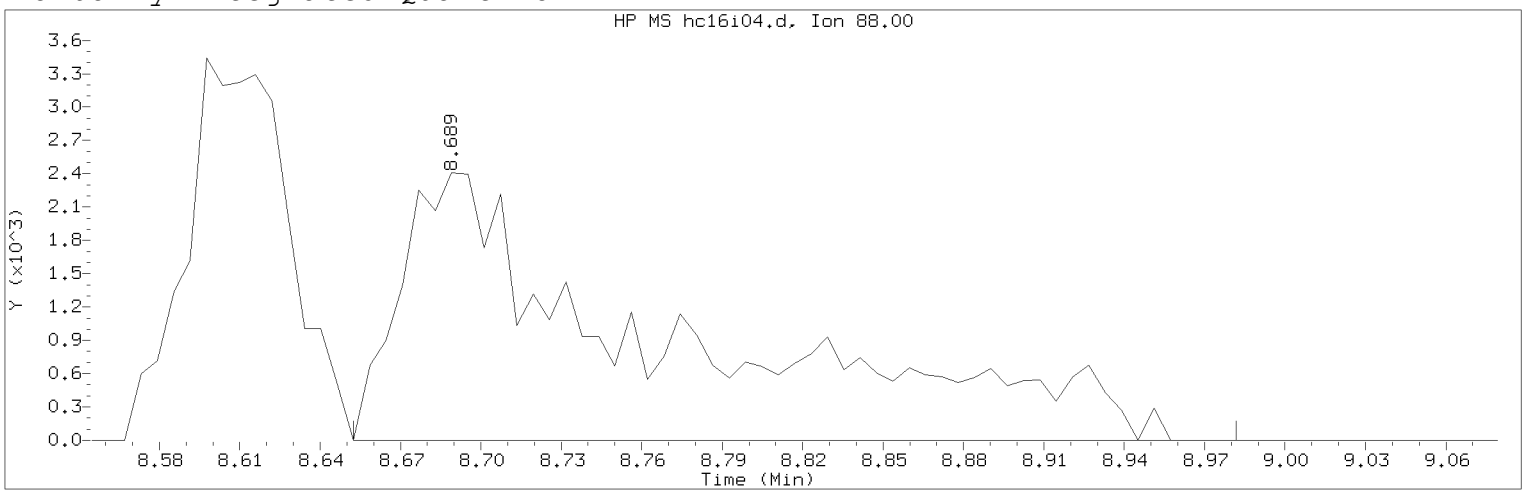
Compound Number : 14
Compound Name : Acetone
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 43.00
Area : 140855
On-column Amount (ng) : 20.7647
Integration start scan : 315 Integration stop scan: 386
Y at integration start : 136 Y at integration end: 187

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key: 2285

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

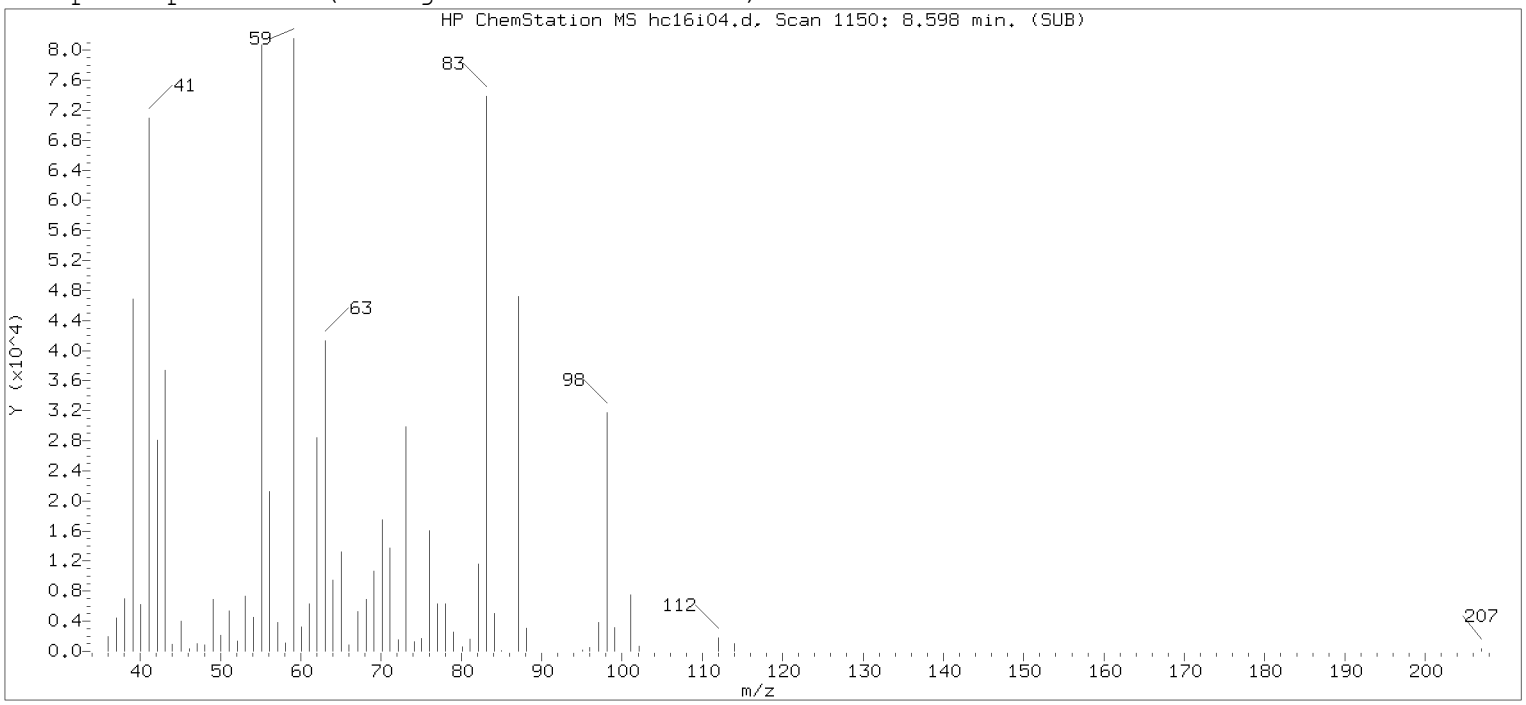
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 88.00
Area (flag) : 16029M
On-Column Amount (ng) : 97.6772
Integration start scan : 1158 Integration stop scan: 1212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

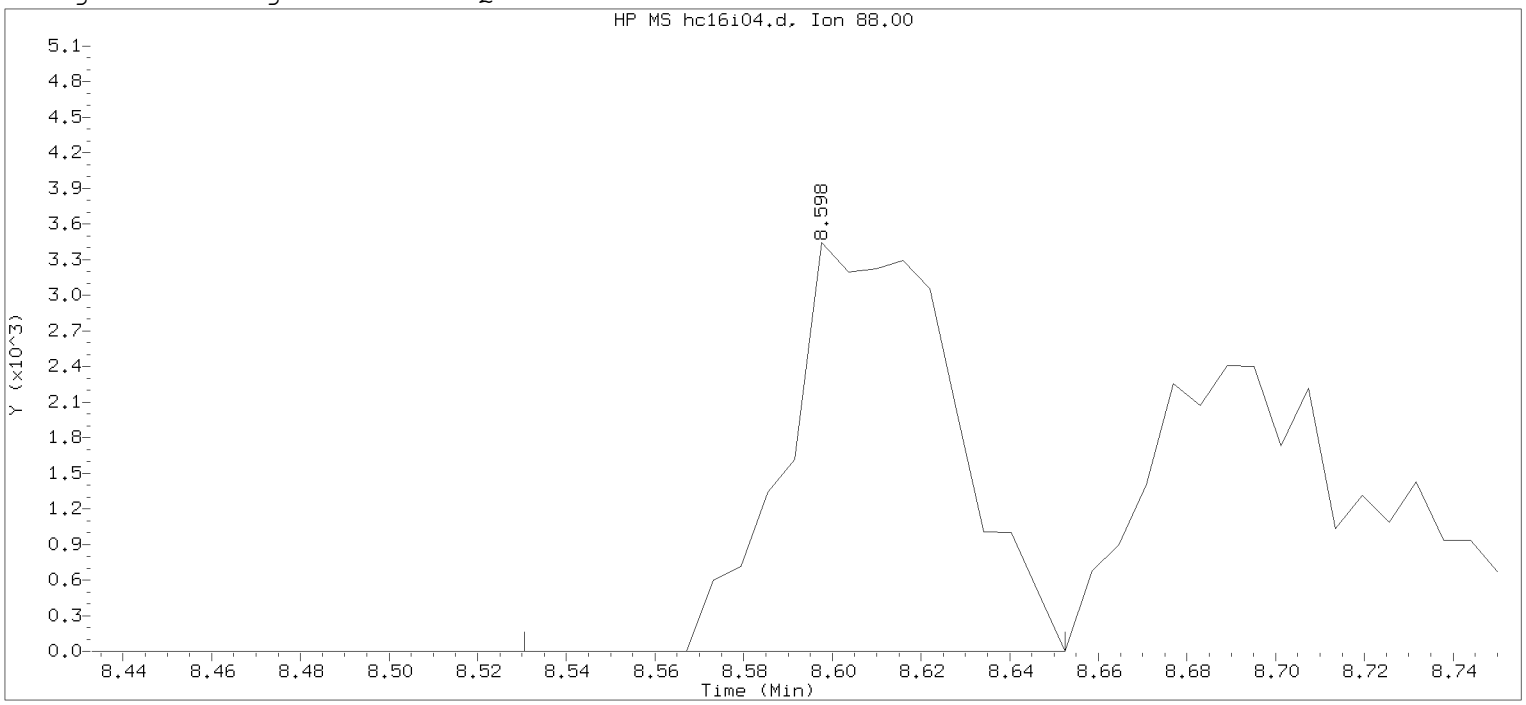
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

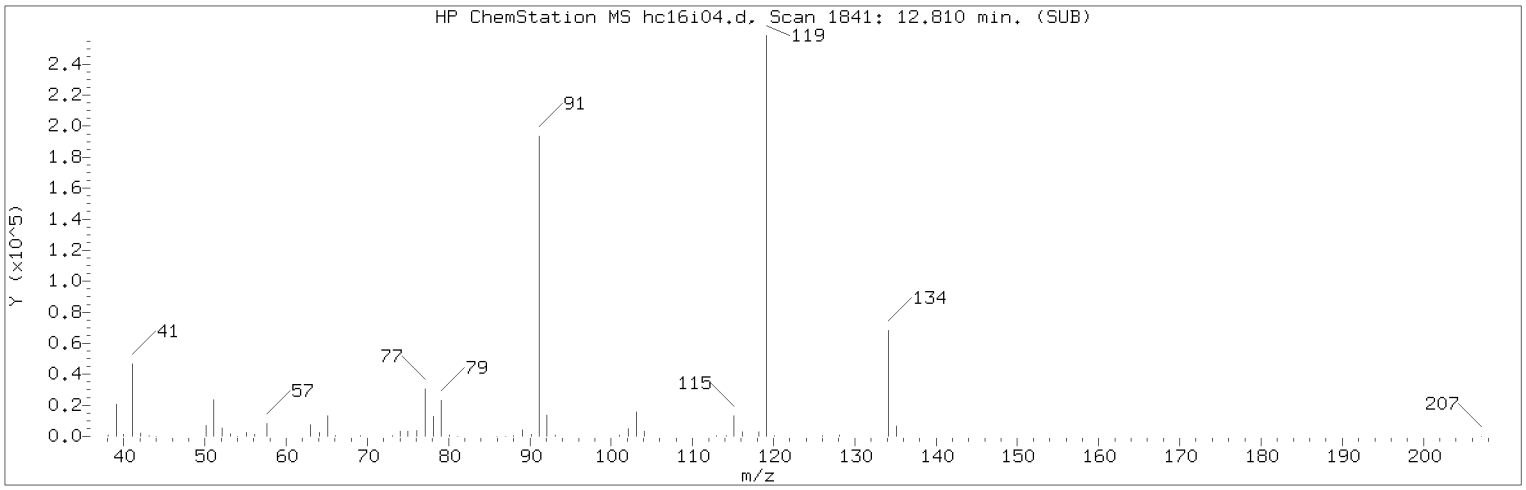
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

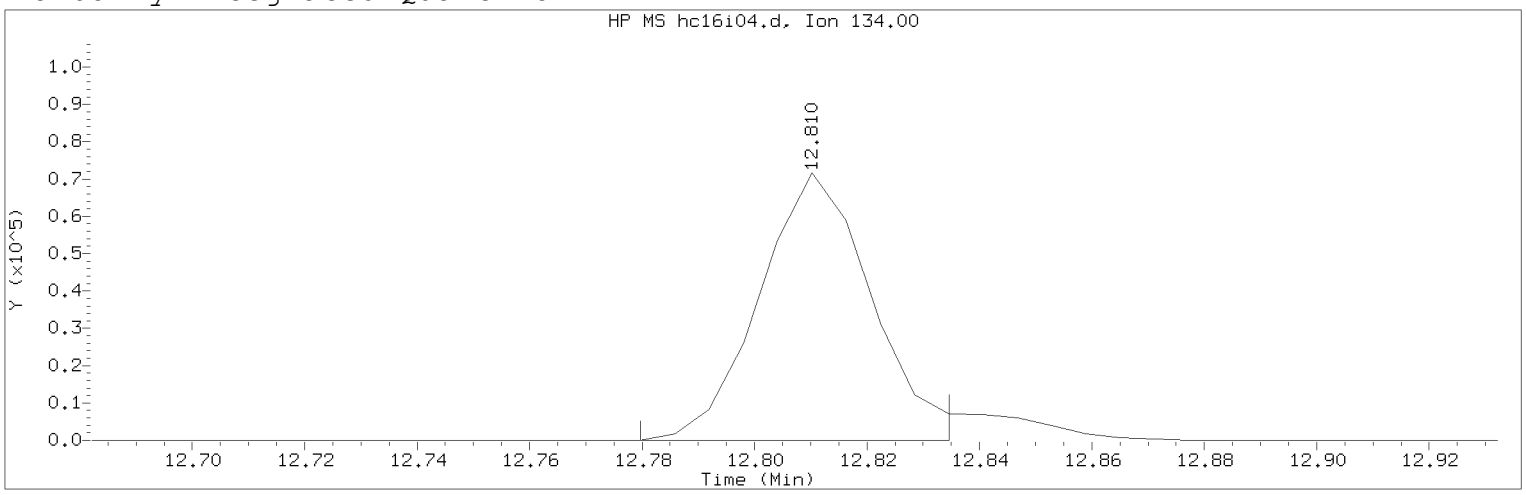
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1150
Retention Time (minutes): 8.598
Quant Ion : 88.00
Area : 9142
On-column Amount (ng) : 49.7041
Integration start scan : 1138 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature used. Key: 2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

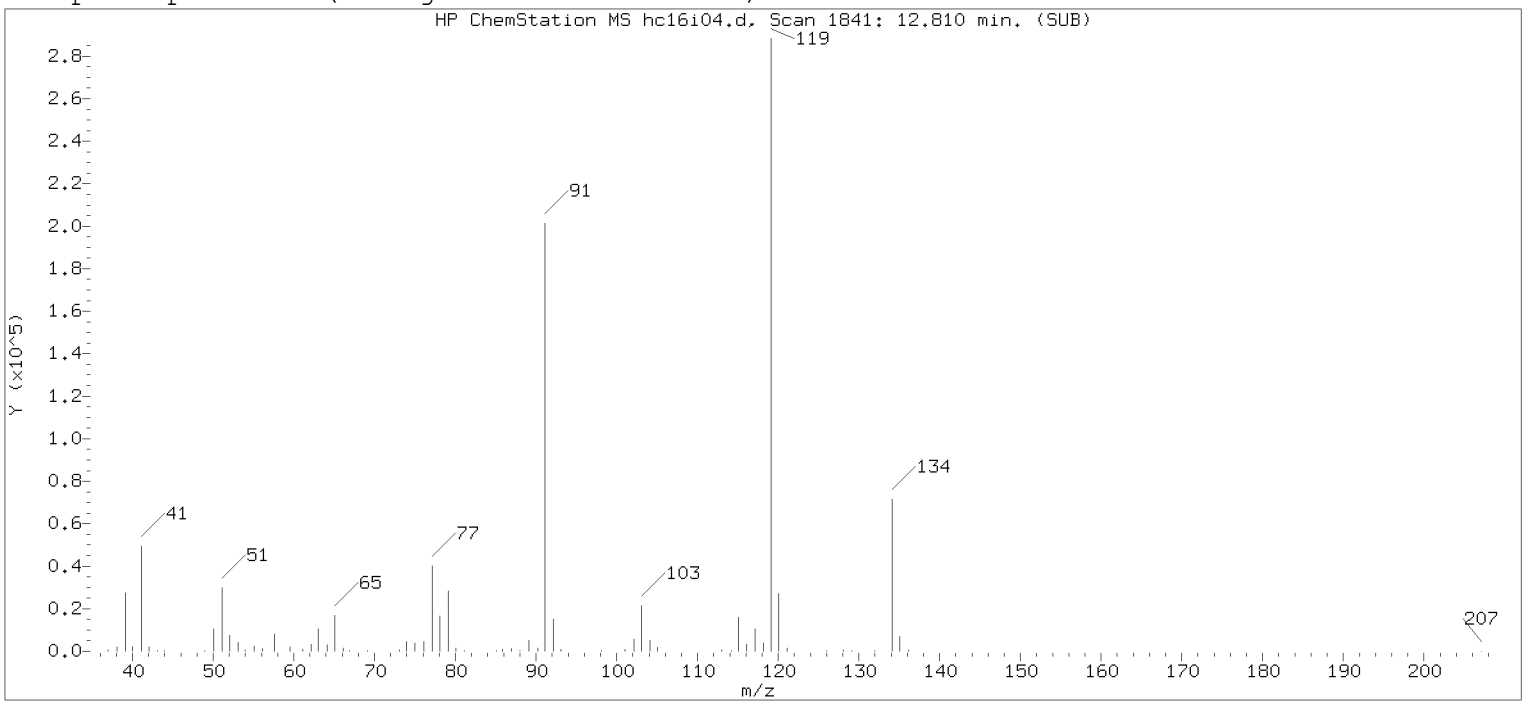
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 99006M
On-Column Amount (ng) : 1.9526
Integration start scan : 1835 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

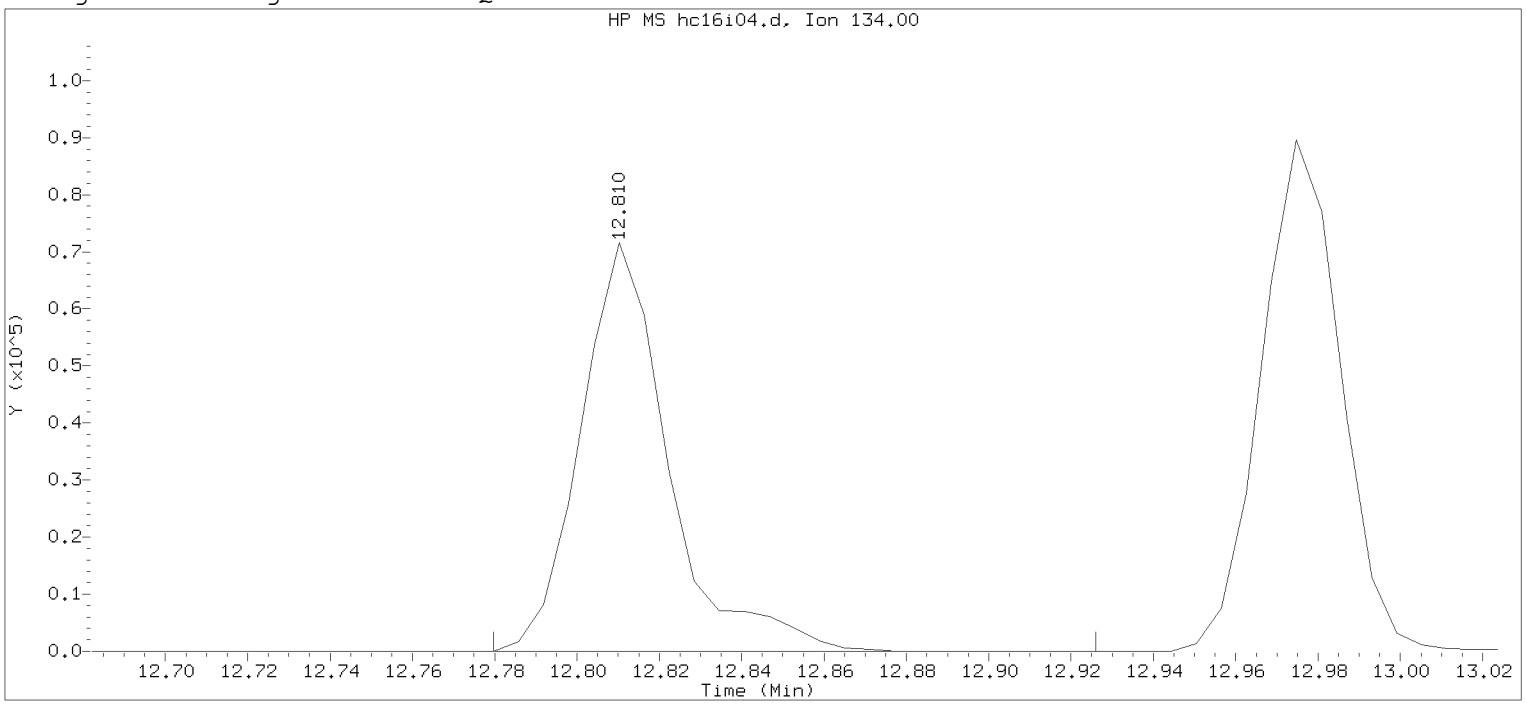
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



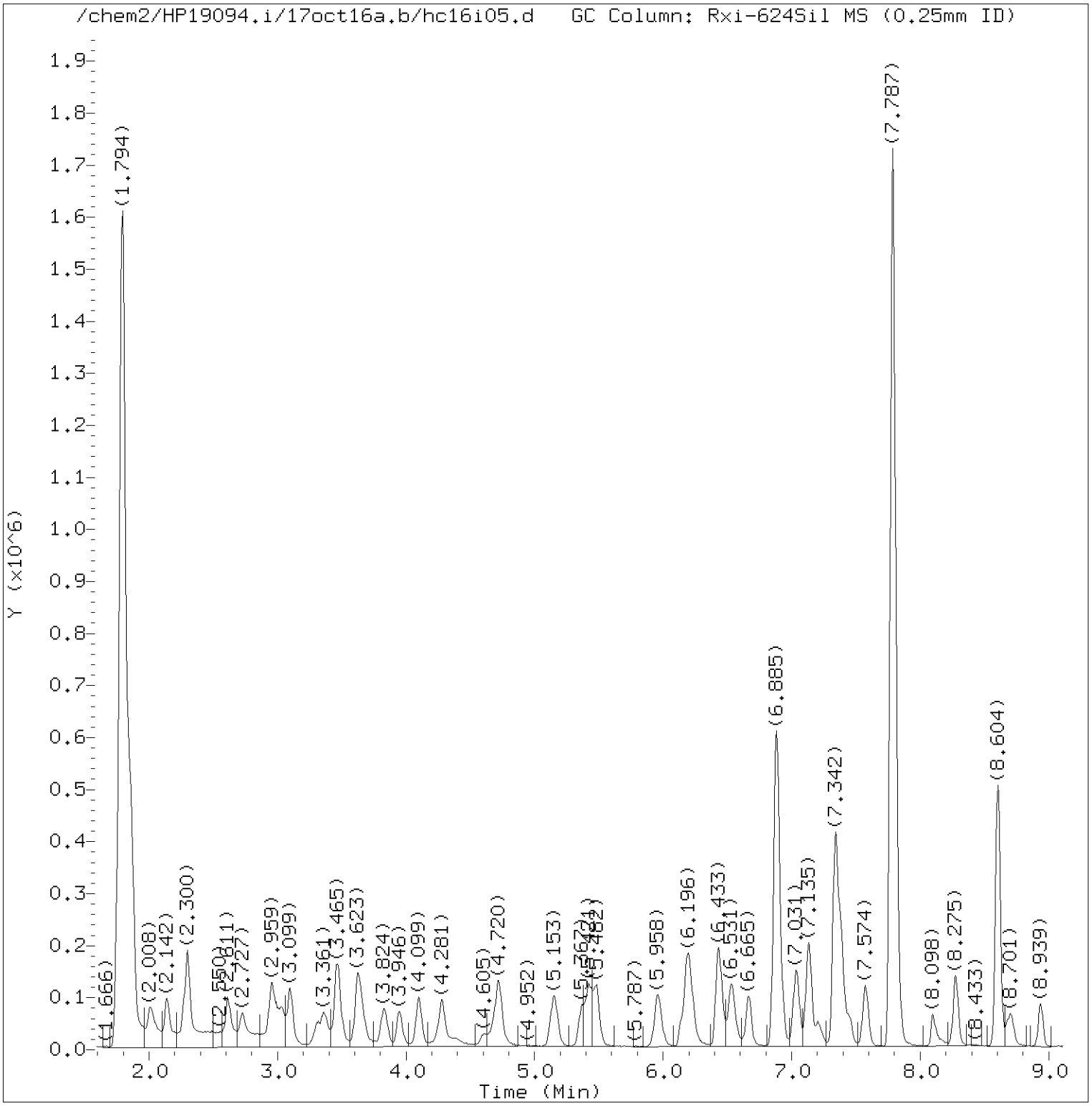
Data File: /chem2/HP19094.i/17oct16a.b/hc16i04.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 11:44 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:39 kas02648

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 106222
On-column Amount (ng) : 2.1029
Integration start scan : 1835 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key ID: 0x2289



Total Ion Chromatogram (TIC)

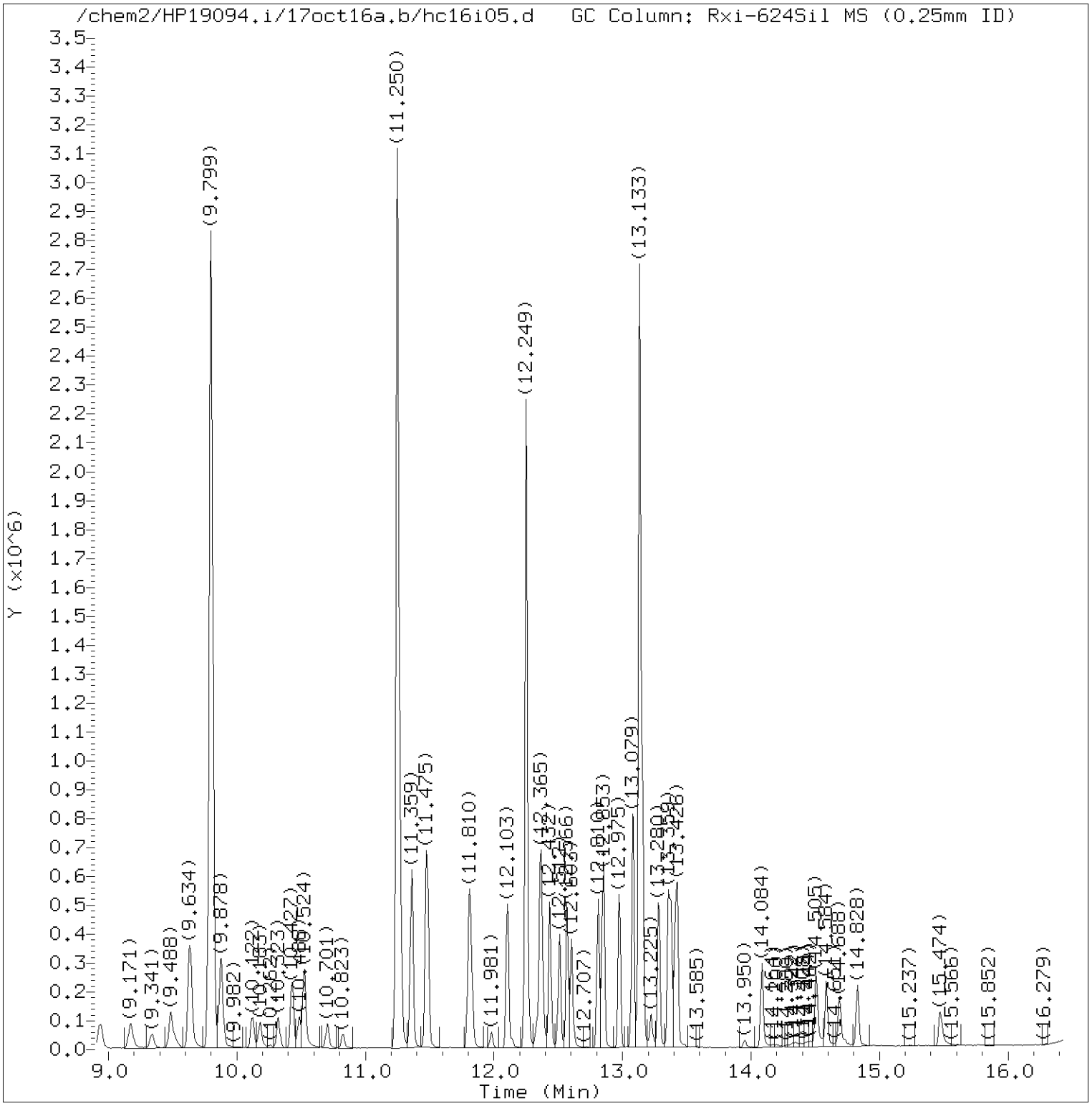
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	106626	1.099
2) Chloromethane	(2)	2.142	50	98261	1.026
5) Vinyl Chloride	(2)	2.276	62	90988	1.033
6) 1,3-Butadiene	(2)	2.300	39	86465	1.039
7) Bromomethane	(2)	2.611	94	60938	1.017
8) Chloroethane	(2)	2.727	64	52618	1.050
9) Dichlorofluoromethane	(2)	2.952	67	148072	1.009
10) Trichlorofluoromethane	(2)	3.032	101	122383	1.043
11) Ethyl ether	(2)	3.306	59	36437	0.973
12) Freon 123a	(2)	3.361	67	77677	1.058
13) Acrolein	(1)	3.465	56	278819	52.394
15) 1,1-Dichloroethene	(2)	3.623	96	49137	1.047
14) Acetone	(1)	3.635	43	74148	10.867
16) Freon 113	(2)	3.660	101	55424	1.061
17) Methyl Iodide	(2)	3.824	142	96615	1.033
18) Carbon Disulfide	(2)	3.946	76	154346	1.028
21) Methyl Acetate	(1)	4.068	43	22019	1.074
22) Allyl Chloride	(2)	4.099	41	104799	0.984
26)*t-Butyl Alcohol-d10	(1)	4.257	65	86008M	50.000
23) Methylene Chloride	(2)	4.275	84	54107	1.011
28) t-Butyl Alcohol	(1)	4.379	59	46416	20.099
29) Acrylonitrile	(1)	4.605	53	44193	5.292
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	119111	1.028
31) trans-1,2-Dichloroethene	(2)	4.720	96	55348	1.043
32) n-Hexane	(2)	5.153	57	98905	1.055
33) 1,1-Dichloroethane	(2)	5.367	63	114647	1.050
34) di-Isopropyl Ether	(2)	5.421	45	215493	1.046
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	105917	1.034
37) Ethyl t-butyl ether	(2)	5.958	59	173575	1.050
40) 1,2-Dichloroethene (Total)	(2)		96	117911	2.074
38) 2-Butanone	(1)	6.141	43	138888	10.371
39) cis-1,2-Dichloroethene	(2)	6.190	96	62563	1.031
42) Propionitrile	(1)	6.202	54	61876	20.058
41) 2,2-Dichloropropane	(2)	6.214	77	95894	1.040
45) Methacrylonitrile	(1)	6.427	67	115094	10.263
47) Bromochloromethane	(2)	6.531	128	23476	0.984
48) Tetrahydrofuran	(1)	6.537	71	32010	10.544
49) Chloroform	(2)	6.665	83	110326	1.047

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	528736	9.925
50)$Dibromofluoromethane	(2)	6.885	111	540190	9.876
51) 1,1,1-Trichloroethane	(2)	6.921	97	99392	1.046
52) Cyclohexane	(2)	7.037	56	120739	1.039
52) Cyclohexane	(2)	7.043	84	92193	1.032
52) Cyclohexane	(2)	7.043	69	34493	1.042
55) 1,1-Dichloropropene	(2)	7.128	75	86619	1.030
54) Carbon Tetrachloride	(2)	7.141	117	87397	1.053
56) Isobutyl Alcohol	(1)	7.208	41	44406	47.548
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82483	9.887
57)$1,2-Dichloroethane-d4	(2)	7.336	65	447388	9.802
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51264	9.769
58) Benzene	(2)	7.391	78	238855	1.039
59) 1,2-Dichloroethane	(2)	7.452	62	65525	1.019
60) t-Amyl methyl ether	(2)	7.574	73	139368	1.039
63)*Fluorobenzene	(2)	7.787	96	2205975	10.000
62) n-Heptane	(2)	7.817	43	111064	0.993
65) n-Butanol	(1)	8.092	56	70573	102.896
67) Trichloroethene	(2)	8.268	95	63924	1.038
70) 1,2-Dichloropropane	(2)	8.598	63	62101	1.041
69) Methylcyclohexane	(2)	8.610	83	108168	1.022
71) Methyl Methacrylate	(1)	8.683	69	23250M	1.044
72) 1,4-Dioxane	(1)	8.689	88	8479M	60.711
73) Dibromomethane	(2)	8.707	93	25814	1.034
74) Bromodichloromethane	(2)	8.939	83	71961	0.999
76) 2-Nitropropane	(1)	9.171	41	72631	9.564
80) cis-1,3-Dichloropropene	(2)	9.482	75	85511	1.023
81) 4-Methyl-2-Pentanone	(1)	9.634	43	337244	10.287
82)$Toluene-d8	(3)	9.799	98	2178723	10.185
82)$Toluene-d8	(3)	9.799	100	1378710	10.182
83) Toluene	(3)	9.878	92	149350	1.069
84) trans-1,3-Dichloropropene	(3)	10.122	75	65427	1.025
85) 1,3-Dichloropropene (total)	(3)		75	150938	2.048
86) Ethyl Methacrylate	(3)	10.183	69	50986	1.069
88) 1,1,2-Trichloroethane	(3)	10.317	97	34725	1.064
89) Tetrachloroethene	(3)	10.433	166	69518	1.060
90) 1,3-Dichloropropane	(3)	10.481	76	61266	1.056
91) 2-Hexanone	(1)	10.524	43	242151	10.242

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	44180	1.037
95) 1,2-Dibromoethane	(3)	10.823	107	33405	1.083
97)*Chlorobenzene-d5	(3)	11.250	117	1471876	10.000
98) Chlorobenzene	(3)	11.280	112	158730	1.066
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	55255	1.053
100) Ethylbenzene	(3)	11.359	91	293666	1.045
101) m+p-Xylene	(3)	11.475	106	219327	2.071
105) Xylene (Total)	(3)		106	327787	3.118
104) o-Xylene	(3)	11.804	106	108460	1.047
106) Styrene	(3)	11.823	104	167982	1.038
107) Bromoform	(3)	11.981	173	23791	1.029
108) Isopropylbenzene	(3)	12.103	105	294109	1.058
111)$4-Bromofluorobenzene	(3)	12.249	95	648367	9.979
111)$4-Bromofluorobenzene	(3)	12.249	174	567981	9.940
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	39073	1.039
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	98074	9.696
114) Bromobenzene	(4)	12.371	156	63703	1.074
116) 1,2,3-Trichloropropane	(4)	12.384	110	9556	0.997
117) n-Propylbenzene	(4)	12.432	91	351201	1.084
119) 2-Chlorotoluene	(4)	12.512	126	65427	1.077
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	242261	1.079
122) 4-Chlorotoluene	(4)	12.603	126	65946	1.067
125) tert-Butylbenzene	(4)	12.810	134	52067M	1.091
126) Pentachloroethane	(4)	12.841	167	36631	0.986
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	238797	1.059
128) sec-Butylbenzene	(4)	12.975	105	313277	1.077
131) 1,3-Dichlorobenzene	(4)	13.079	146	122969	1.065
132) p-Isopropyltoluene	(4)	13.085	119	259075	1.068
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	609642	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	129499	1.077
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	96775	1.011
136) Benzyl Chloride	(4)	13.225	126	13215	0.986
138) n-Butylbenzene	(4)	13.377	92	124050	1.020
139) 1,2-Dichlorobenzene	(4)	13.408	146	110110	1.070
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	4968	1.013
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	90262	1.055
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	74772	1.061
146) Hexachlorobutadiene	(4)	14.584	225	34801	1.046

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

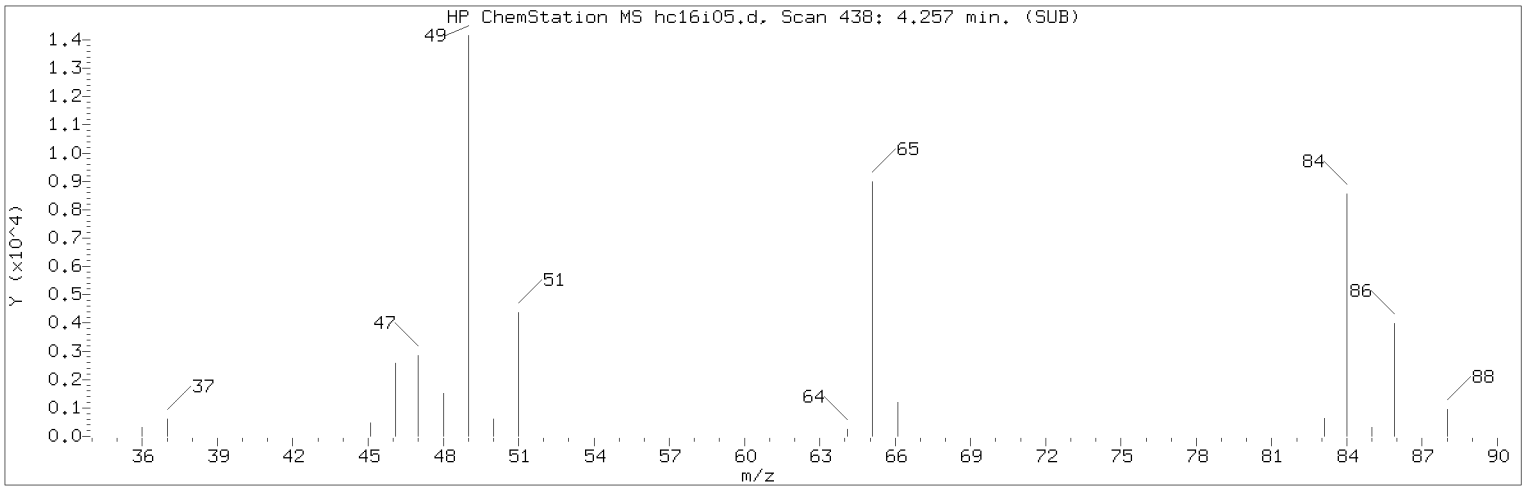
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

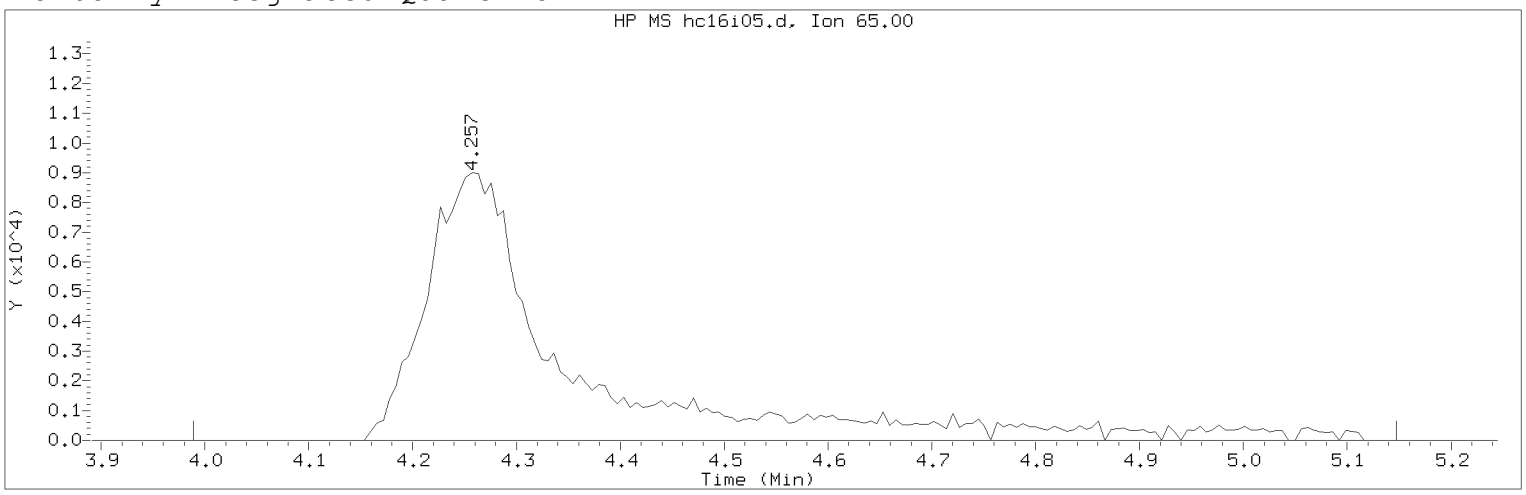
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	126585	1.104
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	63842	1.076

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on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

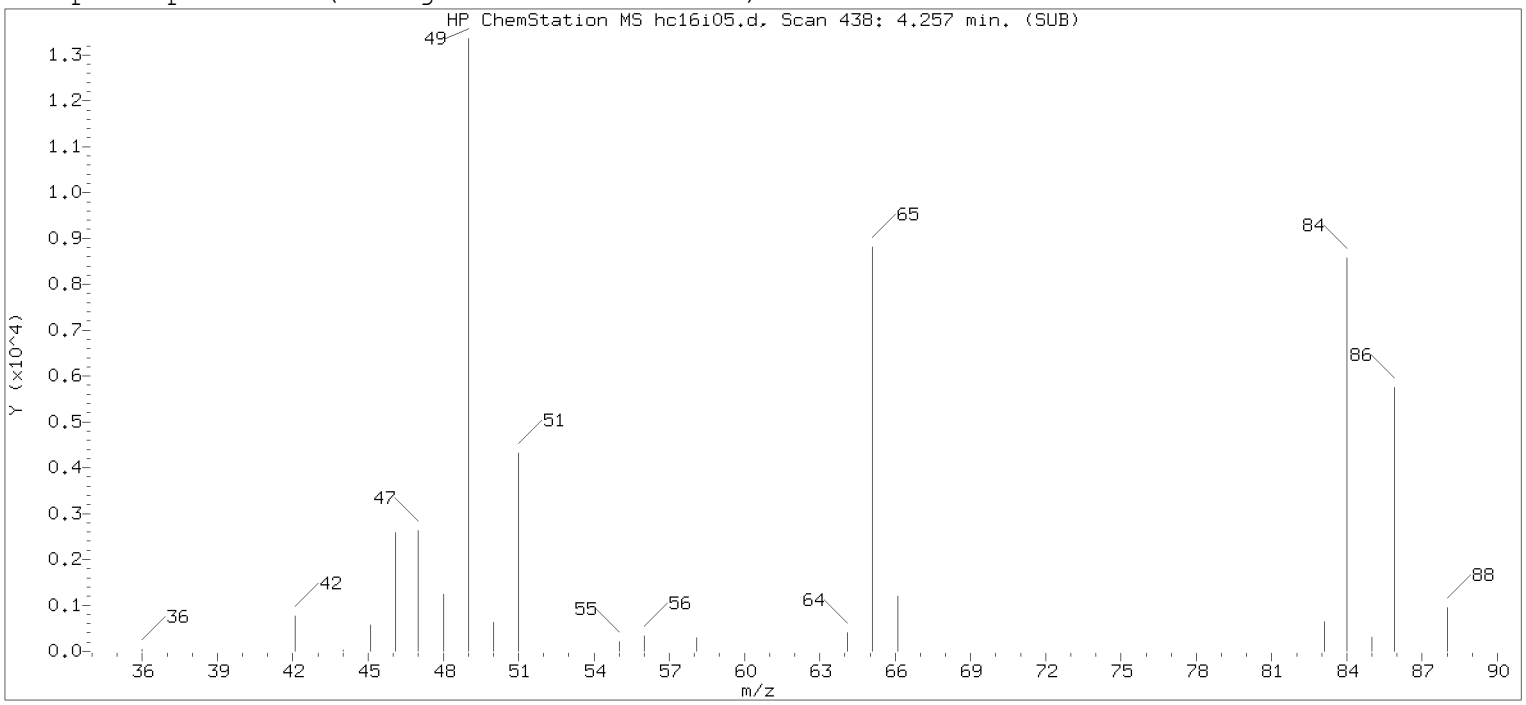
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 438
Retention Time (minutes): 4.257
Quant Ion : 65.00
Area (flag) : 86008M
On-Column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 583
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

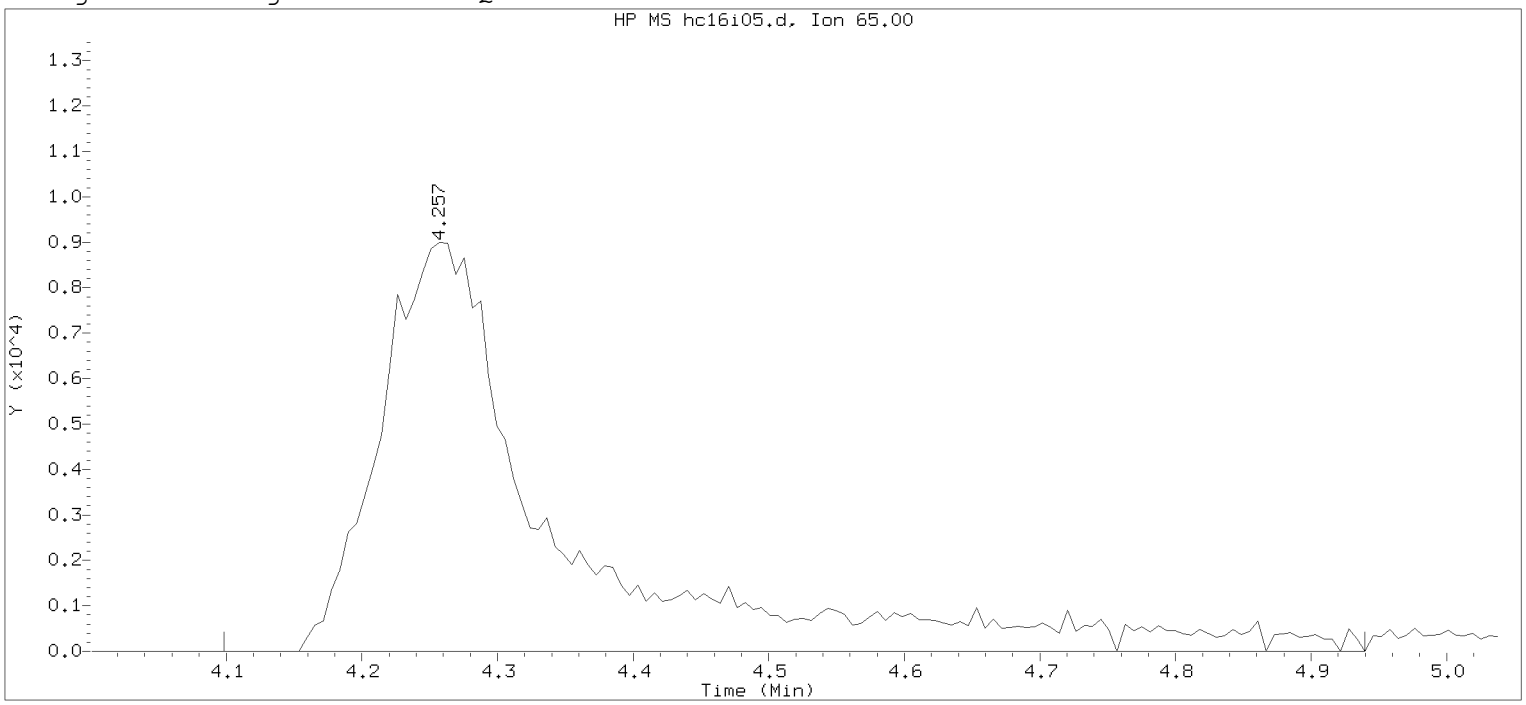
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

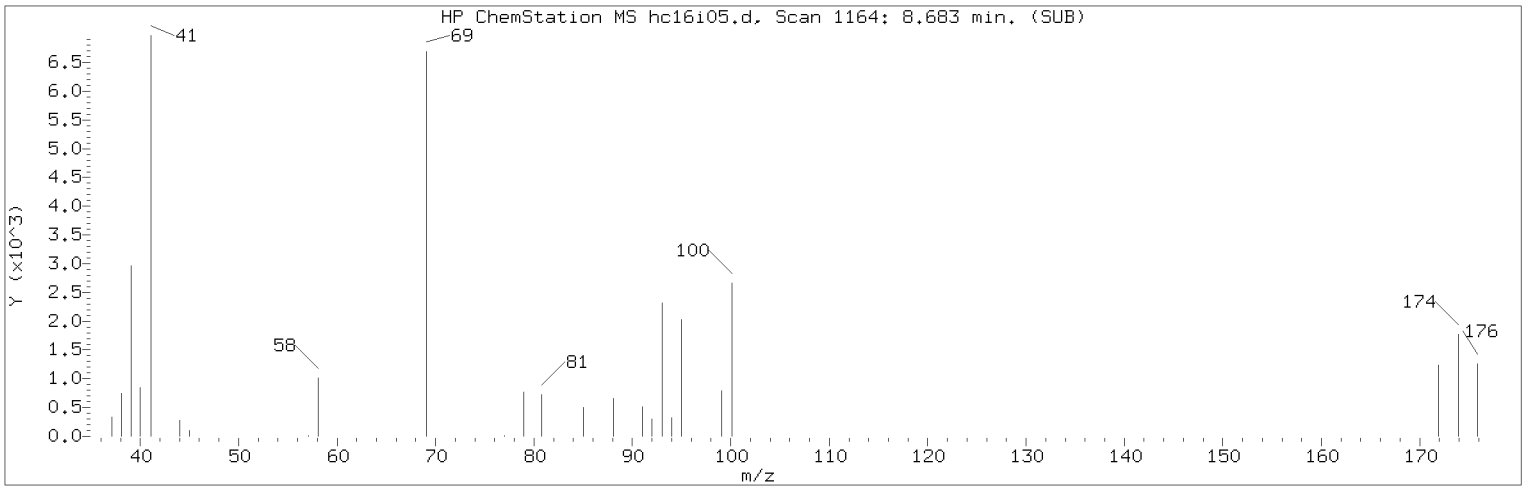
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

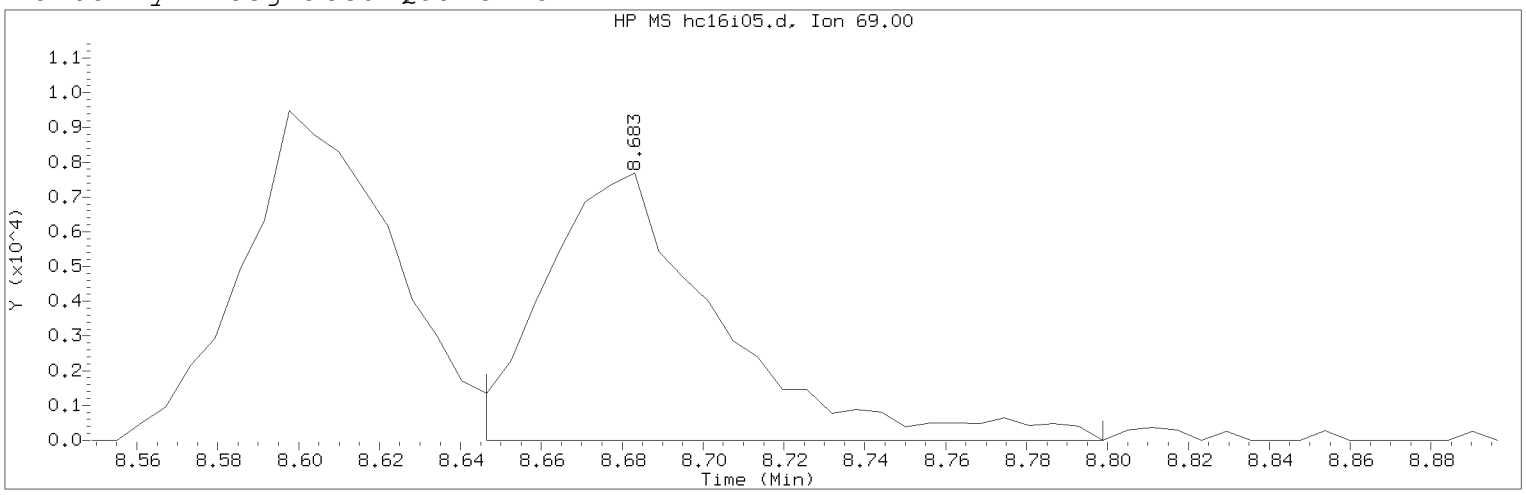
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 438		
Retention Time (minutes)	: 4.257		
Quant Ion	: 65.00		
Area	: 82836		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 411	Integration stop scan:	549
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key: 2278

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

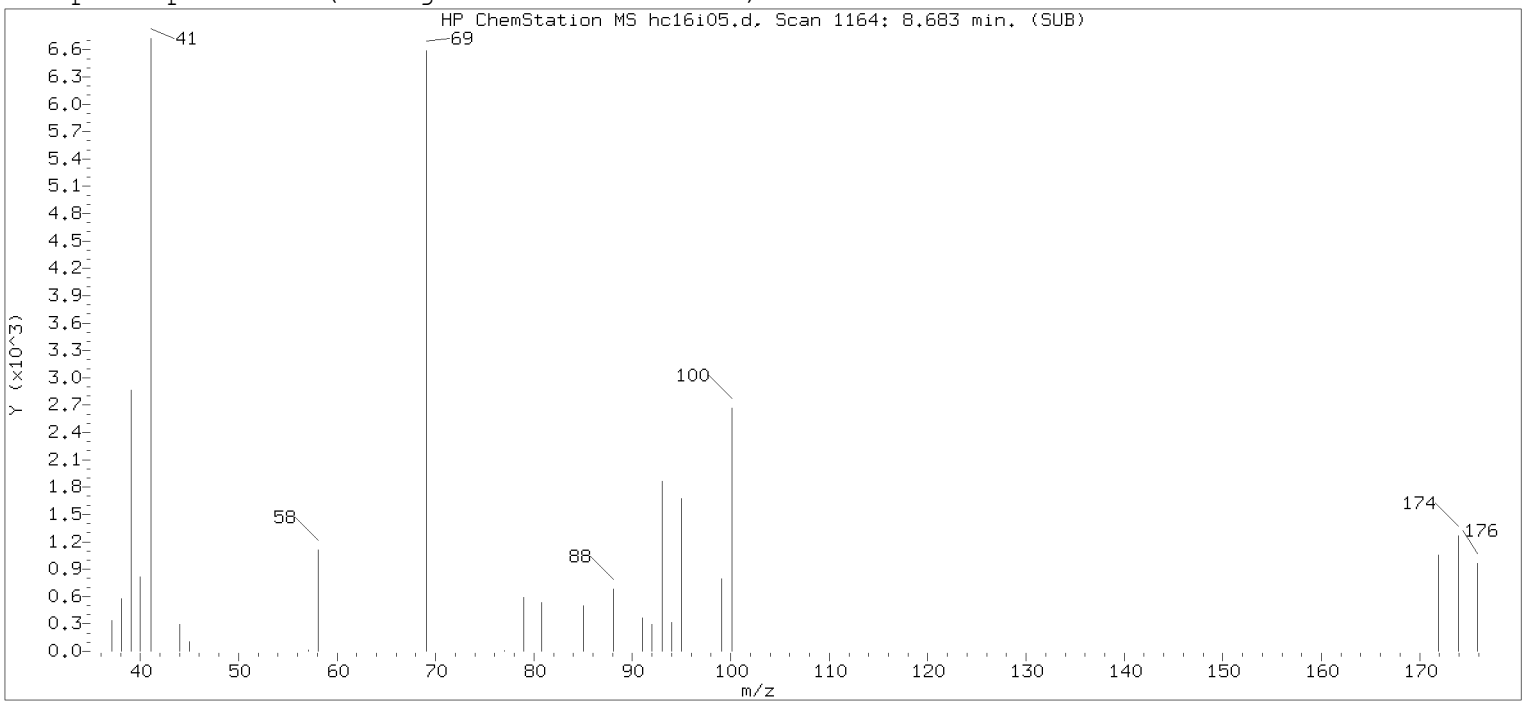
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 23250M
On-Column Amount (ng) : 1.0437
Integration start scan : 1157 Integration stop scan: 1182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

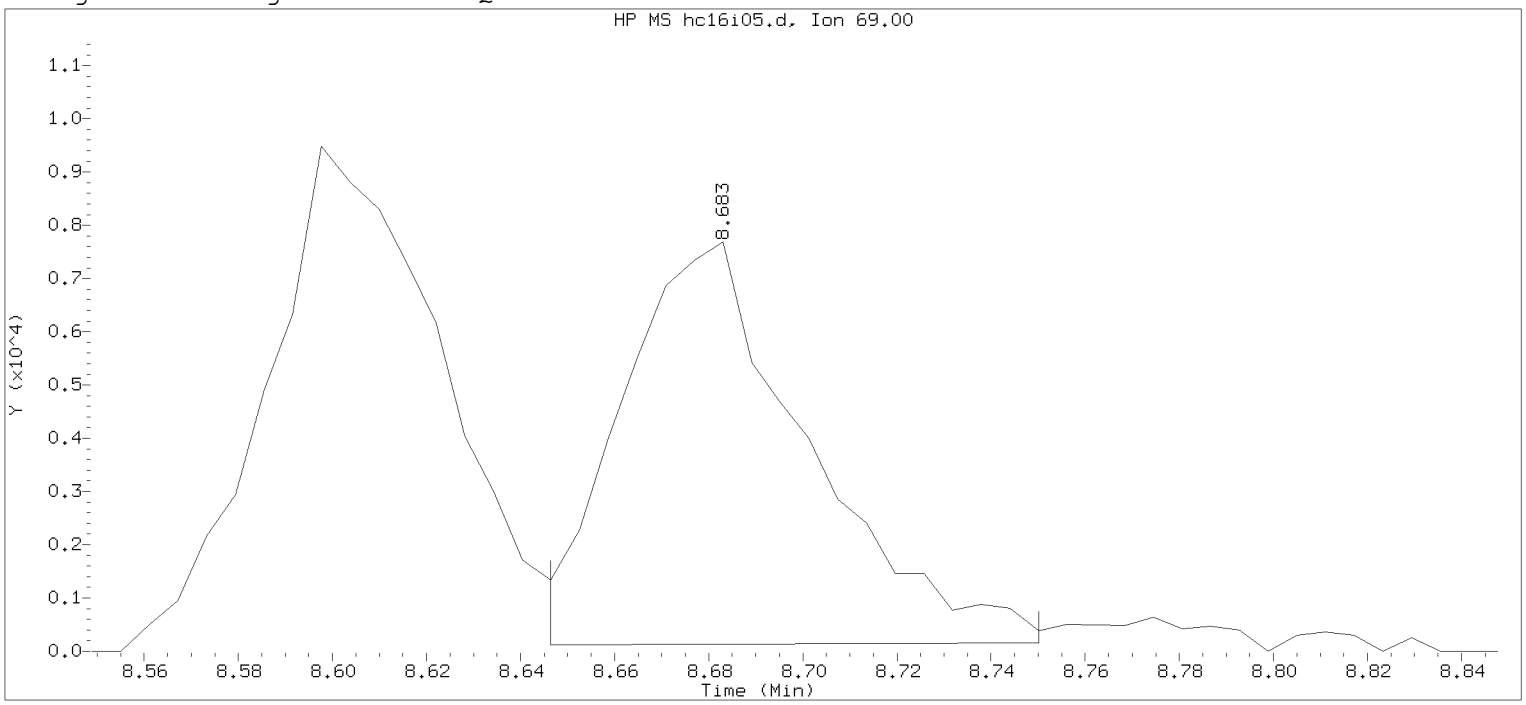
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

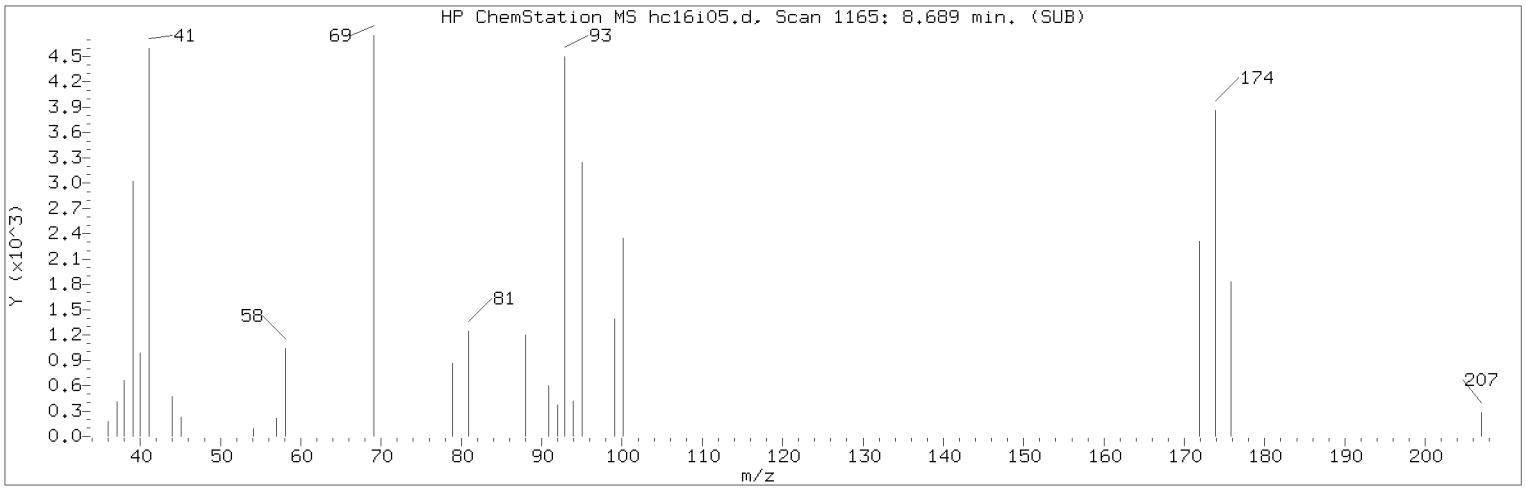
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

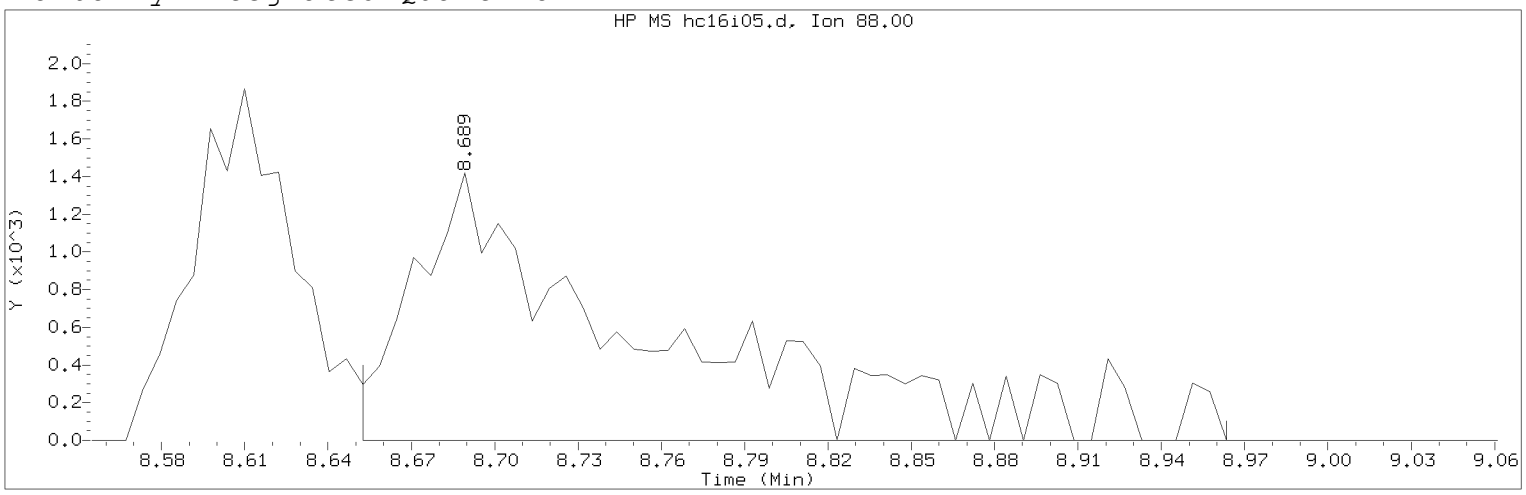
Compound Number	: 71		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1164		
Retention Time (minutes)	: 8.683		
Quant Ion	: 69.00		
Area	: 20849		
On-column Amount (ng)	: 0.9757		
Integration start scan	: 1157	Integration stop scan:	1174
Y at integration start	: 117	Y at integration end:	152

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Target 3.5 esignature used. Key: 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

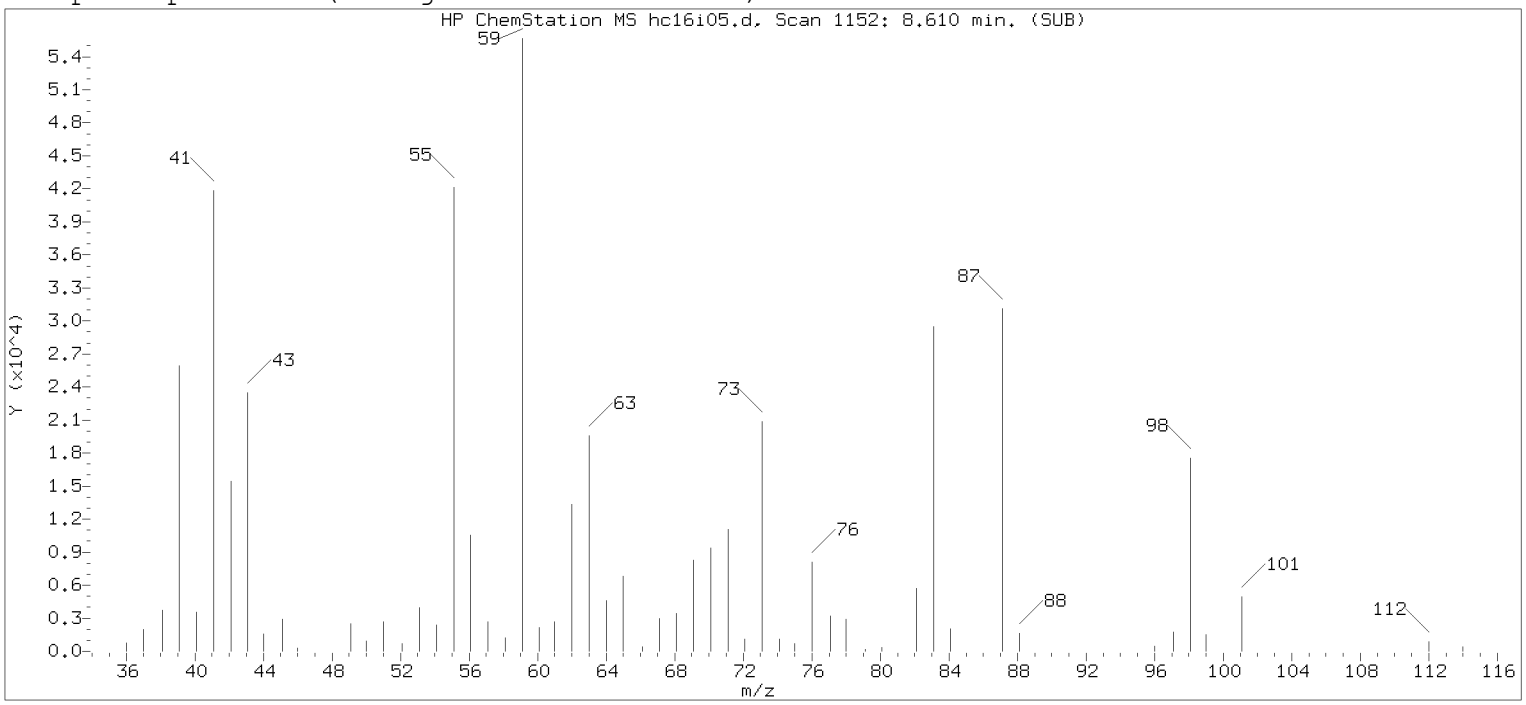
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 88.00
Area (flag) : 8479M
On-Column Amount (ng) : 60.7109
Integration start scan : 1158 Integration stop scan: 1209
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

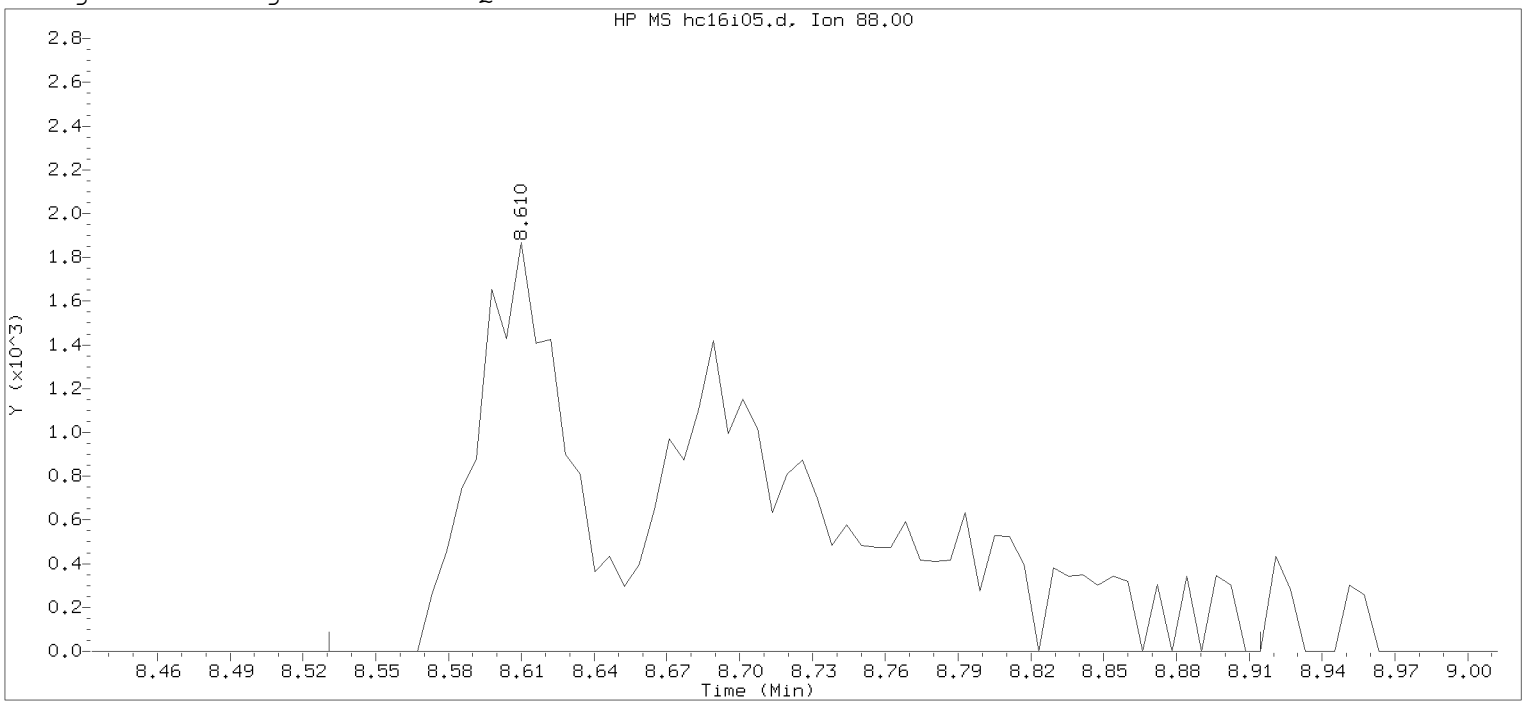
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

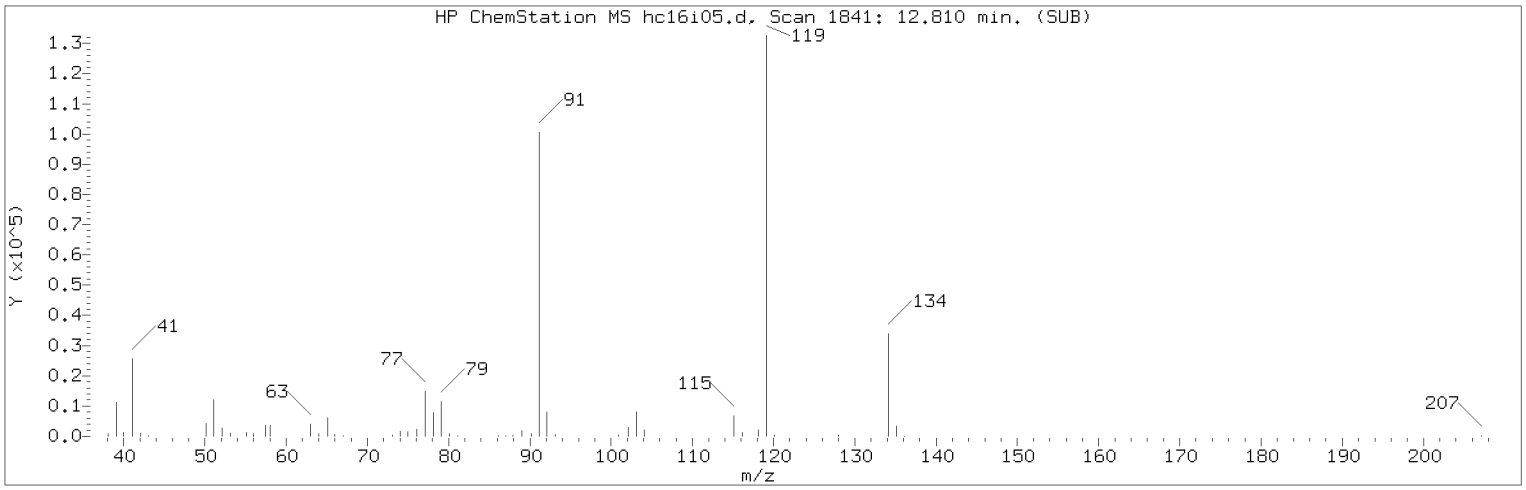
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

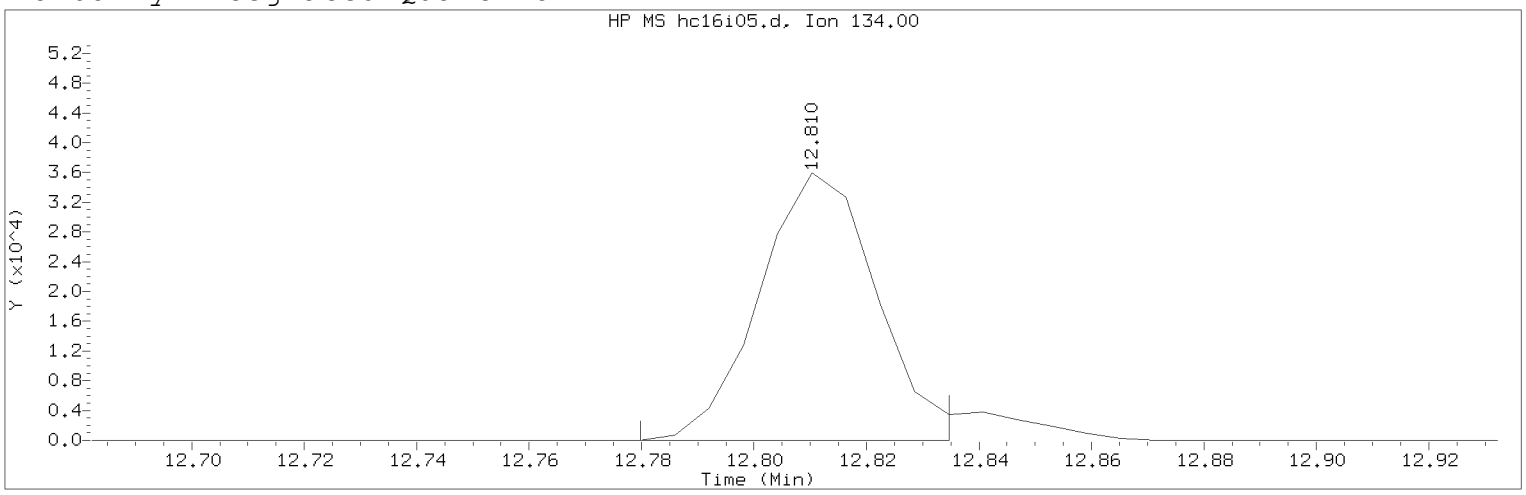
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1152		
Retention Time (minutes)	: 8.610		
Quant Ion	: 88.00		
Area	: 12633		
On-column Amount (ng)	: 66.0739		
Integration start scan	: 1138	Integration stop scan:	1201
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used. kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:52 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

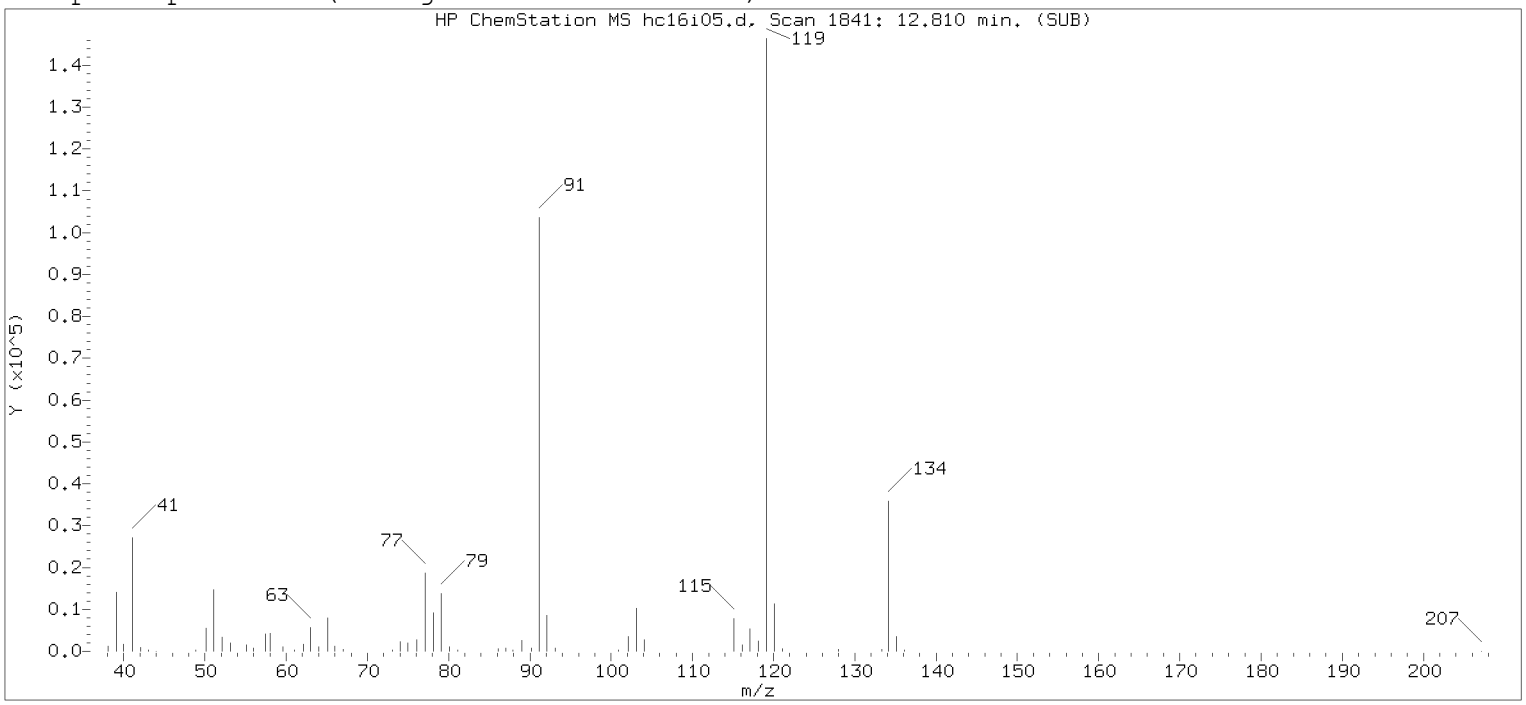
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 52067M
On-Column Amount (ng) : 1.0906
Integration start scan : 1835 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

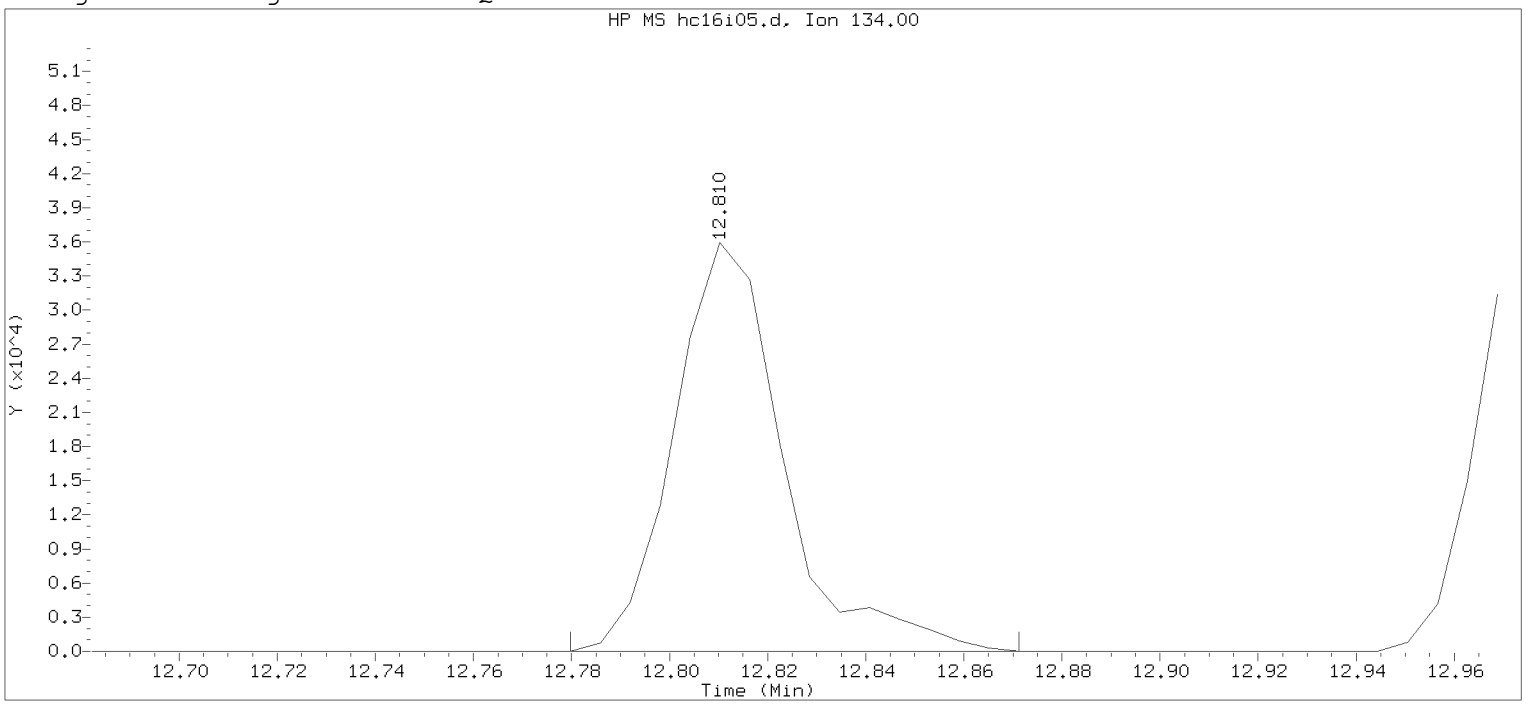
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



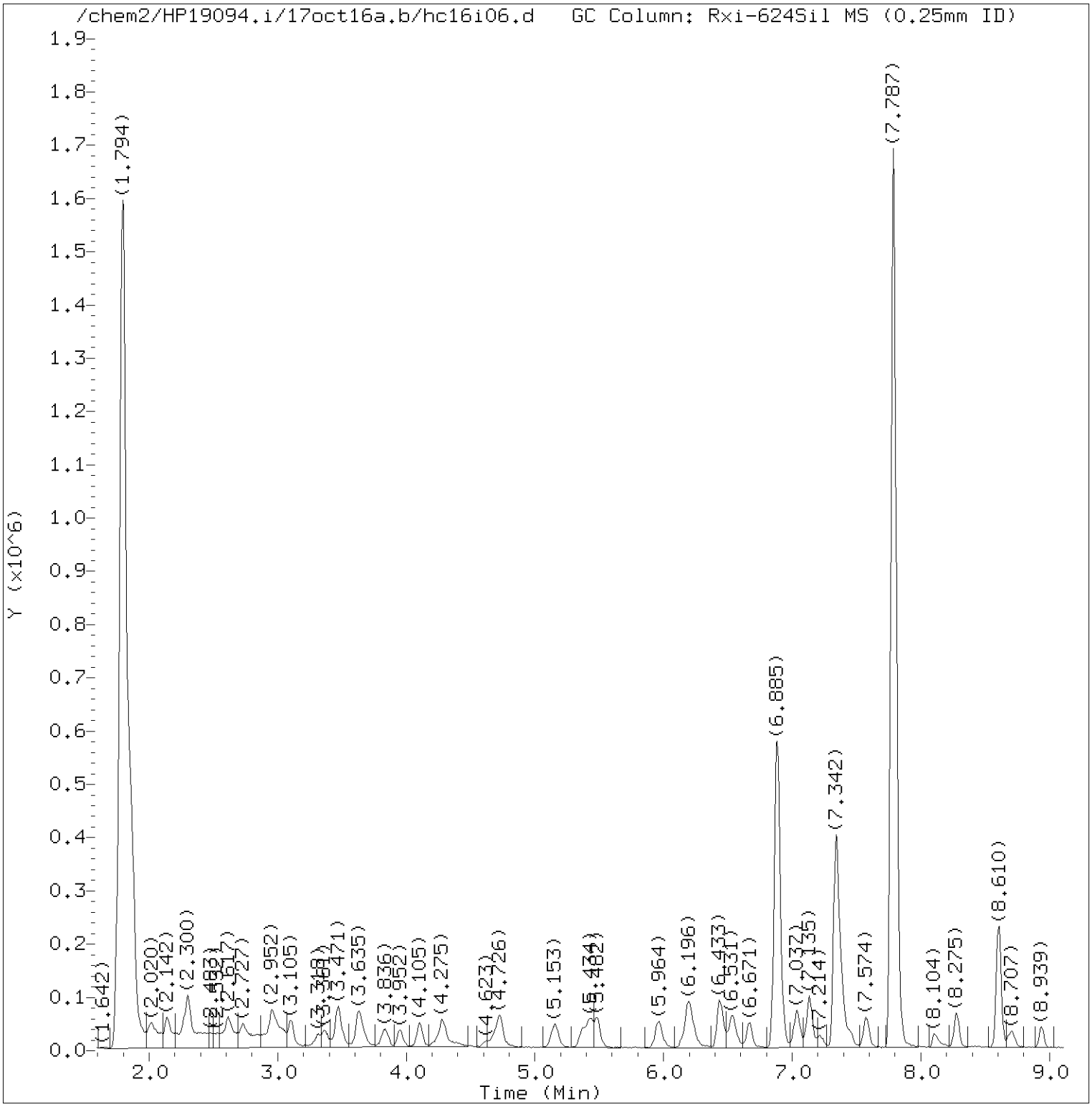
Data File: /chem2/HP19094.i/17oct16a.b/hc16i05.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:04 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:39
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 55620
On-column Amount (ng) : 1.1109
Integration start scan : 1835 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key: 2303



Total Ion Chromatogram (TIC)

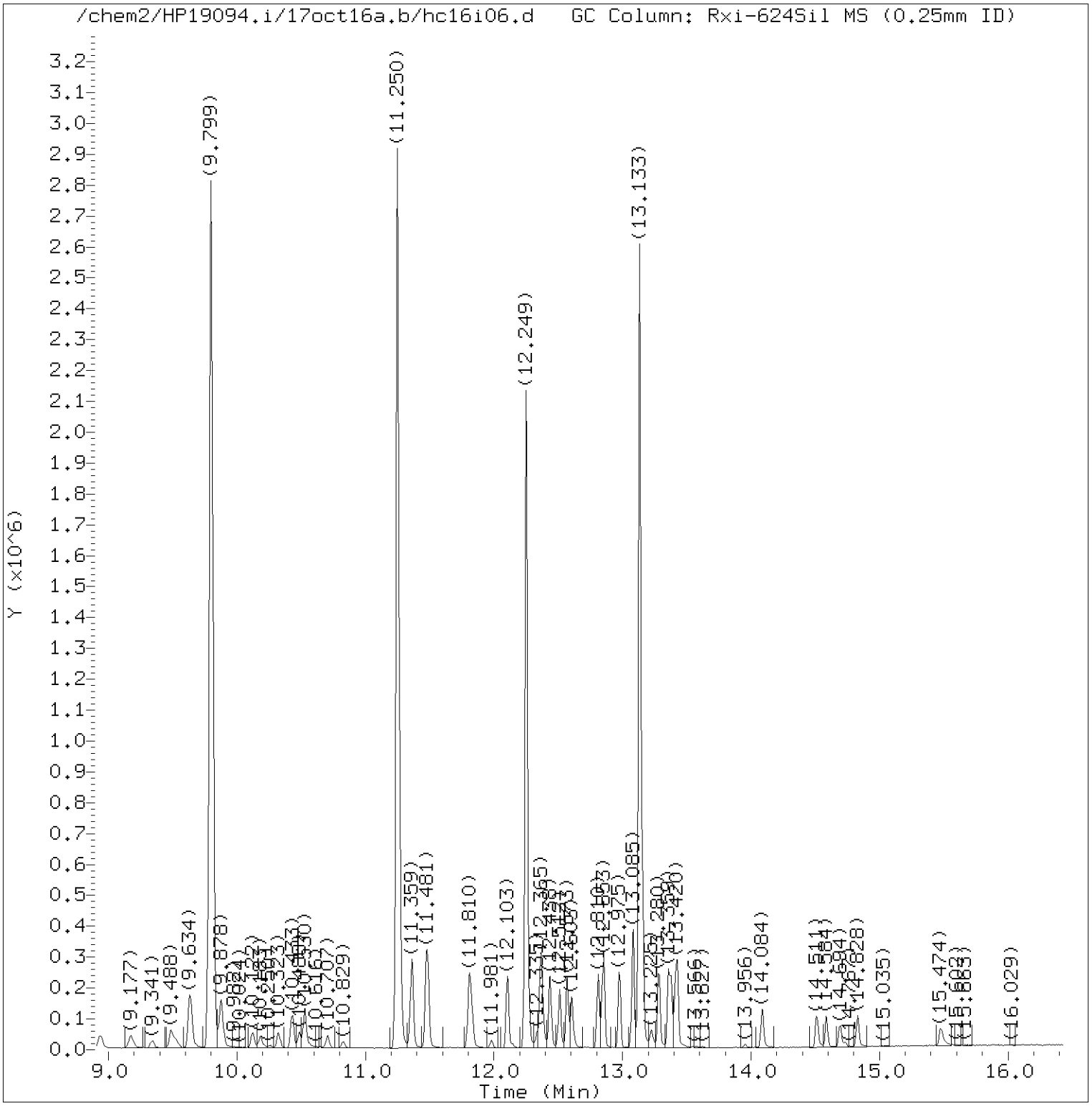
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	45956	0.479
2) Chloromethane	(2)	2.142	50	47008	0.496
5) Vinyl Chloride	(2)	2.276	62	42476	0.487
6) 1,3-Butadiene	(2)	2.306	39	42495	0.516
7) Bromomethane	(2)	2.611	94	29825	0.503
8) Chloroethane	(2)	2.727	64	24456	0.493
9) Dichlorofluoromethane	(2)	2.952	67	72429	0.499
10) Trichlorofluoromethane	(2)	3.044	101	54616	0.471
11) Ethyl ether	(2)	3.306	59	18816	0.508
12) Freon 123a	(2)	3.361	67	36253	0.499
13) Acrolein	(1)	3.471	56	133622	25.837
15) 1,1-Dichloroethene	(2)	3.623	96	22912	0.493
14) Acetone	(1)	3.641	43	38067	5.740
16) Freon 113	(2)	3.647	101	24363	0.471
17) Methyl Iodide	(2)	3.824	142	46006	0.497
18) Carbon Disulfide	(2)	3.952	76	74265	0.500
21) Methyl Acetate	(1)	4.086	43	9929M	0.436
22) Allyl Chloride	(2)	4.105	41	50856	0.483
26)*t-Butyl Alcohol-d10	(1)	4.269	65	83112	50.000
23) Methylene Chloride	(2)	4.288	84	27906	0.527
28) t-Butyl Alcohol	(1)	4.397	59	25257	11.256
29) Acrylonitrile	(1)	4.629	53	21568	2.657
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	58232	0.508
31) trans-1,2-Dichloroethene	(2)	4.726	96	26327	0.501
32) n-Hexane	(2)	5.153	57	45003	0.485
33) 1,1-Dichloroethane	(2)	5.361	63	52659	0.488
34) di-Isopropyl Ether	(2)	5.434	45	101947	0.500
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	50390	0.497
37) Ethyl t-butyl ether	(2)	5.964	59	81617	0.499
40) 1,2-Dichloroethene (Total)	(2)		96	56623	1.006
38) 2-Butanone	(1)	6.147	43	69204	5.318
39) cis-1,2-Dichloroethene	(2)	6.190	96	30296	0.505
41) 2,2-Dichloropropane	(2)	6.208	77	45307	0.497
42) Propionitrile	(1)	6.220	54	30137	10.054
45) Methacrylonitrile	(1)	6.433	67	56101	5.148
47) Bromochloromethane	(2)	6.525	128	11540	0.489
48) Tetrahydrofuran	(1)	6.549	71	15466	5.242
49) Chloroform	(2)	6.665	83	53201	0.510

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	514192	9.754
50)$Dibromofluoromethane	(2)	6.879	111	530178	9.795
51) 1,1,1-Trichloroethane	(2)	6.915	97	47283	0.503
52) Cyclohexane	(2)	7.031	56	58479	0.509
52) Cyclohexane	(2)	7.043	84	42055	0.476
52) Cyclohexane	(2)	7.031	69	16442	0.502
55) 1,1-Dichloropropene	(2)	7.128	75	41009	0.493
54) Carbon Tetrachloride	(2)	7.141	117	38860	0.473
56) Isobutyl Alcohol	(1)	7.214	41	28929	31.890
57)$1,2-Dichloroethane-d4	(2)	7.348	102	82033	9.937
57)$1,2-Dichloroethane-d4	(2)	7.342	65	441814	9.781
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51737	9.963
58) Benzene	(2)	7.385	78	114827	0.505
59) 1,2-Dichloroethane	(2)	7.445	62	31671	0.498
60) t-Amyl methyl ether	(2)	7.586	73	65779	0.496
63)*Fluorobenzene	(2)	7.787	96	2183030	10.000
62) n-Heptane	(2)	7.823	43	54273	0.490
65) n-Butanol	(1)	8.104	56	30974	46.473
67) Trichloroethene	(2)	8.281	95	30386	0.499
70) 1,2-Dichloropropane	(2)	8.598	63	28335	0.480
69) Methylcyclohexane	(2)	8.604	83	48436	0.462
72) 1,4-Dioxane	(1)	8.677	88	2265M	16.672
71) Methyl Methacrylate	(1)	8.683	69	10253	0.409
73) Dibromomethane	(2)	8.714	93	12645	0.512
74) Bromodichloromethane	(2)	8.933	83	35496	0.498
76) 2-Nitropropane	(1)	9.177	41	37376	5.067
80) cis-1,3-Dichloropropene	(2)	9.488	75	40246	0.486
81) 4-Methyl-2-Pentanone	(1)	9.634	43	162348	4.925
82)$Toluene-d8	(3)	9.799	98	2153620	10.155
82)$Toluene-d8	(3)	9.799	100	1365748	10.173
83) Toluene	(3)	9.878	92	72334	0.522
84) trans-1,3-Dichloropropene	(3)	10.122	75	31408	0.496
85) 1,3-Dichloropropene (total)	(3)		75	71654	0.983
86) Ethyl Methacrylate	(3)	10.183	69	24163	0.511
88) 1,1,2-Trichloroethane	(3)	10.323	97	16260	0.503
89) Tetrachloroethene	(3)	10.433	166	32577	0.501
90) 1,3-Dichloropropane	(3)	10.488	76	28654	0.498
91) 2-Hexanone	(1)	10.530	43	119949	5.221

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	21534	0.510
95) 1,2-Dibromoethane	(3)	10.829	107	14775	0.483
97)*Chlorobenzene-d5	(3)	11.250	117	1459268	10.000
98) Chlorobenzene	(3)	11.280	112	75074	0.508
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	25674	0.494
100) Ethylbenzene	(3)	11.365	91	140408	0.504
101) m+p-Xylene	(3)	11.481	106	107191	1.021
105) Xylene (Total)	(3)		106	157621	1.512
104) o-Xylene	(3)	11.804	106	50430	0.491
106) Styrene	(3)	11.823	104	78714	0.491
107) Bromoform	(3)	11.981	173	11096	0.484
108) Isopropylbenzene	(3)	12.103	105	138738	0.503
111)$4-Bromofluorobenzene	(3)	12.249	95	630118	9.782
111)$4-Bromofluorobenzene	(3)	12.249	174	554373	9.786
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	20219	0.547
115) trans-1,4-Dichloro-2-butene	(1)	12.365	53	47128	4.796
114) Bromobenzene	(4)	12.371	156	30495	0.523
116) 1,2,3-Trichloropropane	(4)	12.390	110	5152	0.546
117) n-Propylbenzene	(4)	12.438	91	166612	0.522
119) 2-Chlorotoluene	(4)	12.512	126	31729	0.531
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	113047	0.512
122) 4-Chlorotoluene	(4)	12.609	126	32427	0.533
125) tert-Butylbenzene	(4)	12.810	134	23723M	0.505
126) Pentachloroethane	(4)	12.847	167	18349	0.502
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	112705	0.508
128) sec-Butylbenzene	(4)	12.975	105	148189	0.518
131) 1,3-Dichlorobenzene	(4)	13.079	146	59422	0.523
132) p-Isopropyltoluene	(4)	13.085	119	120387	0.504
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	599945	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	63010	0.533
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	49155	0.522
136) Benzyl Chloride	(4)	13.225	126	6357	0.482
138) n-Butylbenzene	(4)	13.377	92	56680	0.474
139) 1,2-Dichlorobenzene	(4)	13.408	146	52951	0.523
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	2183	0.458
144) 1,3,5-Trichlorobenzene	(4)	14.091	180	42913	0.510
145) 1,2,4-Trichlorobenzene	(4)	14.511	180	35115	0.506
146) Hexachlorobutadiene	(4)	14.590	225	15857	0.485

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

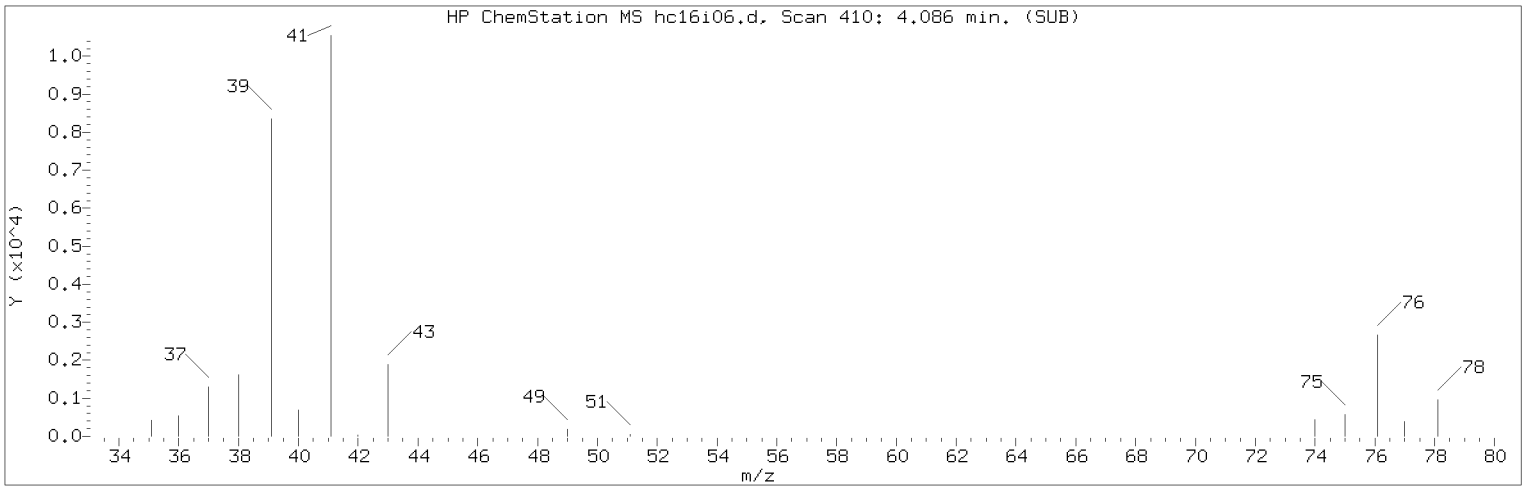
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

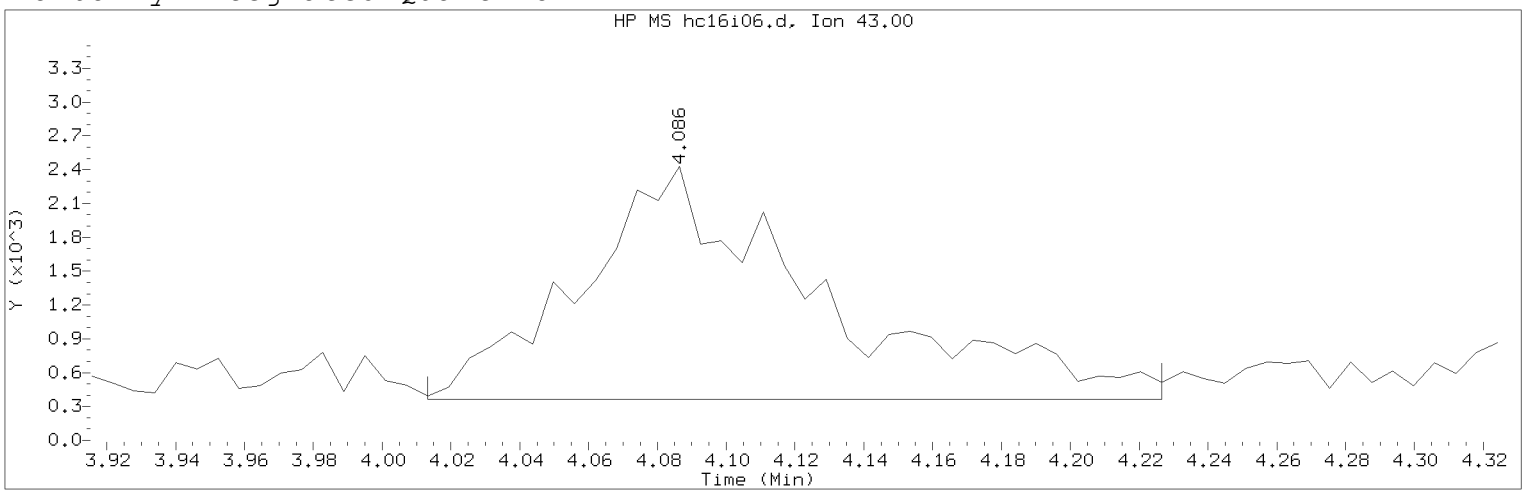
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.694	128	61798	0.548
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	30581	0.524

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

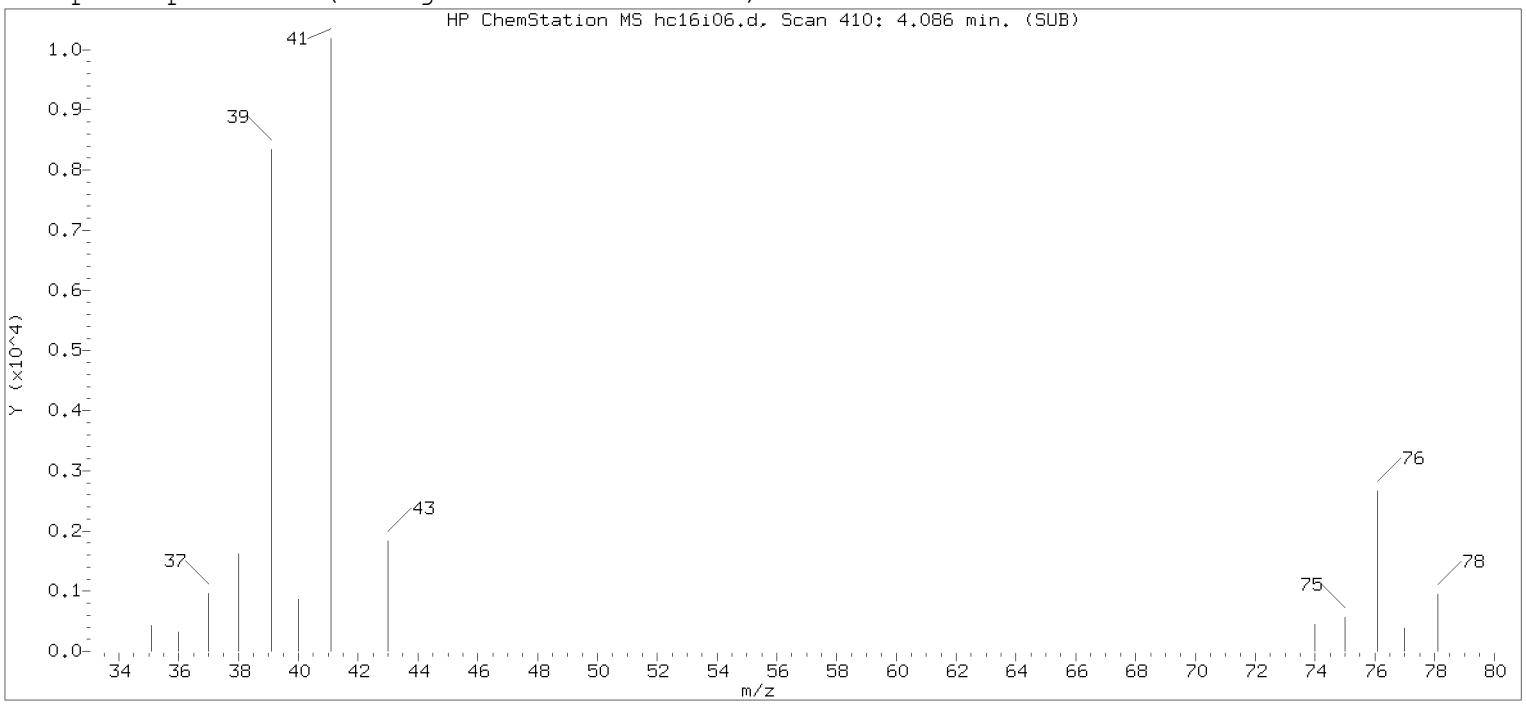
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 410
Retention Time (minutes): 4.086
Quant Ion : 43.00
Area (flag) : 9929M
On-Column Amount (ng) : 0.4355
Integration start scan : 397 Integration stop scan: 432
Y at integration start : 362 Y at integration end: 362

Reason for manual integration: improper integration

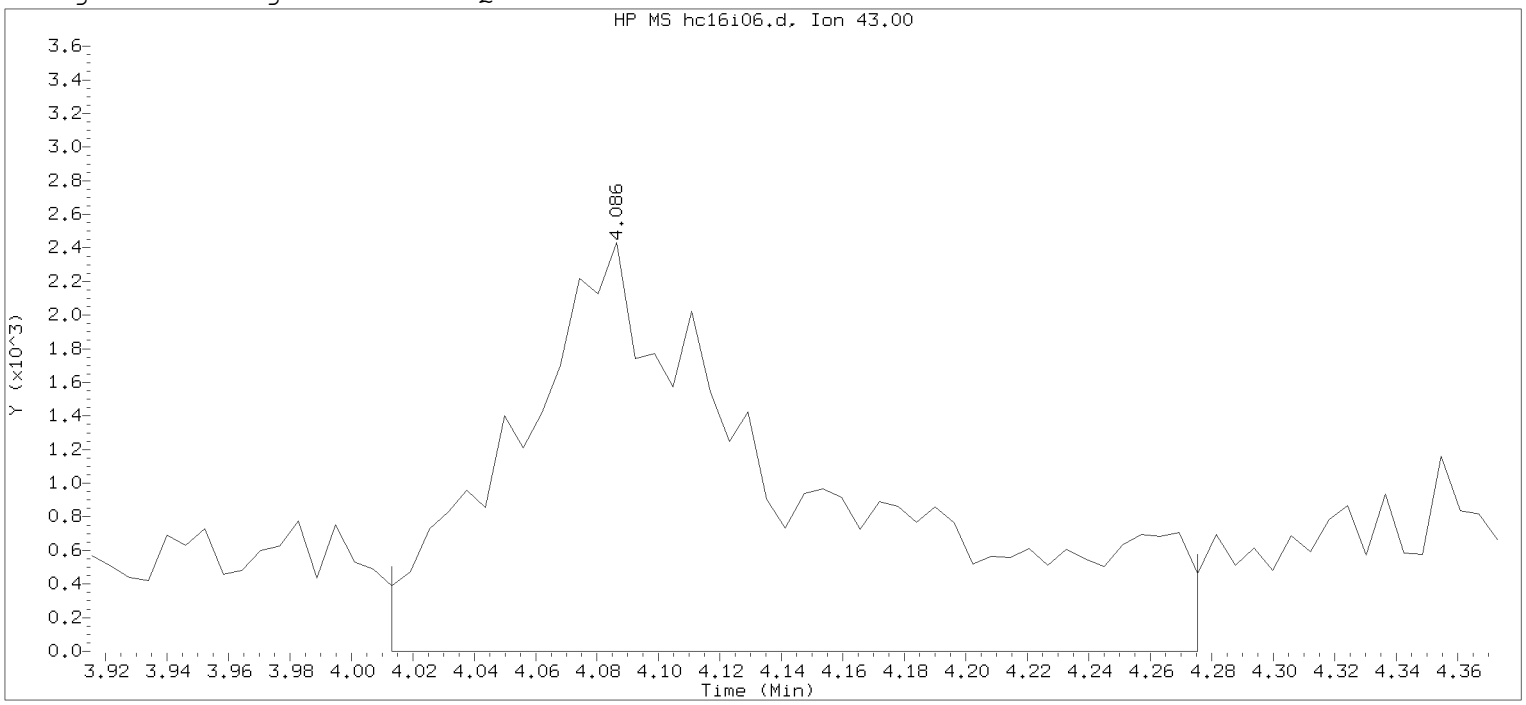
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

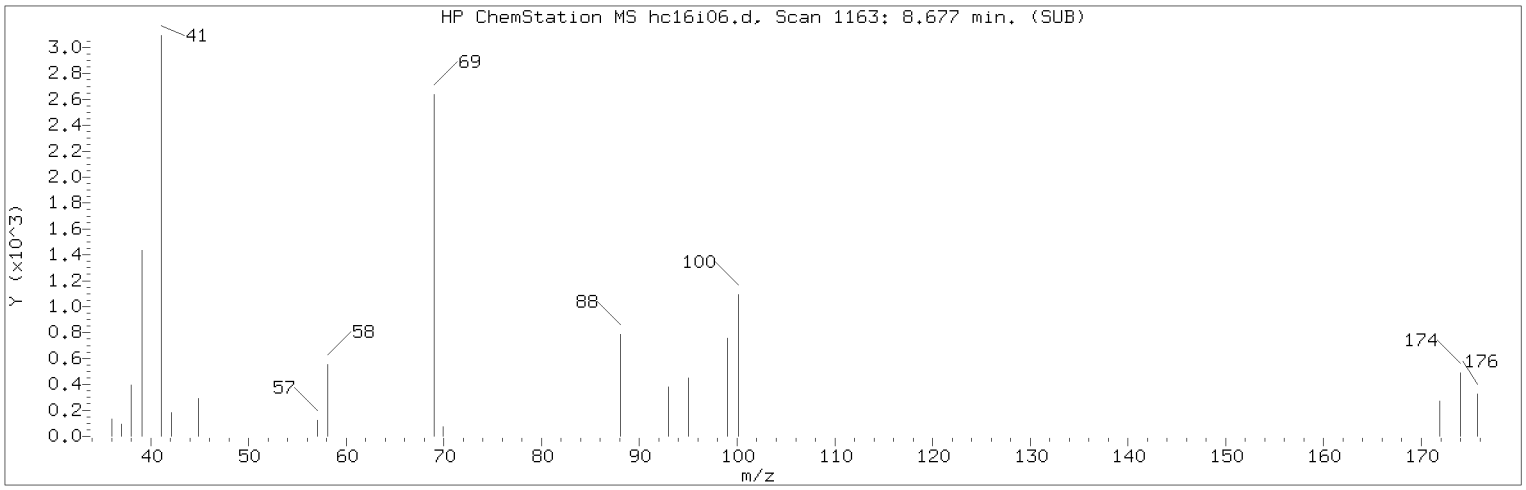
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

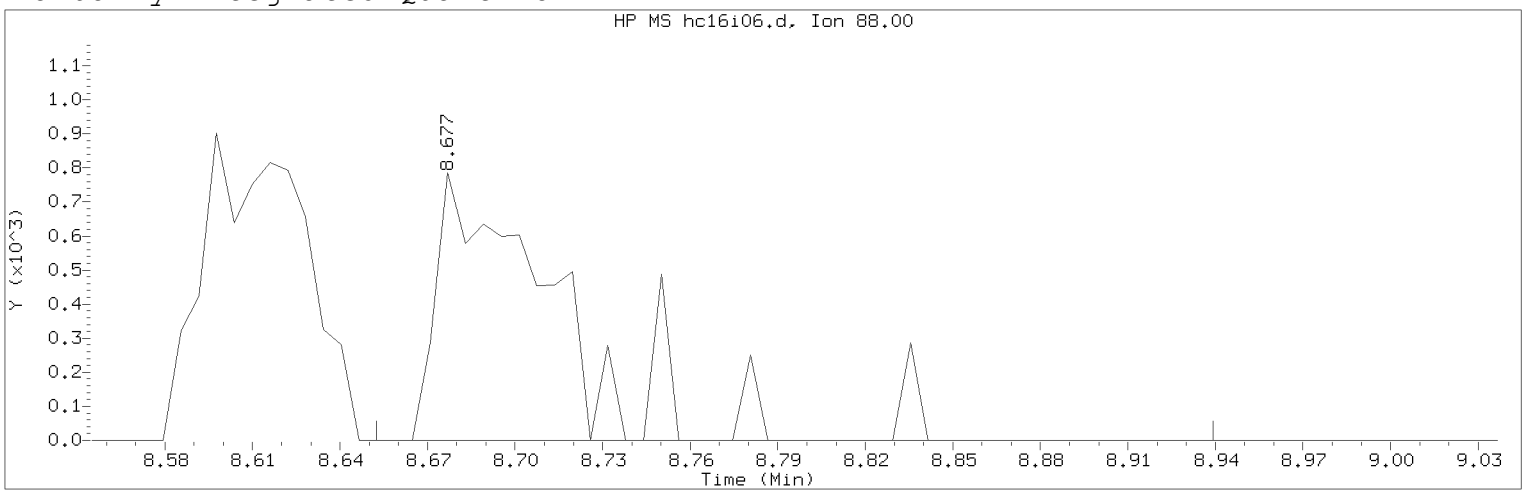
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 410
Retention Time (minutes): 4.086
Quant Ion : 43.00
Area : 16310
On-column Amount (ng) : 0.7397
Integration start scan : 397 Integration stop scan: 440
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key ID: 0x2343

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

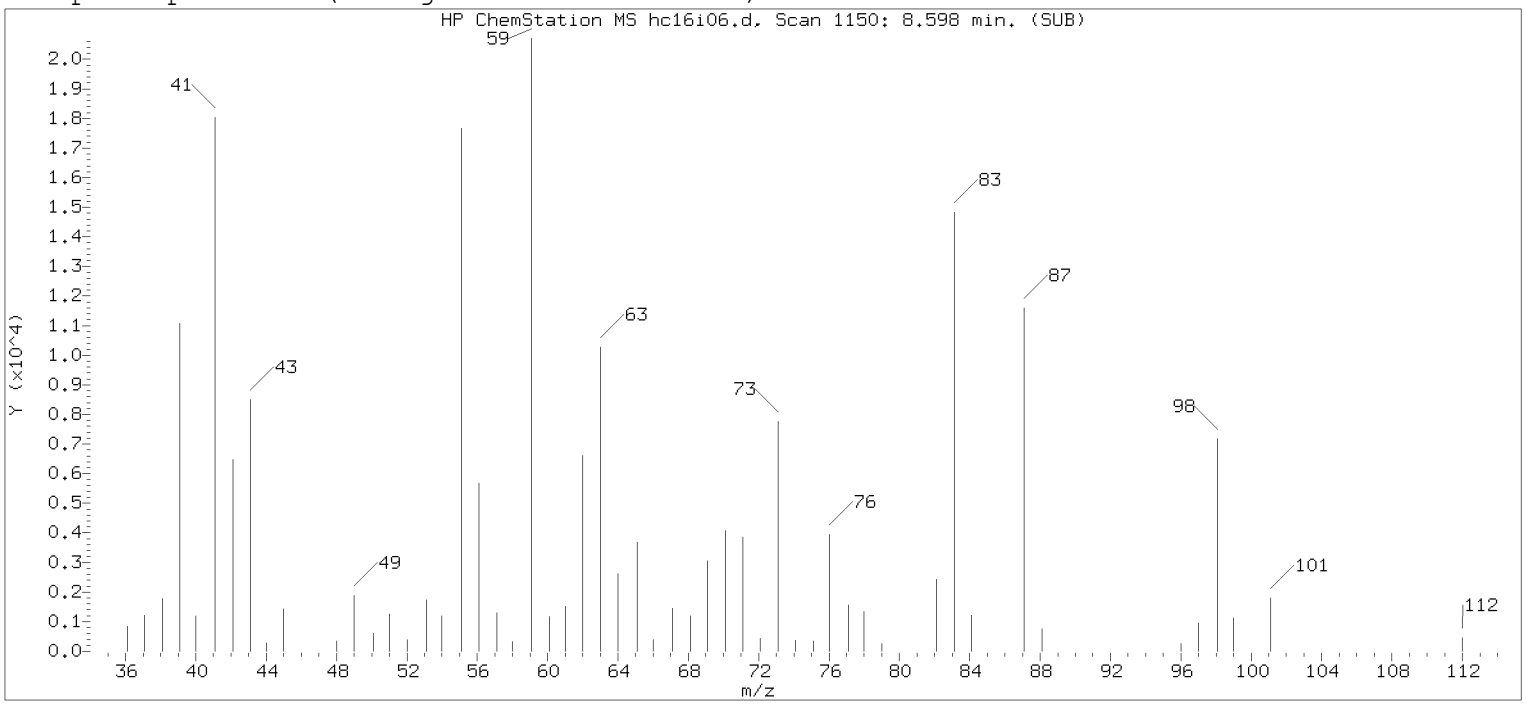
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1163
Retention Time (minutes): 8.677
Quant Ion : 88.00
Area (flag) : 2265M
On-Column Amount (ng) : 16.6722
Integration start scan : 1158 Integration stop scan: 1205
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

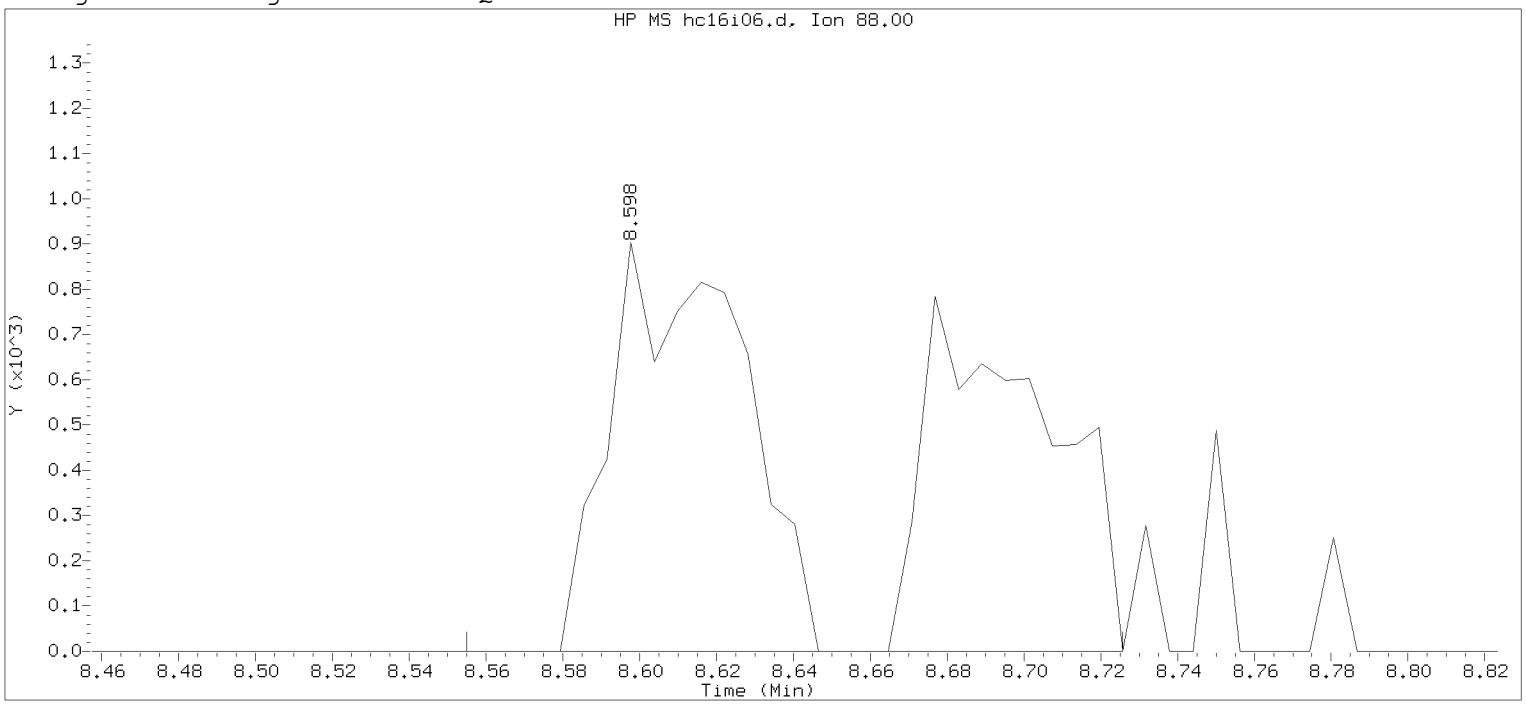
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

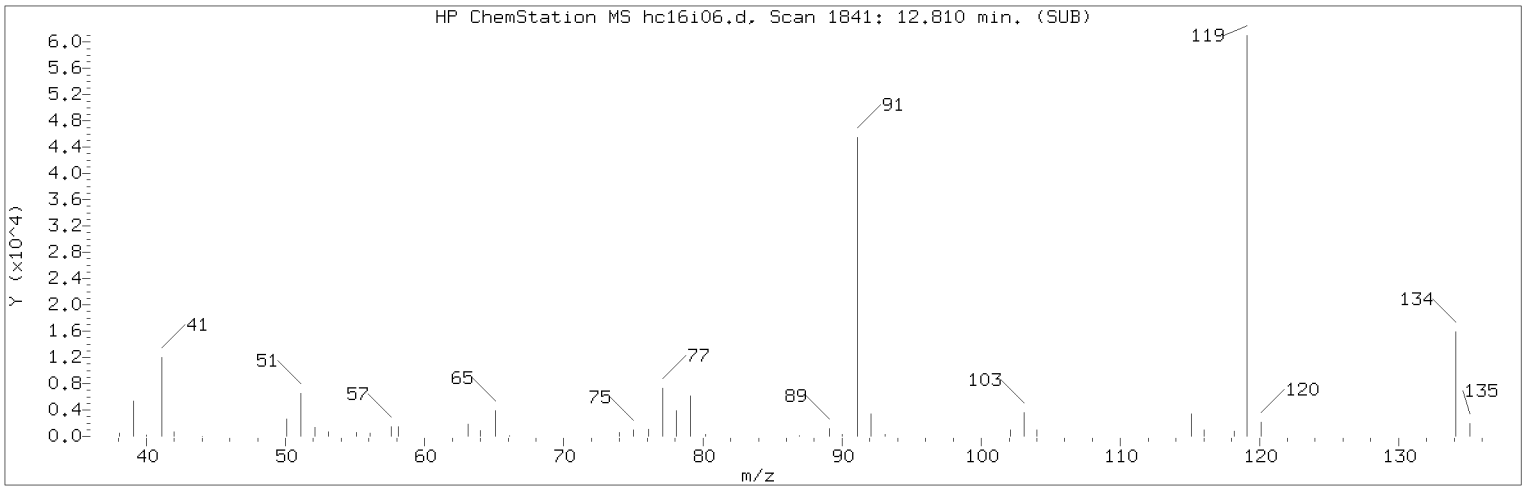
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

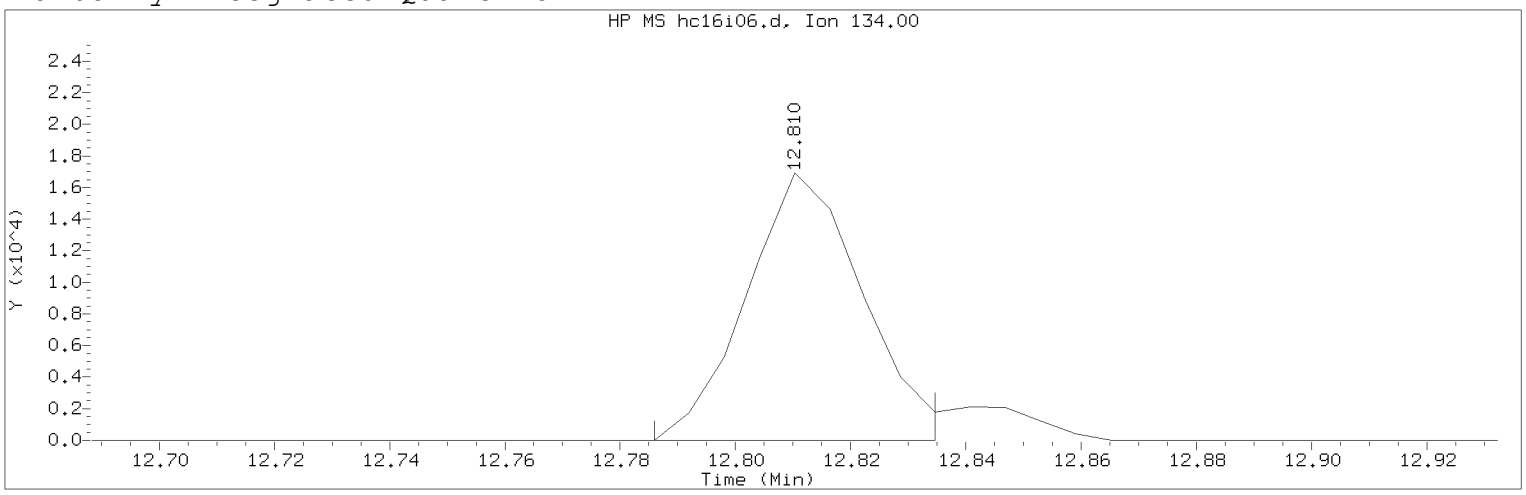
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1150		
Retention Time (minutes)	: 8.598		
Quant Ion	: 88.00		
Area	: 3951		
On-column Amount (ng)	: 21.2213		
Integration start scan	: 1142	Integration stop scan:	1170
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key: 2313

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:49 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

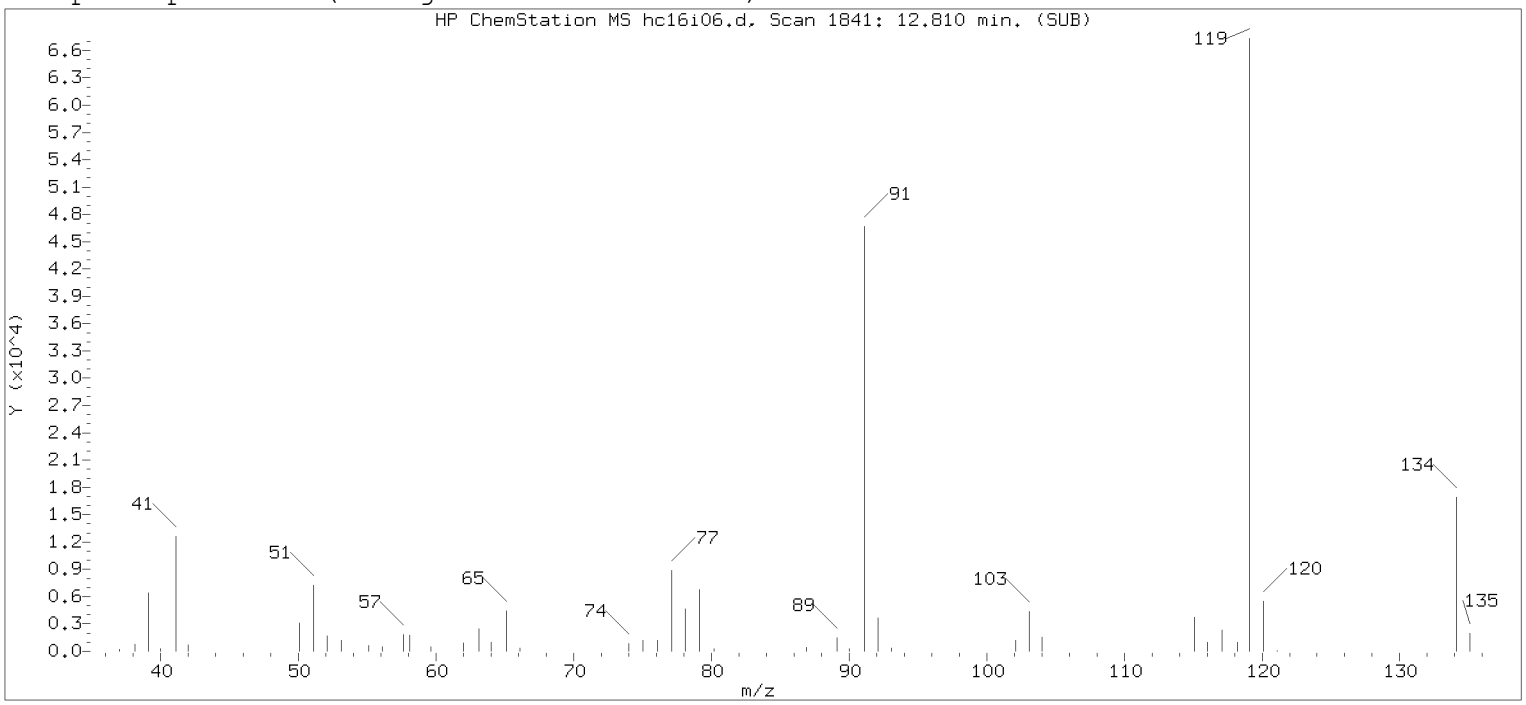
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 23723M
On-Column Amount (ng) : 0.5049
Integration start scan : 1836 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

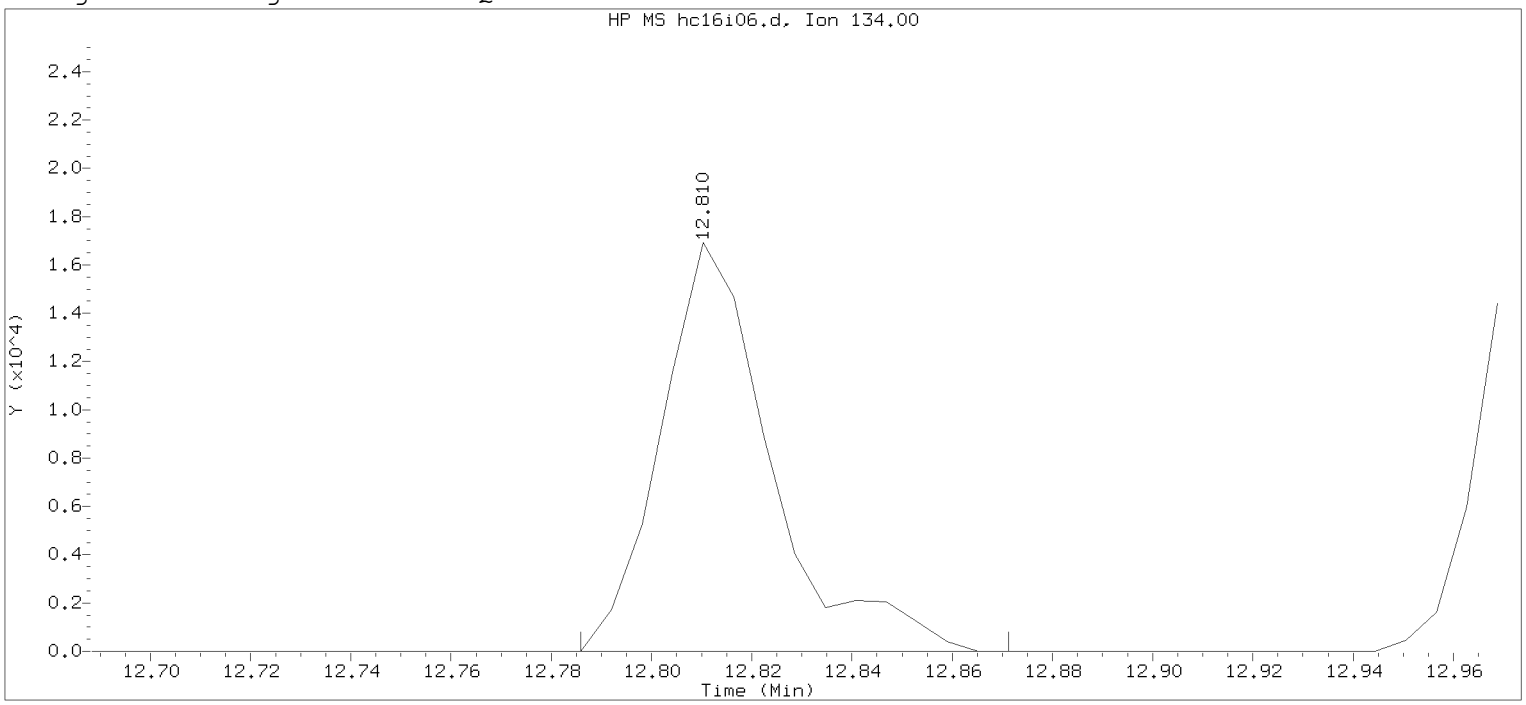
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



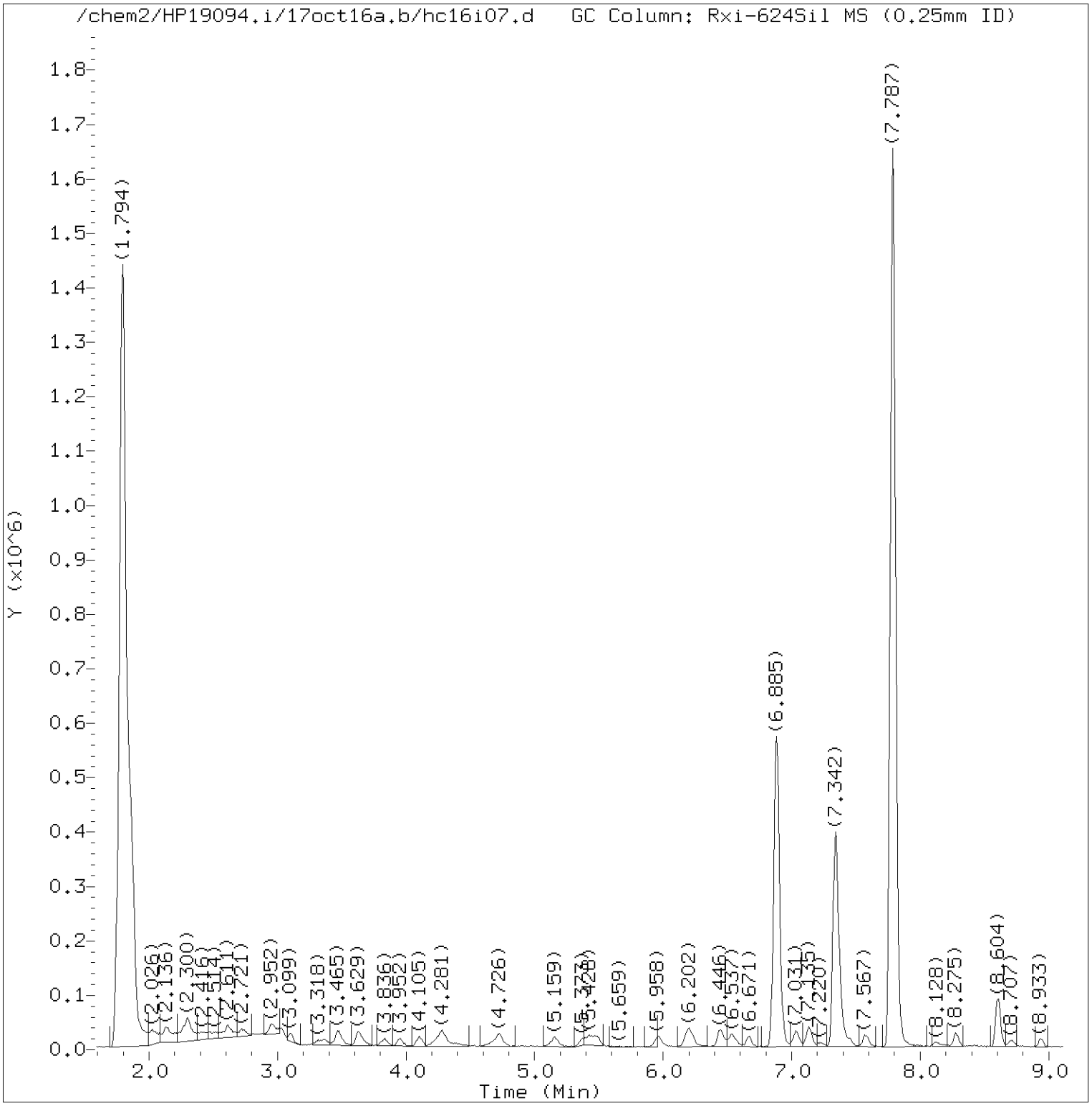
Data File: /chem2/HP19094.i/17oct16a.b/hc16i06.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:24 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 25836
On-column Amount (ng) : 0.5202
Integration start scan : 1836 Integration stop scan: 1850
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key: 2315



Total Ion Chromatogram (TIC)

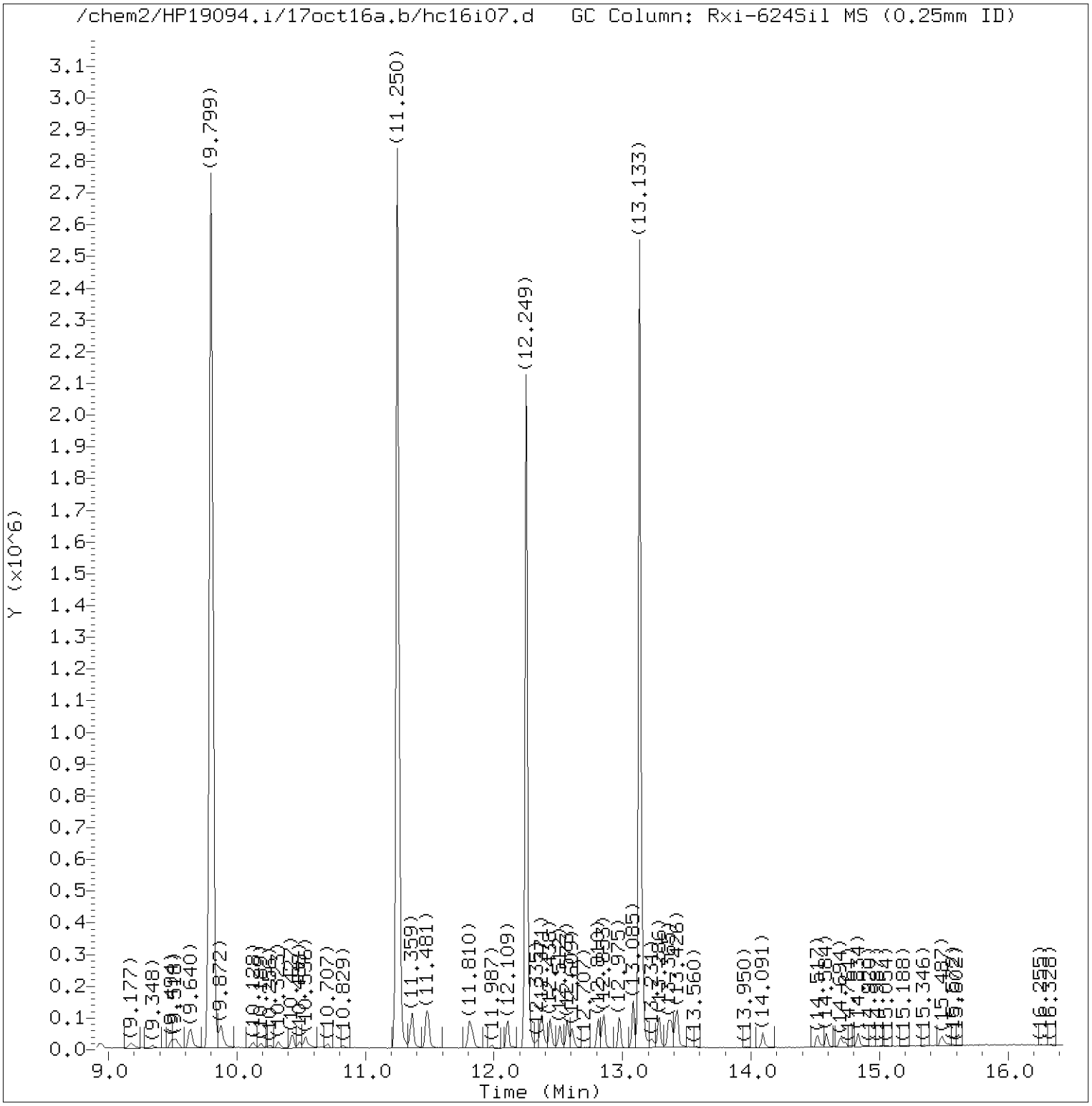
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	17741	0.186
2) Chloromethane	(2)	2.136	50	21560	0.229
5) Vinyl Chloride	(2)	2.276	62	17599	0.203
6) 1,3-Butadiene	(2)	2.300	39	19277	0.236
7) Bromomethane	(2)	2.611	94	13009	0.221
8) Chloroethane	(2)	2.727	64	10580	0.215
9) Dichlorofluoromethane	(2)	2.952	67	34663	0.240
10) Trichlorofluoromethane	(2)	3.038	101	22552	0.196
11) Ethyl ether	(2)	3.318	59	7001	0.190
12) Freon 123a	(2)	3.367	67	15219	0.211
13) Acrolein	(1)	3.477	56	51223	10.330
15) 1,1-Dichloroethene	(2)	3.617	96	9019	0.195
14) Acetone	(1)	3.641	43	13874	2.182
16) Freon 113	(2)	3.647	101	9523	0.185
17) Methyl Iodide	(2)	3.830	142	18690	0.203
18) Carbon Disulfide	(2)	3.952	76	33156	0.225
21) Methyl Acetate	(1)	4.092	43	3839M	0.201
22) Allyl Chloride	(2)	4.099	41	23451	0.224
26)*t-Butyl Alcohol-d10	(1)	4.263	65	79685	50.000
23) Methylene Chloride	(2)	4.294	84	11897	0.226
28) t-Butyl Alcohol	(1)	4.409	59	8848	4.113
29) Acrylonitrile	(1)	4.641	53	6061	0.779
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	21771	0.191
31) trans-1,2-Dichloroethene	(2)	4.726	96	10728	0.206
32) n-Hexane	(2)	5.159	57	17207	0.187
33) 1,1-Dichloroethane	(2)	5.373	63	21531	0.201
34) di-Isopropyl Ether	(2)	5.428	45	40136	0.198
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	19107	0.190
37) Ethyl t-butyl ether	(2)	5.958	59	31081	0.191
40) 1,2-Dichloroethene (Total)	(2)		96	22757	0.407
38) 2-Butanone	(1)	6.171	43	27859	2.233
39) cis-1,2-Dichloroethene	(2)	6.190	96	12029	0.202
41) 2,2-Dichloropropane	(2)	6.208	77	18209	0.201
42) Propionitrile	(1)	6.226	54	10639	3.702
45) Methacrylonitrile	(1)	6.440	67	19902	1.905
47) Bromochloromethane	(2)	6.531	128	4857	0.207
48) Tetrahydrofuran	(1)	6.549	71	5725	2.024
49) Chloroform	(2)	6.665	83	20122	0.194

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.885	113	519229	9.915
50)$Dibromofluoromethane	(2)	6.885	111	530426	9.864
51) 1,1,1-Trichloroethane	(2)	6.915	97	17951	0.192
52) Cyclohexane	(2)	7.037	56	22669	0.199
52) Cyclohexane	(2)	7.043	84	16796	0.191
52) Cyclohexane	(2)	7.043	69	6458	0.198
54) Carbon Tetrachloride	(2)	7.135	117	15582	0.191
55) 1,1-Dichloropropene	(2)	7.135	75	15408	0.186
56) Isobutyl Alcohol	(1)	7.220	41	9517	10.942
57)$1,2-Dichloroethane-d4	(2)	7.348	102	81614	9.952
57)$1,2-Dichloroethane-d4	(2)	7.342	65	437305	9.746
57)$1,2-Dichloroethane-d4	(2)	7.342	104	51334	9.951
58) Benzene	(2)	7.391	78	44928	0.199
59) 1,2-Dichloroethane	(2)	7.458	62	13236	0.209
60) t-Amyl methyl ether	(2)	7.580	73	25182	0.191
63)*Fluorobenzene	(2)	7.787	96	2168662	10.000
62) n-Heptane	(2)	7.817	43	23860	0.217
65) n-Butanol	(1)	8.128	56	12087	18.915
67) Trichloroethene	(2)	8.275	95	12370	0.204
69) Methylcyclohexane	(2)	8.598	83	18267	0.176
70) 1,2-Dichloropropane	(2)	8.604	63	11083	0.189
72) 1,4-Dioxane	(1)	8.610	88	582	4.468
71) Methyl Methacrylate	(1)	8.695	69	4109M	0.198
73) Dibromomethane	(2)	8.714	93	4841	0.197
74) Bromodichloromethane	(2)	8.939	83	13333	0.188
76) 2-Nitropropane	(1)	9.177	41	16325	2.308
80) cis-1,3-Dichloropropene	(2)	9.494	75	15101	0.184
81) 4-Methyl-2-Pentanone	(1)	9.640	43	60789M	1.990
82)$Toluene-d8	(3)	9.799	98	2155491	10.085
82)$Toluene-d8	(3)	9.799	100	1365396	10.091
83) Toluene	(3)	9.878	92	27228	0.195
84) trans-1,3-Dichloropropene	(3)	10.128	75	12246	0.192
85) 1,3-Dichloropropene (total)	(3)		75	27347	0.376
86) Ethyl Methacrylate	(3)	10.189	69	8542	0.179
88) 1,1,2-Trichloroethane	(3)	10.329	97	6705	0.206
89) Tetrachloroethene	(3)	10.433	166	13043	0.199
90) 1,3-Dichloropropane	(3)	10.488	76	11547	0.199
91) 2-Hexanone	(1)	10.536	43	49339	2.240

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	7693	0.181
95) 1,2-Dibromoethane	(3)	10.829	107	5996	0.195
97)*Chlorobenzene-d5	(3)	11.250	117	1470758	10.000
98) Chlorobenzene	(3)	11.280	112	29500	0.198
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	9926	0.189
100) Ethylbenzene	(3)	11.365	91	55951	0.199
101) m+p-Xylene	(3)	11.481	106	41904	0.396
105) Xylene (Total)	(3)		106	62208	0.592
104) o-Xylene	(3)	11.804	106	20304	0.196
106) Styrene	(3)	11.829	104	30491	0.189
107) Bromoform	(3)	11.981	173	3658	0.158
108) Isopropylbenzene	(3)	12.109	105	53181	0.191
111)$4-Bromofluorobenzene	(3)	12.249	95	632123	9.736
111)$4-Bromofluorobenzene	(3)	12.249	174	557125	9.758
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	7440	0.200
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	14487	1.538
114) Bromobenzene	(4)	12.371	156	12361	0.211
116) 1,2,3-Trichloropropane	(4)	12.390	110	1927	0.204
117) n-Propylbenzene	(4)	12.438	91	63381	0.198
119) 2-Chlorotoluene	(4)	12.518	126	12210	0.204
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	43967	0.198
122) 4-Chlorotoluene	(4)	12.609	126	12529	0.205
125) tert-Butylbenzene	(4)	12.810	134	9693	0.206
126) Pentachloroethane	(4)	12.847	167	6911	0.188
127) 1,2,4-Trimethylbenzene	(4)	12.859	105	45150	0.203
128) sec-Butylbenzene	(4)	12.975	105	57161	0.199
131) 1,3-Dichlorobenzene	(4)	13.085	146	22266	0.195
132) p-Isopropyltoluene	(4)	13.085	119	45352	0.189
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	602005	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	26454	0.223
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	19742	0.209
136) Benzyl Chloride	(4)	13.225	126	2223	0.168
138) n-Butylbenzene	(4)	13.377	92	22932	0.191
139) 1,2-Dichlorobenzene	(4)	13.414	146	20584	0.203
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	937	0.205
144) 1,3,5-Trichlorobenzene	(4)	14.091	180	17214	0.204
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	15389	0.221
146) Hexachlorobutadiene	(4)	14.590	225	6451	0.196

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

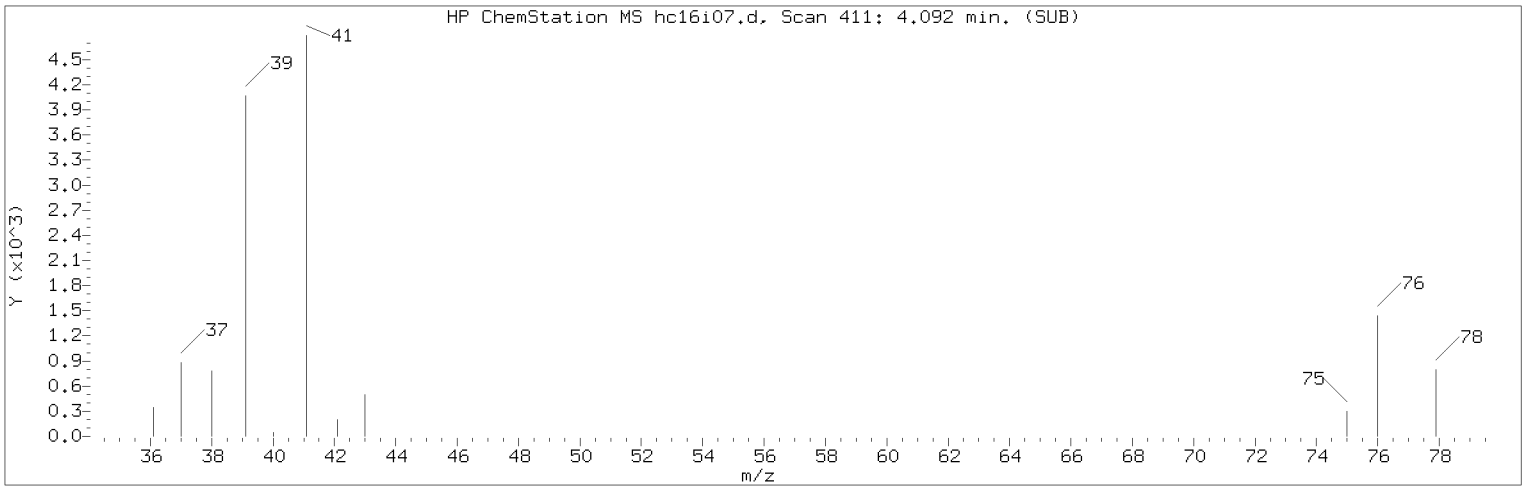
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

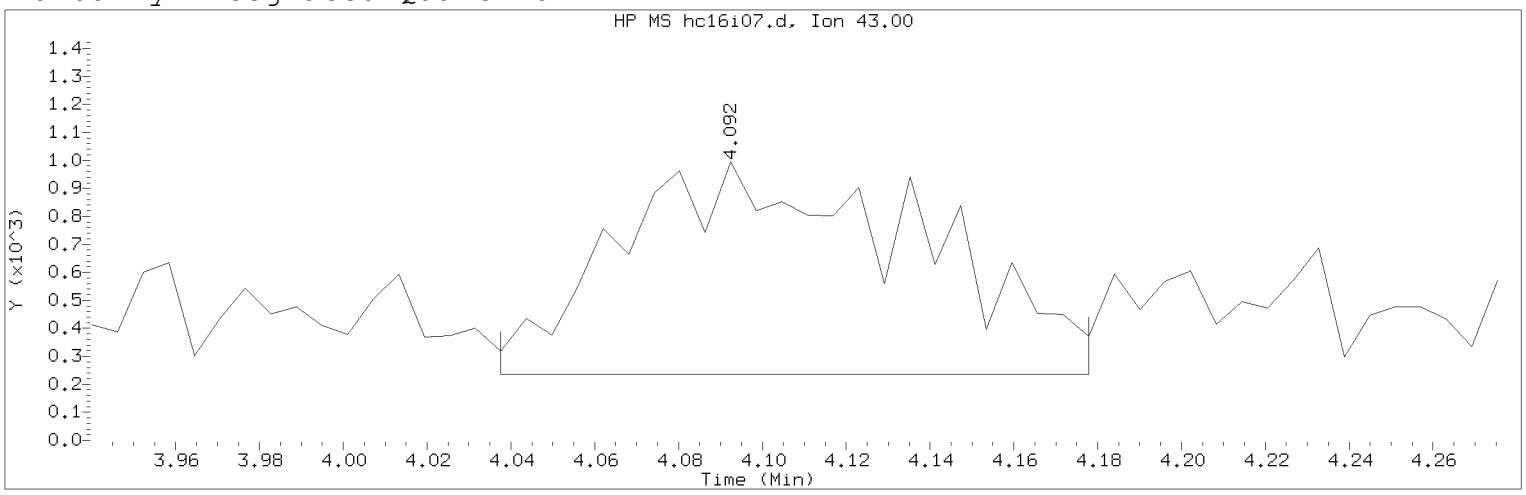
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.700	128	27671	0.244
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	14742	0.252

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

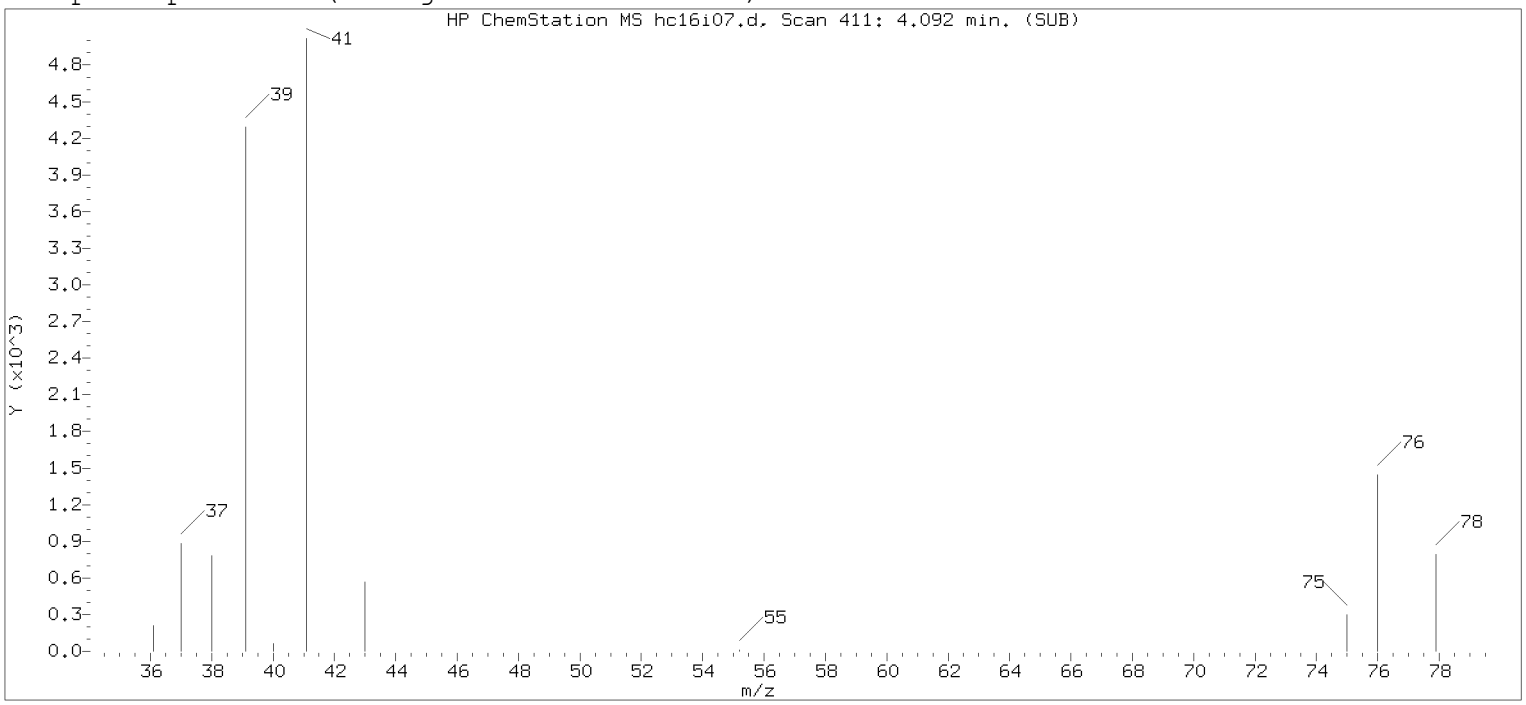
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 411
Retention Time (minutes): 4.092
Quant Ion : 43.00
Area (flag) : 3839M
On-Column Amount (ng) : 0.2009
Integration start scan : 401 Integration stop scan: 424
Y at integration start : 235 Y at integration end: 235

Reason for manual integration: improper integration

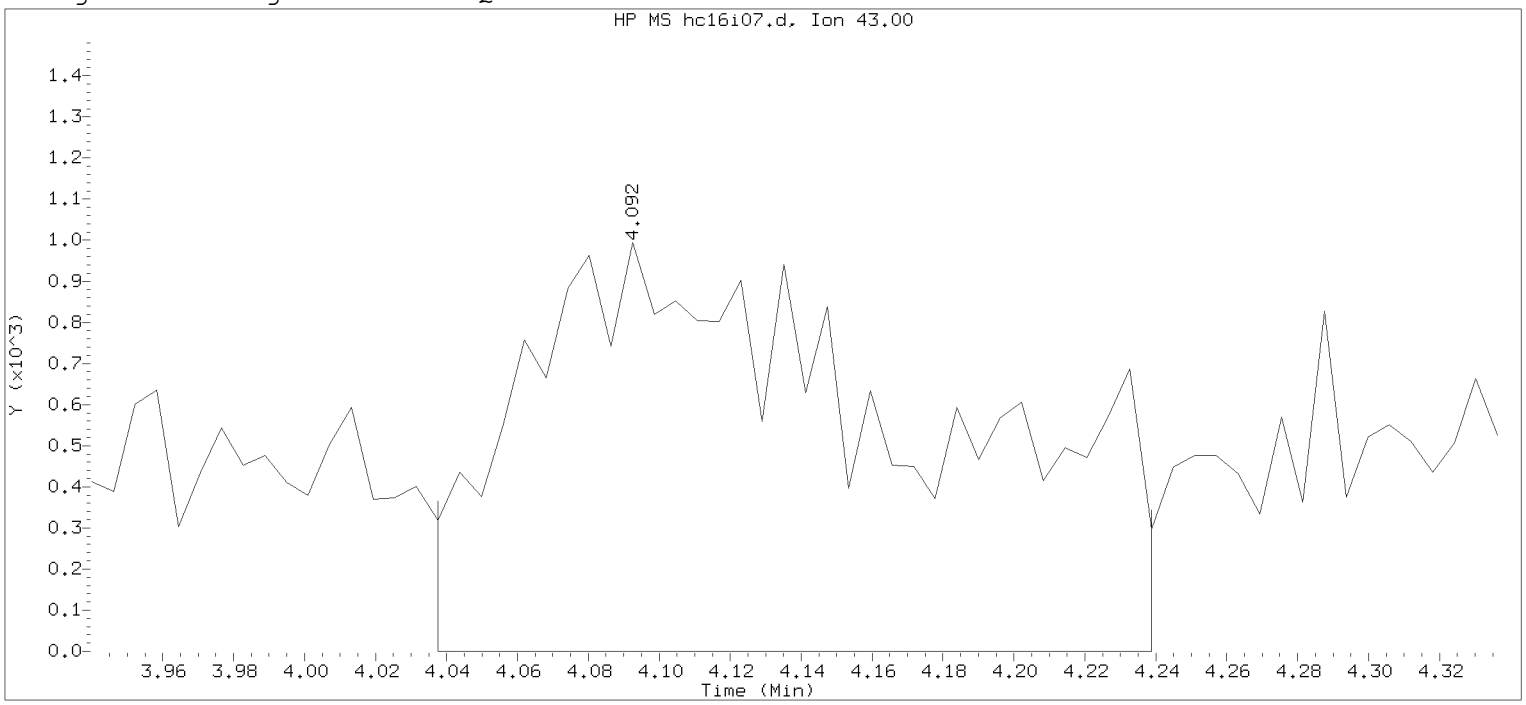
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

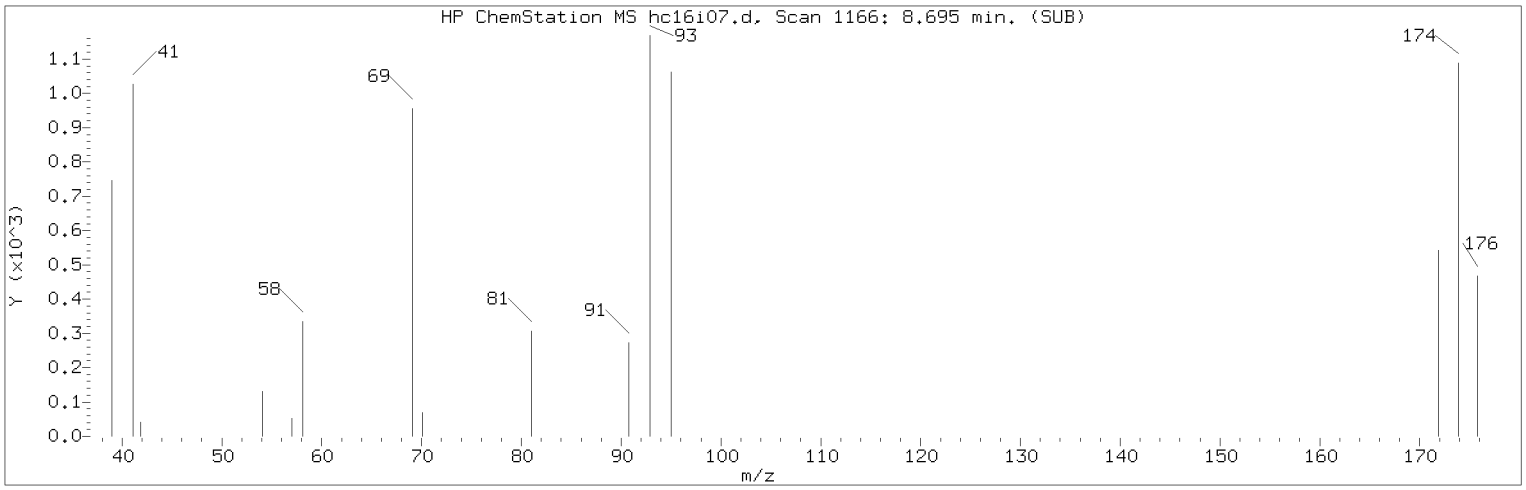
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

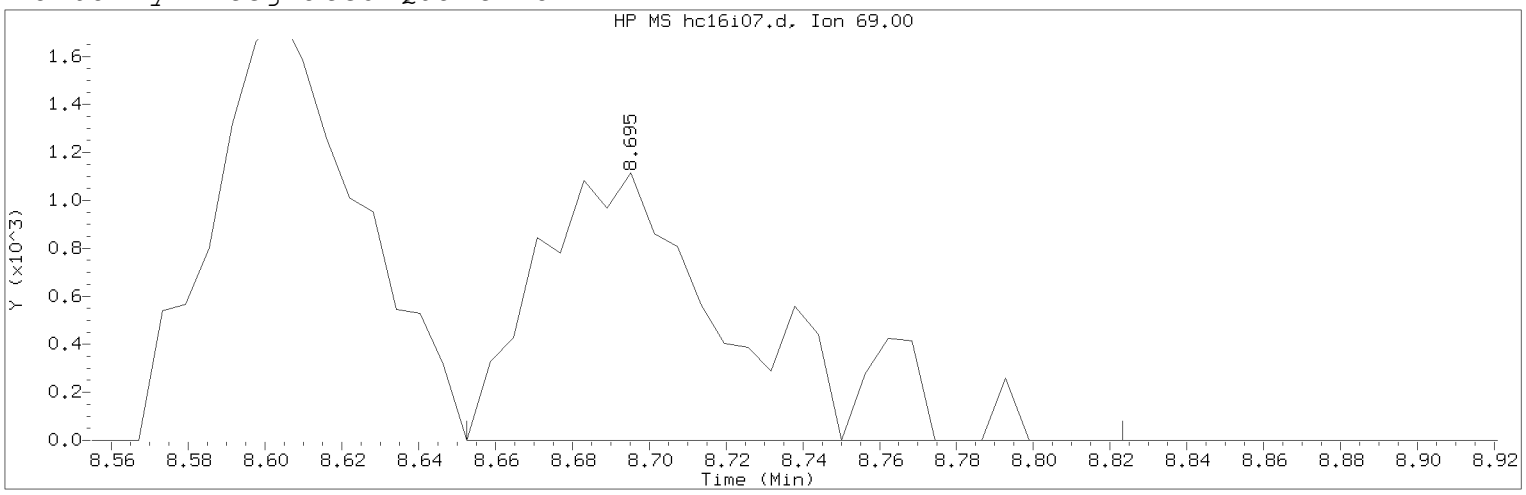
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 411
Retention Time (minutes): 4.092
Quant Ion : 43.00
Area : 7680
On-column Amount (ng) : 0.3254
Integration start scan : 401 Integration stop scan: 434
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key ID: 0x2[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

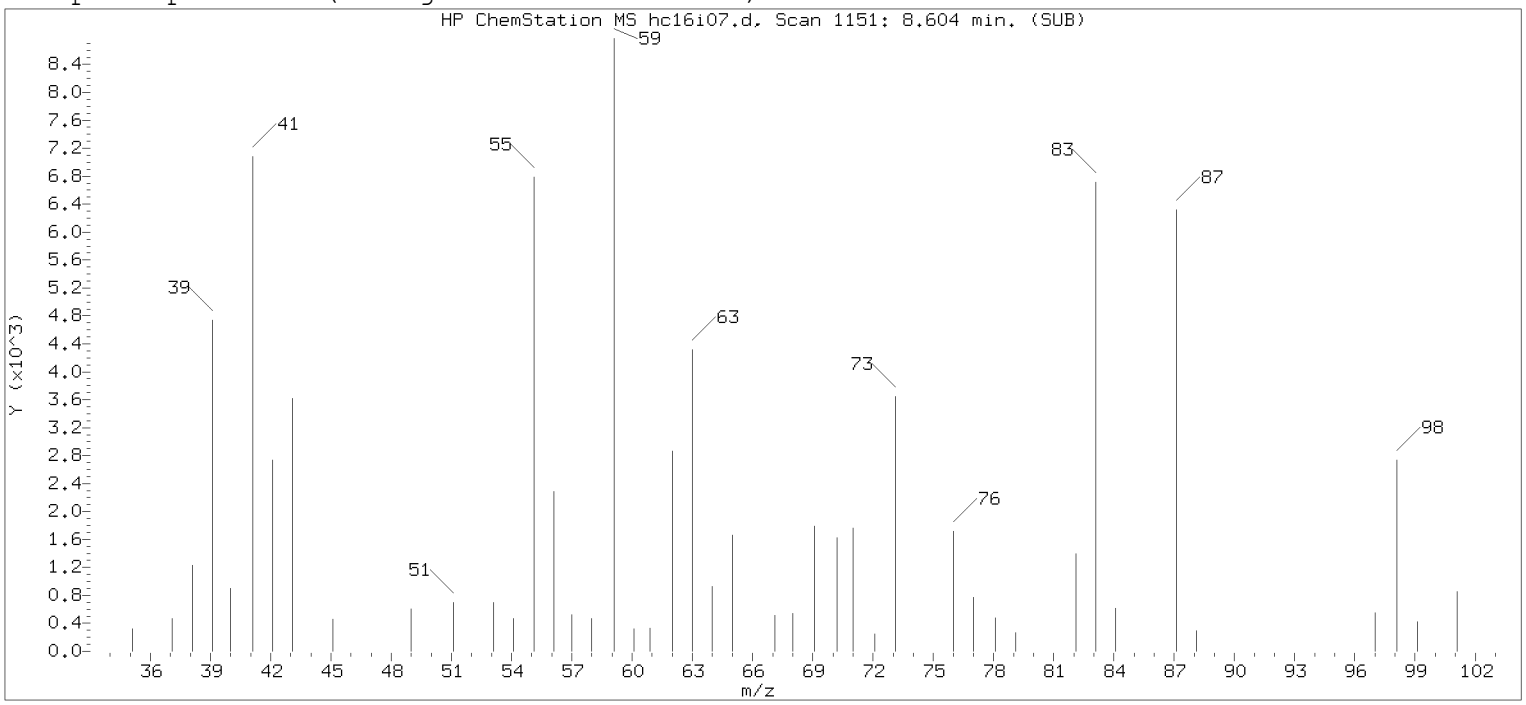
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 4109M
On-Column Amount (ng) : 0.1980
Integration start scan : 1158 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

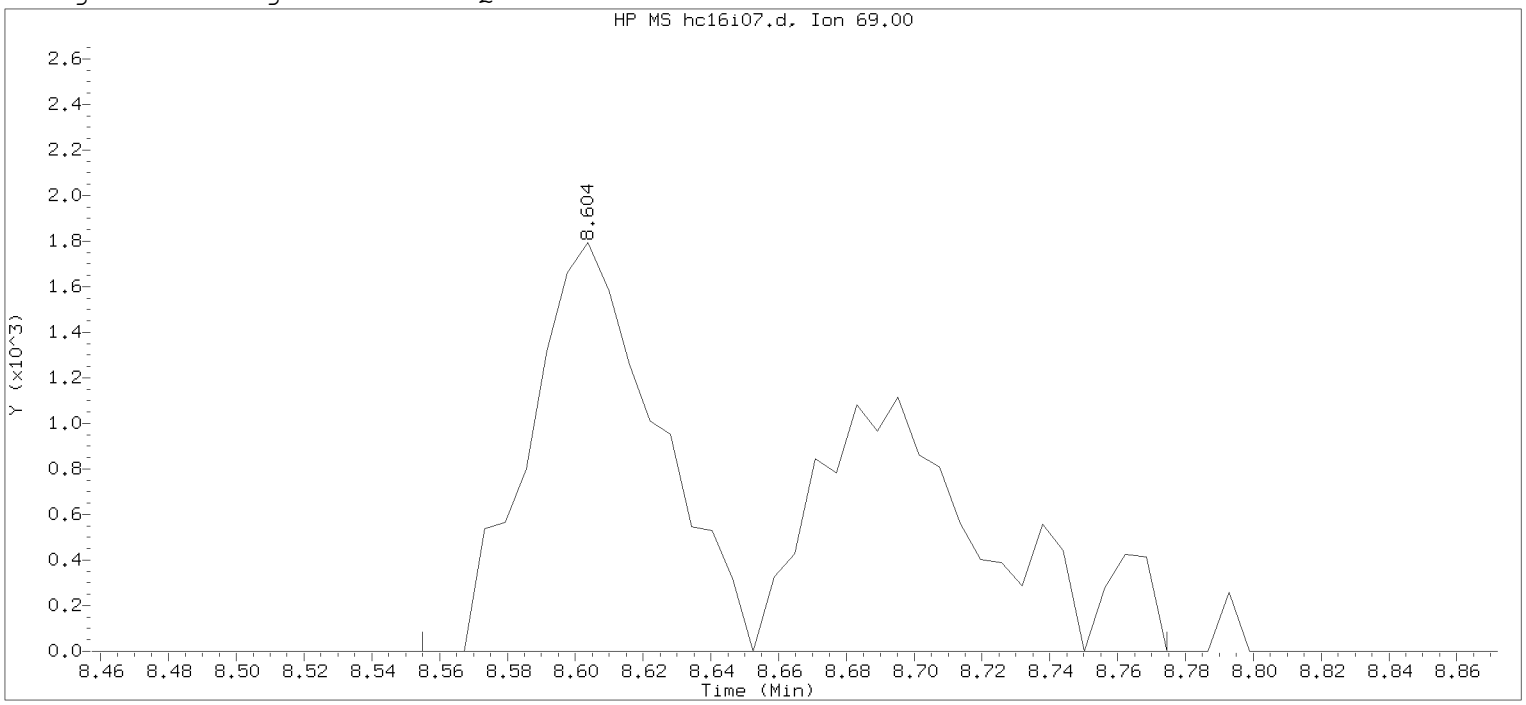
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

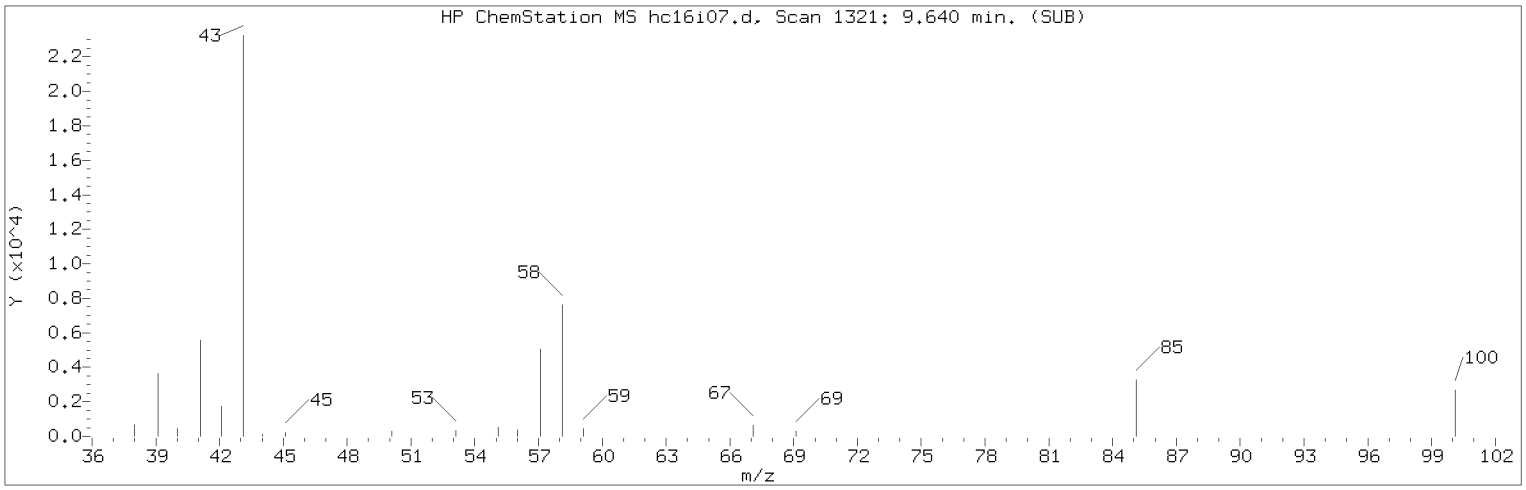
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

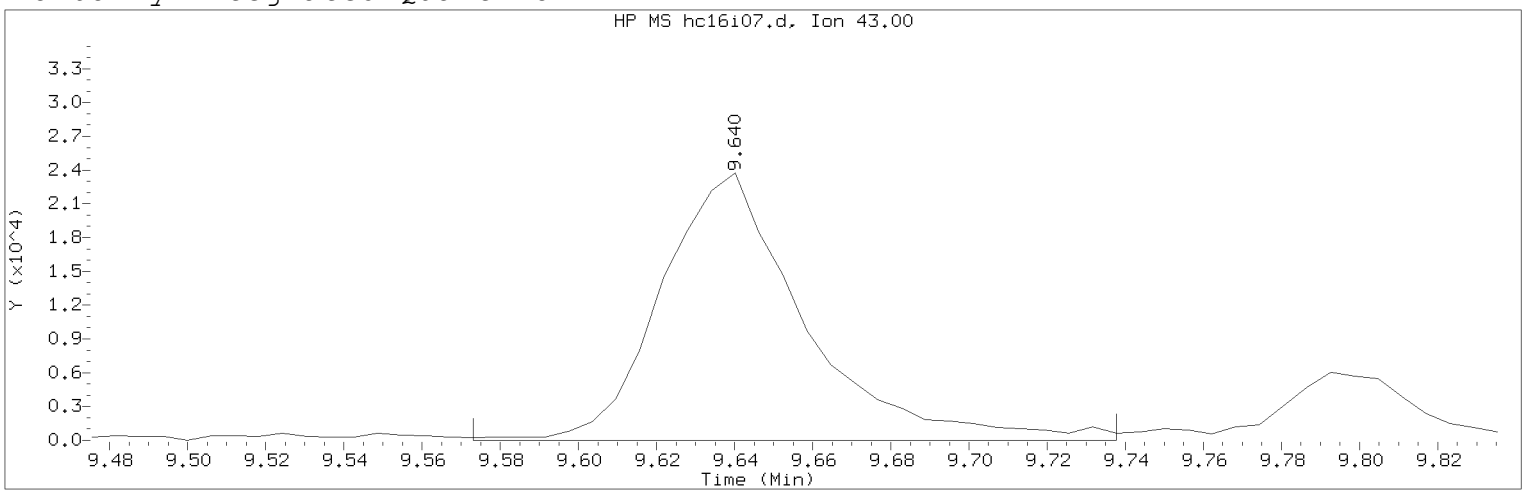
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 8723
On-column Amount (ng) : 0.3677
Integration start scan : 1142 Integration stop scan: 1178
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. Key: 0235

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:51 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

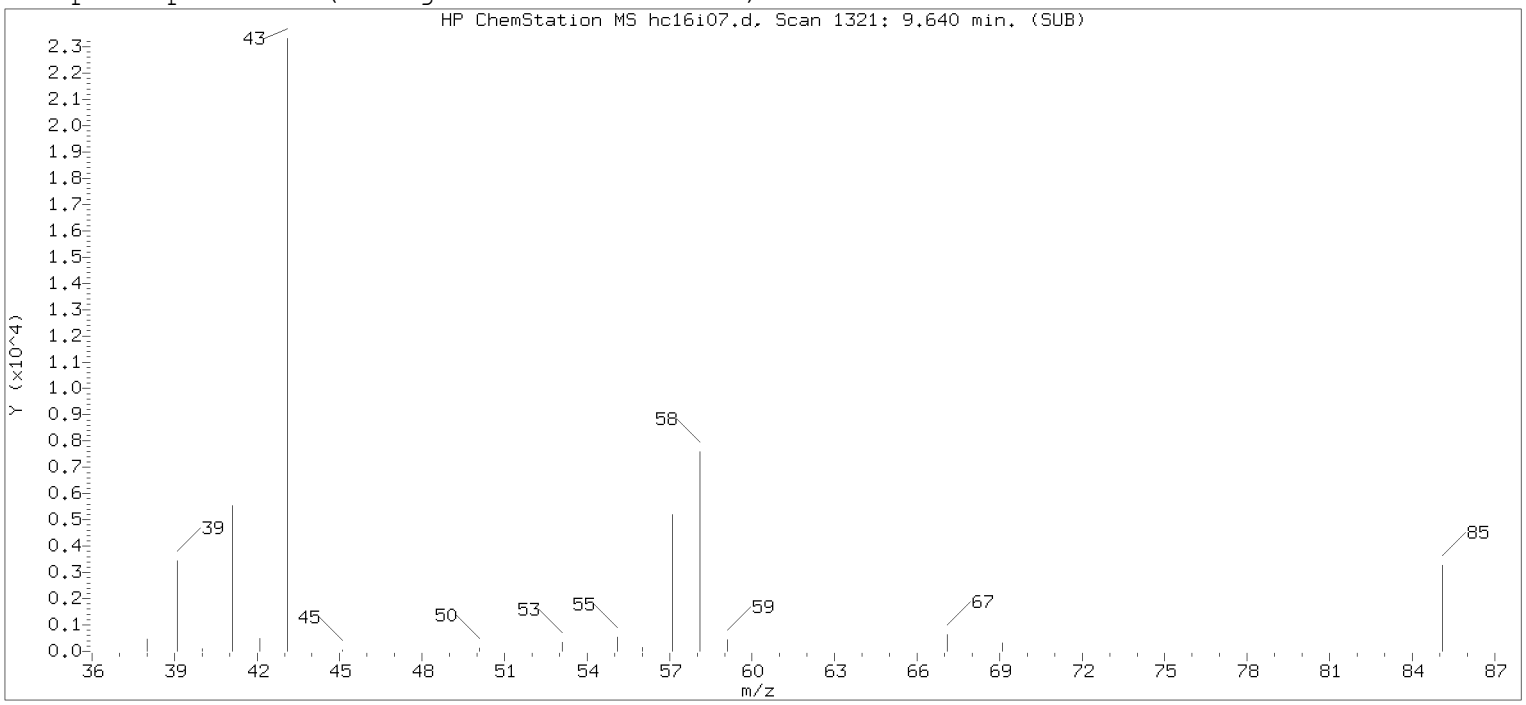
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1321
Retention Time (minutes): 9.640
Quant Ion : 43.00
Area (flag) : 60789M
On-Column Amount (ng) : 1.9902
Integration start scan : 1309 Integration stop scan: 1336
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

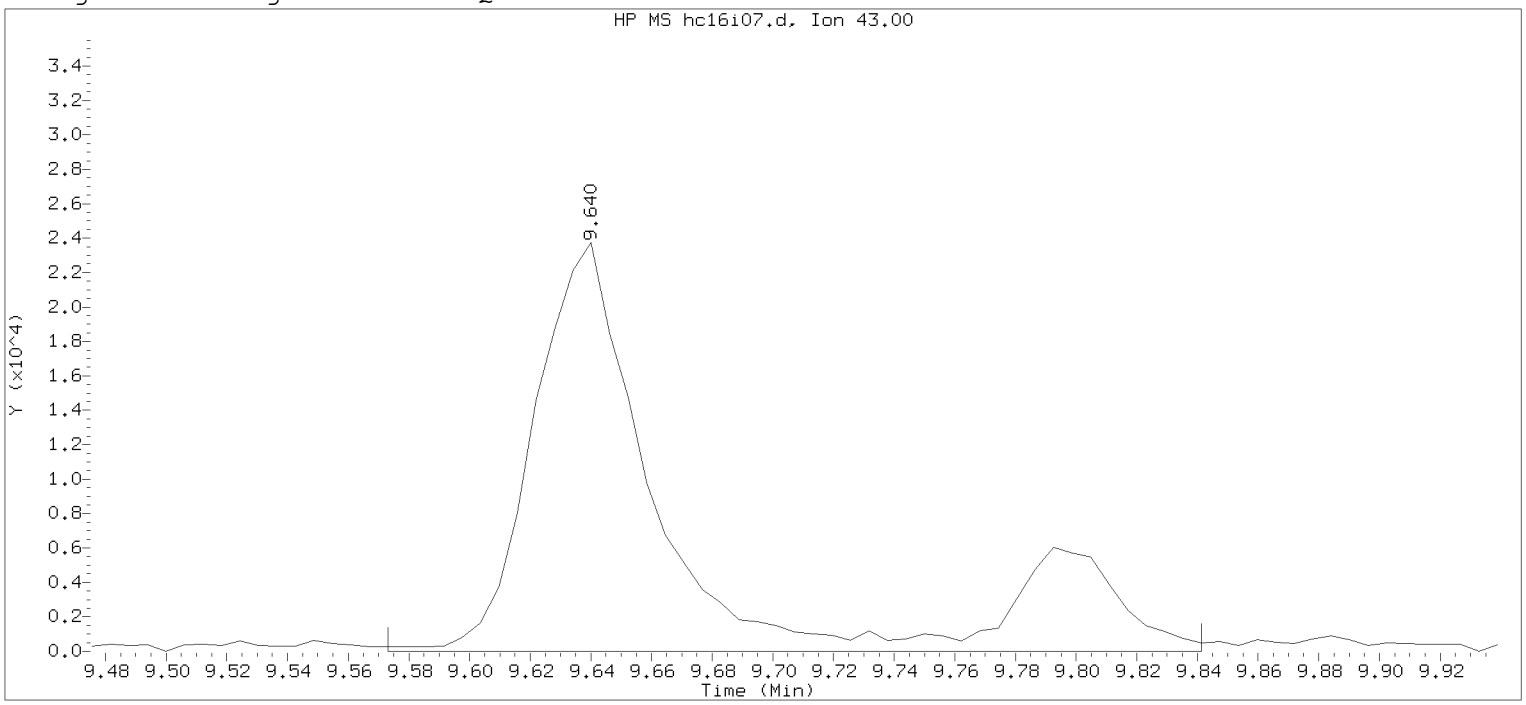
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:00.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



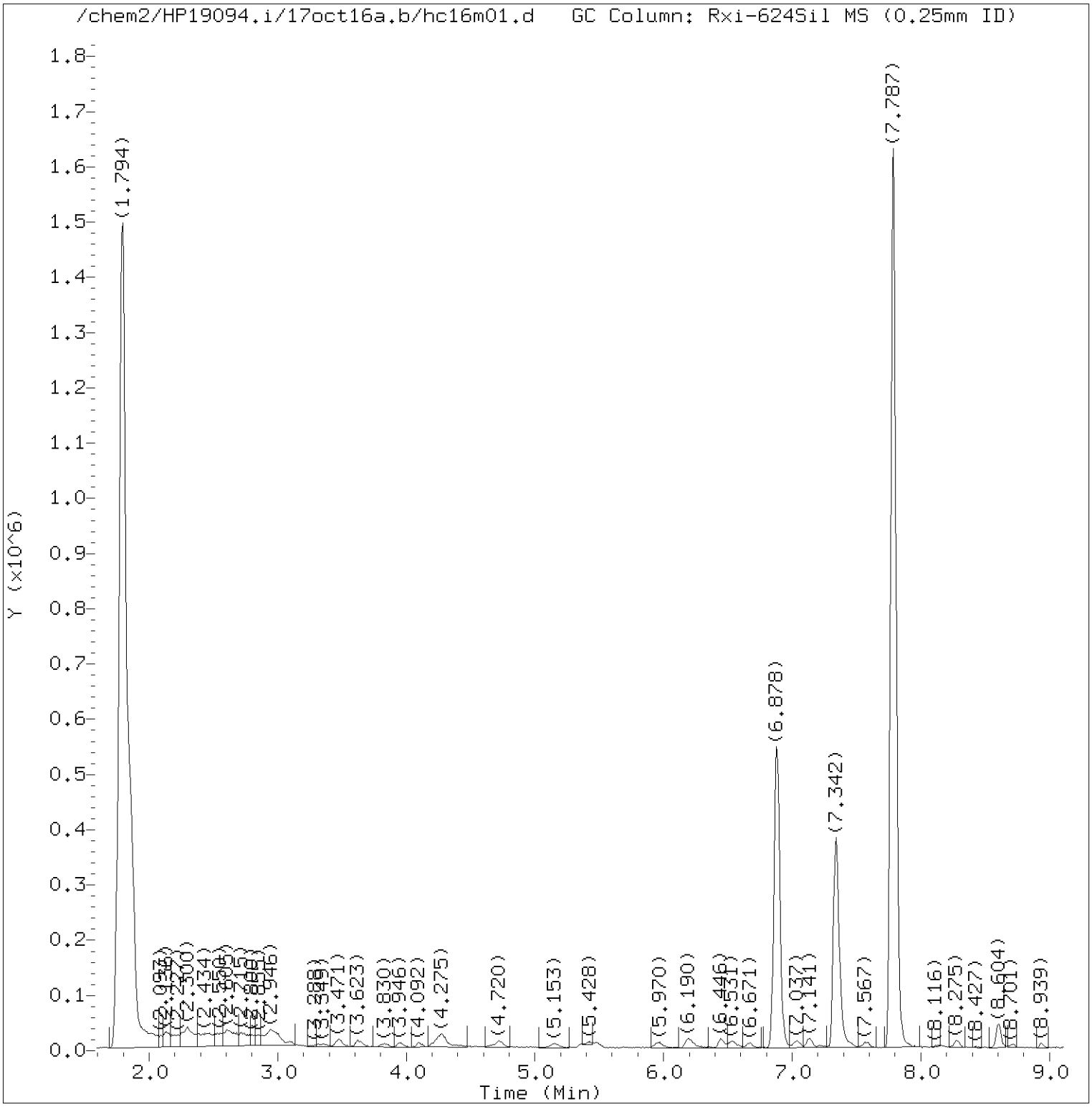
Data File: /chem2/HP19094.i/17oct16a.b/hc16i07.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 12:45 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:40 kas02648

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1321
Retention Time (minutes): 9.640
Quant Ion : 43.00
Area : 75621
On-column Amount (ng) : 2.3928
Integration start scan : 1309 Integration stop scan: 1353
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:00.
Target 3.5 esignature used. kas02648



Total Ion Chromatogram (TIC)

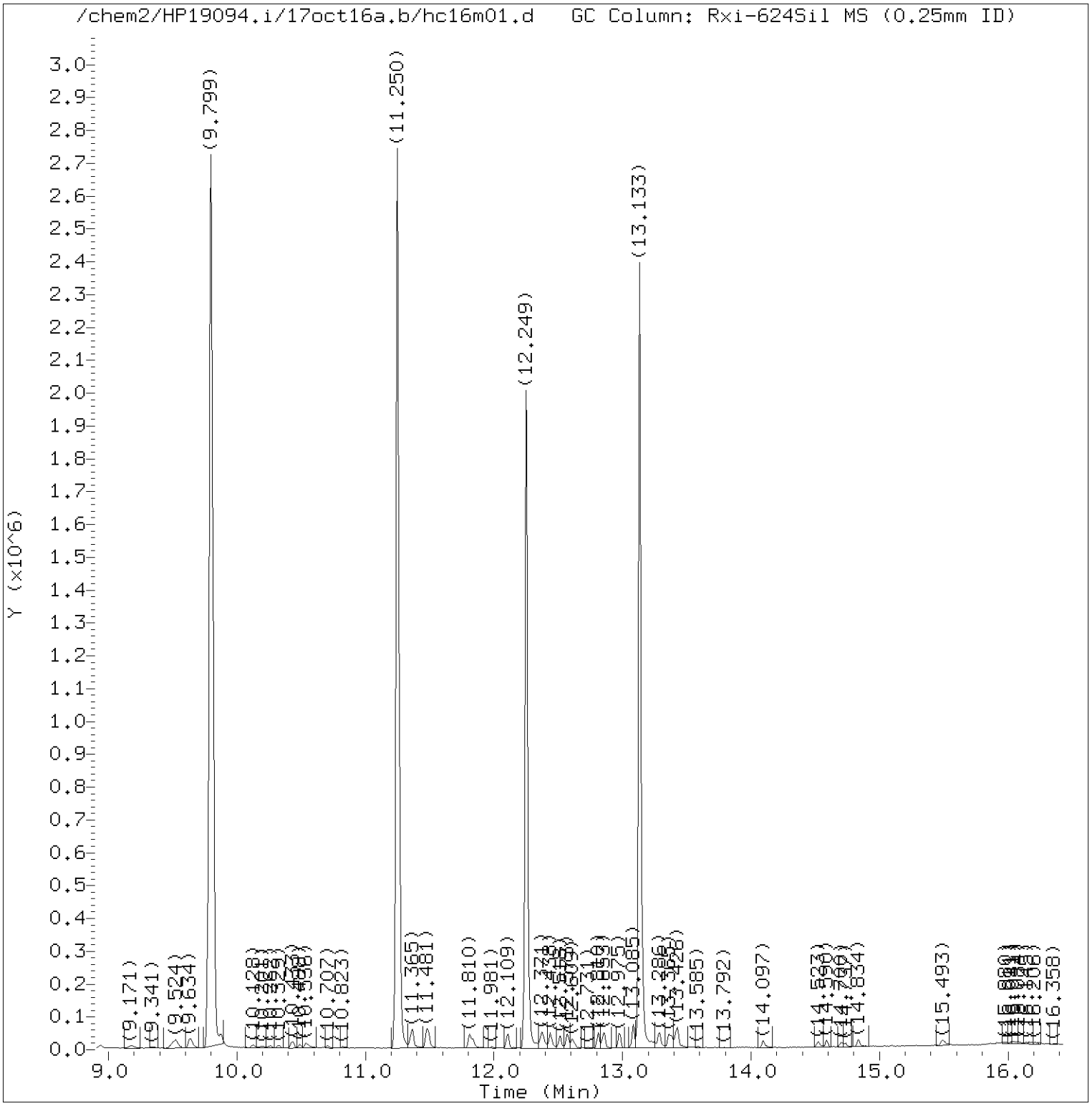
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	9153	0.097
2) Chloromethane	(2)	2.129	50	12284	0.132
5) Vinyl Chloride	(2)	2.270	62	8986	0.105
6) 1,3-Butadiene	(2)	2.300	39	9123	0.112
7) Bromomethane	(2)	2.617	94	6690	0.115
8) Chloroethane	(2)	2.721	64	5510	0.113
9) Dichlorofluoromethane	(2)	2.952	67	16317	0.114
10) Trichlorofluoromethane	(2)	3.050	101	11429	0.100
11) Ethyl ether	(2)	3.288	59	2964	0.081
12) Freon 123a	(2)	3.367	67	6734	0.094
13) Acrolein	(1)	3.477	56	26992	4.897
15) 1,1-Dichloroethene	(2)	3.617	96	4338	0.095
14) Acetone	(1)	3.654	43	14864	2.106
16) Freon 113	(2)	3.660	101	4018	0.079
17) Methyl Iodide	(2)	3.818	142	8549	0.094
18) Carbon Disulfide	(2)	3.946	76	18651	0.127
21) Methyl Acetate	(1)	4.086	43	1371	0.065
22) Allyl Chloride	(2)	4.092	41	11399	0.110
26)*t-Butyl Alcohol-d10	(1)	4.251	65	87742	50.000
23) Methylene Chloride	(2)	4.275	84	7149	0.137
28) t-Butyl Alcohol	(1)	4.379	59	5109	2.137
29) Acrylonitrile	(1)	4.684	53	3512	0.406
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	11302	0.100
31) trans-1,2-Dichloroethene	(2)	4.733	96	5630	0.109
32) n-Hexane	(2)	5.159	57	7720	0.085
33) 1,1-Dichloroethane	(2)	5.373	63	10703	0.101
34) di-Isopropyl Ether	(2)	5.415	45	20136	0.100
35) 2-Chloro-1,3-Butadiene	(2)	5.489	53	8611	0.086
37) Ethyl t-butyl ether	(2)	5.958	59	15736	0.098
40) 1,2-Dichloroethene (Total)	(2)		96	11927	0.215
39) cis-1,2-Dichloroethene	(2)	6.184	96	6297	0.106
38) 2-Butanone	(1)	6.190	43	12253	0.884
41) 2,2-Dichloropropane	(2)	6.208	77	9134	0.102
42) Propionitrile	(1)	6.244	54	5162	1.614
45) Methacrylonitrile	(1)	6.446	67	10325	0.888
47) Bromochloromethane	(2)	6.525	128	1962	0.084
48) Tetrahydrofuran	(1)	6.543	71	3101	0.986
49) Chloroform	(2)	6.677	83	10206	0.099

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	509012	9.804
51) 1,1,1-Trichloroethane	(2)	6.915	97	9028	0.097
52) Cyclohexane	(2)	7.037	56	10534	0.093
54) Carbon Tetrachloride	(2)	7.135	117	7595	0.094
55) 1,1-Dichloropropene	(2)	7.141	75	7504	0.092
56) Isobutyl Alcohol	(1)	7.220	41	7958	8.233
57)$1,2-Dichloroethane-d4	(2)	7.342	102	78470	9.651
58) Benzene	(2)	7.385	78	23501	0.105
59) 1,2-Dichloroethane	(2)	7.452	62	7364	0.118
60) t-Amyl methyl ether	(2)	7.580	73	12488	0.096
63)*Fluorobenzene	(2)	7.787	96	2150060	10.000
62) n-Heptane	(2)	7.811	43	12230	0.112
65) n-Butanol	(1)	8.128	56	7591	10.676
67) Trichloroethene	(2)	8.281	95	6339	0.106
69) Methylcyclohexane	(2)	8.598	83	8289	0.080
70) 1,2-Dichloropropane	(2)	8.610	63	6311	0.109
71) Methyl Methacrylate	(1)	8.701	69	1730M	0.075
73) Dibromomethane	(2)	8.720	93	2551	0.105
74) Bromodichloromethane	(2)	8.927	83	6761	0.096
76) 2-Nitropropane	(1)	9.183	41	10465	1.329
80) cis-1,3-Dichloropropene	(2)	9.500	75	7190	0.088
81) 4-Methyl-2-Pentanone	(1)	9.640	43	31029	0.913
82)$Toluene-d8	(3)	9.799	98	2127274	10.260
83) Toluene	(3)	9.878	92	14469	0.107
84) trans-1,3-Dichloropropene	(3)	10.128	75	5542	0.090
85) 1,3-Dichloropropene (total)	(3)		75	12732	0.178
86) Ethyl Methacrylate	(3)	10.195	69	4205	0.091
88) 1,1,2-Trichloroethane	(3)	10.329	97	3015	0.095
89) Tetrachloroethene	(3)	10.433	166	5438	0.086
90) 1,3-Dichloropropane	(3)	10.488	76	5691	0.101
91) 2-Hexanone	(1)	10.542	43	25406	1.038
93) Dibromochloromethane	(3)	10.707	129	3746	0.091
95) 1,2-Dibromoethane	(3)	10.823	107	2741	0.092
97)*Chlorobenzene-d5	(3)	11.250	117	1426744	10.000
98) Chlorobenzene	(3)	11.280	112	14600	0.101
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	4878	0.096
100) Ethylbenzene	(3)	11.365	91	27184	0.100
101) m+p-Xylene	(3)	11.481	106	20341	0.198

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

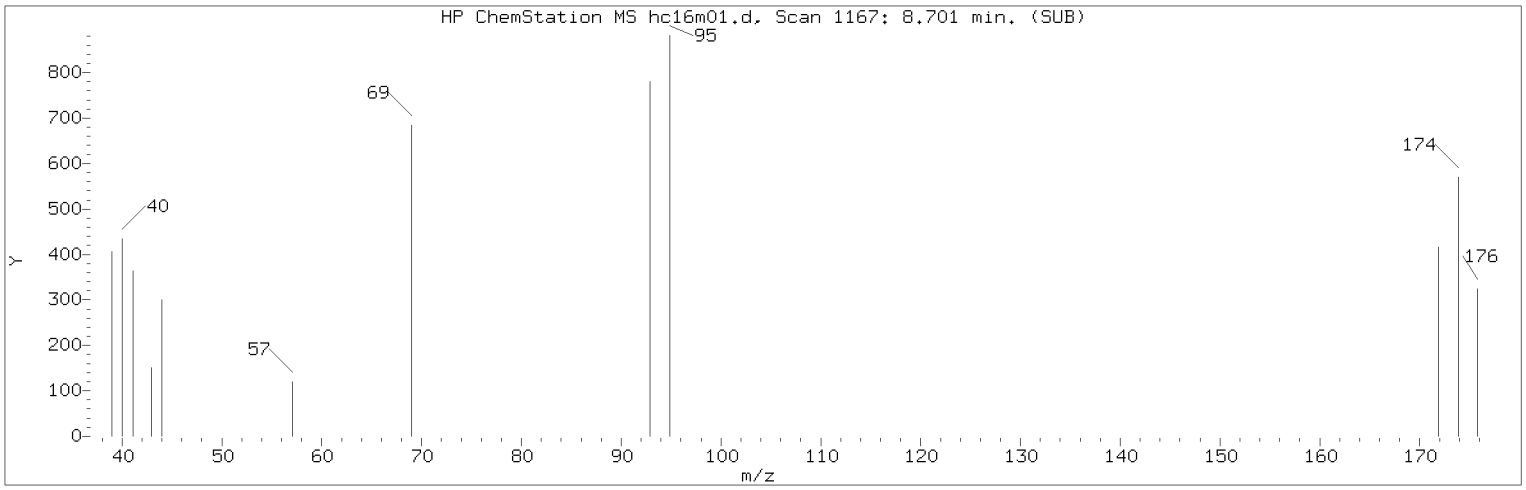
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
105) Xylene (Total)	(3)		106	30911	0.303
104) o-Xylene	(3)	11.810	106	10570	0.105
106) Styrene	(3)	11.835	104	15420	0.098
107) Bromoform	(3)	11.993	173	1827	0.081
108) Isopropylbenzene	(3)	12.109	105	26275	0.097
111)$4-Bromofluorobenzene	(3)	12.249	95	608680	9.664
113) 1,1,2,2-Tetrachloroethane	(4)	12.341	83	4090	0.116
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	7373	0.702
114) Bromobenzene	(4)	12.371	156	6269	0.113
116) 1,2,3-Trichloropropane	(4)	12.384	110	820	0.091
117) n-Propylbenzene	(4)	12.438	91	31562	0.104
119) 2-Chlorotoluene	(4)	12.518	126	6186	0.109
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	21650	0.103
122) 4-Chlorotoluene	(4)	12.609	126	5758	0.099
125) tert-Butylbenzene	(4)	12.810	134	5131	0.114
126) Pentachloroethane	(4)	12.847	167	3304	0.095
127) 1,2,4-Trimethylbenzene	(4)	12.859	105	21393	0.101
128) sec-Butylbenzene	(4)	12.975	105	27793	0.102
131) 1,3-Dichlorobenzene	(4)	13.085	146	11765	0.109
132) p-Isopropyltoluene	(4)	13.085	119	22907	0.101
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	572291	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	13317	0.118
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	9910M	0.110
136) Benzyl Chloride	(4)	13.237	126	755	0.060
138) n-Butylbenzene	(4)	13.377	92	10709	0.094
139) 1,2-Dichlorobenzene	(4)	13.414	146	10649	0.110
143) 1,2-Dibromo-3-chloropropane	(1)	13.975	155	113	0.022
144) 1,3,5-Trichlorobenzene	(4)	14.097	180	9045	0.113
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	8416	0.127
146) Hexachlorobutadiene	(4)	14.590	225	3349	0.107
147) Naphthalene	(4)	14.700	128	16748	0.156
148) 1,2,3-Trichlorobenzene	(4)	14.834	180	8533	0.153

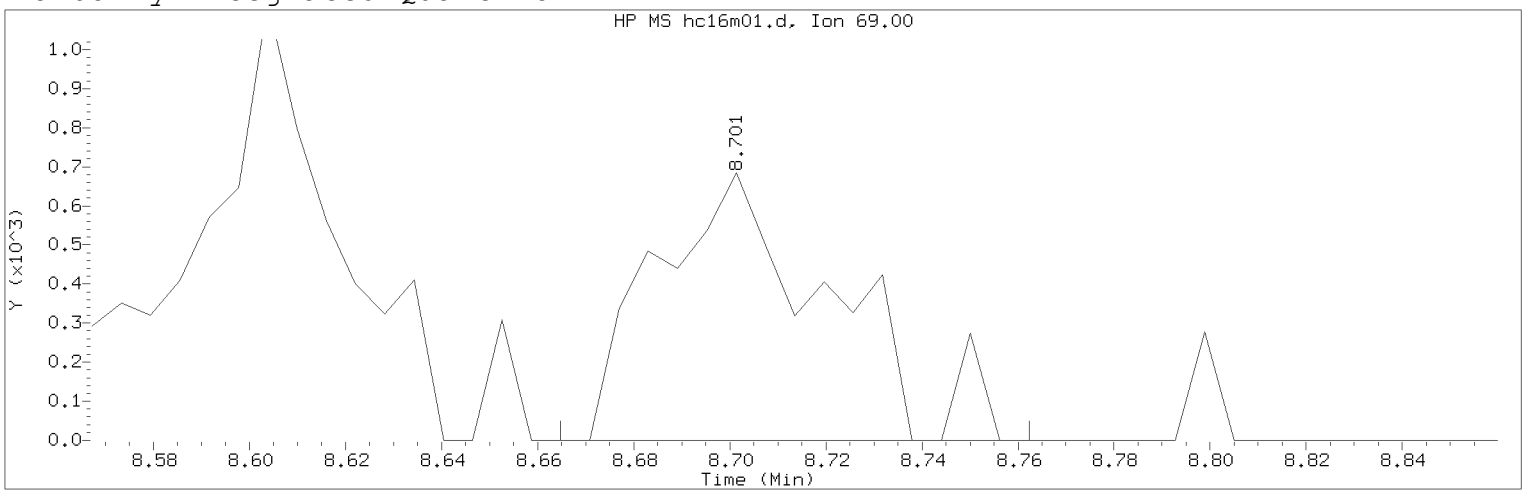
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

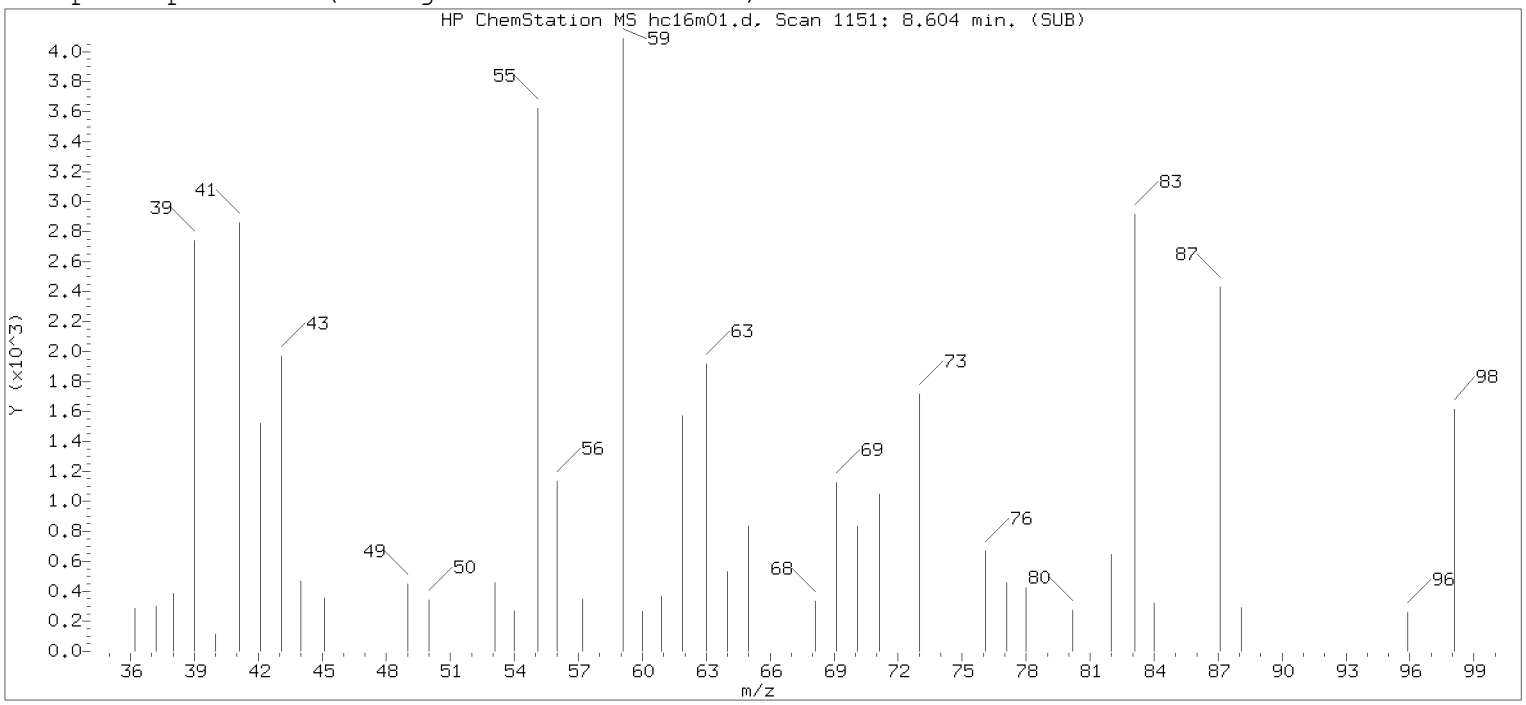
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1167
Retention Time (minutes): 8.701
Quant Ion : 69.00
Area (flag) : 1730M
On-Column Amount (ng) : 0.0750
Integration start scan : 1160 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

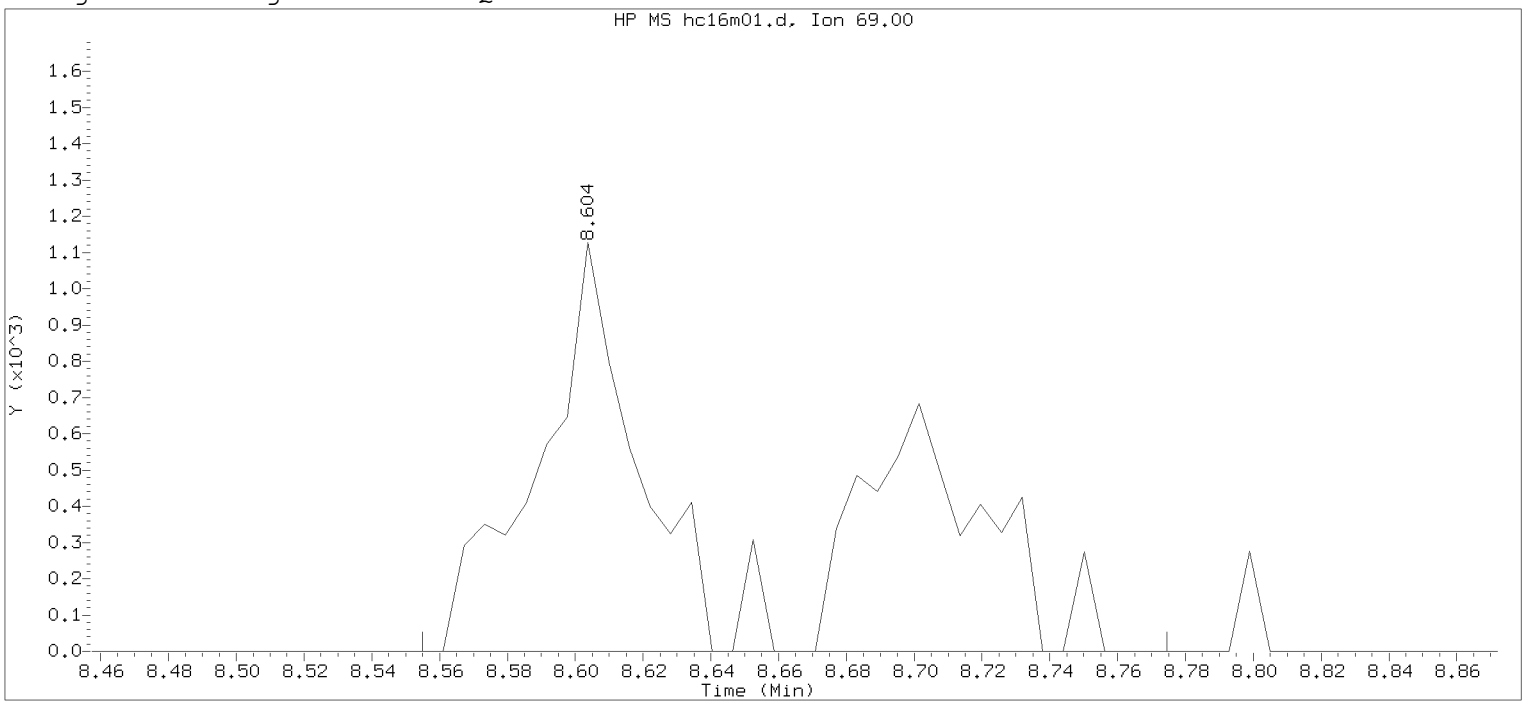
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

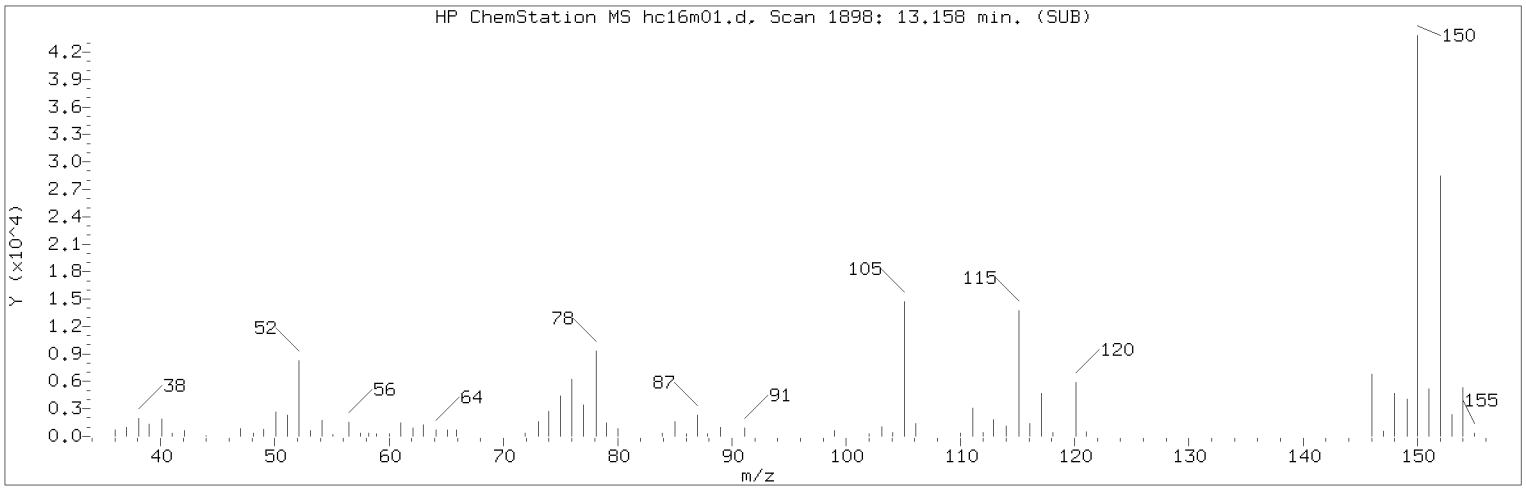
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:03
Date, time and analyst ID of latest file update: 16-Oct-2017 13:23 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

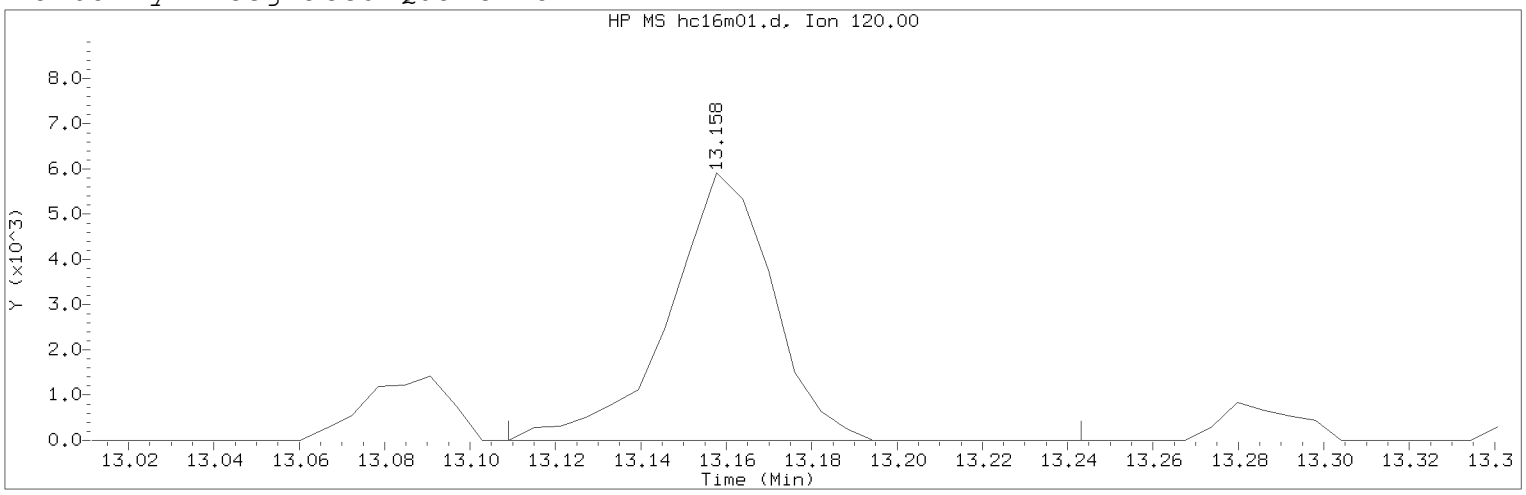
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 4115
On-column Amount (ng) : 0.1347
Integration start scan : 1142 Integration stop scan: 1178
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key ID: 0234

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 13:58 kas02648

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

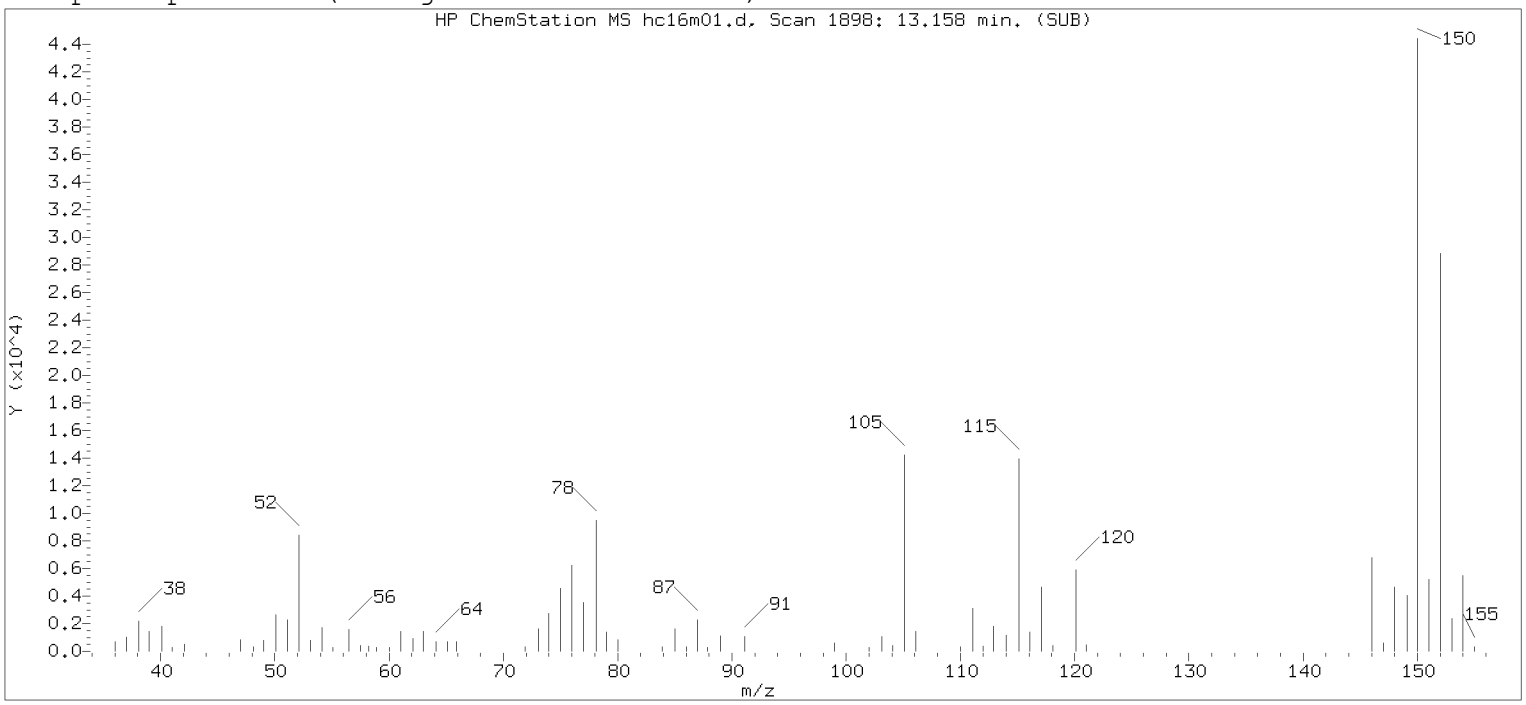
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 120.00
Area (flag) : 9910M
On-Column Amount (ng) : 0.1103
Integration start scan : 1889 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

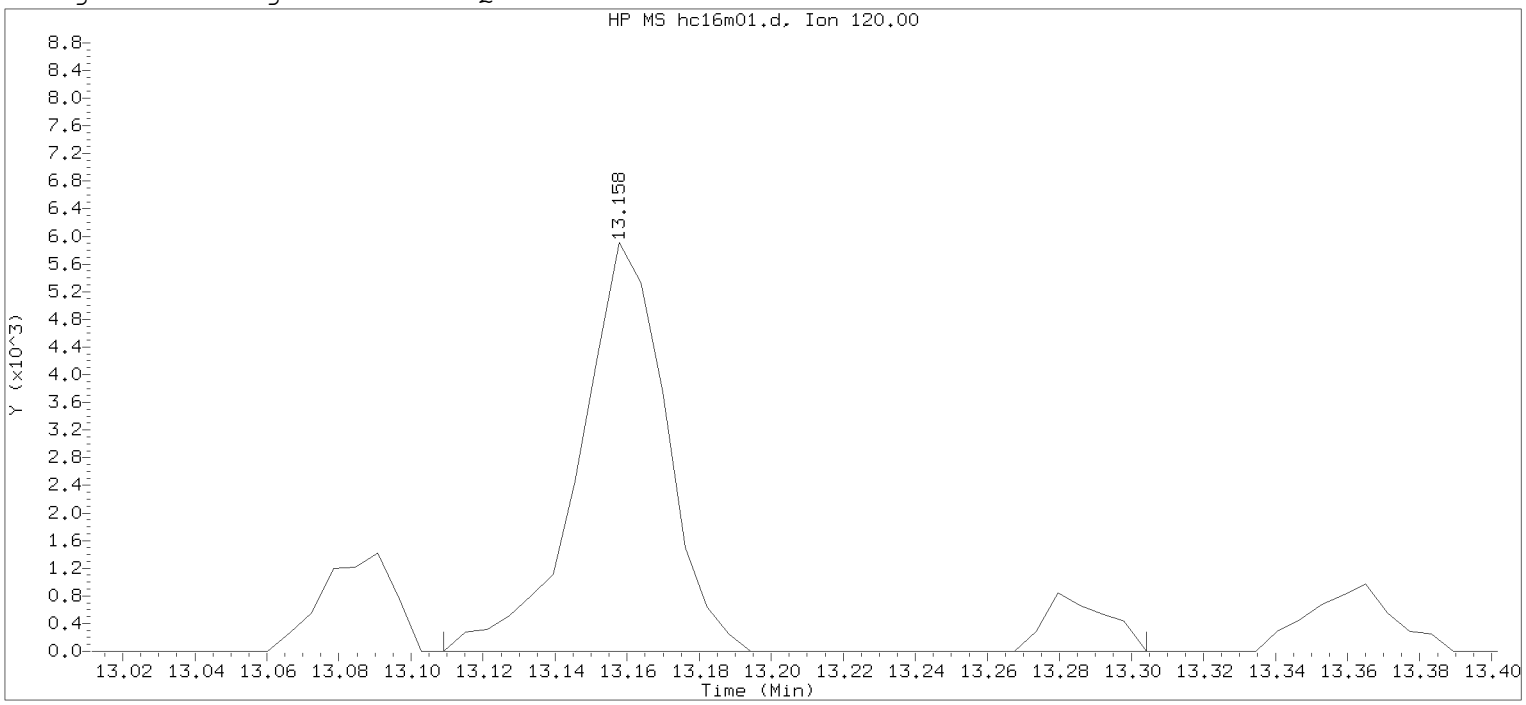
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 13:59.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



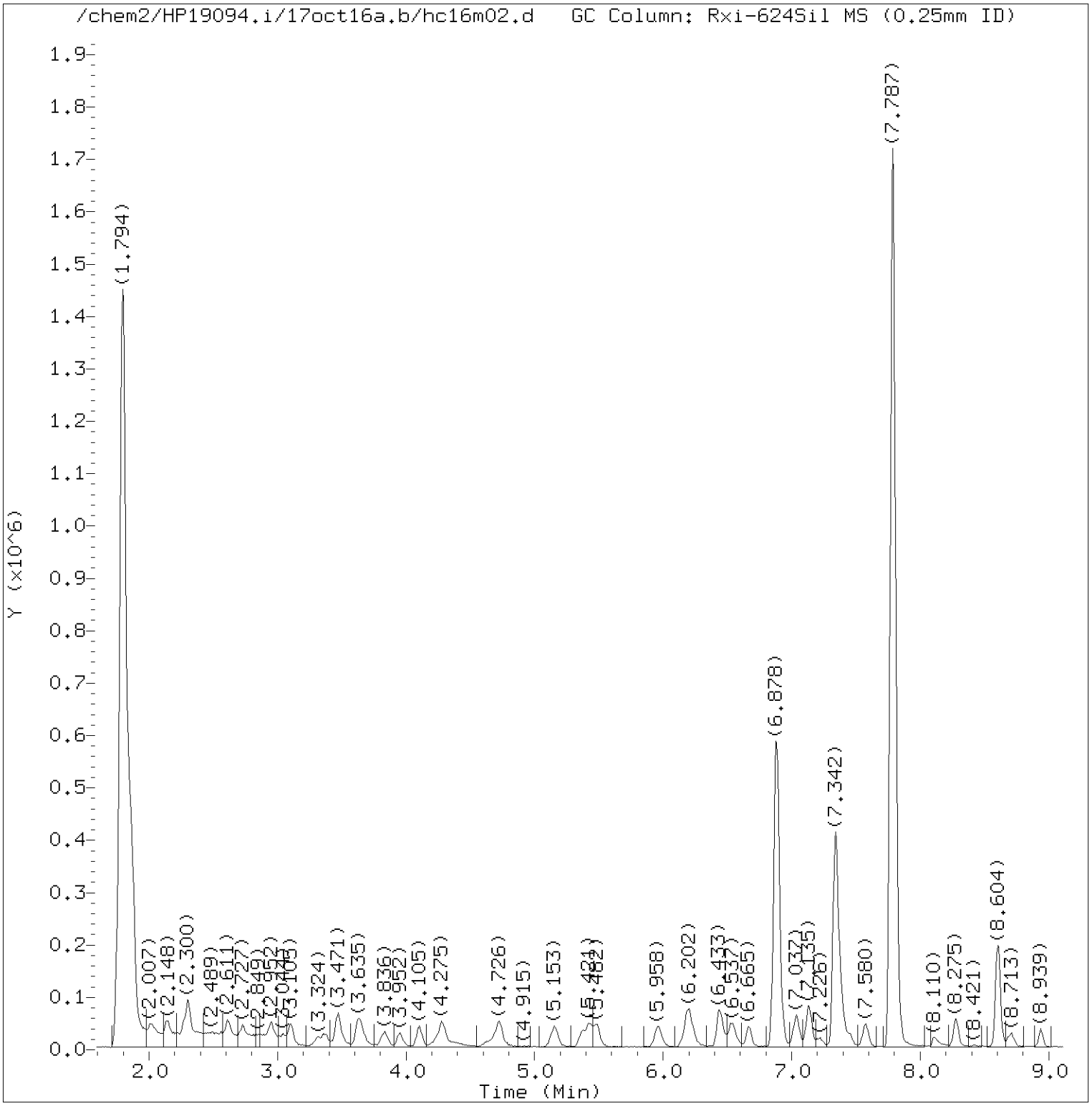
Data File: /chem2/HP19094.i/17oct16a.b/hc16m01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:05 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:03
Date, time and analyst ID of latest file update: 16-Oct-2017 13:23 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 120.00
Area : 10922
On-column Amount (ng) : 0.1216
Integration start scan : 1889 Integration stop scan: 1921
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 13:59.
Target 3.5 esignature used. Key: 2336



Total Ion Chromatogram (TIC)

Target Revision 3.5

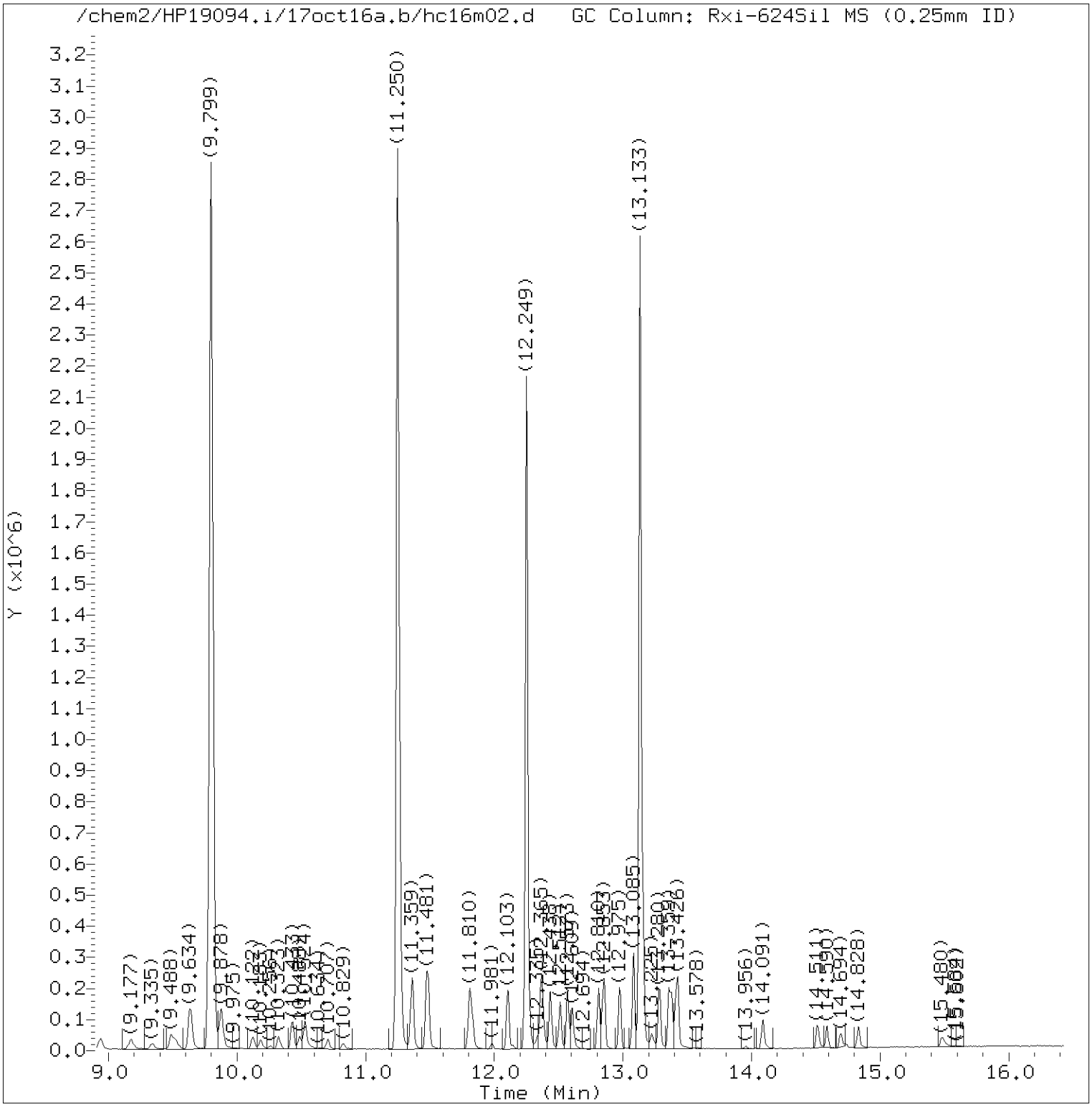
Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

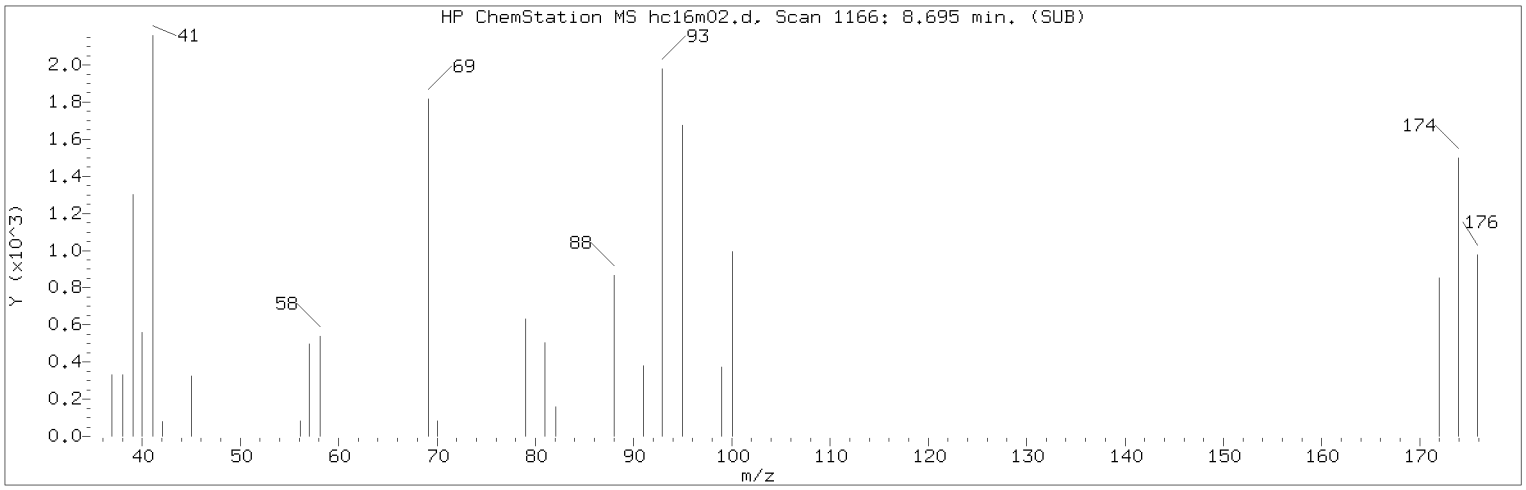
Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	85164	50.000
50)$Dibromofluoromethane	(2)	6.885	113	526844	9.820
57)$1,2-Dichloroethane-d4	(2)	7.342	102	81733	9.729
63)*Fluorobenzene	(2)	7.787	96	2221581	10.000
72) 1,4-Dioxane	(1)	8.695	88	1843M	11.974
82)$Toluene-d8	(3)	9.799	98	2193085	10.409
97)*Chlorobenzene-d5	(3)	11.250	117	1449707	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	629888	9.842
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	606801	10.000

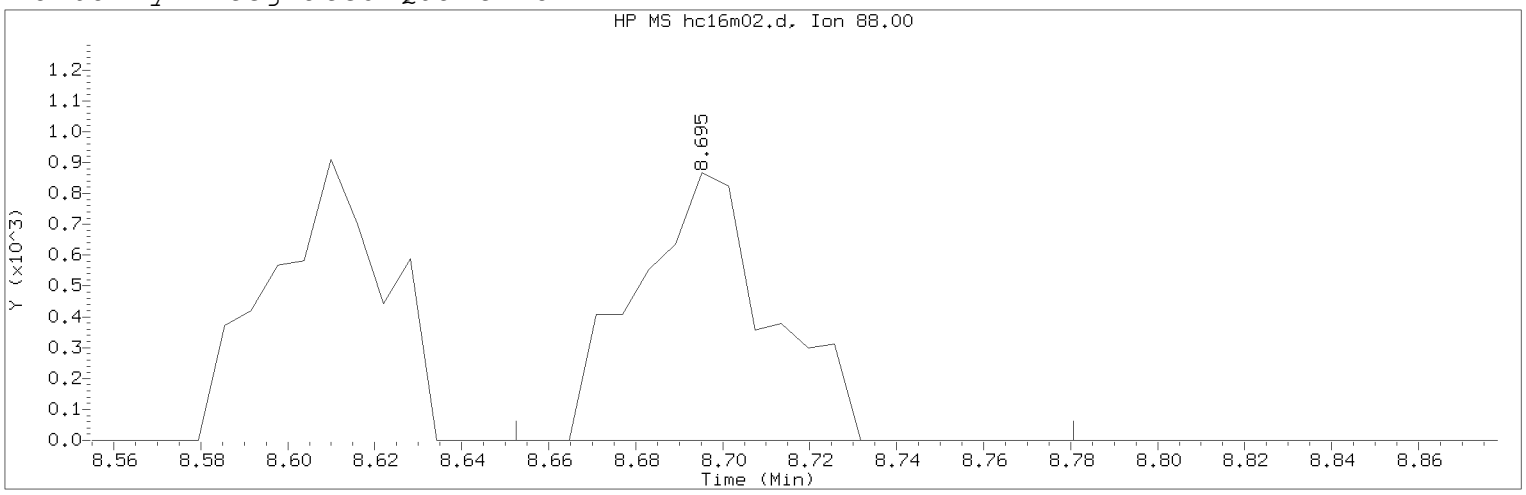
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 21:53
Date, time and analyst ID of latest file update: 17-Oct-2017 11:50 kas02648

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

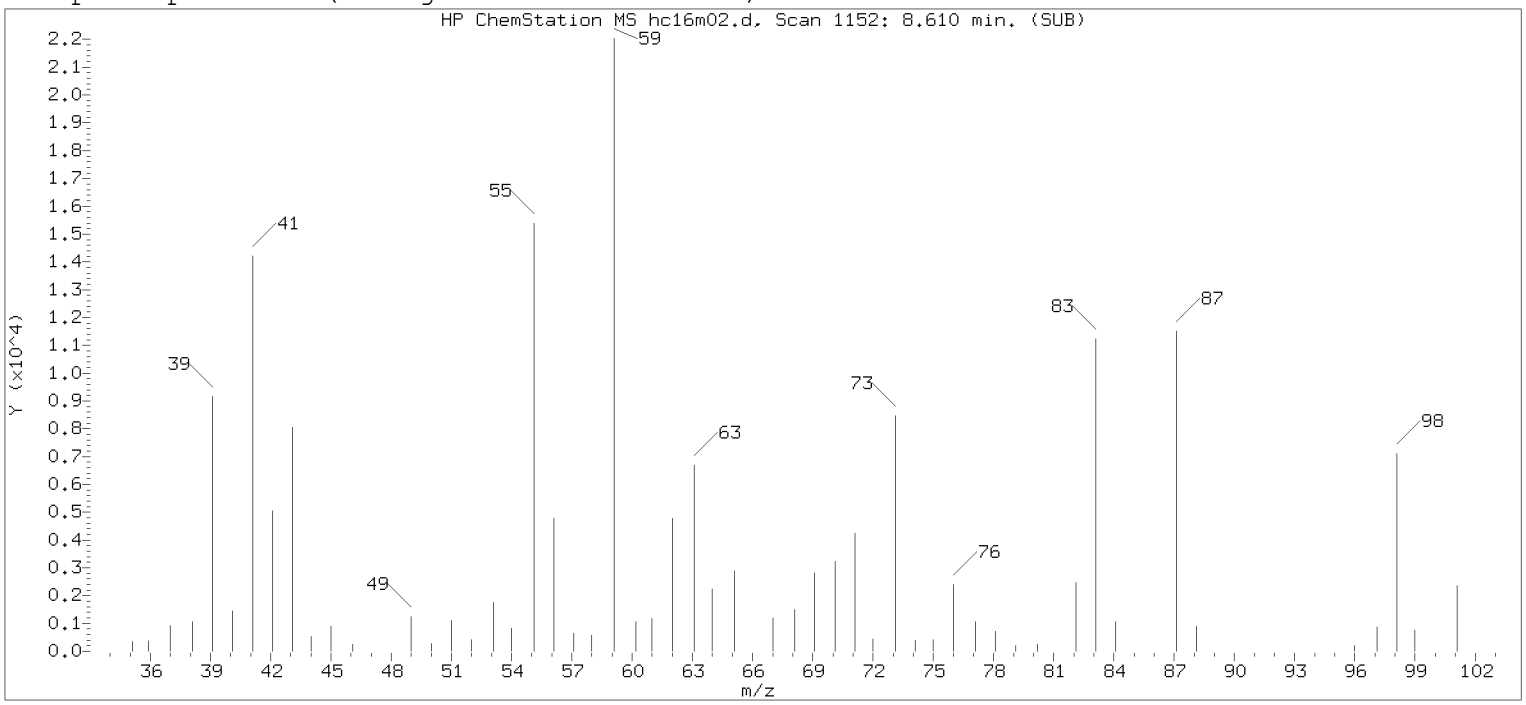
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 88.00
Area (flag) : 1843M
On-Column Amount (ng) : 11.9737
Integration start scan : 1158 Integration stop scan: 1179
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

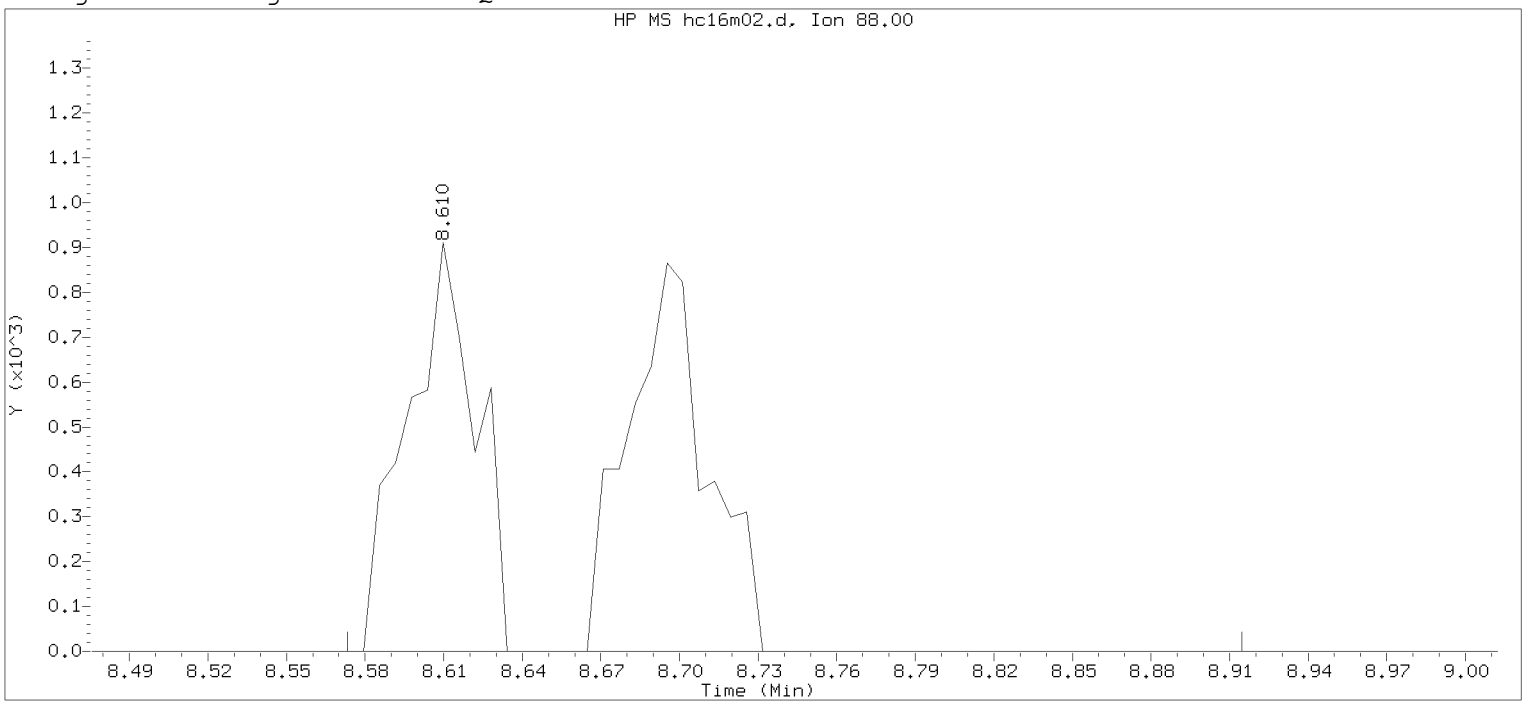
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/17/2017 at 11:50.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



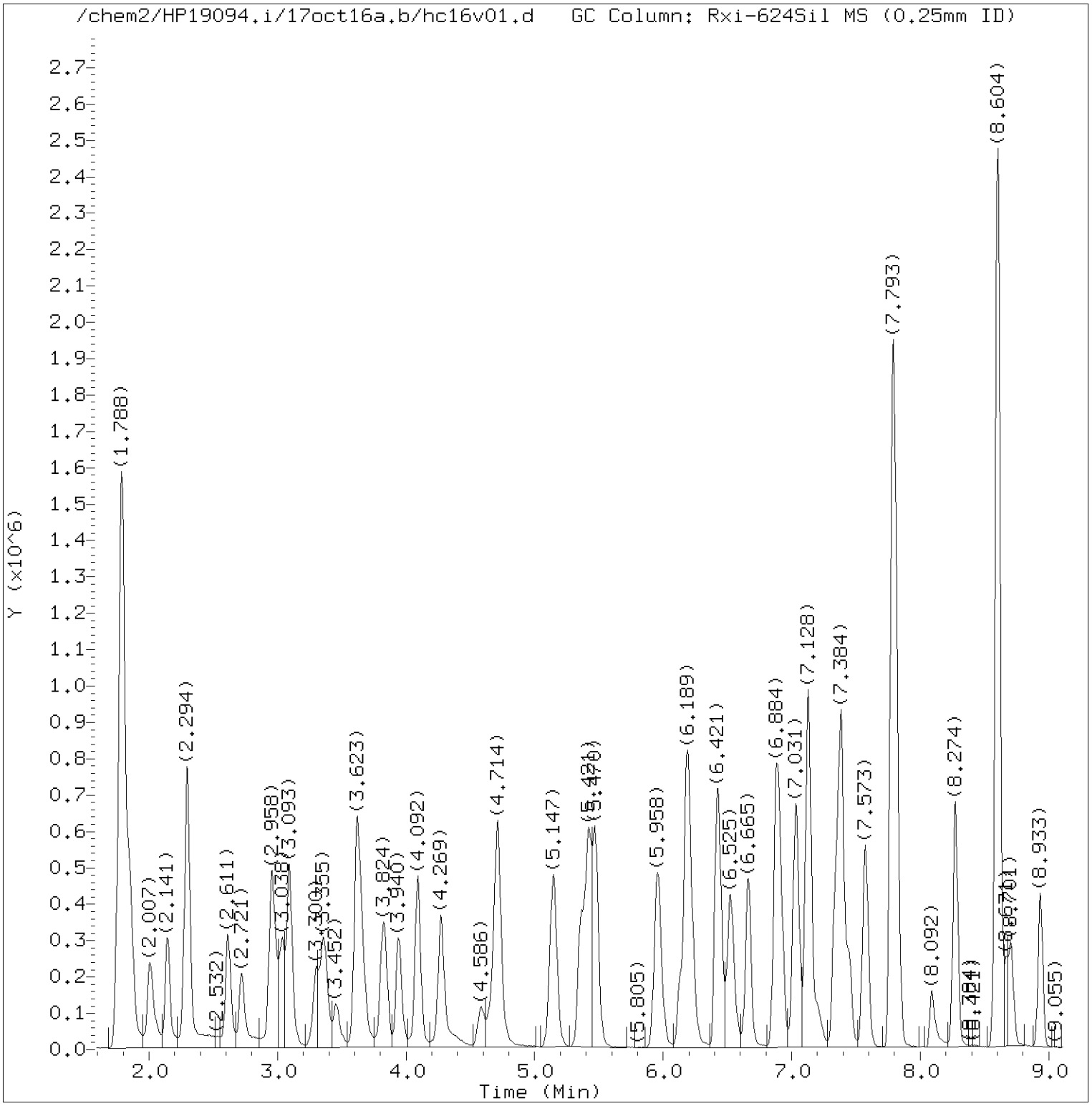
Data File: /chem2/HP19094.i/17oct16a.b/hc16m02.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 16-OCT-2017 13:40
Date, time and analyst ID of latest file update: 16-Oct-2017 13:46 Automation

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 3519
On-column Amount (ng) : 21.8242
Integration start scan : 1145 Integration stop scan: 1201
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/17/2017 at 11:50.
Target 3.5 esignature user Kevin A. Sposito



Total Ion Chromatogram (TIC)

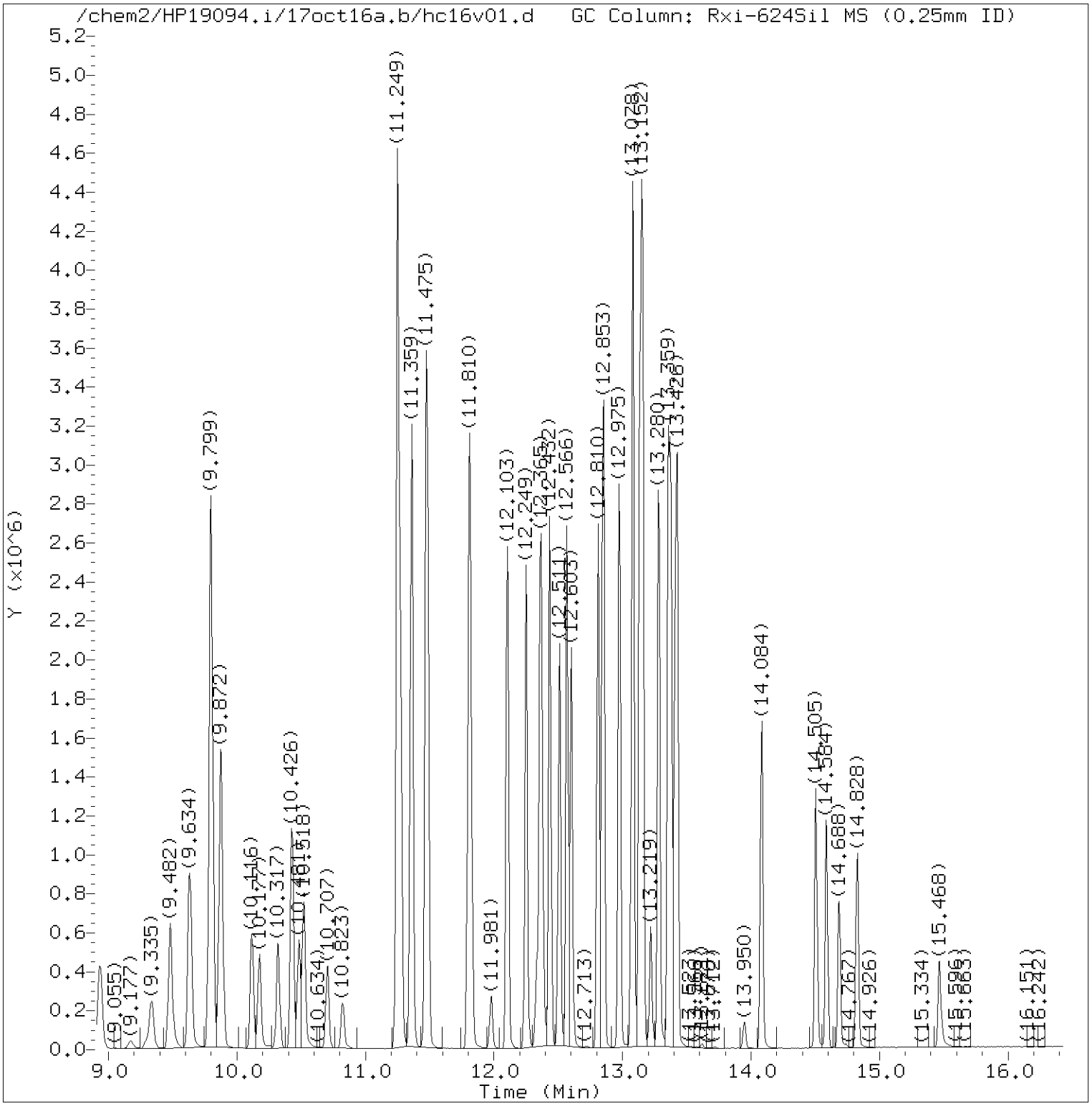
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	413321	4.309
2) Chloromethane	(2)	2.141	50	424516	4.482
5) Vinyl Chloride	(2)	2.282	62	404202	4.643
6) 1,3-Butadiene	(2)	2.300	39	420903	5.116
7) Bromomethane	(2)	2.611	94	283129	4.781
8) Chloroethane	(2)	2.721	64	229318	4.627
9) Dichlorofluoromethane	(2)	2.952	67	670407	4.619
10) Trichlorofluoromethane	(2)	3.038	101	573082	4.942
11) Ethyl ether	(2)	3.300	59	181378	4.900
12) Freon 123a	(2)	3.361	67	361652	4.985
13) Acrolein	(1)	3.458	56	191119	39.706
14) Acetone	(1)	3.617	43	233441M	37.872
15) 1,1-Dichloroethene	(2)	3.617	96	246650	5.316
16) Freon 113	(2)	3.647	101	266826	5.165
17) Methyl Iodide	(2)	3.818	142	453113	4.903
18) Carbon Disulfide	(2)	3.940	76	713202	4.803
21) Methyl Acetate	(1)	4.056	43	95265	5.134
22) Allyl Chloride	(2)	4.092	41	494909	4.702
26)*t-Butyl Alcohol-d10	(1)	4.251	65	76615M	50.000
23) Methylene Chloride	(2)	4.269	84	266383	5.033
28) t-Butyl Alcohol	(1)	4.385	59	116012	55.580
29) Acrylonitrile	(1)	4.580	53	215161	28.453
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	585342	5.108
31) trans-1,2-Dichloroethene	(2)	4.714	96	274416	5.231
32) n-Hexane	(2)	5.141	57	460938	4.976
33) 1,1-Dichloroethane	(2)	5.360	63	554886	5.142
34) di-Isopropyl Ether	(2)	5.421	45	1051648	5.164
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	507991	5.018
37) Ethyl t-butyl ether	(2)	5.958	59	829899	5.079
40) 1,2-Dichloroethene (Total)	(2)		96	589551	10.485
38) 2-Butanone	(1)	6.128	43	475763	39.294
39) cis-1,2-Dichloroethene	(2)	6.183	96	315135	5.254
42) Propionitrile	(1)	6.196	54	114519	41.008
41) 2,2-Dichloropropane	(2)	6.208	77	471083	5.169
45) Methacrylonitrile	(1)	6.427	67	434229	42.787
47) Bromochloromethane	(2)	6.525	128	116227	4.926
48) Tetrahydrofuran	(1)	6.537	71	75379	27.451
49) Chloroform	(2)	6.665	83	535513	5.139

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

Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.878	113	538774	10.231
51) 1,1,1-Trichloroethane	(2)	6.915	97	478338	5.091
52) Cyclohexane	(2)	7.031	56	546402	4.758
55) 1,1-Dichloropropene	(2)	7.128	75	423921	5.101
54) Carbon Tetrachloride	(2)	7.134	117	423055	5.155
56) Isobutyl Alcohol	(1)	7.208	41	104070	123.300
57)$1,2-Dichloroethane-d4	(2)	7.342	102	85434M	10.359
58) Benzene	(2)	7.384	78	1165954	5.130
59) 1,2-Dichloroethane	(2)	7.451	62	317810	5.000
60) t-Amyl methyl ether	(2)	7.573	73	675228	5.092
63)*Fluorobenzene	(2)	7.787	96	2180817	10.000
62) n-Heptane	(2)	7.811	43	557321	5.039
65) n-Butanol	(1)	8.085	56	163918	264.011
67) Trichloroethene	(2)	8.274	95	309863	5.090
70) 1,2-Dichloropropane	(2)	8.598	63	311979	5.289
69) Methylcyclohexane	(2)	8.604	83	536719	5.128
71) Methyl Methacrylate	(1)	8.665	69	116826	5.794
72) 1,4-Dioxane	(1)	8.683	88	21676M	156.524
73) Dibromomethane	(2)	8.707	93	126747	5.136
74) Bromodichloromethane	(2)	8.933	83	371354	5.215
76) 2-Nitropropane	(1)	9.171	41	35680	5.190
80) cis-1,3-Dichloropropene	(2)	9.482	75	429743	5.199
81) 4-Methyl-2-Pentanone	(1)	9.634	43	842881	28.413
82)$Toluene-d8	(3)	9.799	98	2178183	9.779
83) Toluene	(3)	9.878	92	737581	5.067
84) trans-1,3-Dichloropropene	(3)	10.116	75	331256	4.983
85) 1,3-Dichloropropene (total)	(3)		75	760999	10.182
86) Ethyl Methacrylate	(3)	10.177	69	256409	5.163
88) 1,1,2-Trichloroethane	(3)	10.317	97	176788	5.202
89) Tetrachloroethene	(3)	10.426	166	352722	5.163
90) 1,3-Dichloropropane	(3)	10.481	76	309707	5.125
91) 2-Hexanone	(1)	10.518	43	574347	26.870
93) Dibromochloromethane	(3)	10.707	129	226178	5.096
95) 1,2-Dibromoethane	(3)	10.823	107	164196	5.113
97)*Chlorobenzene-d5	(3)	11.249	117	1532756	10.000
98) Chlorobenzene	(3)	11.274	112	791430	5.102
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	281608	5.155
100) Ethylbenzene	(3)	11.359	91	1492561	5.099

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Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

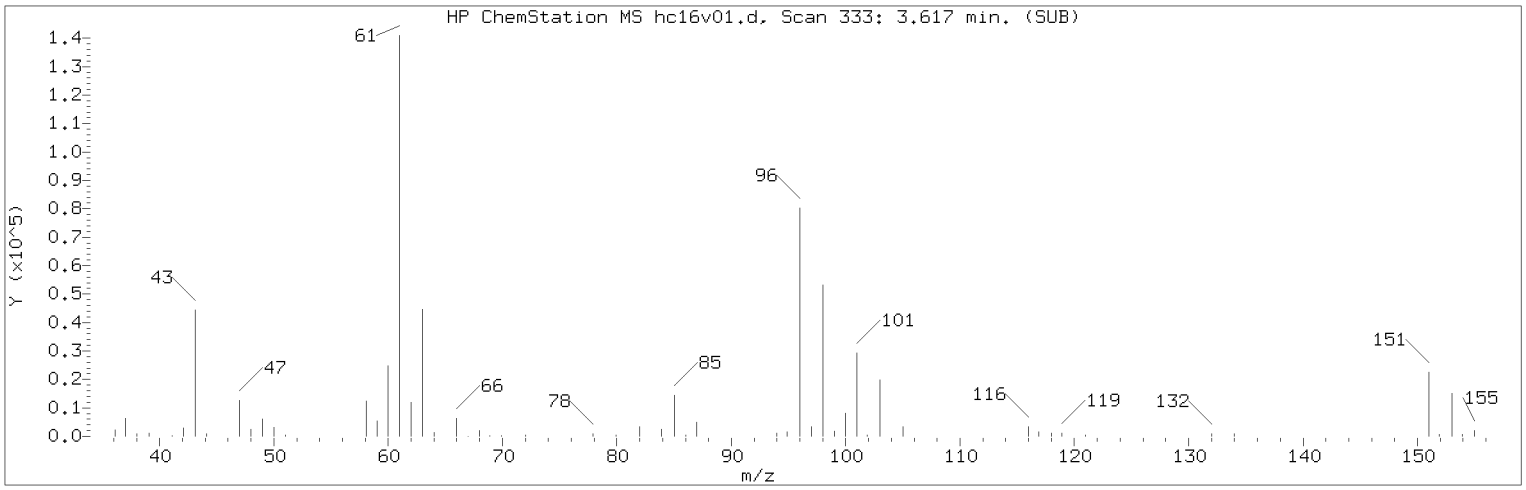
Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.475	106	1130069	10.245
105) Xylene (Total)	(3)		106	1674144	15.290
104) o-Xylene	(3)	11.804	106	544075	5.044
106) Styrene	(3)	11.816	104	880660	5.227
107) Bromoform	(3)	11.981	173	121209	5.032
108) Isopropylbenzene	(3)	12.103	105	1496672	5.169
111)$4-Bromofluorobenzene	(3)	12.249	95	693539	10.250
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	204922	4.706
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	288332	31.417
114) Bromobenzene	(4)	12.371	156	326857	4.759
116) 1,2,3-Trichloropropane	(4)	12.383	110	55385	4.989
117) n-Propylbenzene	(4)	12.432	91	1836231	4.892
119) 2-Chlorotoluene	(4)	12.511	126	343081	4.877
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	1261902	4.852
122) 4-Chlorotoluene	(4)	12.603	126	335125	4.681
125) tert-Butylbenzene	(4)	12.810	134	266628M	4.822
126) Pentachloroethane	(4)	12.841	167	204864	4.762
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	1273025	4.873
128) sec-Butylbenzene	(4)	12.975	105	1672039	4.965
131) 1,3-Dichlorobenzene	(4)	13.078	146	645045	4.824
132) p-Isopropyltoluene	(4)	13.084	119	1412184	5.026
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	706123	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	647505	4.650
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	528102	4.765
136) Benzyl Chloride	(4)	13.219	126	78597	5.064
138) n-Butylbenzene	(4)	13.377	92	715376	5.078
139) 1,2-Dichlorobenzene	(4)	13.408	146	574928	4.825
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	25677	5.783
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	485805	4.901
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	370173	4.534
146) Hexachlorobutadiene	(4)	14.590	225	198260	5.147
147) Naphthalene	(4)	14.688	128	546885	4.117
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	290826	4.231

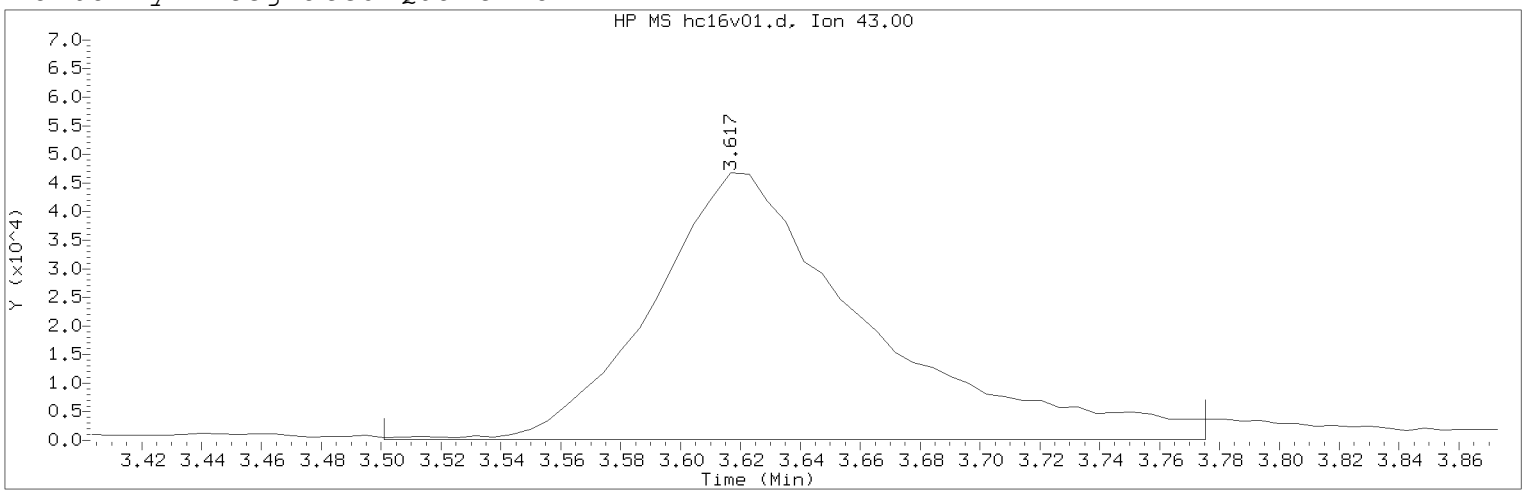
M = Compound was manually integrated.
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Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

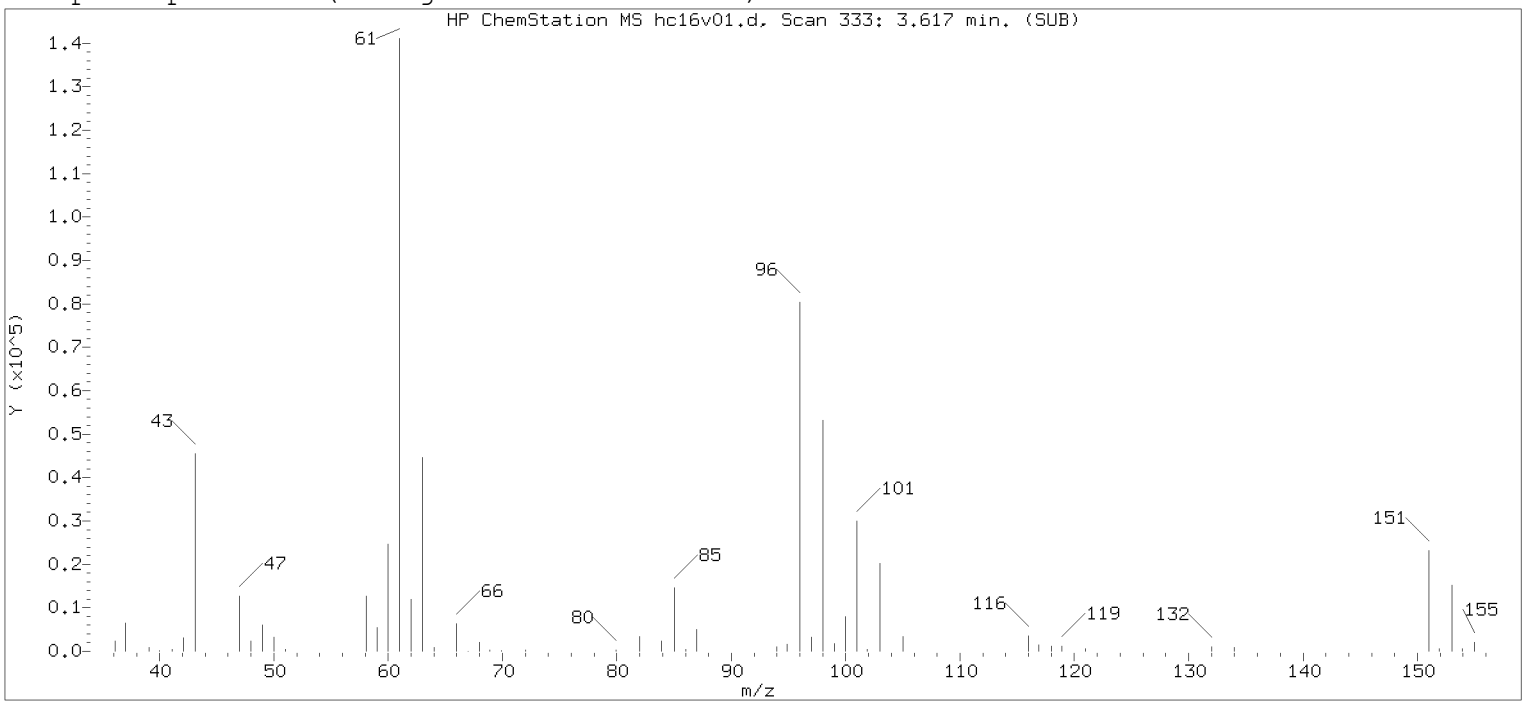
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area (flag) : 233441M
On-Column Amount (ng) : 37.8718
Integration start scan : 313 Integration stop scan: 358
Y at integration start : 116 Y at integration end: 124

Reason for manual integration: improper integration

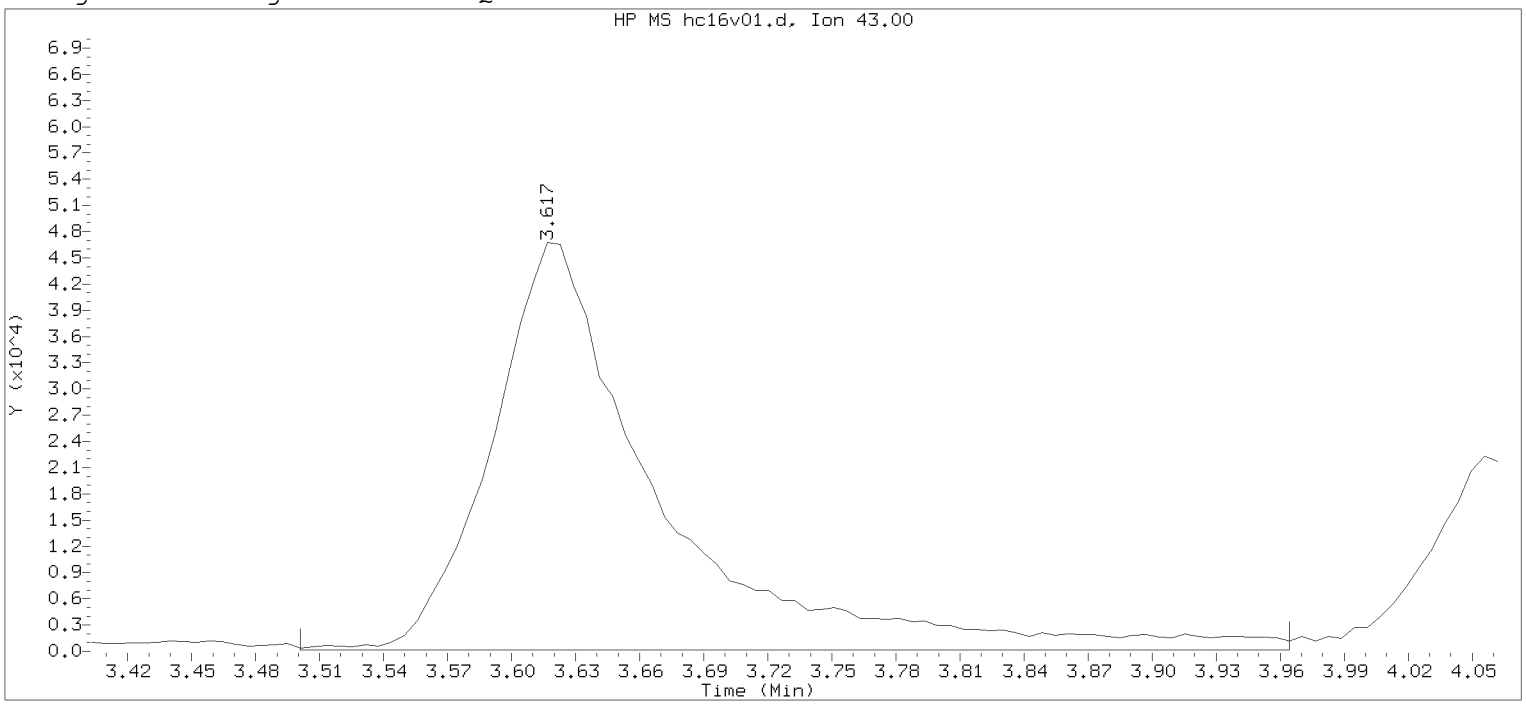
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

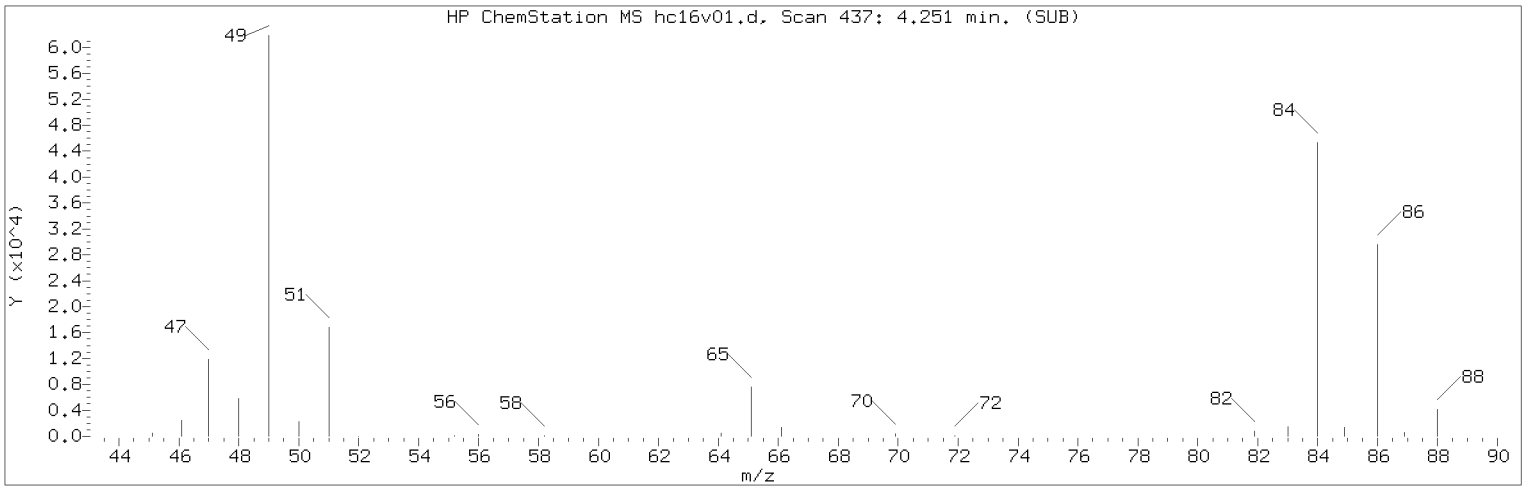
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

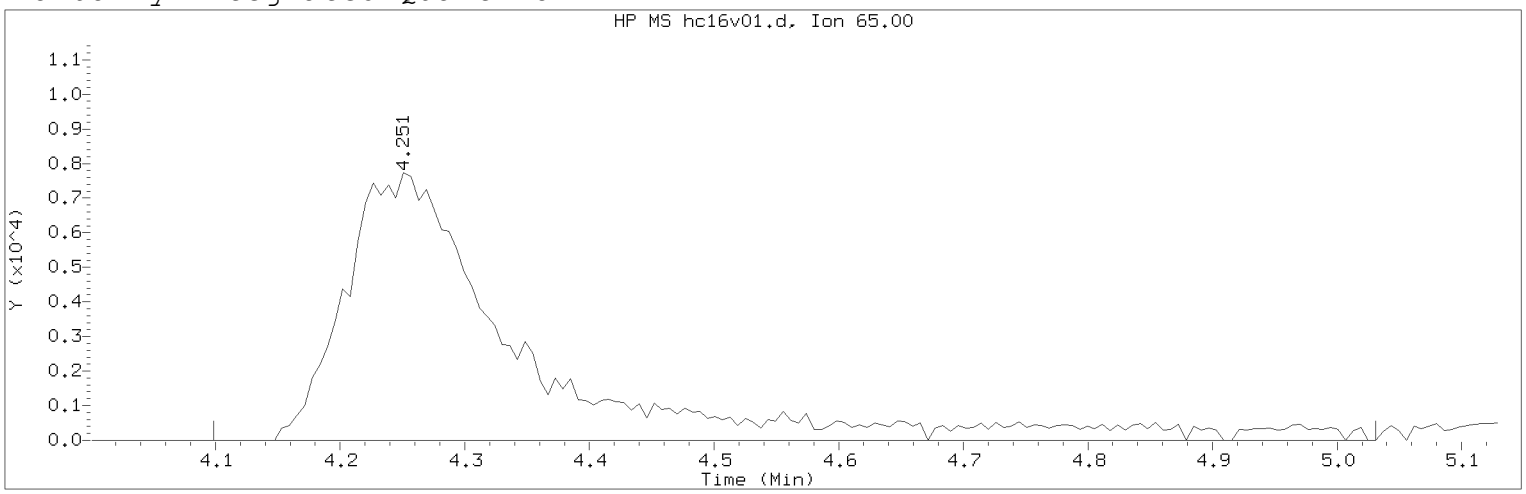
Compound Number : 14
Compound Name : Acetone
Scan Number : 333
Retention Time (minutes): 3.617
Quant Ion : 43.00
Area : 255331
On-column Amount (ng) : 45.7588
Integration start scan : 313 Integration stop scan: 389
Y at integration start : 116 Y at integration end: 130

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature used. Key: 2348

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

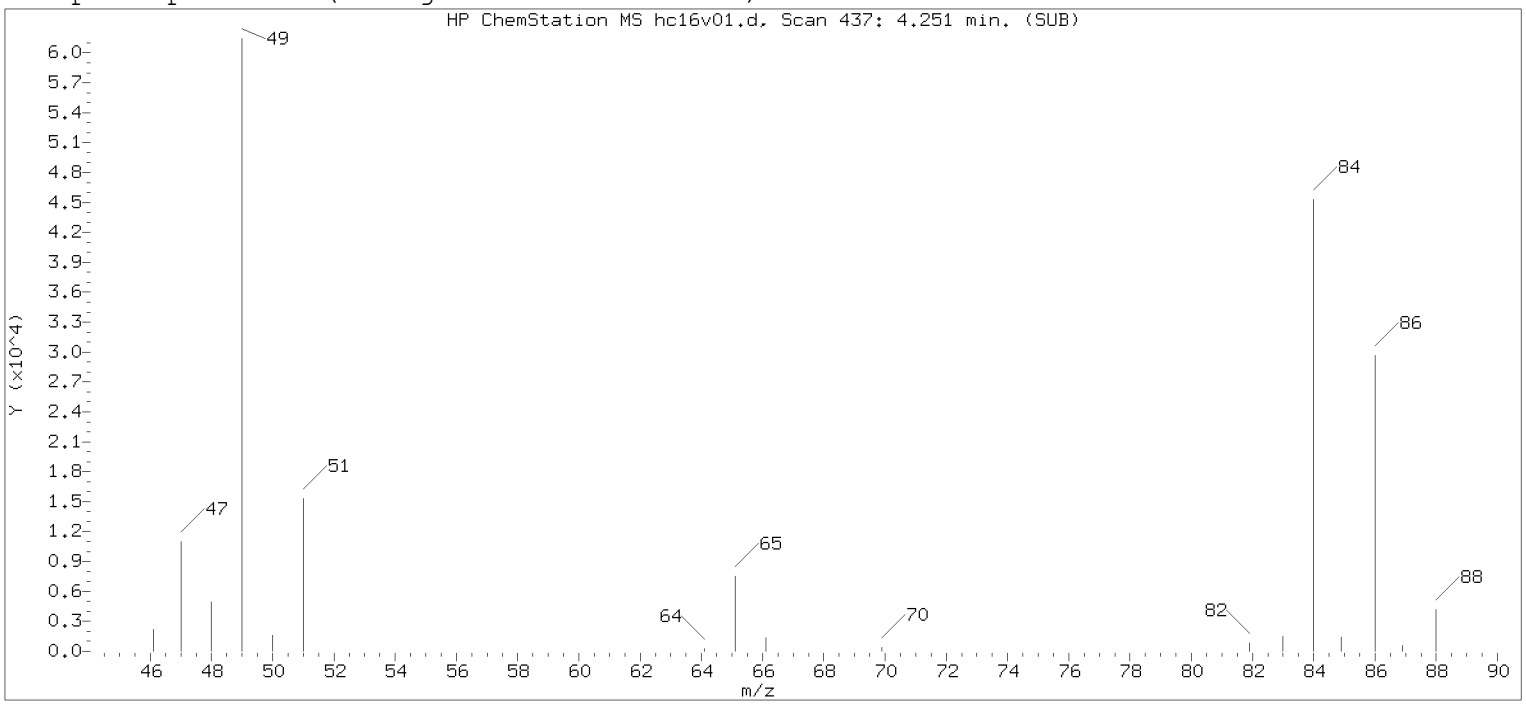
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area (flag) : 76615M
On-Column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

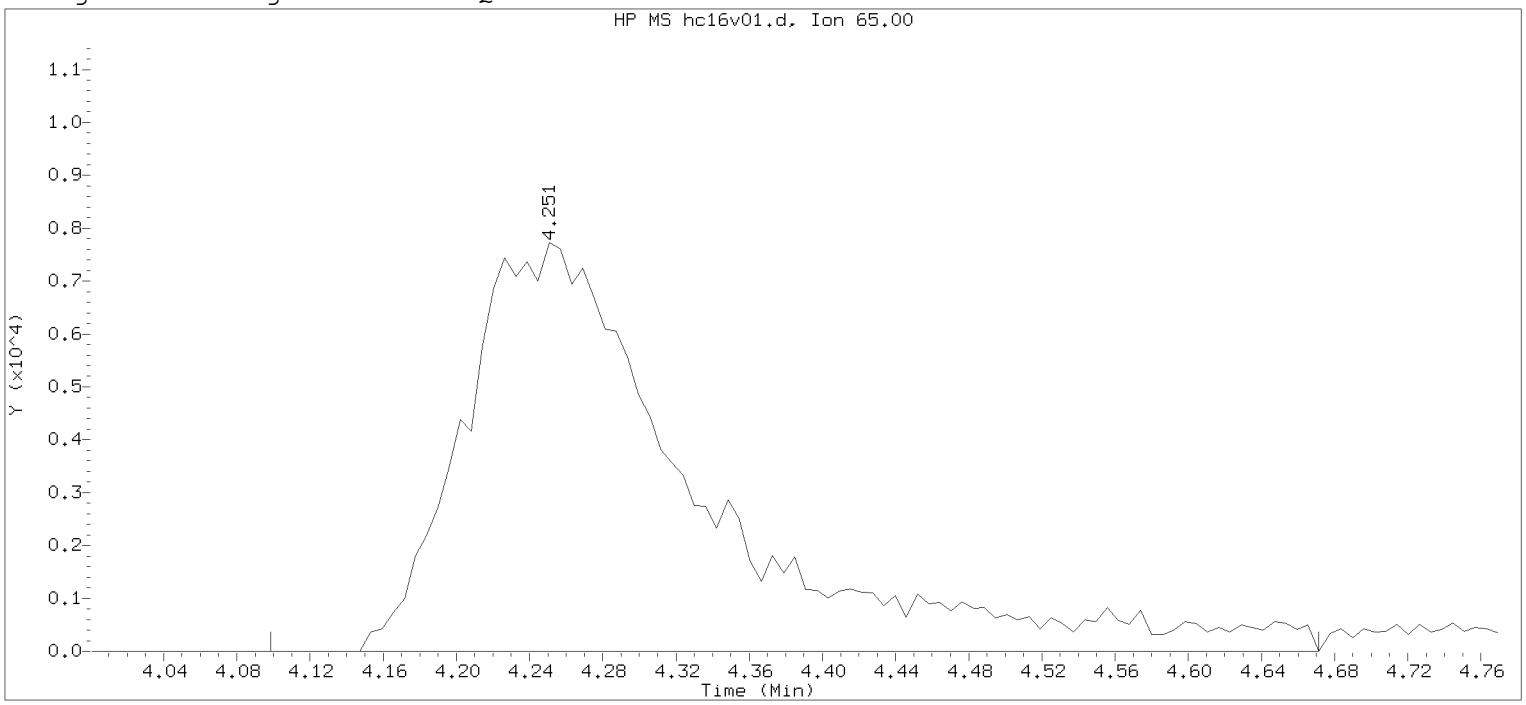
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

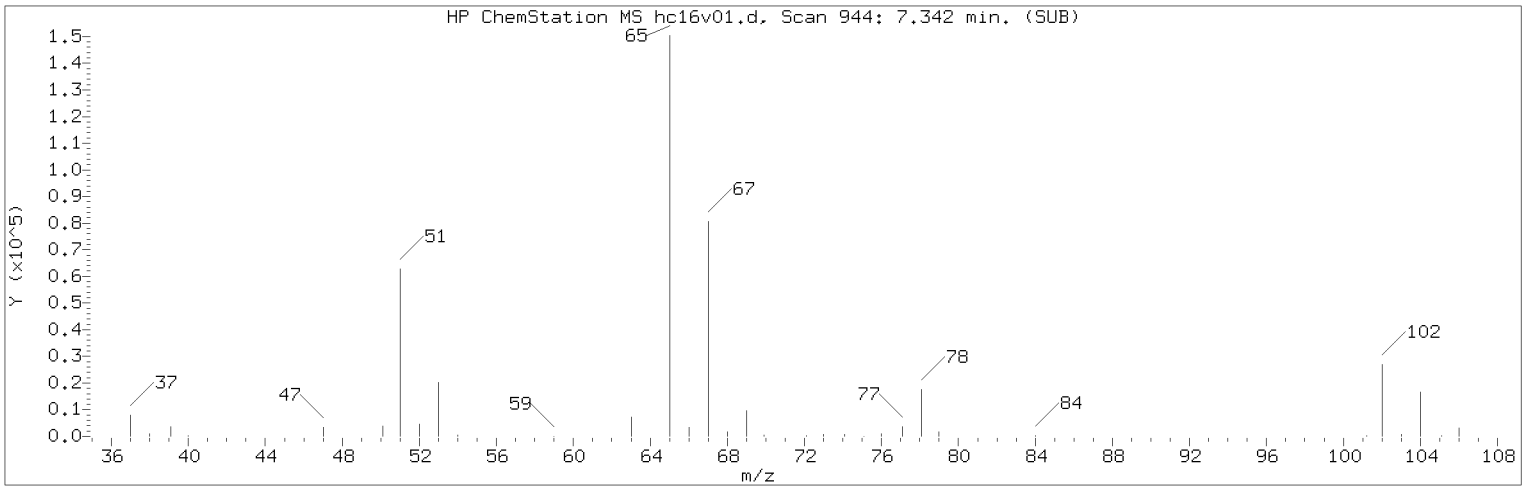
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

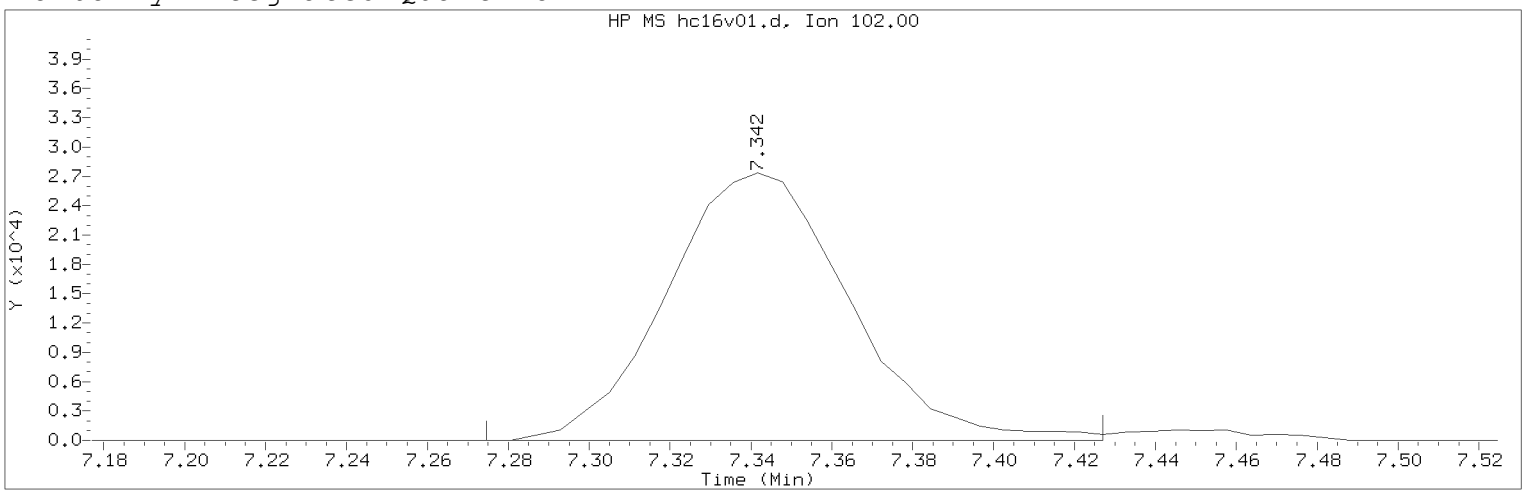
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area : 69355
On-column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature used. Key: 2338

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

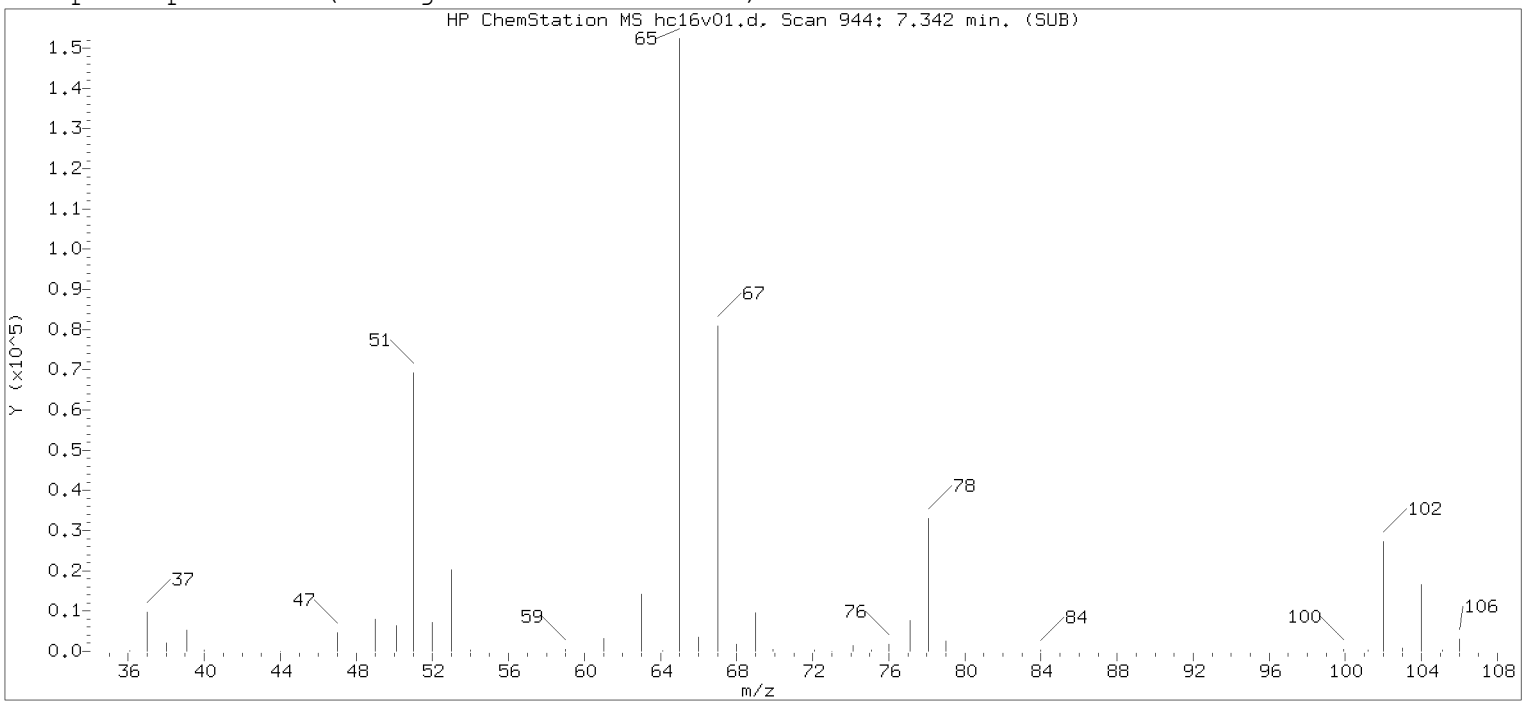
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area (flag) : 85434M
On-Column Amount (ng) : 10.3593
Integration start scan : 932 Integration stop scan: 957
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

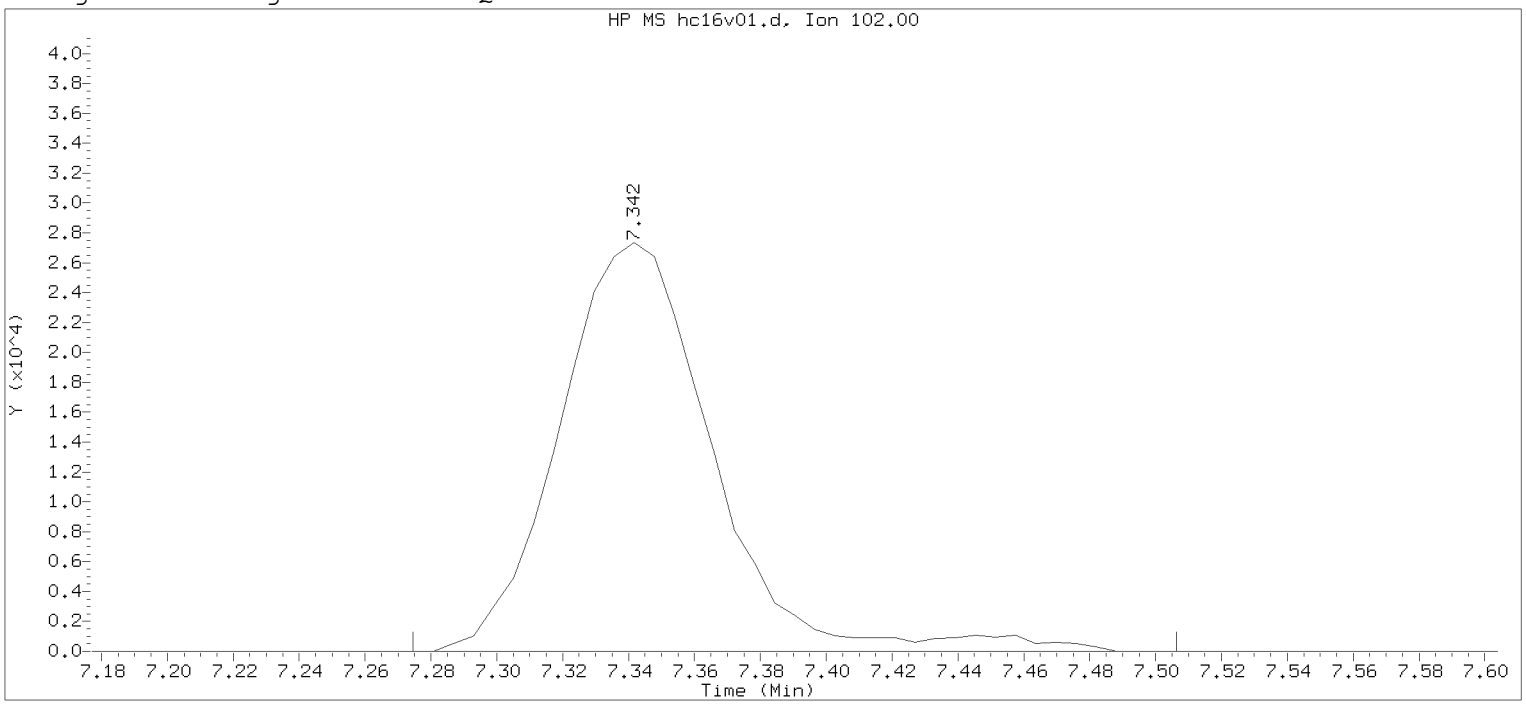
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

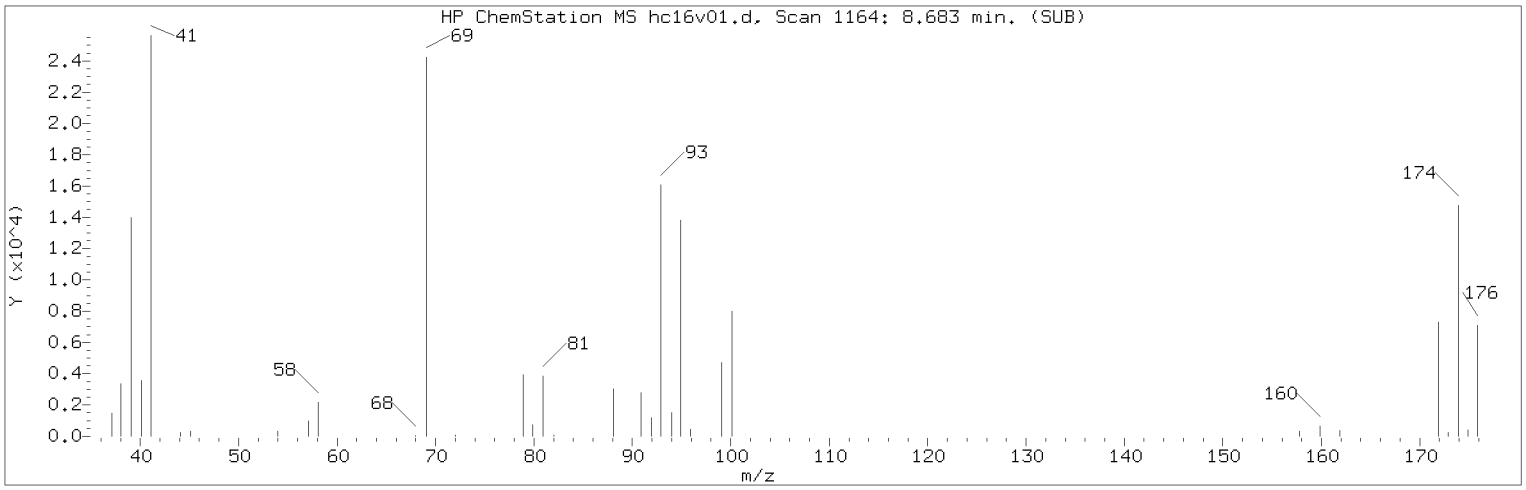
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

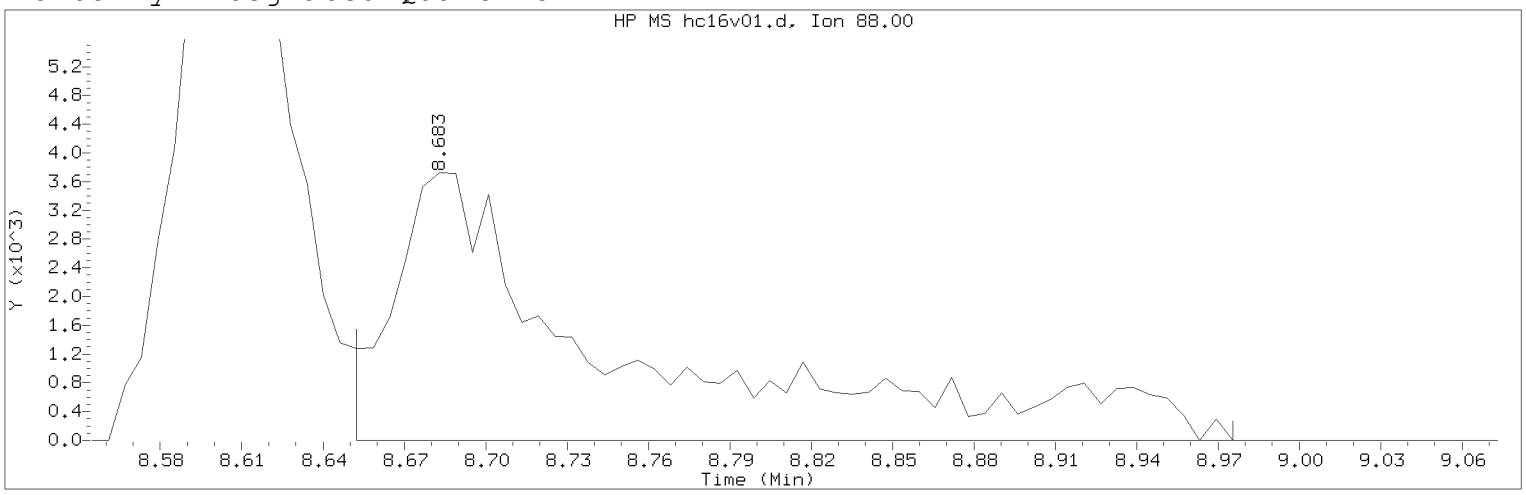
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area : 87912
On-column Amount (ng) : 10.6598
Integration start scan : 932 Integration stop scan: 970
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature used. Key: 2343

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

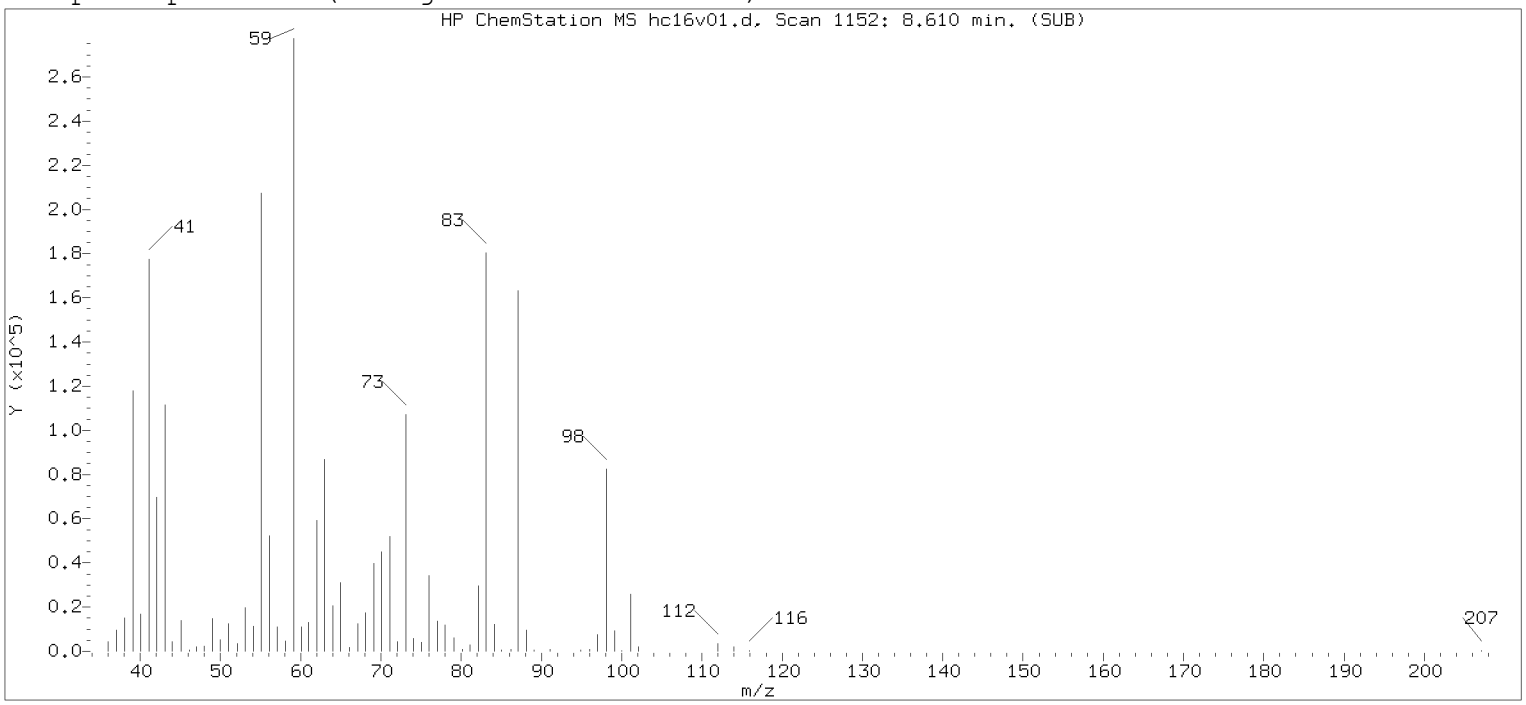
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 21676M
On-Column Amount (ng) : 156.5237
Integration start scan : 1158 Integration stop scan: 1211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

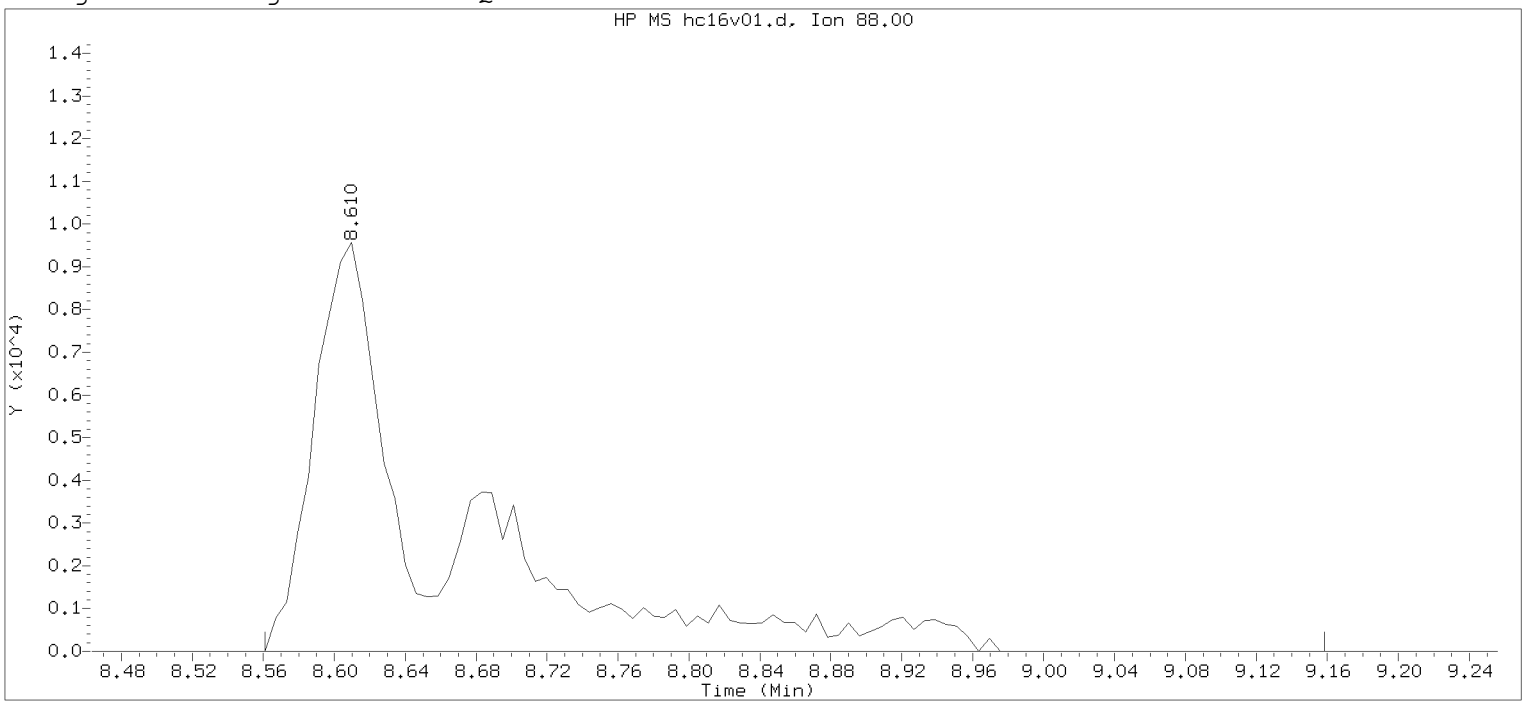
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

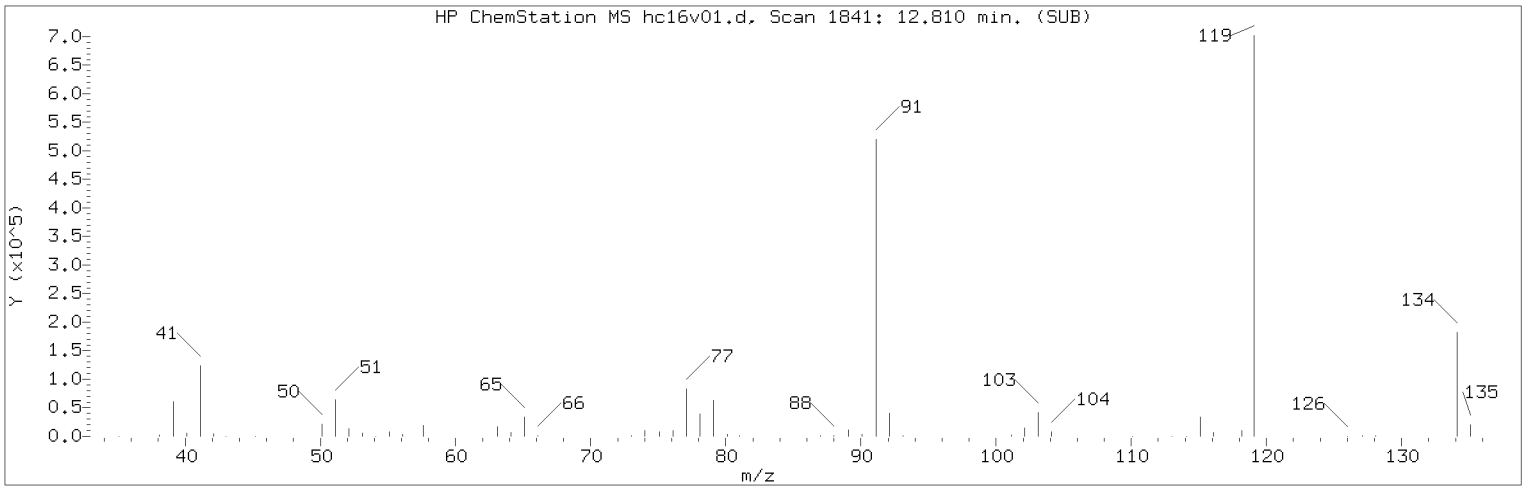
Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

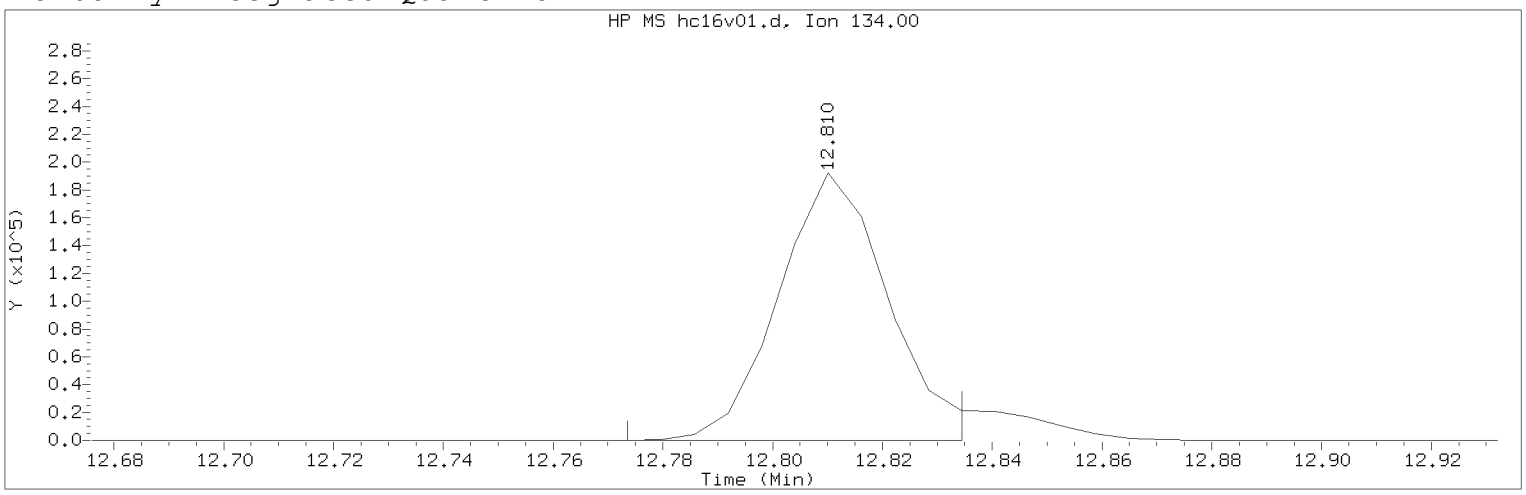
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 46545
On-column Amount (ng) : 371.2853
Integration start scan : 1143 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature used. Key: 02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:18 kas02648

Sample Name: LCSHLG Lab Sample ID: LCSHLG

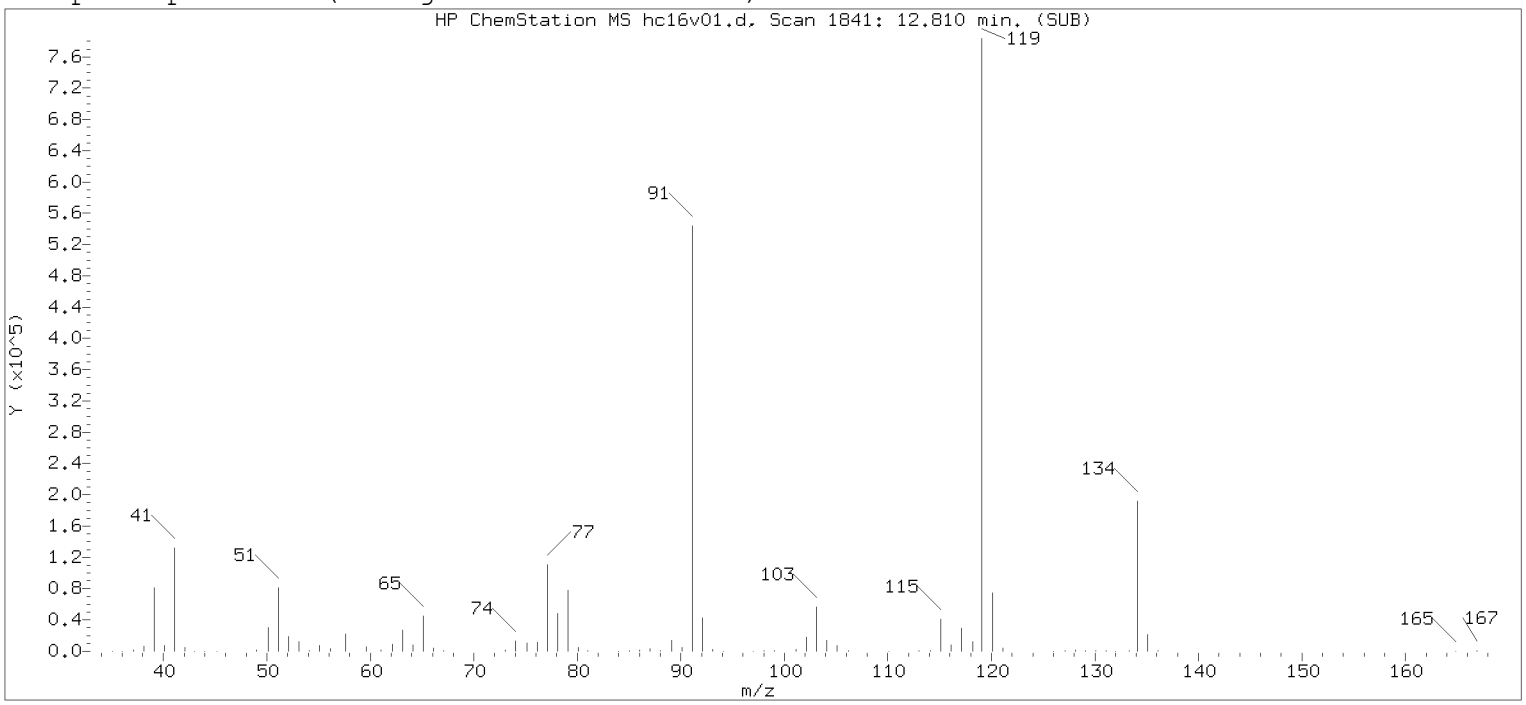
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 266628M
On-Column Amount (ng) : 4.8216
Integration start scan : 1834 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

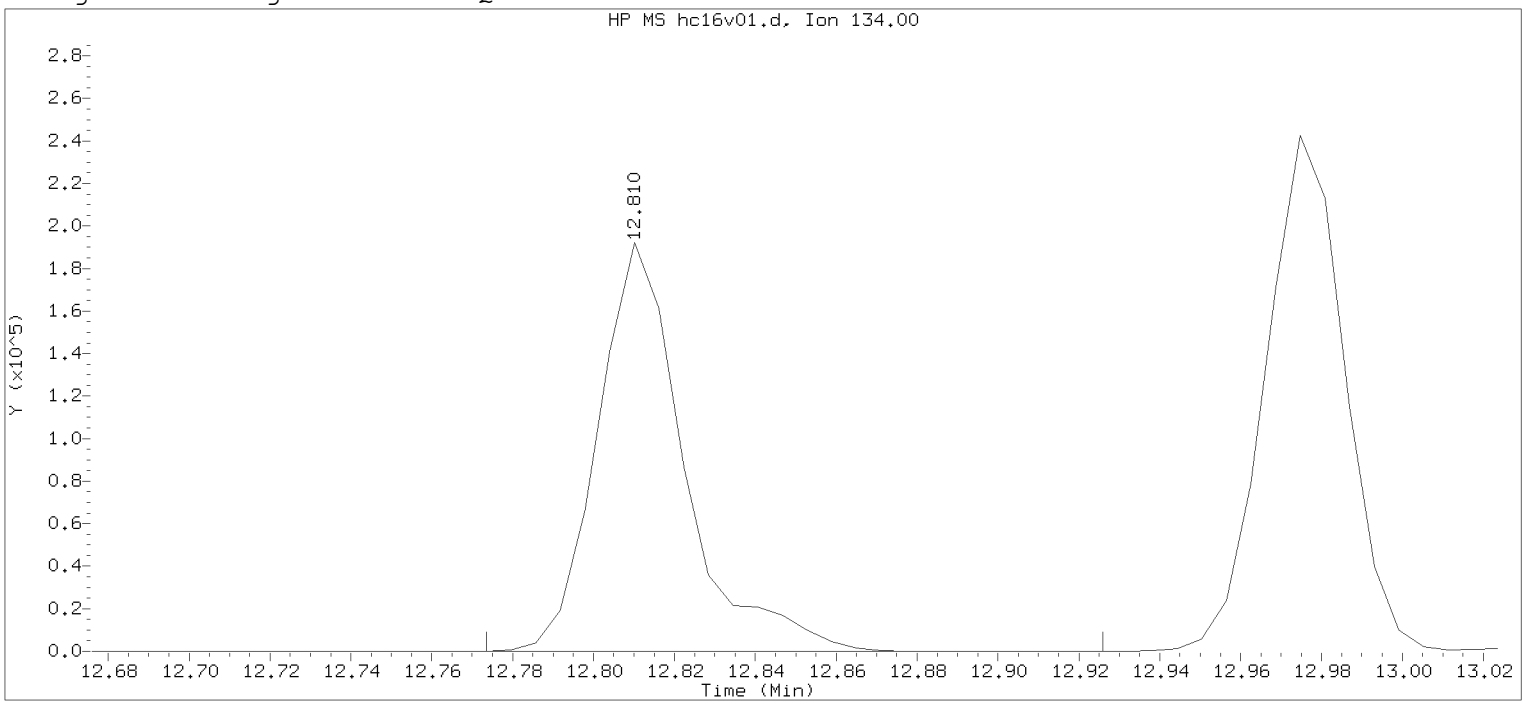
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/16/2017 at 14:18.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/17/2017 at 11:24.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct16a.b/hc16v01.d Instrument ID: HP19094.i
Injection date and time: 16-OCT-2017 13:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct16a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 16-OCT-2017 13:55
Date, time and analyst ID of latest file update: 16-Oct-2017 14:06 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 286417
On-column Amount (ng) : 5.1795
Integration start scan : 1834 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/16/2017 at 14:18.
Target 3.5 esignature used. Key: 2336

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

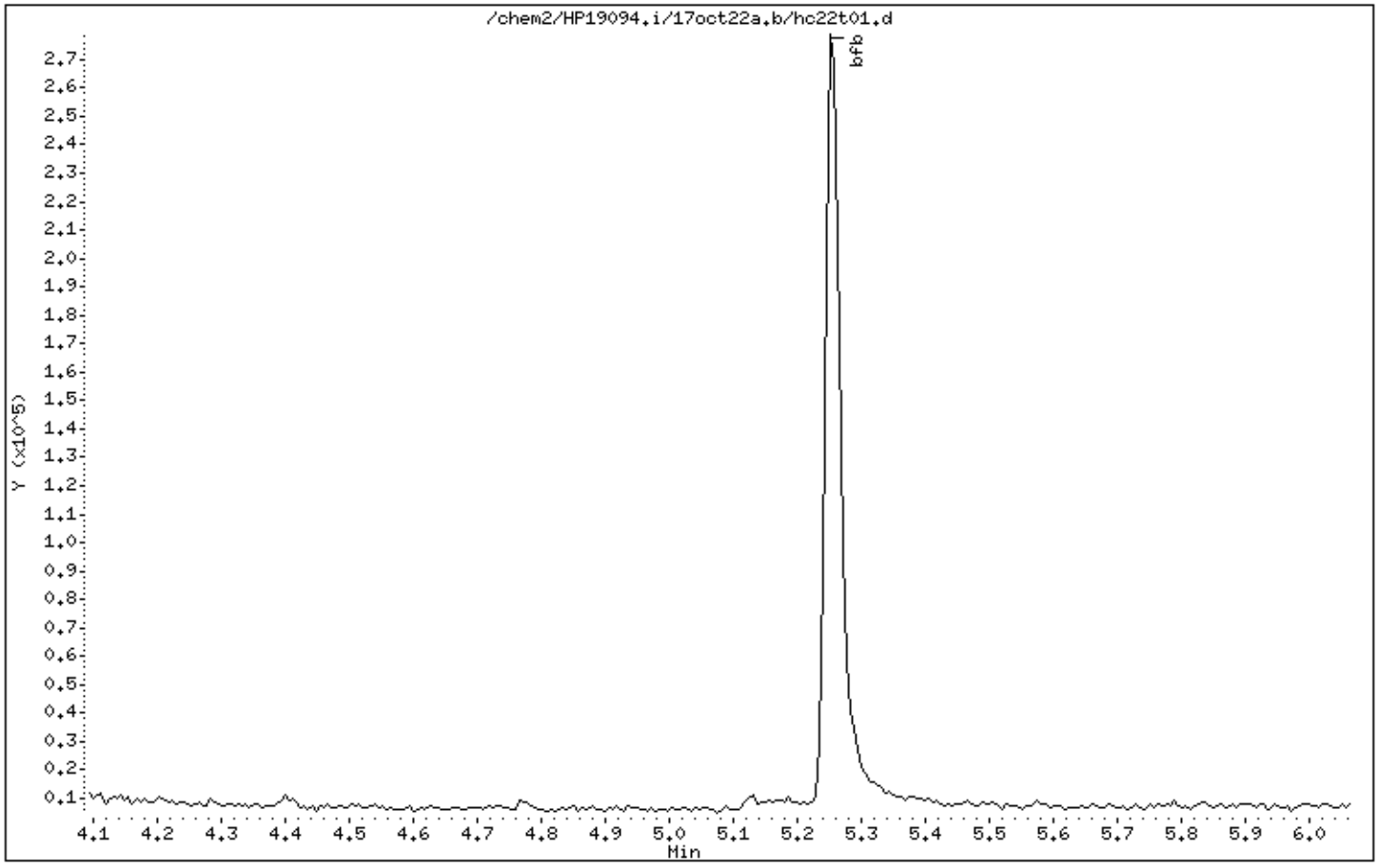
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

Instrument: HP19094.i

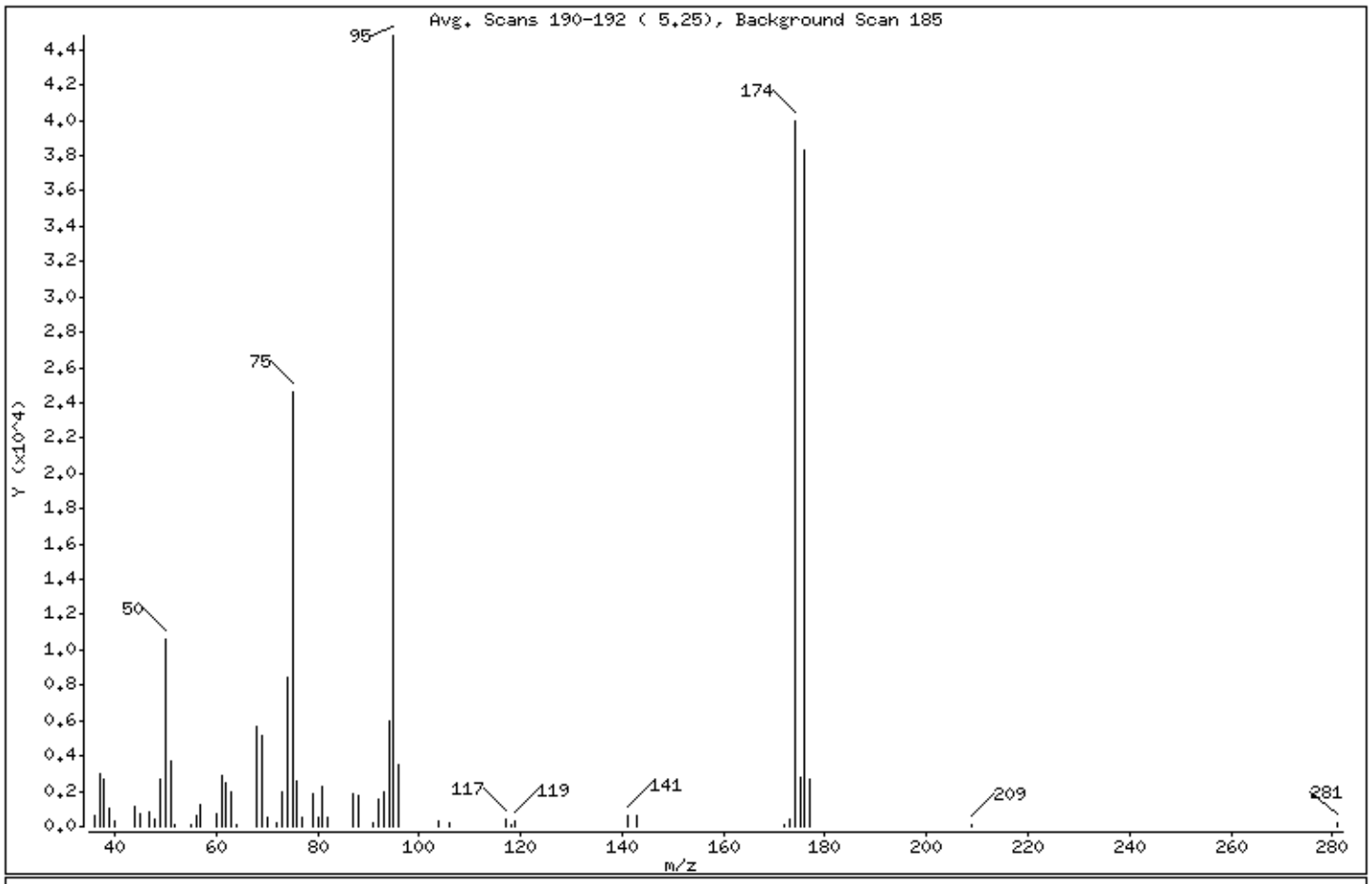
Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

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	23.74
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.78
173	Less than 2.00% of mass 174	1.02 (1.14)
174	50.00 - 100.00% of mass 95	89.09
175	5.00 - 9.00% of mass 174	6.21 (6.97)
176	95.00 - 101.00% of mass 174	85.61 (96.10)
177	5.00 - 9.00% of mass 176	6.06 (7.08)

Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

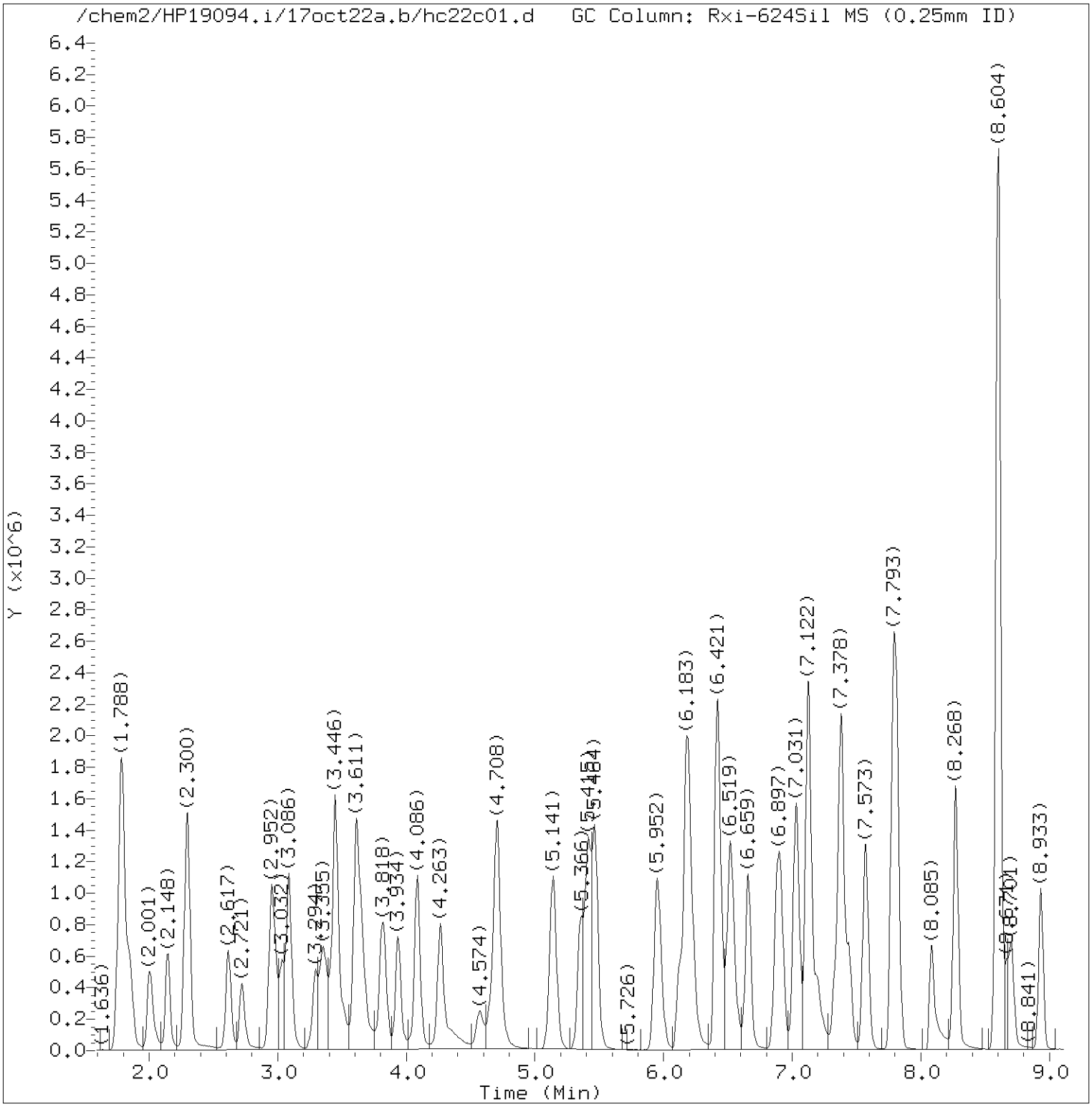
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hc22t01.d
Spectrum: Avg. Scans 190-192 (5.25), Background Scan 185
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	621	57.00	1270	79.00	1905	118.00	129
37.00	2980	60.00	688	80.00	521	119.00	338
38.00	2678	61.00	2887	81.00	2280	141.00	619
39.00	1076	62.00	2428	82.00	492	143.00	580
40.00	344	63.00	1990	87.00	1847	172.00	111
44.00	1143	64.00	128	88.00	1770	173.00	455
45.00	751	68.00	5619	91.00	234	174.00	39912
47.00	802	69.00	5146	92.00	1567	175.00	2783
48.00	405	70.00	504	93.00	1976	176.00	38352
49.00	2636	72.00	212	94.00	6014	177.00	2714
50.00	10634	73.00	1959	95.00	44800	209.00	132
51.00	3703	74.00	8495	96.00	3485	281.00	204
52.00	116	75.00	24664	104.00	292		
55.00	93	76.00	2581	106.00	218		
56.00	604	77.00	493	117.00	392		

Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

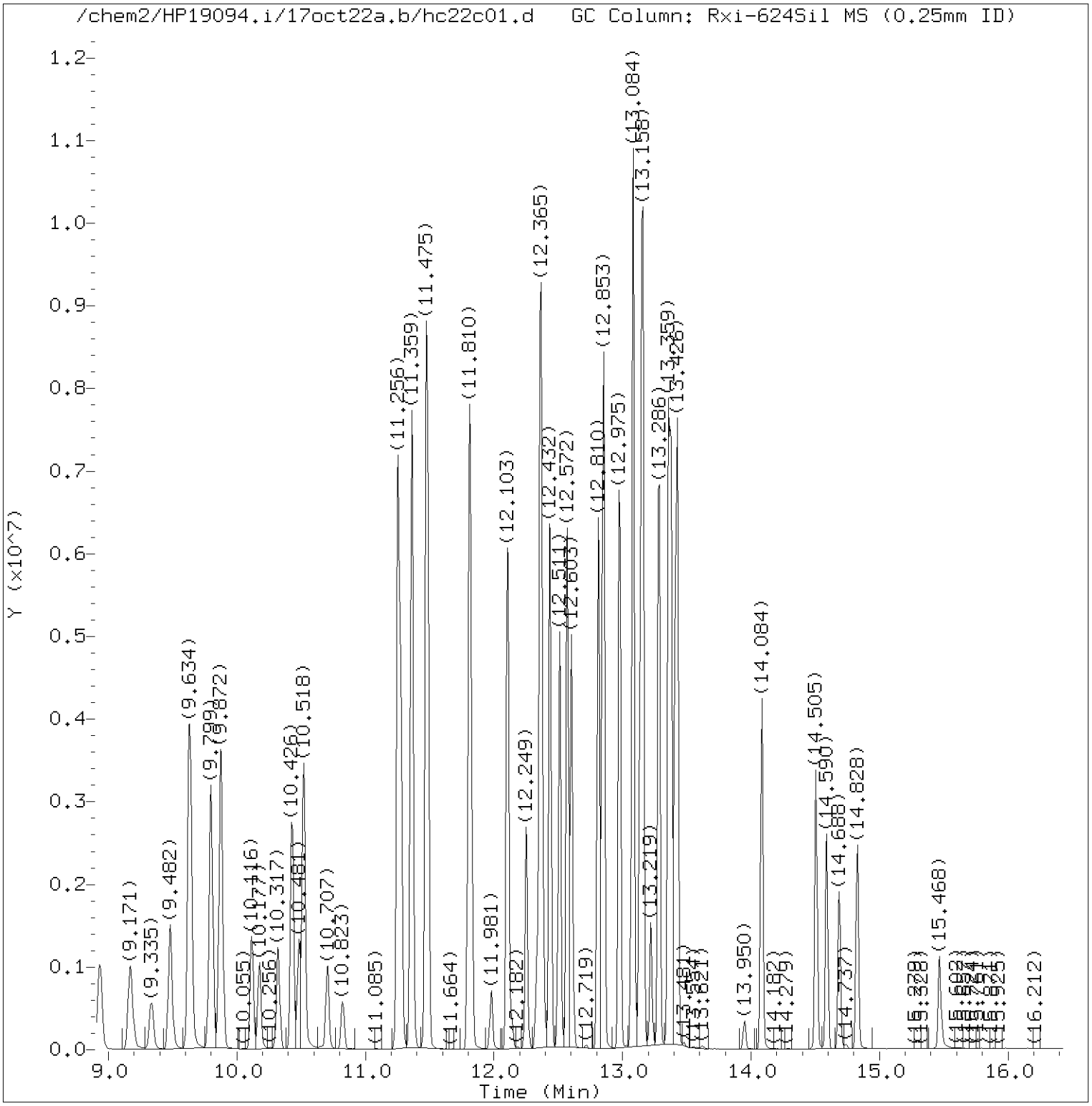
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	940298	8.789
2) Chloromethane	(2)	2.148	50	935789	8.858
5) Vinyl Chloride	(2)	2.276	62	911020	9.383
6) 1,3-Butadiene	(2)	2.300	39	911169M	9.929
7) Bromomethane	(2)	2.617	94	637664	9.655
8) Chloroethane	(2)	2.721	64	545019	9.860
9) Dichlorofluoromethane	(2)	2.952	67	1520222	9.392
10) Trichlorofluoromethane	(2)	3.032	101	1233880	9.540
11) Ethyl ether	(2)	3.294	59	413052	10.006
12) Freon 123a	(2)	3.355	67	840313	10.384
13) Acrolein	(1)	3.446	56	2768378	518.249
14) Acetone	(1)	3.605	43	805213	117.711
15) 1,1-Dichloroethene	(2)	3.611	96	549302	10.615
16) Freon 113	(2)	3.647	101	642352	11.148
17) Methyl Iodide	(2)	3.806	142	1106462	10.734
18) Carbon Disulfide	(2)	3.934	76	1562478	9.435
21) Methyl Acetate	(1)	4.050	43	218444	10.607
22) Allyl Chloride	(2)	4.086	41	1088082	9.268
26)*t-Butyl Alcohol-d10	(1)	4.233	65	85025M	50.000
23) Methylene Chloride	(2)	4.263	84	597884	10.128
28) t-Butyl Alcohol	(1)	4.367	59	477383M	206.086
29) Acrylonitrile	(1)	4.574	53	497304	59.260
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	1327621	10.388
31) trans-1,2-Dichloroethene	(2)	4.708	96	632797	10.816
32) n-Hexane	(2)	5.141	57	1019120	9.864
33) 1,1-Dichloroethane	(2)	5.354	63	1268745	10.542
34) di-Isopropyl Ether	(2)	5.415	45	2224806	9.795
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	1180777	10.458
37) Ethyl t-butyl ether	(2)	5.952	59	1813926	9.954
40) 1,2-Dichloroethene (Total)	(2)		96	1348031	21.507
38) 2-Butanone	(1)	6.122	43	1419880	105.671
39) cis-1,2-Dichloroethene	(2)	6.171	96	715234	10.691
42) Propionitrile	(1)	6.183	54	742215	239.487
41) 2,2-Dichloropropane	(2)	6.202	77	1069733	10.524
45) Methacrylonitrile	(1)	6.415	67	1309958	116.311
47) Bromochloromethane	(2)	6.513	128	288355	10.958
48) Tetrahydrofuran	(1)	6.525	71	342493	112.389
49) Chloroform	(2)	6.659	83	1265952	10.892

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

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.872	113	582478	9.917
50)$Dibromofluoromethane	(2)	6.872	111	599969	9.948
51) 1,1,1-Trichloroethane	(2)	6.903	97	1142624	10.903
52) Cyclohexane	(2)	7.031	56	1266189	9.886
52) Cyclohexane	(2)	7.031	84	1210415	12.290
52) Cyclohexane	(2)	7.037	69	365866	10.019
55) 1,1-Dichloropropene	(2)	7.122	75	1003762	10.830
54) Carbon Tetrachloride	(2)	7.134	117	1002402	10.952
56) Isobutyl Alcohol	(1)	7.195	41	478441	510.777
57)$1,2-Dichloroethane-d4	(2)	7.342	102	89856M	9.769
57)$1,2-Dichloroethane-d4	(2)	7.336	65	496784	9.871
57)$1,2-Dichloroethane-d4	(2)	7.336	104	57239	9.893
58) Benzene	(2)	7.384	78	2732314	10.779
59) 1,2-Dichloroethane	(2)	7.439	62	756012M	10.663
60) t-Amyl methyl ether	(2)	7.573	73	1527904	10.330
63)*Fluorobenzene	(2)	7.781	96	2432302	10.000
62) n-Heptane	(2)	7.811	43	1170268	9.487
65) n-Butanol	(1)	8.085	56	743492	1079.040
67) Trichloroethene	(2)	8.268	95	743354	10.947
70) 1,2-Dichloropropane	(2)	8.598	63	700839	10.654
69) Methylcyclohexane	(2)	8.604	83	1251287	10.720
71) Methyl Methacrylate	(1)	8.665	69	265742A	11.875
72) 1,4-Dioxane	(1)	8.683	88	93631M	609.238
73) Dibromomethane	(2)	8.707	93	303020	11.010
74) Bromodichloromethane	(2)	8.933	83	866278	10.907
76) 2-Nitropropane	(1)	9.171	41	912843	119.641
80) cis-1,3-Dichloropropene	(2)	9.482	75	986920	10.705
81) 4-Methyl-2-Pentanone	(1)	9.628	43	3667750	111.407
82)$Toluene-d8	(3)	9.799	98	2461602	9.837
82)$Toluene-d8	(3)	9.799	100	1560013	9.848
83) Toluene	(3)	9.878	92	1754958	10.733
84) trans-1,3-Dichloropropene	(3)	10.116	75	761539	10.197
85) 1,3-Dichloropropene (total)	(3)		75	1748459	20.902
86) Ethyl Methacrylate	(3)	10.177	69	554697	9.942
88) 1,1,2-Trichloroethane	(3)	10.317	97	408962	10.712
89) Tetrachloroethene	(3)	10.433	166	854519	11.135
90) 1,3-Dichloropropane	(3)	10.481	76	722067	10.636
91) 2-Hexanone	(1)	10.518	43	2531874	106.732

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	541084	10.852
95) 1,2-Dibromoethane	(3)	10.823	107	385011	10.672
97)*Chlorobenzene-d5	(3)	11.249	117	1721860	10.000
98) Chlorobenzene	(3)	11.274	112	1899398	10.900
99) 1,1,1,2-Tetrachloroethane	(3)	11.359	131	674936	10.999
100) Ethylbenzene	(3)	11.365	91	3598889	10.944
101) m+p-Xylene	(3)	11.475	106	2743270	22.140
105) Xylene (Total)	(3)		106	4072777	33.114
104) o-Xylene	(3)	11.804	106	1329507	10.973
106) Styrene	(3)	11.823	104	2107137	11.133
107) Bromoform	(3)	11.981	173	306079	11.312
108) Isopropylbenzene	(3)	12.109	105	3612789	11.106
111)$4-Bromofluorobenzene	(3)	12.249	95	741073	9.750
111)$4-Bromofluorobenzene	(3)	12.255	174	686733	10.273
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	501082	10.304
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	1270901	124.783
114) Bromobenzene	(4)	12.371	156	813459	10.606
116) 1,2,3-Trichloropropane	(4)	12.383	110	132902	10.719
117) n-Propylbenzene	(4)	12.432	91	4425686	10.557
119) 2-Chlorotoluene	(4)	12.511	126	827015	10.526
121) 1,3,5-Trimethylbenzene	(4)	12.572	105	3087950	10.630
122) 4-Chlorotoluene	(4)	12.603	126	841144	10.519
125) tert-Butylbenzene	(4)	12.810	134	635549M	10.290
126) Pentachloroethane	(4)	12.847	167	514915	10.716
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	3098462	10.620
128) sec-Butylbenzene	(4)	12.975	105	3966124	10.544
131) 1,3-Dichlorobenzene	(4)	13.078	146	1628278	10.902
132) p-Isopropyltoluene	(4)	13.084	119	3405276	10.851
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	788649	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	1604347	10.315
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	1272319	10.278
136) Benzyl Chloride	(4)	13.219	126	188165	10.855
138) n-Butylbenzene	(4)	13.377	92	1700283	10.806
139) 1,2-Dichlorobenzene	(4)	13.408	146	1443722	10.847
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	61356	12.452
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	1171869	10.586
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	924095	10.134
146) Hexachlorobutadiene	(4)	14.590	225	431126	10.021

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

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

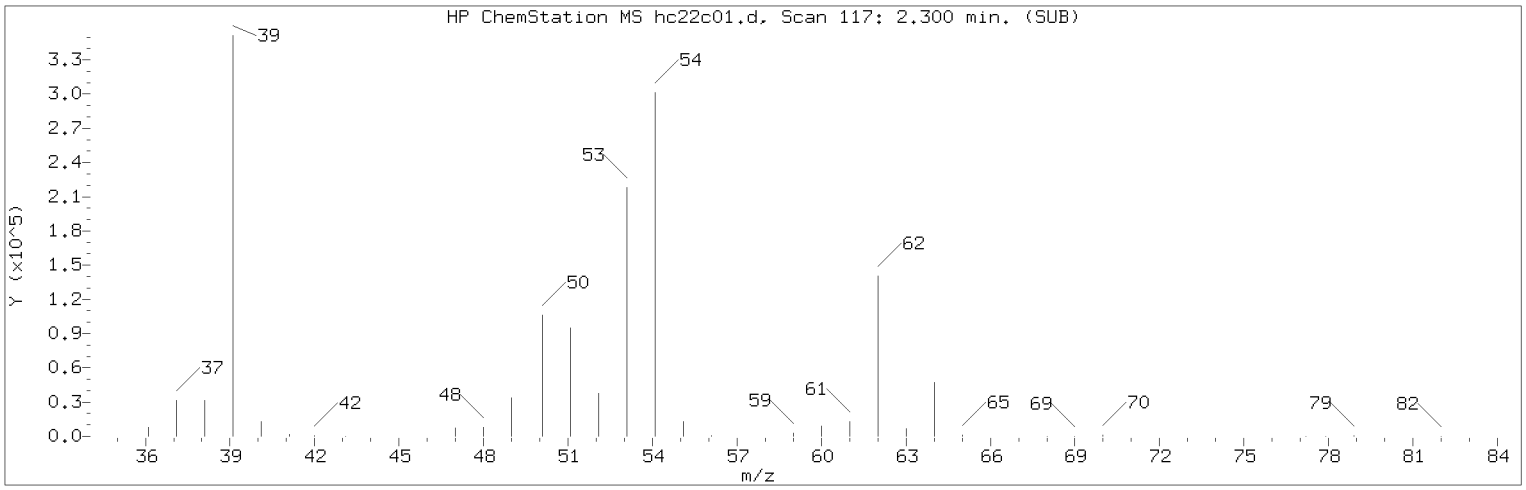
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

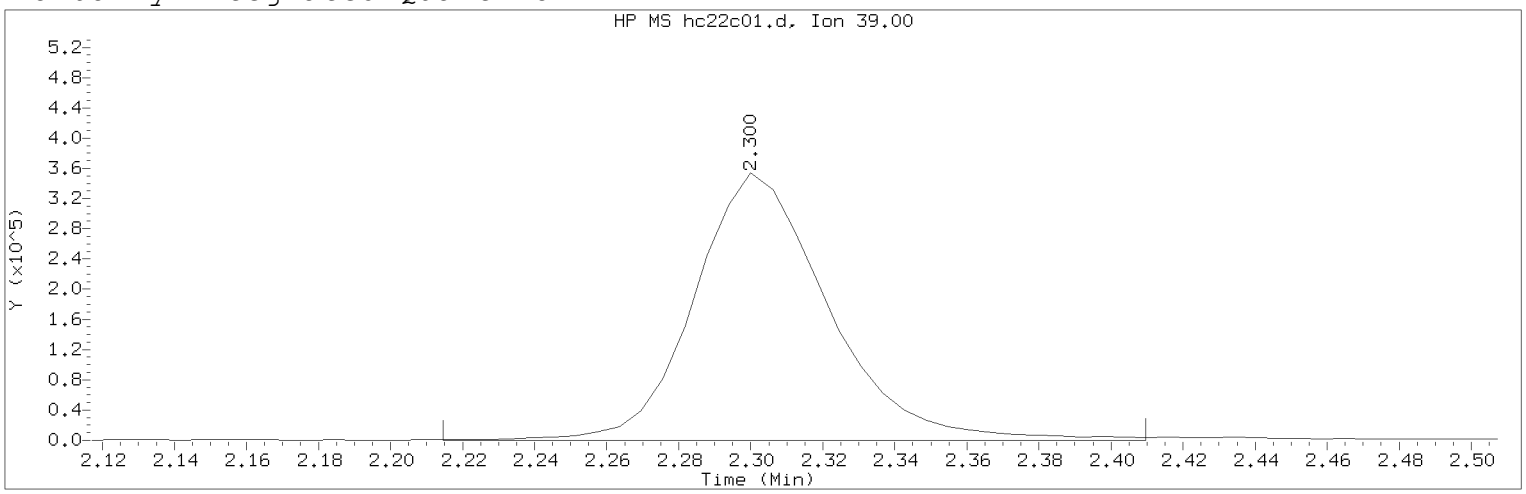
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	1316675	8.875
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	705251	9.187

Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

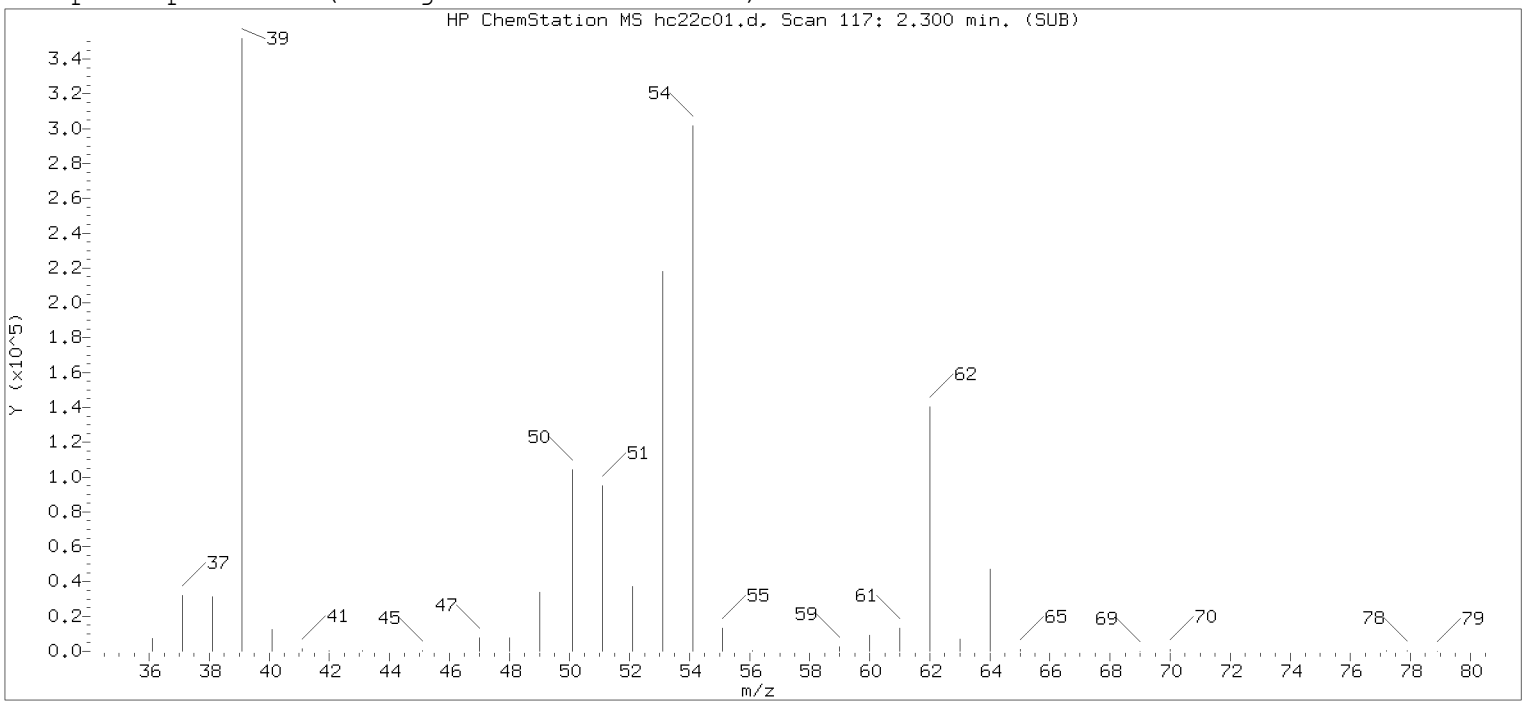
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area (flag) : 911169M
On-Column Amount (ng) : 9.9293
Integration start scan : 102 Integration stop scan: 134
Y at integration start : 292 Y at integration end: 292

Reason for manual integration: improper integration

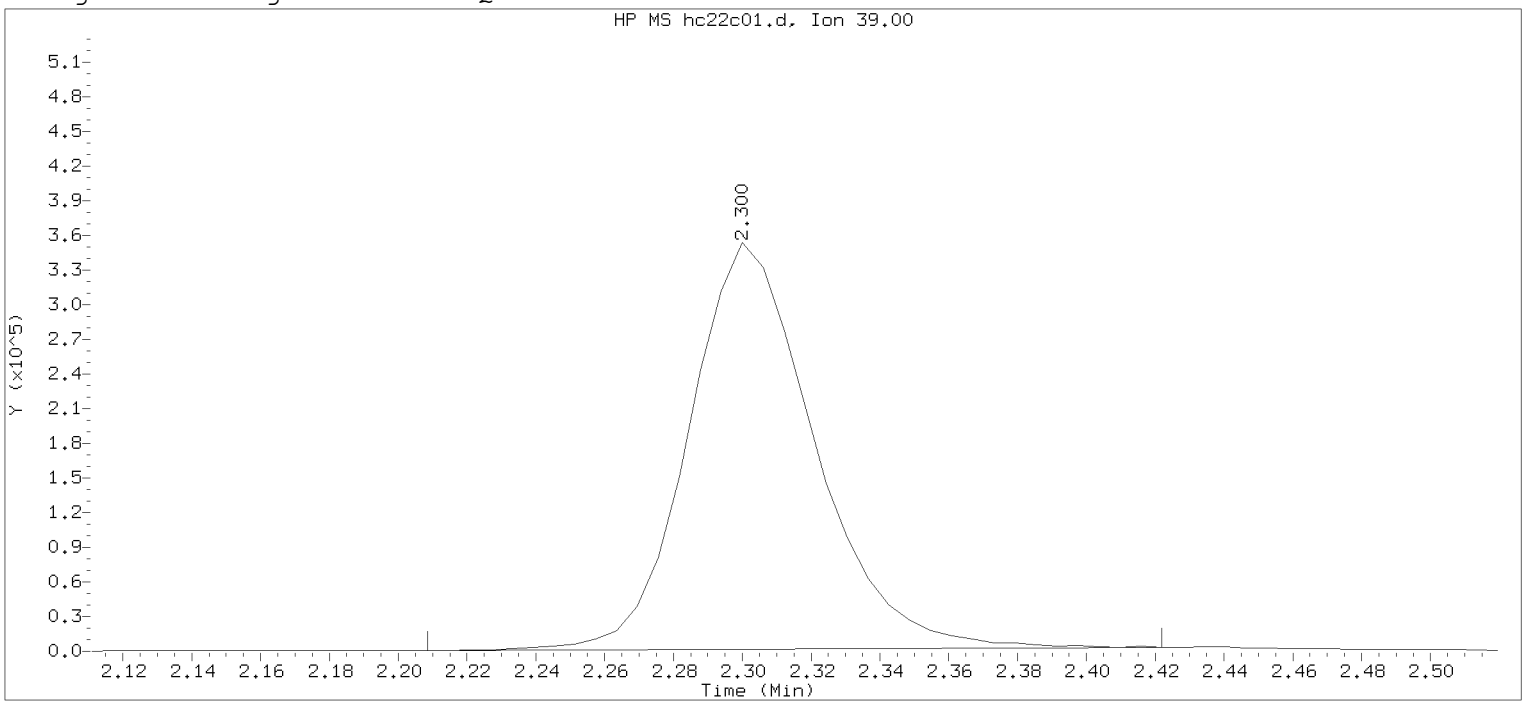
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

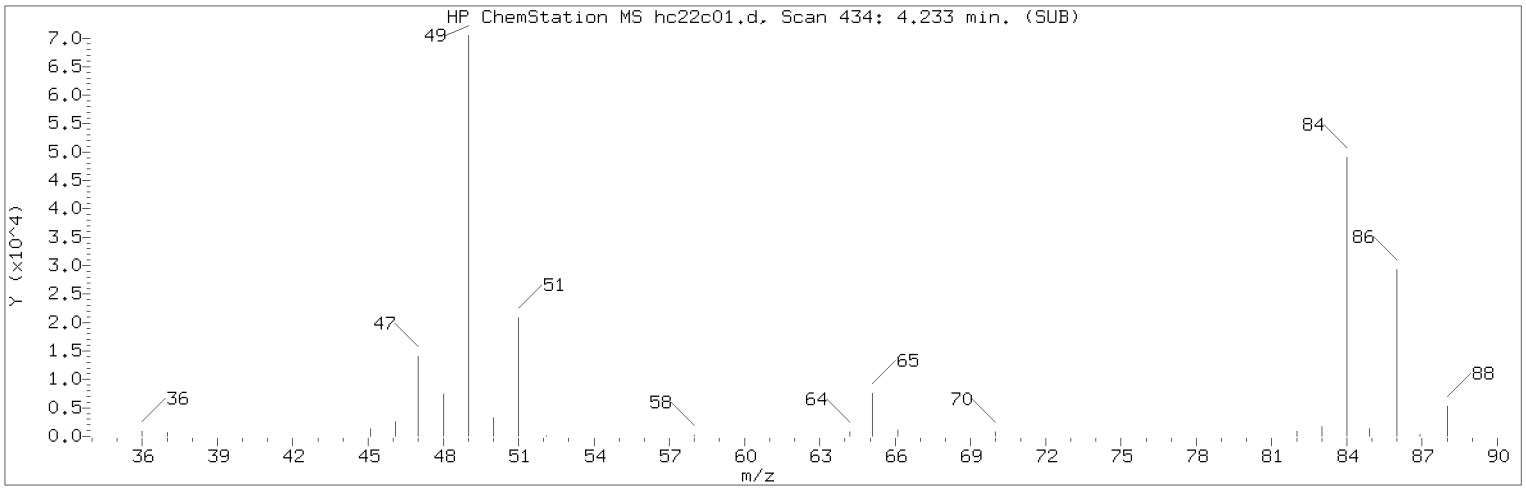
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Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

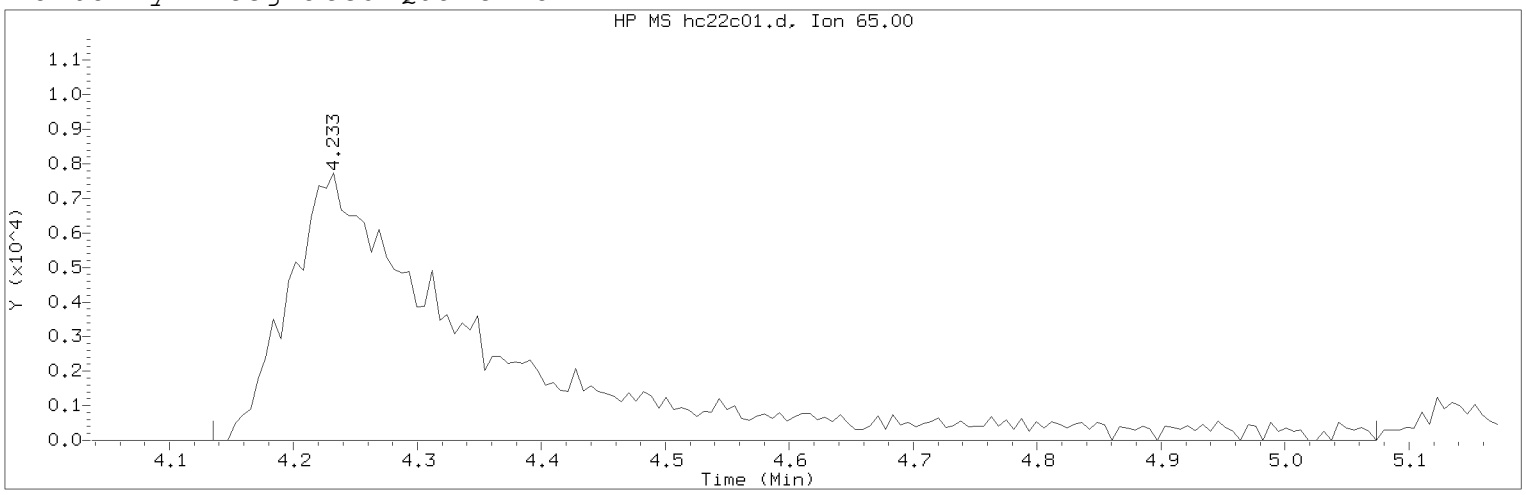
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area : 892849
On-column Amount (ng) : 9.7297
Integration start scan : 101 Integration stop scan: 136
Y at integration start : 419 Y at integration end: 3341

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used during 10/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

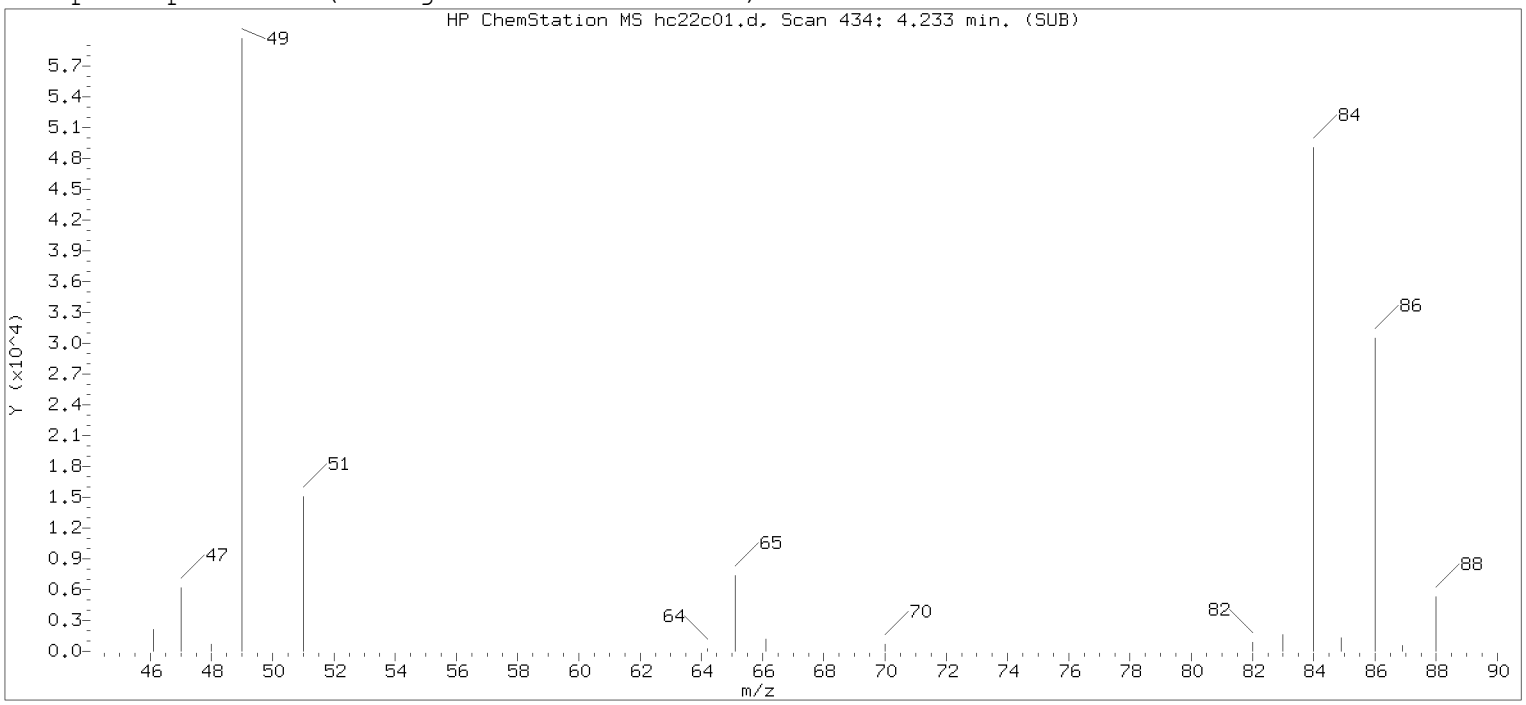
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 434
Retention Time (minutes): 4.233
Quant Ion : 65.00
Area (flag) : 85025M
On-Column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 571
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

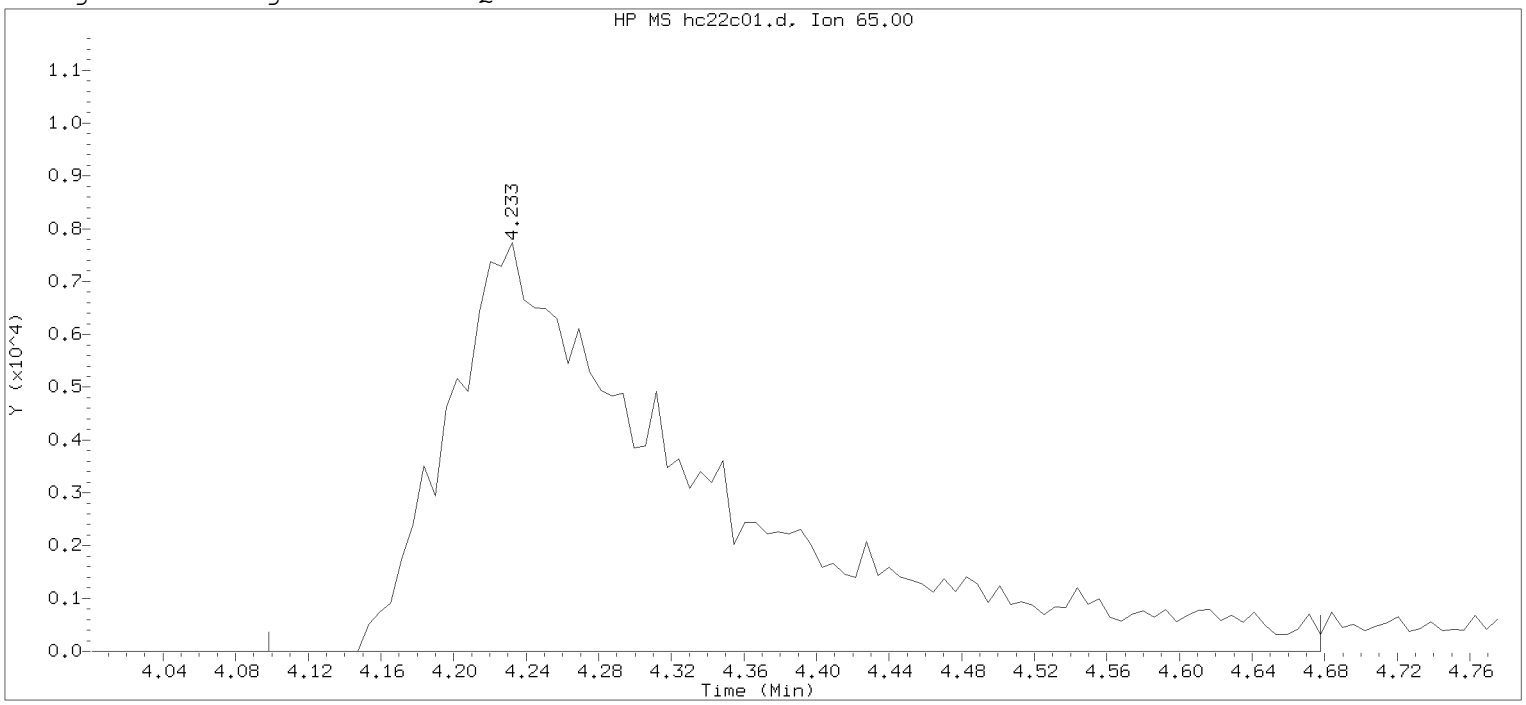
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

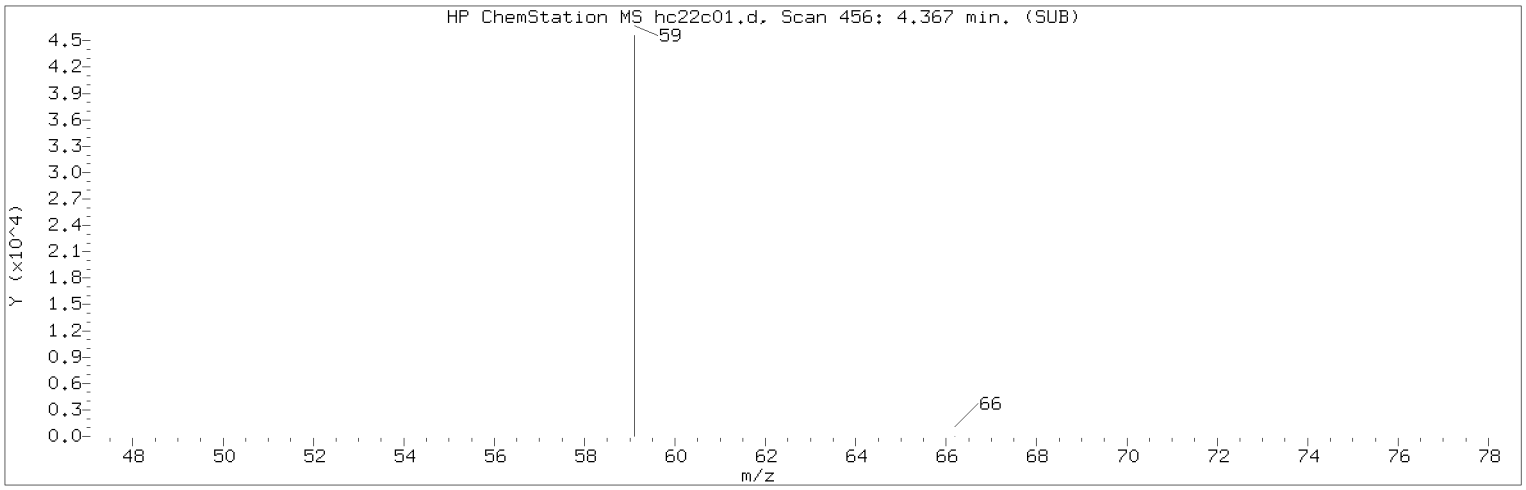
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

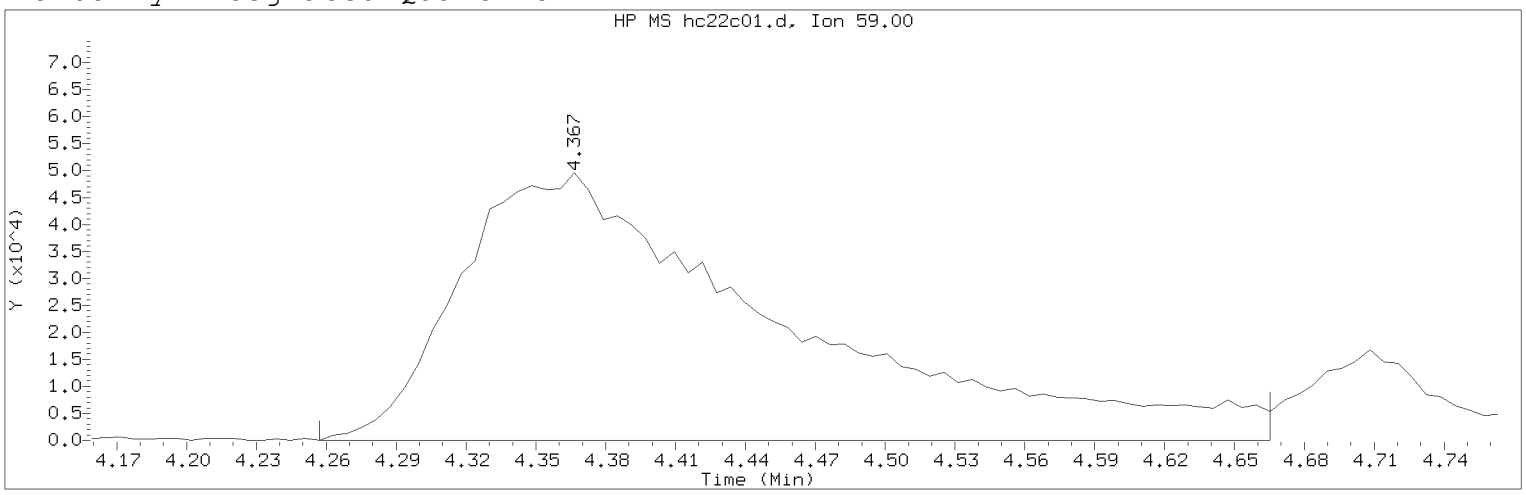
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 434
Retention Time (minutes): 4.233
Quant Ion : 65.00
Area : 76252
On-column Amount (ng) : 50.0000
Integration start scan : 411 Integration stop scan: 506
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

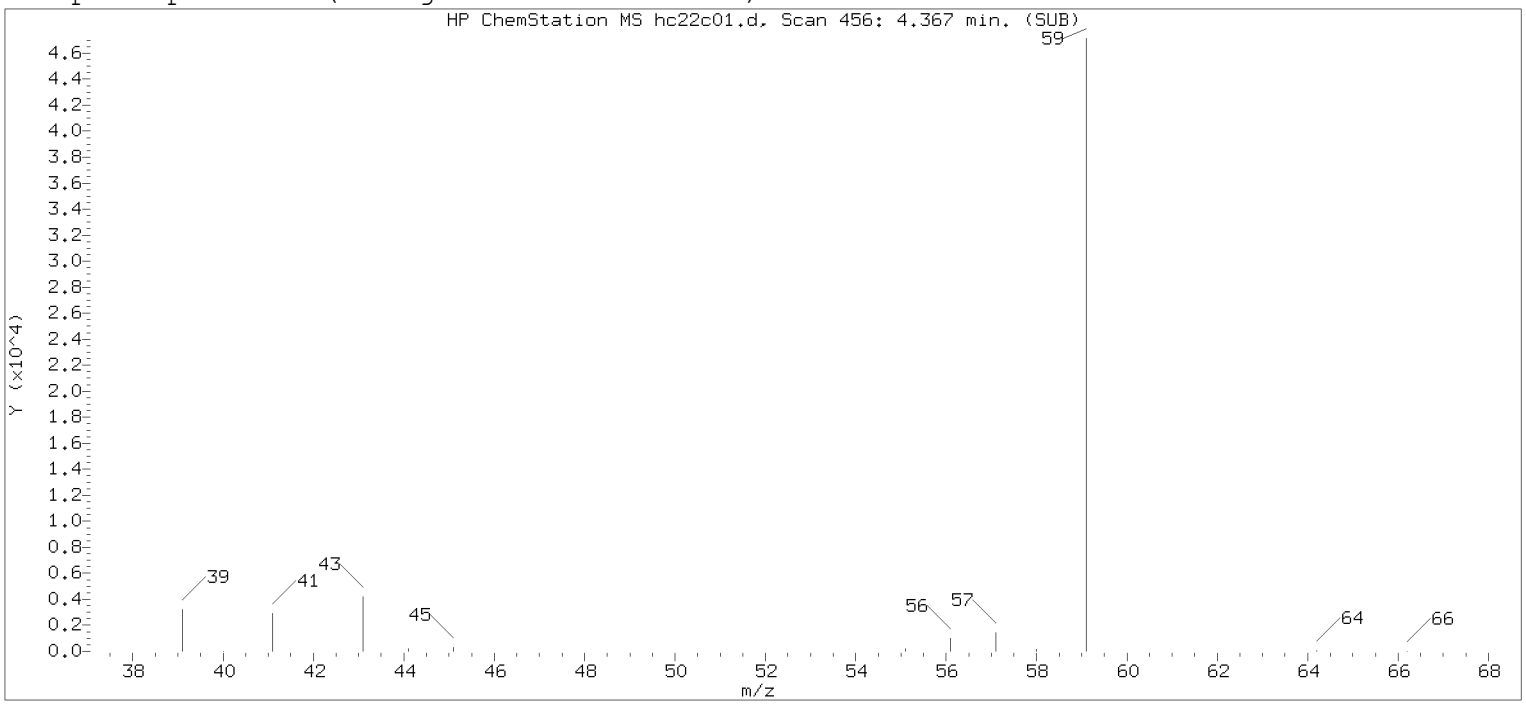
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area (flag) : 477383M
On-Column Amount (ng) : 206.0856
Integration start scan : 437 Integration stop scan: 504
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

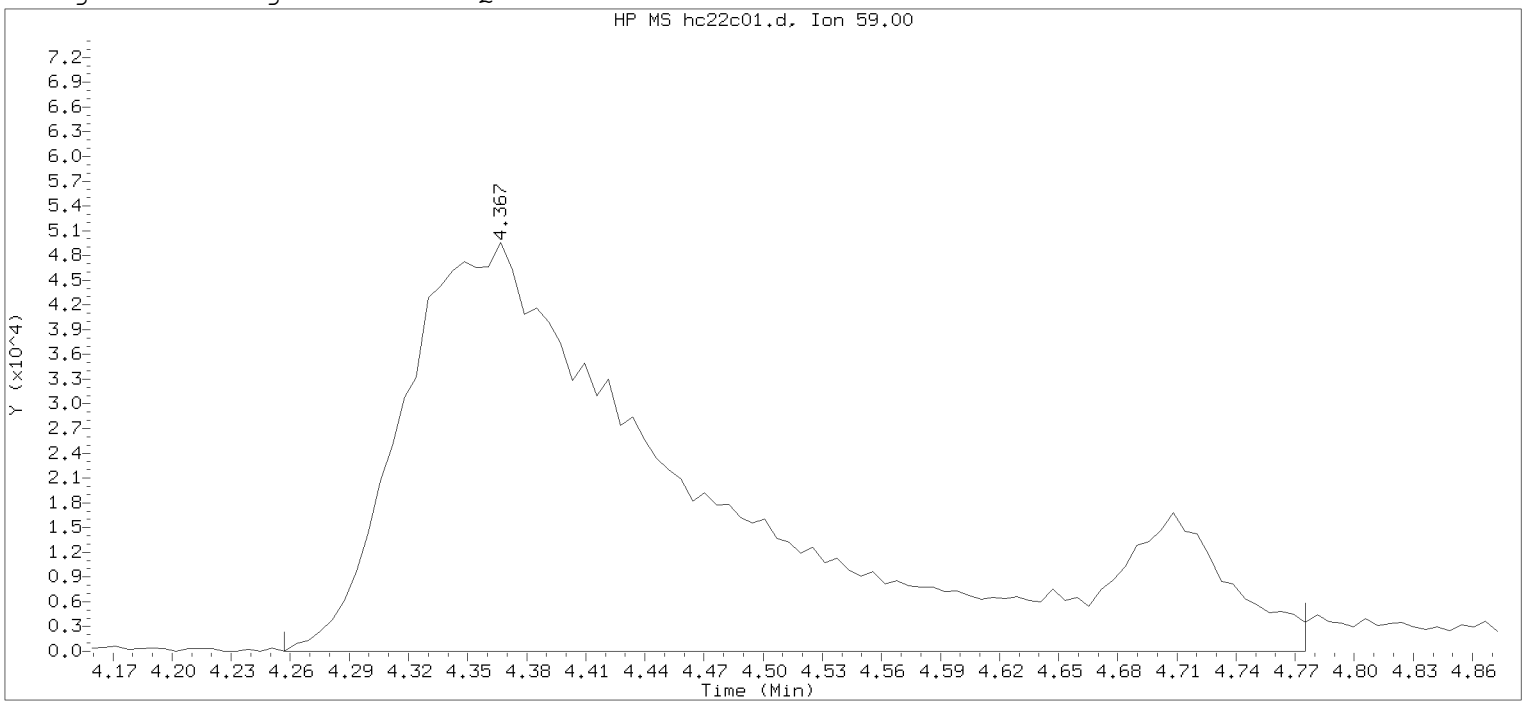
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

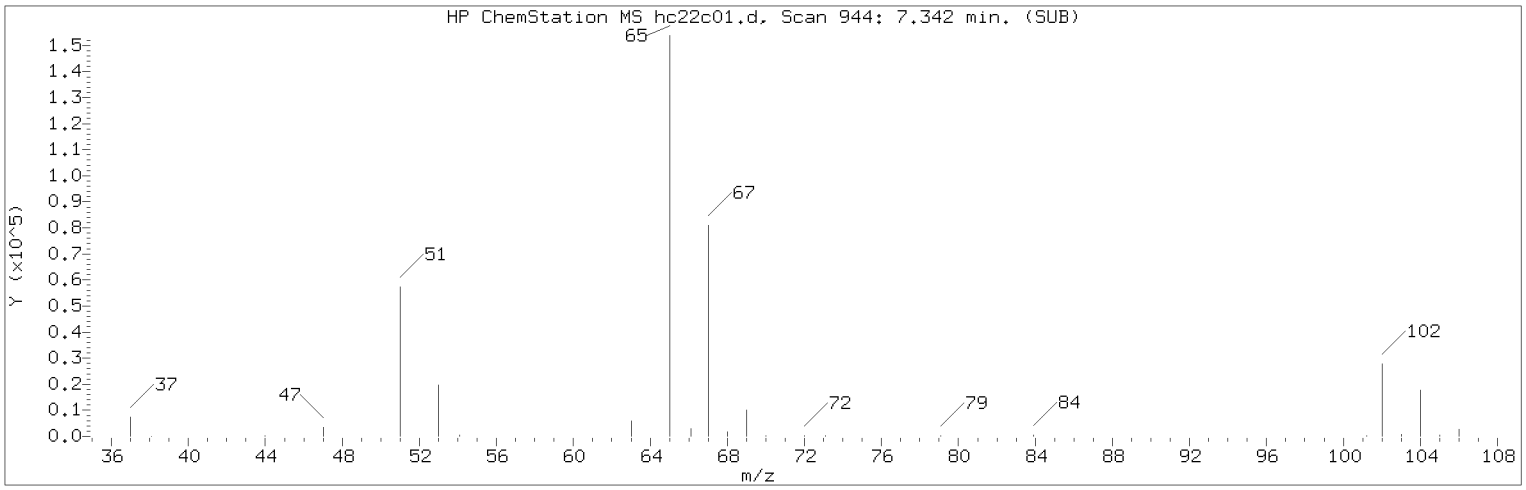
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

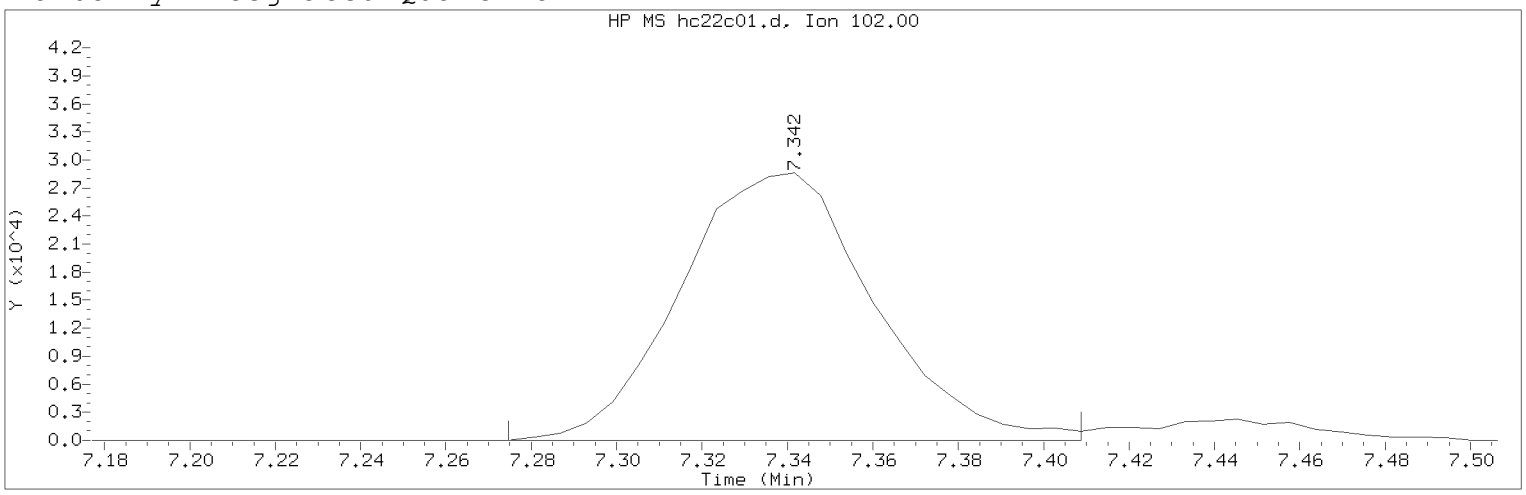
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 456
Retention Time (minutes): 4.367
Quant Ion : 59.00
Area : 539057
On-column Amount (ng) : 259.4826
Integration start scan : 437 Integration stop scan: 522
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

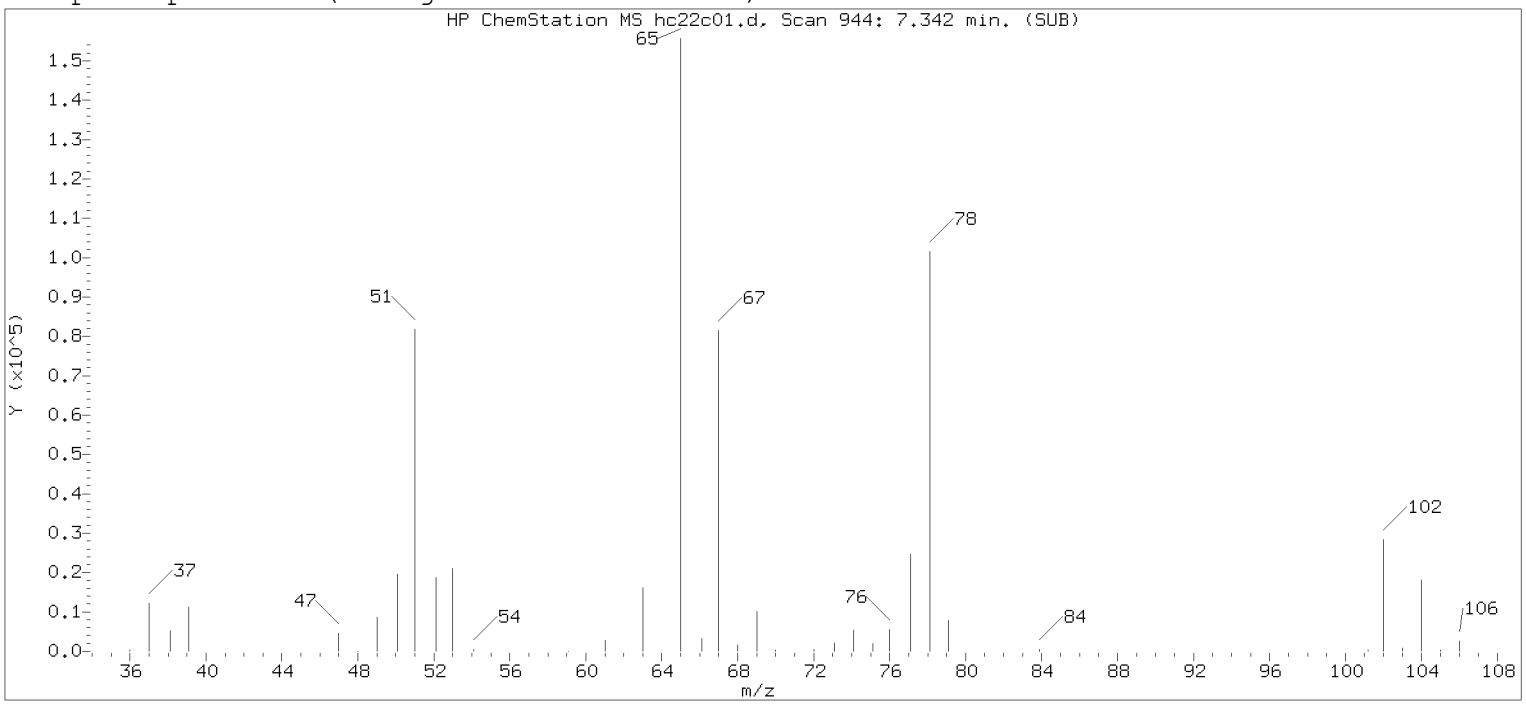
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area (flag) : 89856M
On-Column Amount (ng) : 9.7690
Integration start scan : 932 Integration stop scan: 954
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

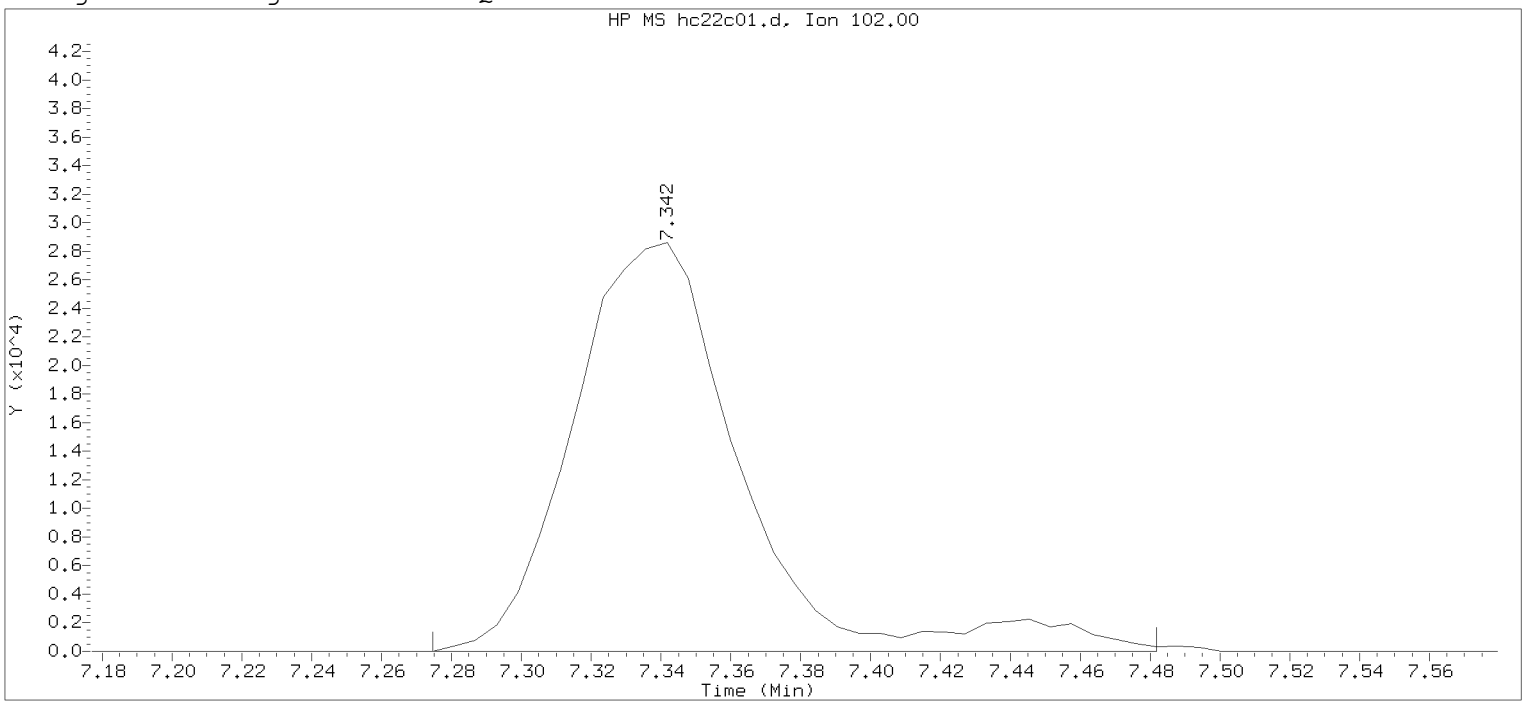
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

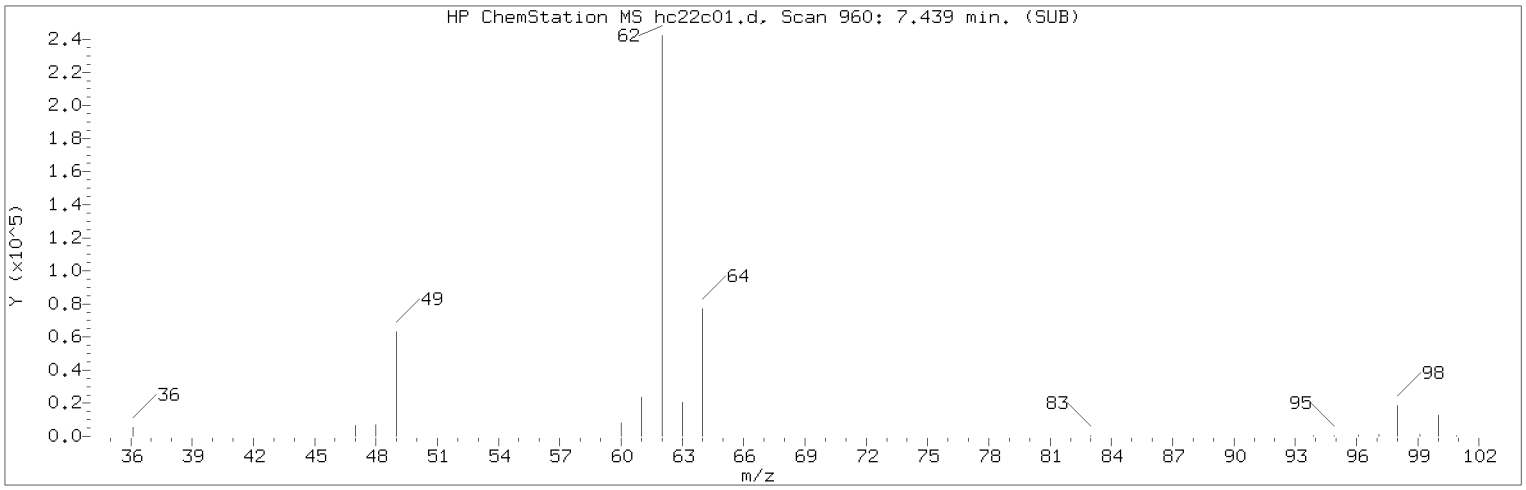
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

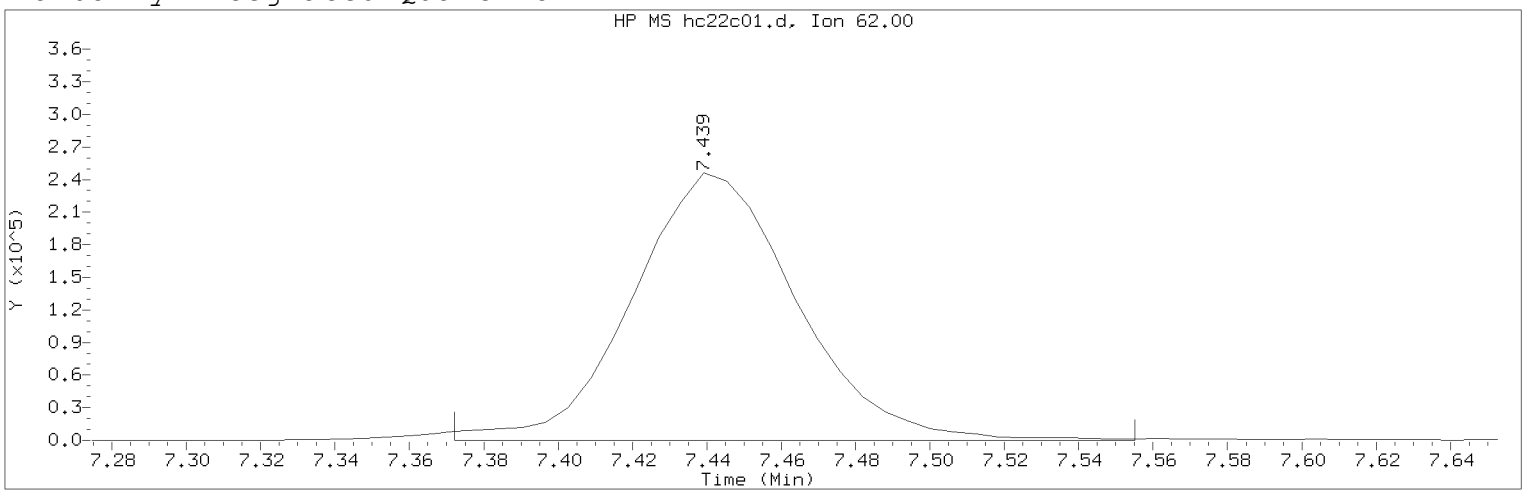
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area : 95966
On-column Amount (ng) : 10.4333
Integration start scan : 932 Integration stop scan: 966
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

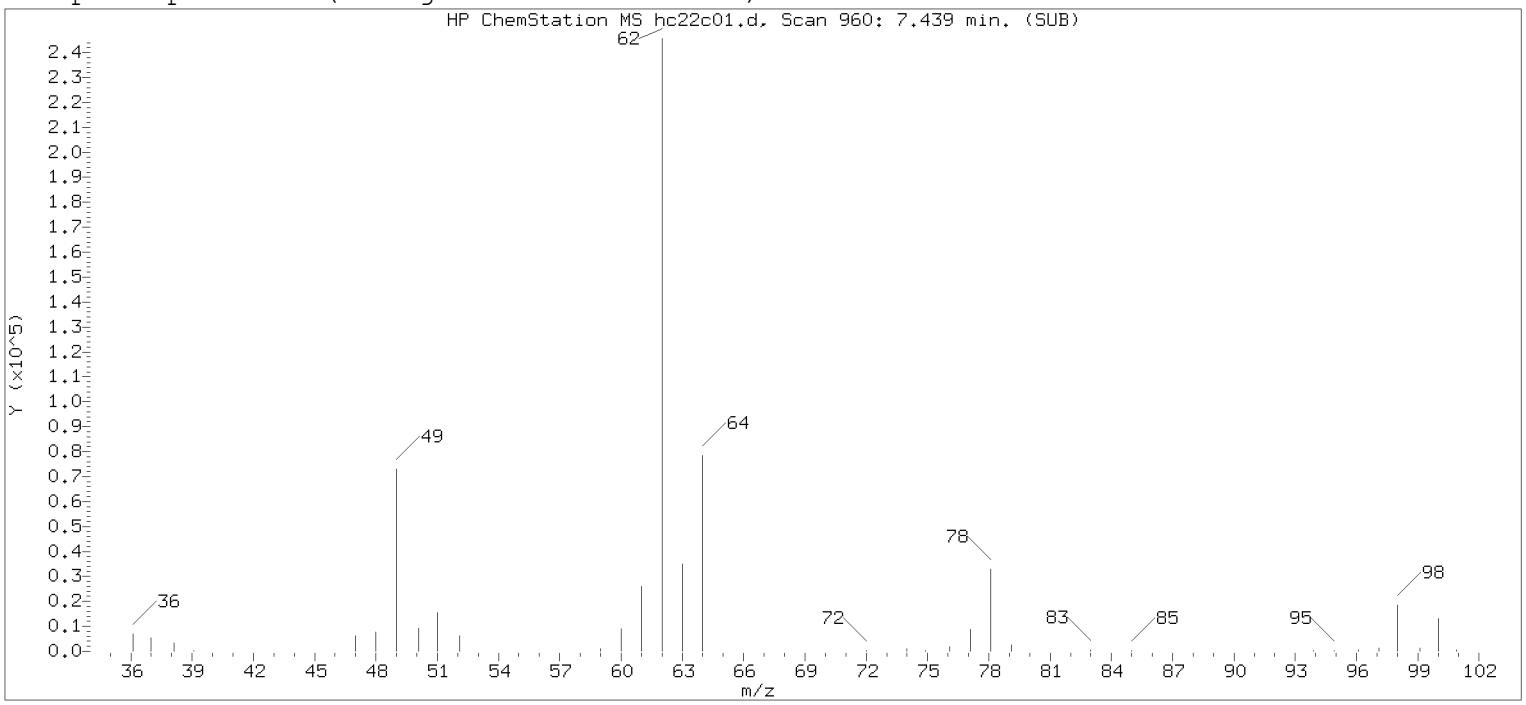
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 960
Retention Time (minutes): 7.439
Quant Ion : 62.00
Area (flag) : 756012M
On-Column Amount (ng) : 10.6634
Integration start scan : 948 Integration stop scan: 978
Y at integration start : 48 Y at integration end: 48

Reason for manual integration: improper integration

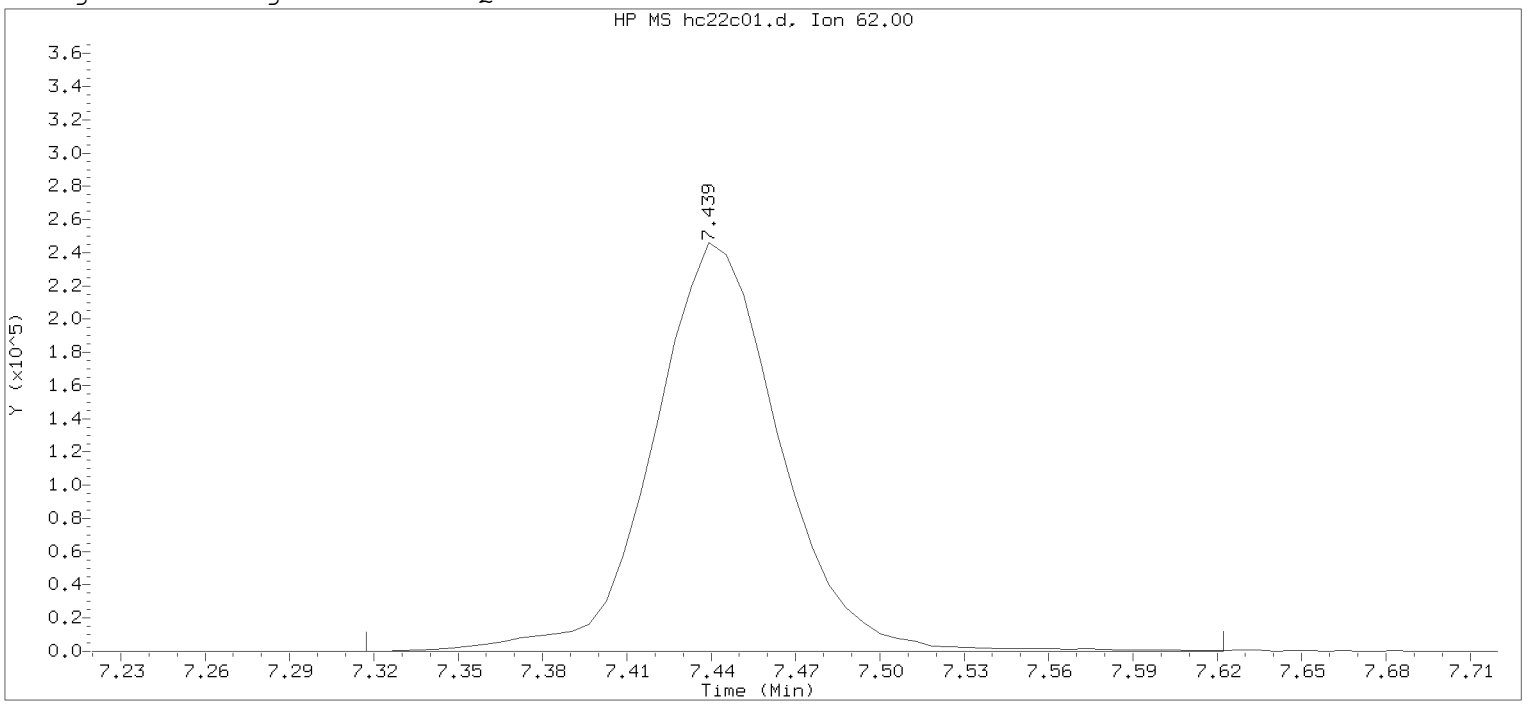
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

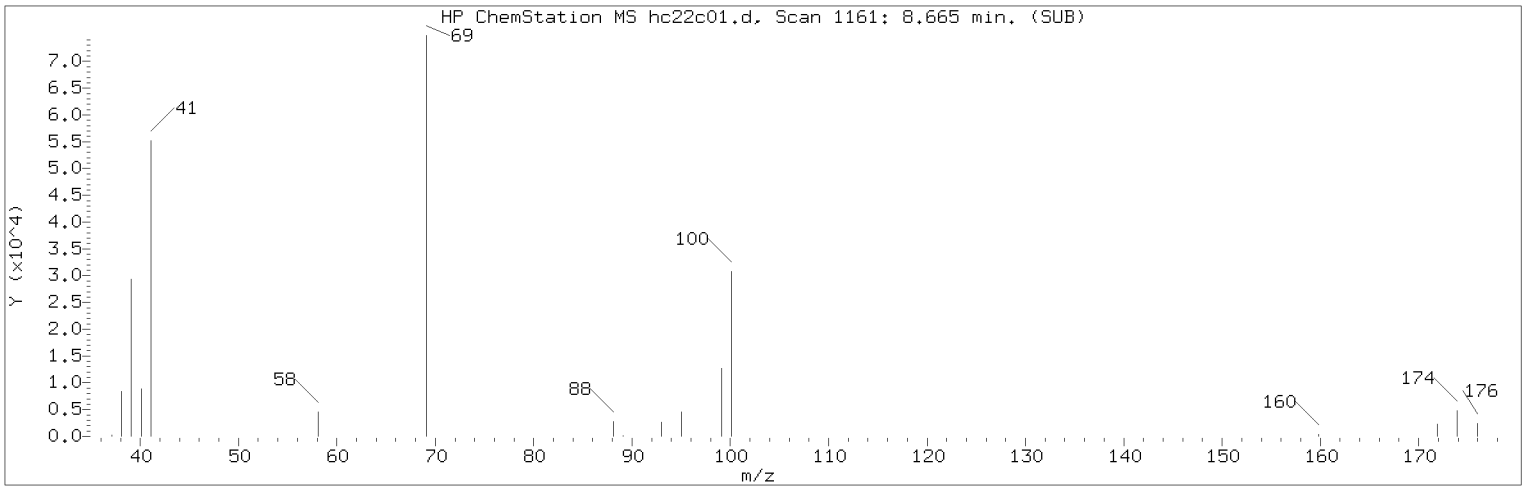
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

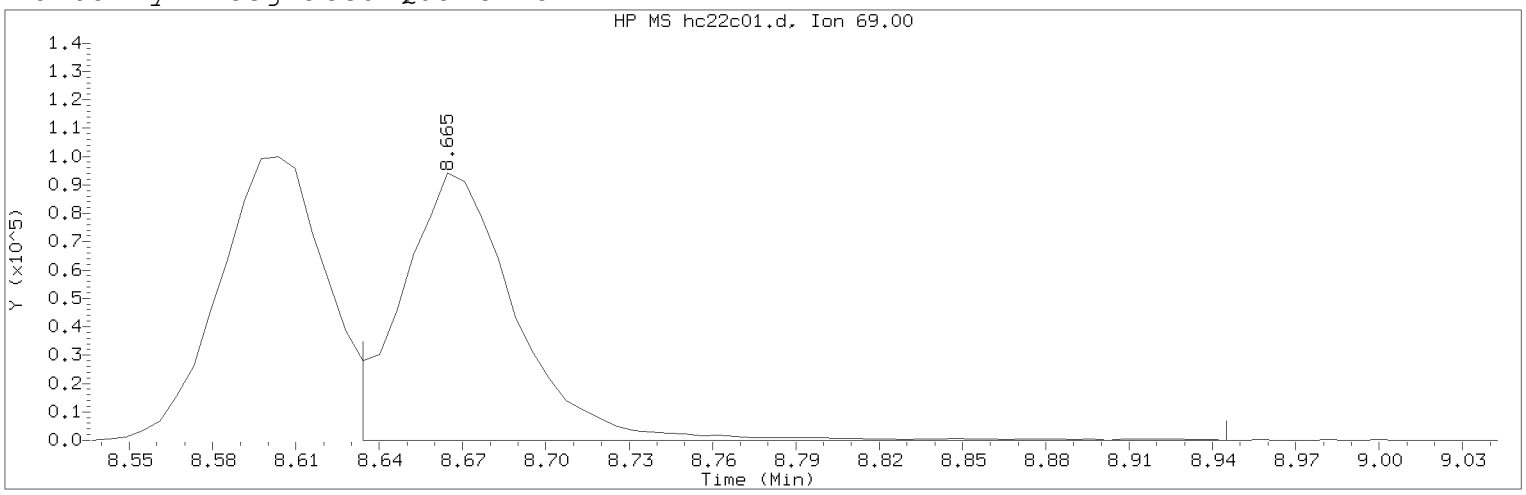
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 960
Retention Time (minutes): 7.439
Quant Ion : 62.00
Area : 766585
On-column Amount (ng) : 10.8126
Integration start scan : 939 Integration stop scan: 989
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/2[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

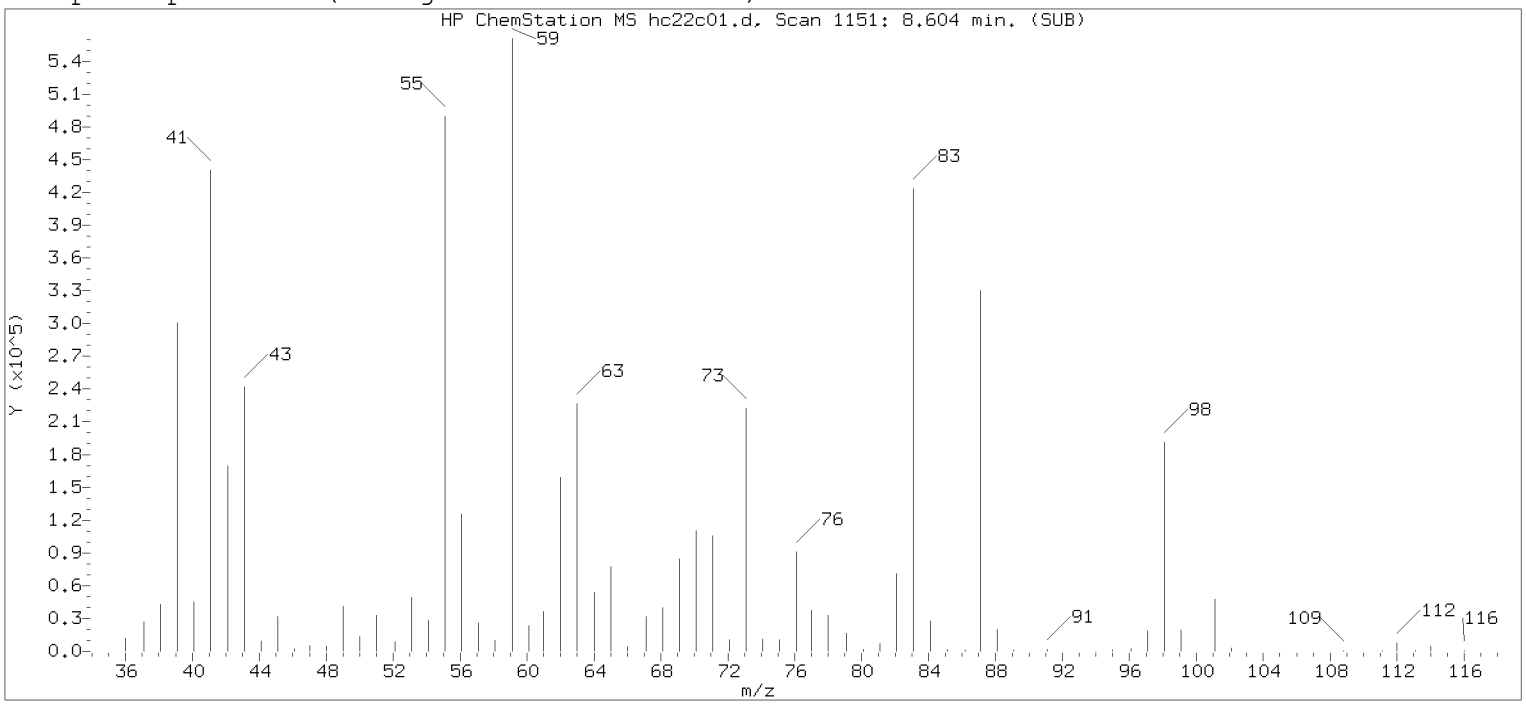
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1161
Retention Time (minutes): 8.665
Quant Ion : 69.00
Area (flag) : 265742A
On-Column Amount (ng) : 11.8754
Integration start scan : 1155 Integration stop scan: 1206
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

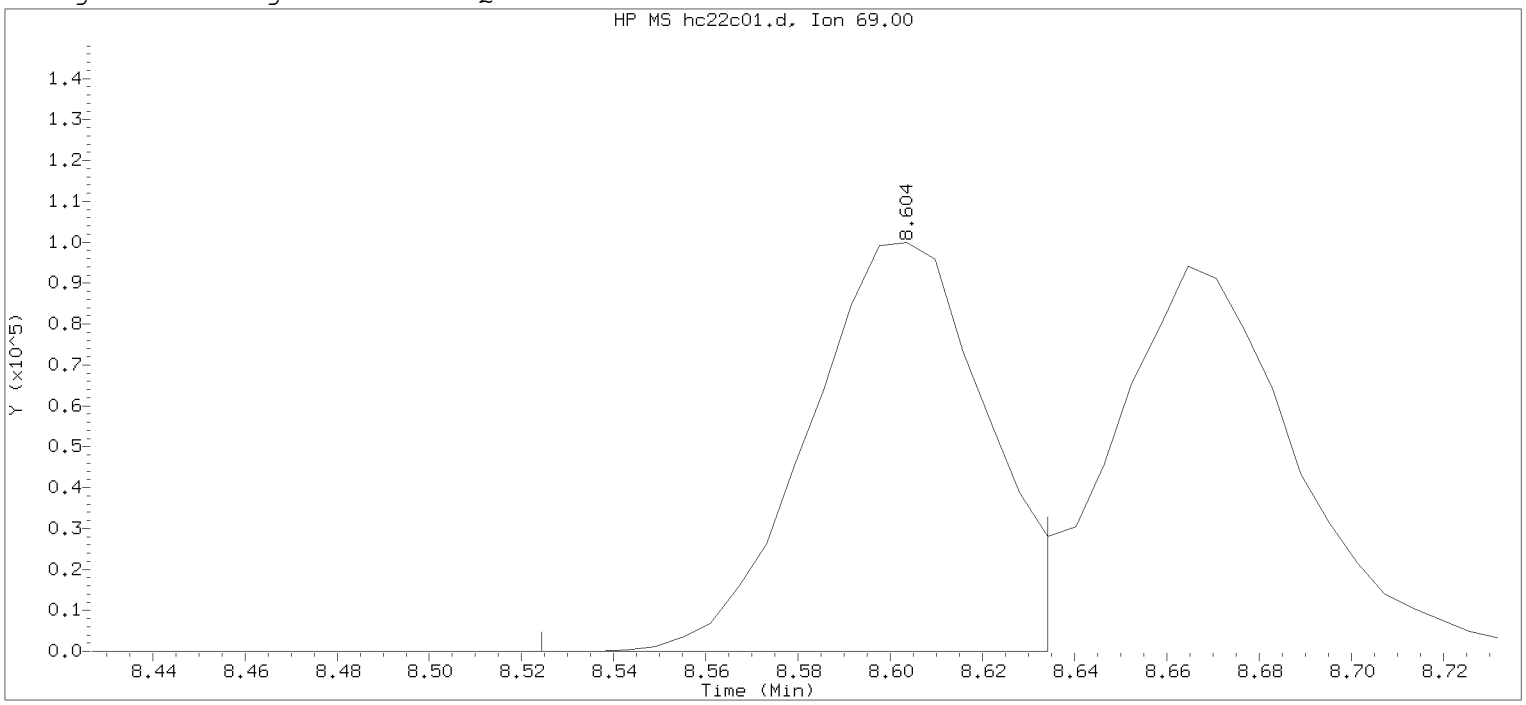
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

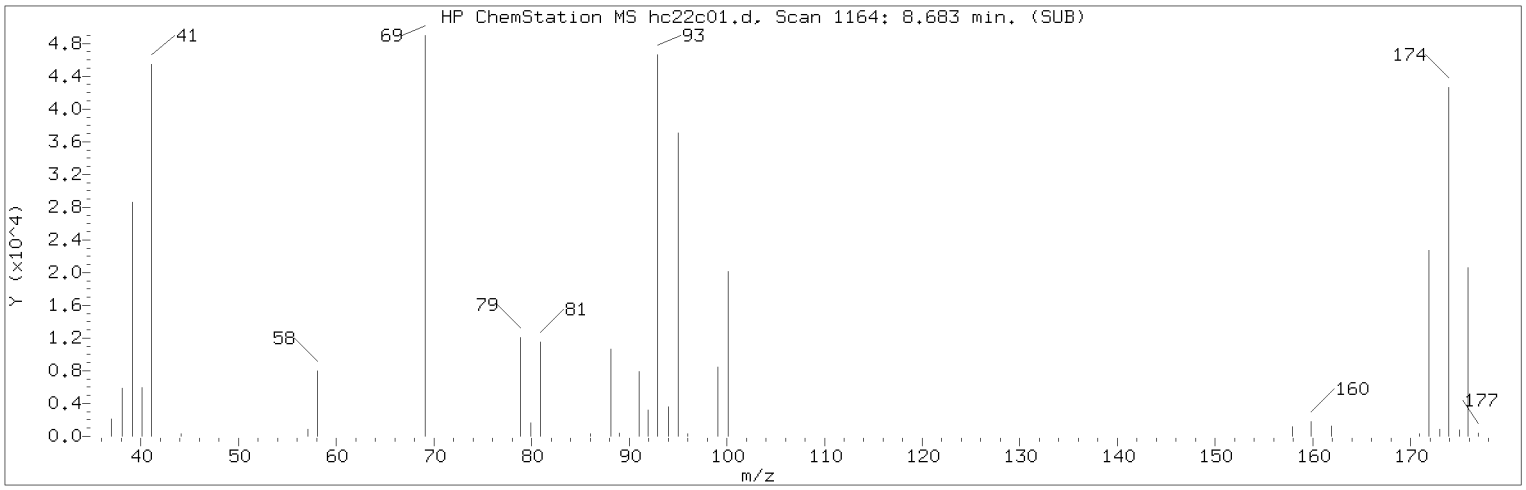
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

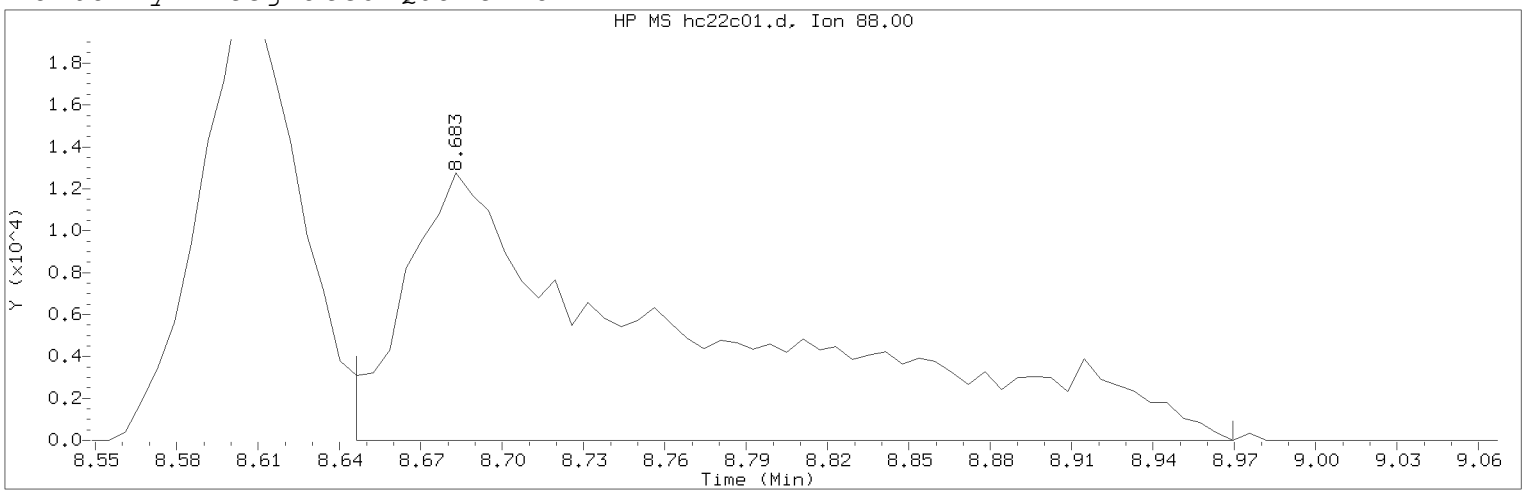
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1151
Retention Time (minutes): 8.604
Quant Ion : 69.00
Area : 264595
On-column Amount (ng) : 13.1845
Integration start scan : 1137 Integration stop scan: 1155
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

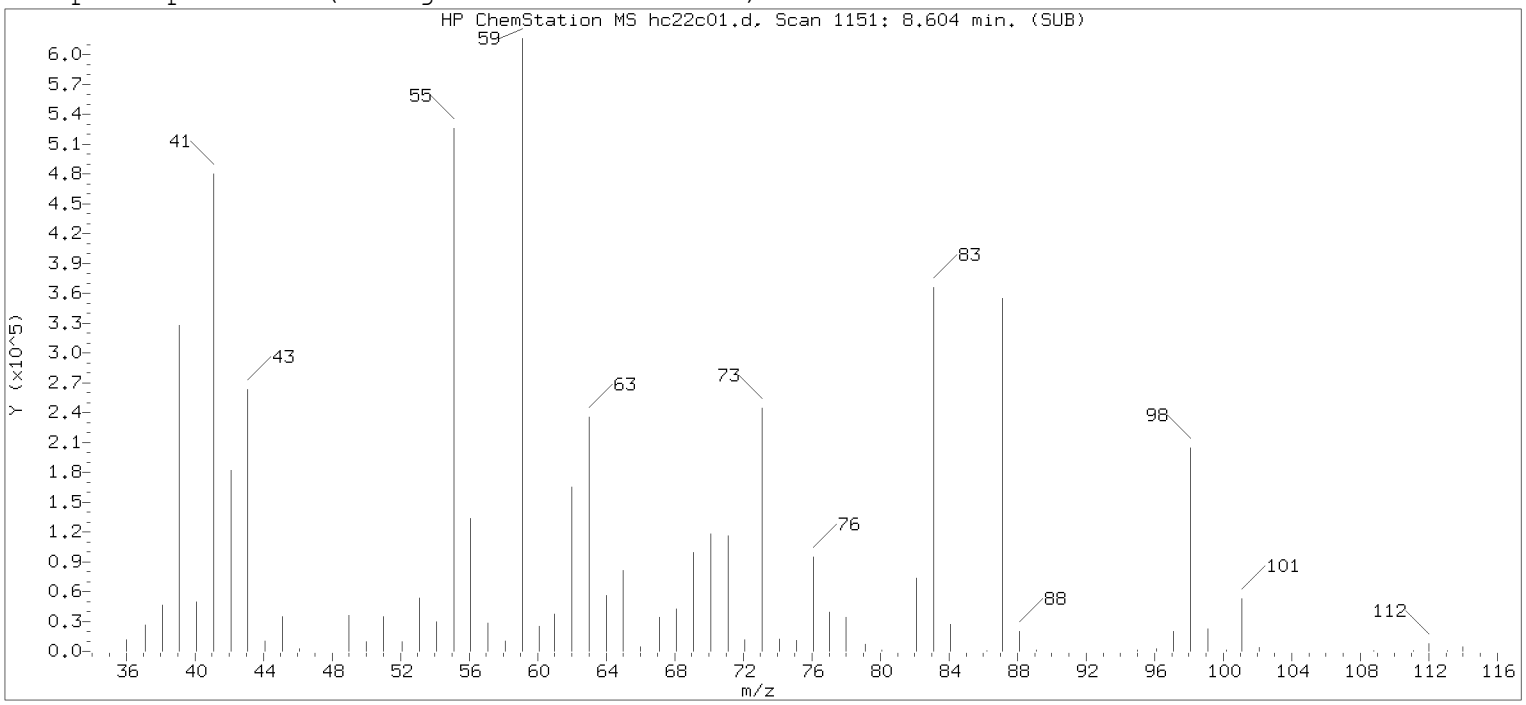
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 93631M
On-Column Amount (ng) : 609.2377
Integration start scan : 1157 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

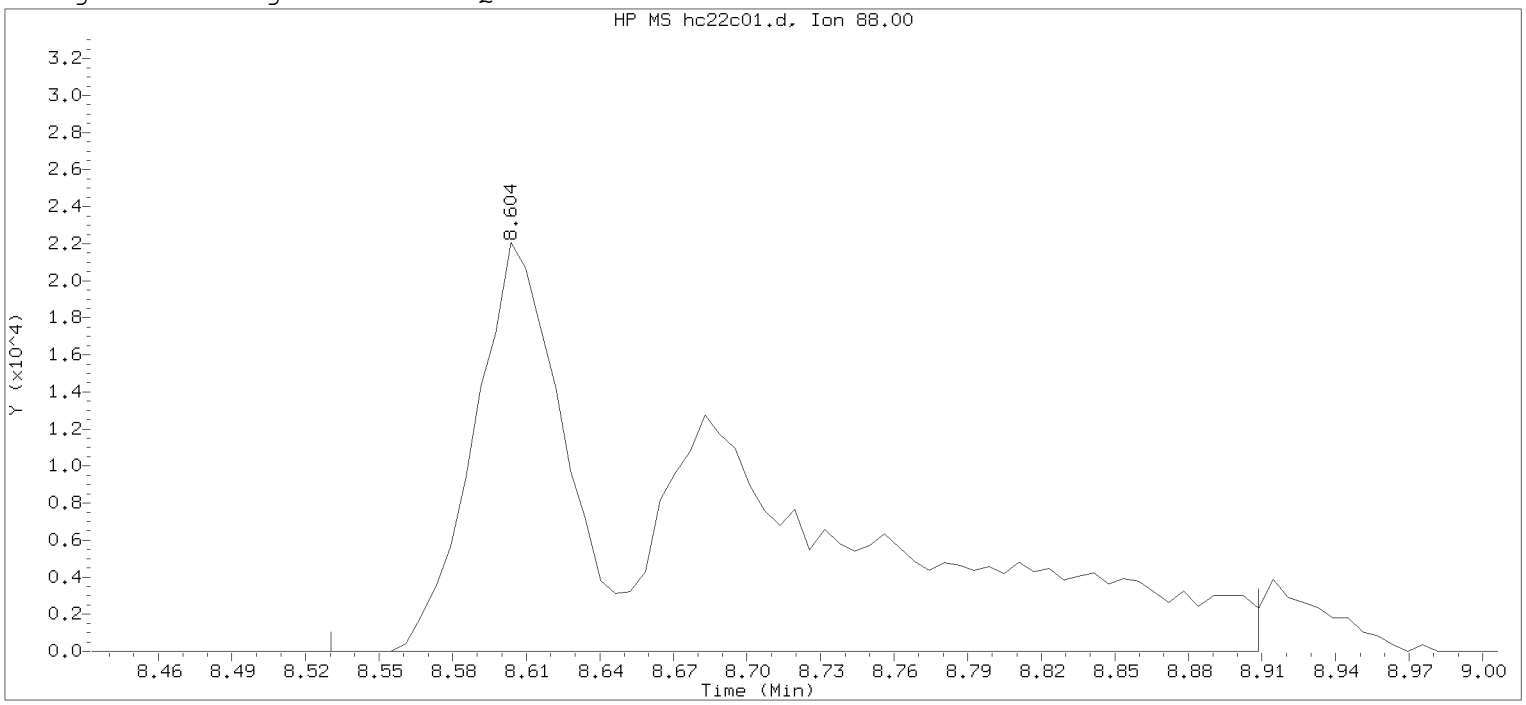
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

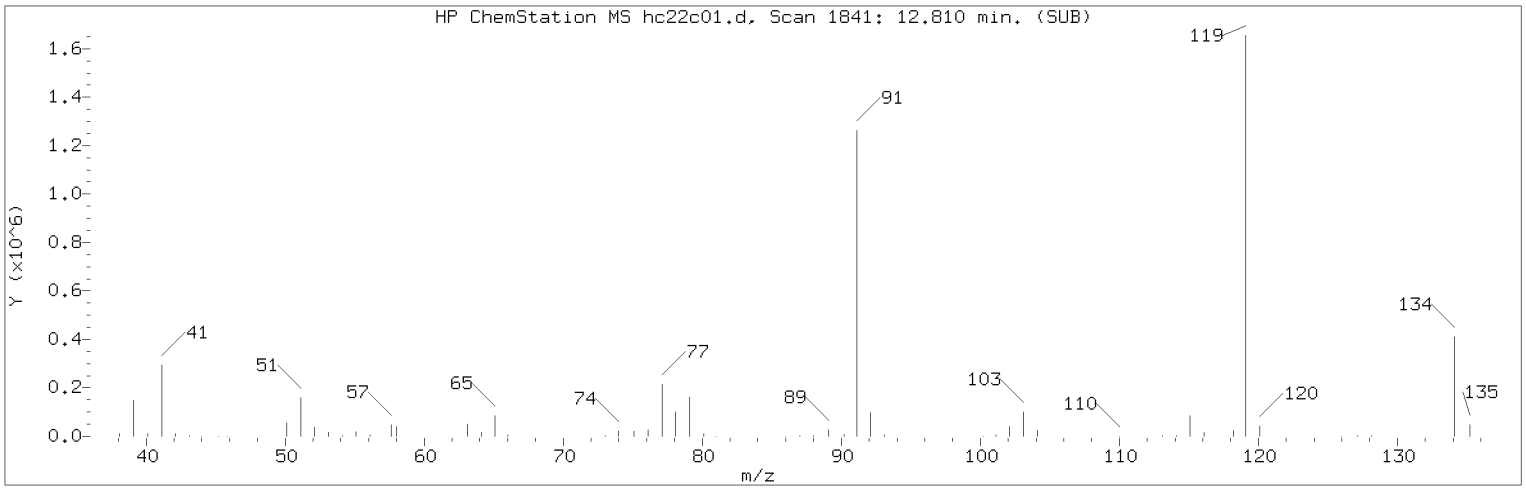
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

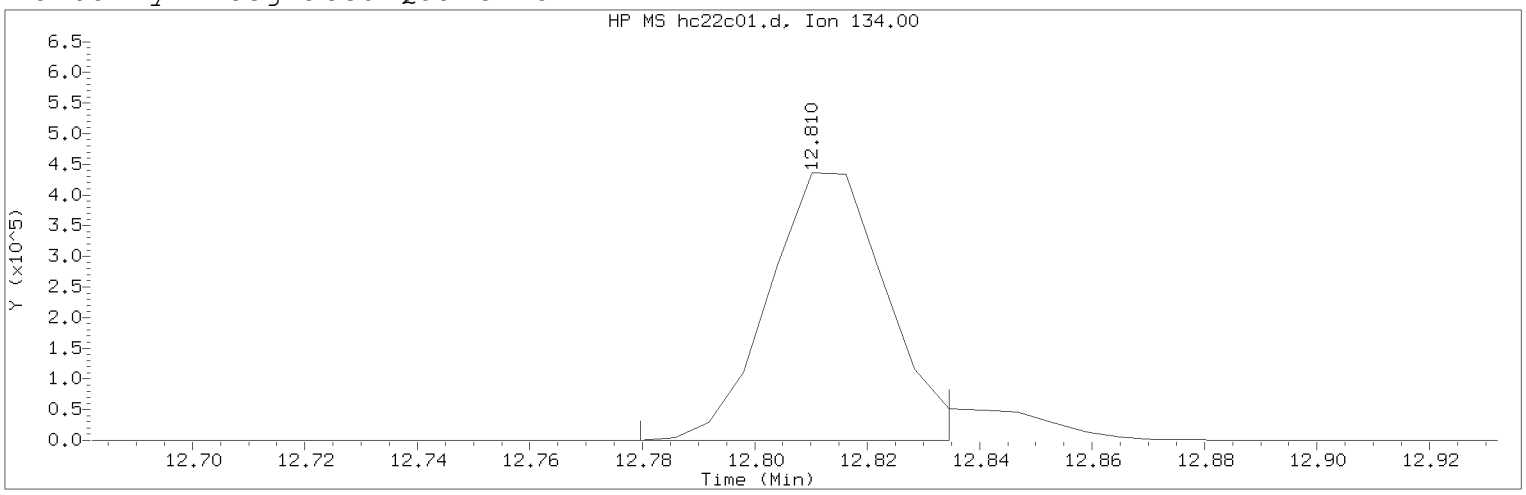
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1151		
Retention Time (minutes)	: 8.604		
Quant Ion	: 88.00		
Area	: 140691		
On-column Amount (ng)	: 1020.7720		
Integration start scan	: 1138	Integration stop scan:	1200
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:12 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

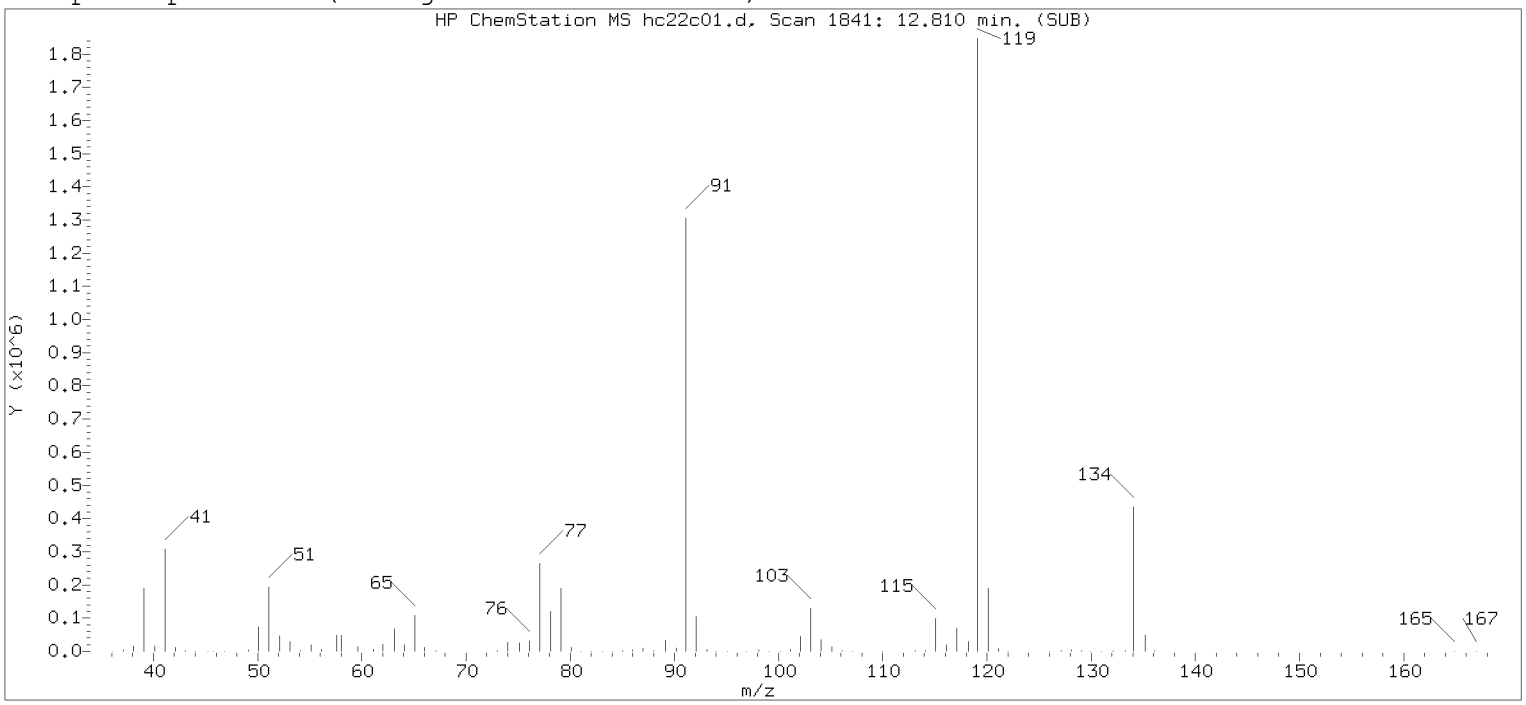
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area (flag) : 635549M
On-Column Amount (ng) : 10.2904
Integration start scan : 1835 Integration stop scan: 1844
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

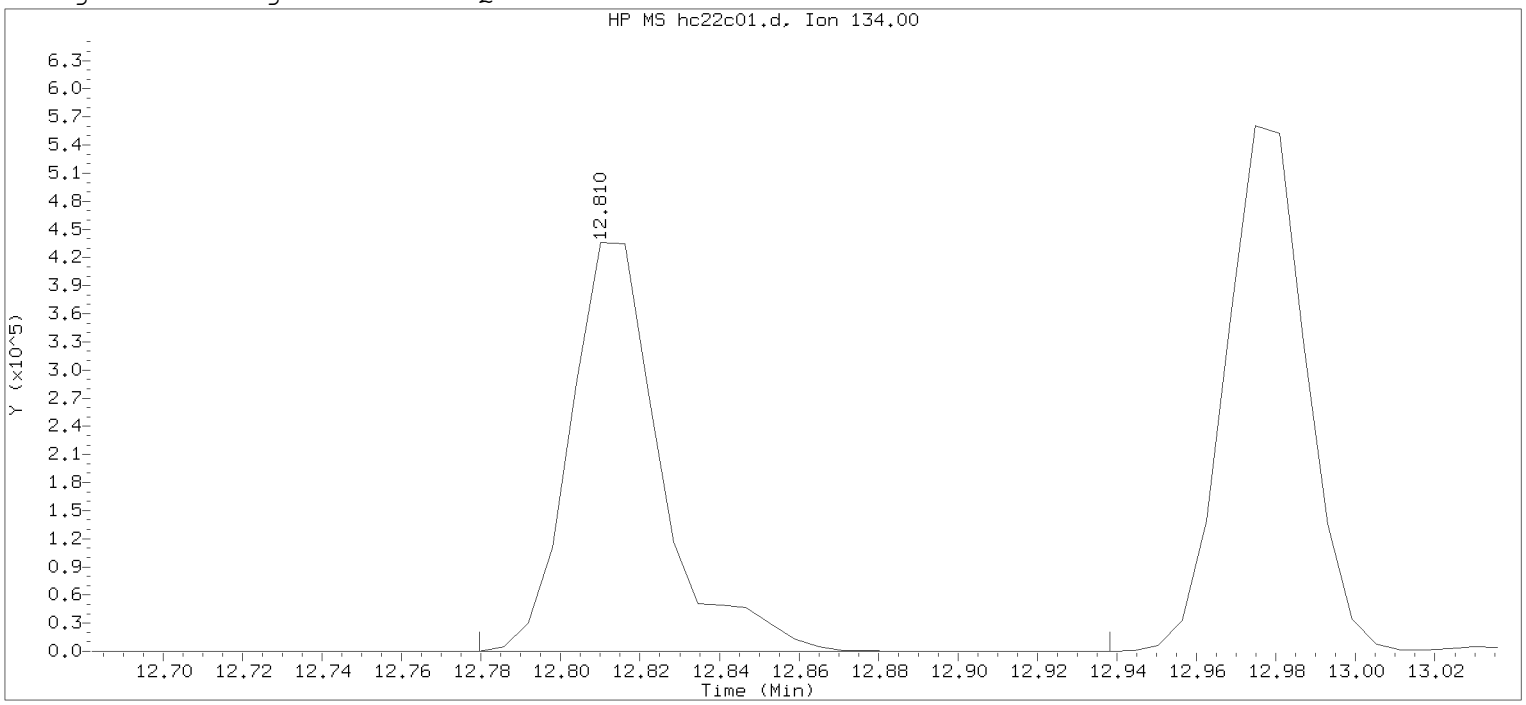
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 23:13.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 22:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:03 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1841
Retention Time (minutes): 12.810
Quant Ion : 134.00
Area : 688542
On-column Amount (ng) : 11.1485
Integration start scan : 1835 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 23:13.
Target 3.5 esignature used on 10/23/2013

Data File: /chem2/HP19094.i/17oct23a.b/hc23t01.d

Date : 23-OCT-2017 08:03

Client ID: aug14-17

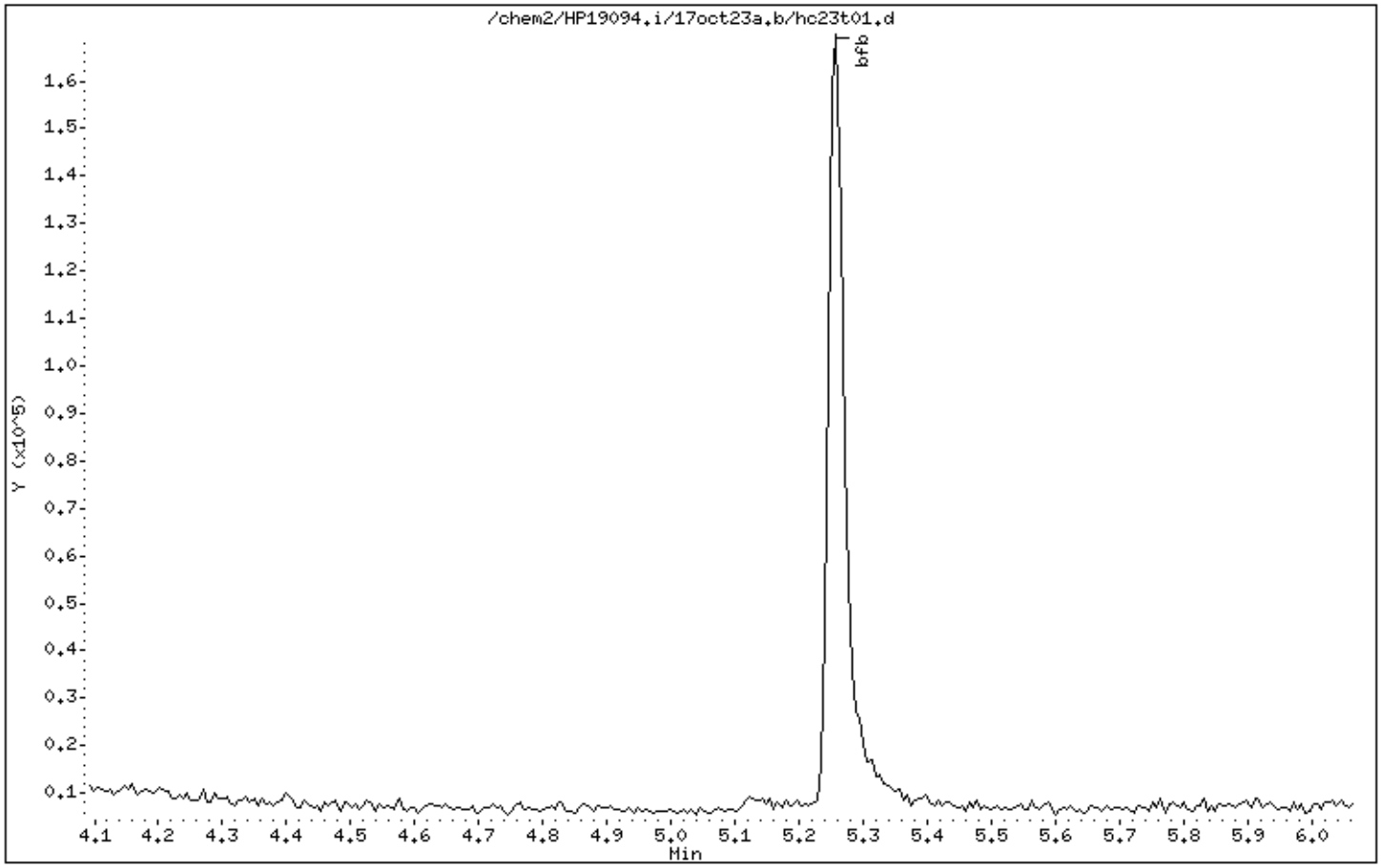
Instrument: HP19094.i

Sample Info: aug14-17;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin A. Sposito on 10/23/2017 at 08:12.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct23a.b/hc23t01.d

Date : 23-OCT-2017 08:03

Client ID: aug14-17

Instrument: HP19094.i

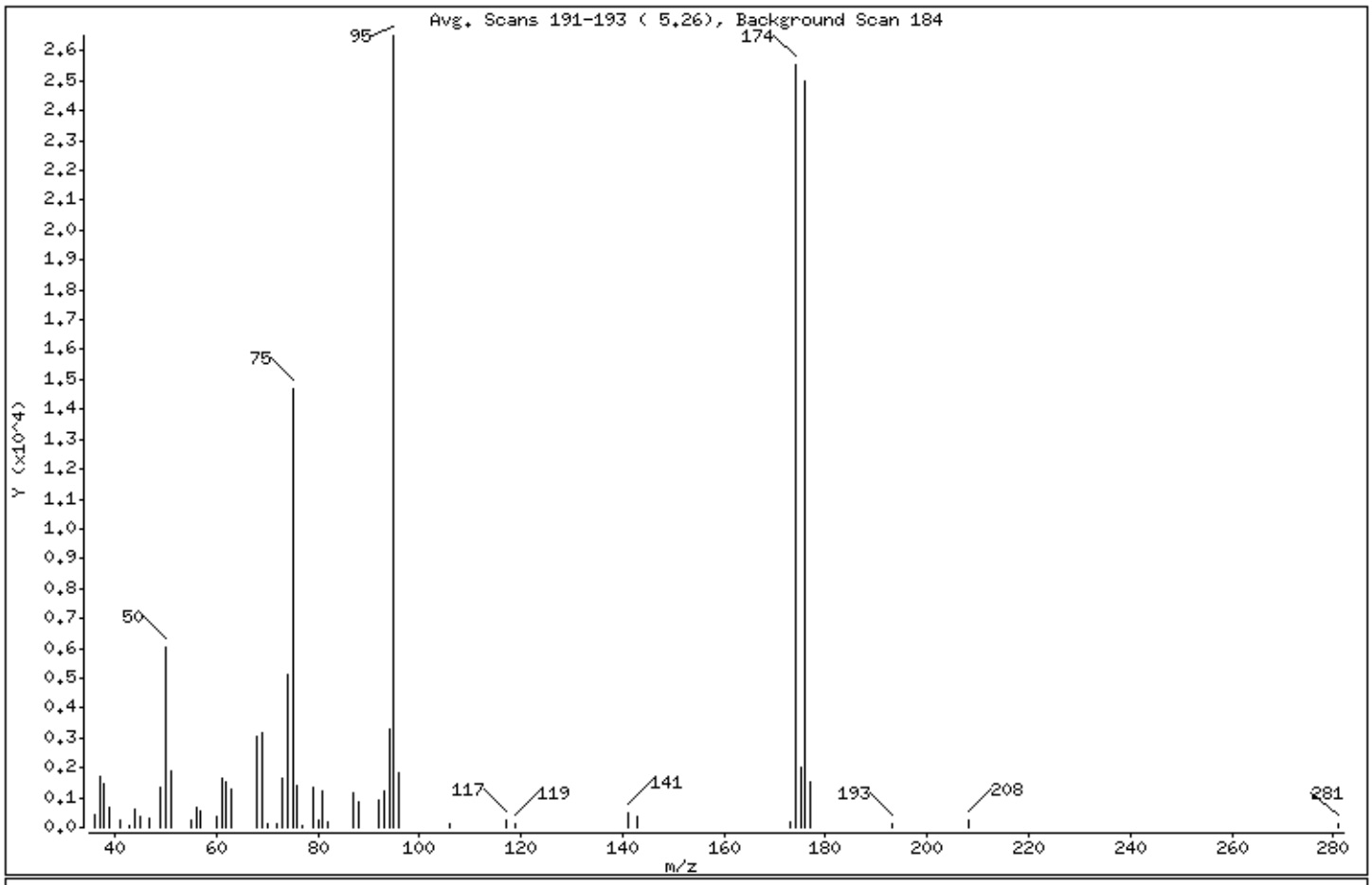
Sample Info: aug14-17;50NGBFB;1;3;;;;;;

Operator: KAS02648

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	22.73
75	30.00 - 60.00% of mass 95	55.30
96	5.00 - 9.00% of mass 95	6.83
173	Less than 2.00% of mass 174	0.68 (0.71)
174	50.00 - 100.00% of mass 95	96.24
175	5.00 - 9.00% of mass 174	7.47 (7.77)
176	95.00 - 101.00% of mass 174	94.35 (98.03)
177	5.00 - 9.00% of mass 176	5.85 (6.20)

Digitally signed by Kevin A. Sposito on 10/23/2017 at 08:12.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/17oct23a.b/hc23t01.d

Date : 23-OCT-2017 08:03

Client ID: aug14-17 Instrument: HP19094.i

Sample Info: aug14-17;50NGBFB;1;3;;;;;;

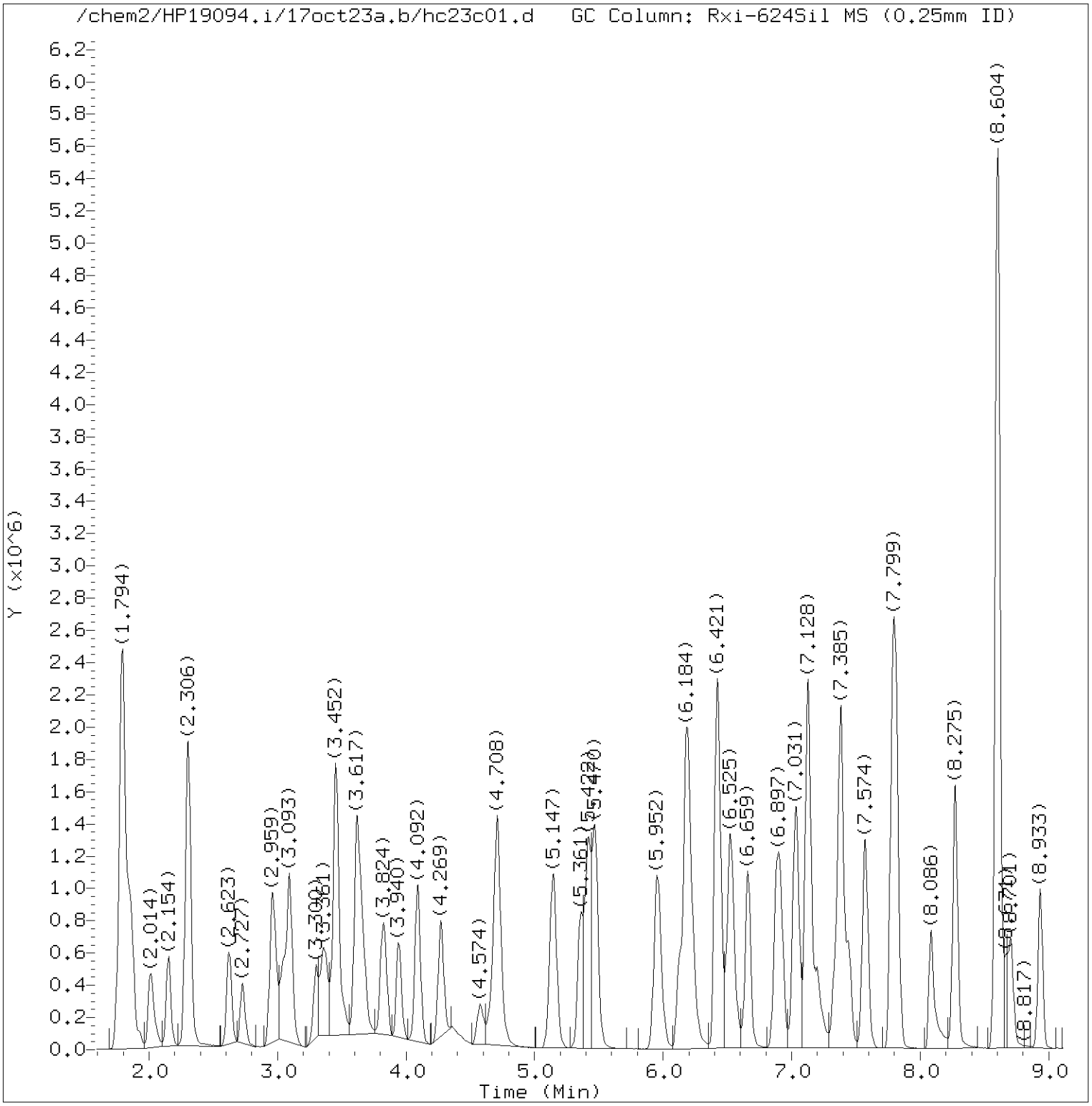
Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hc23t01.d
Spectrum: Avg. Scans 191-193 (5.26), Background Scan 184
Location of Maximum: 95.00
Number of points: 52

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	403	57.00	560	79.00	1363	141.00	475
37.00	1735	60.00	362	80.00	235	143.00	389
38.00	1489	61.00	1643	81.00	1207	173.00	181
39.00	687	62.00	1534	82.00	175	174.00	25520
41.00	224	63.00	1307	87.00	1145	175.00	1982
43.00	87	68.00	3048	88.00	862	176.00	25016
44.00	591	69.00	3162	92.00	920	177.00	1551
45.00	382	70.00	115	93.00	1233	193.00	129
47.00	299	72.00	99	94.00	3316	208.00	235
49.00	1338	73.00	1631	95.00	26512	281.00	134
50.00	6027	74.00	5128	96.00	1812		
51.00	1892	75.00	14664	106.00	99		
55.00	224	76.00	1419	117.00	219		
56.00	660	77.00	88	119.00	138		

Digitally signed by Kevin A. Sposito on 10/23/2017 at 08:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

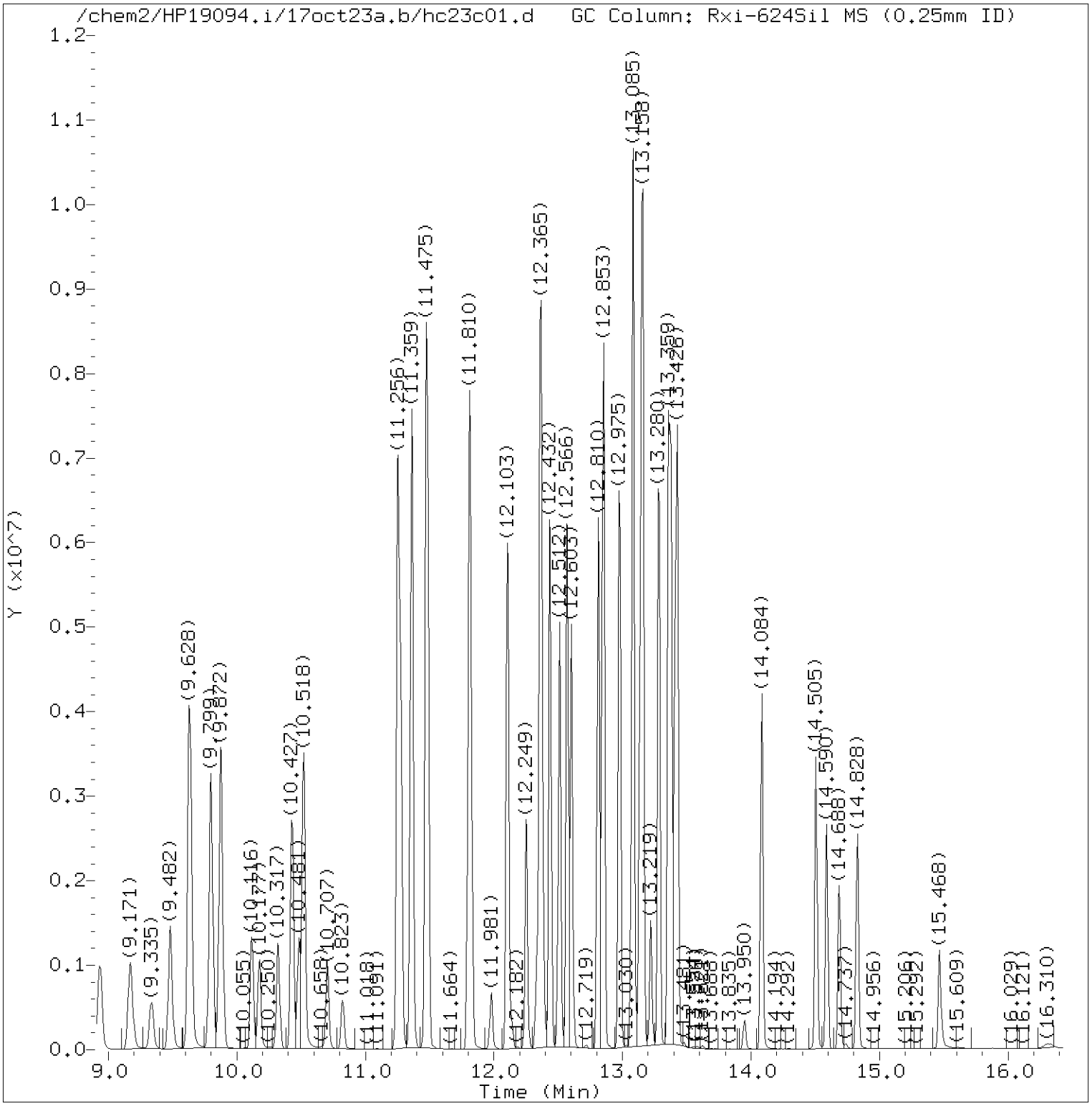
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	893638	8.337
2) Chloromethane	(2)	2.154	50	876289	8.279
5) Vinyl Chloride	(2)	2.288	62	861386	8.855
6) 1,3-Butadiene	(2)	2.306	39	1232752	13.408
7) Bromomethane	(2)	2.623	94	613891	9.278
8) Chloroethane	(2)	2.727	64	520550	9.399
9) Dichlorofluoromethane	(2)	2.959	67	1392418	8.586
10) Trichlorofluoromethane	(2)	3.044	101	1151219	8.884
11) Ethyl ether	(2)	3.294	59	399426	9.657
12) Freon 123a	(2)	3.361	67	820867	10.125
13) Acrolein	(1)	3.452	56	2839344	515.435
14) Acetone	(1)	3.611	43	840360	119.128
15) 1,1-Dichloroethene	(2)	3.617	96	539557	10.407
16) Freon 113	(2)	3.654	101	633747	10.978
17) Methyl Iodide	(2)	3.818	142	1068759	10.349
18) Carbon Disulfide	(2)	3.940	76	1482162	8.933
21) Methyl Acetate	(1)	4.056	43	216676	10.203
22) Allyl Chloride	(2)	4.092	41	1011533	8.600
26)*t-Butyl Alcohol-d10	(1)	4.239	65	87681	50.000
23) Methylene Chloride	(2)	4.269	84	584544	9.883
28) t-Butyl Alcohol	(1)	4.361	59	514900	215.549
29) Acrylonitrile	(1)	4.574	53	501984	58.006
30) Methyl Tertiary Butyl Ether	(2)	4.690	73	1317034	10.286
31) trans-1,2-Dichloroethene	(2)	4.708	96	607338	10.361
32) n-Hexane	(2)	5.141	57	1004257	9.701
33) 1,1-Dichloroethane	(2)	5.354	63	1248664	10.356
34) di-Isopropyl Ether	(2)	5.415	45	2192754	9.636
35) 2-Chloro-1,3-Butadiene	(2)	5.470	53	1138725	10.067
37) Ethyl t-butyl ether	(2)	5.952	59	1789840	9.803
40) 1,2-Dichloroethene (Total)	(2)		96	1310980	20.859
38) 2-Butanone	(1)	6.129	43	1439002	103.850
39) cis-1,2-Dichloroethene	(2)	6.177	96	703642	10.498
42) Propionitrile	(1)	6.190	54	753403	235.734
41) 2,2-Dichloropropane	(2)	6.208	77	1025602	10.071
45) Methacrylonitrile	(1)	6.421	67	1340300	115.400
47) Bromochloromethane	(2)	6.519	128	280014	10.621
48) Tetrahydrofuran	(1)	6.531	71	348803	110.993
49) Chloroform	(2)	6.659	83	1245008	10.692

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.879	113	589457	10.017
50)$Dibromofluoromethane	(2)	6.879	111	609791	10.092
51) 1,1,1-Trichloroethane	(2)	6.909	97	1101196	10.488
52) Cyclohexane	(2)	7.031	56	1246500	9.714
52) Cyclohexane	(2)	7.031	84	985361	9.986
52) Cyclohexane	(2)	7.031	69	358561	9.801
55) 1,1-Dichloropropene	(2)	7.122	75	975246	10.503
54) Carbon Tetrachloride	(2)	7.135	117	989068	10.786
56) Isobutyl Alcohol	(1)	7.196	41	519538	537.853
57)$1,2-Dichloroethane-d4	(2)	7.336	102	91602	9.940
57)$1,2-Dichloroethane-d4	(2)	7.336	65	502071	9.957
57)$1,2-Dichloroethane-d4	(2)	7.336	104	59206	10.214
58) Benzene	(2)	7.385	78	2669975	10.513
59) 1,2-Dichloroethane	(2)	7.446	62	758367	10.676
60) t-Amyl methyl ether	(2)	7.574	73	1511873	10.203
63)*Fluorobenzene	(2)	7.787	96	2436907	10.000
62) n-Heptane	(2)	7.811	43	1152471	9.325
65) n-Butanol	(1)	8.086	56	788446	1109.624
67) Trichloroethene	(2)	8.275	95	731134	10.747
70) 1,2-Dichloropropane	(2)	8.598	63	696139	10.562
69) Methylcyclohexane	(2)	8.604	83	1204899	10.303
71) Methyl Methacrylate	(1)	8.665	69	264046	11.442
72) 1,4-Dioxane	(1)	8.683	88	102816M	648.740
73) Dibromomethane	(2)	8.707	93	304300	11.035
74) Bromodichloromethane	(2)	8.933	83	840382	10.561
76) 2-Nitropropane	(1)	9.171	41	910221	115.684
80) cis-1,3-Dichloropropene	(2)	9.482	75	933244	10.104
81) 4-Methyl-2-Pentanone	(1)	9.628	43	3742712	110.241
82)$Toluene-d8	(3)	9.799	98	2484456	9.757
82)$Toluene-d8	(3)	9.799	100	1562810	9.695
83) Toluene	(3)	9.872	92	1713187	10.296
84) trans-1,3-Dichloropropene	(3)	10.116	75	740357	9.742
85) 1,3-Dichloropropene (total)	(3)		75	1673601	19.846
86) Ethyl Methacrylate	(3)	10.177	69	557368	9.817
88) 1,1,2-Trichloroethane	(3)	10.323	97	401960	10.347
89) Tetrachloroethene	(3)	10.427	166	833797	10.678
90) 1,3-Dichloropropane	(3)	10.481	76	716660	10.374
91) 2-Hexanone	(1)	10.518	43	2571432	105.116

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	513454	10.120
95) 1,2-Dibromoethane	(3)	10.823	107	383193	10.438
97)*Chlorobenzene-d5	(3)	11.250	117	1752116	10.000
98) Chlorobenzene	(3)	11.274	112	1894258	10.683
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	665238	10.653
100) Ethylbenzene	(3)	11.365	91	3501860	10.465
101) m+p-Xylene	(3)	11.475	106	2682251	21.273
105) Xylene (Total)	(3)		106	4000266	31.963
104) o-Xylene	(3)	11.804	106	1318015	10.690
106) Styrene	(3)	11.817	104	2077086	10.785
107) Bromoform	(3)	11.981	173	290375	10.546
108) Isopropylbenzene	(3)	12.103	105	3550740	10.727
111)$4-Bromofluorobenzene	(3)	12.249	95	773776	10.004
111)$4-Bromofluorobenzene	(3)	12.256	174	701899	10.319
113) 1,1,2,2-Tetrachloroethane	(4)	12.335	83	488592	9.852
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	1204299	114.662
114) Bromobenzene	(4)	12.371	156	806921	10.316
116) 1,2,3-Trichloropropane	(4)	12.384	110	137005	10.835
117) n-Propylbenzene	(4)	12.432	91	4324024	10.114
119) 2-Chlorotoluene	(4)	12.512	126	818712	10.218
121) 1,3,5-Trimethylbenzene	(4)	12.573	105	3027304	10.219
122) 4-Chlorotoluene	(4)	12.603	126	829925	10.177
125) tert-Butylbenzene	(4)	12.810	134	688754	10.935
126) Pentachloroethane	(4)	12.847	167	498619	10.175
127) 1,2,4-Trimethylbenzene	(4)	12.853	105	3068658	10.313
128) sec-Butylbenzene	(4)	12.975	105	3899223	10.165
131) 1,3-Dichlorobenzene	(4)	13.079	146	1614122	10.597
132) p-Isopropyltoluene	(4)	13.085	119	3360905	10.501
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	804266	10.000
134) 1,4-Dichlorobenzene	(4)	13.152	146	1586438	10.002
135) 1,2,3-Trimethylbenzene	(4)	13.158	120	1229074	9.736
136) Benzyl Chloride	(4)	13.219	126	186029	10.523
138) n-Butylbenzene	(4)	13.377	92	1677553	10.455
139) 1,2-Dichlorobenzene	(4)	13.408	146	1433429	10.561
143) 1,2-Dibromo-3-chloropropane	(1)	13.950	155	61244	12.053
144) 1,3,5-Trichlorobenzene	(4)	14.084	180	1167066	10.338
145) 1,2,4-Trichlorobenzene	(4)	14.505	180	925792	9.956
146) Hexachlorobutadiene	(4)	14.590	225	435767	9.932

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

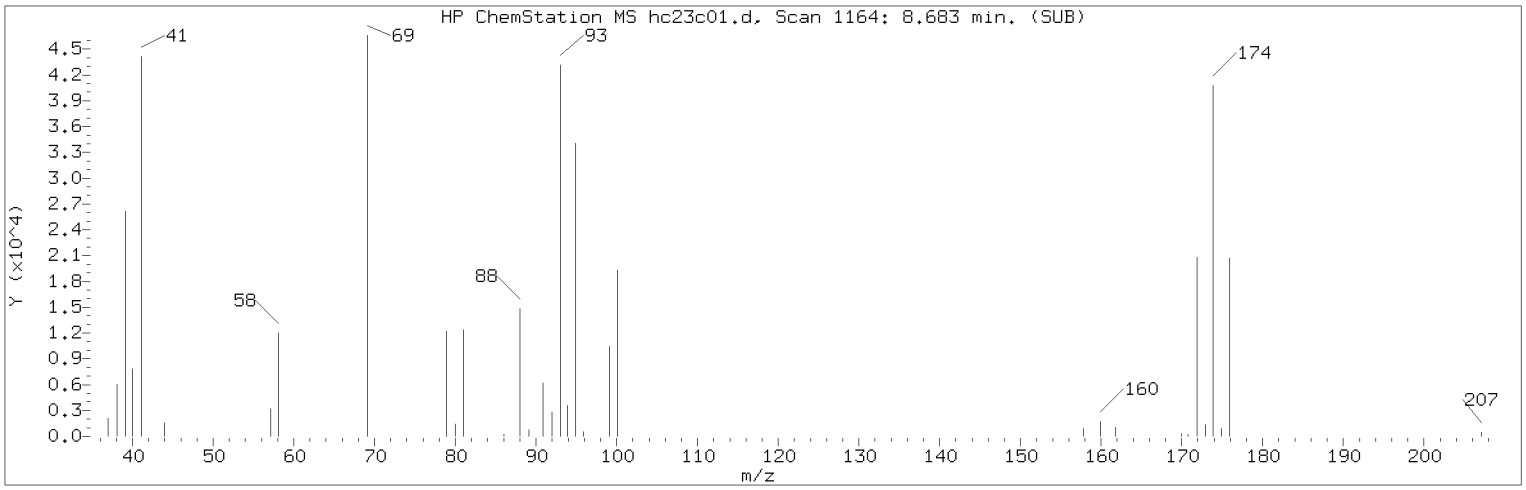
Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

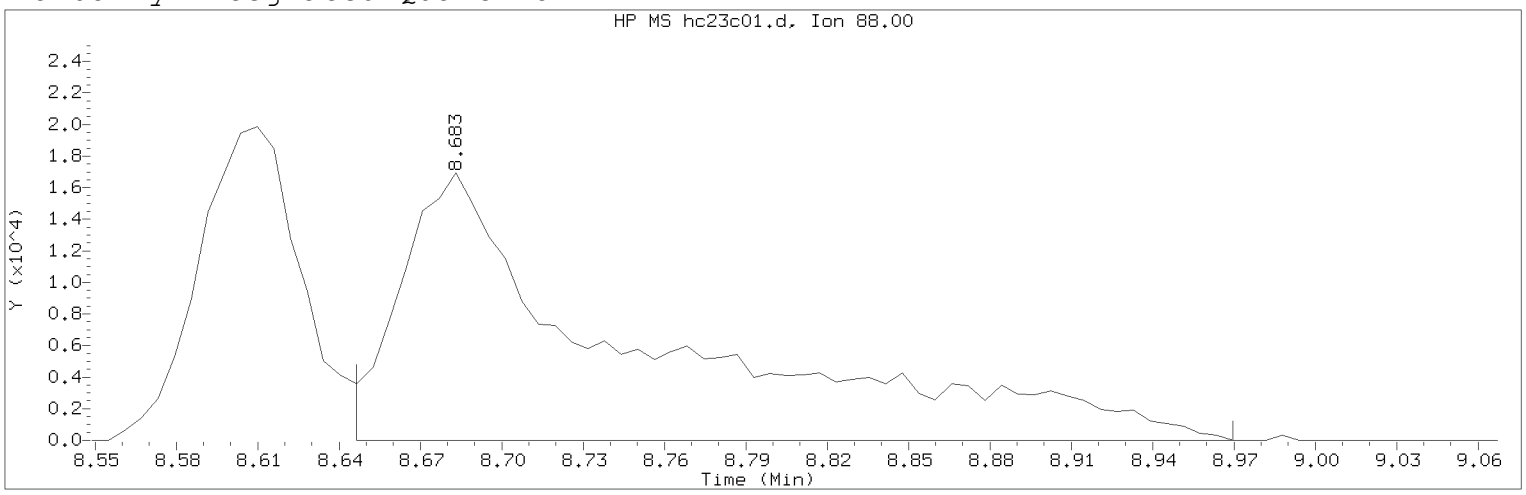
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Naphthalene	(4)	14.688	128	1346923	8.902
148) 1,2,3-Trichlorobenzene	(4)	14.828	180	722708	9.232

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 10:39 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

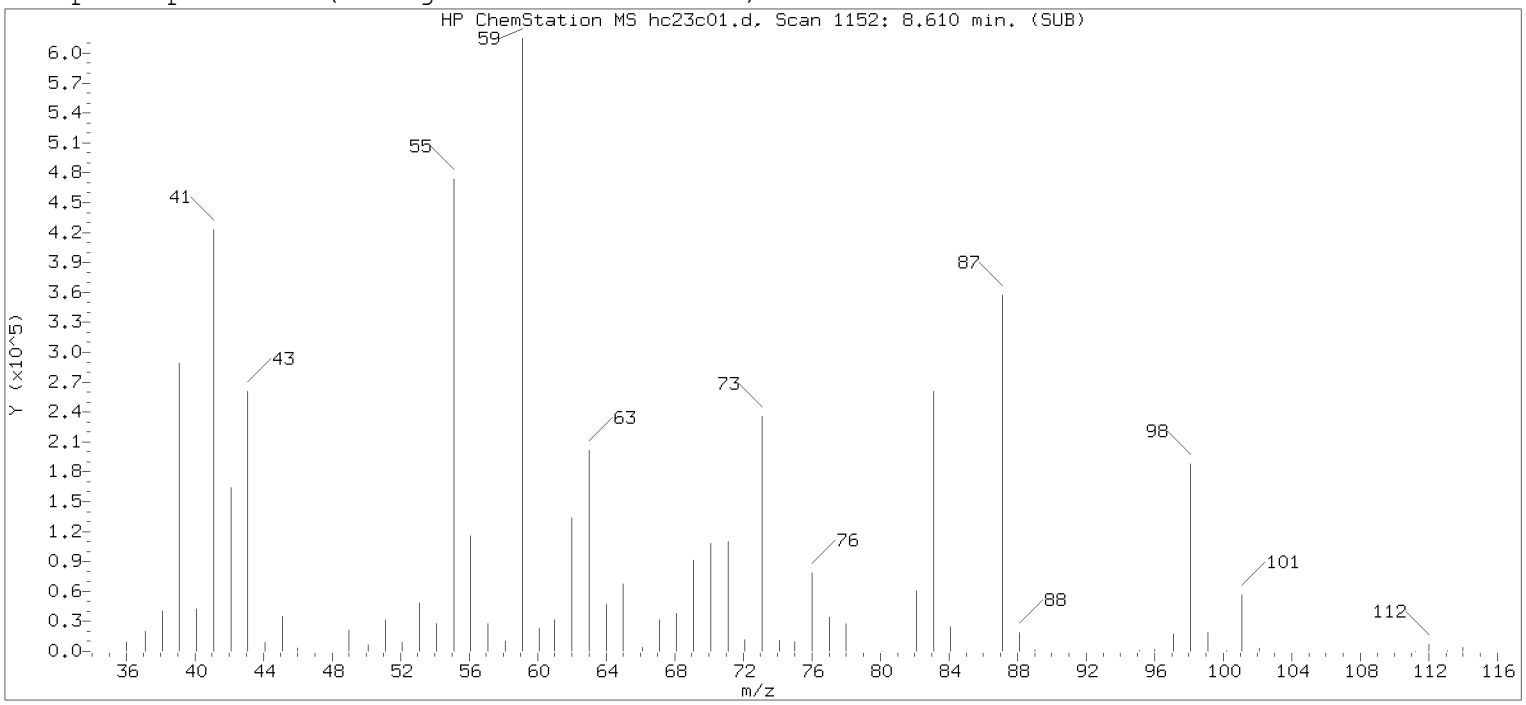
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 88.00
Area (flag) : 102816M
On-Column Amount (ng) : 648.7396
Integration start scan : 1157 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

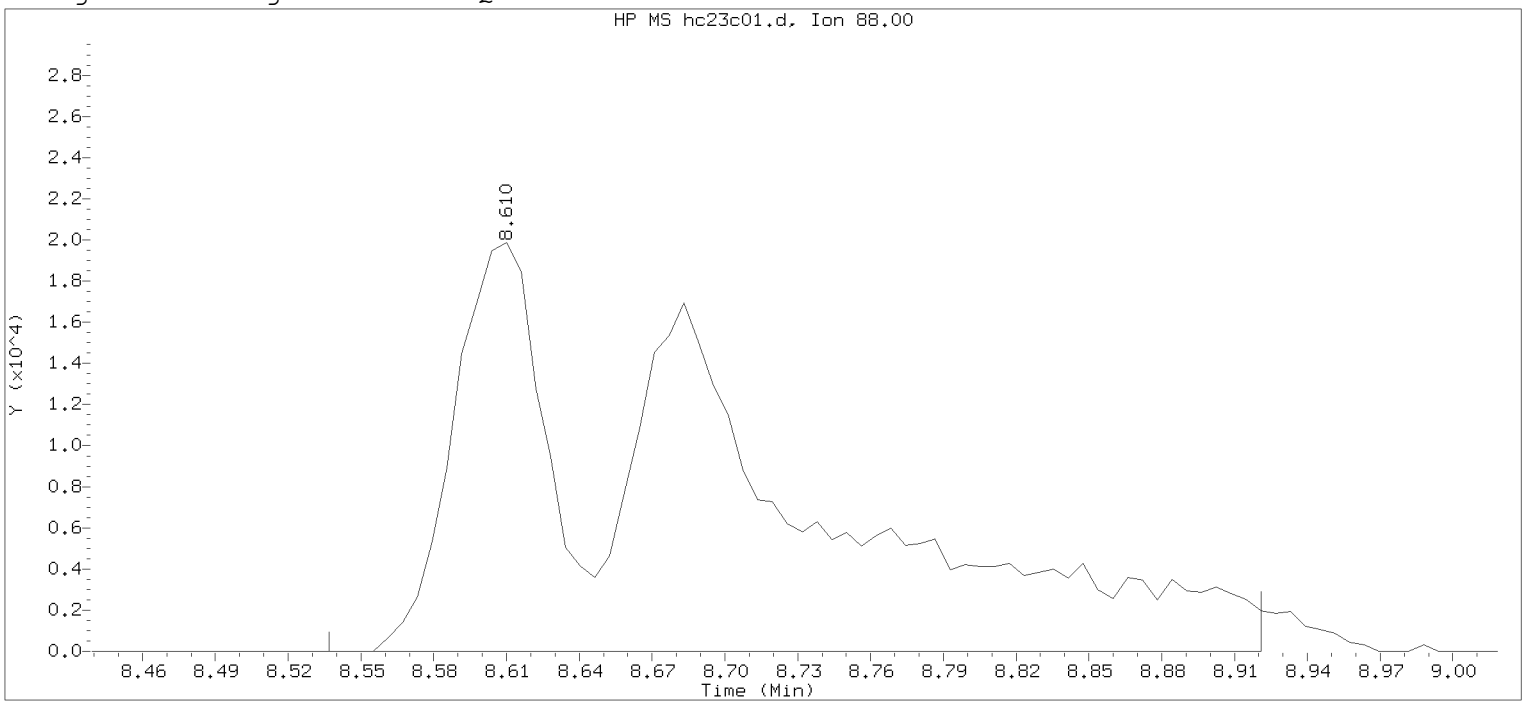
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:40.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct23a.b/hc23c01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-OCT-2017 09:29
Date, time and analyst ID of latest file update: 23-Oct-2017 09:29 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 88.00
Area : 150742
On-column Amount (ng) : 951.1368
Integration start scan : 1139 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2017 at 10:40.
Target 3.5 esignature used. Key ID: 0238

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

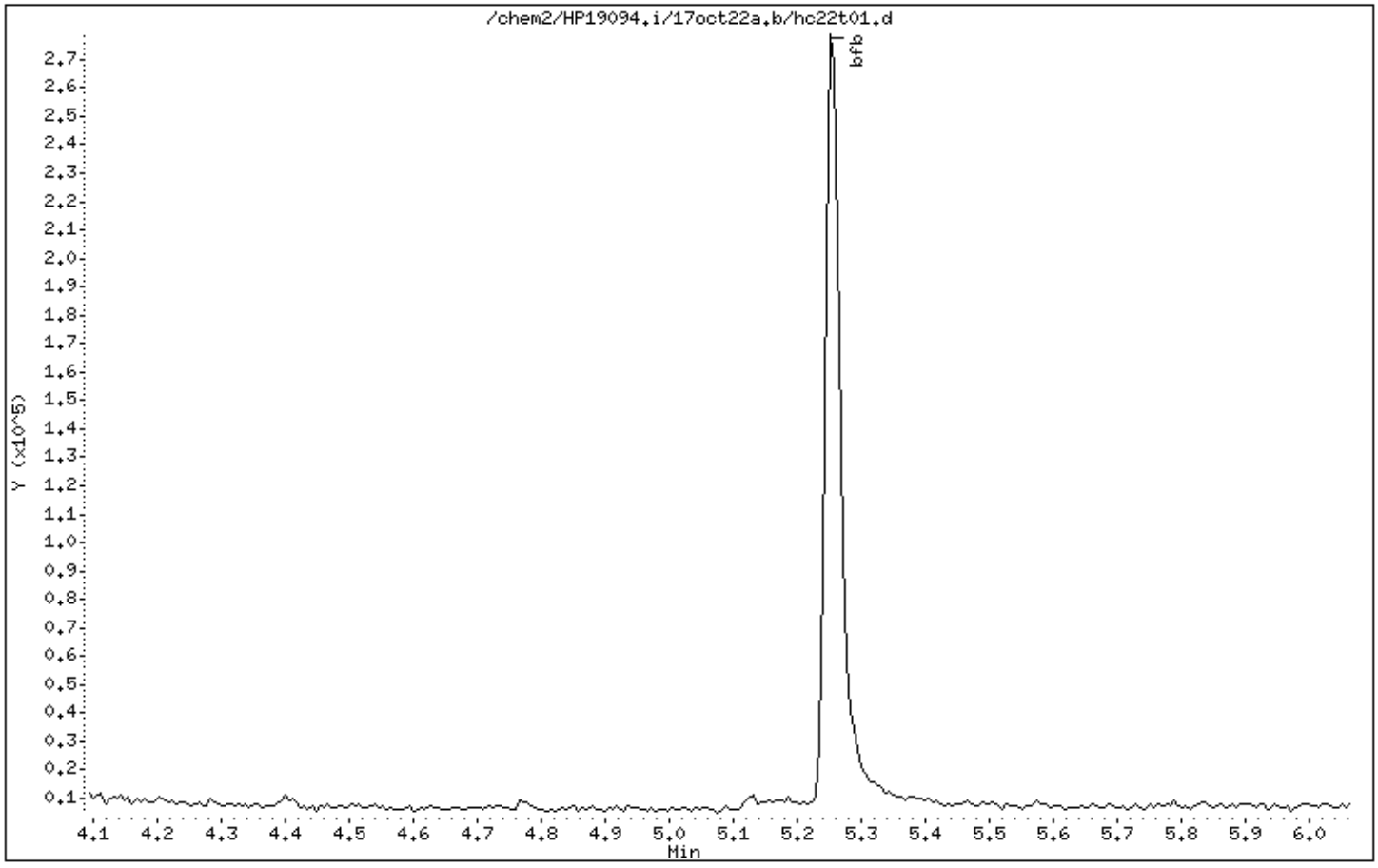
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

Instrument: HP19094.i

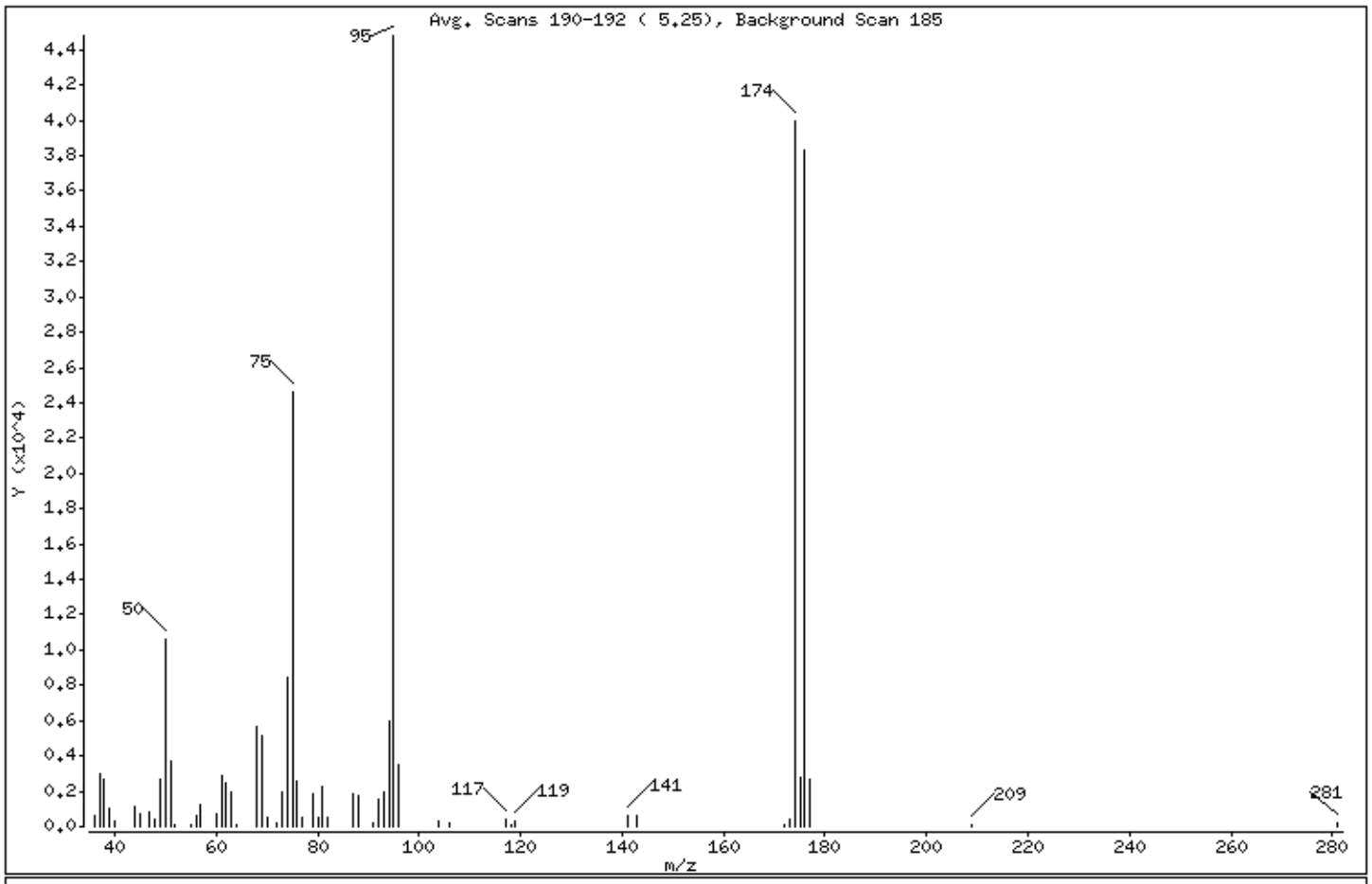
Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

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	23.74
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.78
173	Less than 2.00% of mass 174	1.02 (1.14)
174	50.00 - 100.00% of mass 95	89.09
175	5.00 - 9.00% of mass 174	6.21 (6.97)
176	95.00 - 101.00% of mass 174	85.61 (96.10)
177	5.00 - 9.00% of mass 176	6.06 (7.08)

Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/17oct22a.b/hc22t01.d

Date : 22-OCT-2017 18:21

Client ID: bfb 50ng

Instrument: HP19094.i

Sample Info: bfb 50ng;bfb 08-14-17;1;3;;;;;

Operator: DVV10203

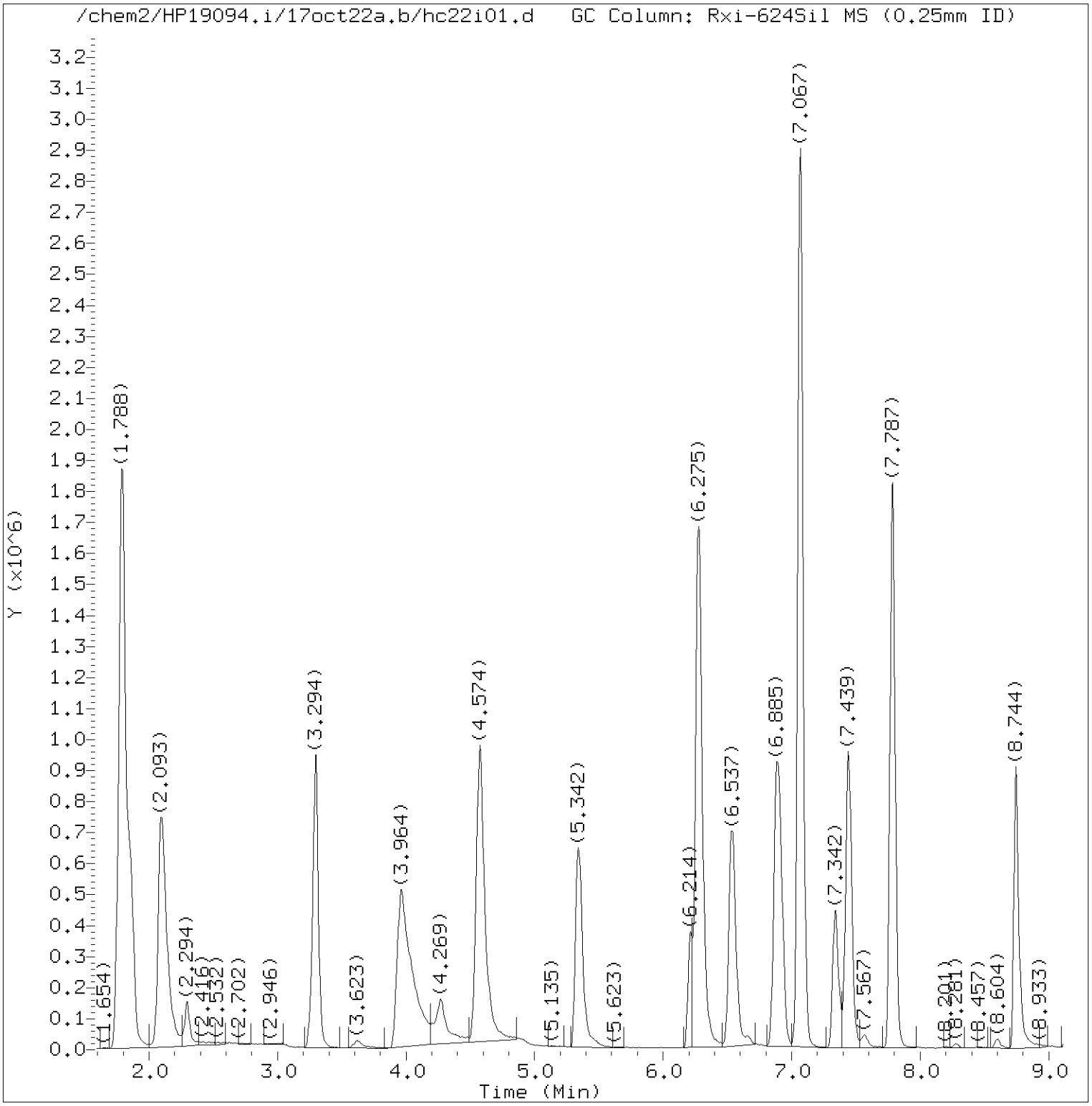
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hc22t01.d
Spectrum: Avg. Scans 190-192 (5.25), Background Scan 185
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	621	57.00	1270	79.00	1905	118.00	129
37.00	2980	60.00	688	80.00	521	119.00	338
38.00	2678	61.00	2887	81.00	2280	141.00	619
39.00	1076	62.00	2428	82.00	492	143.00	580
40.00	344	63.00	1990	87.00	1847	172.00	111
44.00	1143	64.00	128	88.00	1770	173.00	455
45.00	751	68.00	5619	91.00	234	174.00	39912
47.00	802	69.00	5146	92.00	1567	175.00	2783
48.00	405	70.00	504	93.00	1976	176.00	38352
49.00	2636	72.00	212	94.00	6014	177.00	2714
50.00	10634	73.00	1959	95.00	44800	209.00	132
51.00	3703	74.00	8495	96.00	3485	281.00	204
52.00	116	75.00	24664	104.00	292		
55.00	93	76.00	2581	106.00	218		
56.00	604	77.00	493	117.00	392		

Digitally signed by Don V. Viray on 10/22/2017 at 18:27.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

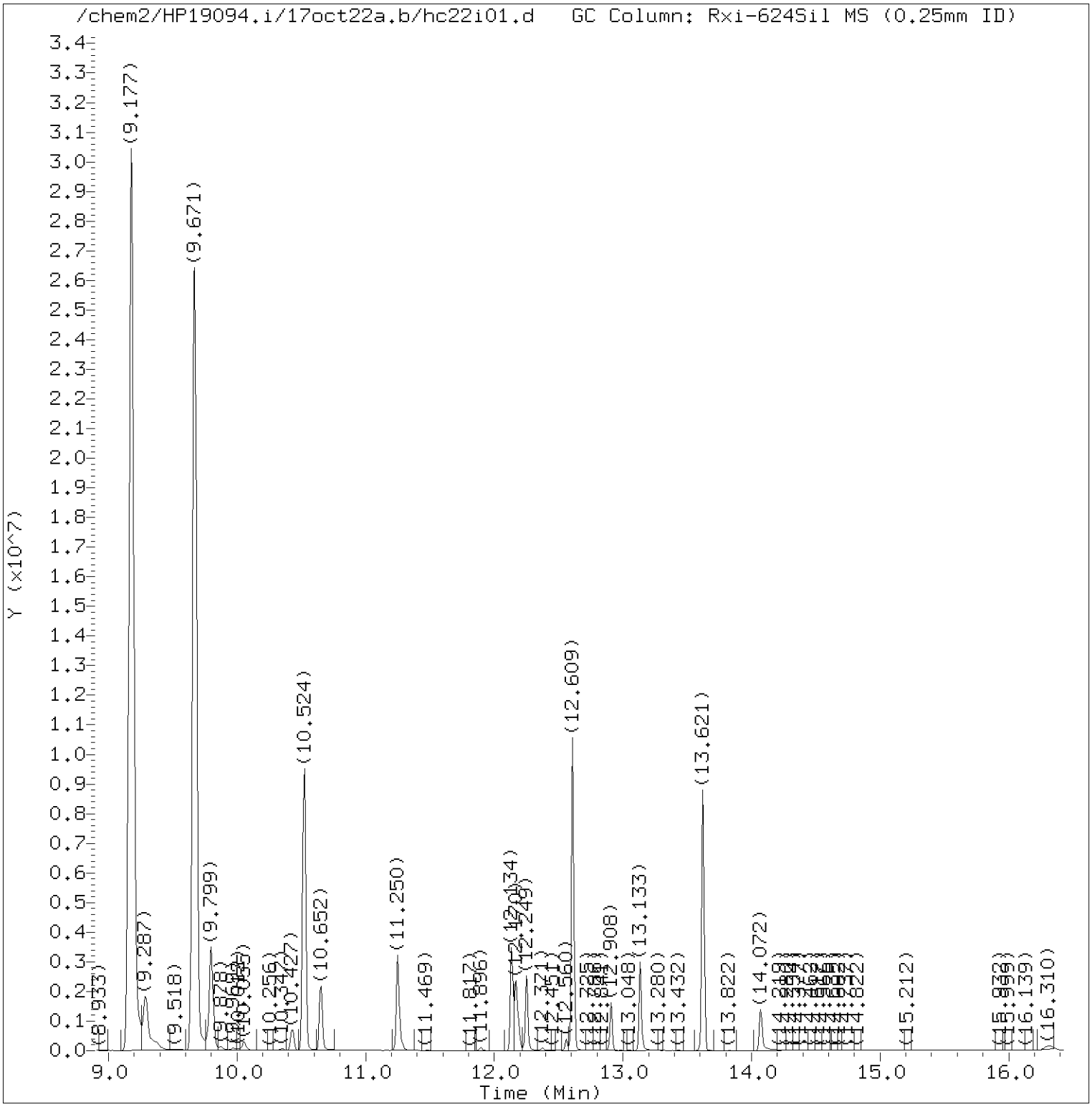
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

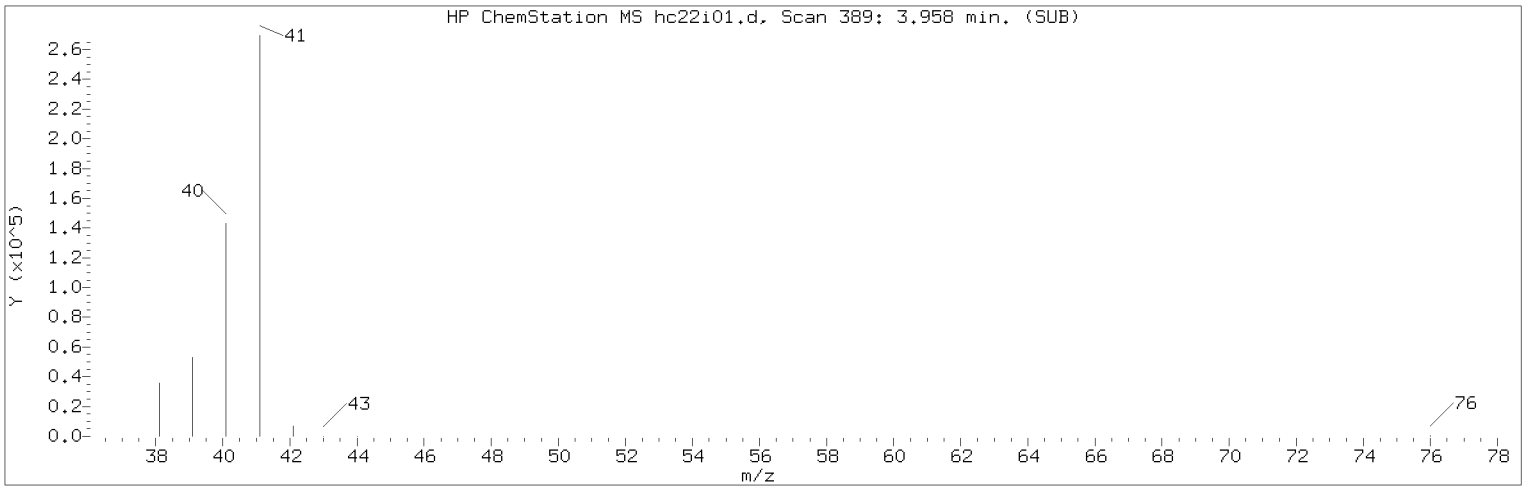
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	2277963	23.661
25) Acetonitrile	(1)	3.958	41	2993387M	936.553
26)*t-Butyl Alcohol-d10	(1)	4.245	65	75207	50.000
36) Vinyl Acetate	(2)	5.342	43	2029119	28.980
43) Methyl Acrylate	(2)	6.275	55	3646841	142.124
53) 1-Chlorobutane	(2)	7.067	56	3258957	27.428
63)*Fluorobenzene	(2)	7.787	96	2353181	10.000
77) Chloroacetonitrile	(2)	9.207	75	1869257	1450.978
78) 2-Chloroethyl vinyl ether	(2)	9.287	63	722679	29.574
97)*Chlorobenzene-d5	(3)	11.250	117	1684749	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	738484A	75.761
112) Cyclohexanone	(1)	12.170	55	1133220	1383.370
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	707468	10.000
142) Hexachloroethane	(4)	13.621	117	1420215	30.709

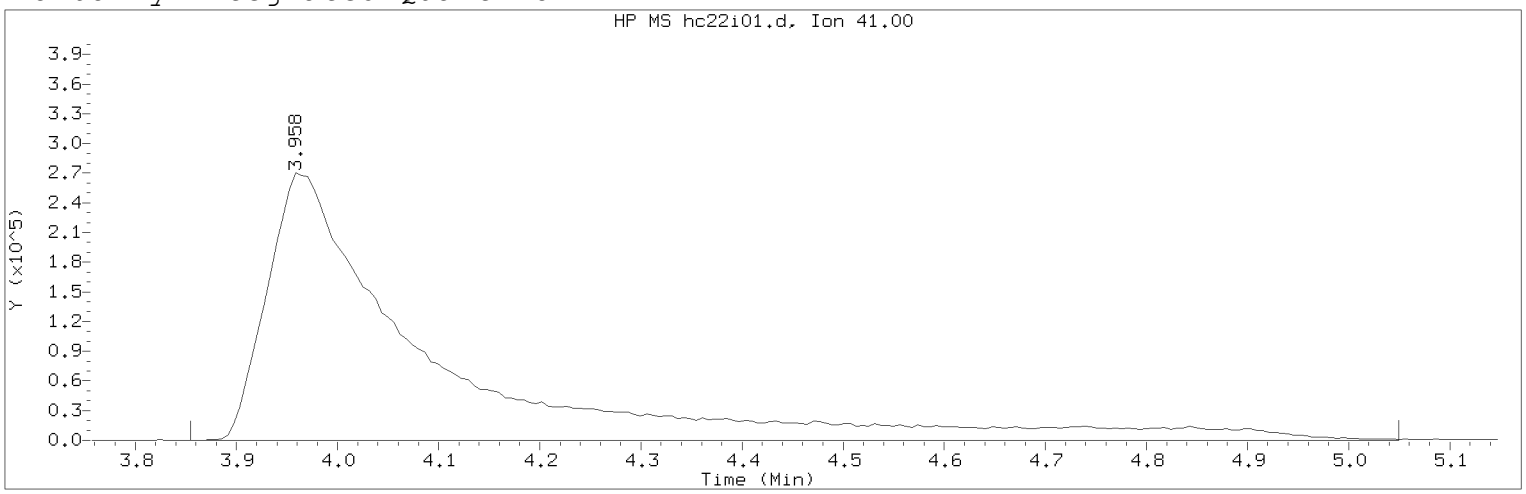
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

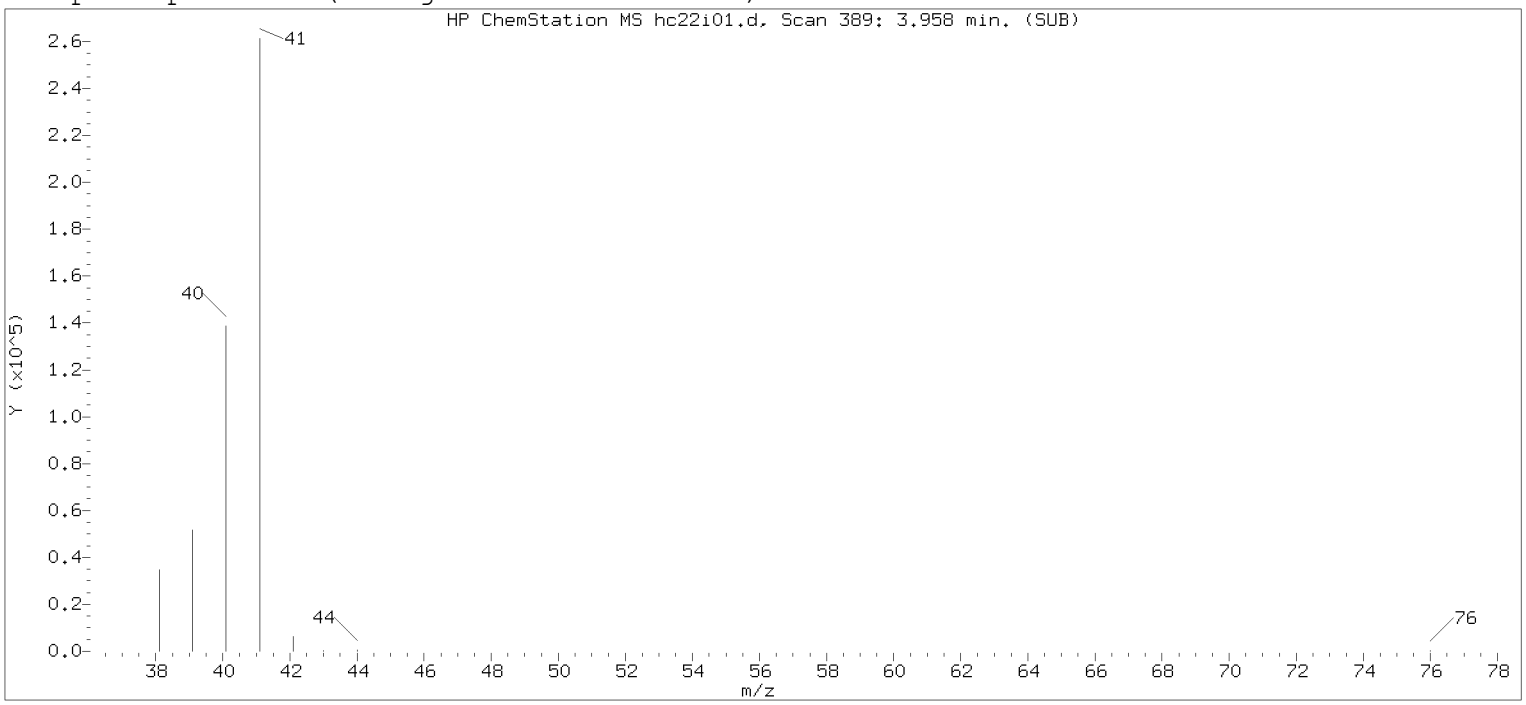
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 389
Retention Time (minutes): 3.958
Quant Ion : 41.00
Area (flag) : 2993387M
On-Column Amount (ng) : 936.5534
Integration start scan : 371 Integration stop scan: 567
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

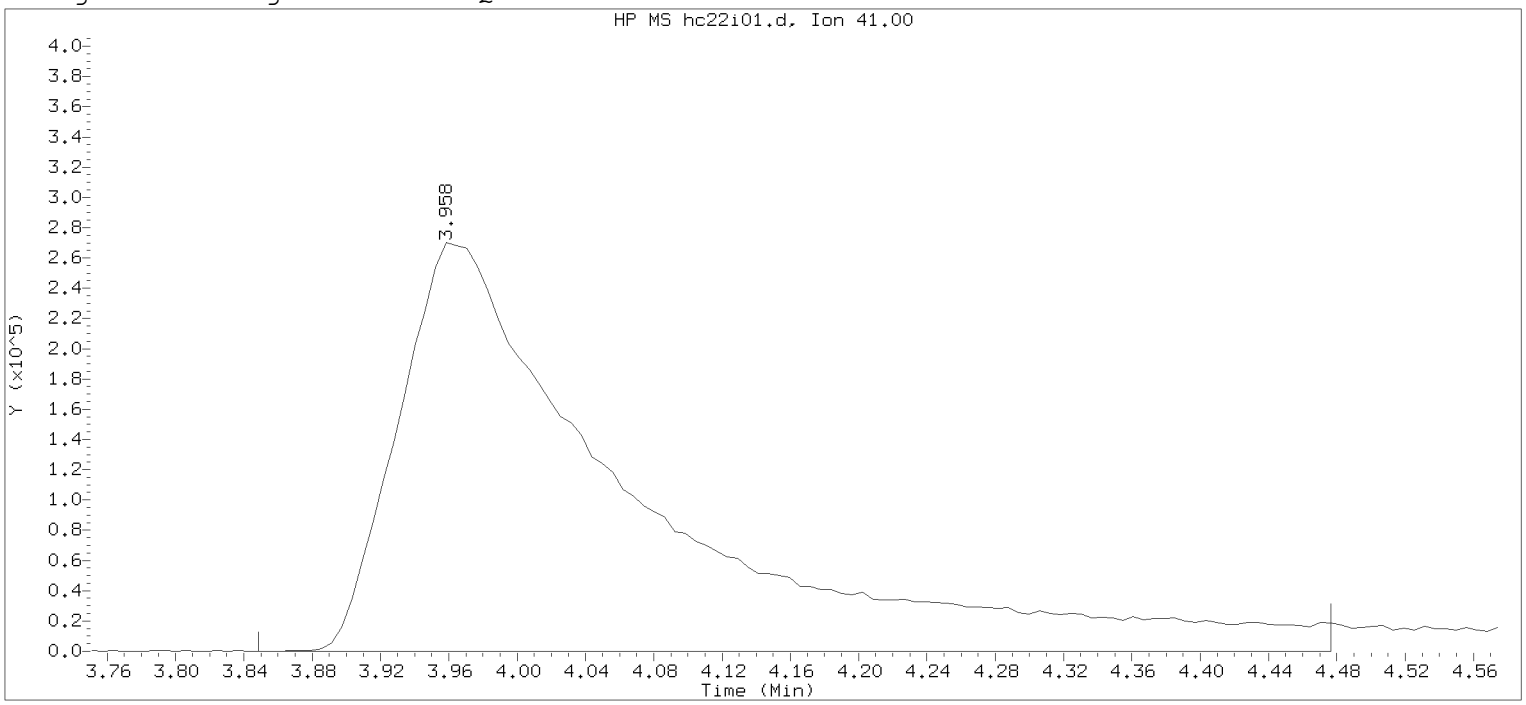
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

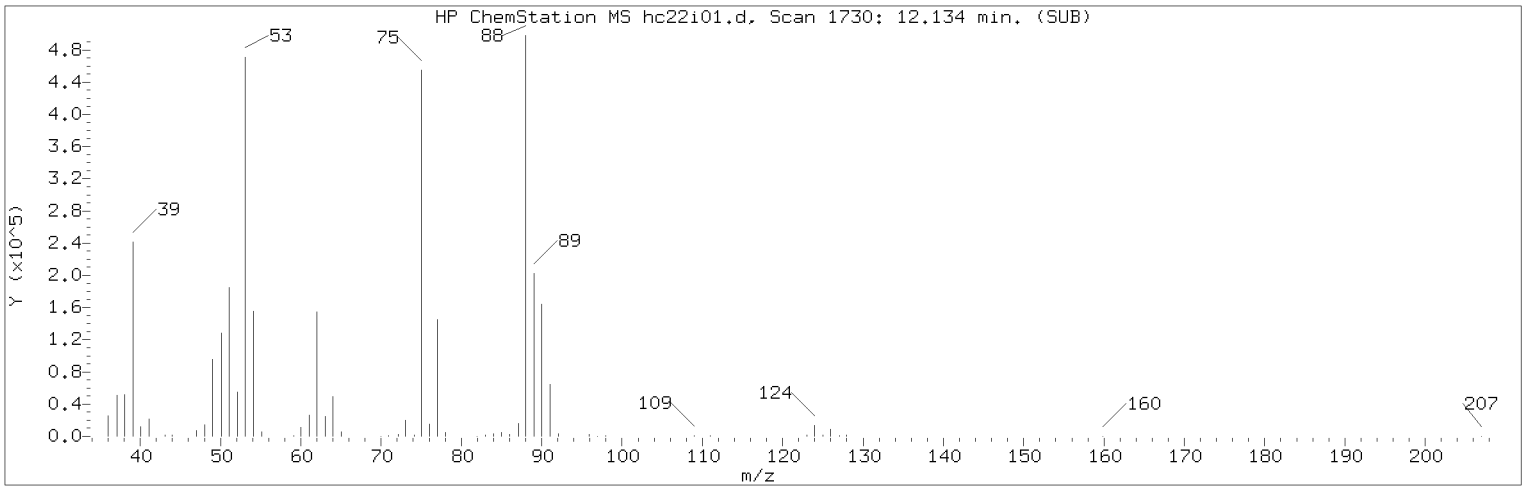
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

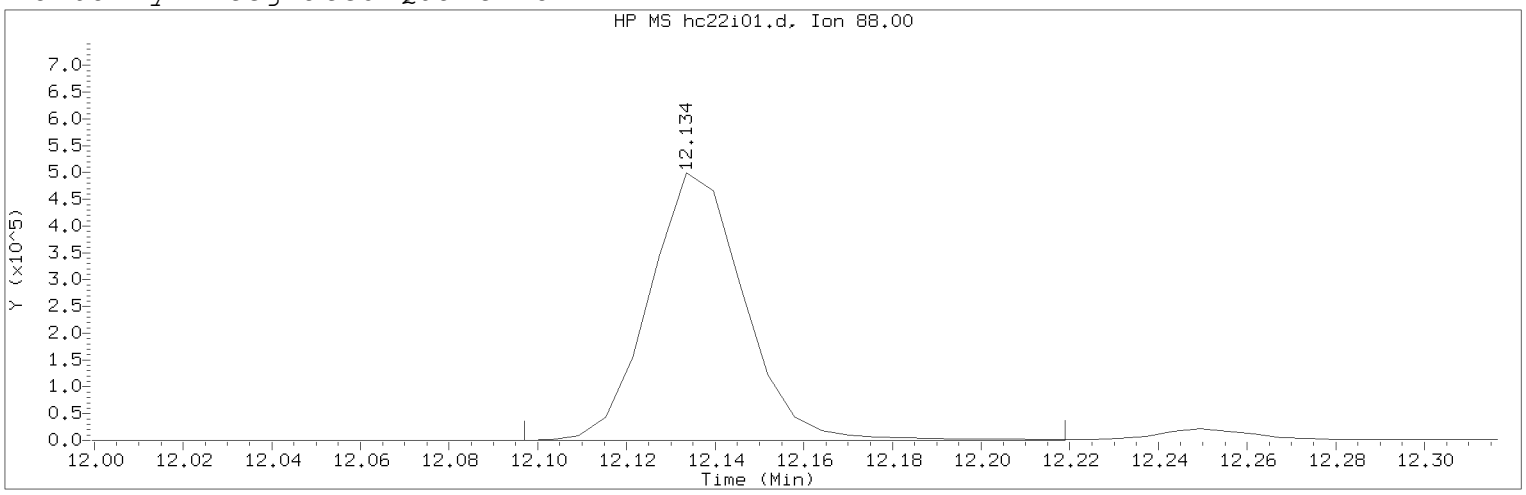
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 389
Retention Time (minutes): 3.958
Quant Ion : 41.00
Area : 2620419
On-column Amount (ng) : 879.6691
Integration start scan : 370 Integration stop scan: 473
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

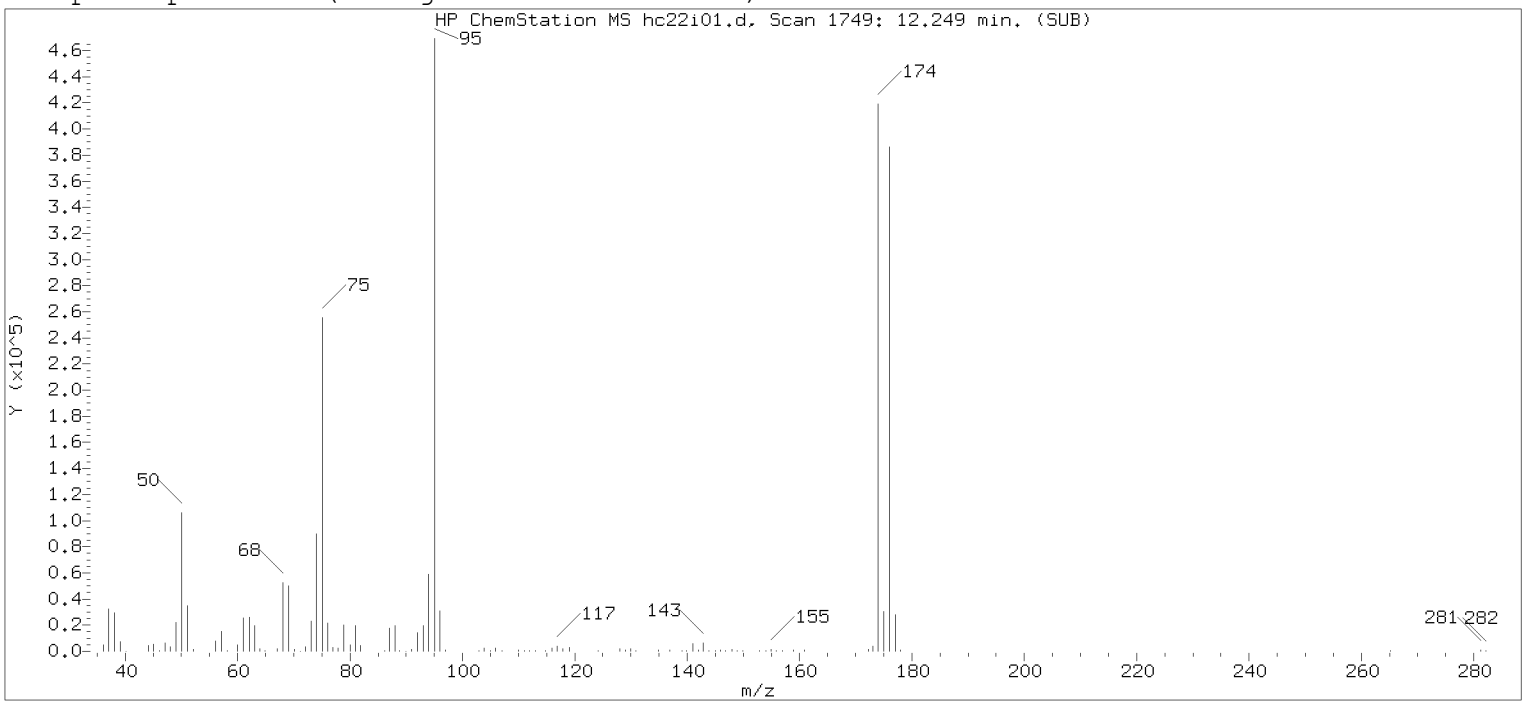
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 88.00
Area (flag) : 738484A
On-Column Amount (ng) : 75.7614
Integration start scan : 1723 Integration stop scan: 1743
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

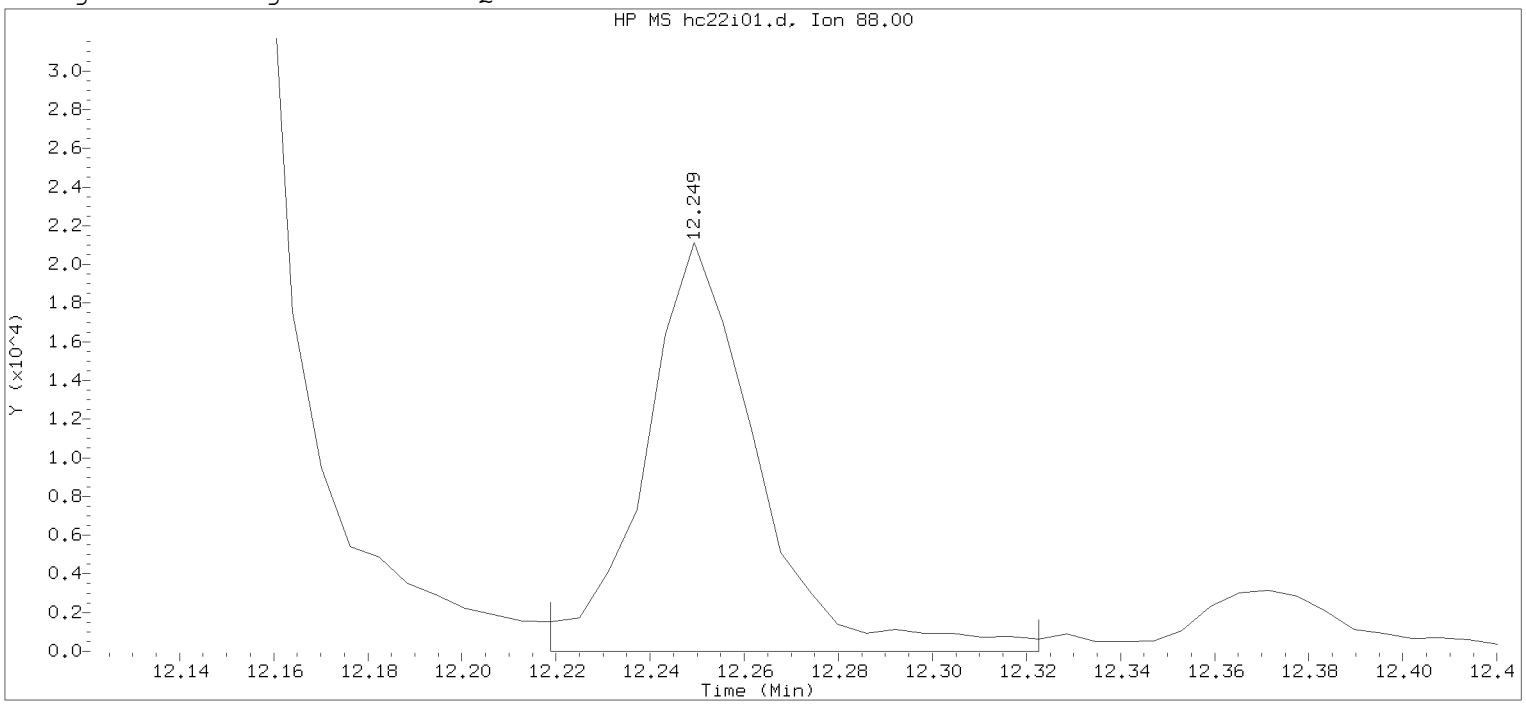
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



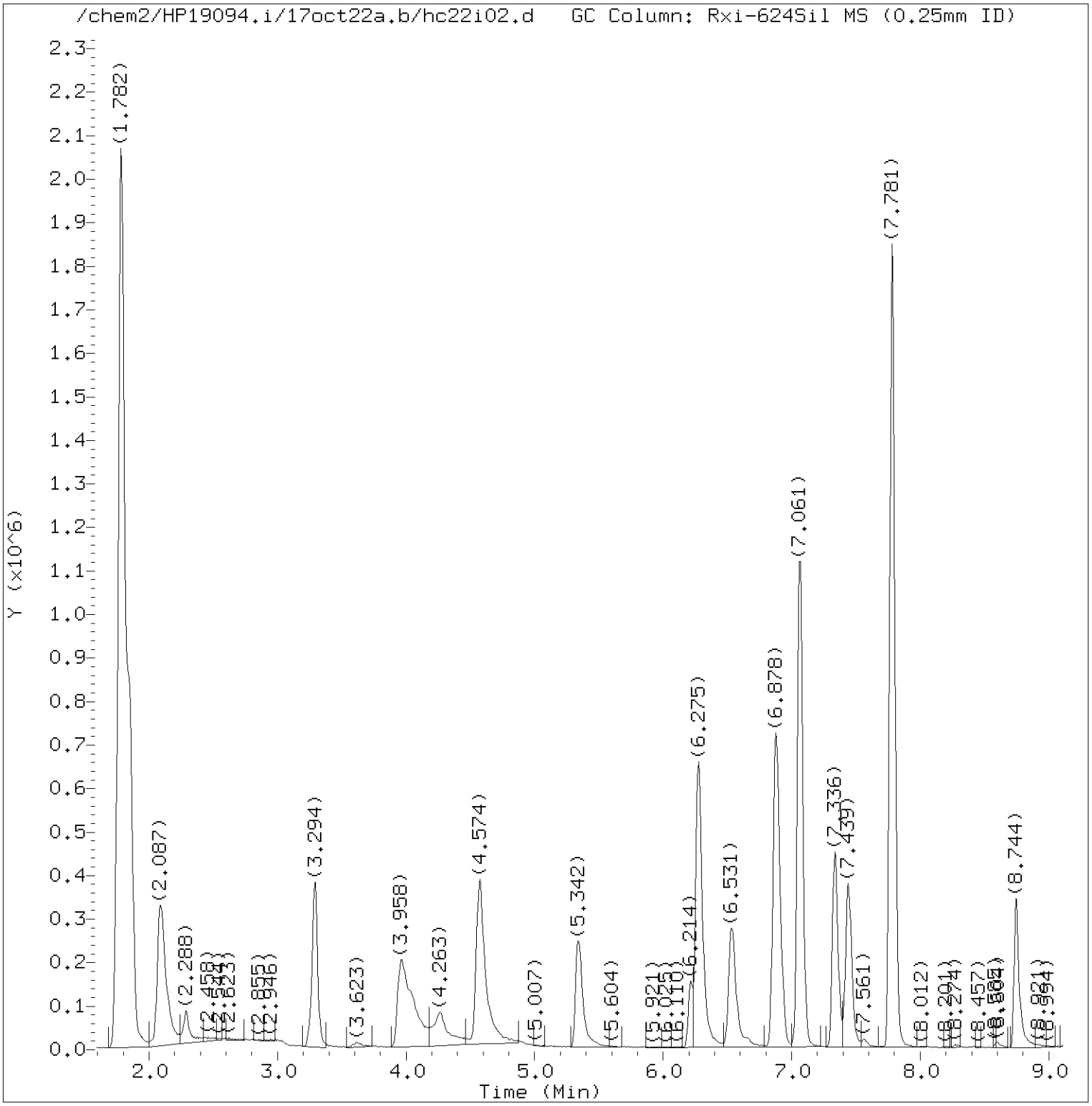
Data File: /chem2/HP19094.i/17oct22a.b/hc22i01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.249
Quant Ion : 88.00
Area : 34842
On-column Amount (ng) : 24.6820
Integration start scan : 1743 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/22/2017



Total Ion Chromatogram (TIC)

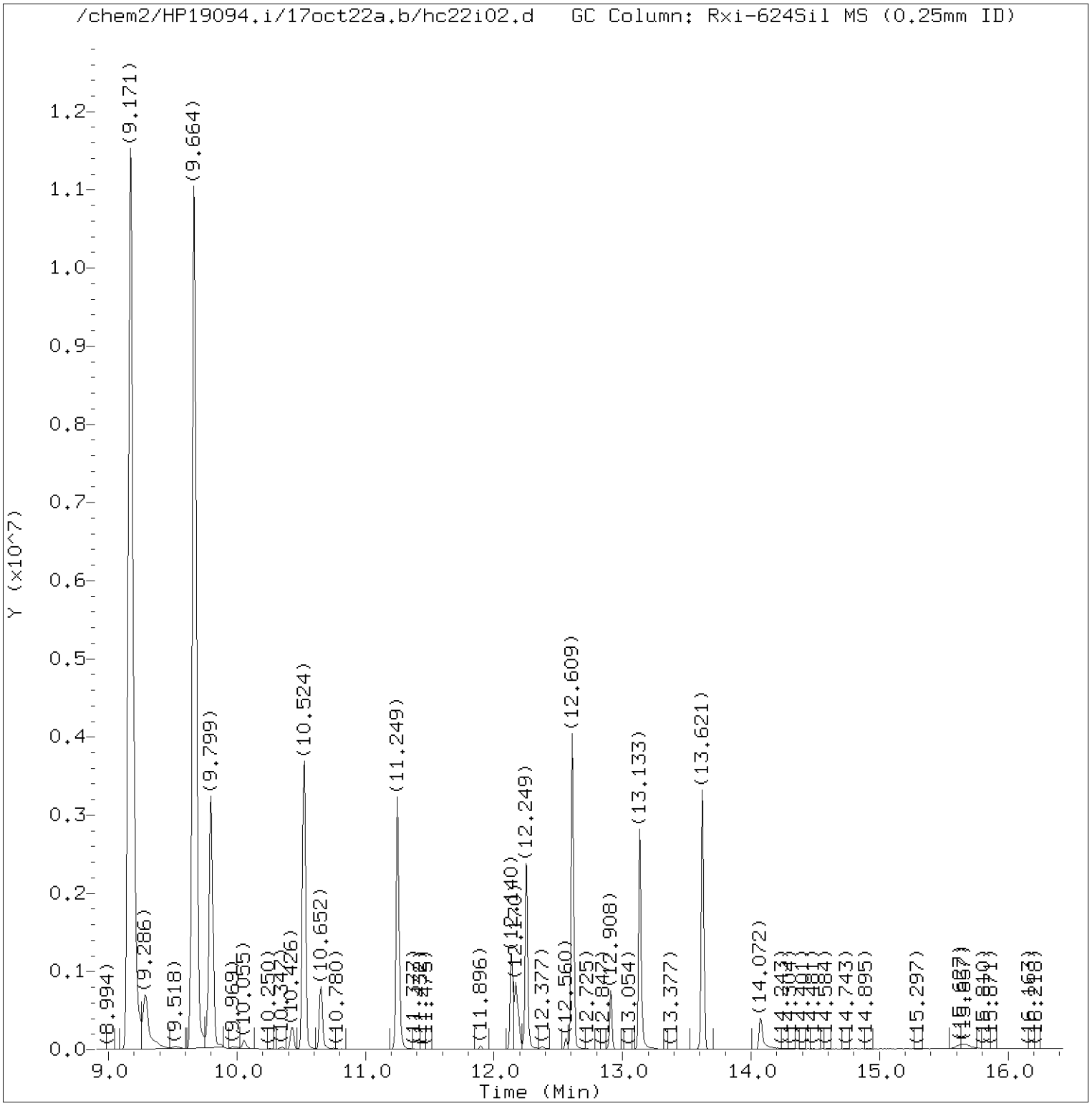
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

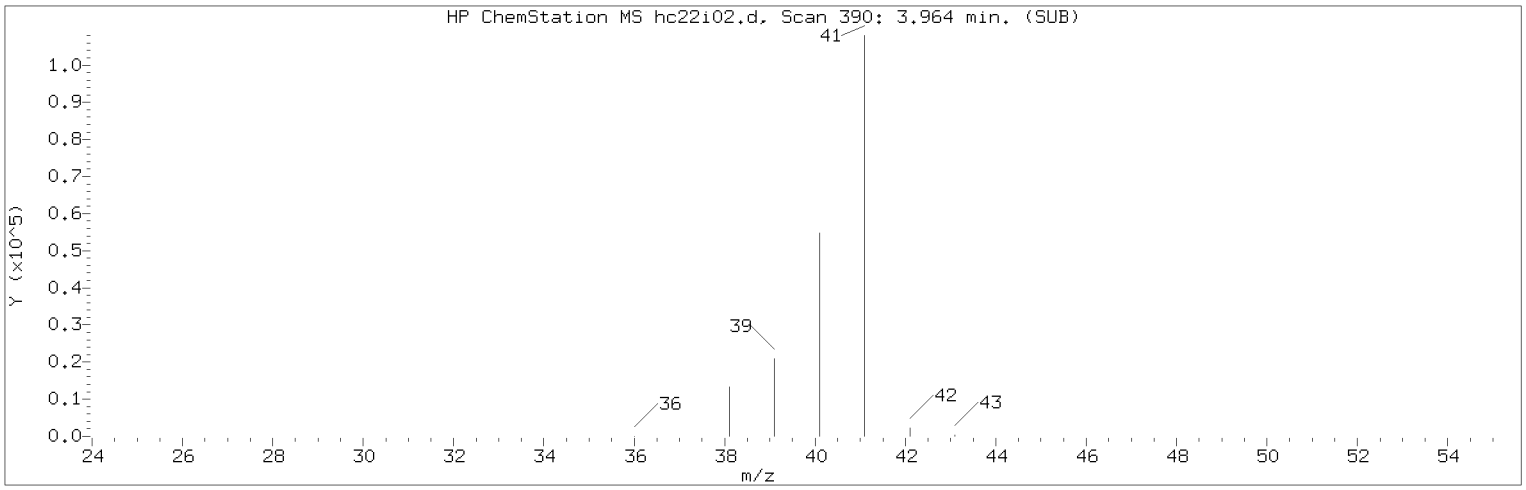
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	951564	9.815
25) Acetonitrile	(1)	3.964	41	1327403M	377.983
26)*t-Butyl Alcohol-d10	(1)	4.226	65	82634	50.000
36) Vinyl Acetate	(2)	5.342	43	796578	11.297
43) Methyl Acrylate	(2)	6.275	55	1427737	55.252
53) 1-Chlorobutane	(2)	7.067	56	1295181	10.824
63)*Fluorobenzene	(2)	7.781	96	2369752	10.000
77) Chloroacetonitrile	(2)	9.207	75	732942	564.955
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	278853	11.332
97)*Chlorobenzene-d5	(3)	11.249	117	1665519	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	275322	25.707
112) Cyclohexanone	(1)	12.170	55	437825	486.434
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	704226	10.000
142) Hexachloroethane	(4)	13.621	117	525185	11.408

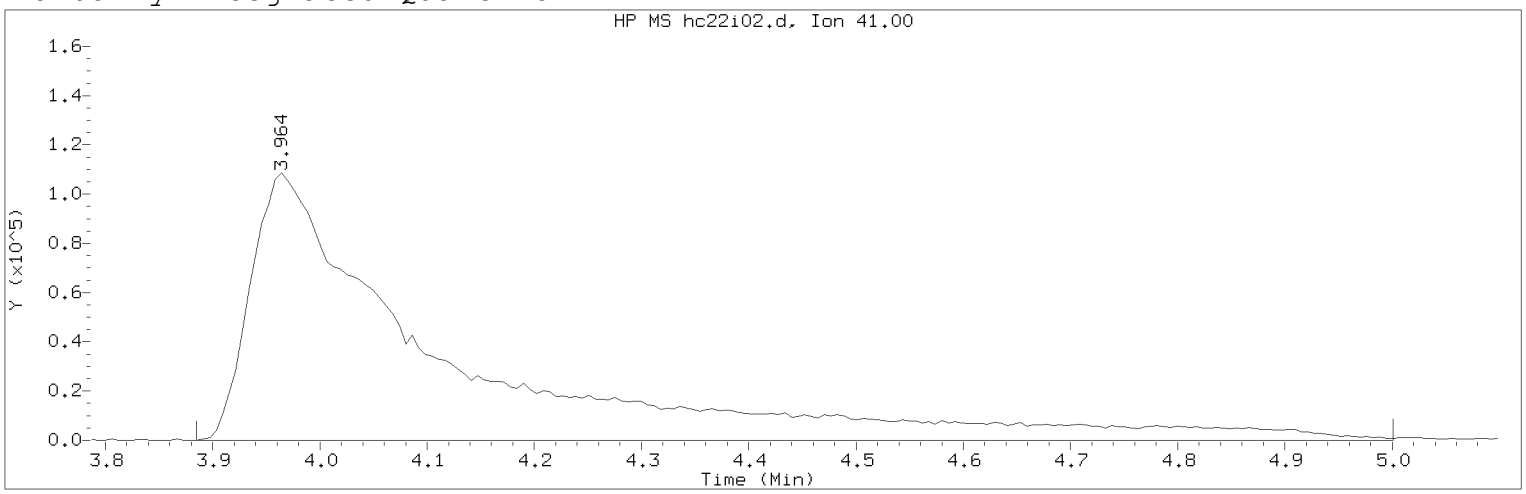
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

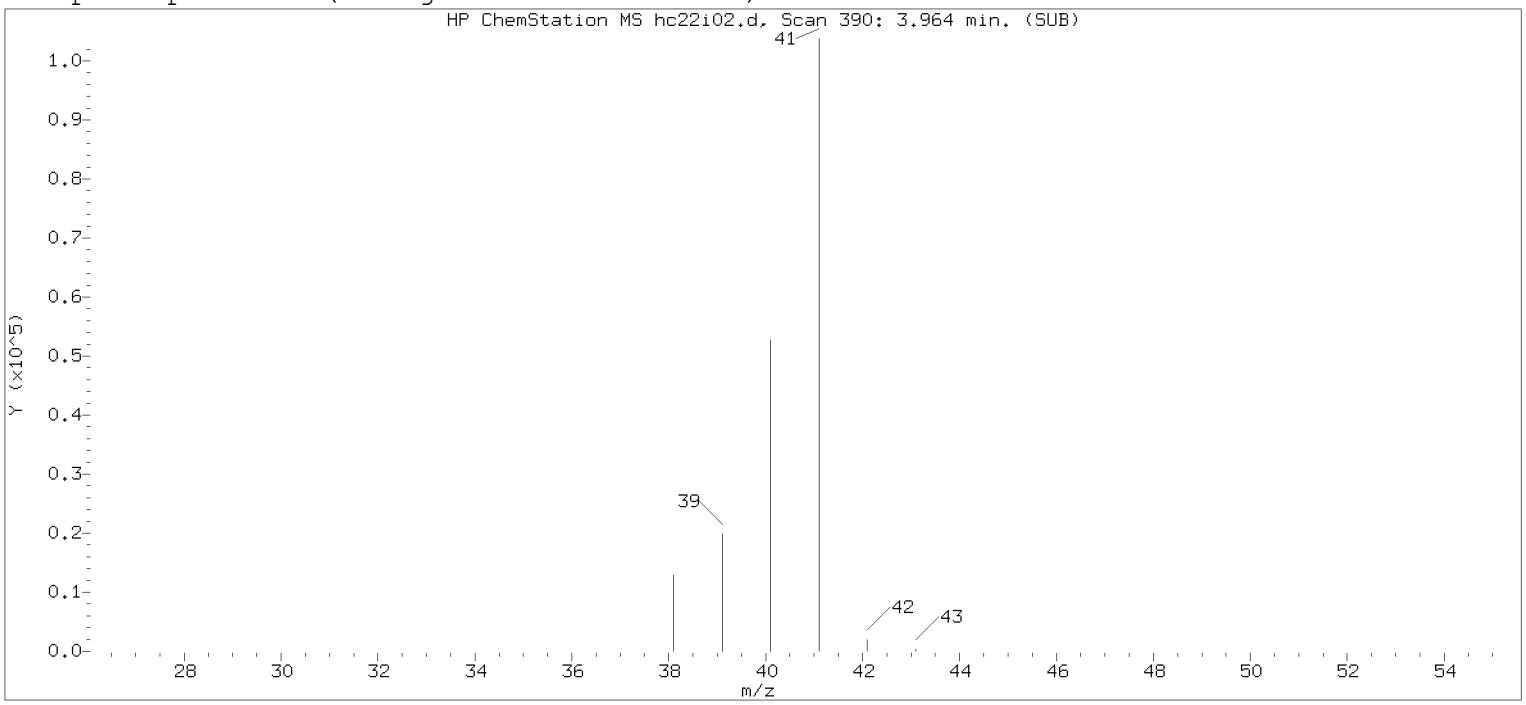
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 41.00
Area (flag) : 1327403M
On-Column Amount (ng) : 377.9827
Integration start scan : 376 Integration stop scan: 559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

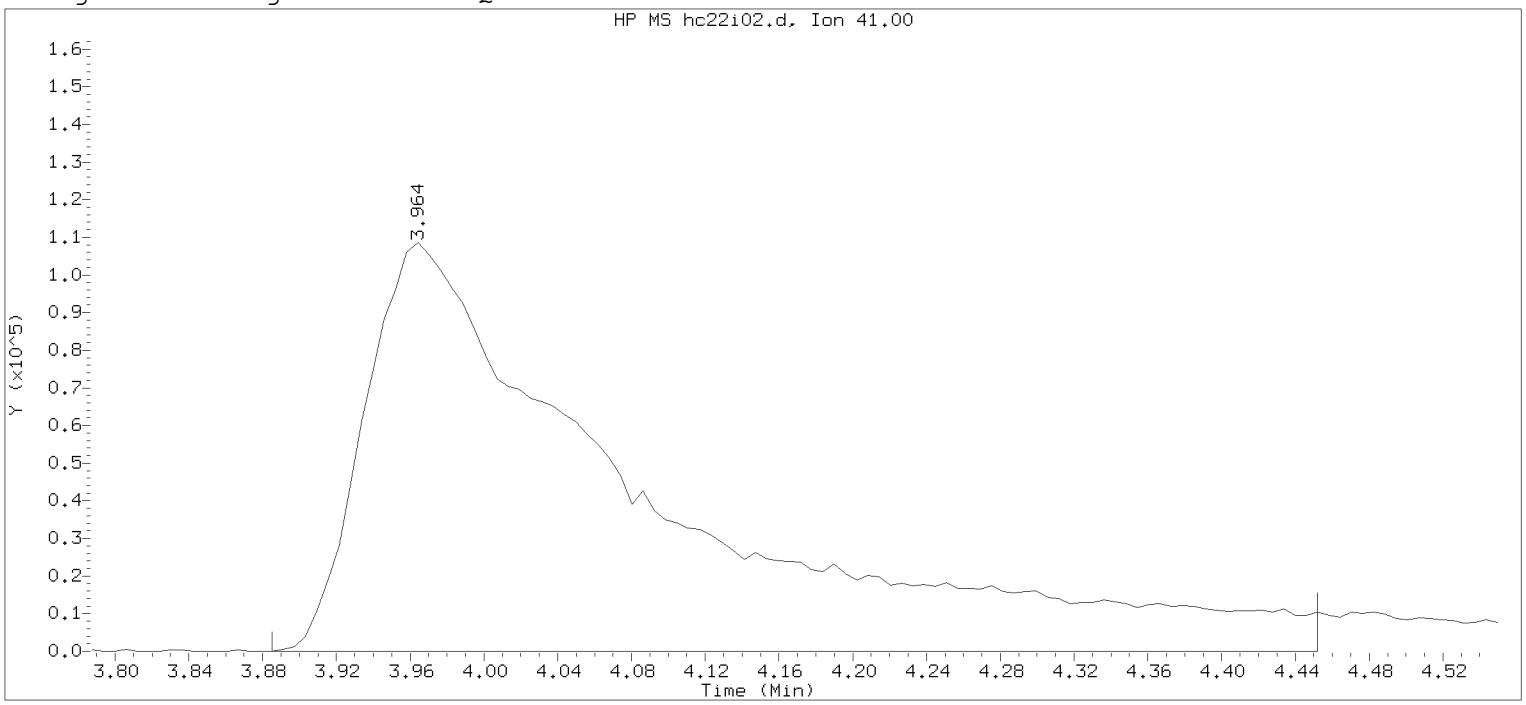
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



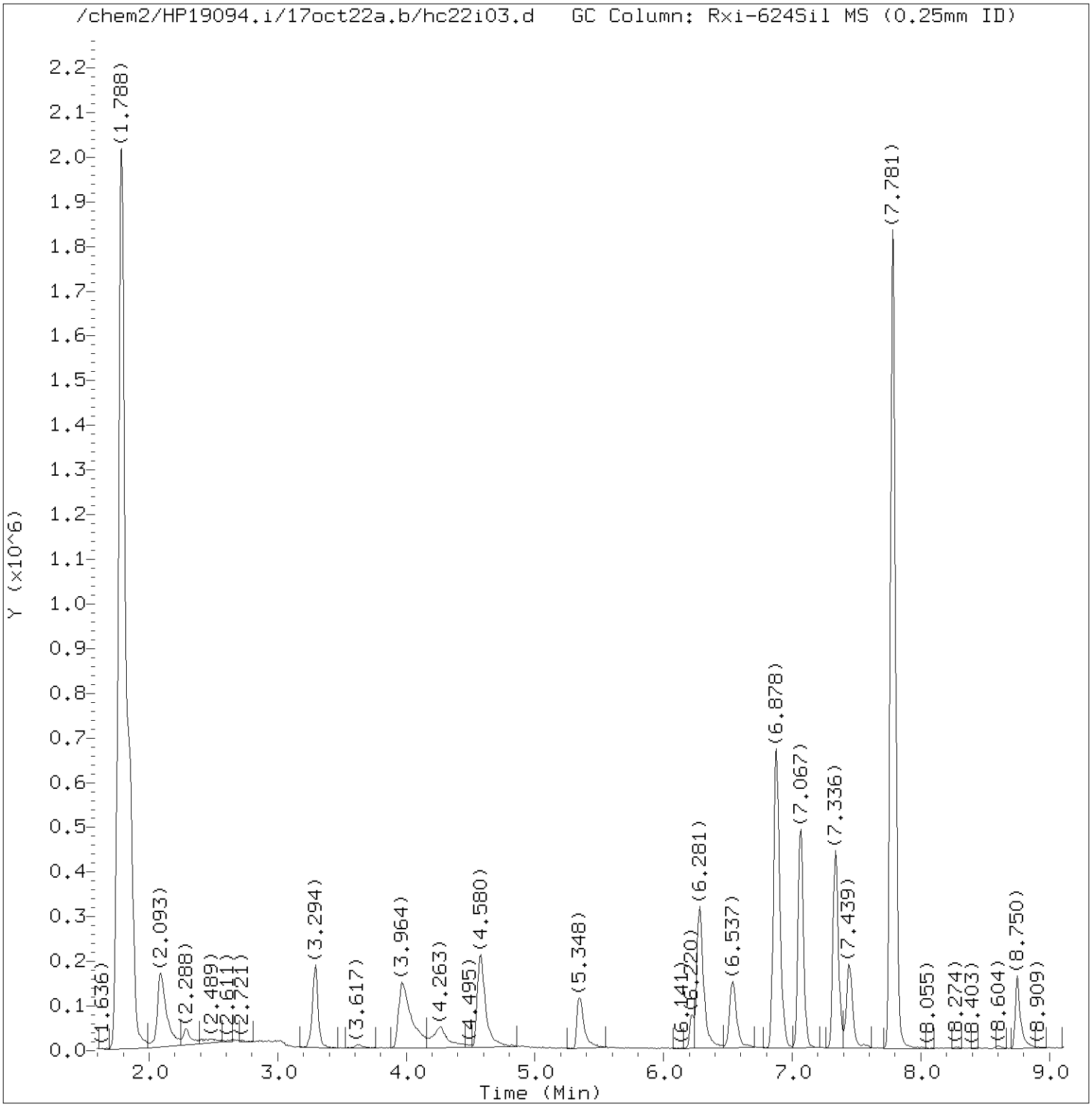
Data File: /chem2/HP19094.i/17oct22a.b/hc22i02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 41.00
Area : 1137246
On-column Amount (ng) : 354.8219
Integration start scan : 376 Integration stop scan: 469
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

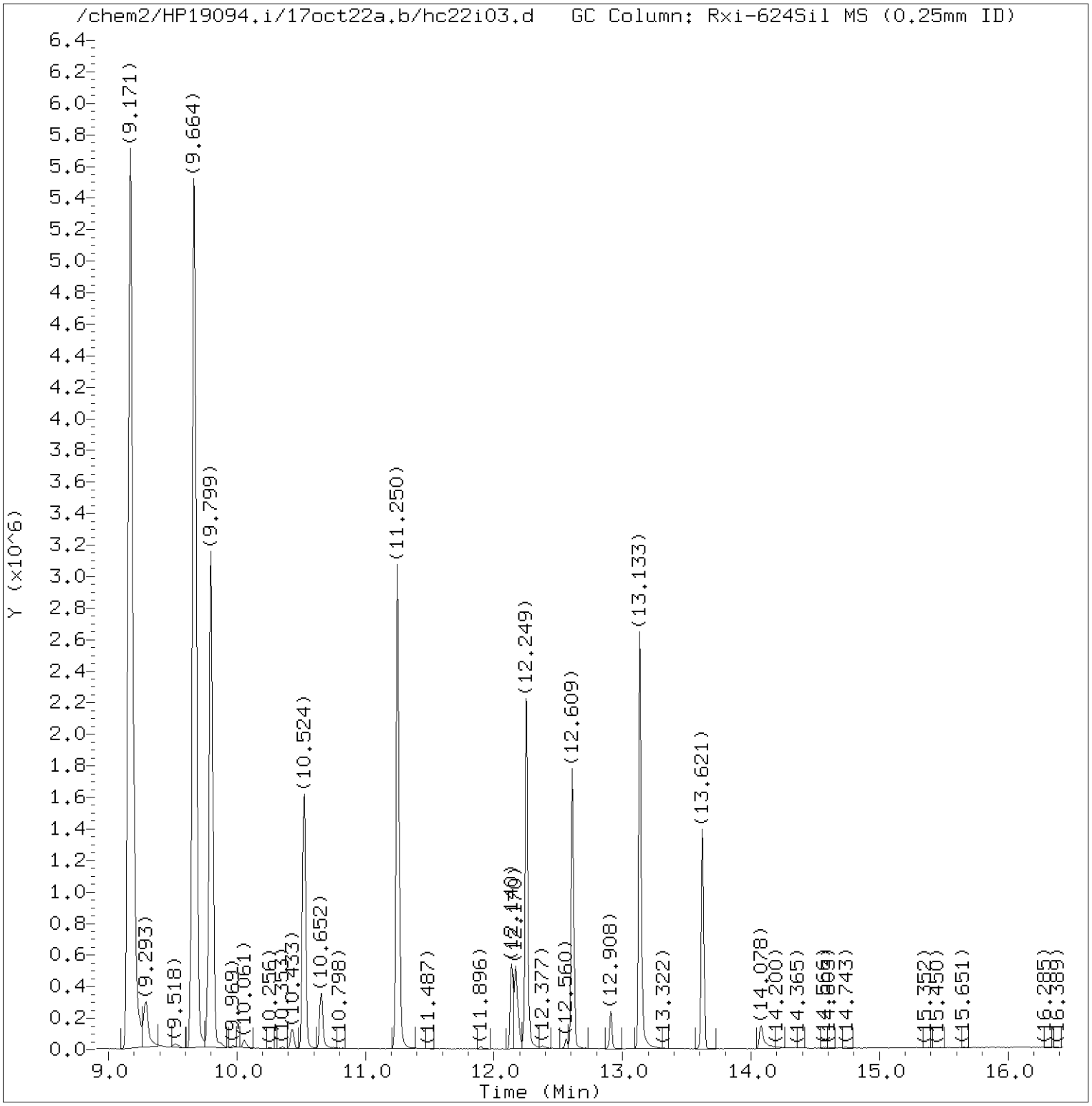
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

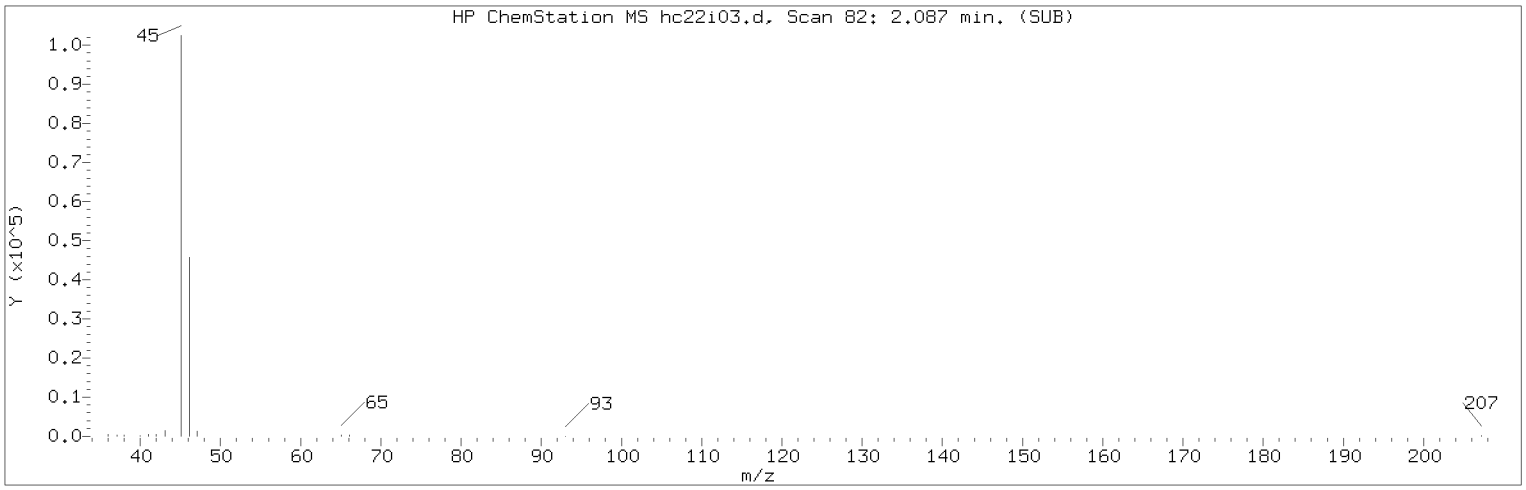
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	459053M	4.808
25) Acetonitrile	(1)	3.964	41	711231M	186.406
26)*t-Butyl Alcohol-d10	(1)	4.263	65	89780M	50.000
36) Vinyl Acetate	(2)	5.354	43	374543	5.394
43) Methyl Acrylate	(2)	6.281	55	687523	27.020
53) 1-Chlorobutane	(2)	7.067	56	553564	4.698
63)*Fluorobenzene	(2)	7.781	96	2333487	10.000
77) Chloroacetonitrile	(2)	9.207	75	371174	290.549
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	125568	5.182
97)*Chlorobenzene-d5	(3)	11.250	117	1611708	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	120112A	10.322
112) Cyclohexanone	(1)	12.170	55	249097A	254.725
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	660423	10.000
142) Hexachloroethane	(4)	13.621	117	215073	4.982

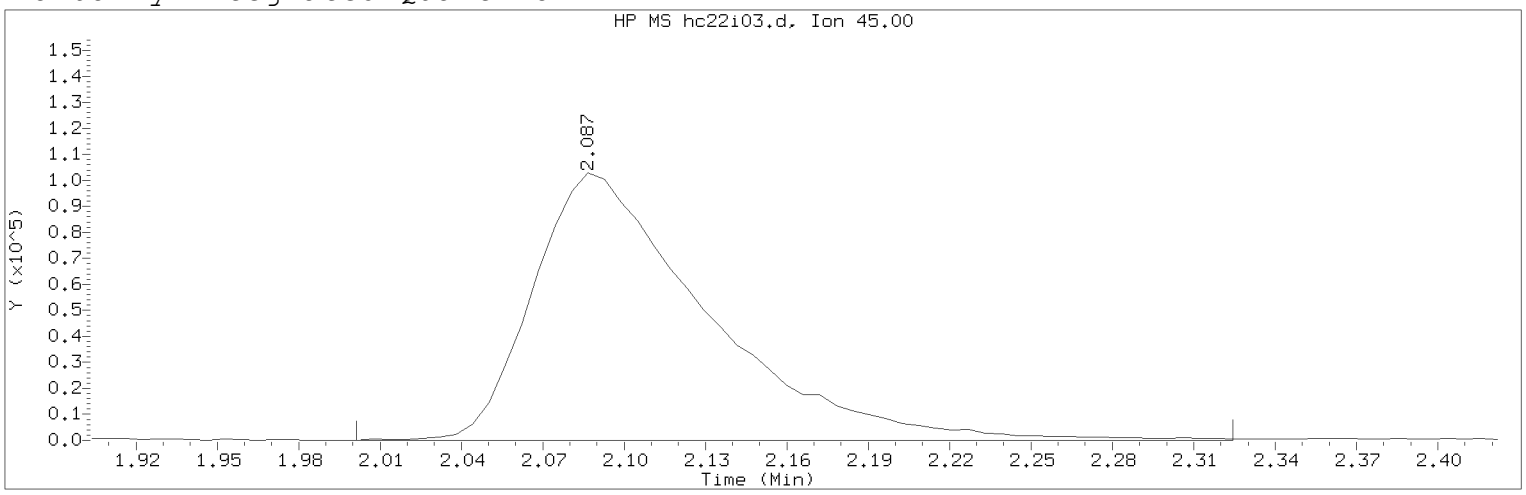
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

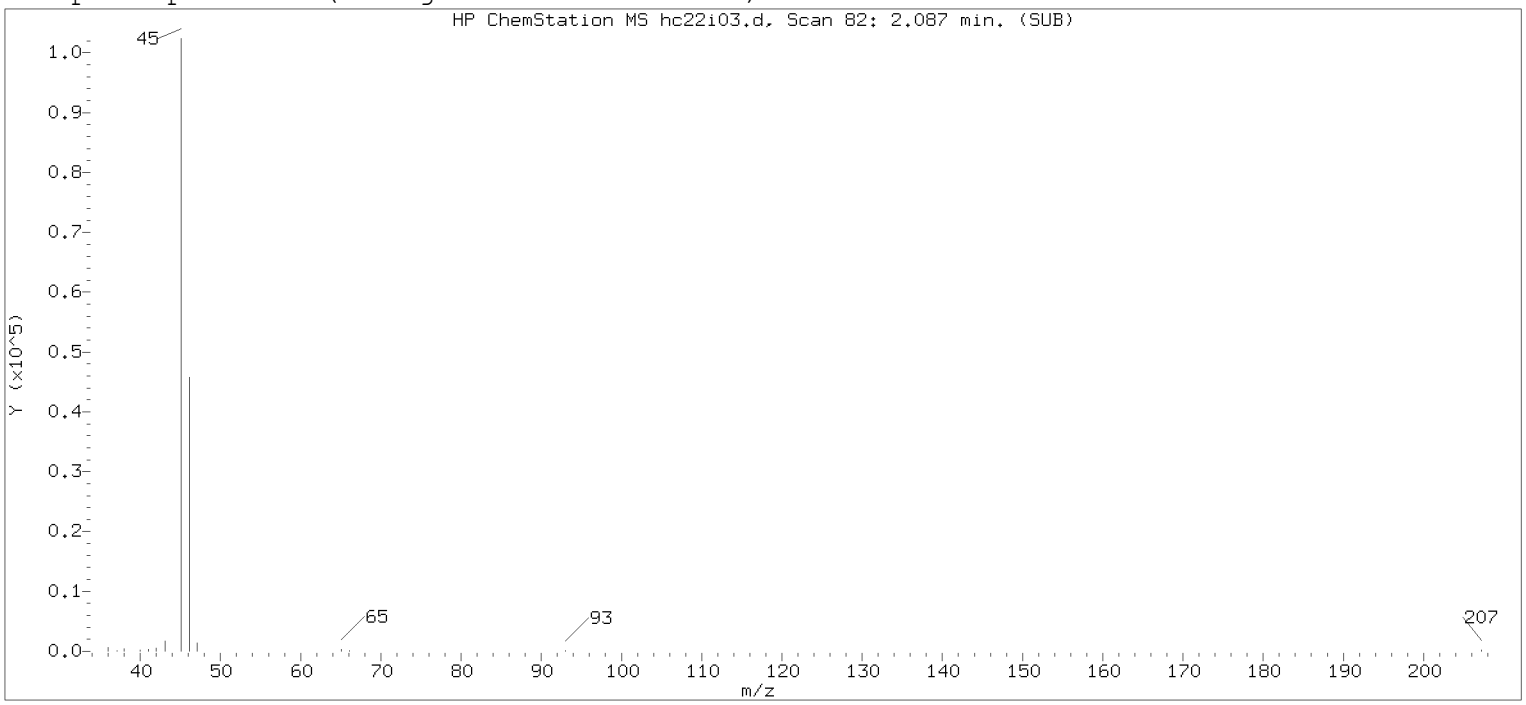
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 82
Retention Time (minutes): 2.087
Quant Ion : 45.00
Area (flag) : 459053M
On-Column Amount (ng) : 4.8084
Integration start scan : 67 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

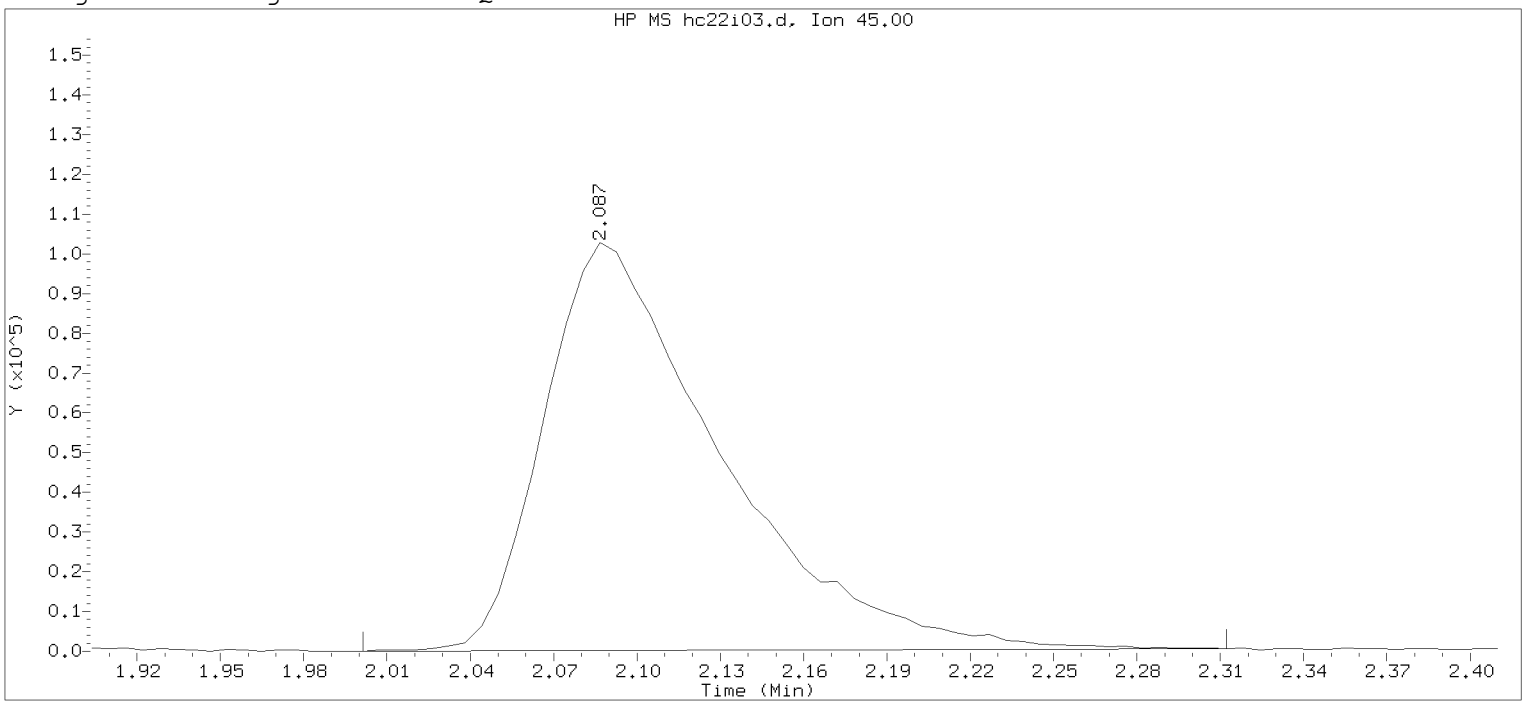
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

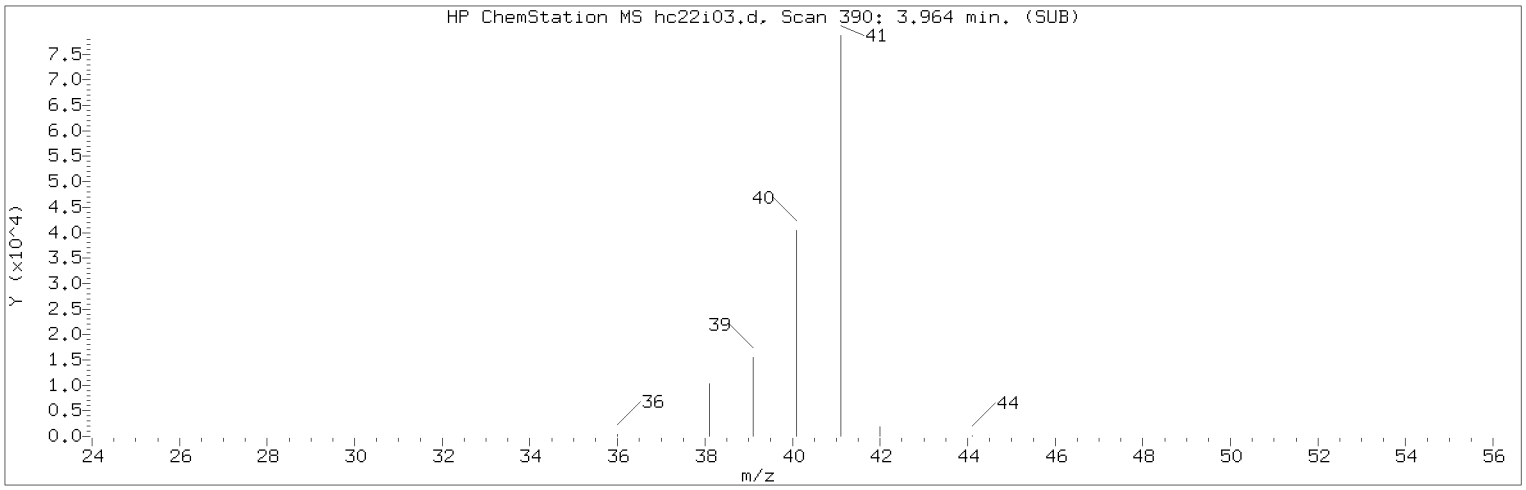
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

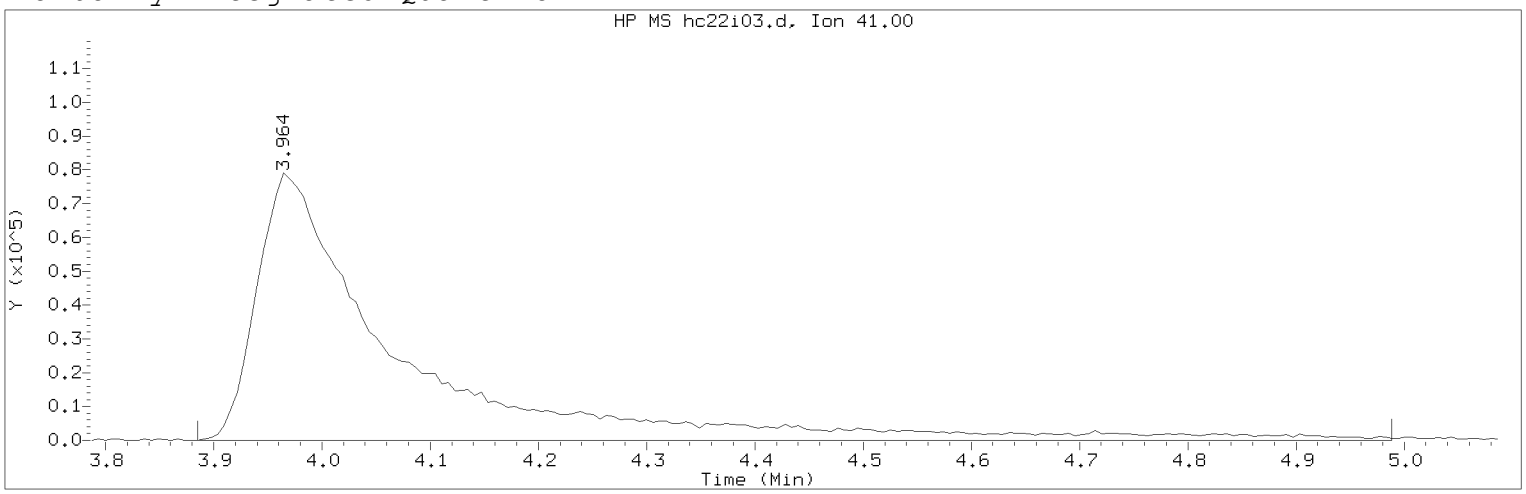
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area	: 451903		
On-column Amount (ng)	: 4.9452		
Integration start scan	: 67	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	706

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

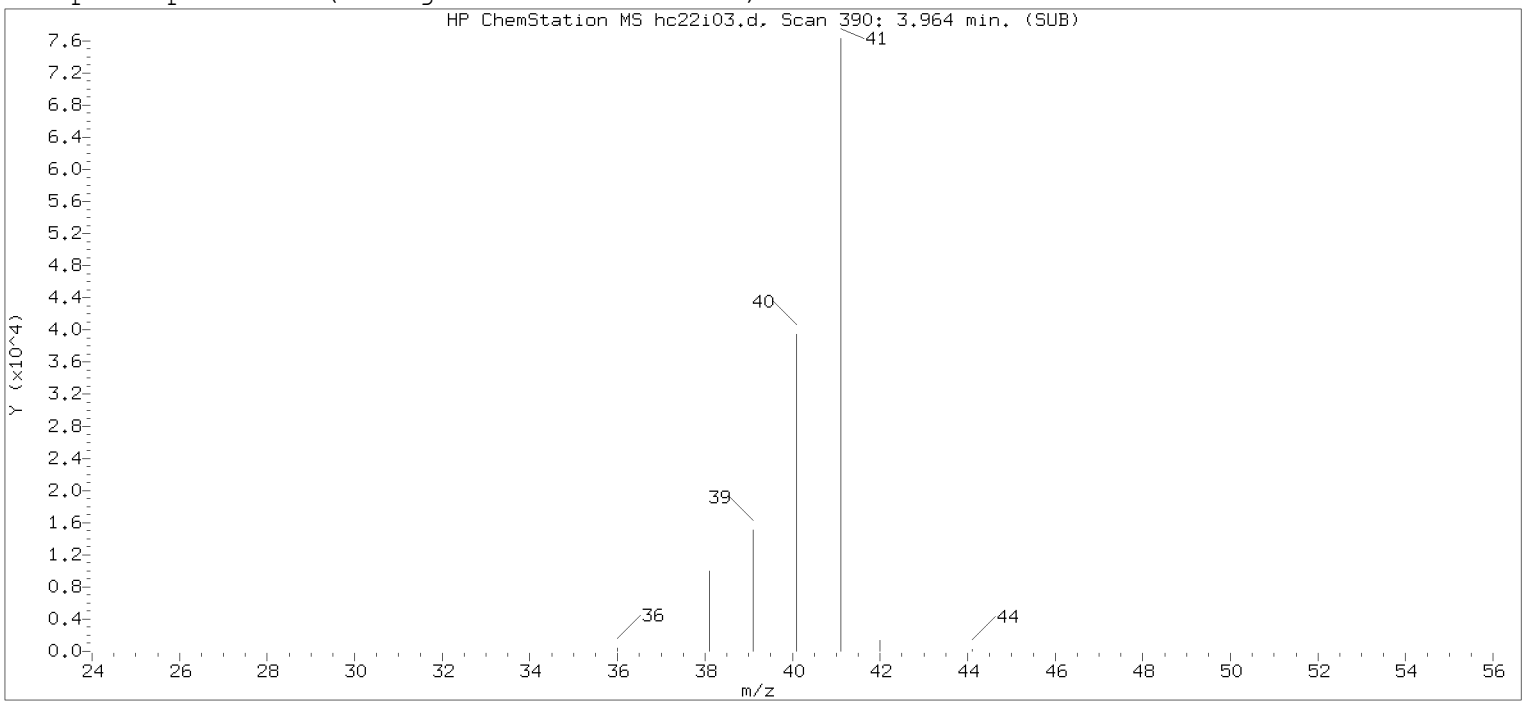
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 41.00
Area (flag) : 711231M
On-Column Amount (ng) : 186.4056
Integration start scan : 376 Integration stop scan: 557
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

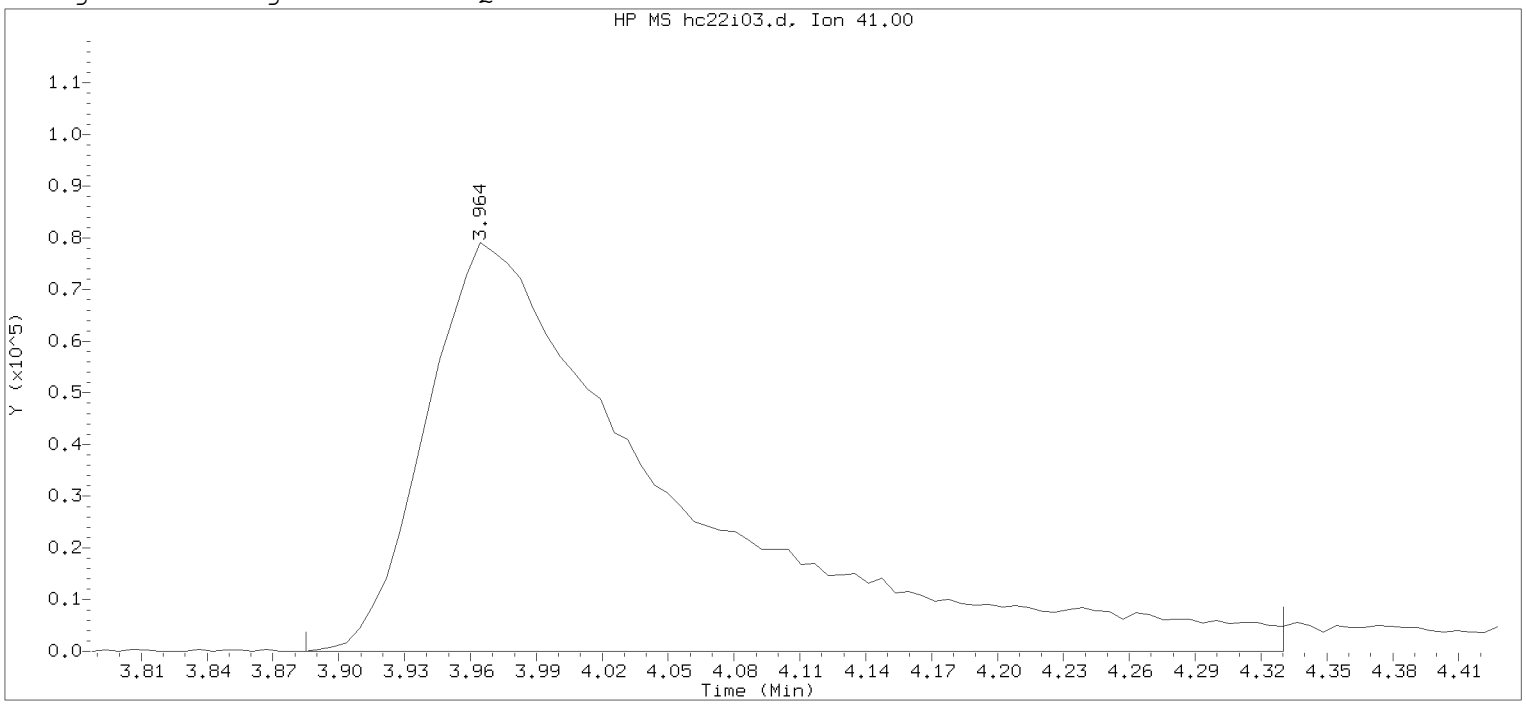
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

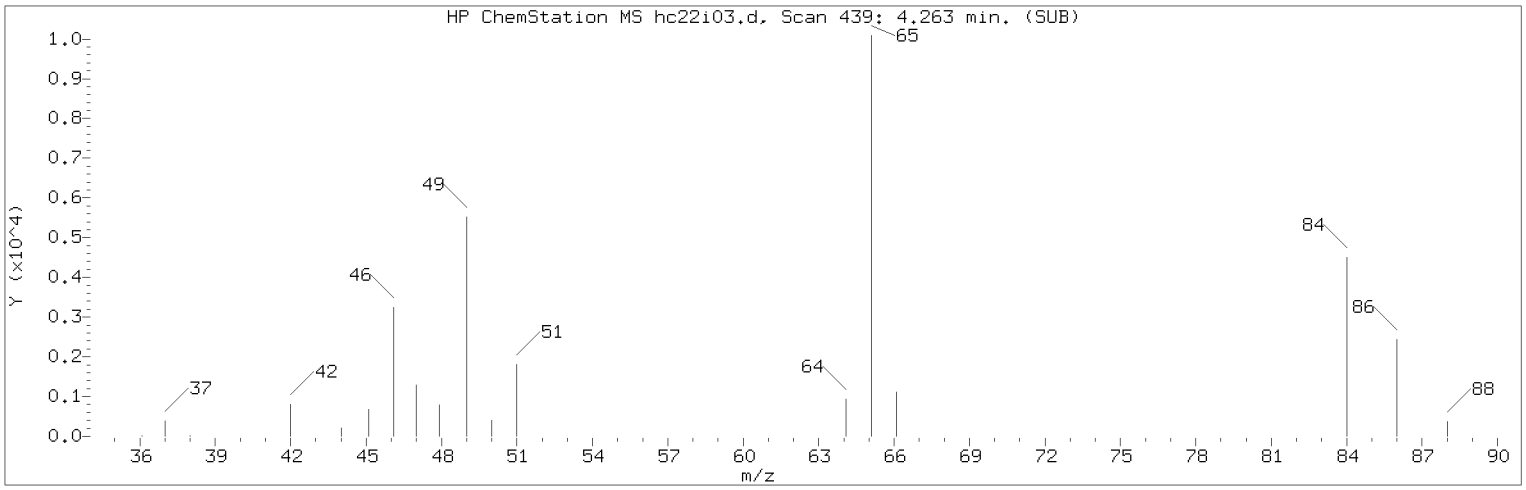
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

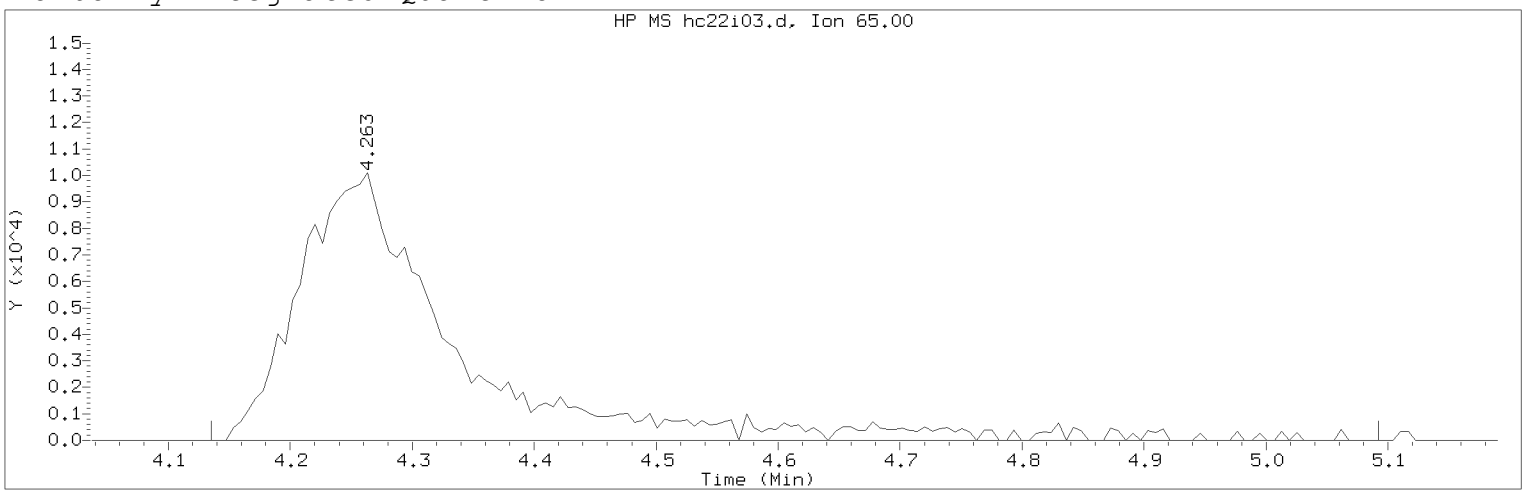
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 41.00
Area : 617907
On-column Amount (ng) : 176.7061
Integration start scan : 376 Integration stop scan: 449
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

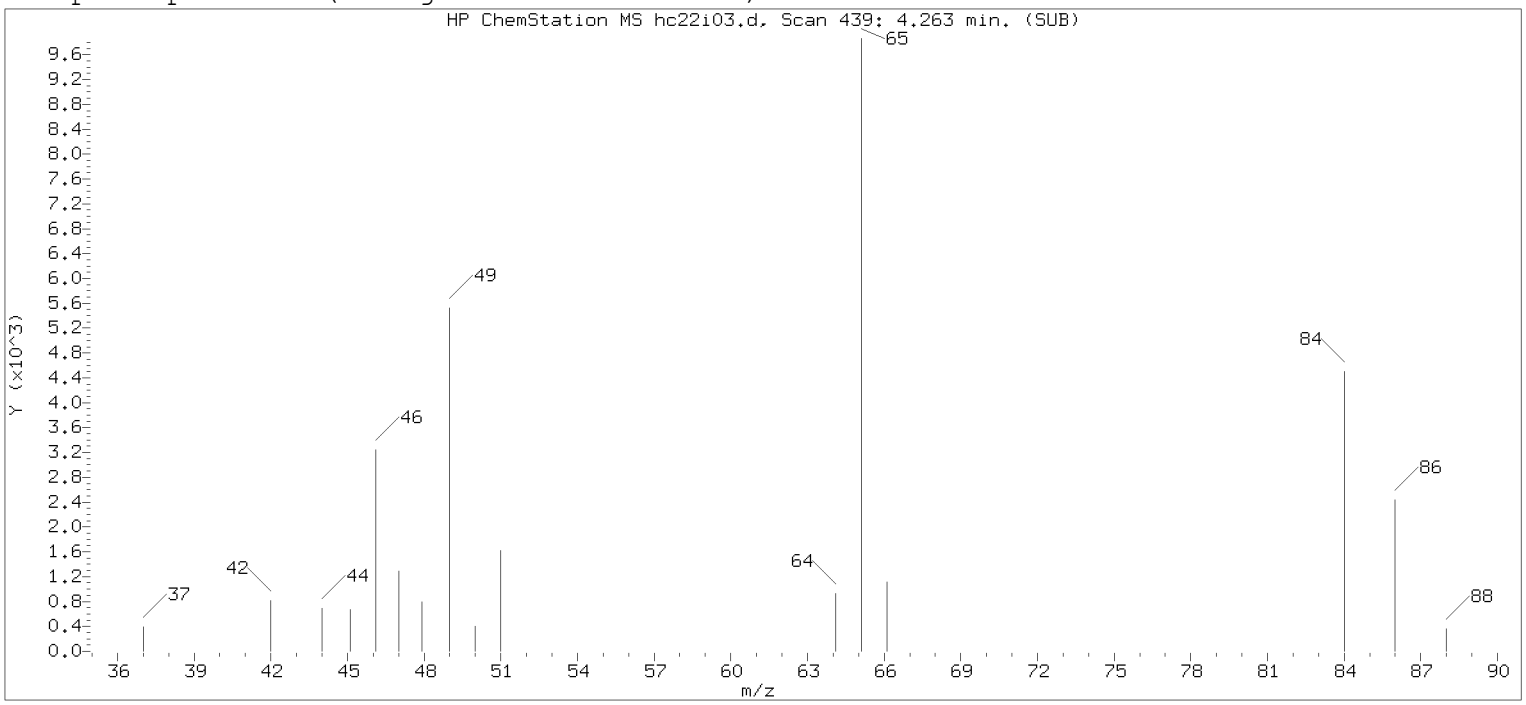
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area (flag) : 89780M
On-Column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

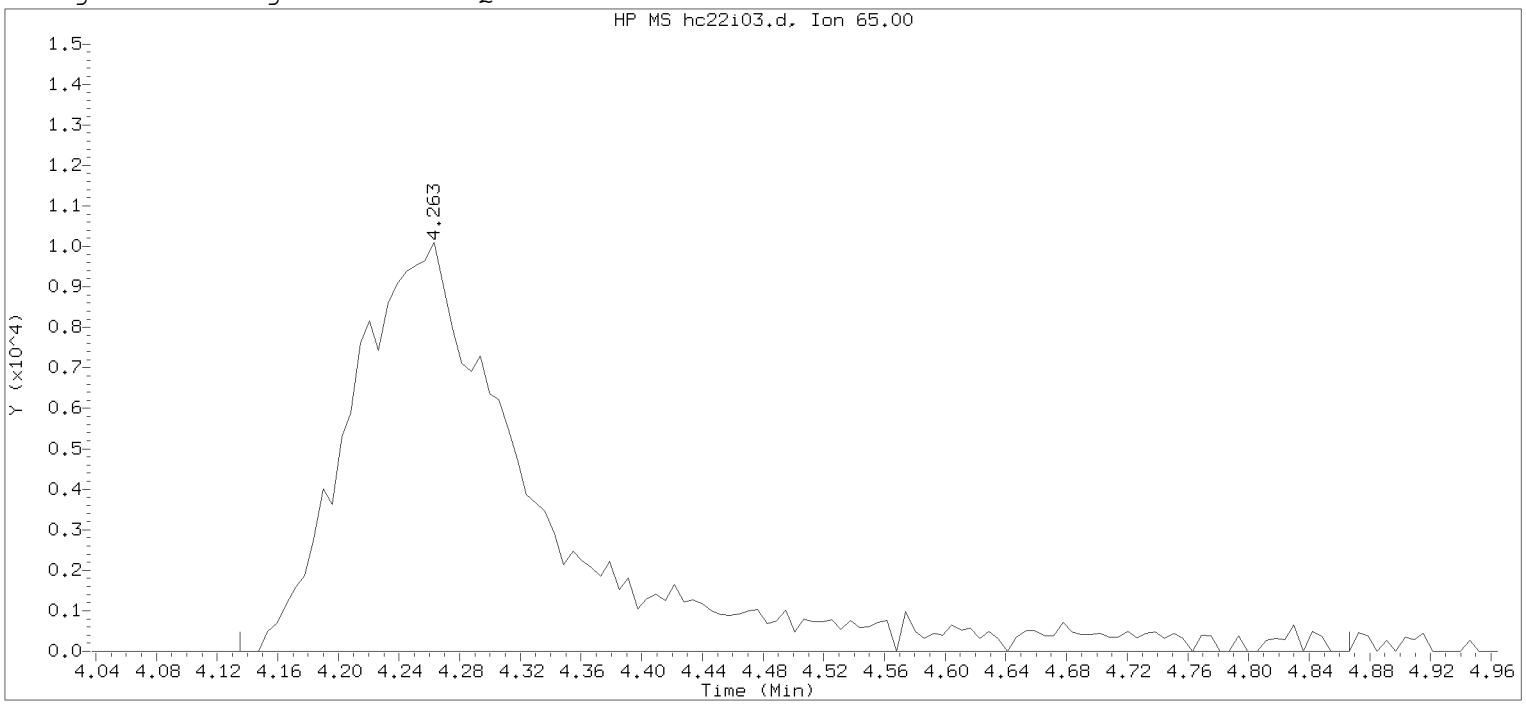
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

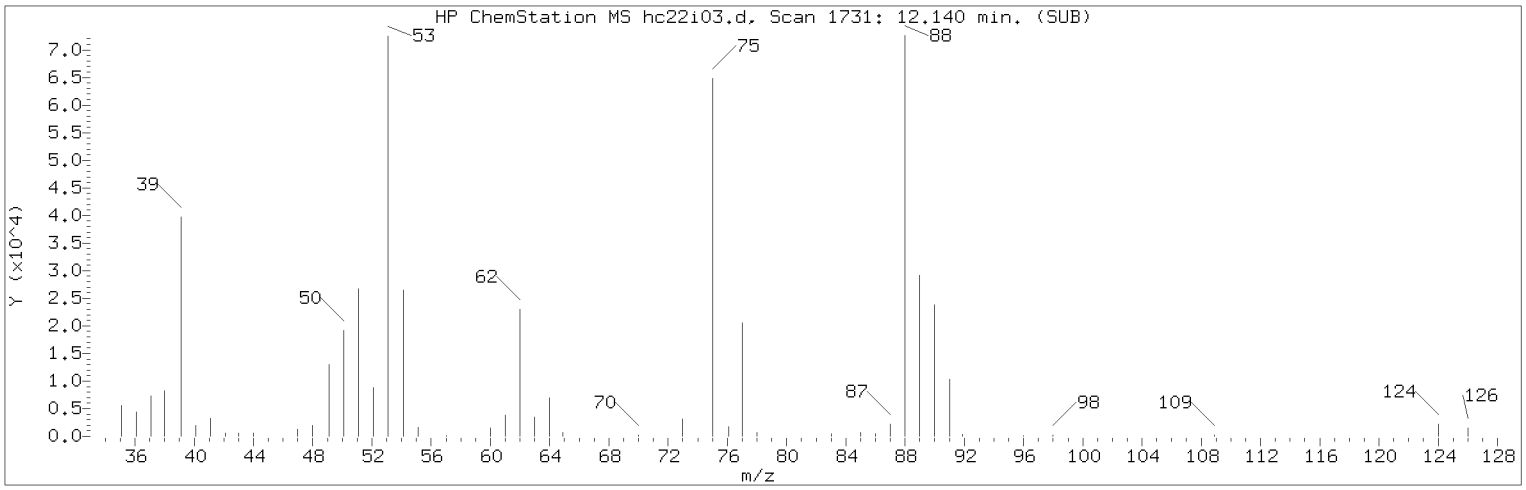
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

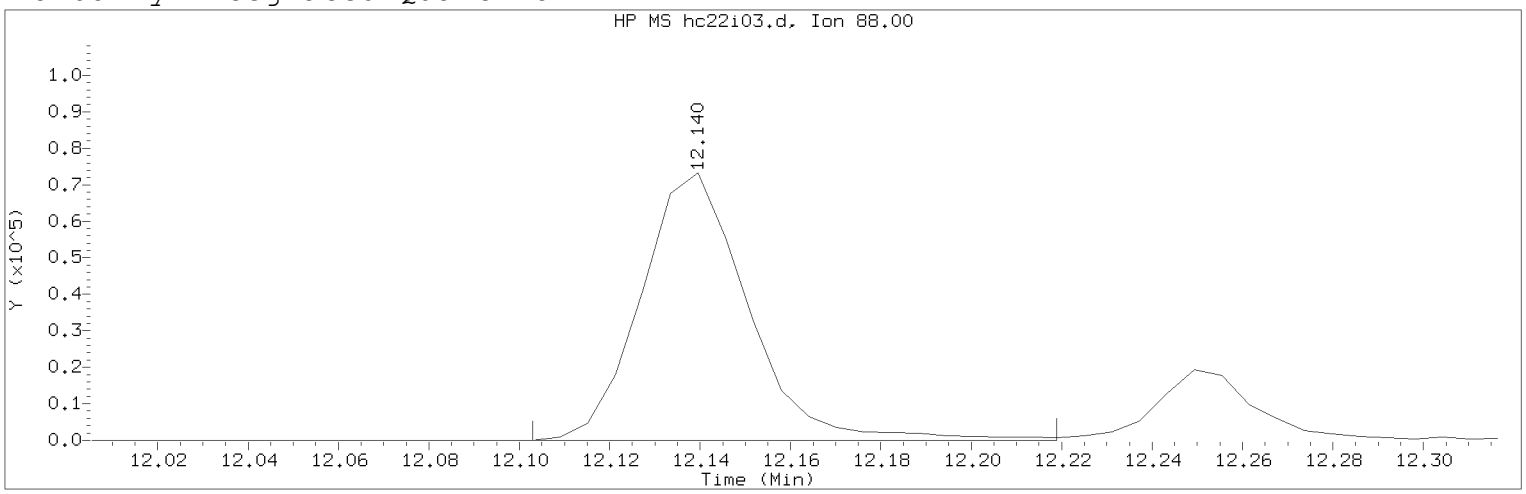
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area : 88284
On-column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used during 10/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

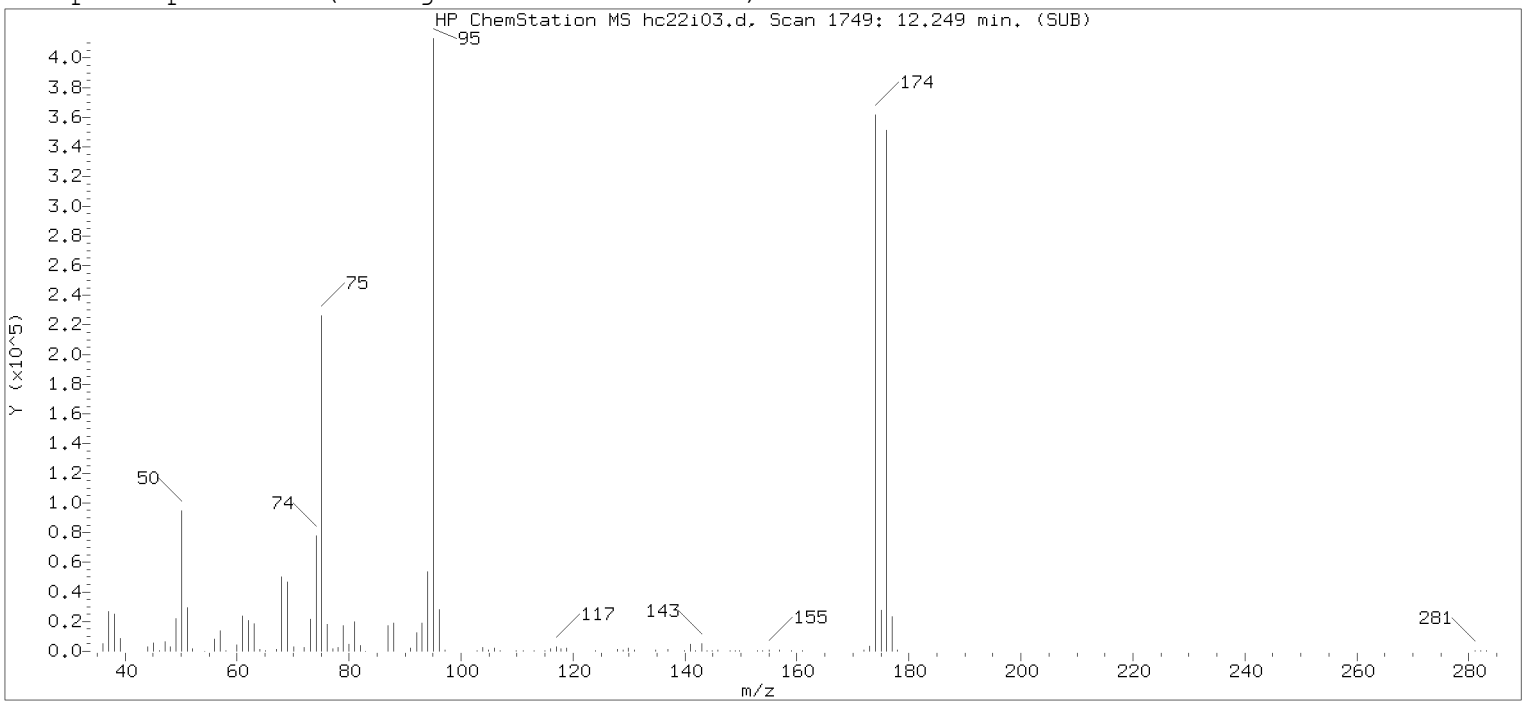
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1731
Retention Time (minutes): 12.140
Quant Ion : 88.00
Area (flag) : 120112A
On-Column Amount (ng) : 10.3222
Integration start scan : 1724 Integration stop scan: 1743
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

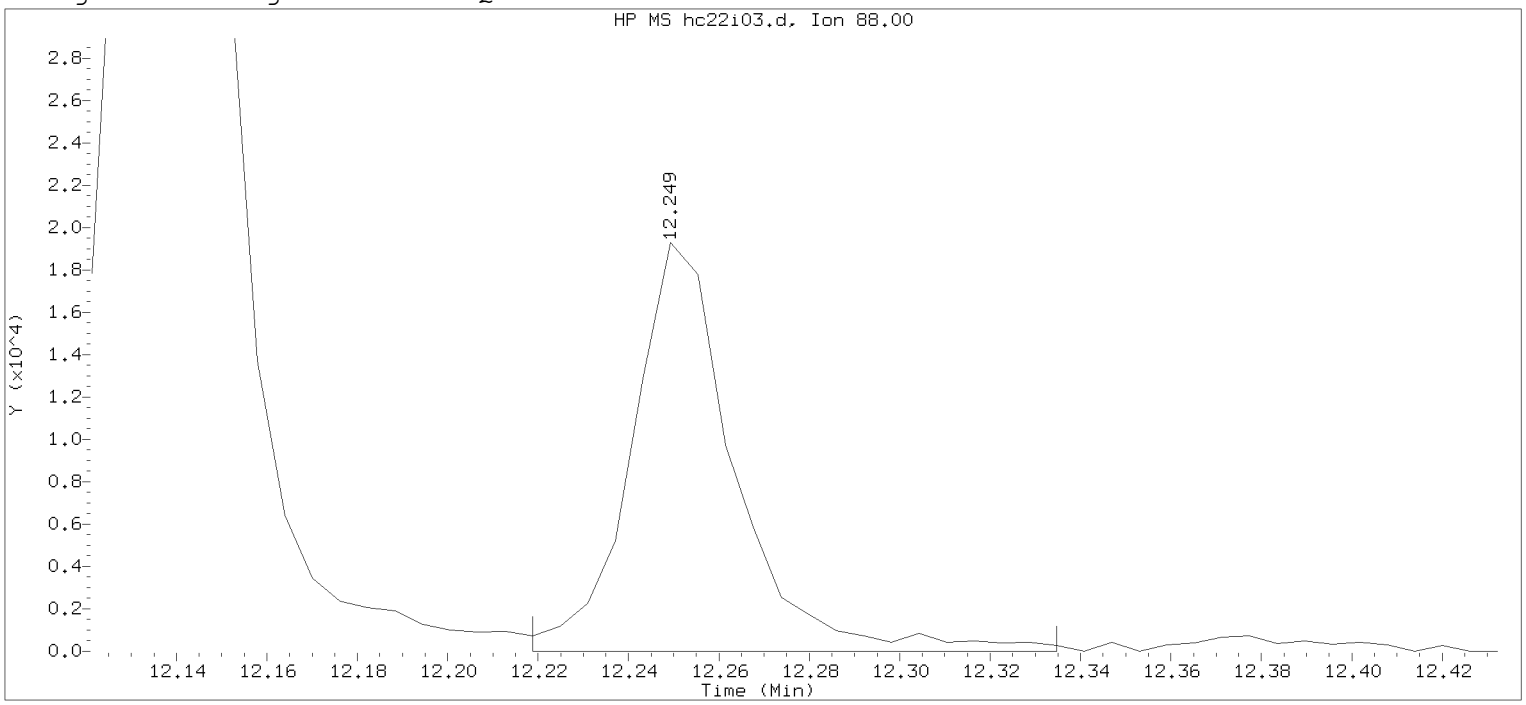
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

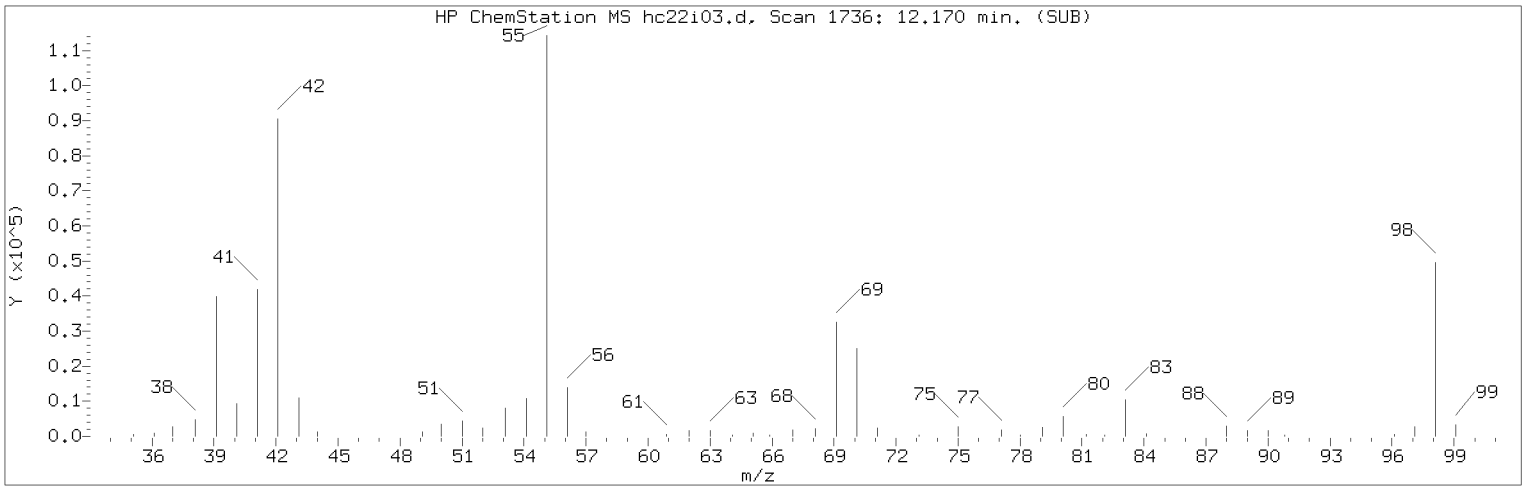
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

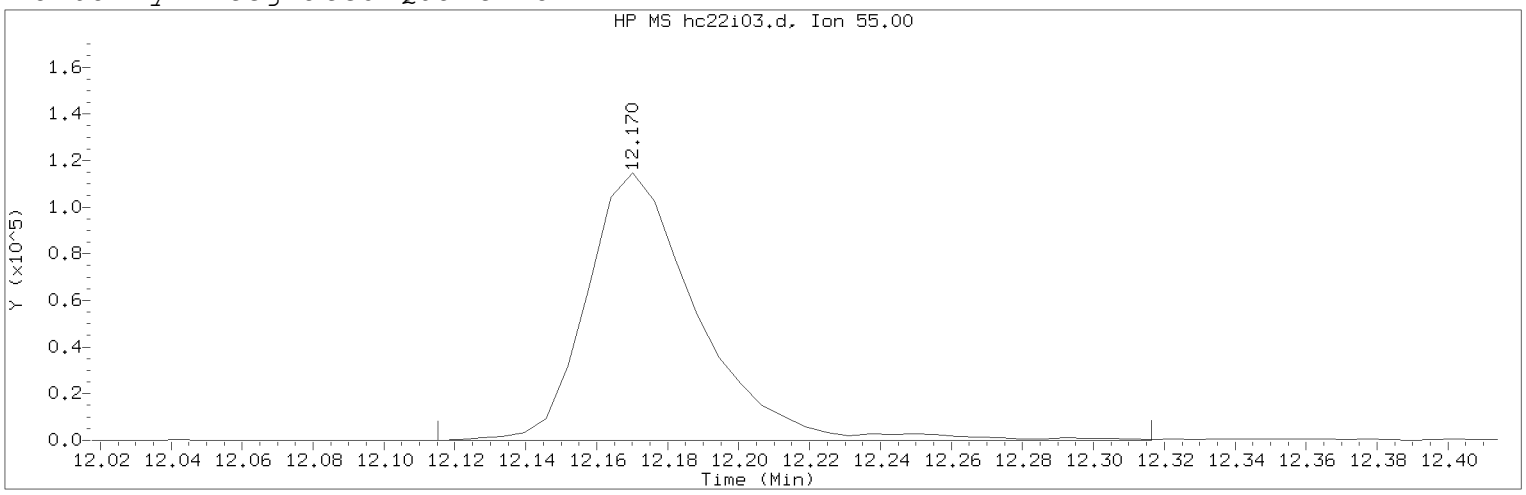
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.249
Quant Ion : 88.00
Area : 30640
On-column Amount (ng) : 17.7888
Integration start scan : 1743 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

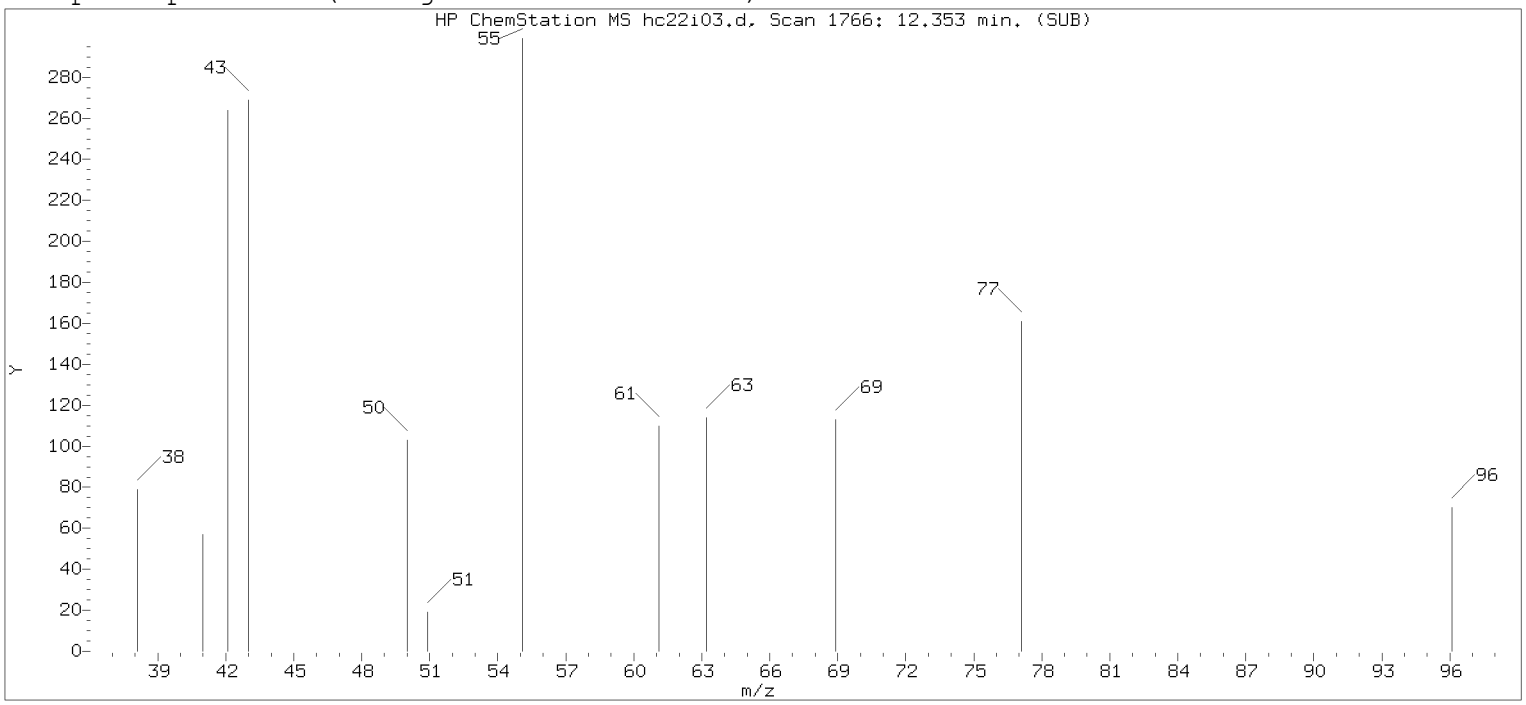
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1736
Retention Time (minutes): 12.170
Quant Ion : 55.00
Area (flag) : 249097A
On-Column Amount (ng) : 254.7248
Integration start scan : 1726 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

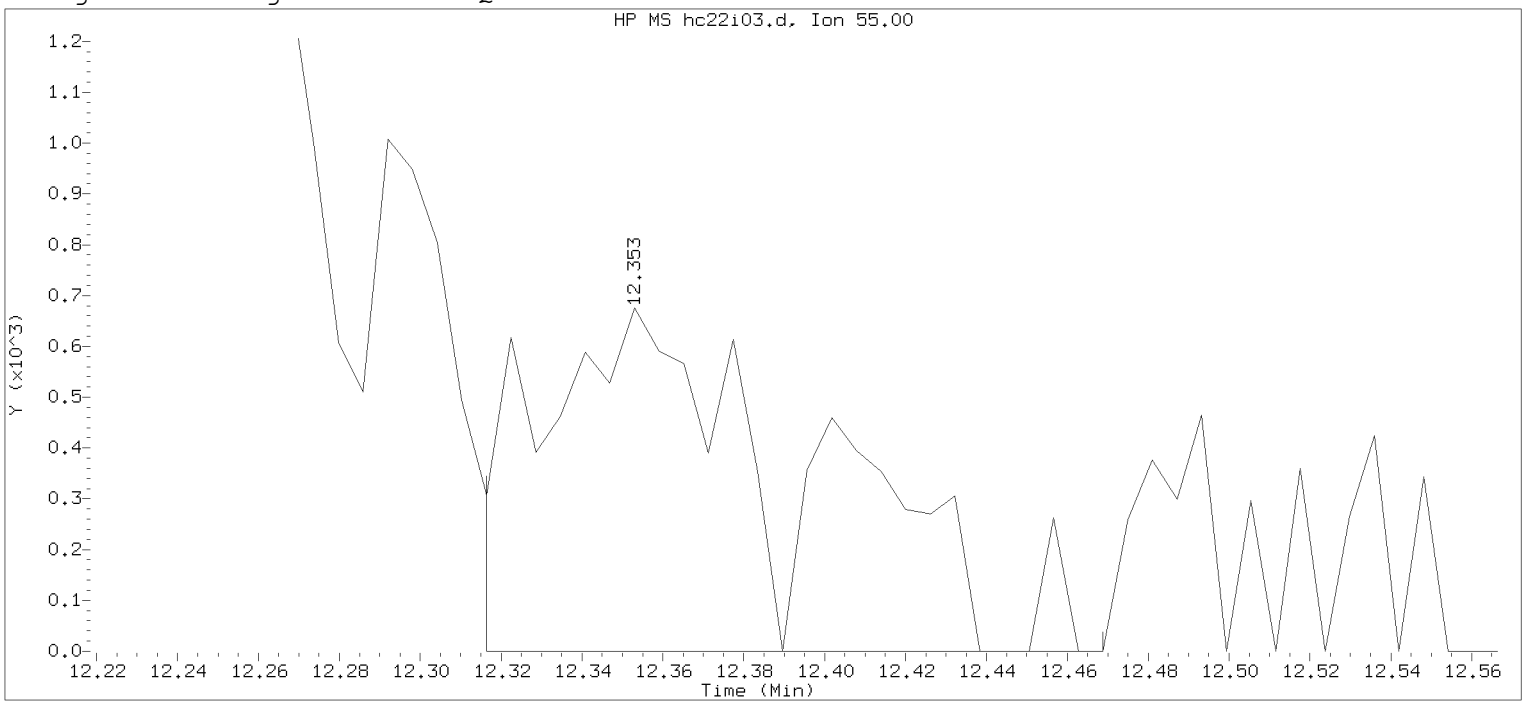
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



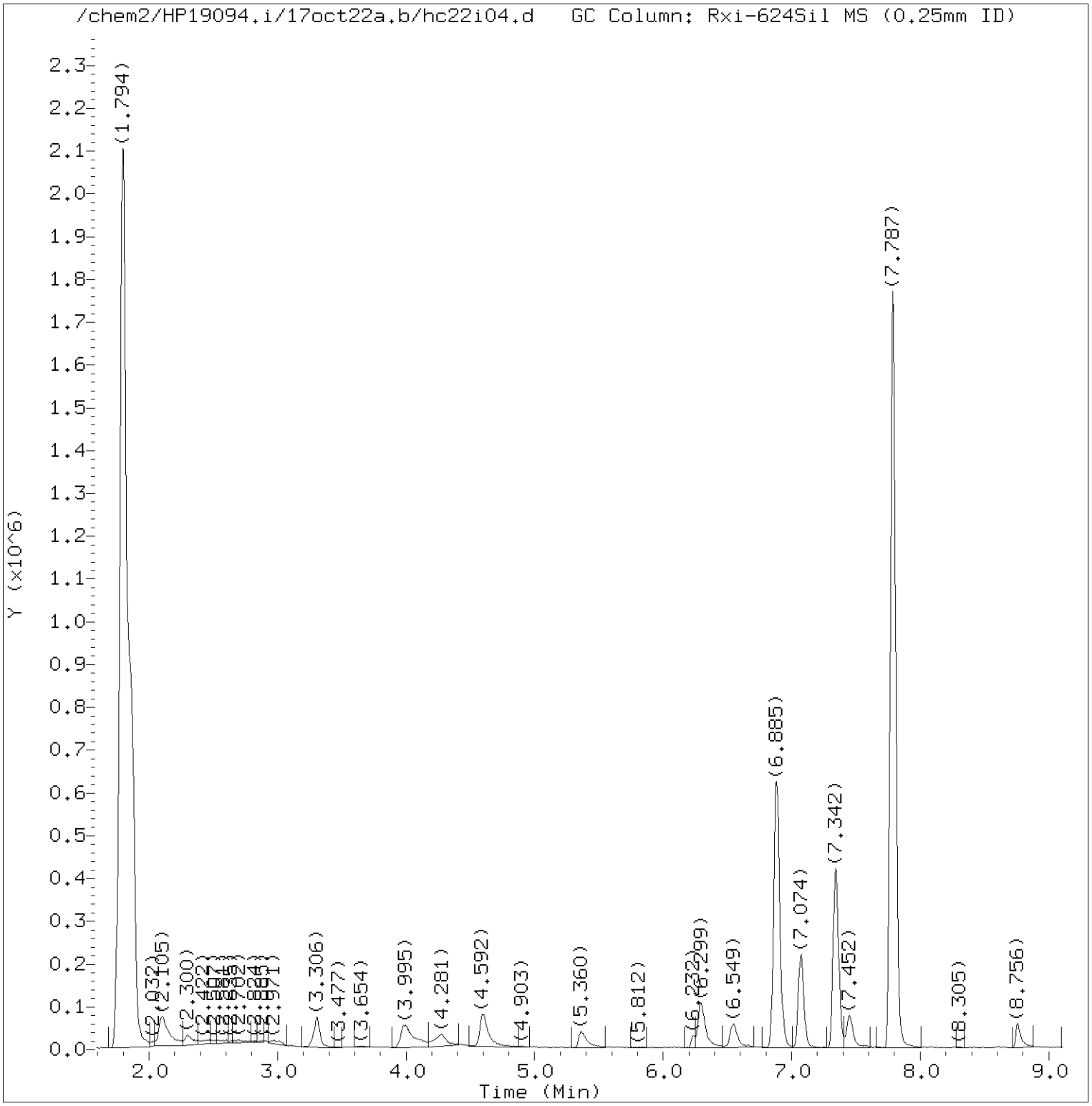
Data File: /chem2/HP19094.i/17oct22a.b/hc22i03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 19:43 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:15
Date, time and analyst ID of latest file update: 22-Oct-2017 20:15 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1766
Retention Time (minutes): 12.353
Quant Ion : 55.00
Area : 3149
On-column Amount (ng) : 4.0896
Integration start scan : 1759 Integration stop scan: 1784
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

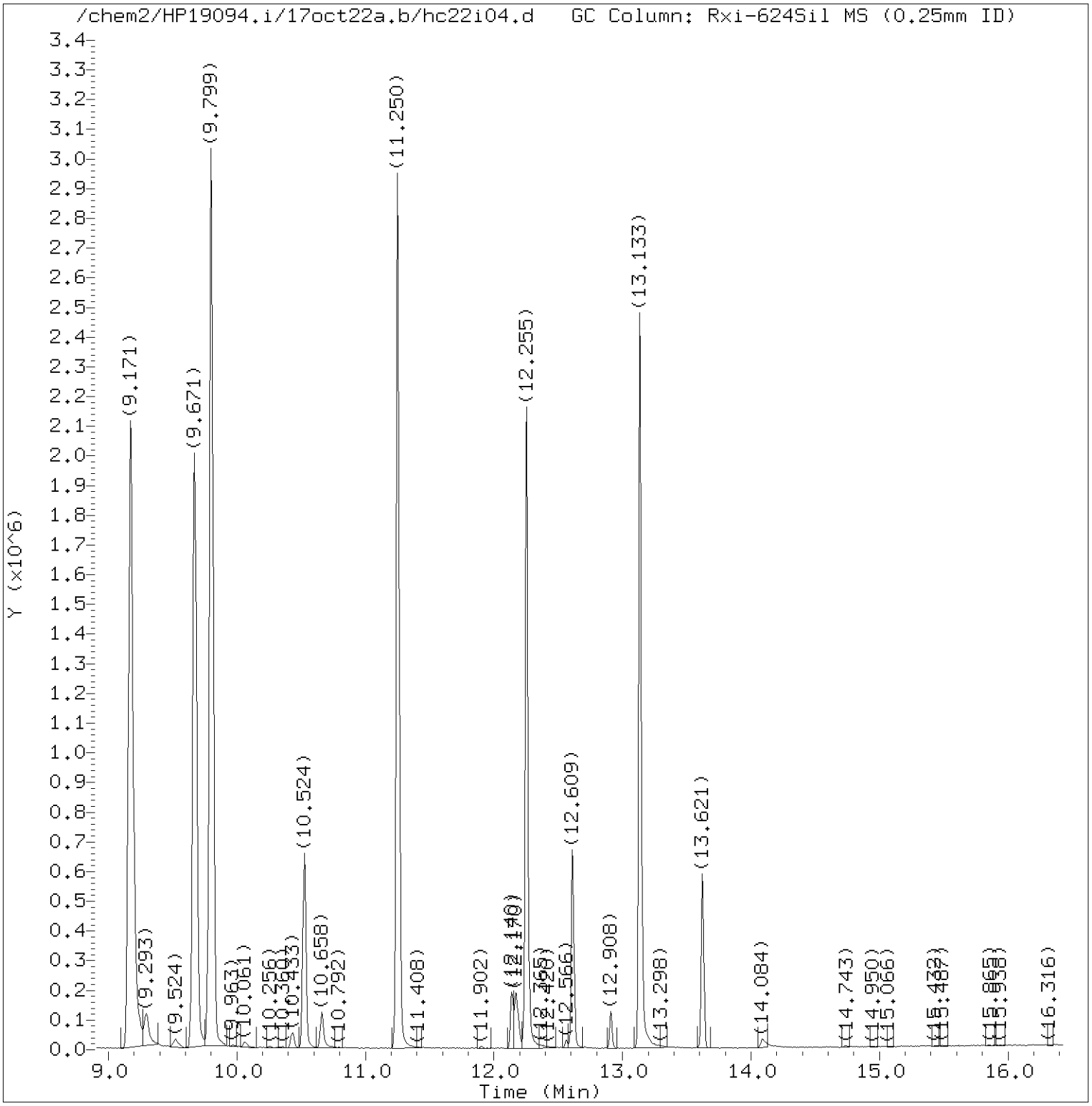
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

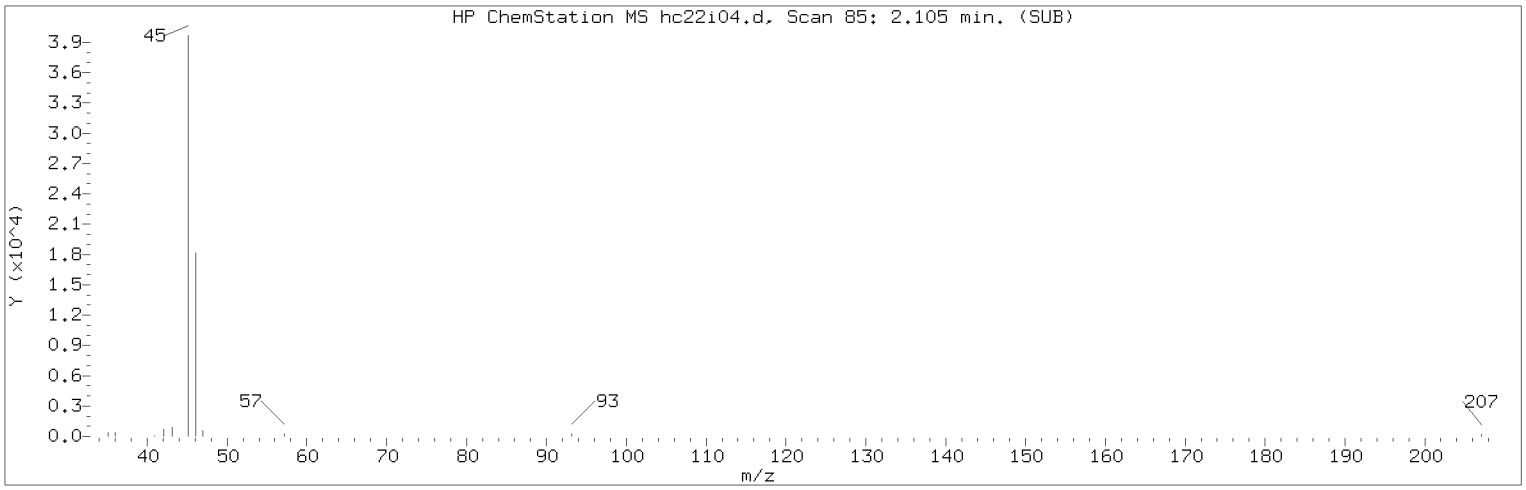
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	179825M	1.904
25) Acetonitrile	(1)	3.983	41	280652M	77.776
26)*t-Butyl Alcohol-d10	(1)	4.275	65	84908M	50.000
36) Vinyl Acetate	(2)	5.360	43	140468	2.045
43) Methyl Acrylate	(2)	6.299	55	255602	10.156
53) 1-Chlorobutane	(2)	7.074	56	251074	2.154
63)*Fluorobenzene	(2)	7.787	96	2308116	10.000
77) Chloroacetonitrile	(2)	9.219	75	135870	107.526
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	48486	2.023
97)*Chlorobenzene-d5	(3)	11.250	117	1562255	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	42854A	3.894
112) Cyclohexanone	(1)	12.170	55	95235MA	102.975
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	631958	10.000
142) Hexachloroethane	(4)	13.621	117	87746	2.124

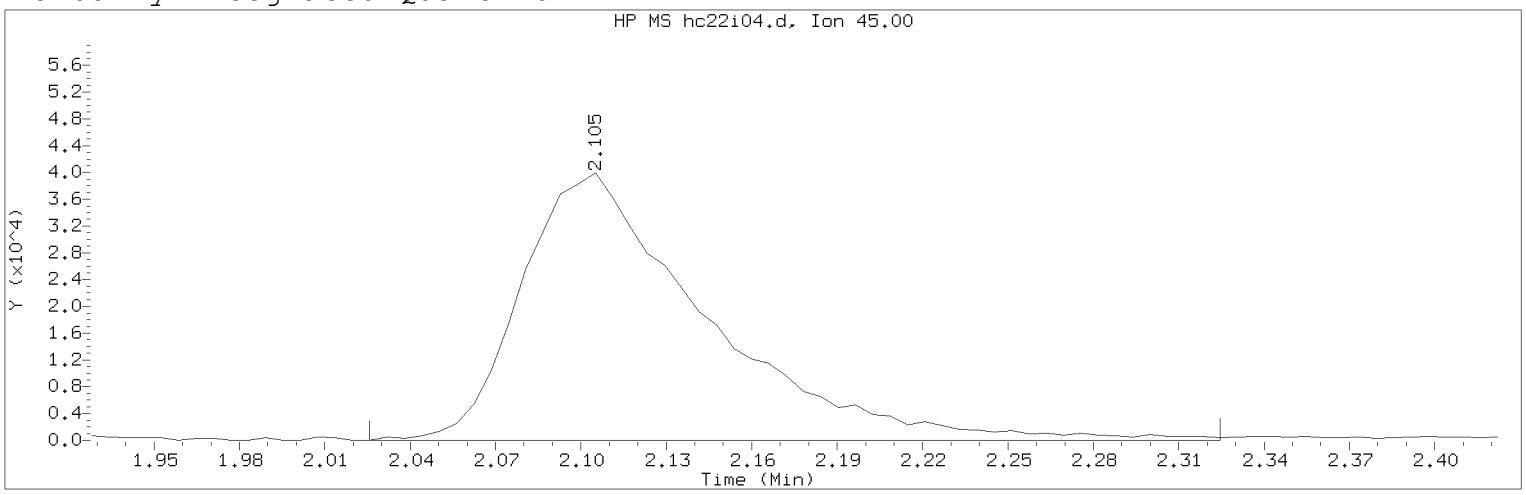
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

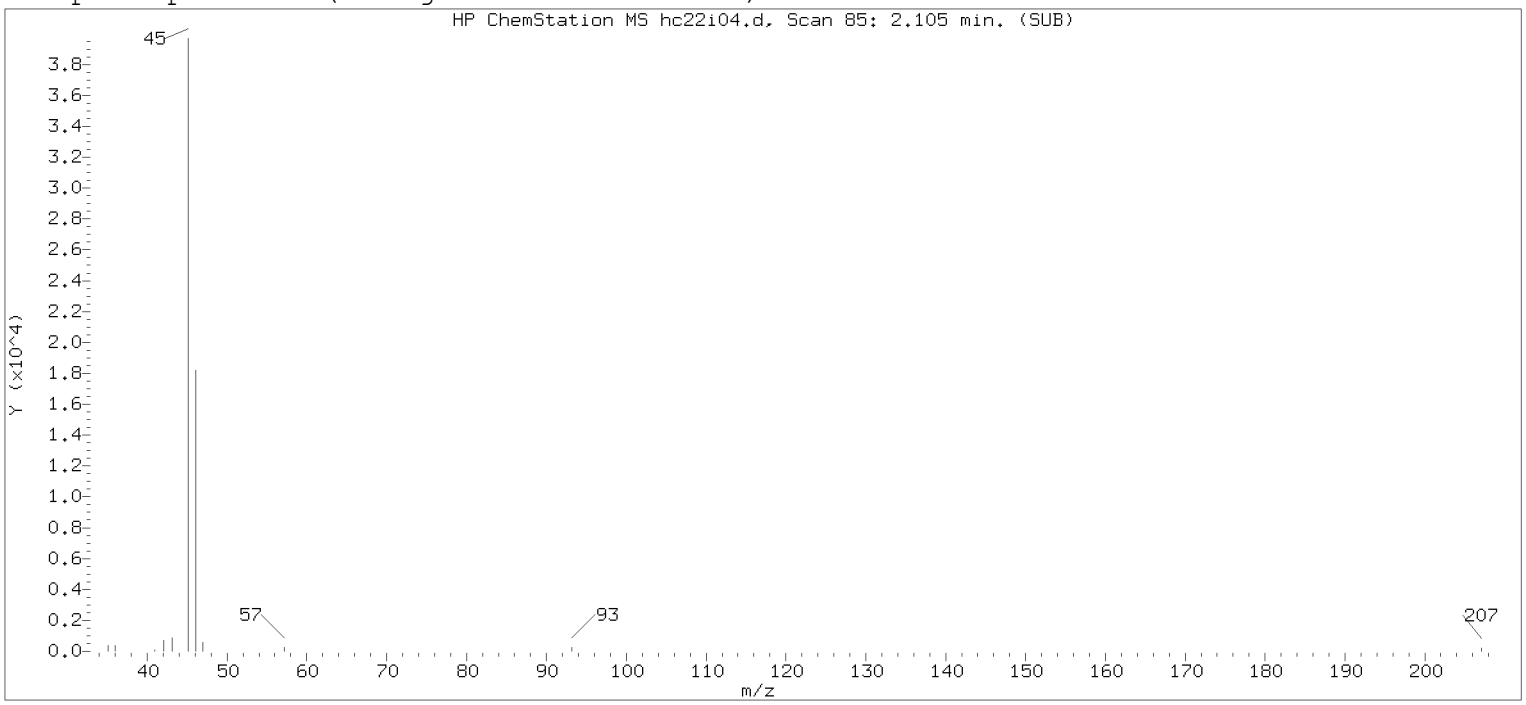
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Quant Ion : 45.00
Area (flag) : 179825M
On-Column Amount (ng) : 1.9043
Integration start scan : 71 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

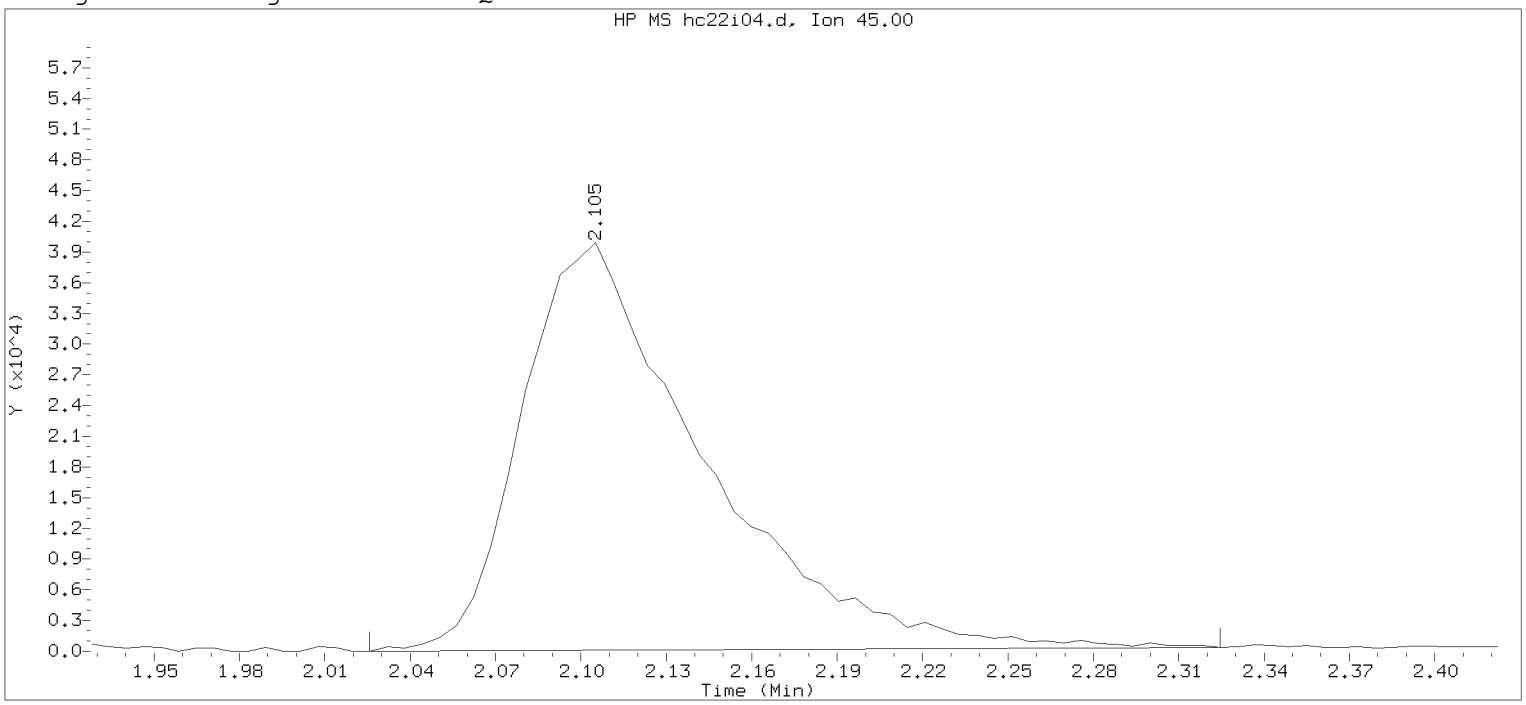
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

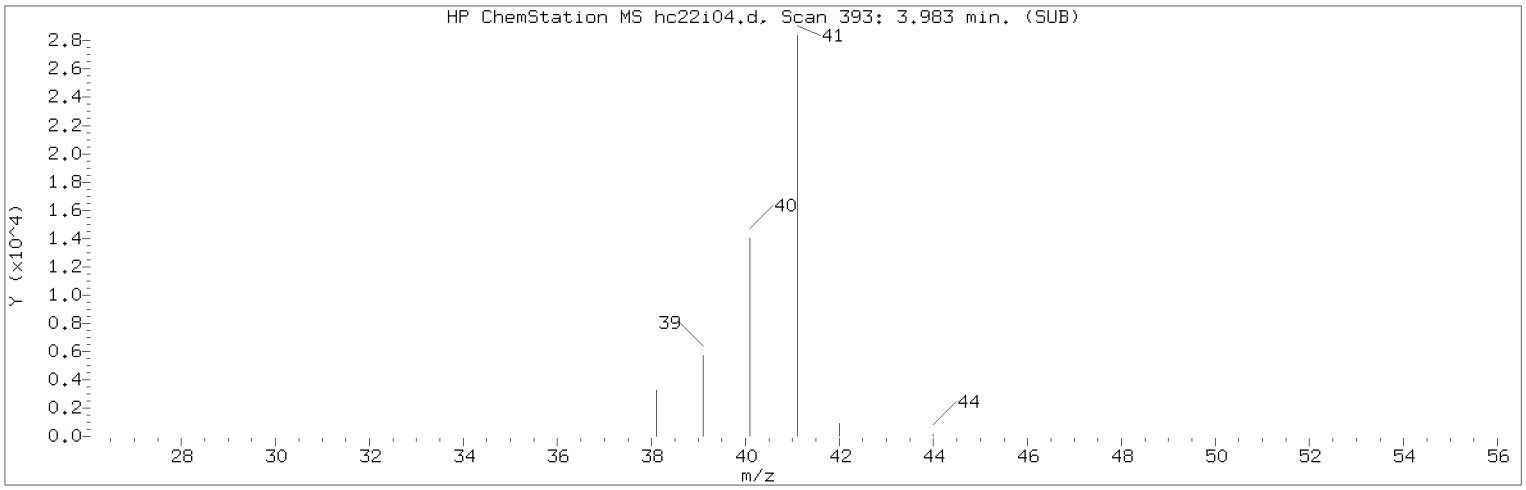
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:21
Date, time and analyst ID of latest file update: 22-Oct-2017 20:21 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

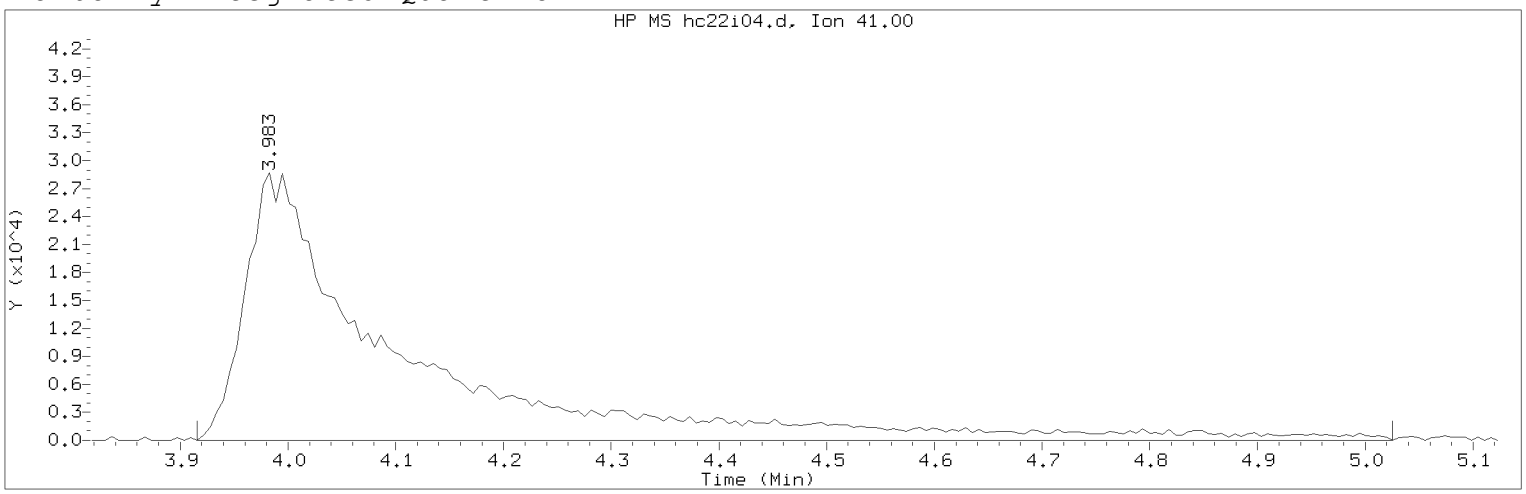
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 85		
Retention Time (minutes)	: 2.105		
Quant Ion	: 45.00		
Area	: 176542		
On-column Amount (ng)	: 1.9554		
Integration start scan	: 71	Integration stop scan:	120
Y at integration start	: 0	Y at integration end:	359

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/22/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

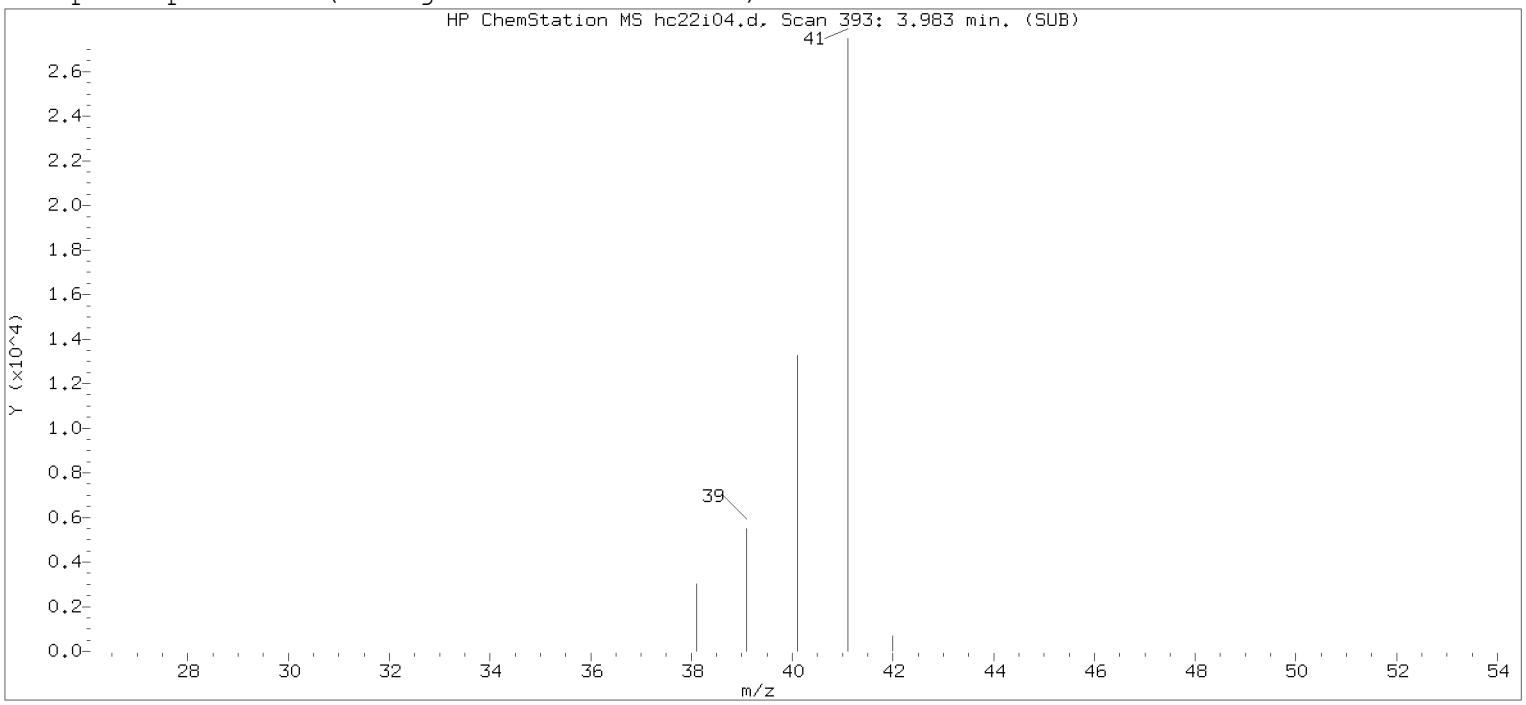
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area (flag) : 280652M
On-Column Amount (ng) : 77.7763
Integration start scan : 381 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

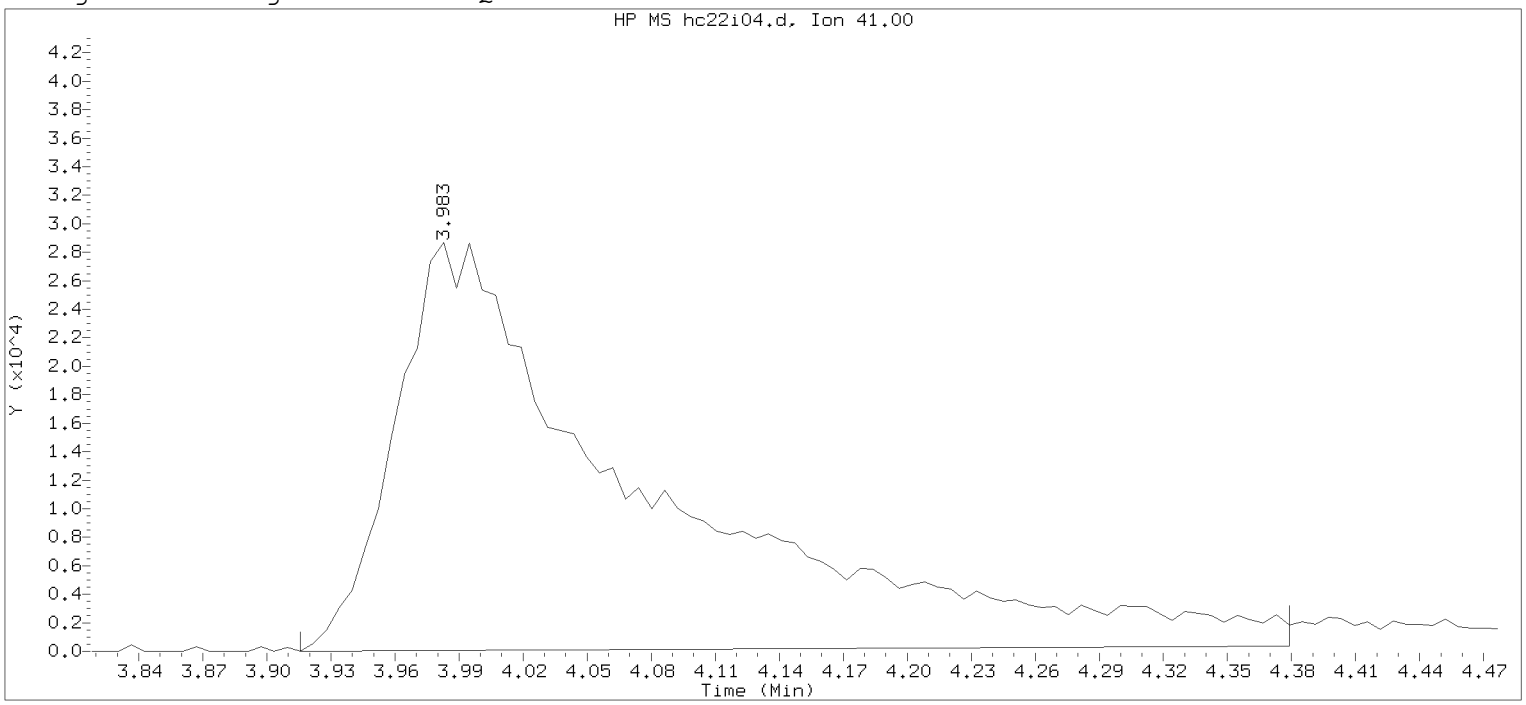
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

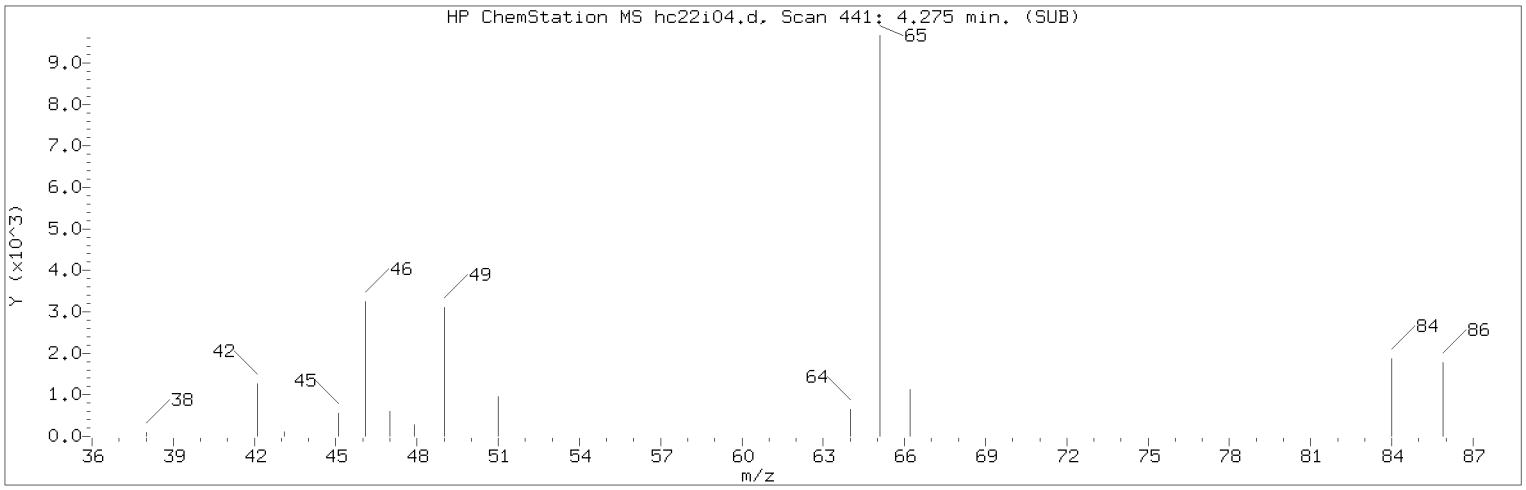
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:21
Date, time and analyst ID of latest file update: 22-Oct-2017 20:21 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

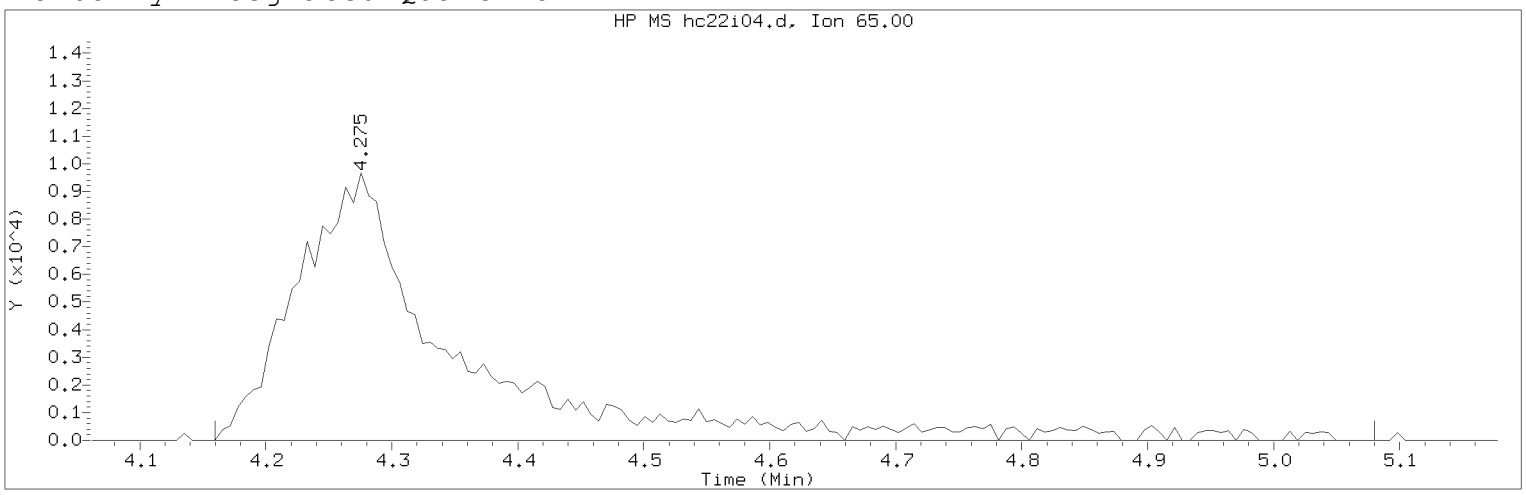
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area : 234136
On-column Amount (ng) : 73.6098
Integration start scan : 381 Integration stop scan: 457
Y at integration start : 0 Y at integration end: 381

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/23/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

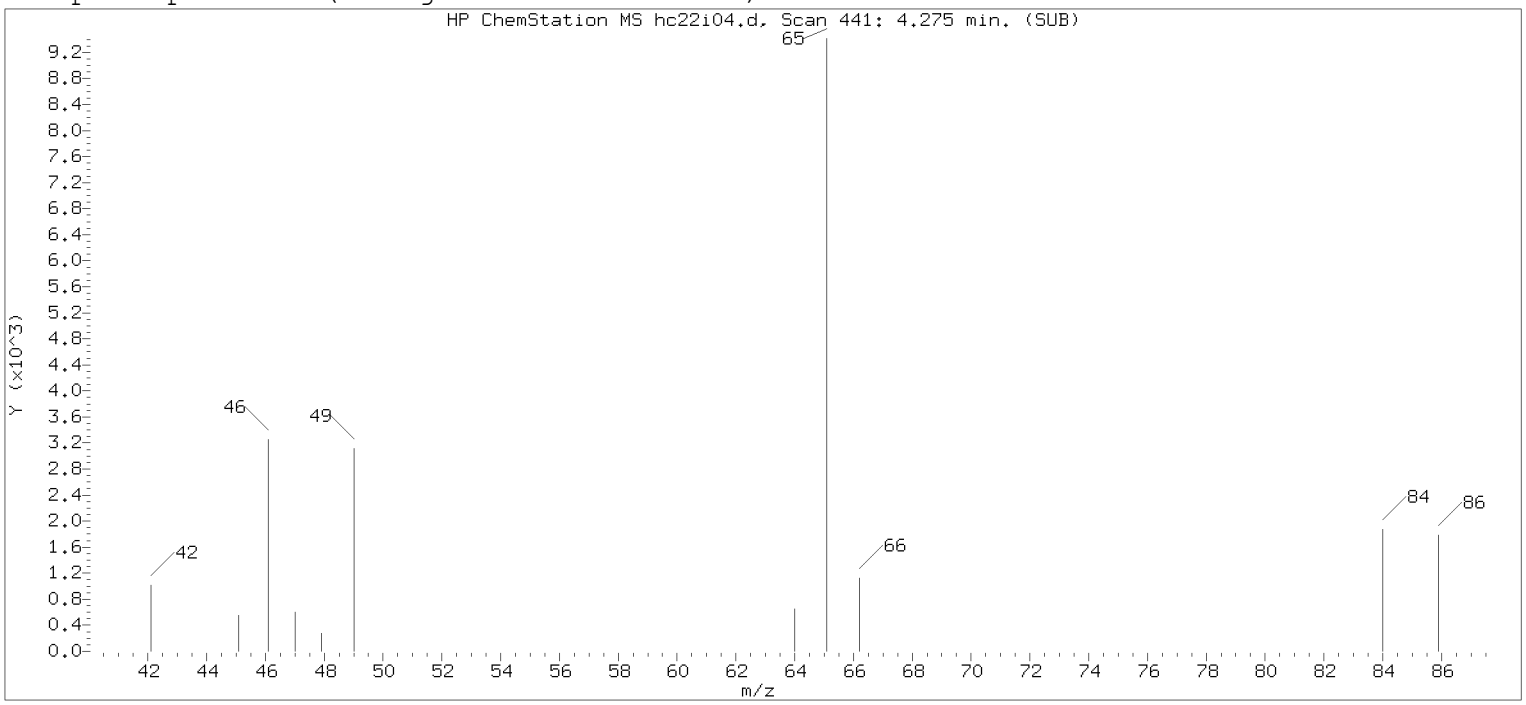
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 84908M
On-Column Amount (ng) : 50.0000
Integration start scan : 421 Integration stop scan: 572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

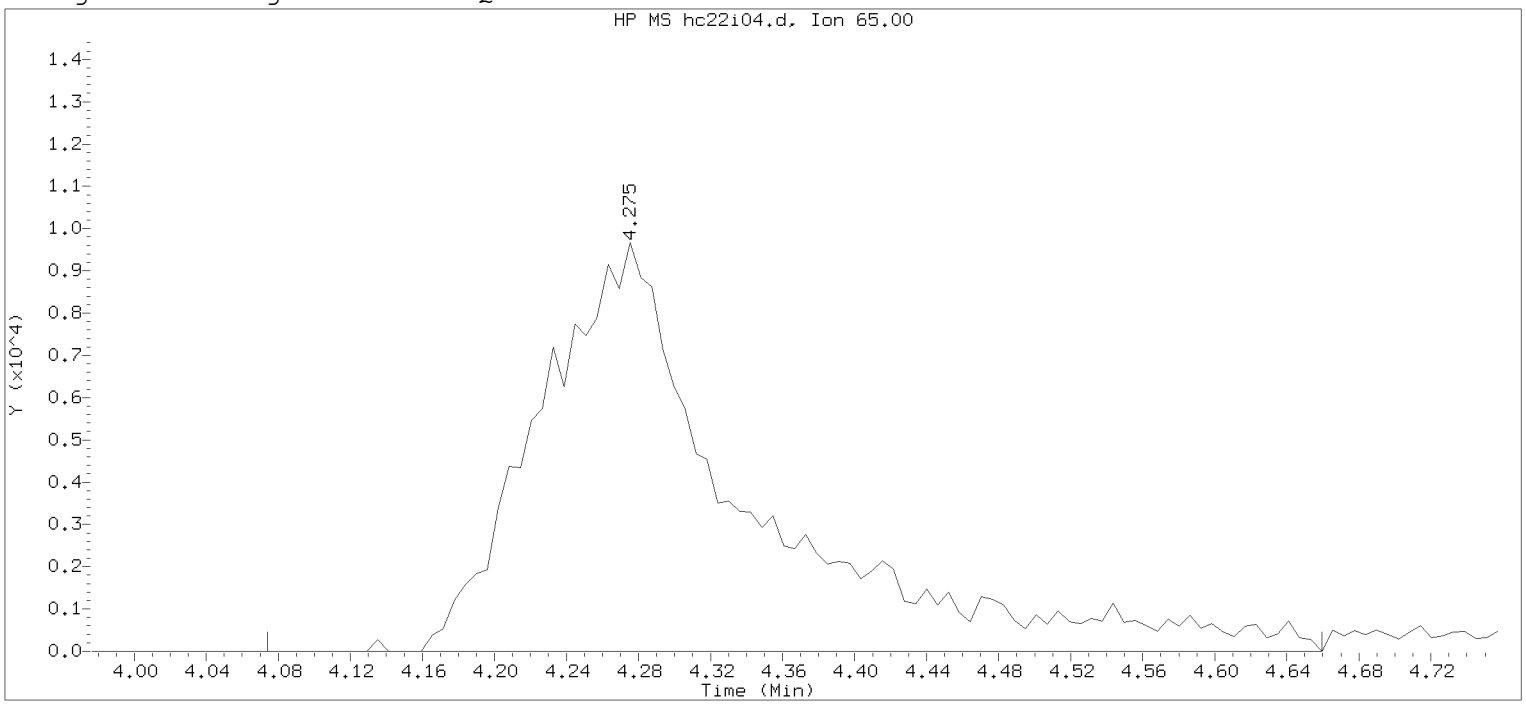
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

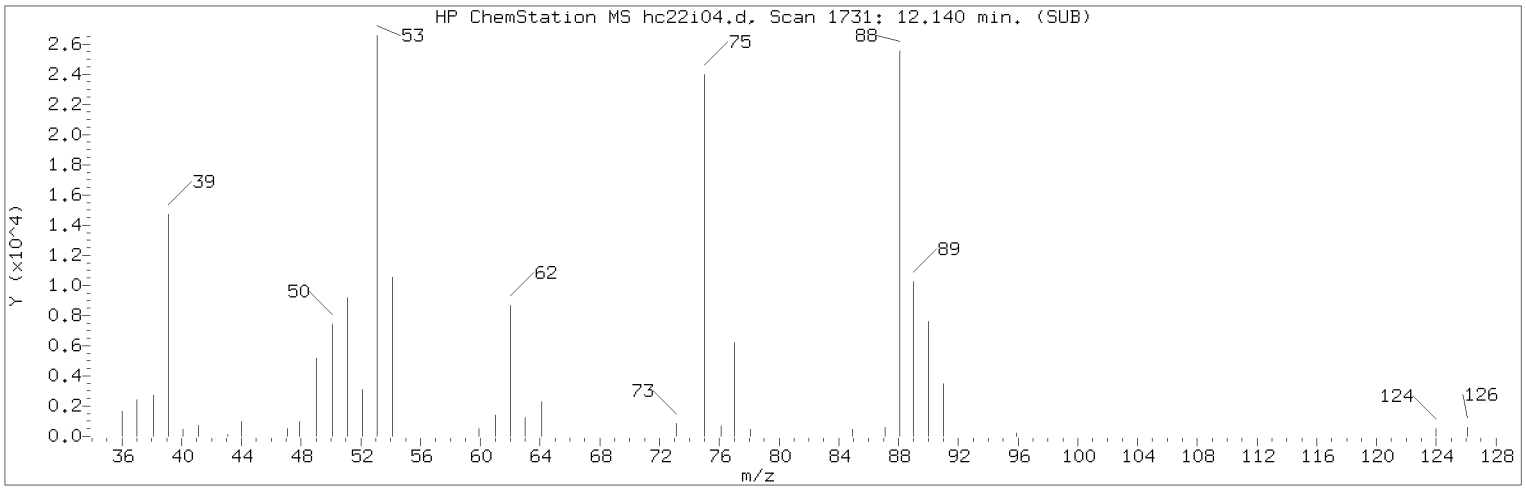
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:21
Date, time and analyst ID of latest file update: 22-Oct-2017 20:21 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

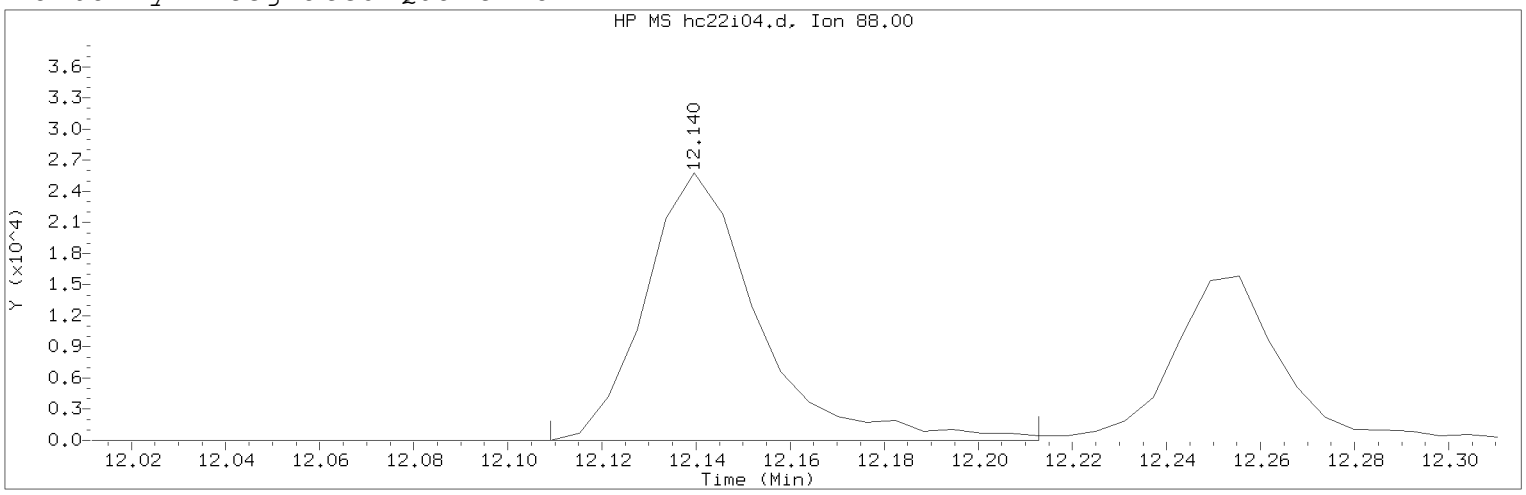
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 441		
Retention Time (minutes)	: 4.275		
Quant Ion	: 65.00		
Area	: 78183		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 407	Integration stop scan:	503
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/22/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

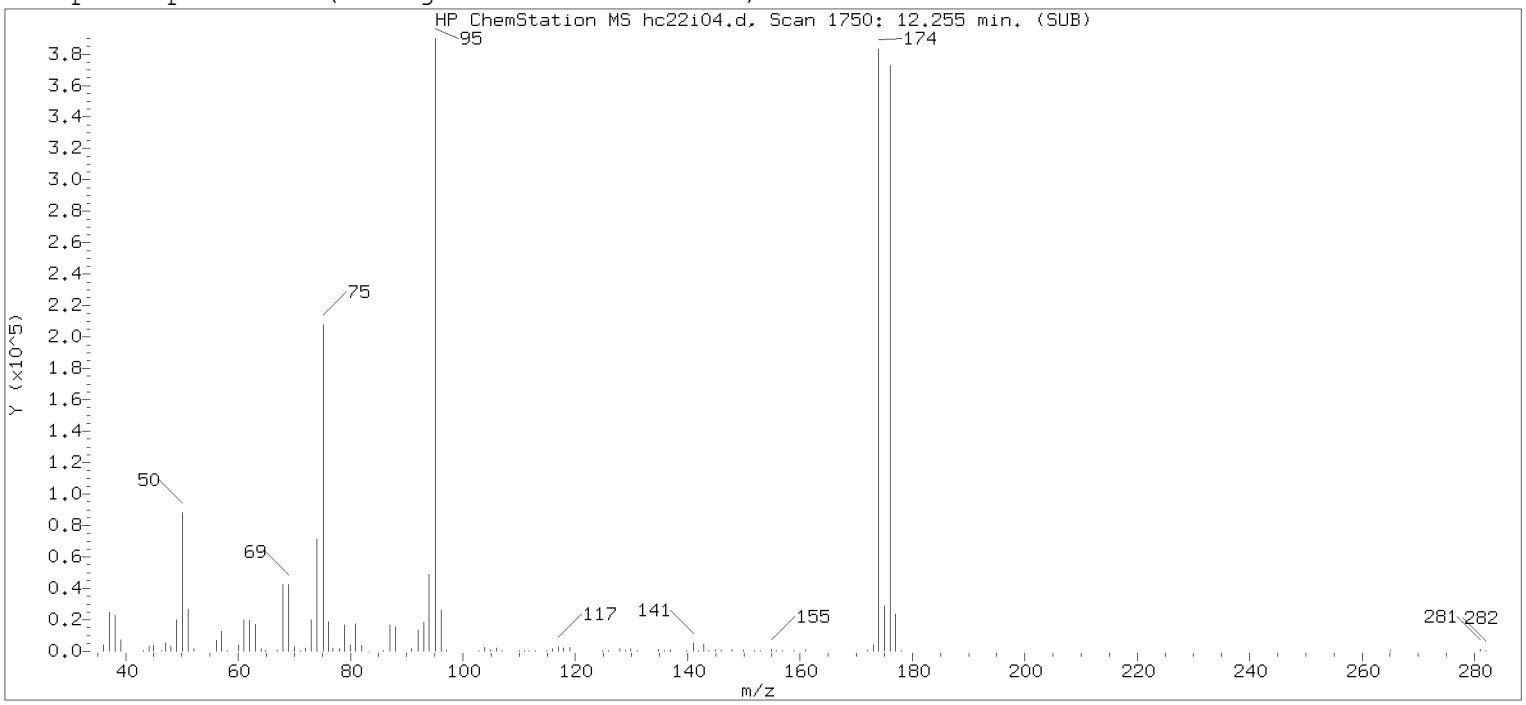
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1731
Retention Time (minutes): 12.140
Quant Ion : 88.00
Area (flag) : 42854A
On-Column Amount (ng) : 3.8941
Integration start scan : 1725 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

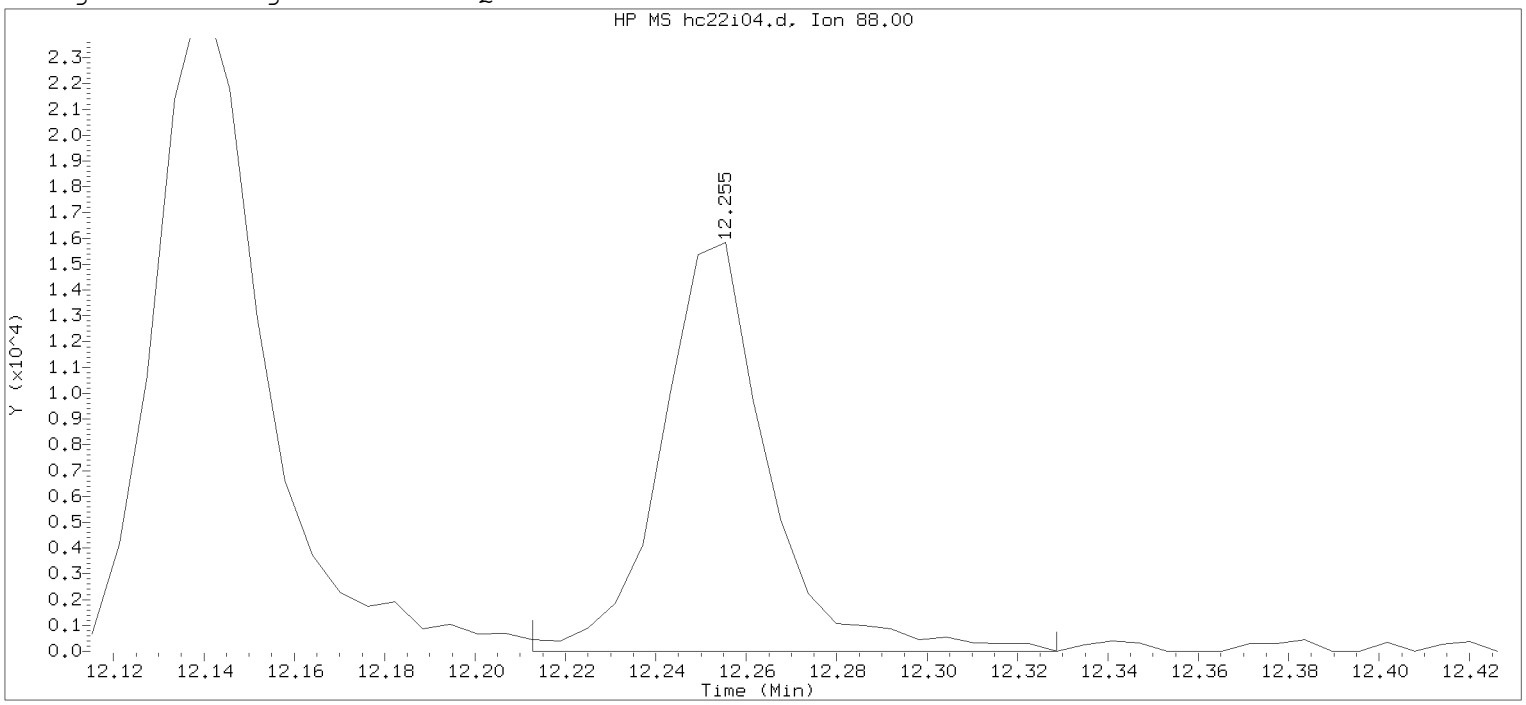
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

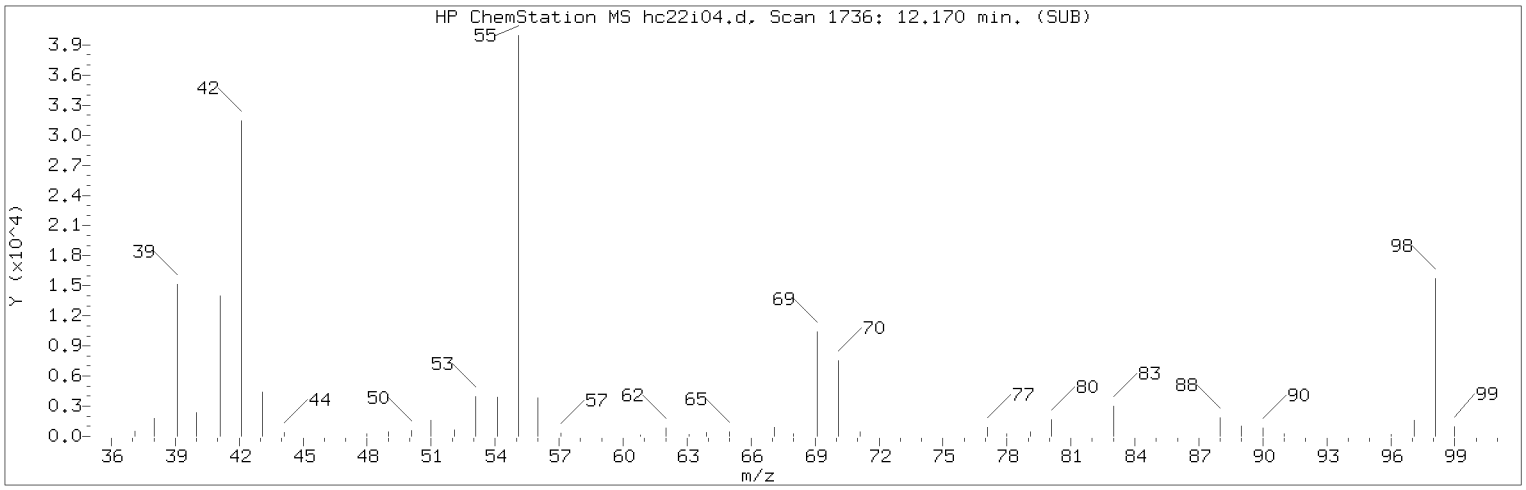
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:21
Date, time and analyst ID of latest file update: 22-Oct-2017 20:21 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

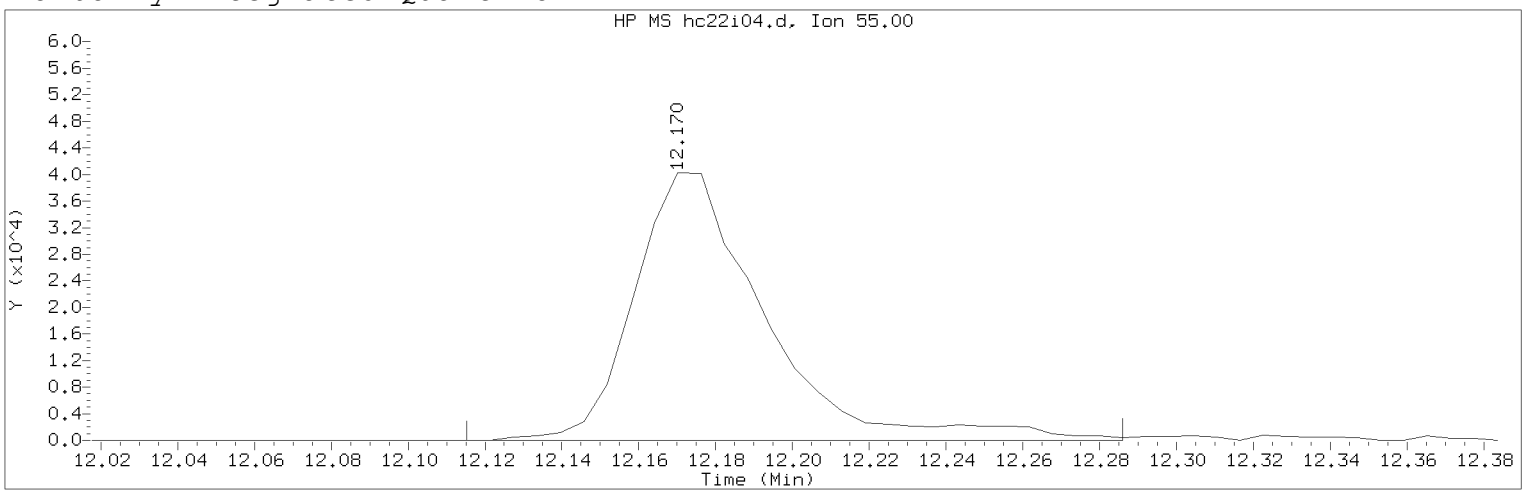
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1750
Retention Time (minutes): 12.255
Quant Ion : 88.00
Area : 25849
On-column Amount (ng) : 3.0624
Integration start scan : 1742 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/13/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

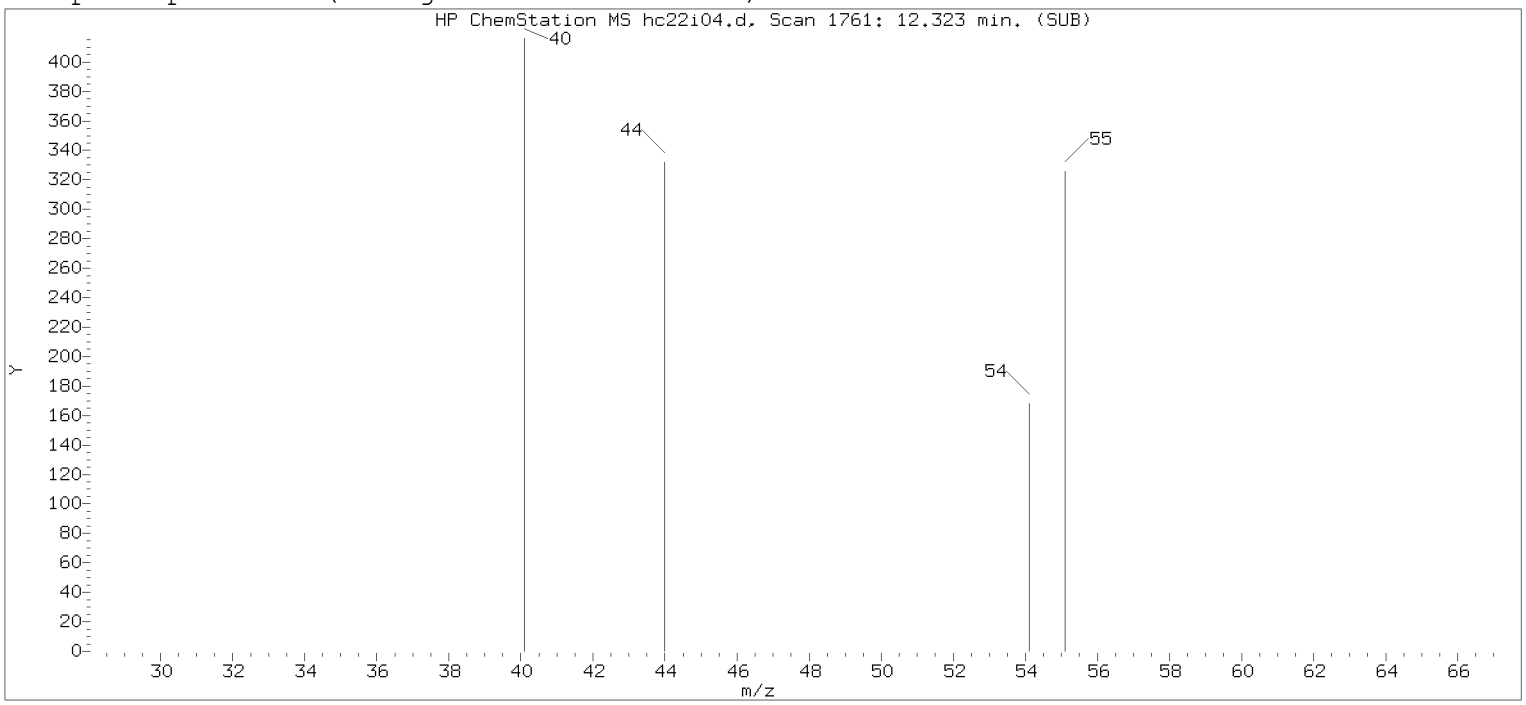
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1736
Retention Time (minutes): 12.170
Quant Ion : 55.00
Area (flag) : 95235MA
On-Column Amount (ng) : 102.9746
Integration start scan : 1726 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

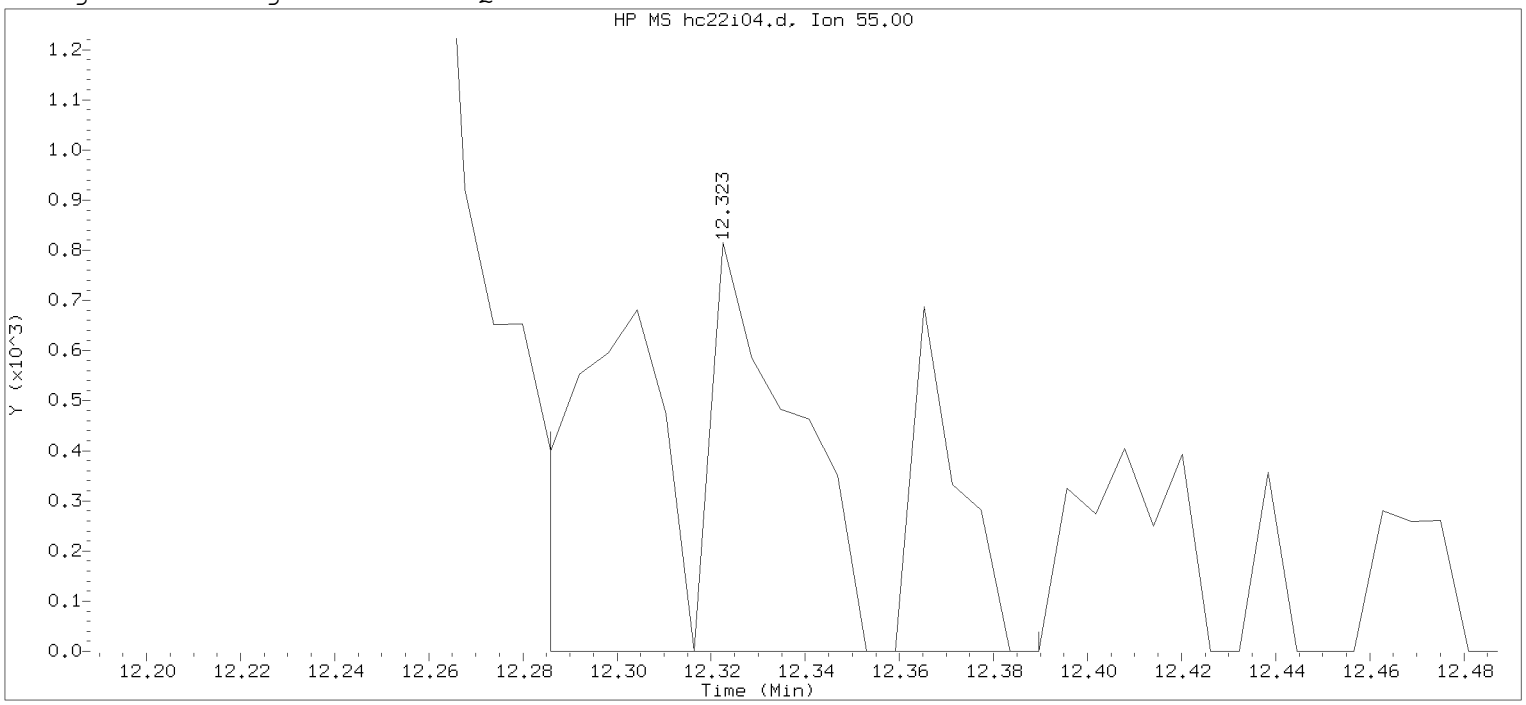
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:52.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



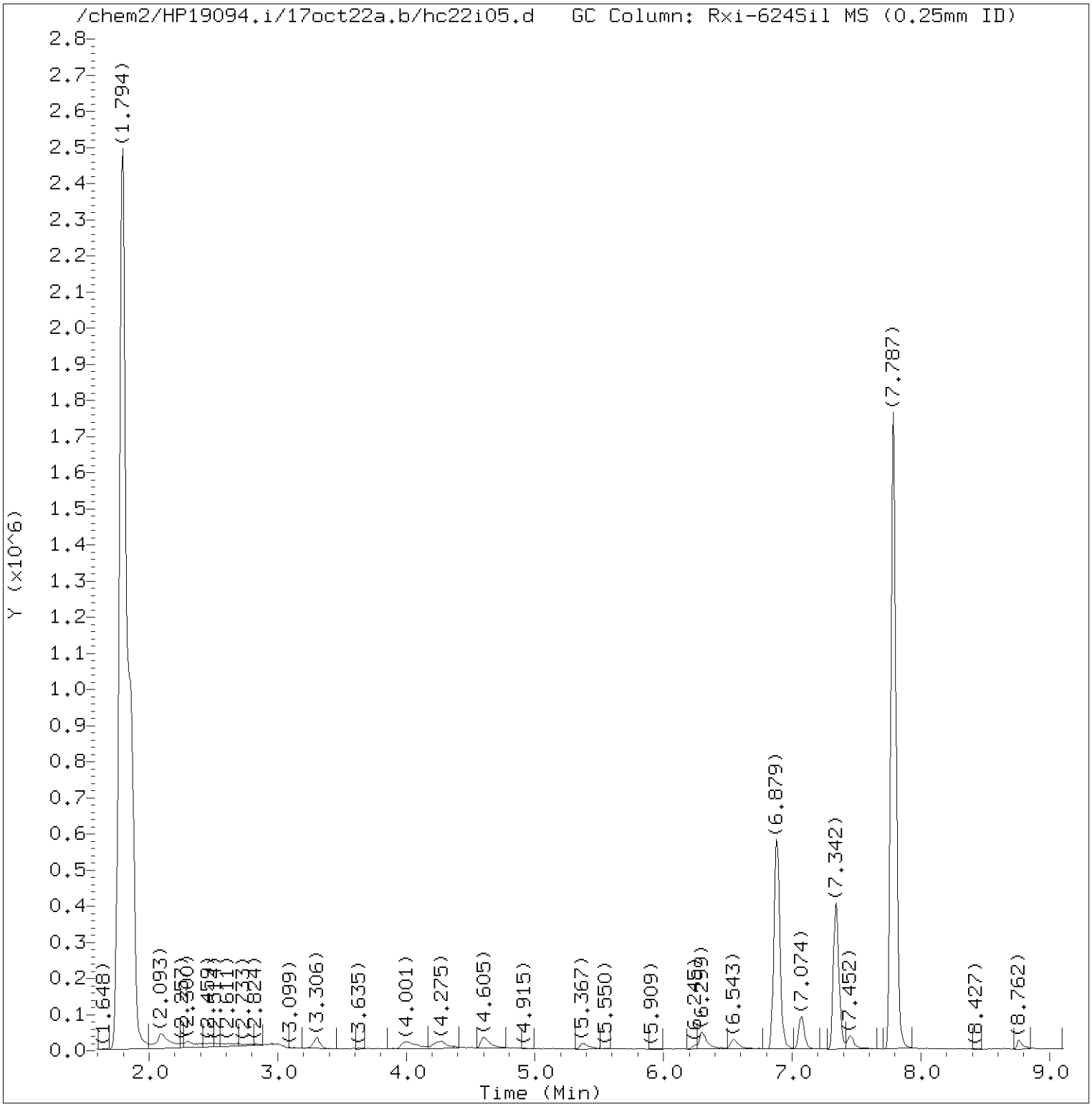
Data File: /chem2/HP19094.i/17oct22a.b/hc22i04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:03 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:21
Date, time and analyst ID of latest file update: 22-Oct-2017 20:21 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1761
Retention Time (minutes): 12.323
Quant Ion : 55.00
Area : 2378
On-column Amount (ng) : 3.4701
Integration start scan : 1754 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:52.
Target 3.5 esignature used on 10/22/2017.



Total Ion Chromatogram (TIC)

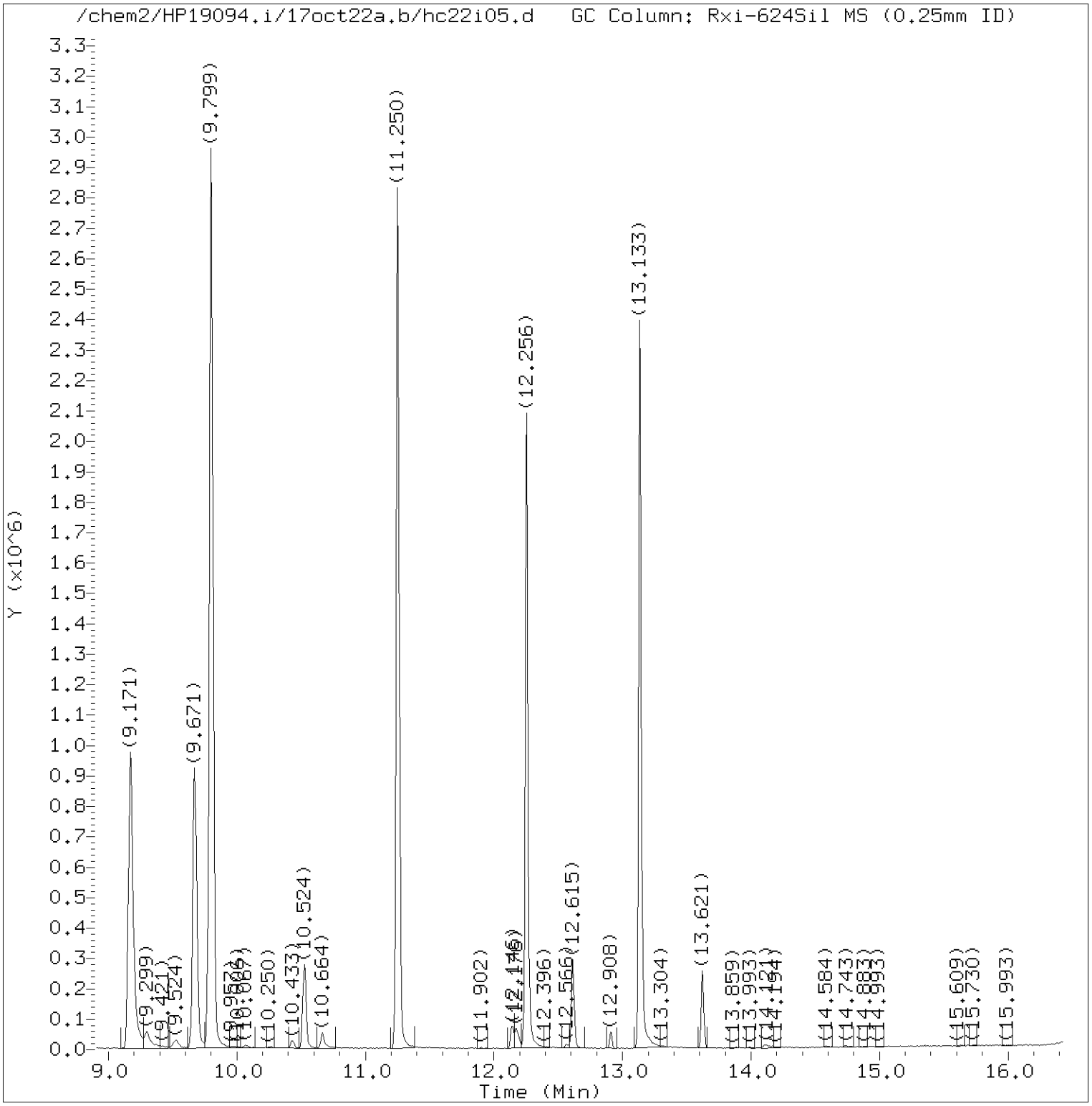
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

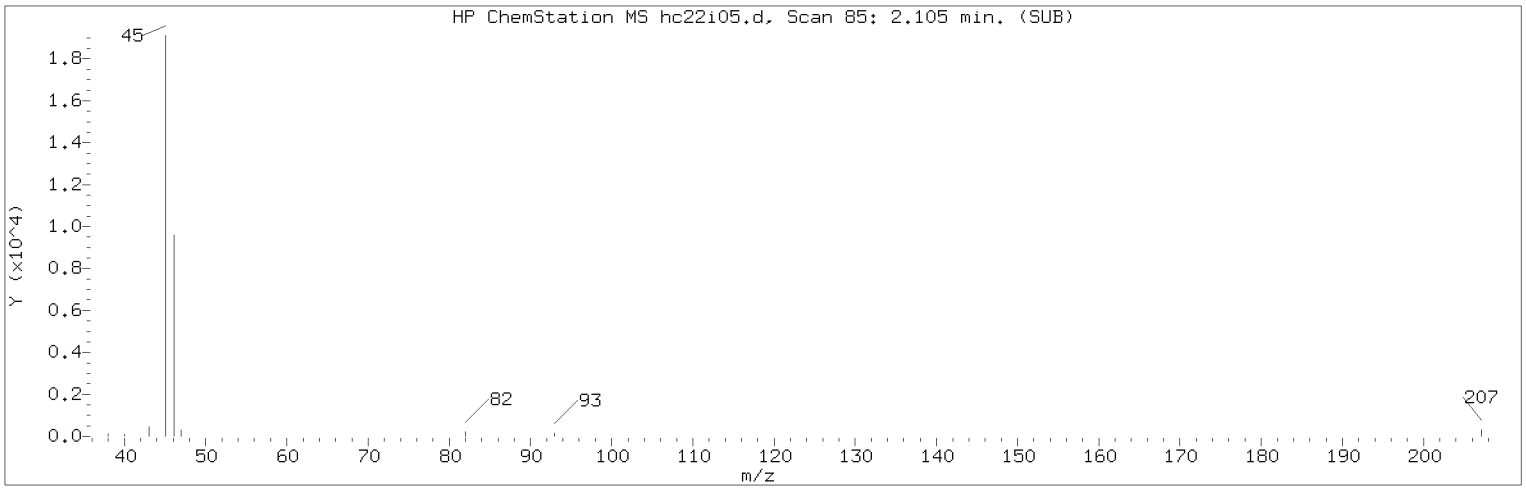
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	92918M	1.001
25) Acetonitrile	(1)	4.001	41	133469M	40.494
26)*t-Butyl Alcohol-d10	(1)	4.245	65	77557	50.000
36) Vinyl Acetate	(2)	5.367	43	66438	0.984
43) Methyl Acrylate	(2)	6.293	55	118658	4.797
53) 1-Chlorobutane	(2)	7.074	56	108497	0.947
63)*Fluorobenzene	(2)	7.787	96	2268467	10.000
77) Chloroacetonitrile	(2)	9.226	75	58489	47.097
78) 2-Chloroethyl vinyl ether	(2)	9.305	63	21857	0.928
97)*Chlorobenzene-d5	(3)	11.250	117	1509017	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.146	88	17944	1.785
112) Cyclohexanone	(1)	12.170	55	35758MA	42.329
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	607360	10.000
142) Hexachloroethane	(4)	13.621	117	36063	0.908

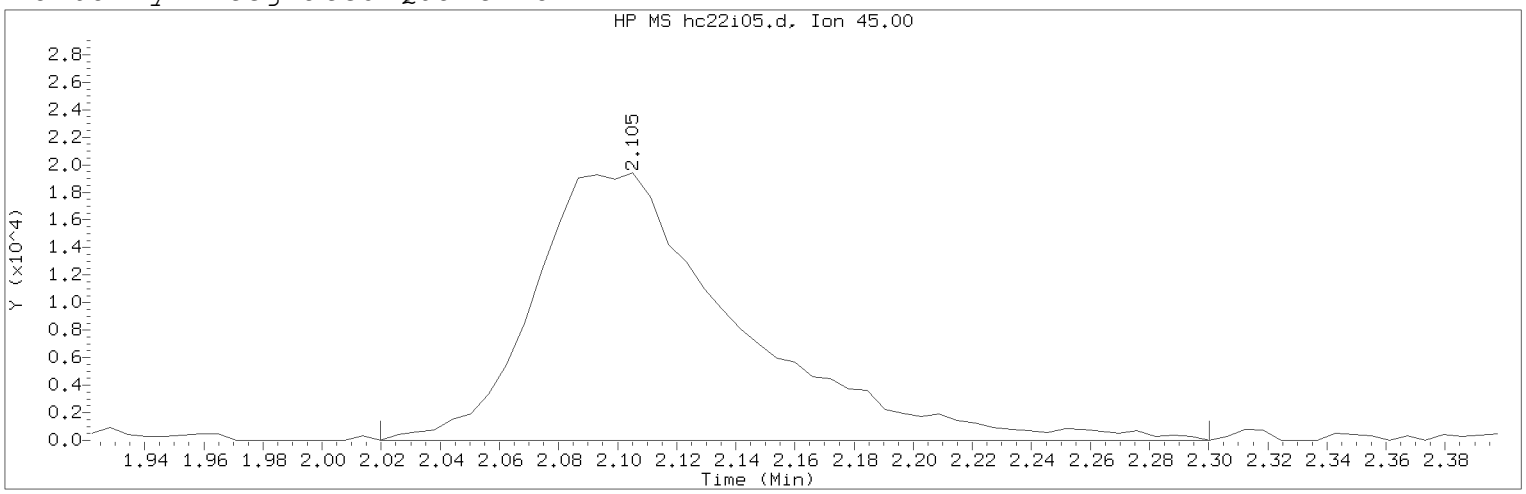
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

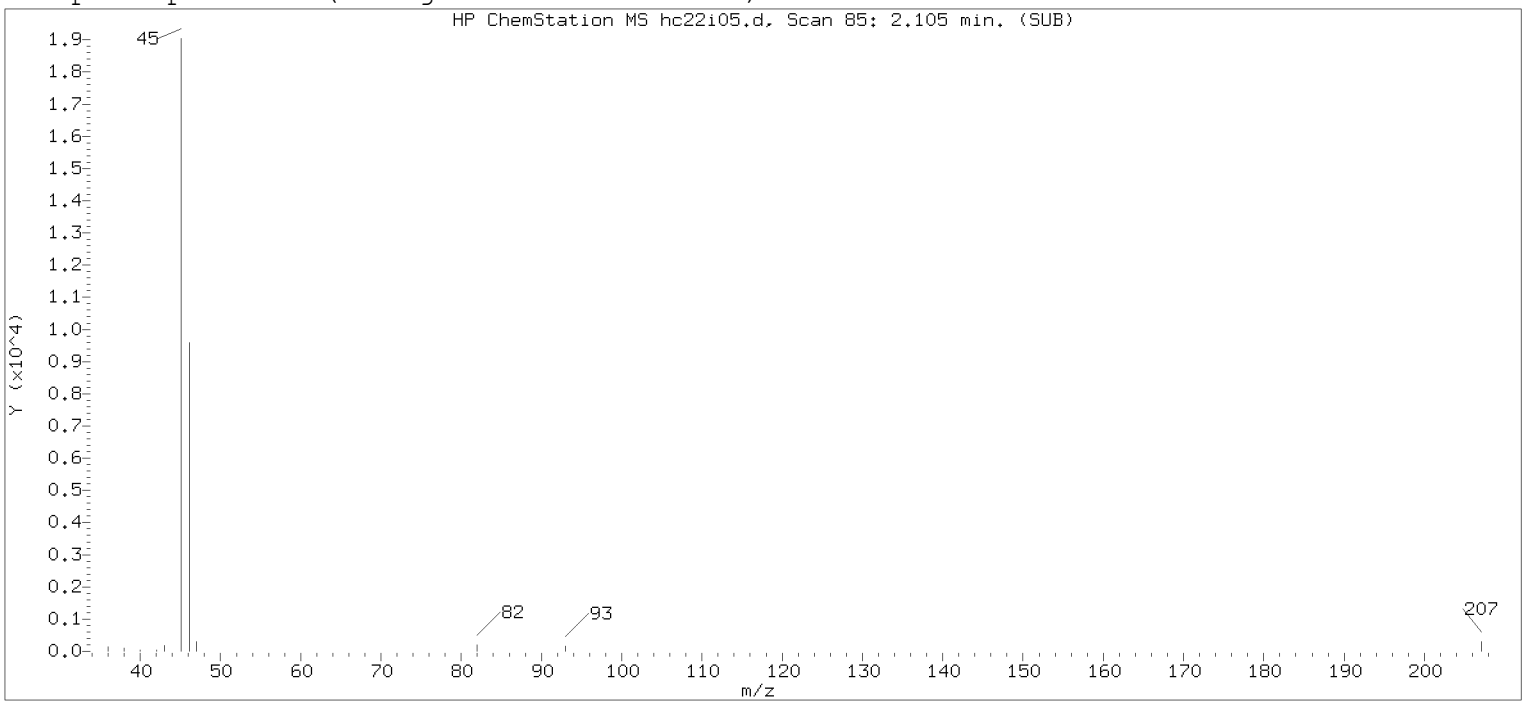
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Quant Ion : 45.00
Area (flag) : 92918M
On-Column Amount (ng) : 1.0012
Integration start scan : 70 Integration stop scan: 116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

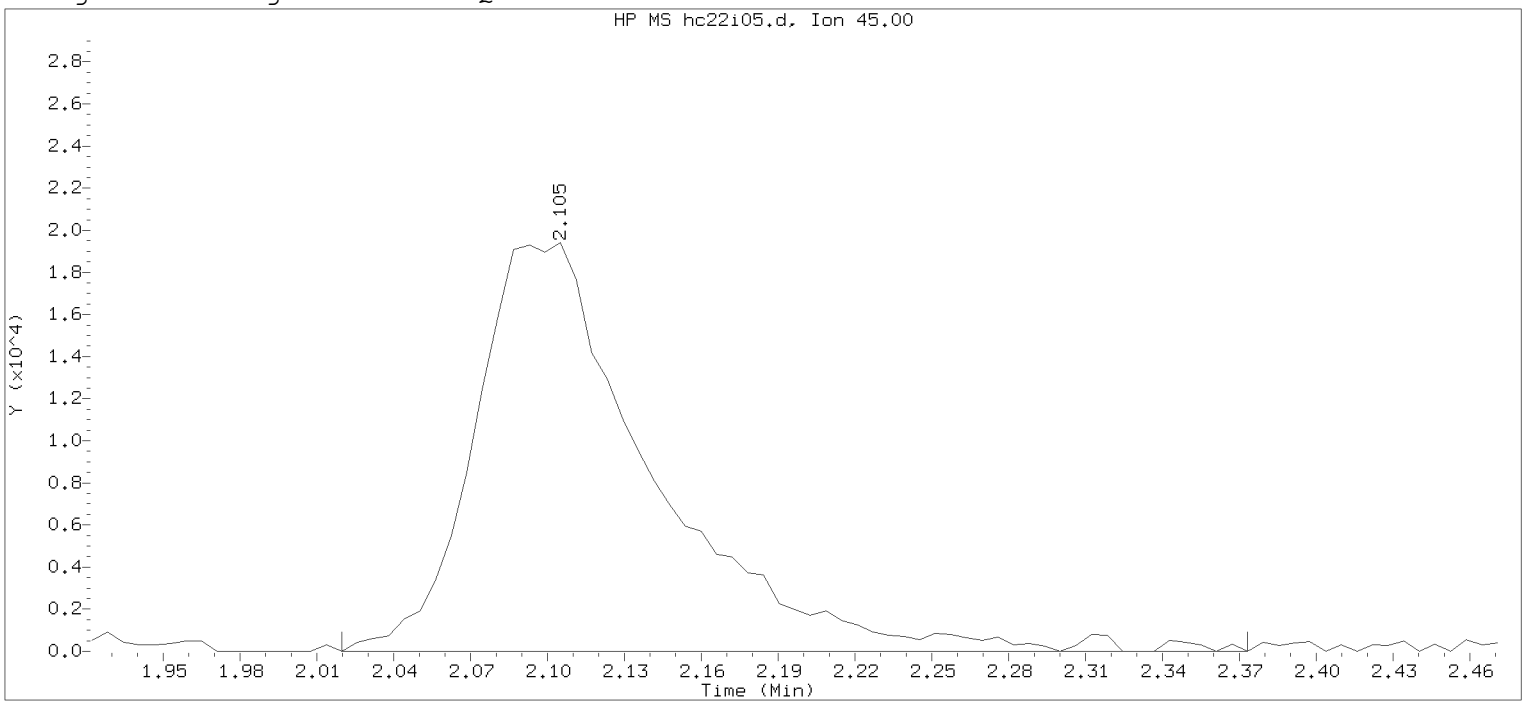
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

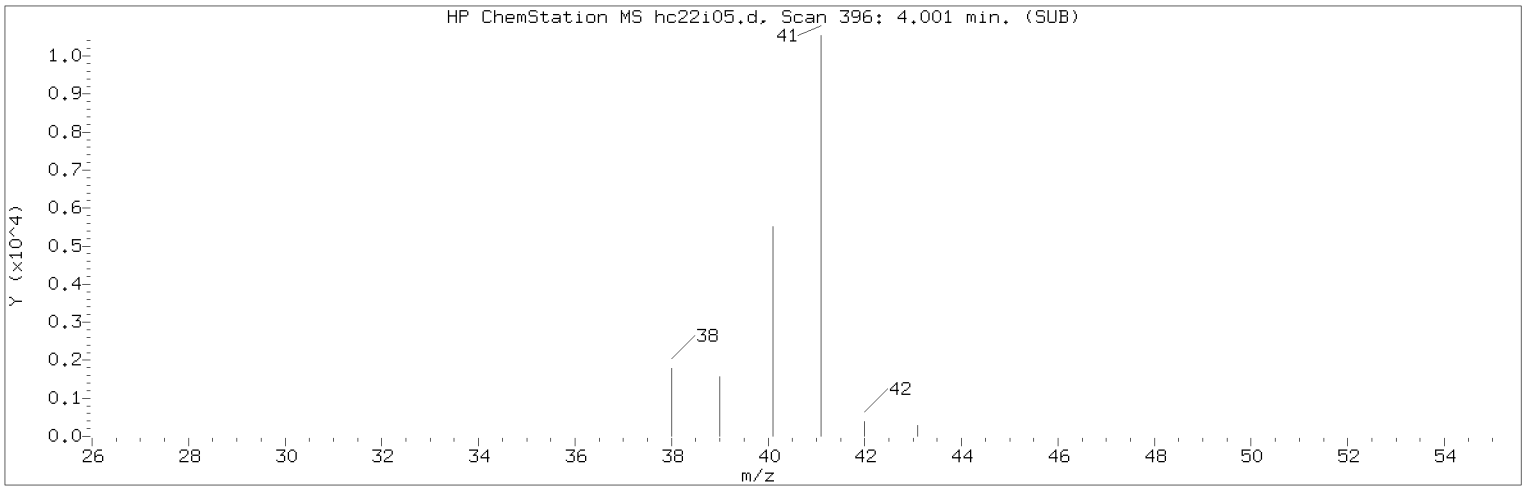
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:41
Date, time and analyst ID of latest file update: 22-Oct-2017 20:41 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

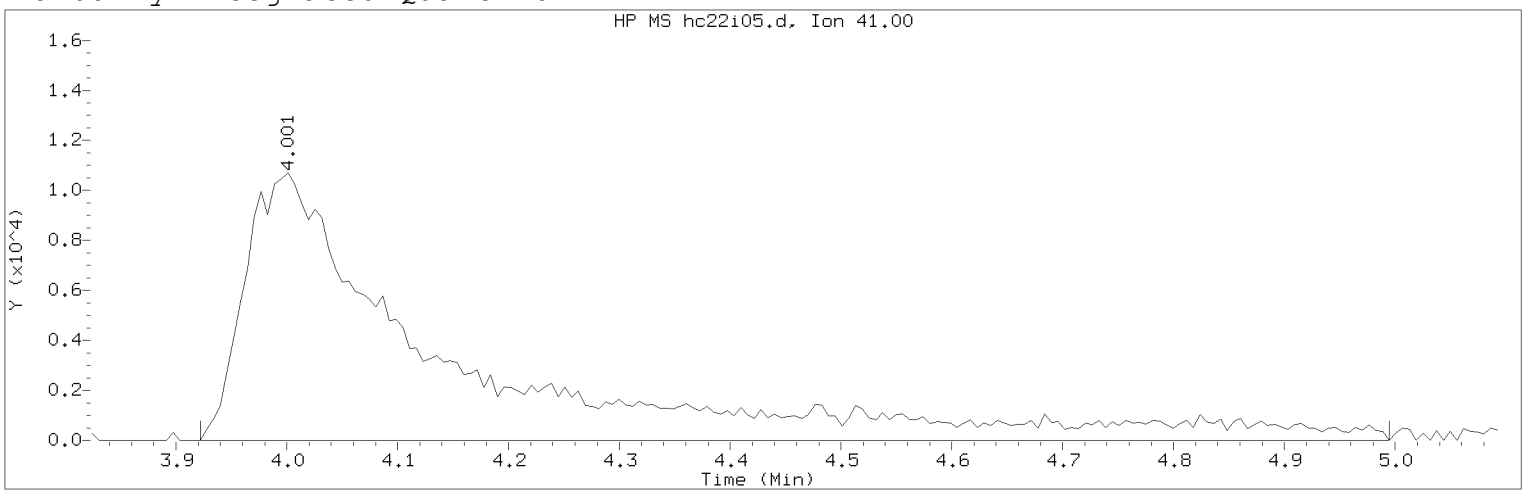
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 85		
Retention Time (minutes)	: 2.105		
Quant Ion	: 45.00		
Area	: 94166		
On-column Amount (ng)	: 1.0446		
Integration start scan	: 70	Integration stop scan:	128
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used for this data.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

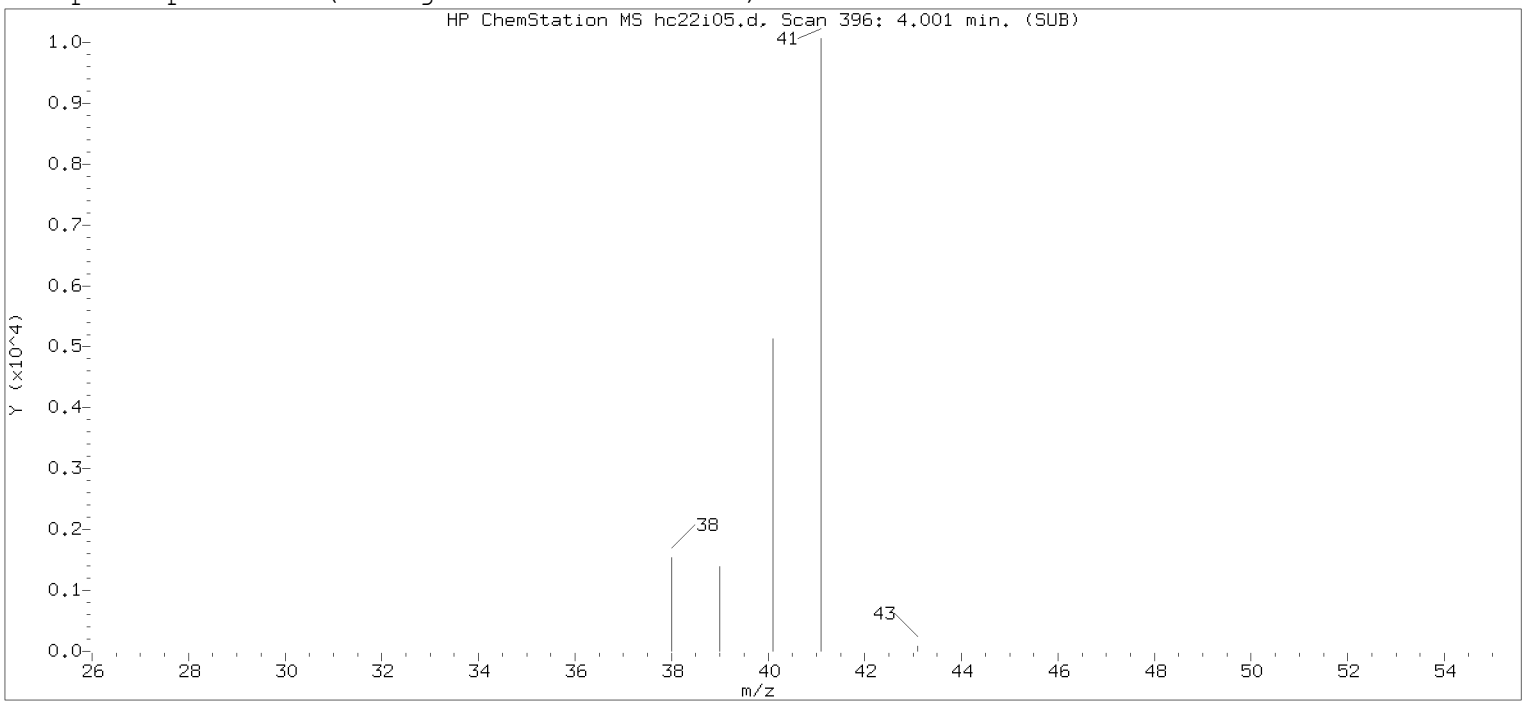
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area (flag) : 133469M
On-Column Amount (ng) : 40.4937
Integration start scan : 382 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

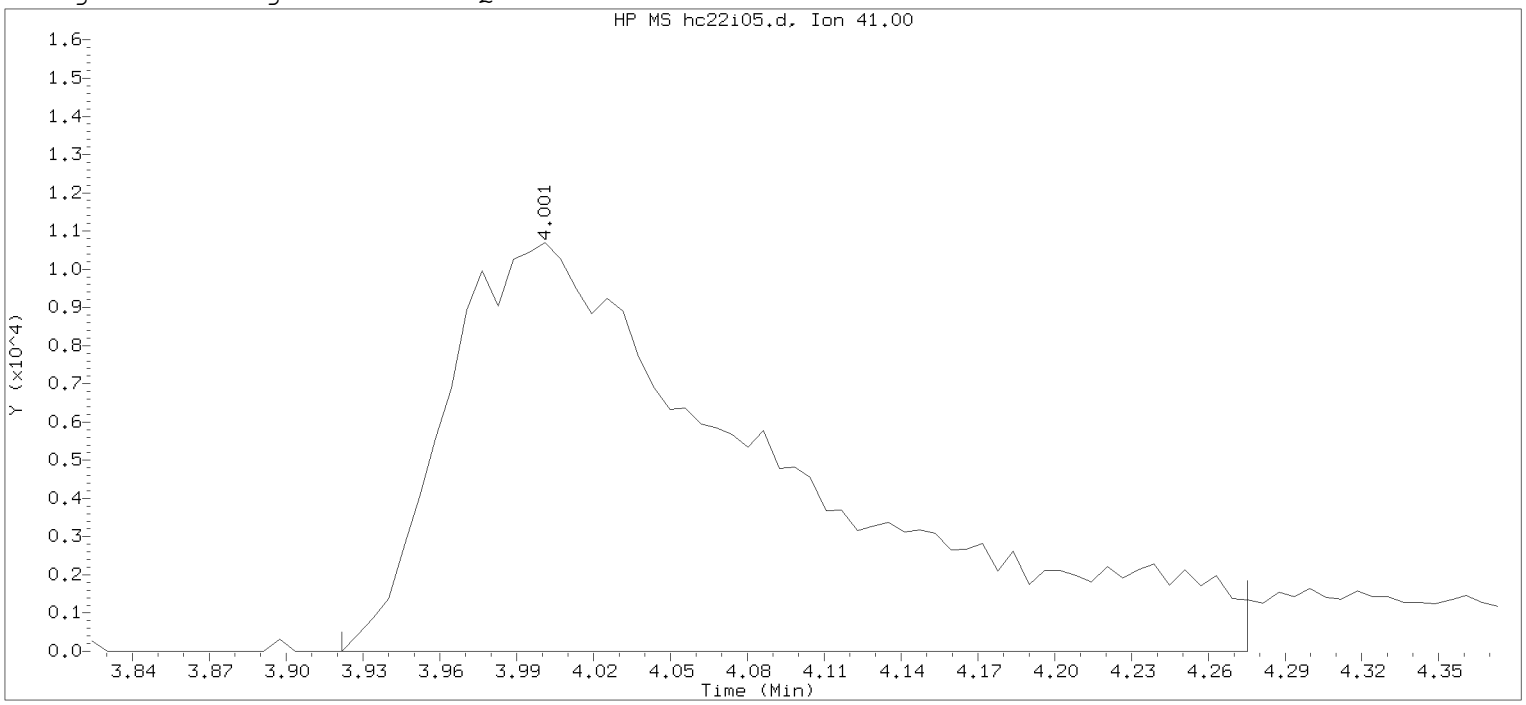
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

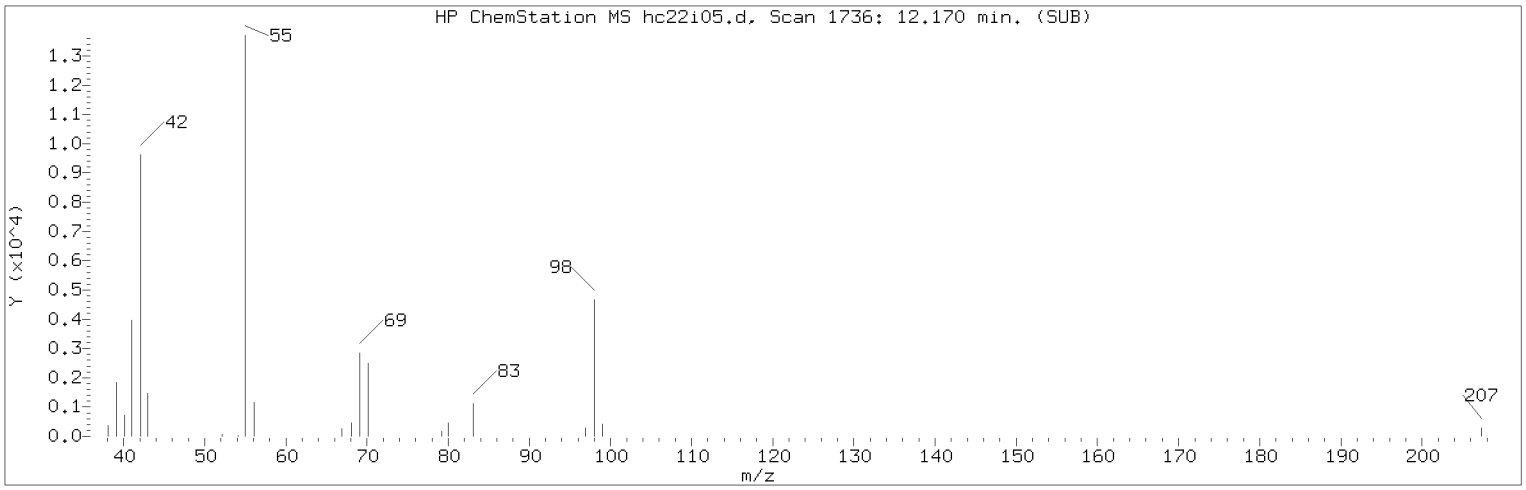
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:41
Date, time and analyst ID of latest file update: 22-Oct-2017 20:41 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

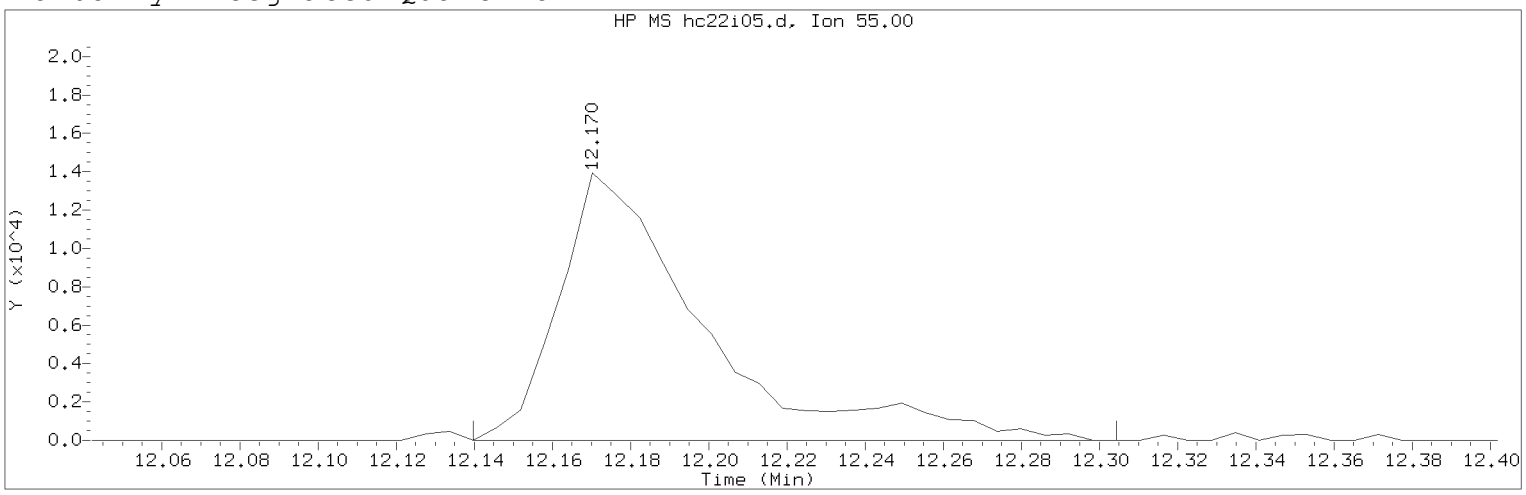
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area : 97100
On-column Amount (ng) : 31.1938
Integration start scan : 382 Integration stop scan: 440
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

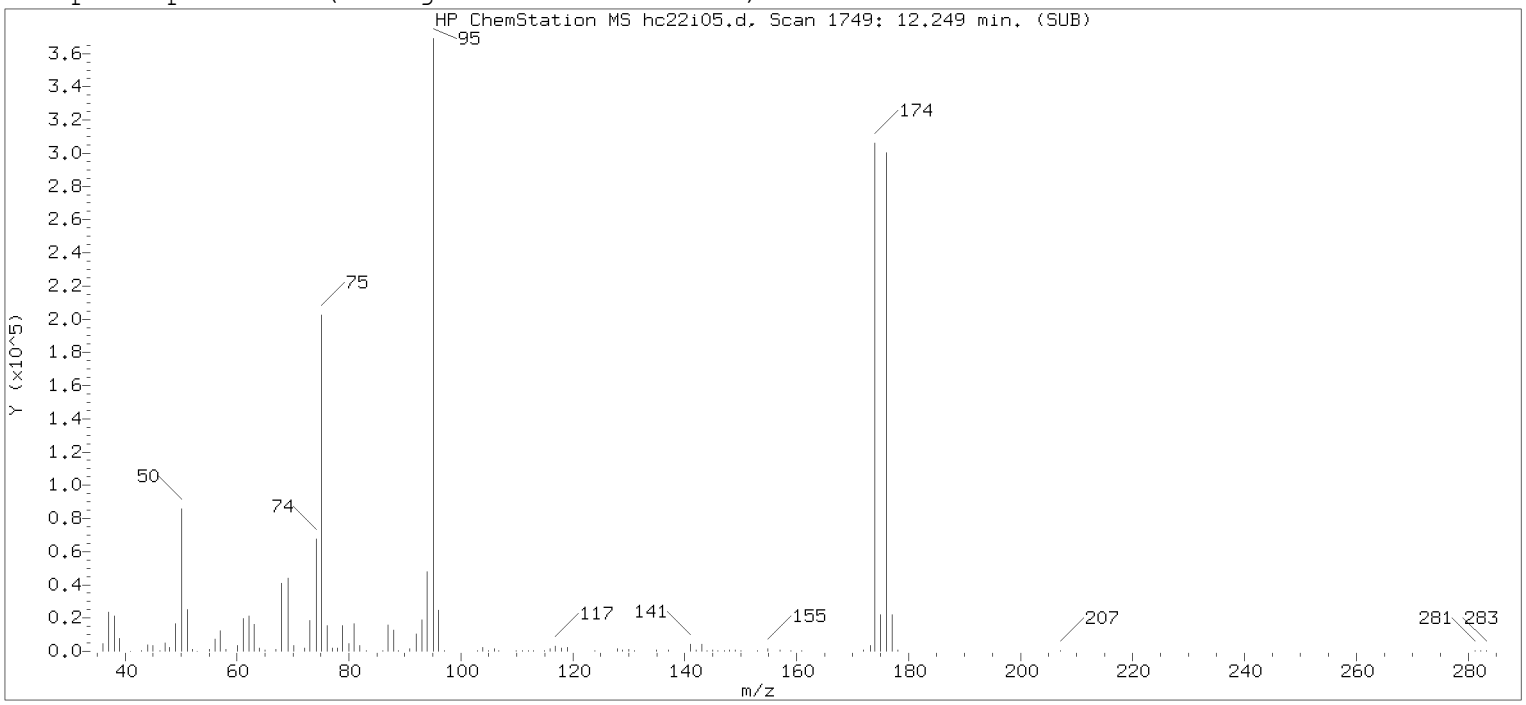
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1736
Retention Time (minutes): 12.170
Quant Ion : 55.00
Area (flag) : 35758MA
On-Column Amount (ng) : 42.3287
Integration start scan : 1730 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

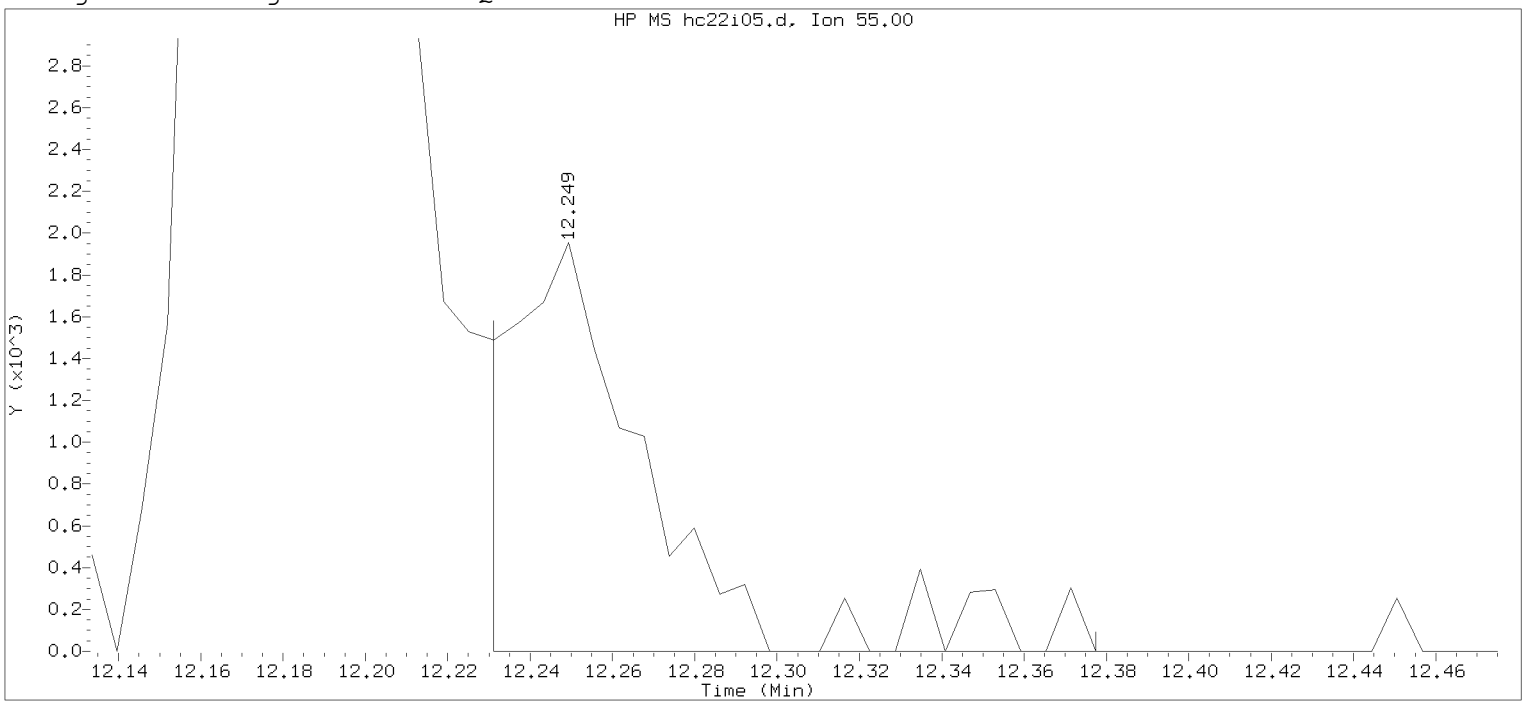
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



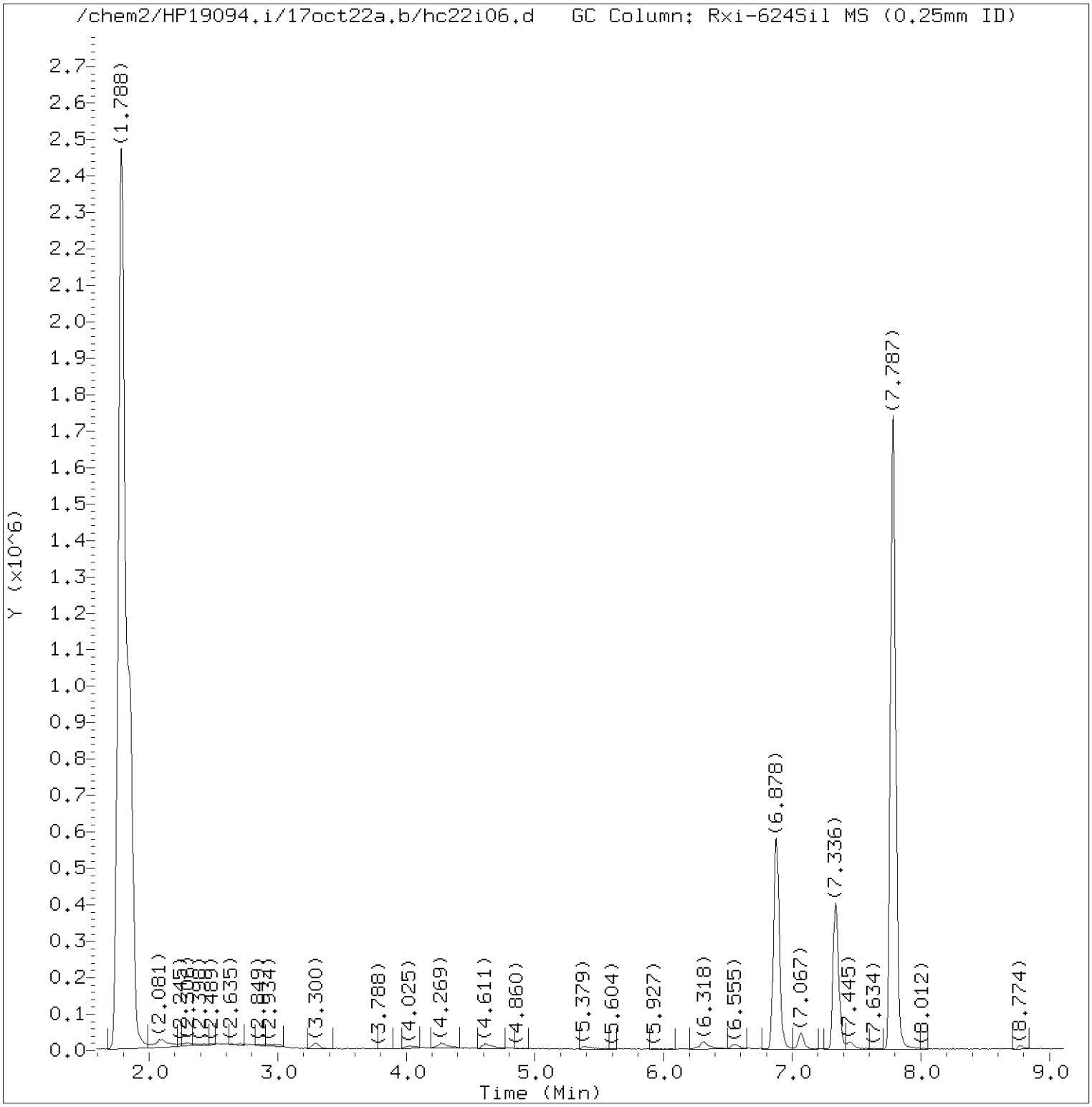
Data File: /chem2/HP19094.i/17oct22a.b/hc22i05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 20:41
Date, time and analyst ID of latest file update: 22-Oct-2017 20:41 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1749
Retention Time (minutes): 12.249
Quant Ion : 55.00
Area : 4627
On-column Amount (ng) : 6.5416
Integration start scan : 1745 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/22/2017



Total Ion Chromatogram (TIC)

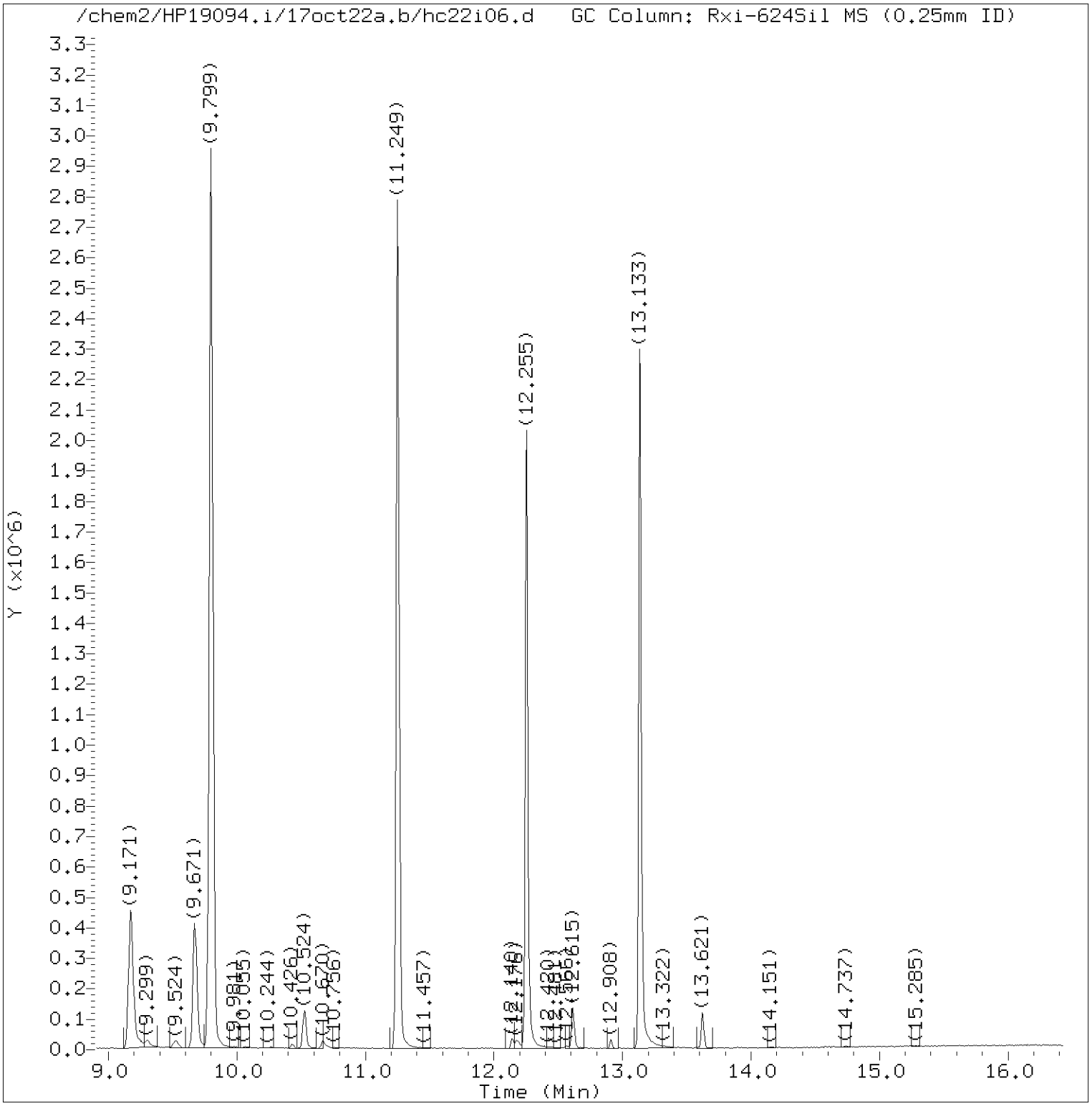
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

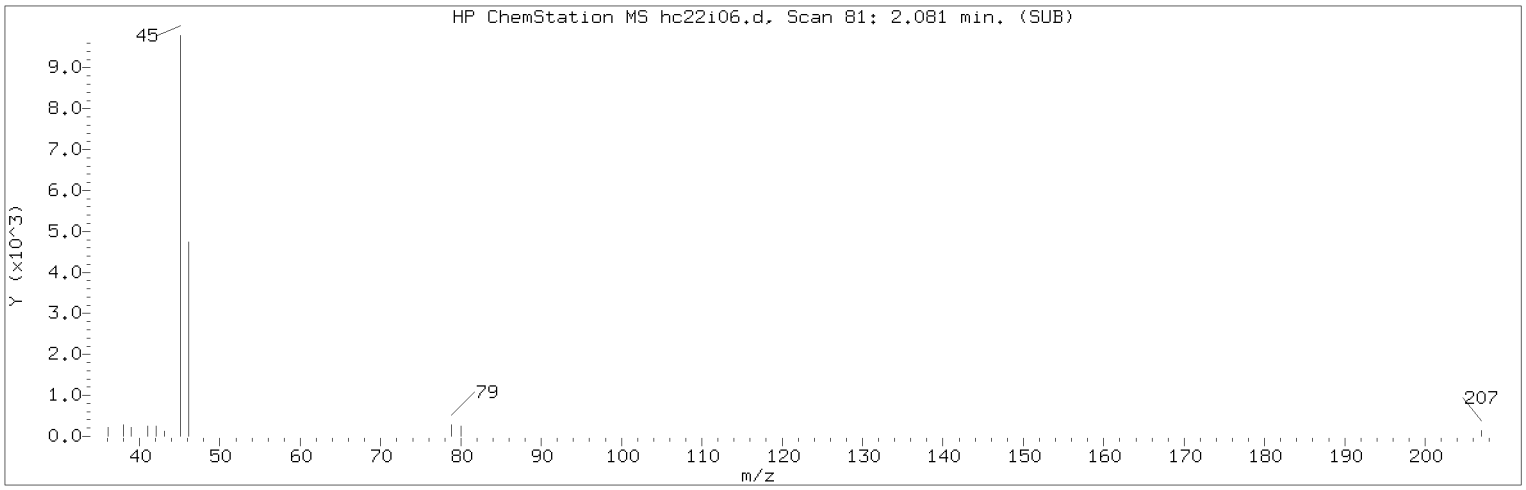
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.081	45	46826M	0.504
25) Acetonitrile	(1)	4.025	41	57726M	22.201
26)*t-Butyl Alcohol-d10	(1)	4.269	65	61182M	50.000
36) Vinyl Acetate	(2)	5.379	43	29974M	0.444
43) Methyl Acrylate	(2)	6.305	55	57973	2.343
53) 1-Chlorobutane	(2)	7.067	56	49167	0.429
63)*Fluorobenzene	(2)	7.787	96	2269053	10.000
77) Chloroacetonitrile	(2)	9.244	75	20766	16.717
78) 2-Chloroethyl vinyl ether	(2)	9.305	63	10756	0.456
97)*Chlorobenzene-d5	(3)	11.249	117	1489327	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.146	88	8024M	1.012
112) Cyclohexanone	(1)	12.182	55	15926M	23.898
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	593747	10.000
142) Hexachloroethane	(4)	13.621	117	16315	0.420

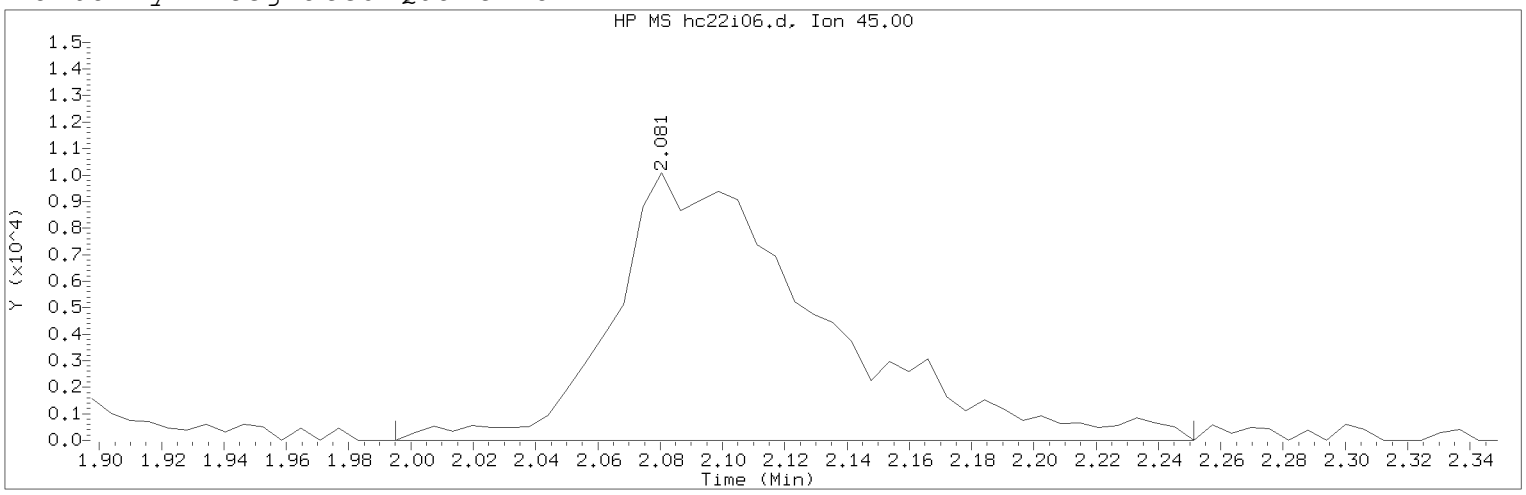
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

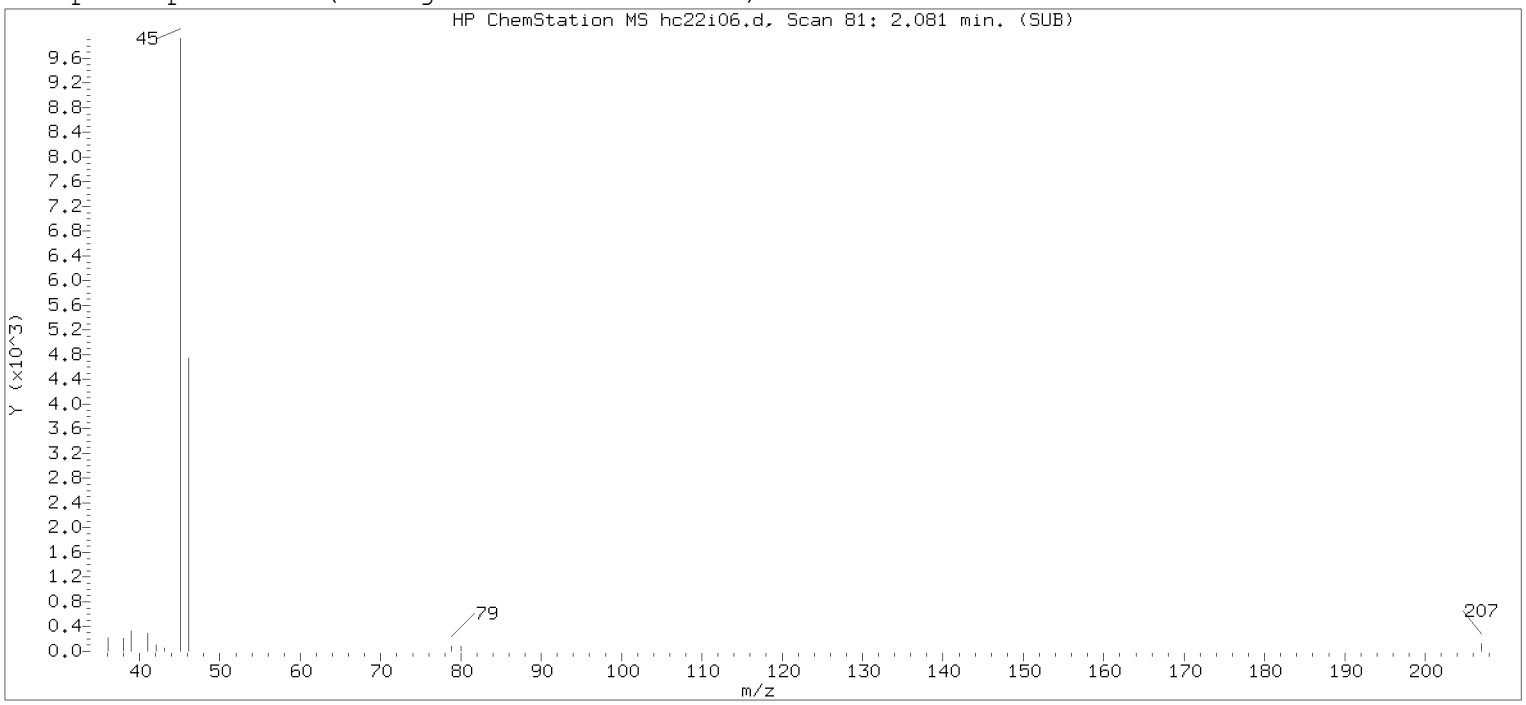
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 45.00
Area (flag) : 46826M
On-Column Amount (ng) : 0.5044
Integration start scan : 66 Integration stop scan: 108
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

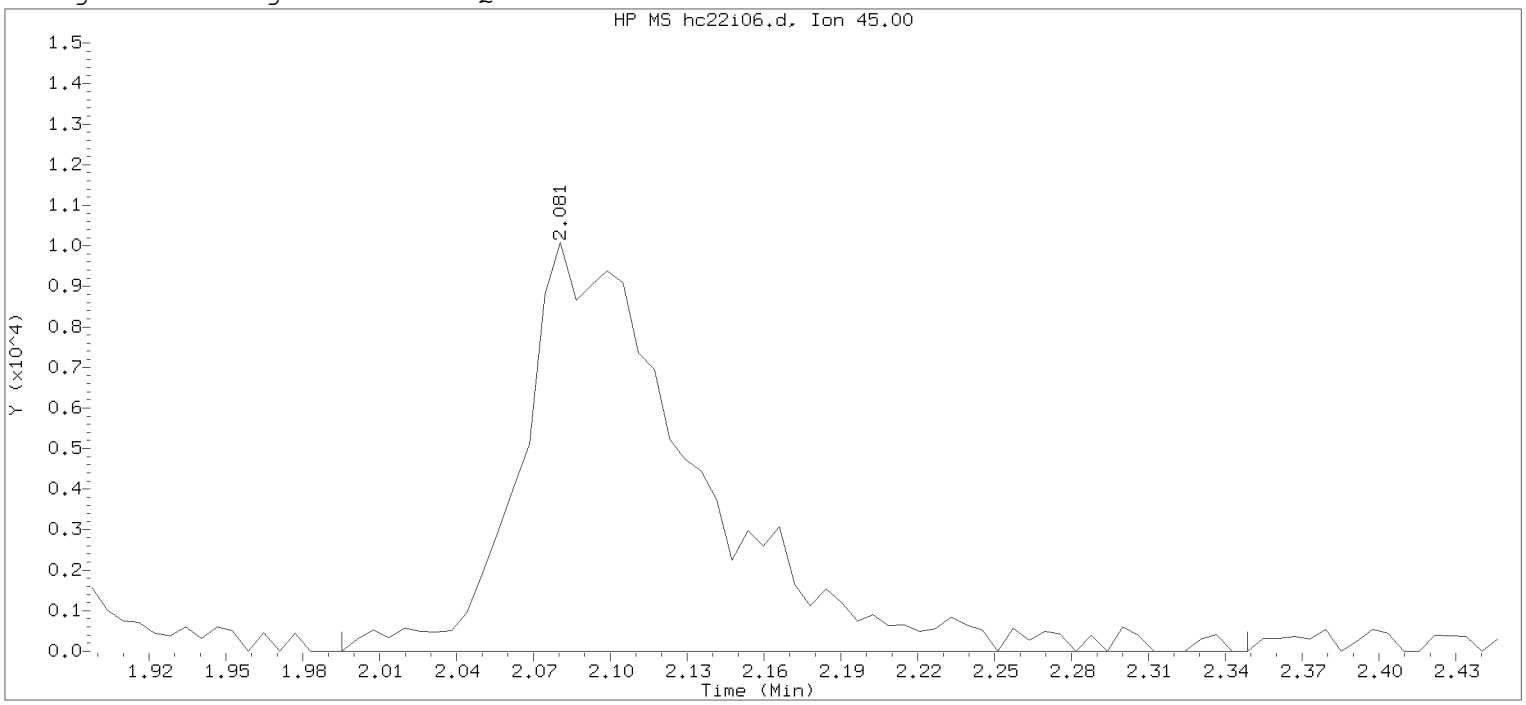
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

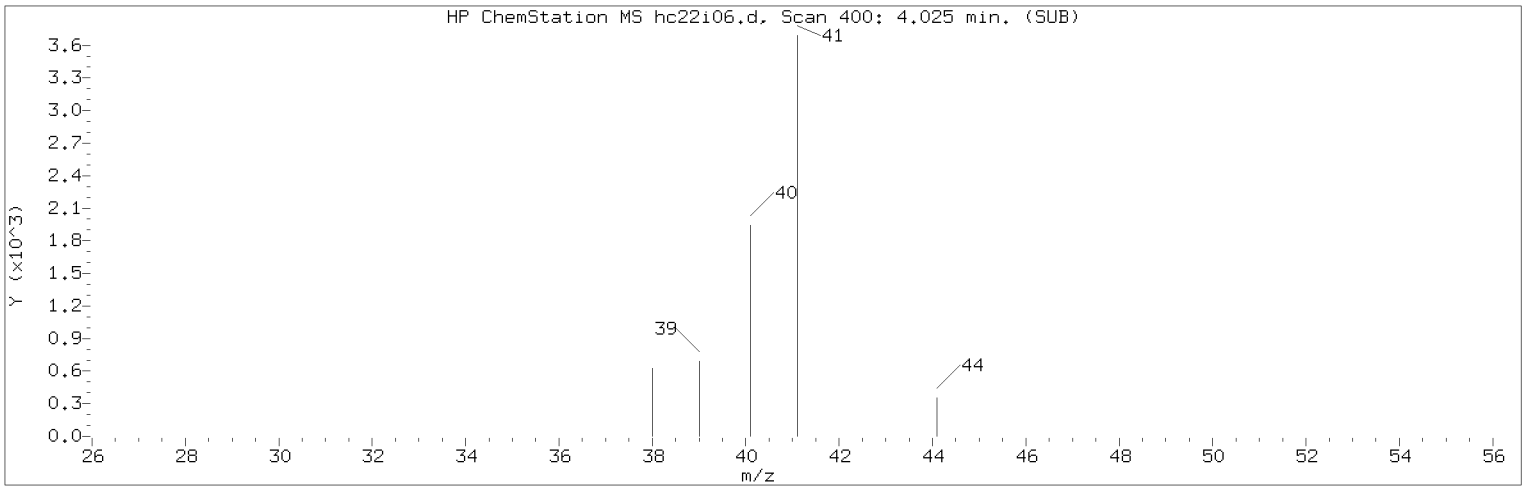
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

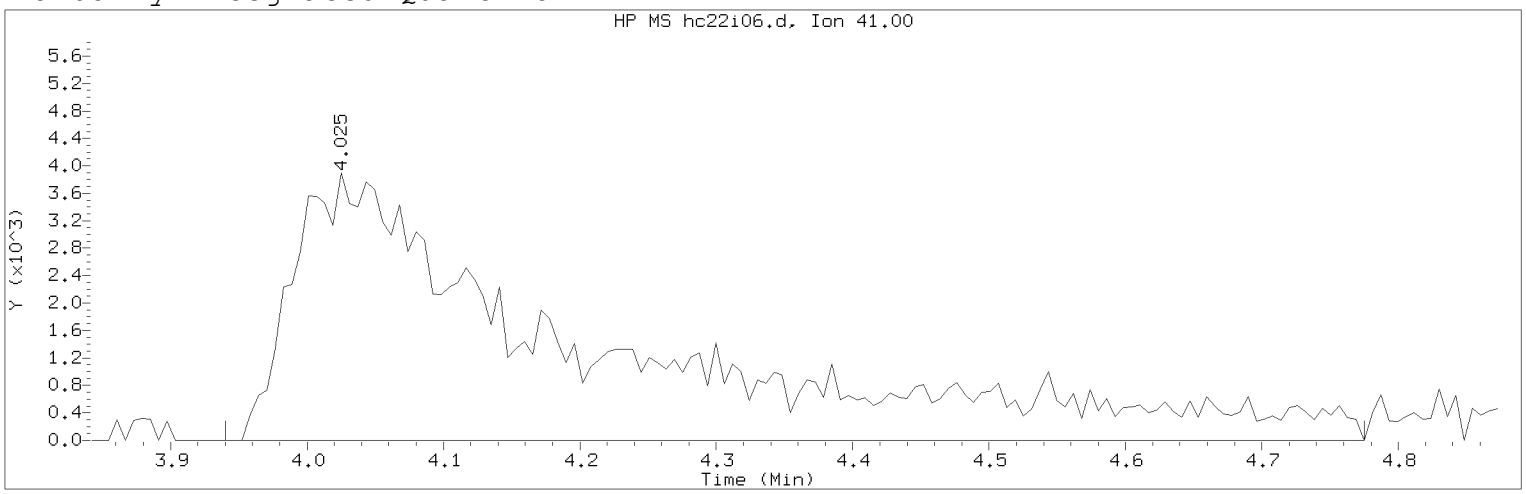
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 45.00
Area : 48241
On-column Amount (ng) : 0.5301
Integration start scan : 66 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/23/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

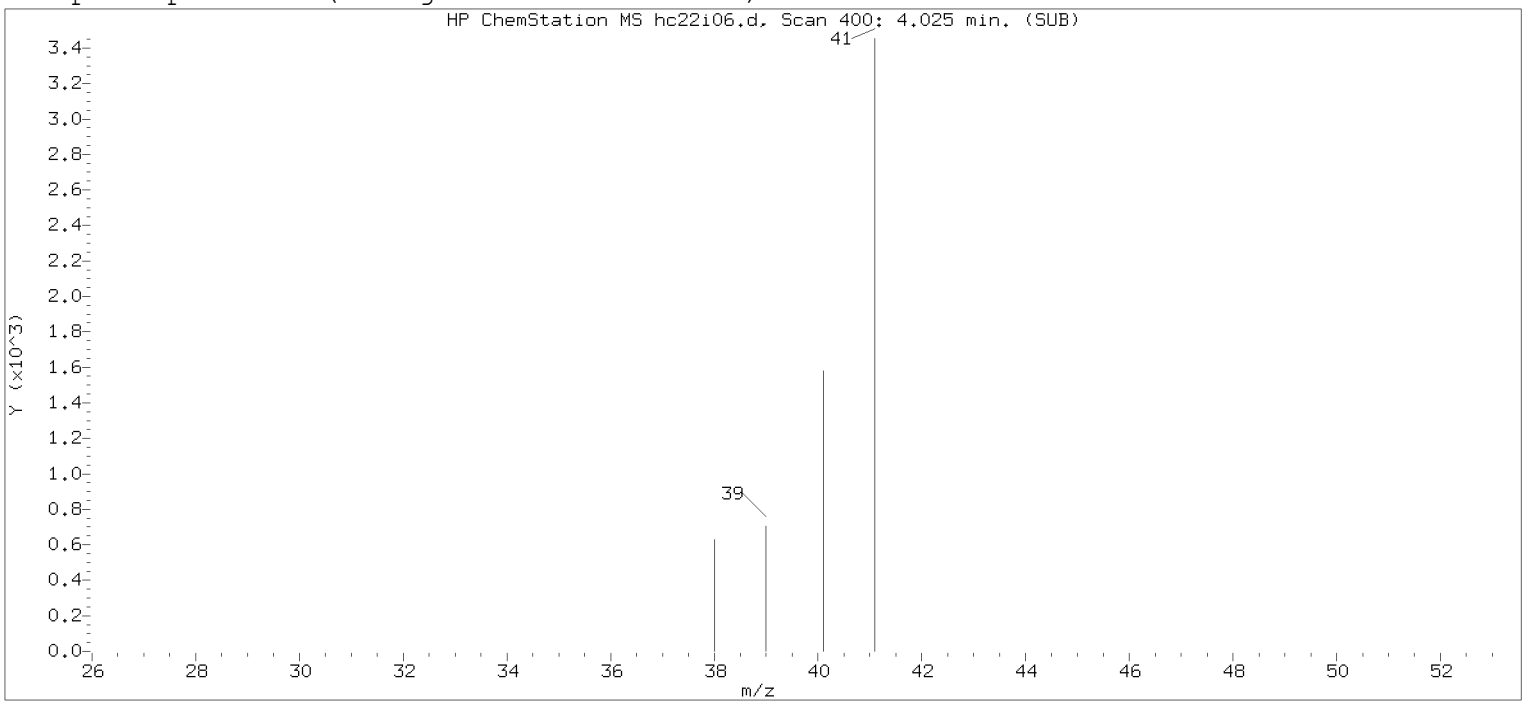
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 400
Retention Time (minutes): 4.025
Quant Ion : 41.00
Area (flag) : 57726M
On-Column Amount (ng) : 22.2012
Integration start scan : 385 Integration stop scan: 522
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

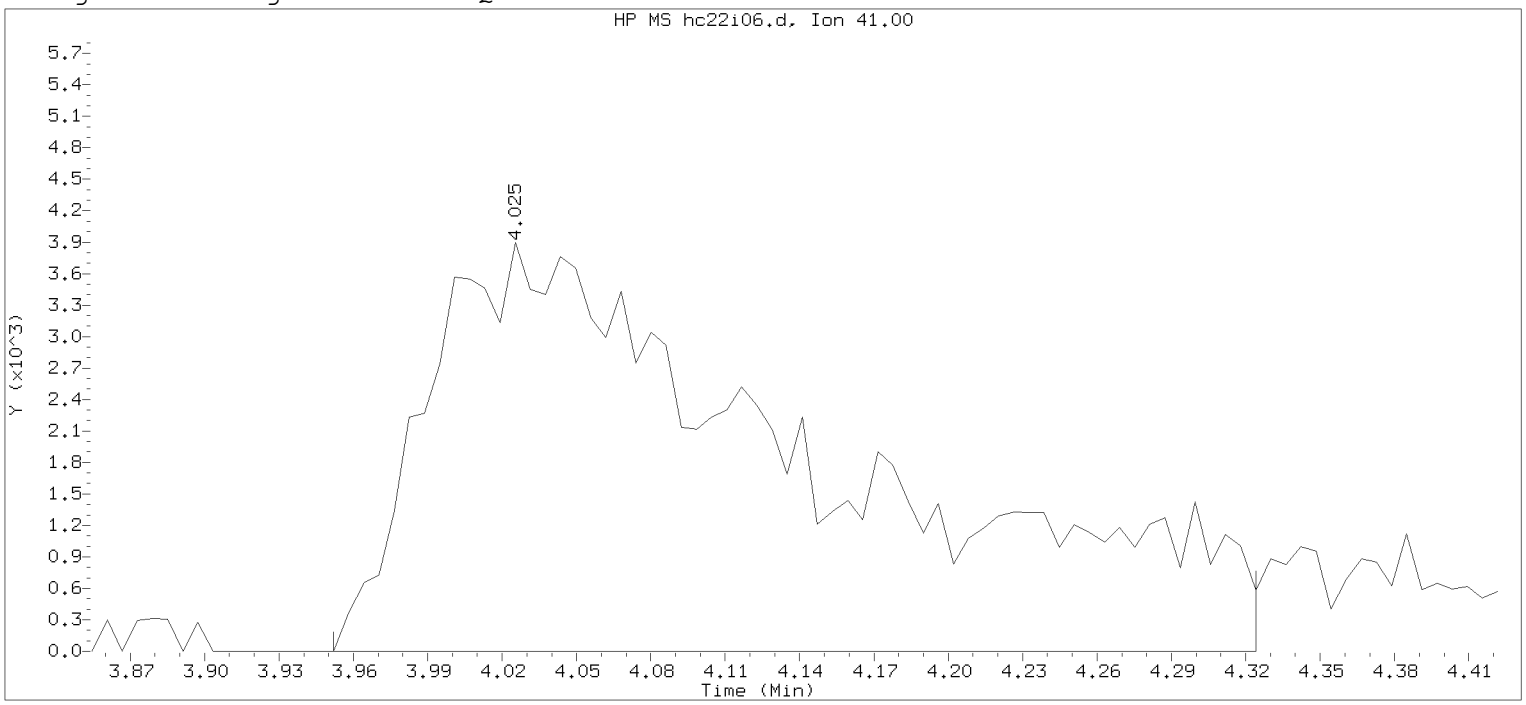
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

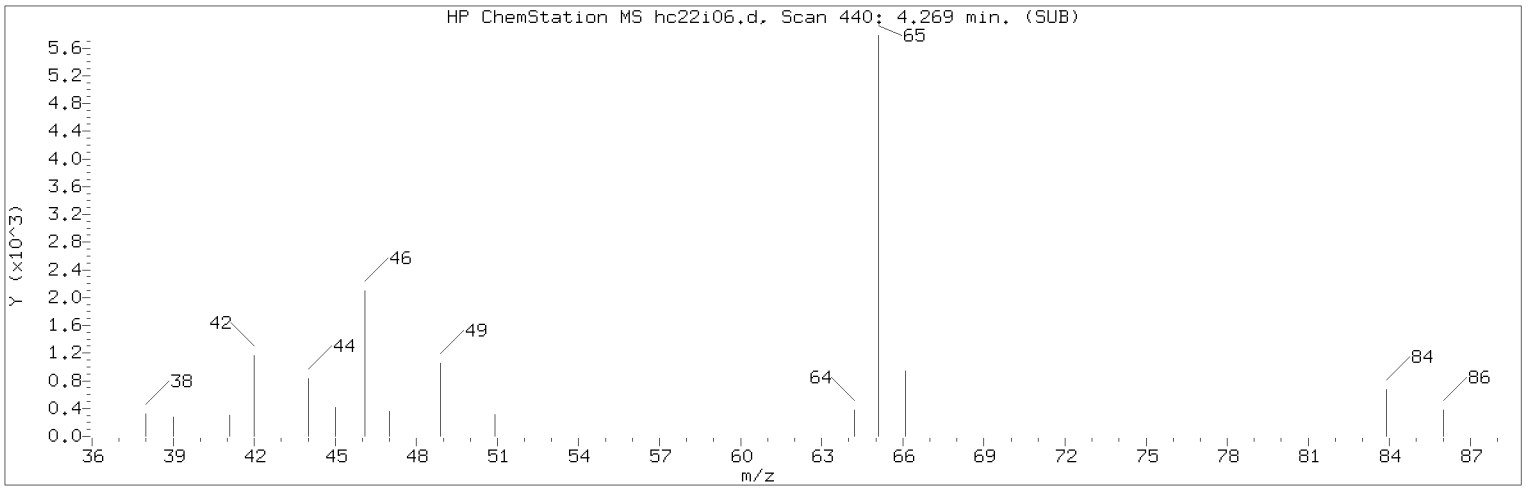
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

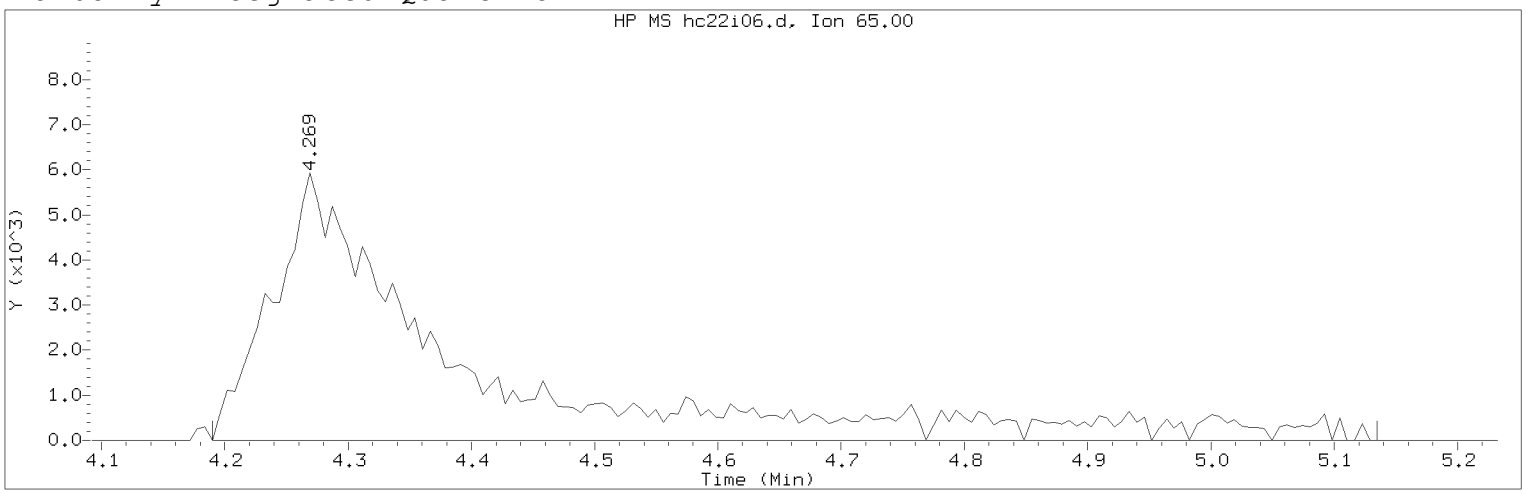
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 400
Retention Time (minutes): 4.025
Quant Ion : 41.00
Area : 42387
On-column Amount (ng) : 21.4918
Integration start scan : 387 Integration stop scan: 448
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/22/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

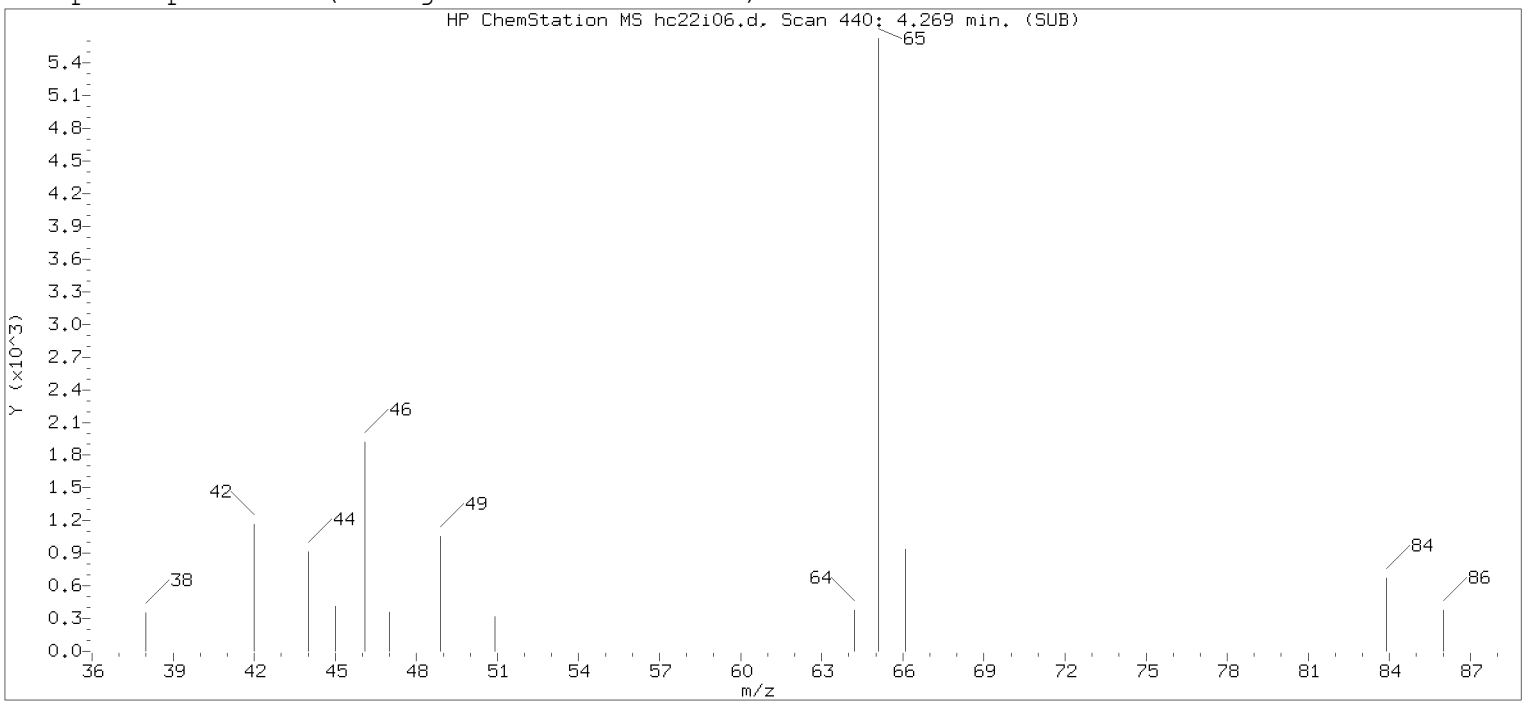
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area (flag) : 61182M
On-Column Amount (ng) : 50.0000
Integration start scan : 426 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

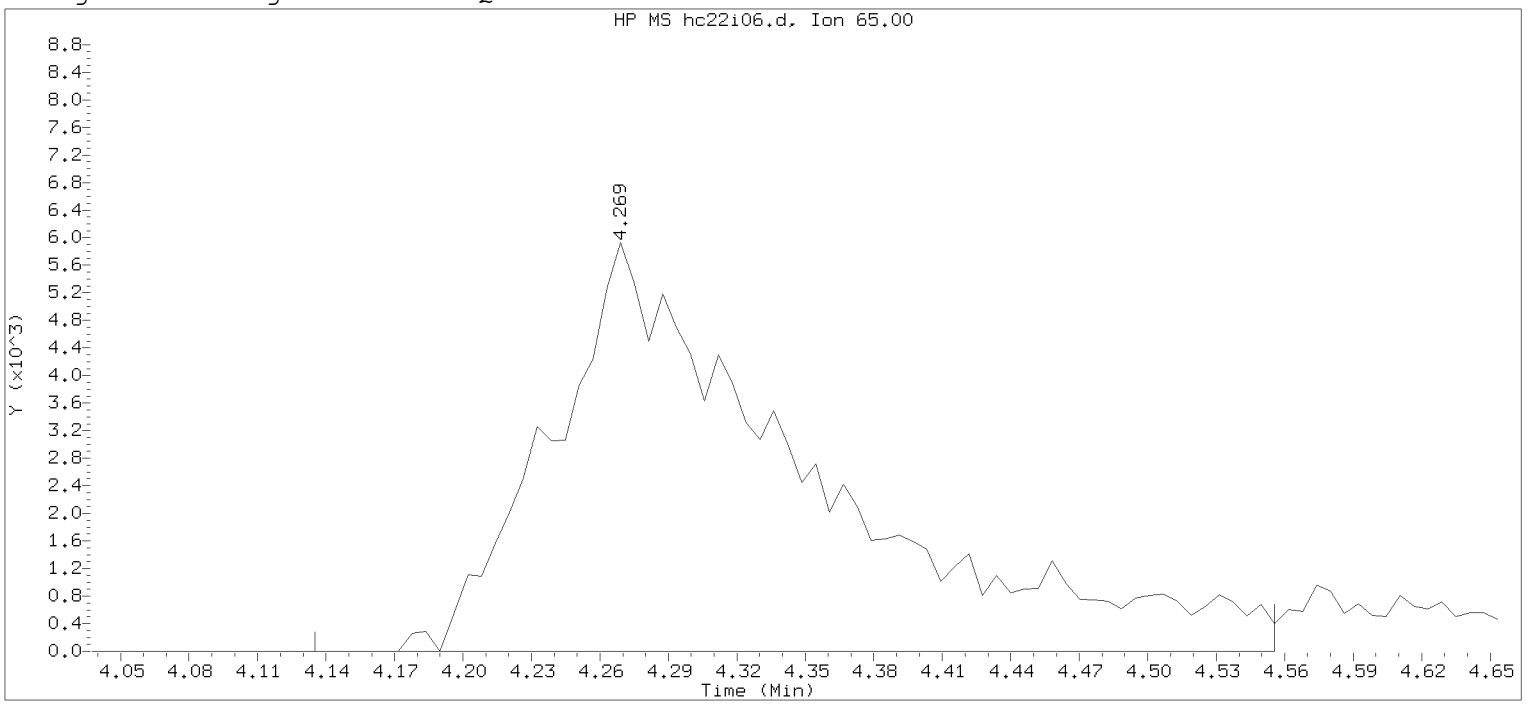
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

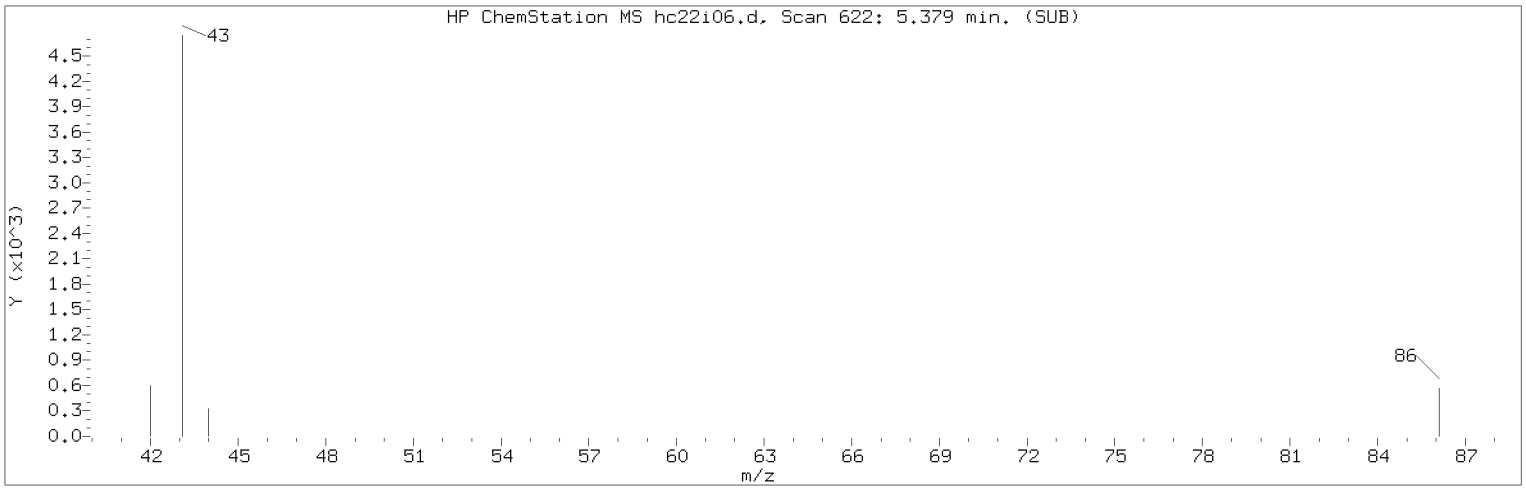
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

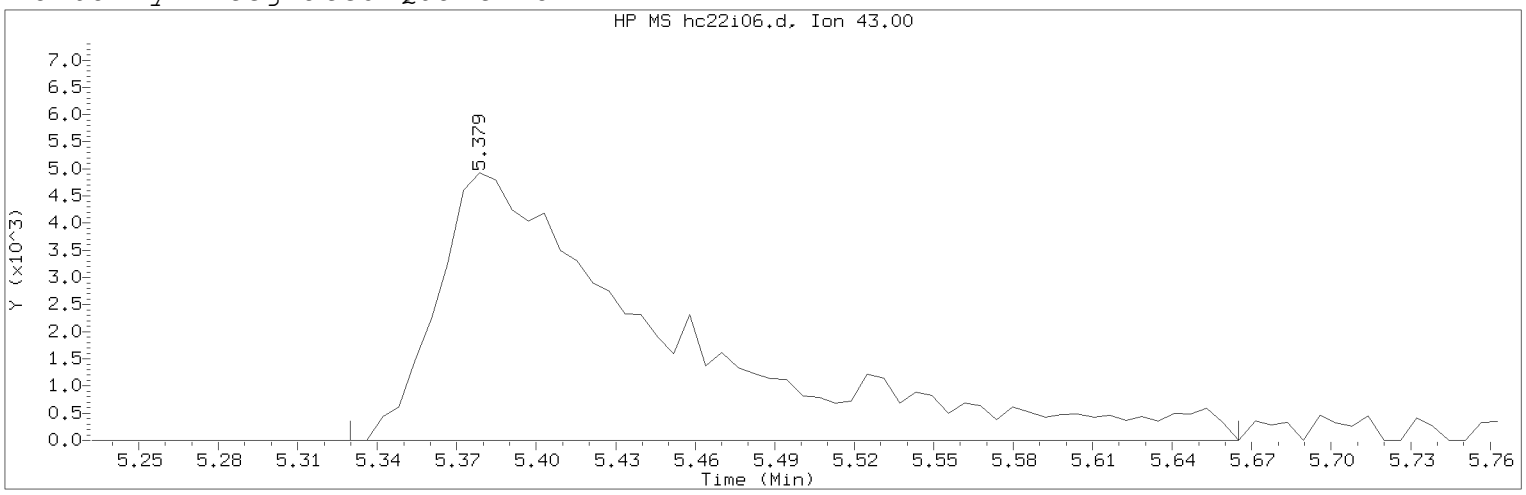
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 440		
Retention Time (minutes)	: 4.269		
Quant Ion	: 65.00		
Area	: 46496		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 417	Integration stop scan:	486
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/23/2013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

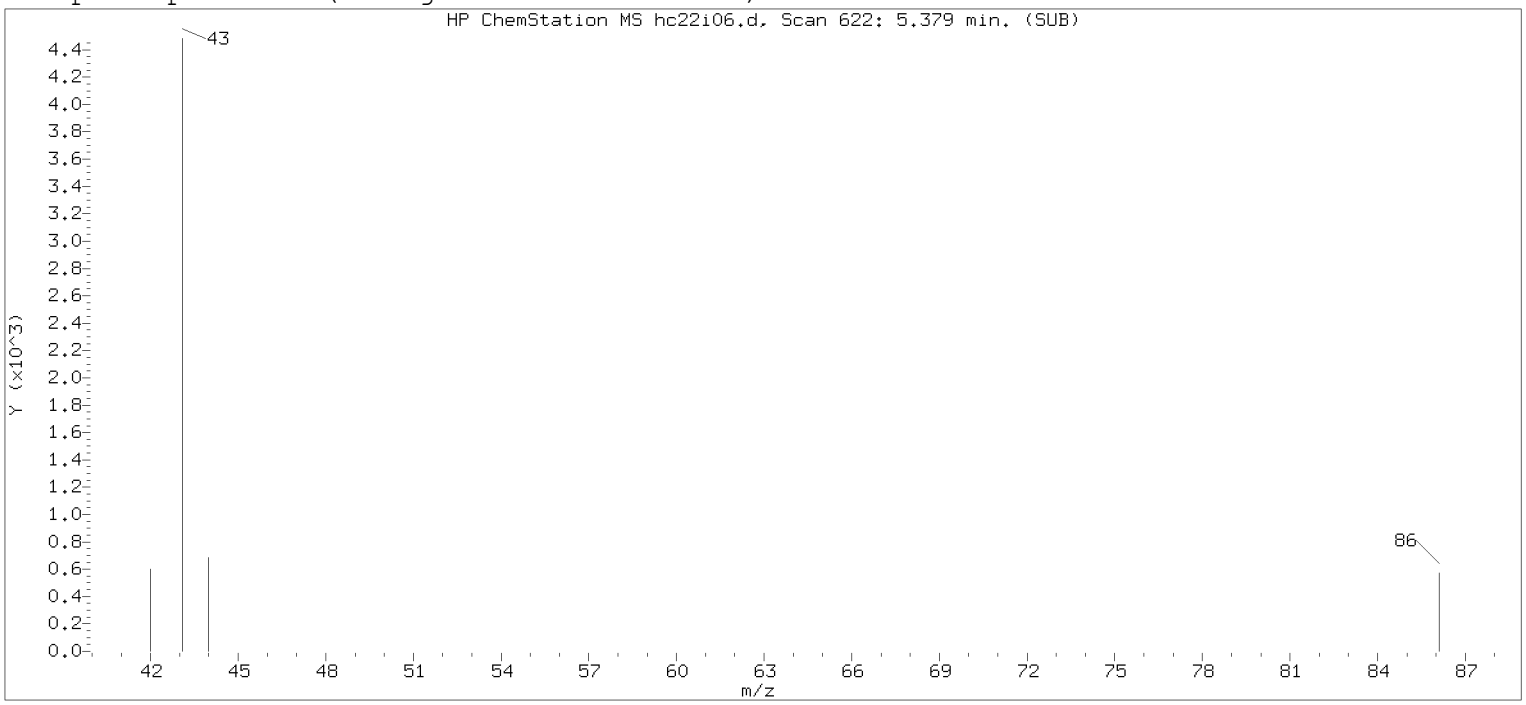
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 622
Retention Time (minutes): 5.379
Quant Ion : 43.00
Area (flag) : 29974M
On-Column Amount (ng) : 0.4440
Integration start scan : 613 Integration stop scan: 668
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

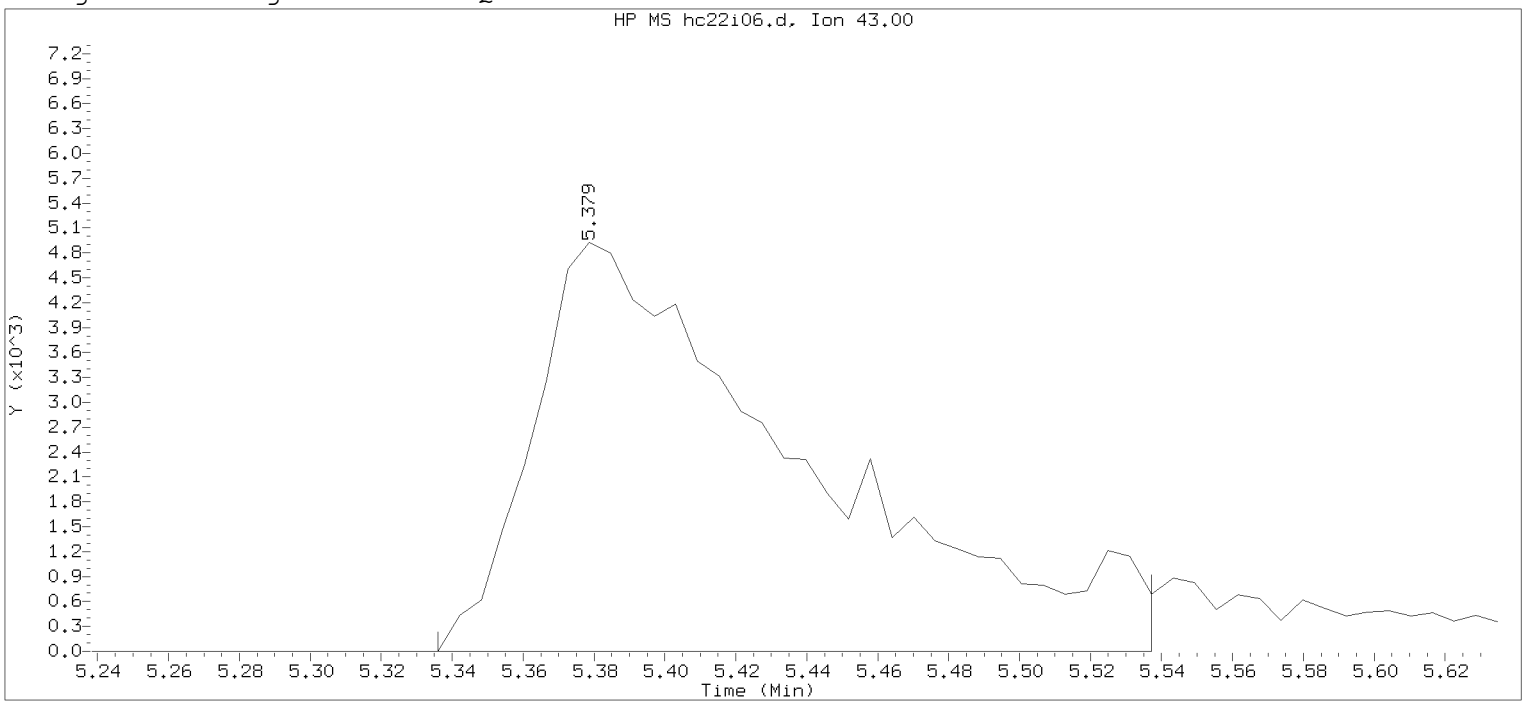
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

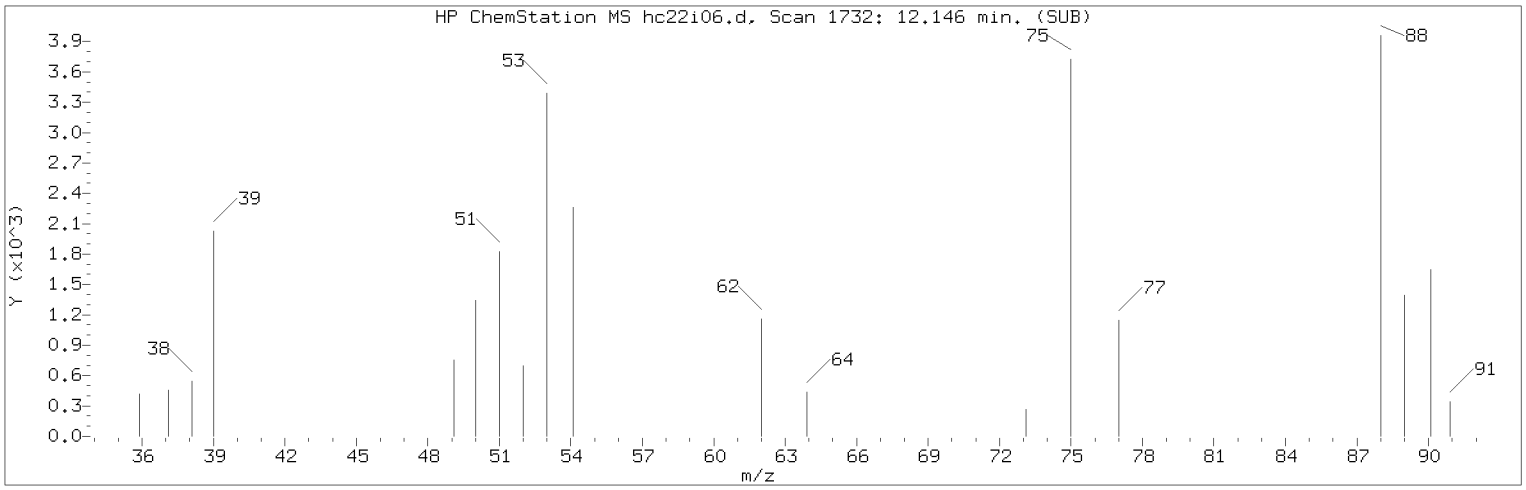
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

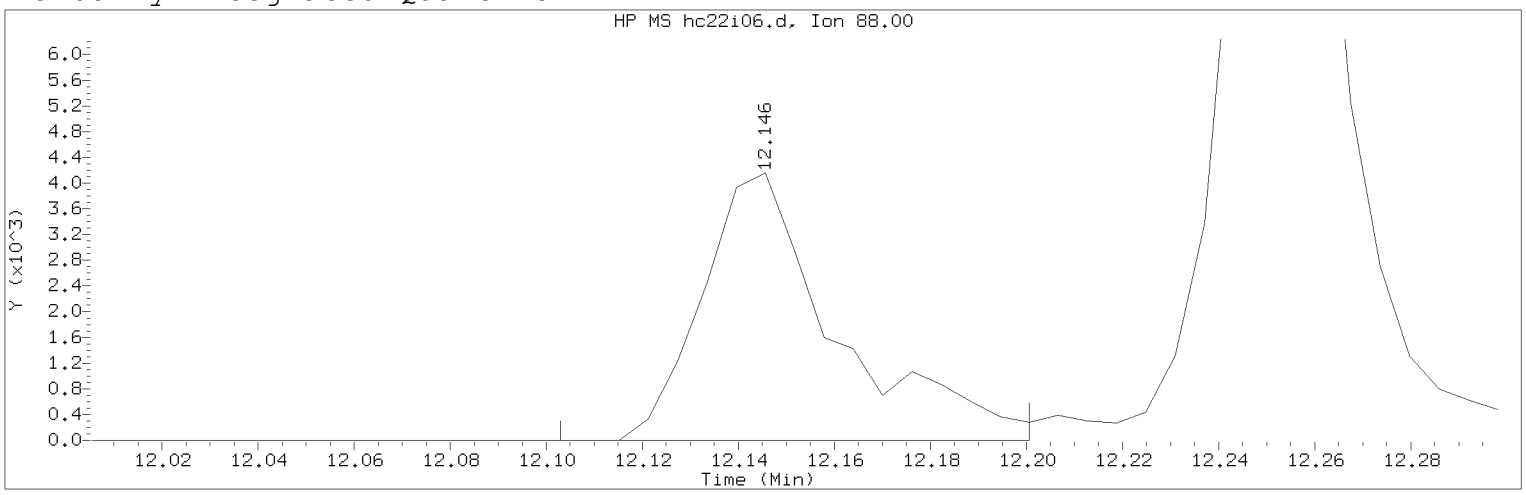
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 622		
Retention Time (minutes)	: 5.379		
Quant Ion	: 43.00		
Area	: 26057		
On-column Amount (ng)	: 0.3801		
Integration start scan	: 614	Integration stop scan:	647
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

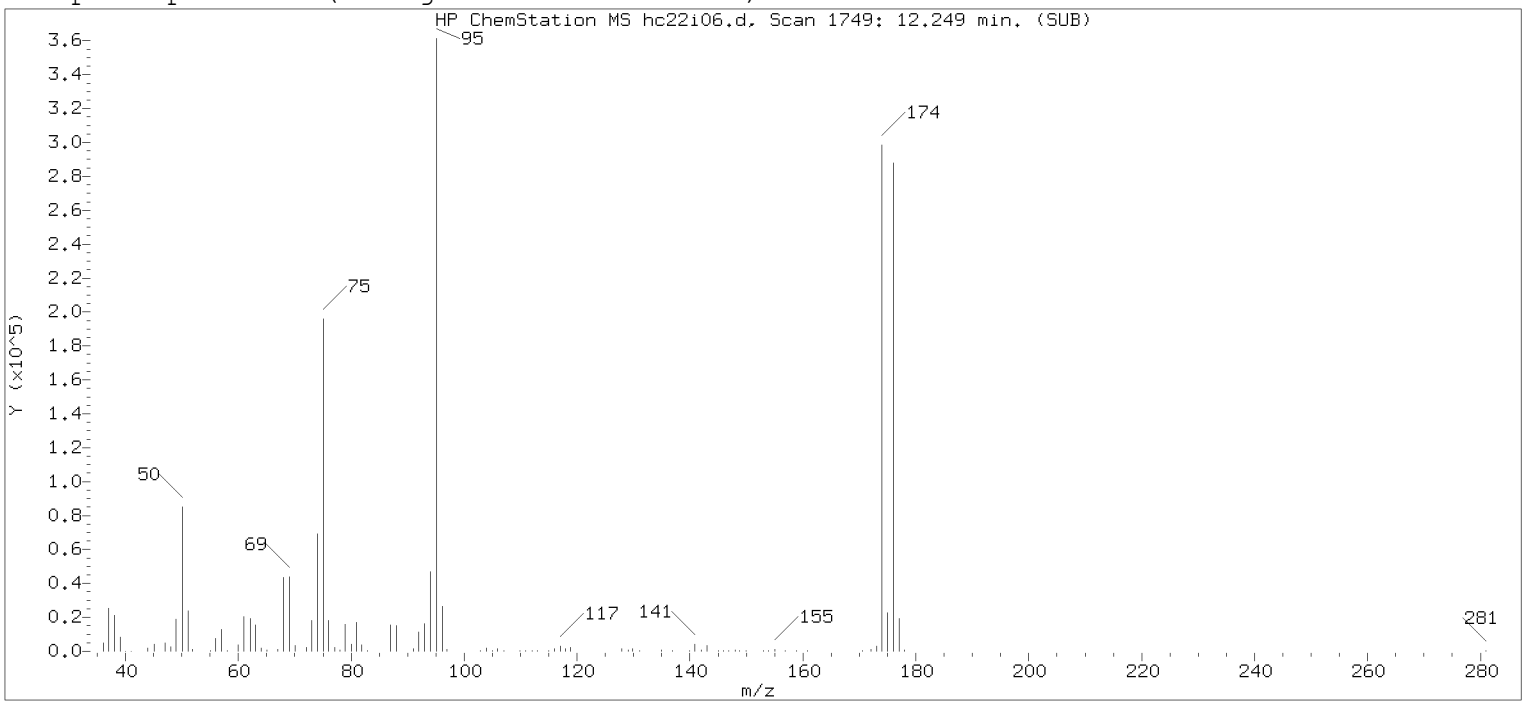
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1732
Retention Time (minutes): 12.146
Quant Ion : 88.00
Area (flag) : 8024M
On-Column Amount (ng) : 1.0119
Integration start scan : 1724 Integration stop scan: 1740
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

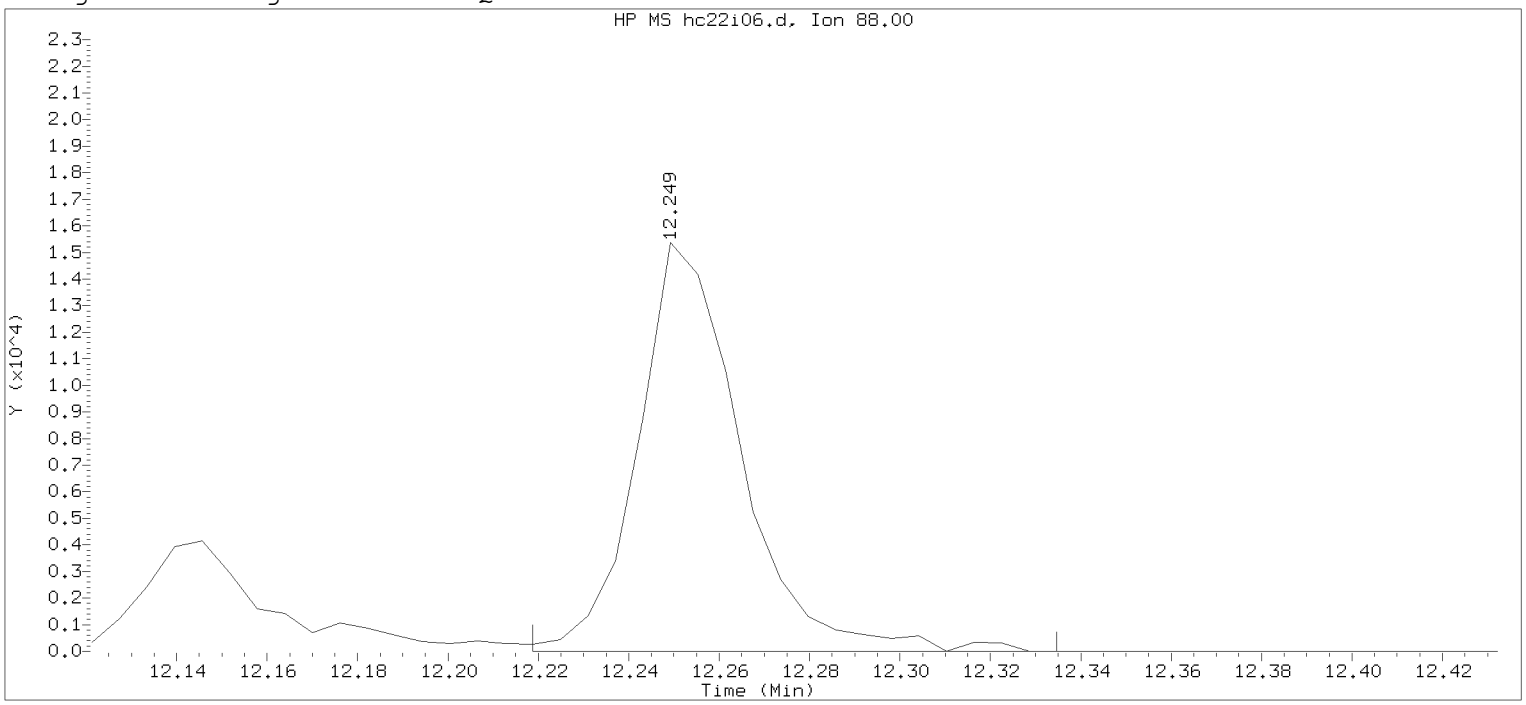
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

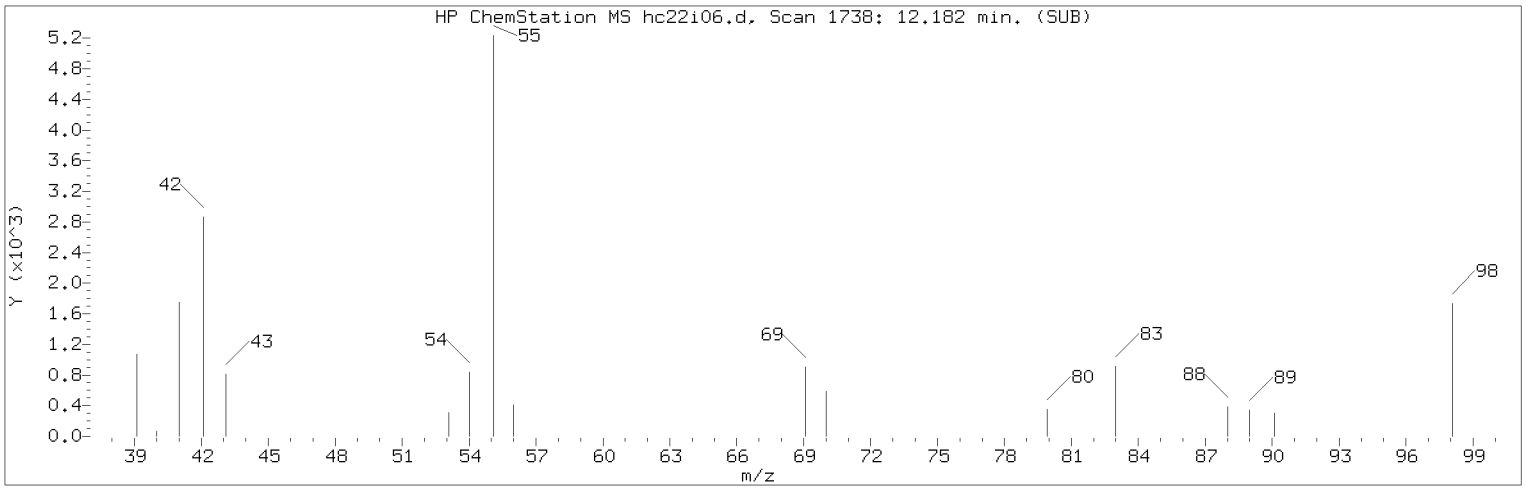
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

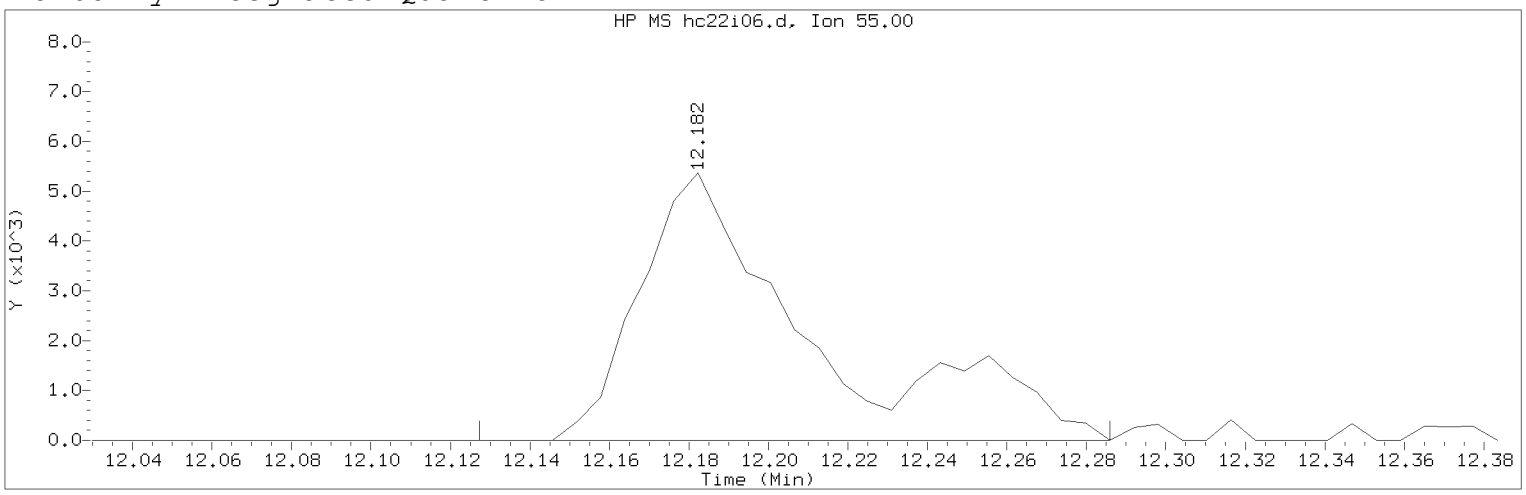
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.249
Quant Ion : 88.00
Area : 24335
On-column Amount (ng) : 3.4266
Integration start scan : 1743 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

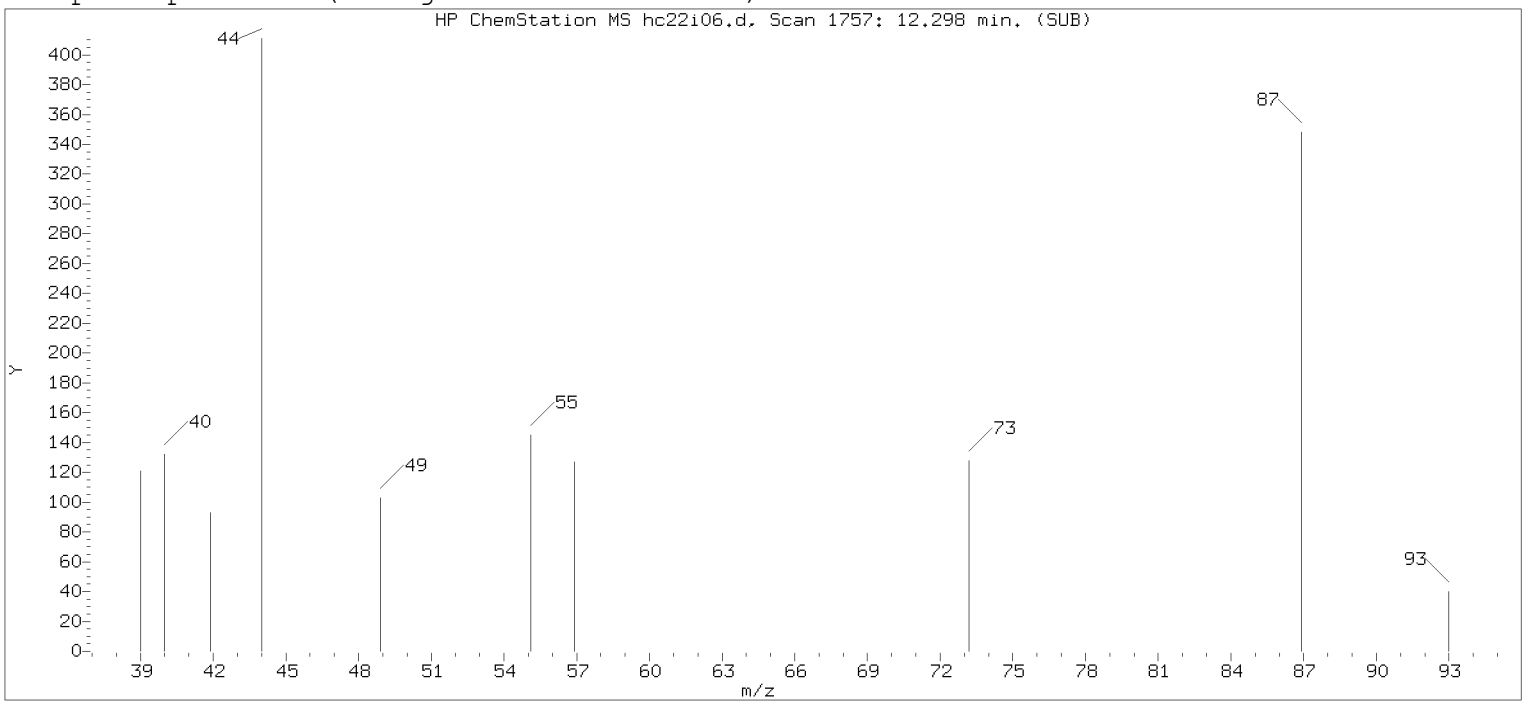
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1738
Retention Time (minutes): 12.182
Quant Ion : 55.00
Area (flag) : 15926M
On-Column Amount (ng) : 23.8982
Integration start scan : 1728 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

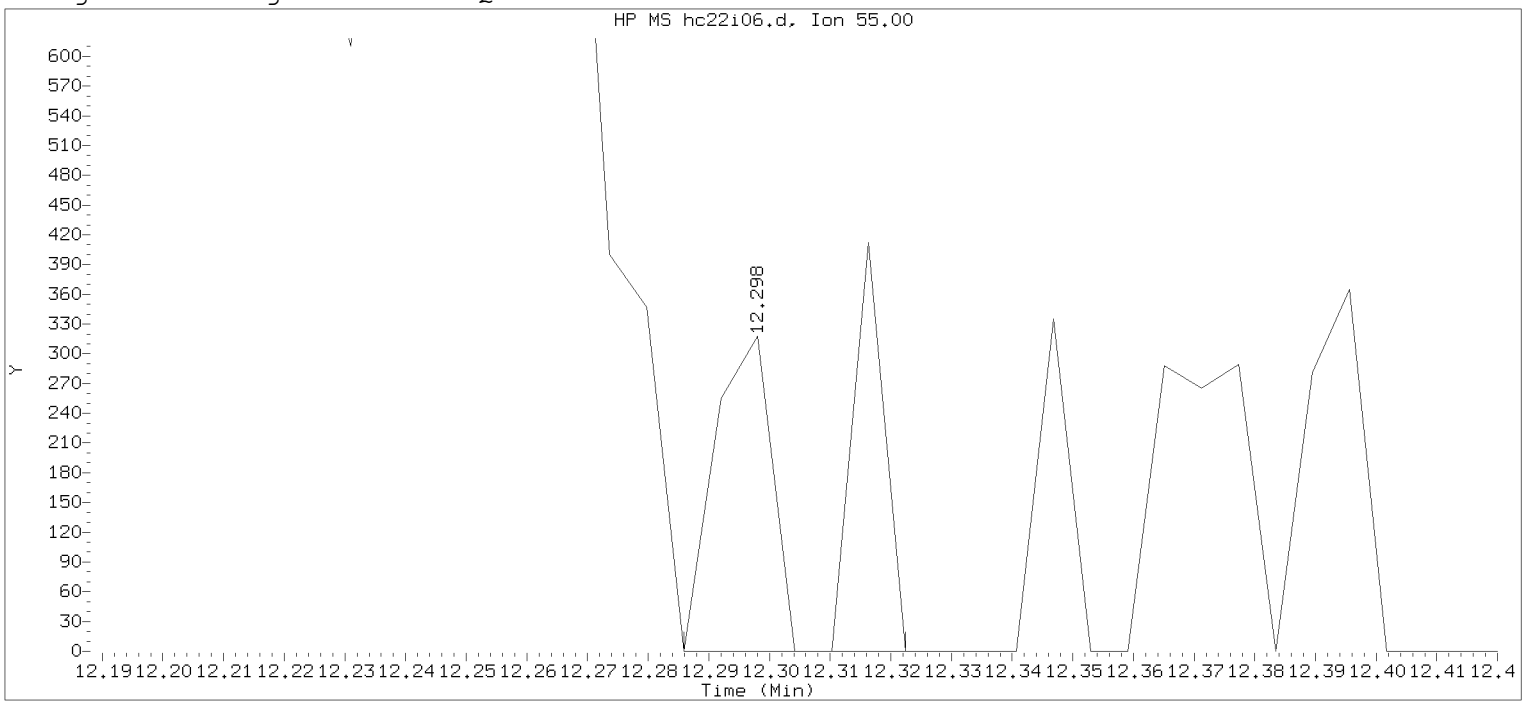
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



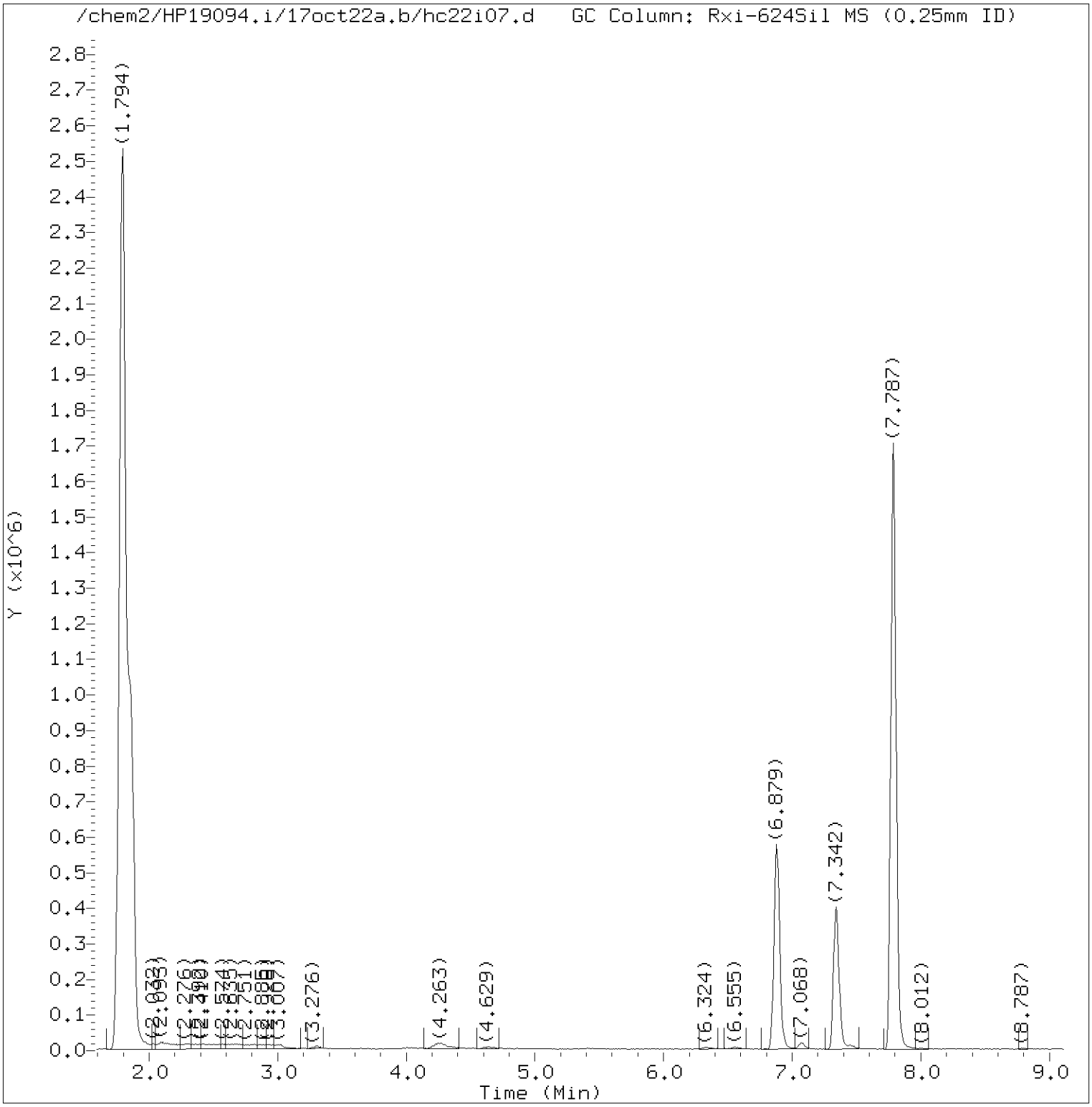
Data File: /chem2/HP19094.i/17oct22a.b/hc22i06.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 20:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:02
Date, time and analyst ID of latest file update: 22-Oct-2017 21:02 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1757
Retention Time (minutes): 12.298
Quant Ion : 55.00
Area : 360
On-column Amount (ng) : 0.8535
Integration start scan : 1754 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/20/2017.



Total Ion Chromatogram (TIC)

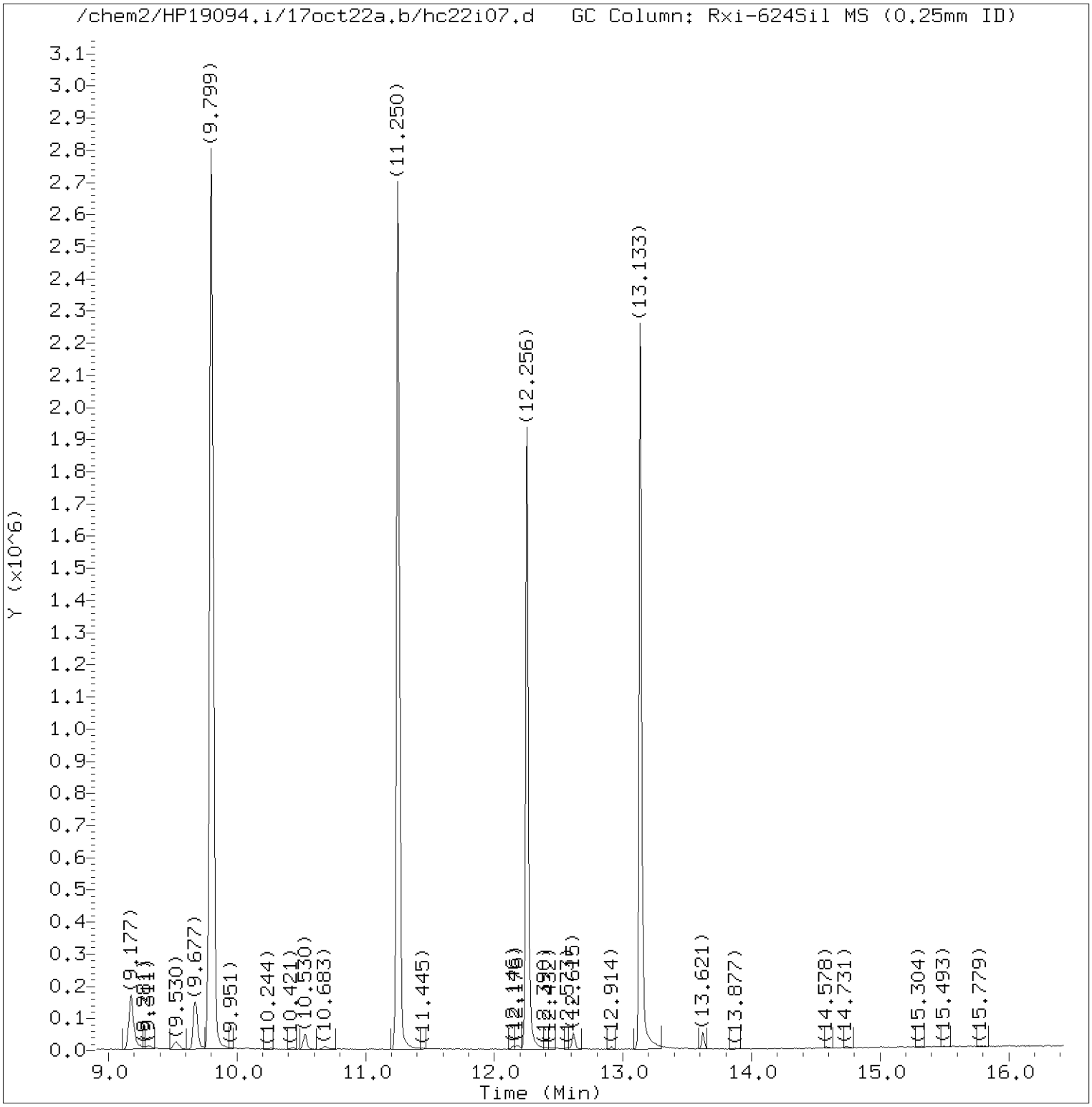
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

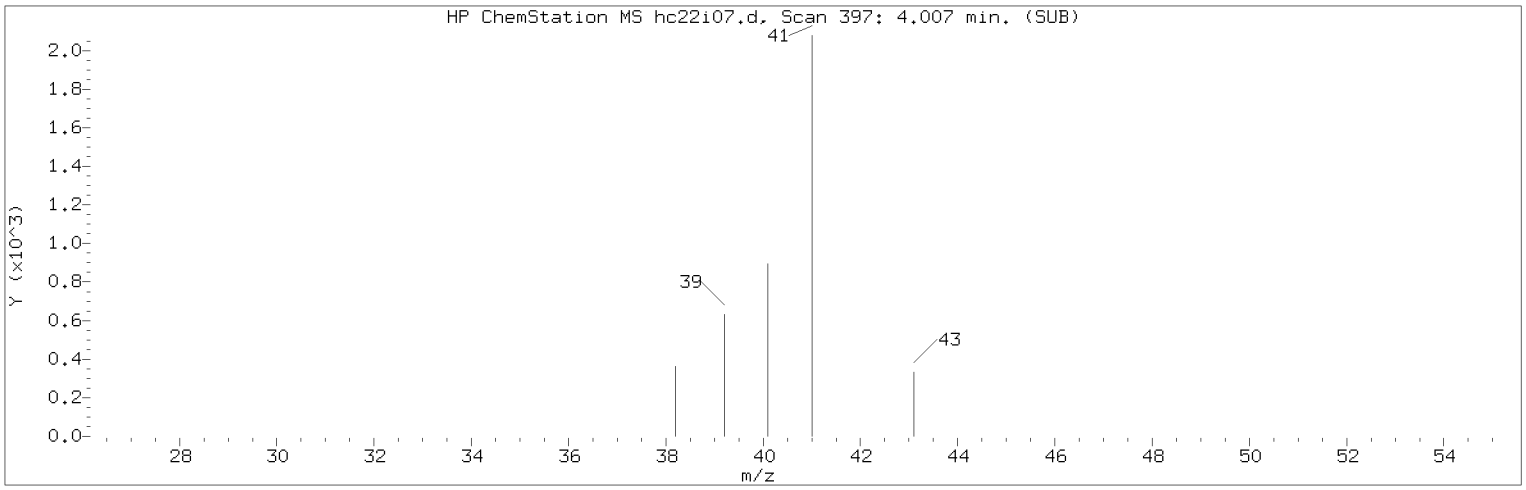
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	20934	0.230
25) Acetonitrile	(1)	4.007	41	28580M	8.735
26)*t-Butyl Alcohol-d10	(1)	4.251	65	76990M	50.000
36) Vinyl Acetate	(2)	5.422	43	9777	0.147
43) Methyl Acrylate	(2)	6.336	55	18584M	0.765
53) 1-Chlorobutane	(2)	7.068	56	22455	0.200
63)*Fluorobenzene	(2)	7.787	96	2227999	10.000
77) Chloroacetonitrile	(2)	9.244	75	10505	8.612
78) 2-Chloroethyl vinyl ether	(2)	9.317	63	3680	0.159
97)*Chlorobenzene-d5	(3)	11.250	117	1454020	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.146	88	3211M	0.322
112) Cyclohexanone	(1)	12.188	55	8967	10.693
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	587302	10.000
142) Hexachloroethane	(4)	13.627	117	6323	0.165

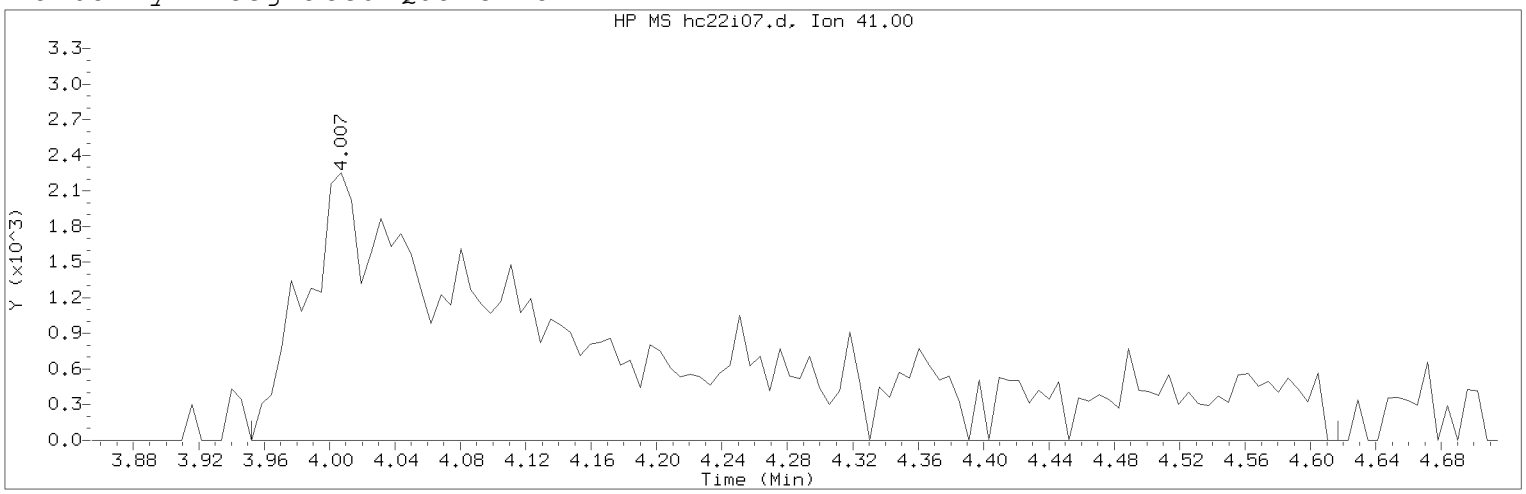
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

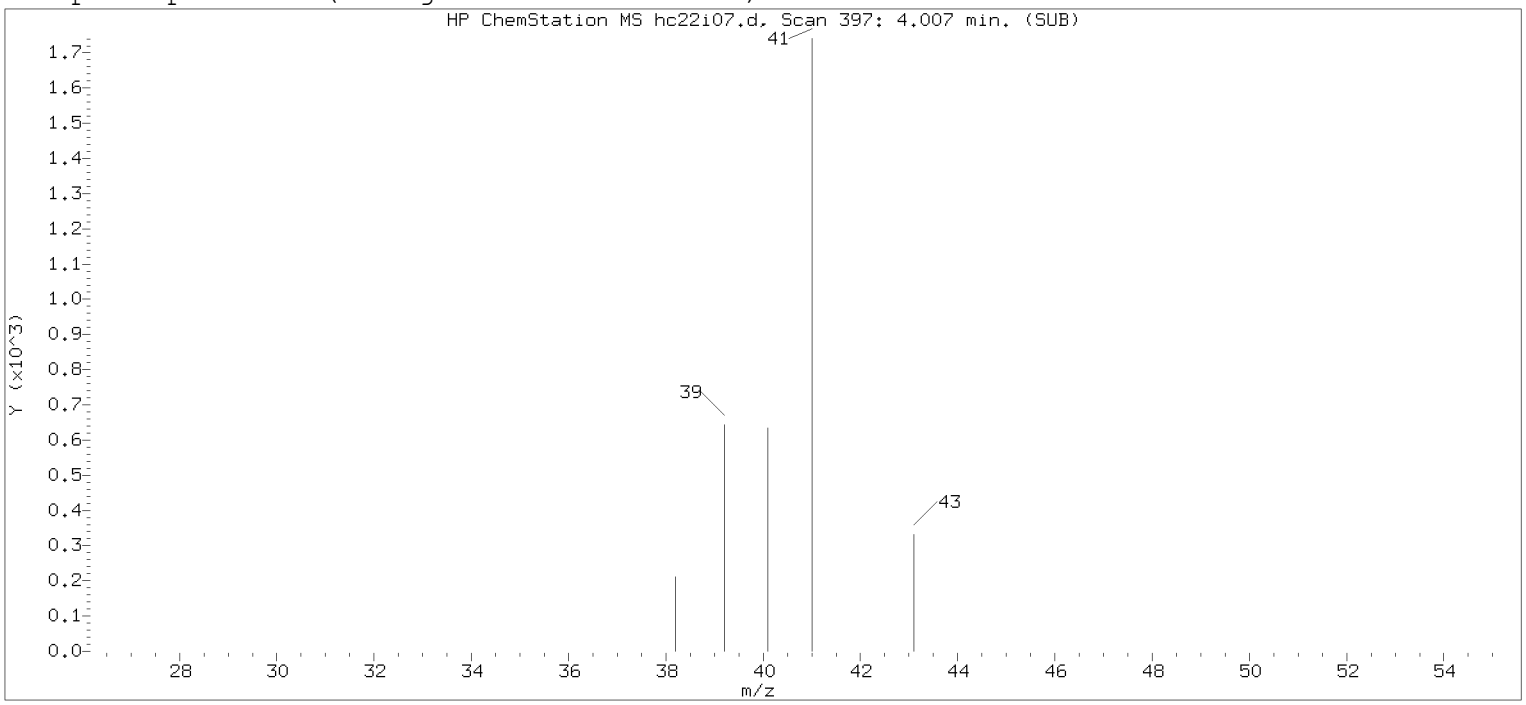
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 397
Retention Time (minutes): 4.007
Quant Ion : 41.00
Area (flag) : 28580M
On-Column Amount (ng) : 8.7349
Integration start scan : 387 Integration stop scan: 496
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

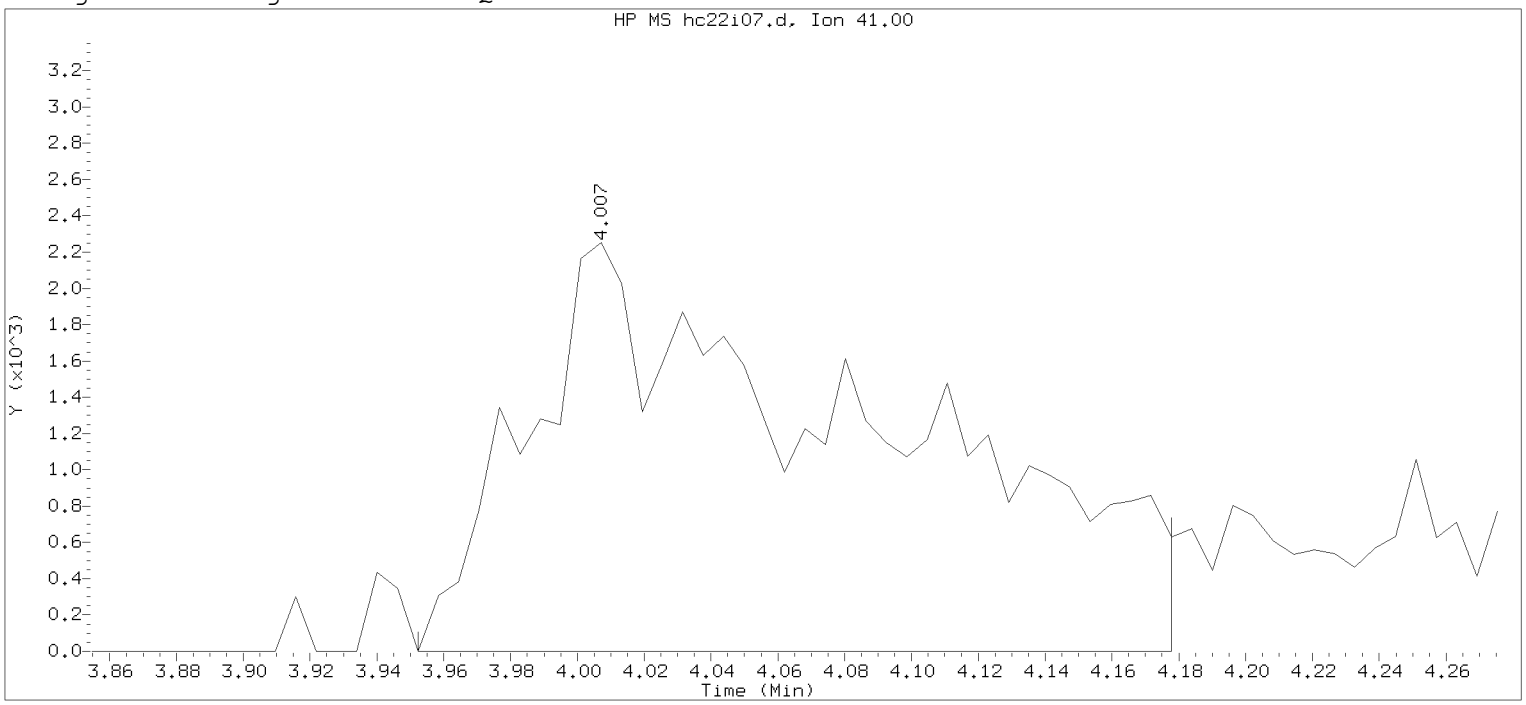
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

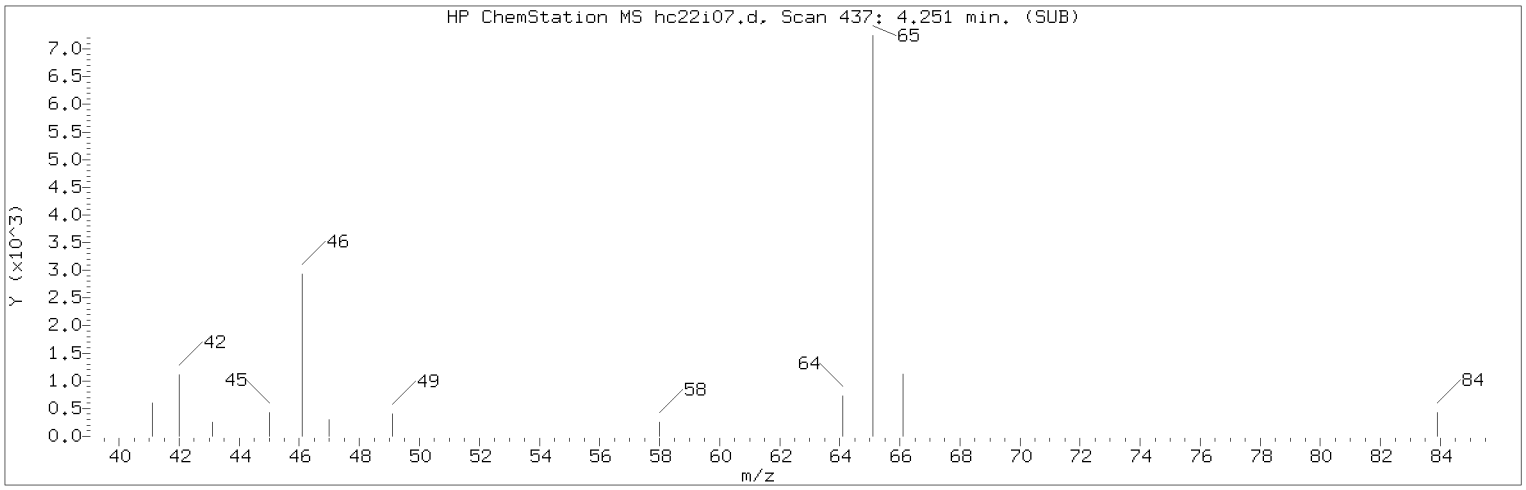
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:22
Date, time and analyst ID of latest file update: 22-Oct-2017 21:22 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

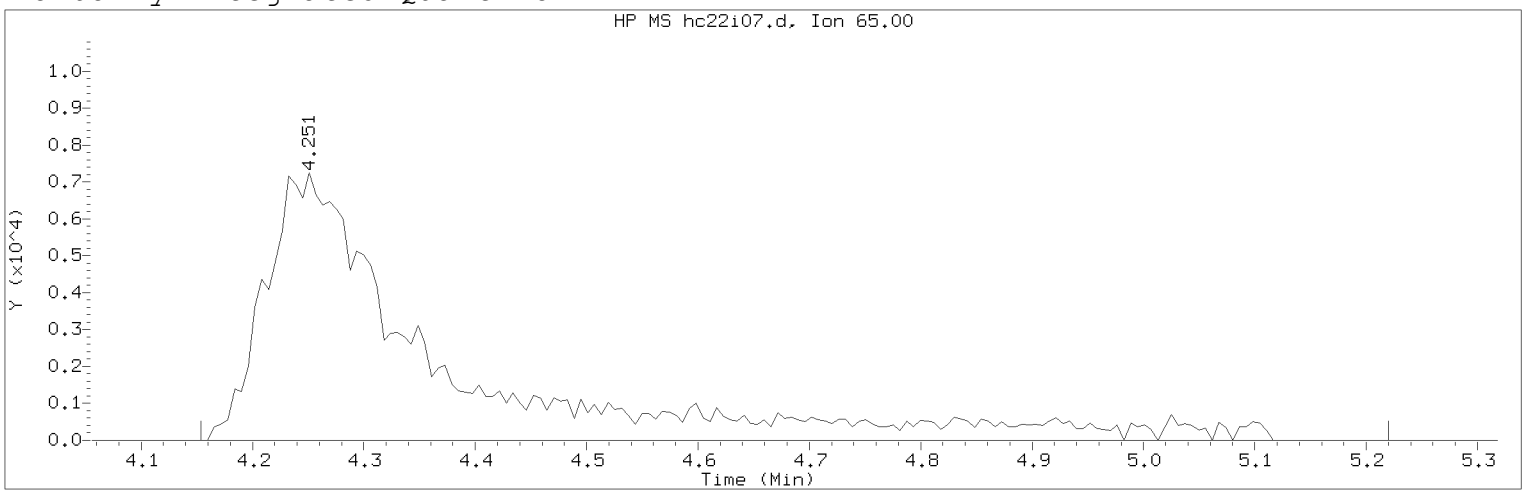
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 397
Retention Time (minutes): 4.007
Quant Ion : 41.00
Area : 16273
On-column Amount (ng) : 5.8754
Integration start scan : 387 Integration stop scan: 424
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/22/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

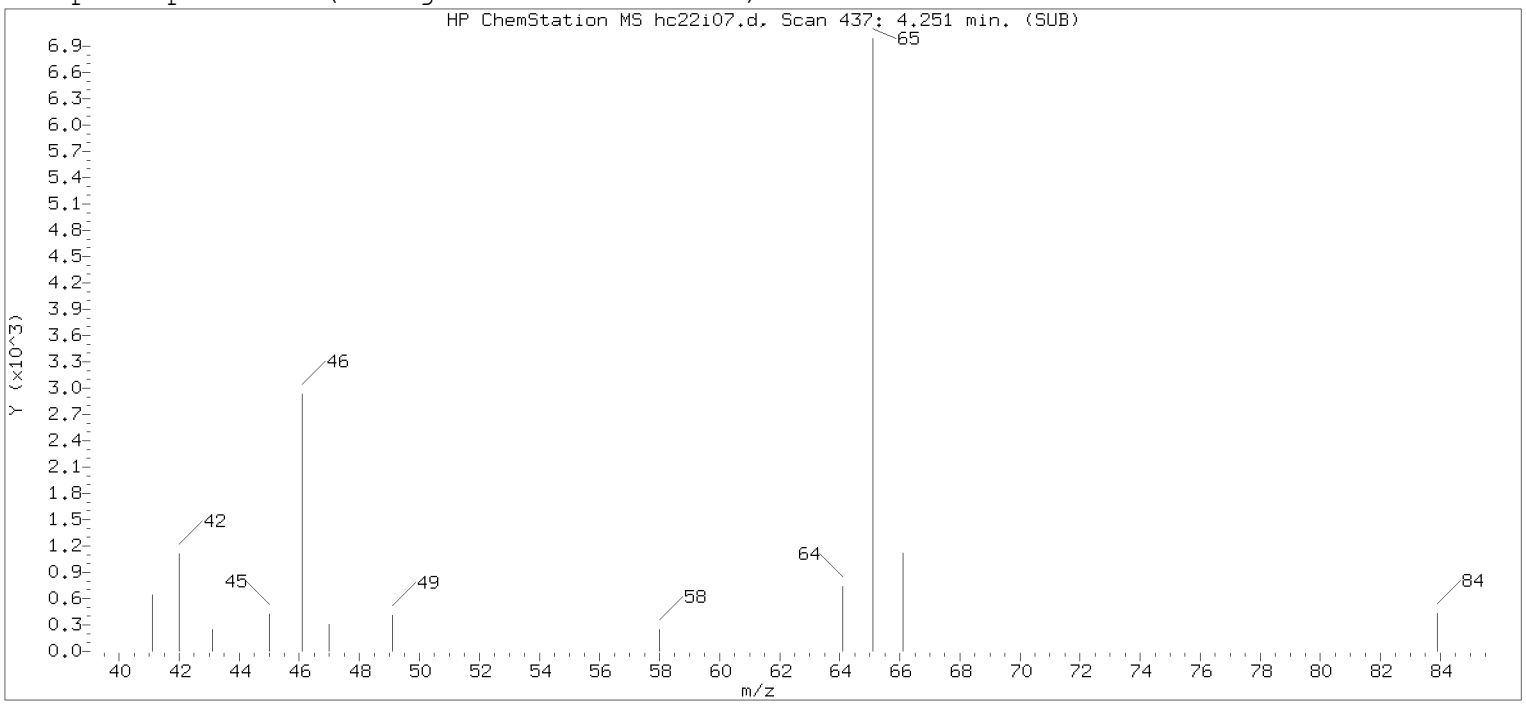
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area (flag) : 76990M
On-Column Amount (ng) : 50.0000
Integration start scan : 420 Integration stop scan: 595
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

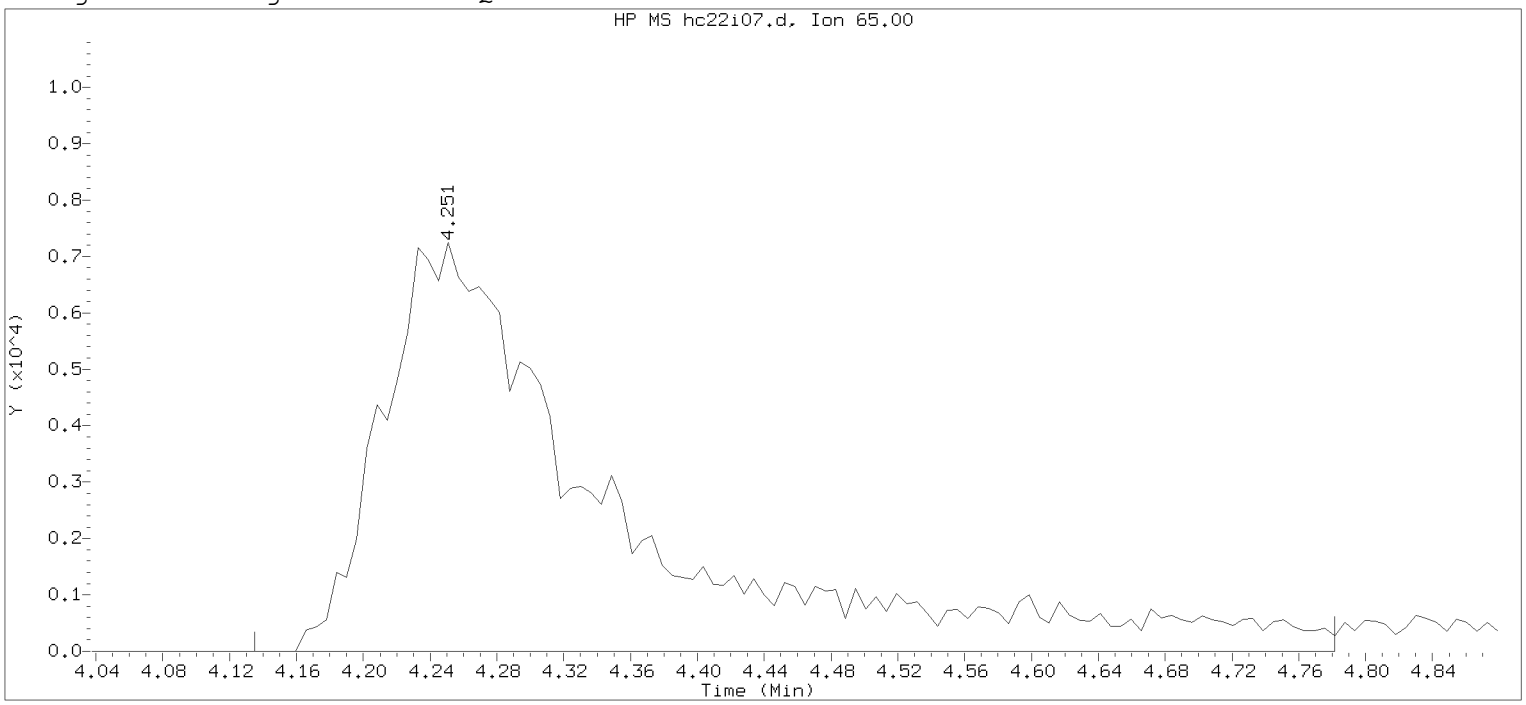
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

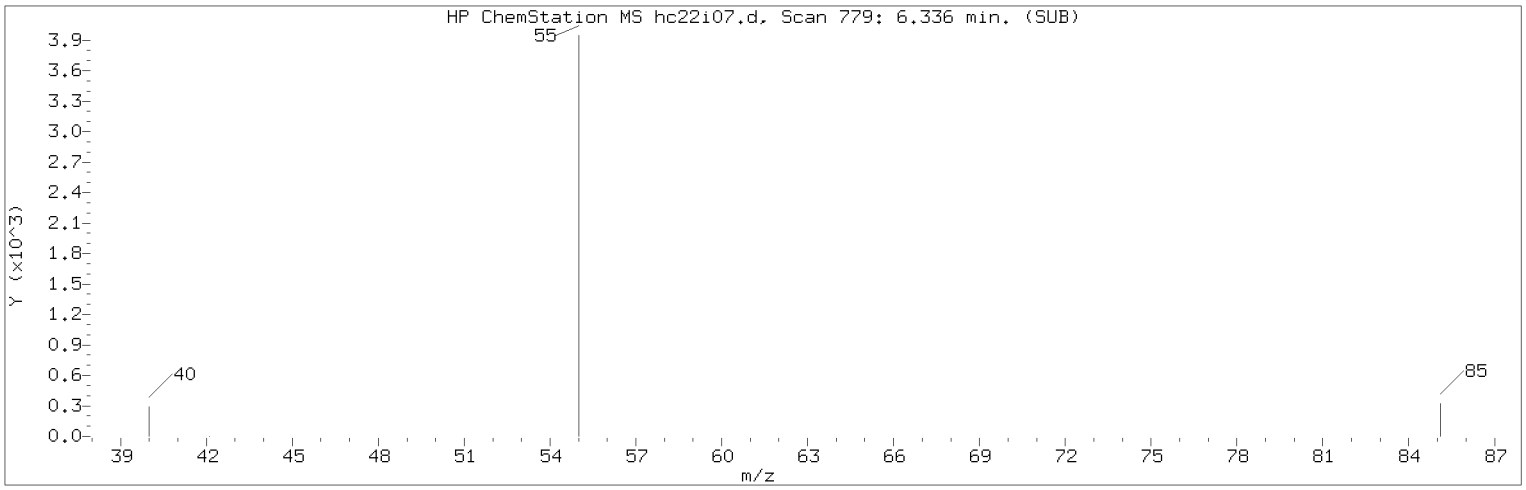
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:22
Date, time and analyst ID of latest file update: 22-Oct-2017 21:22 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

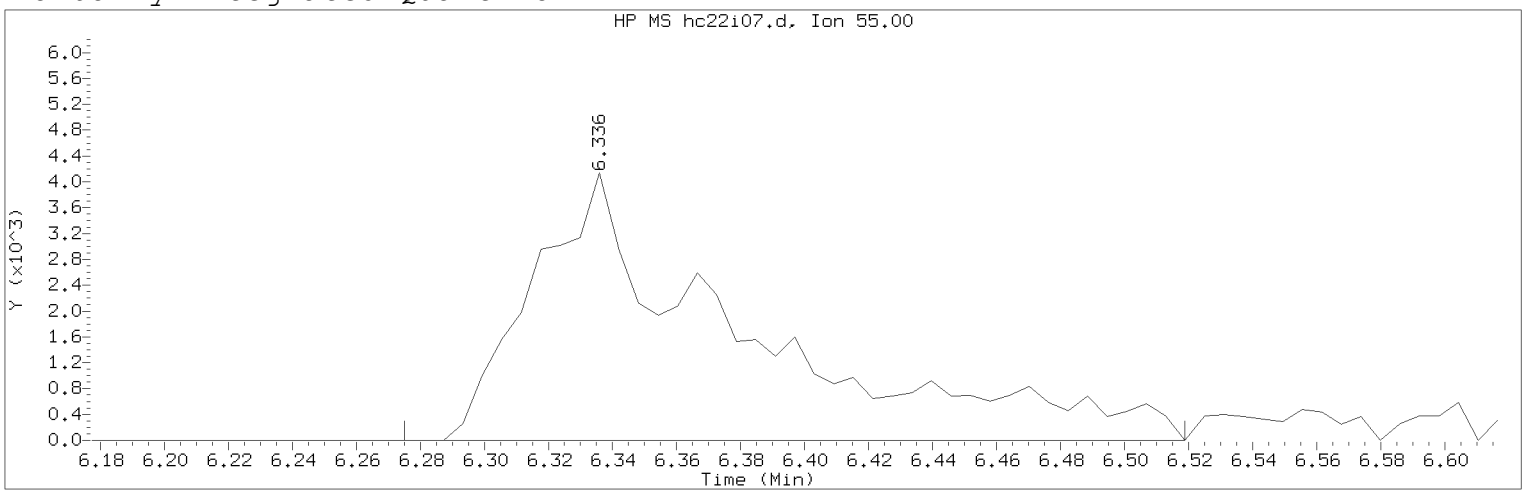
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 65.00
Area : 69117
On-column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 523
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

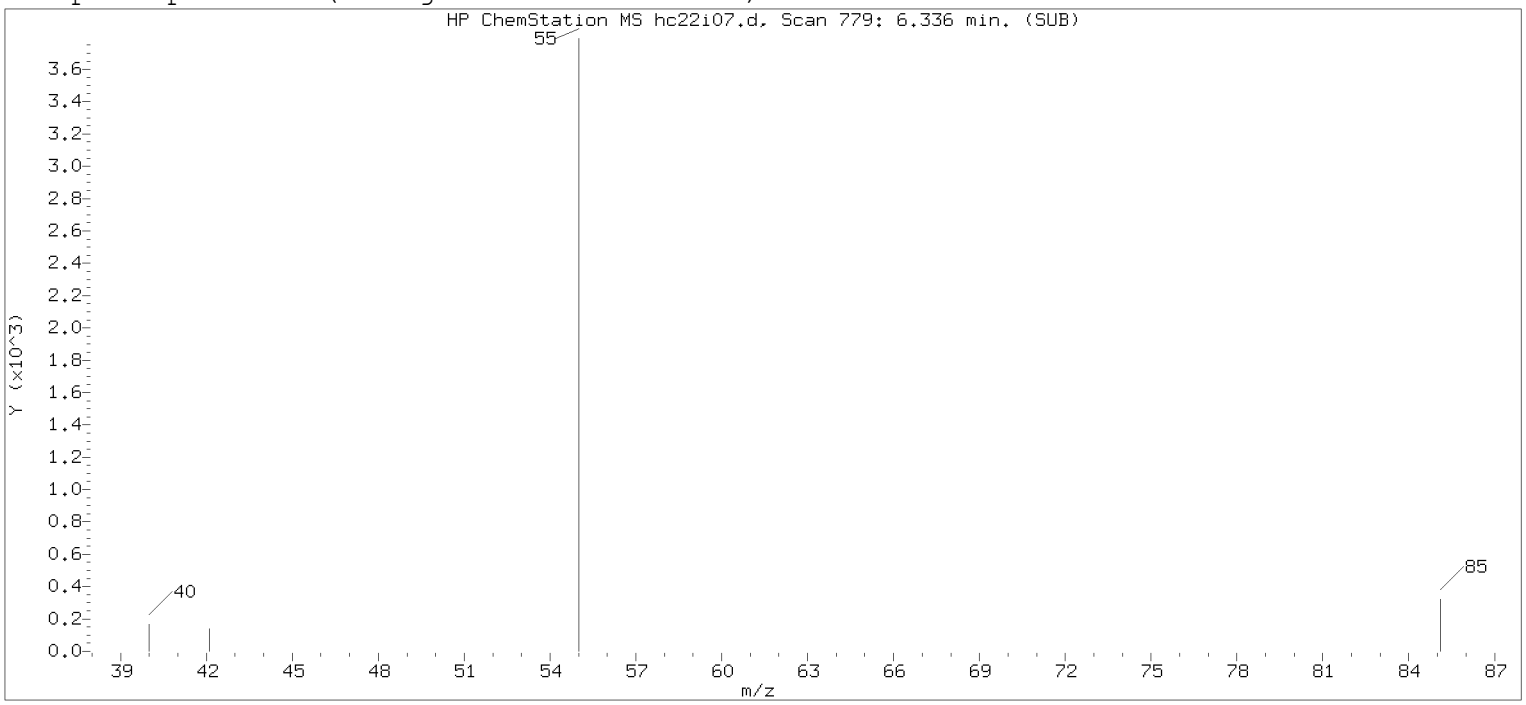
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 779
Retention Time (minutes): 6.336
Quant Ion : 55.00
Area (flag) : 18584M
On-Column Amount (ng) : 0.7649
Integration start scan : 768 Integration stop scan: 808
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

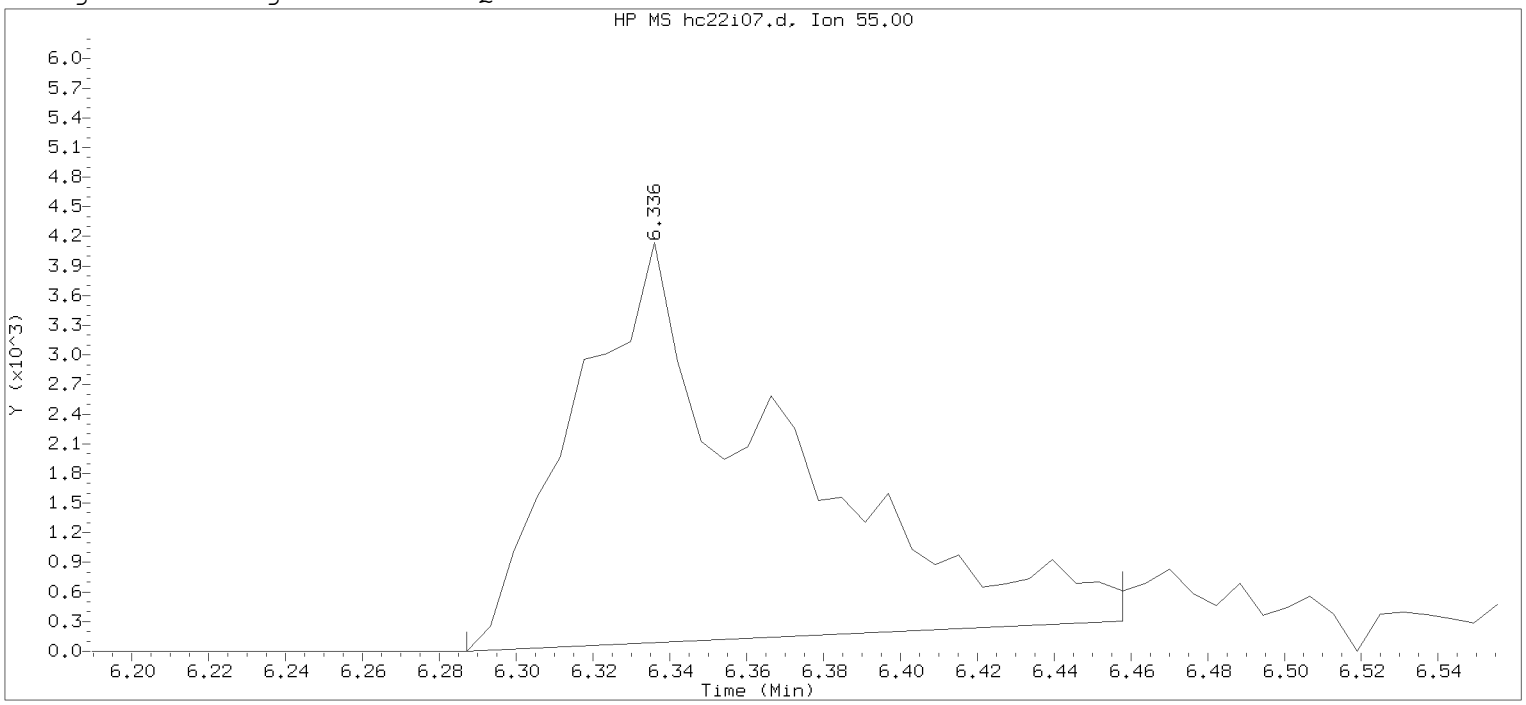
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

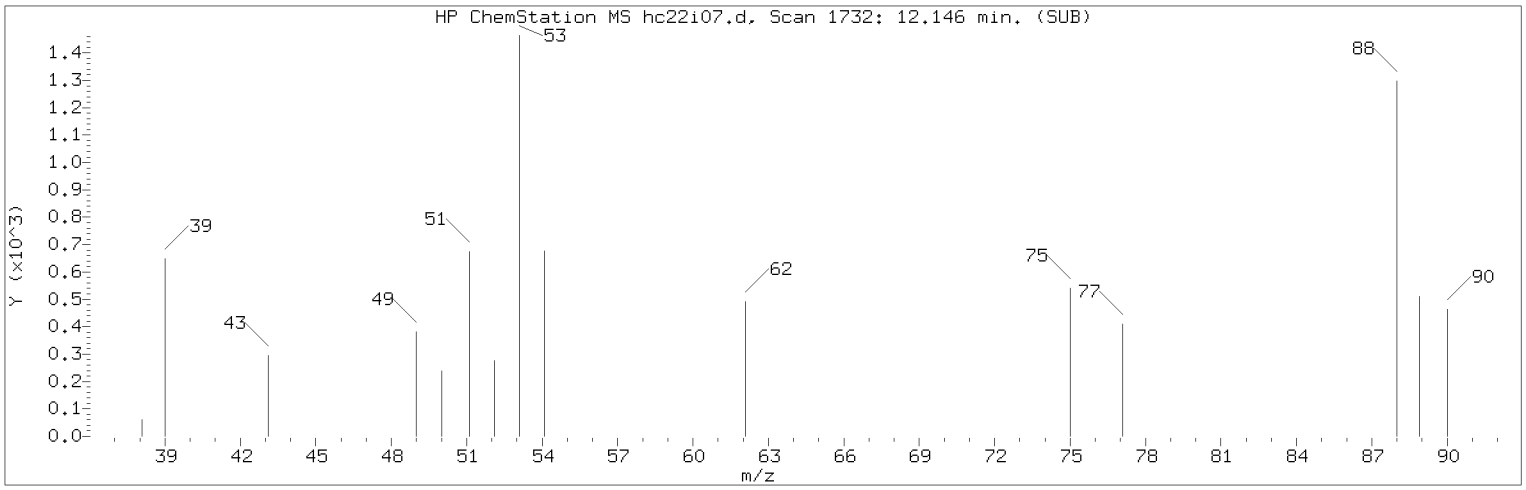
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:22
Date, time and analyst ID of latest file update: 22-Oct-2017 21:22 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

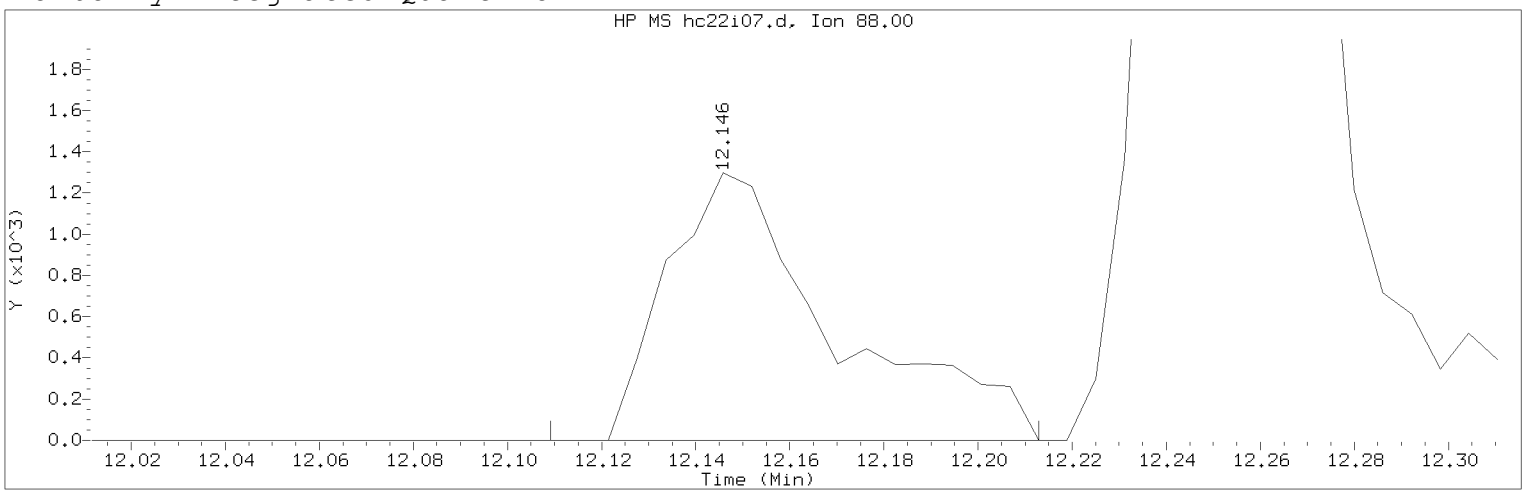
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 779
Retention Time (minutes): 6.336
Quant Ion : 55.00
Area : 15082
On-column Amount (ng) : 0.6339
Integration start scan : 770 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 305

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:52 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

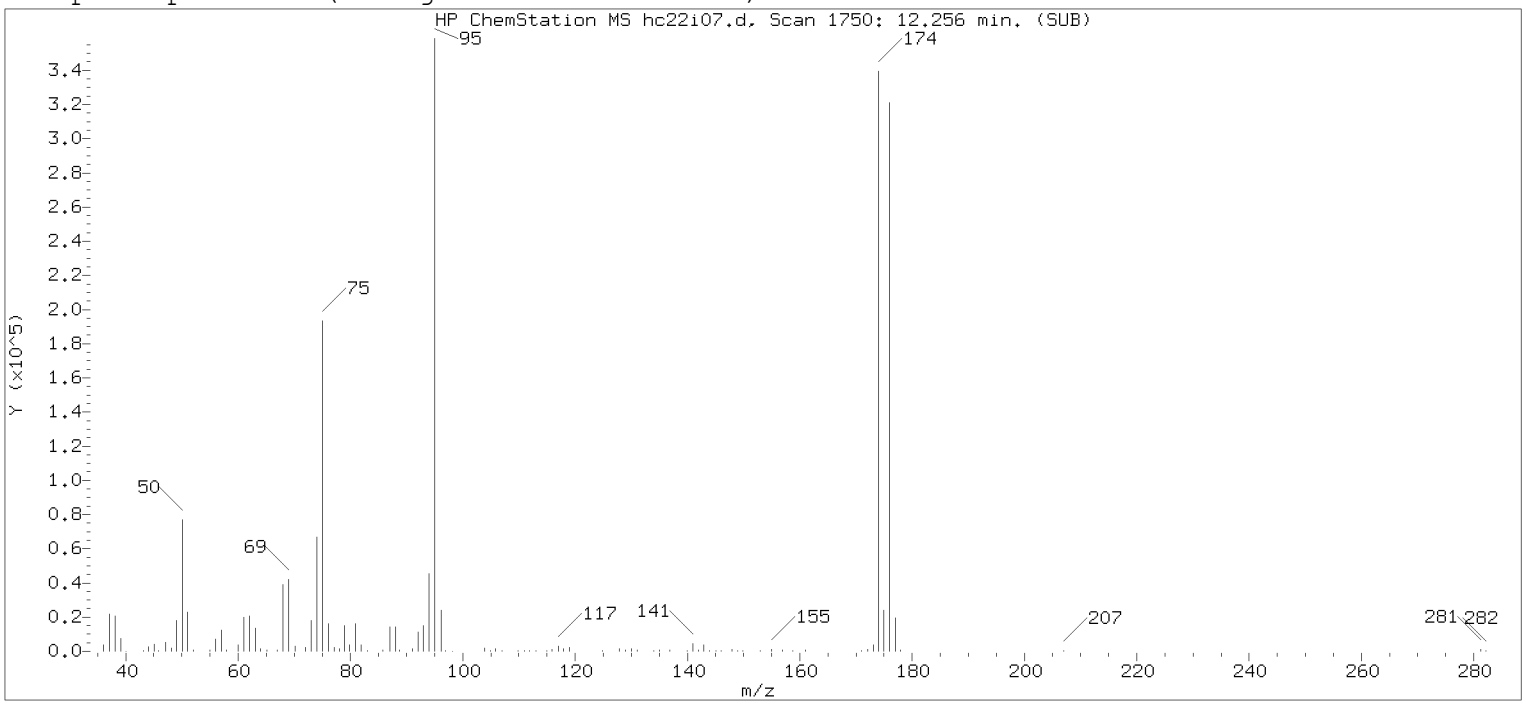
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1732
Retention Time (minutes): 12.146
Quant Ion : 88.00
Area (flag) : 3211M
On-Column Amount (ng) : 0.3218
Integration start scan : 1725 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

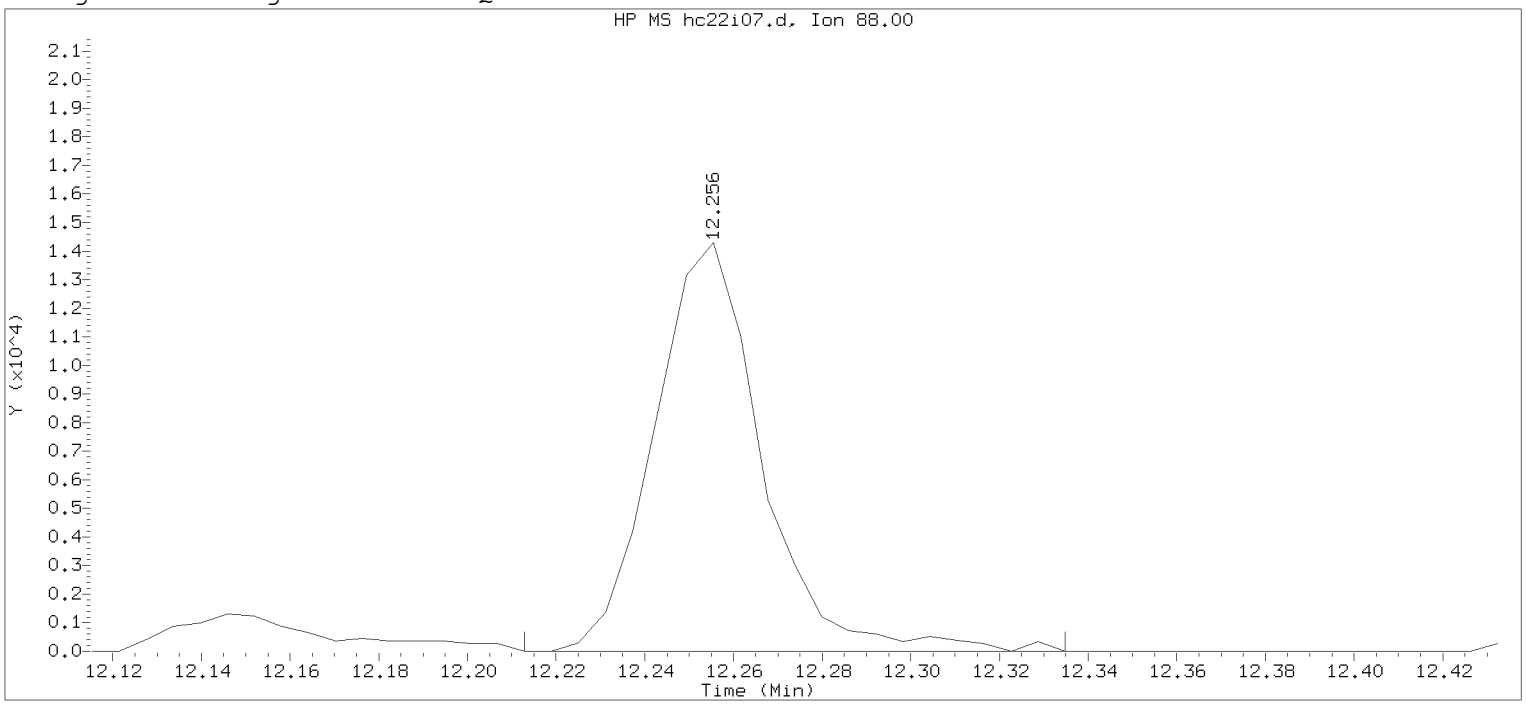
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 21:53.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 12:59.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



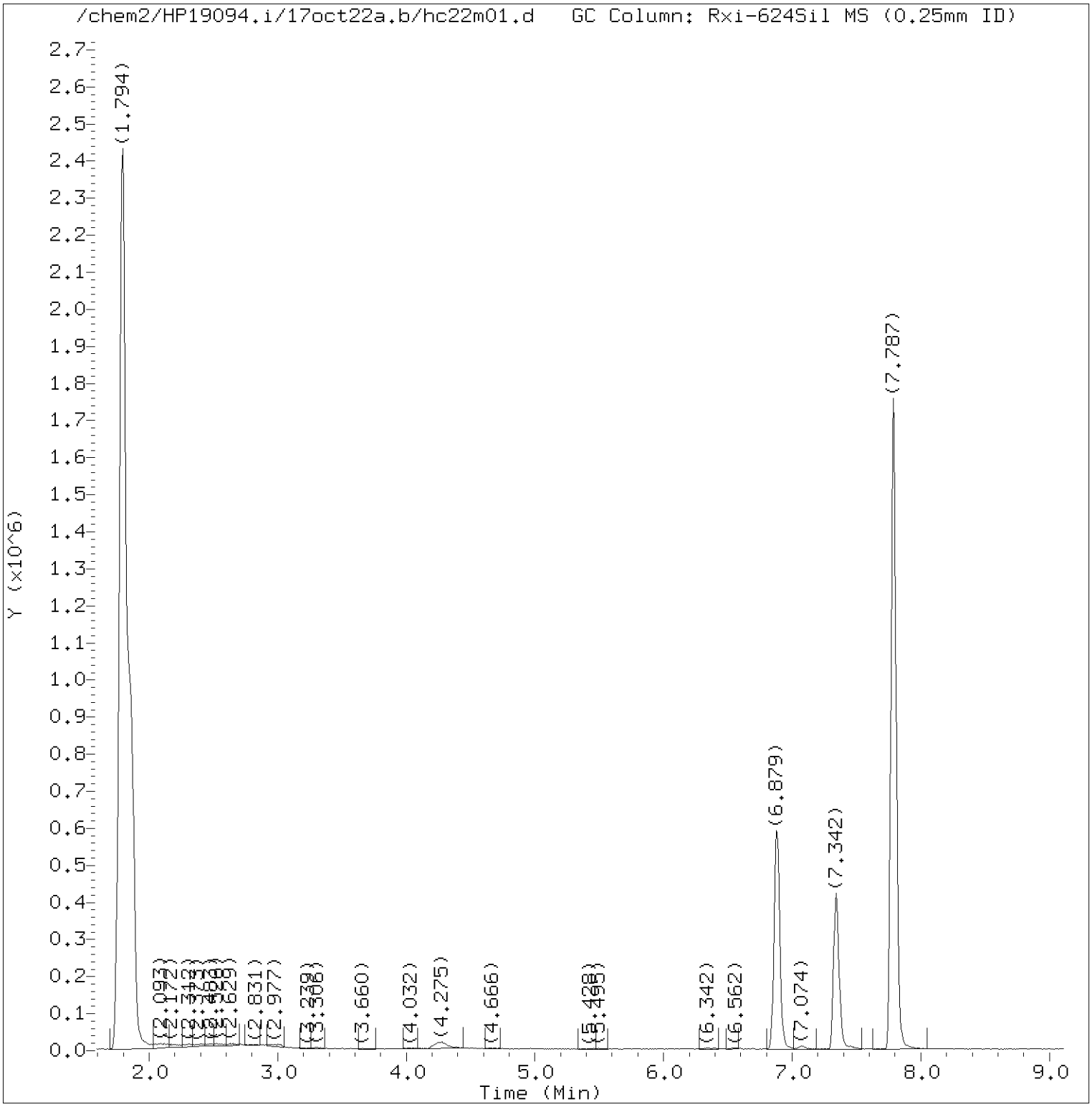
Data File: /chem2/HP19094.i/17oct22a.b/hc22i07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:04 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2017 21:22
Date, time and analyst ID of latest file update: 22-Oct-2017 21:22 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1750
Retention Time (minutes): 12.256
Quant Ion : 88.00
Area : 24044
On-column Amount (ng) : 2.3348
Integration start scan : 1742 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 21:53.
Target 3.5 esignature used on 10/20/2017.



Total Ion Chromatogram (TIC)

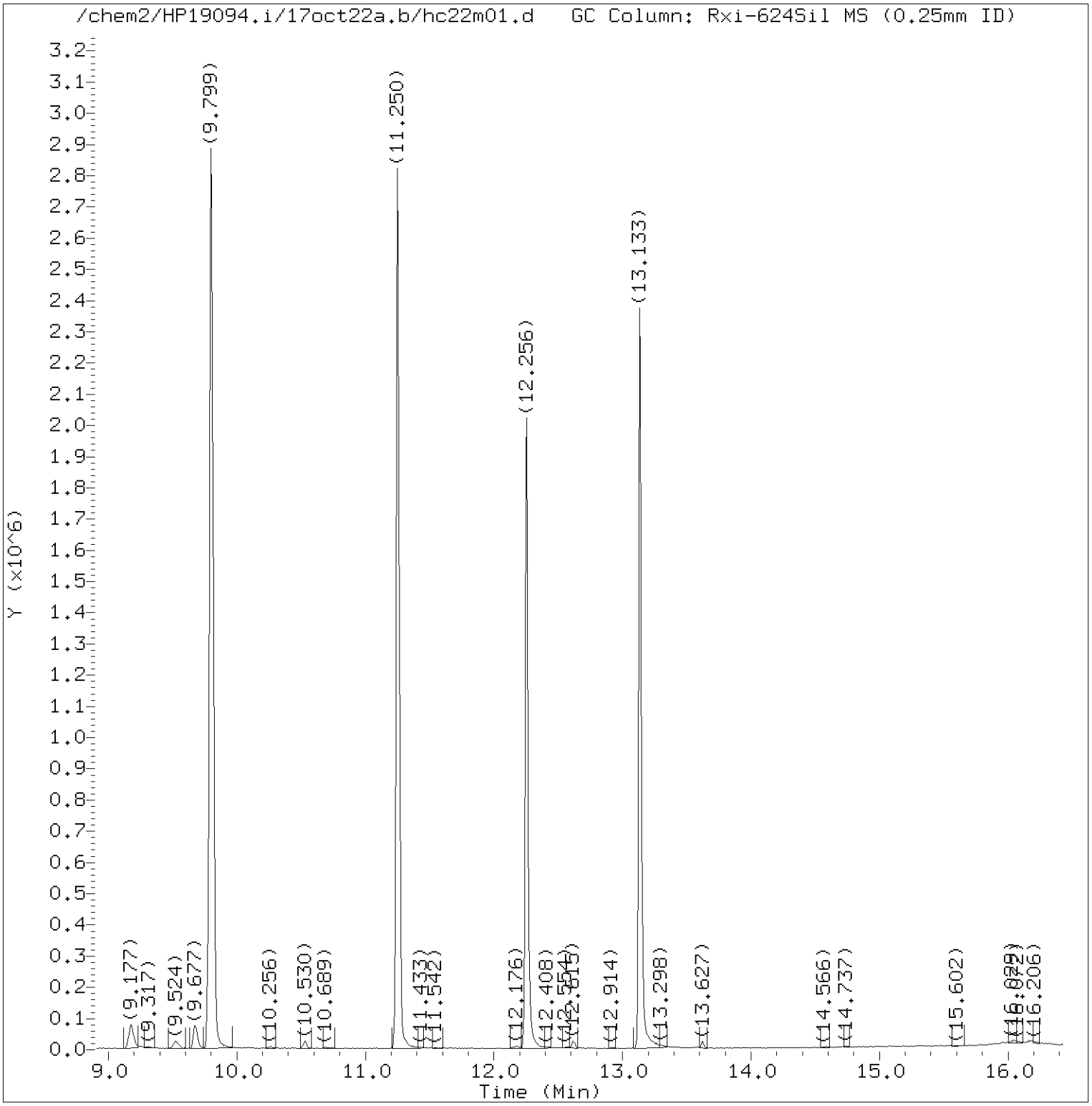
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

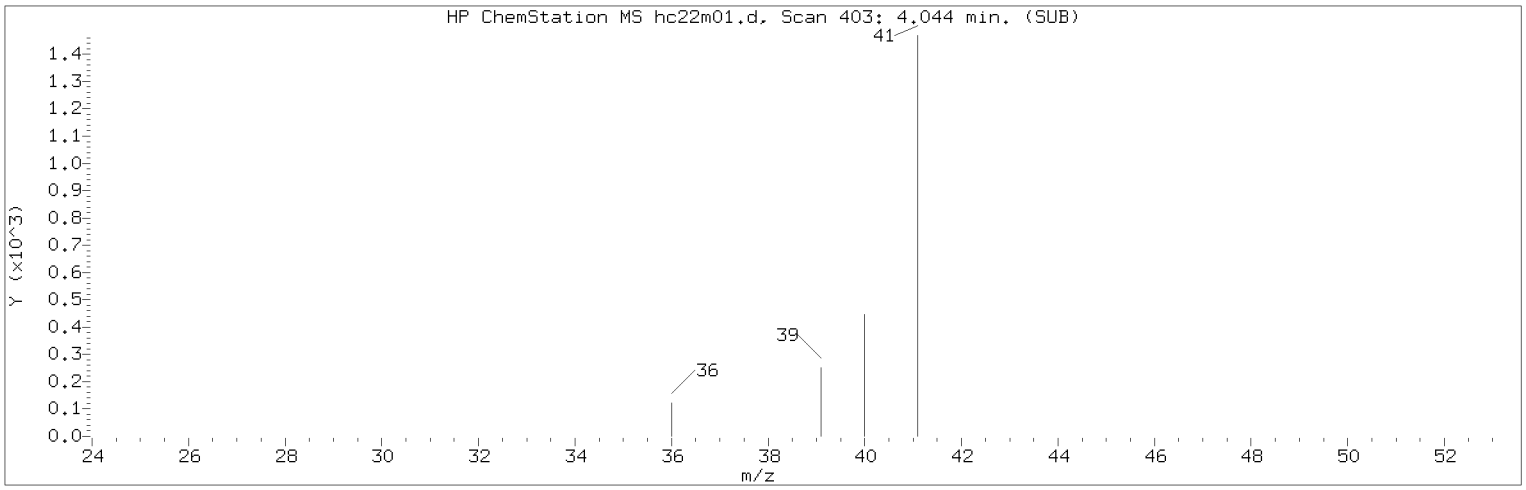
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	11671	0.127
25) Acetonitrile	(1)	4.044	41	18846M	5.074
26)*t-Butyl Alcohol-d10	(1)	4.257	65	87399	50.000
36) Vinyl Acetate	(2)	5.452	43	4307M	0.064
43) Methyl Acrylate	(2)	6.342	55	8947	0.364
50)$Dibromofluoromethane	(2)	6.885	113	530623	0.000
53) 1-Chlorobutane	(2)	7.068	56	10230	0.090
57)$1,2-Dichloroethane-d4	(2)	7.342	102	85244	0.000
63)*Fluorobenzene	(2)	7.787	96	2251679	10.000
77) Chloroacetonitrile	(2)	9.256	75	3970	3.221
78) 2-Chloroethyl vinyl ether	(2)	9.323	63	2019	0.086
82)$Toluene-d8	(3)	9.799	98	2244924	0.000
97)*Chlorobenzene-d5	(3)	11.250	117	1491069	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	1449M	0.128
112) Cyclohexanone	(1)	12.176	55	3613M	3.795
111)$4-Bromofluorobenzene	(3)	12.256	95	614847	0.000
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	609828	10.000
142) Hexachloroethane	(4)	13.627	117	3190	0.080

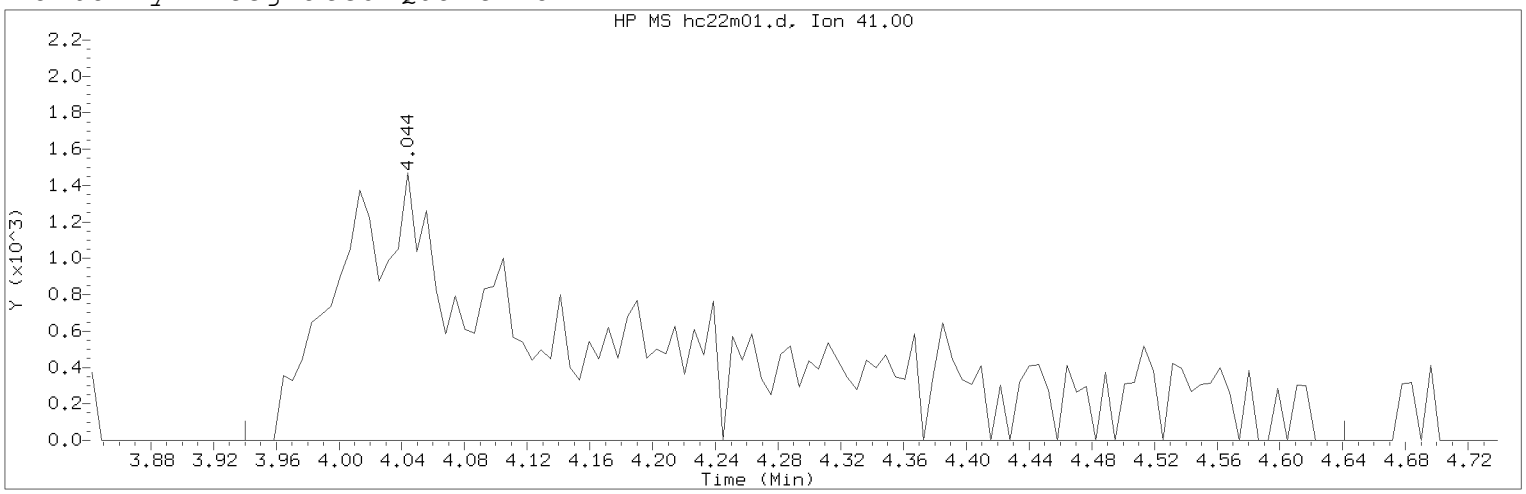
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

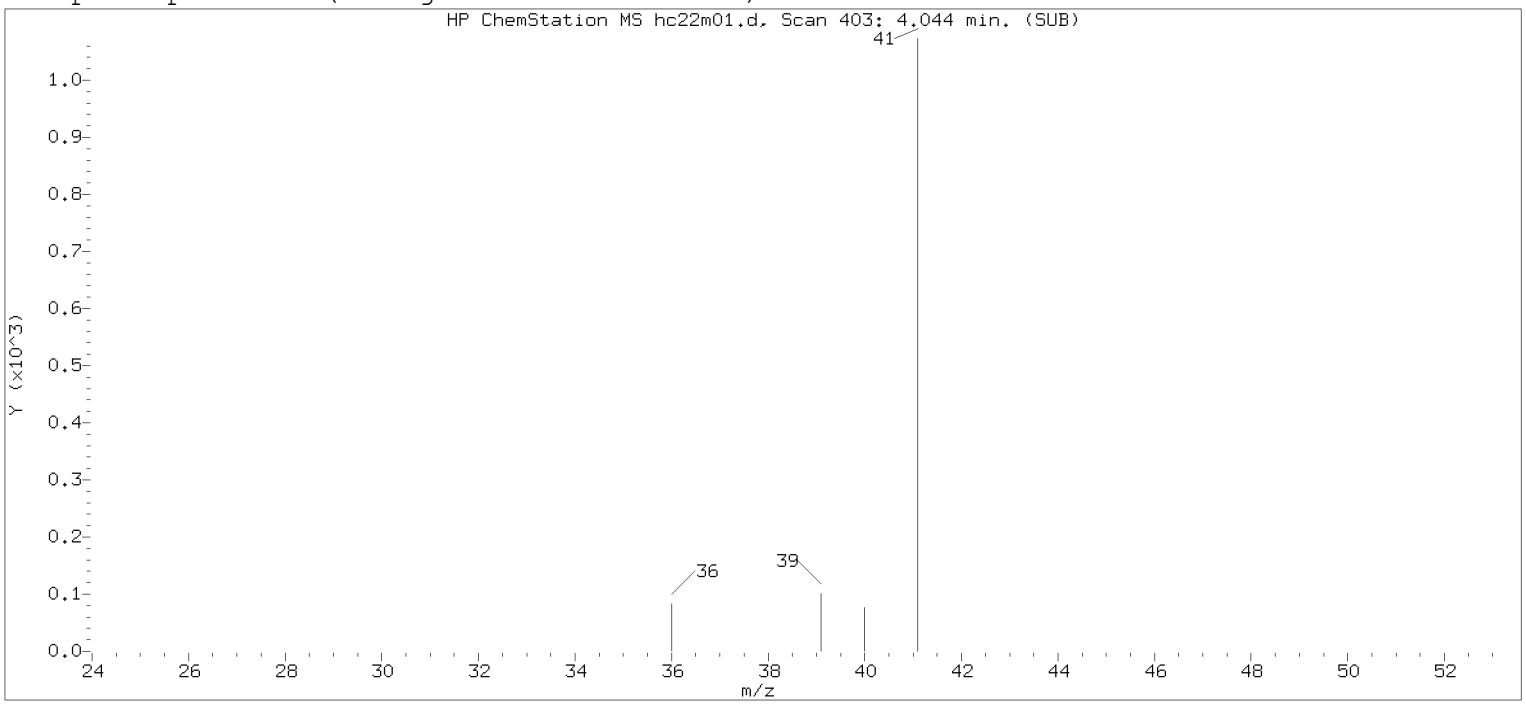
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 403
Retention Time (minutes): 4.044
Quant Ion : 41.00
Area (flag) : 18846M
On-Column Amount (ng) : 5.0739
Integration start scan : 385 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

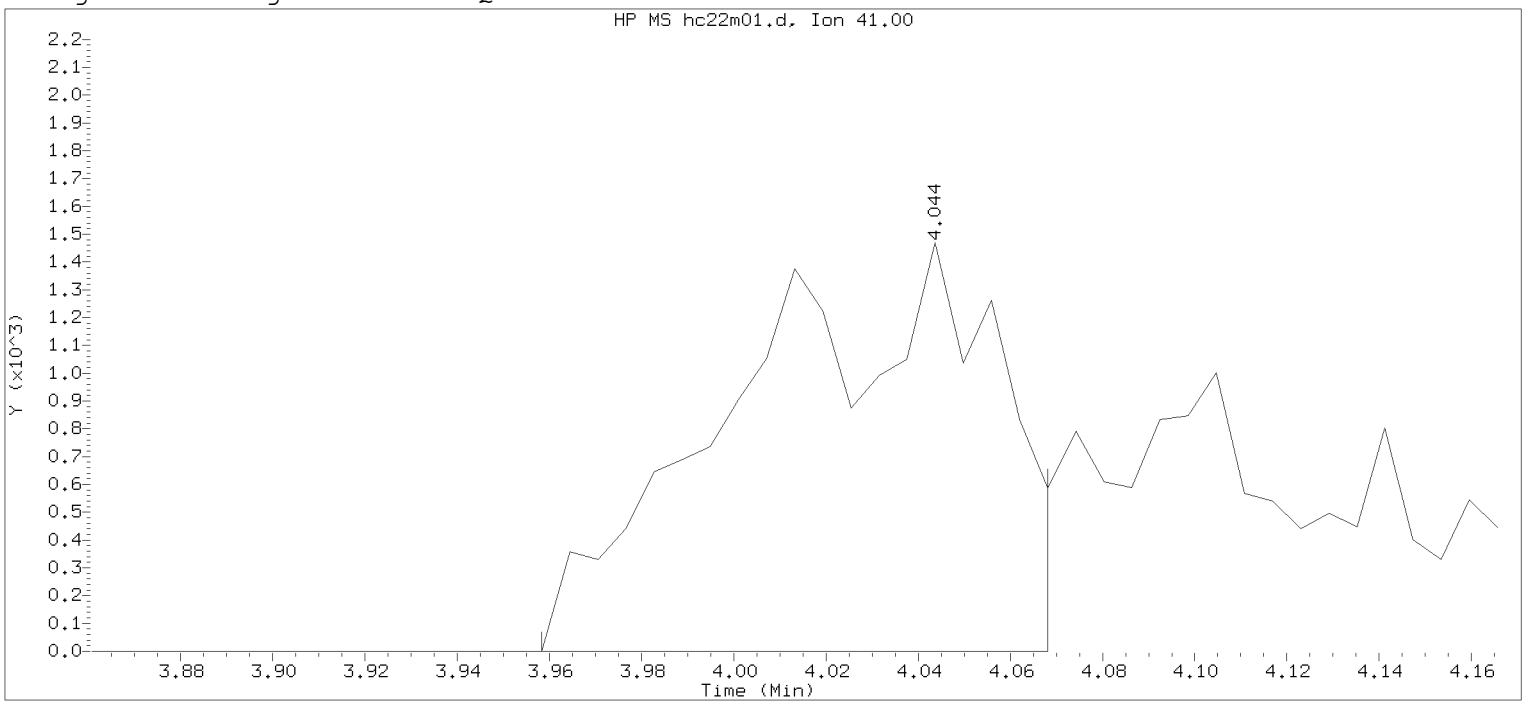
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

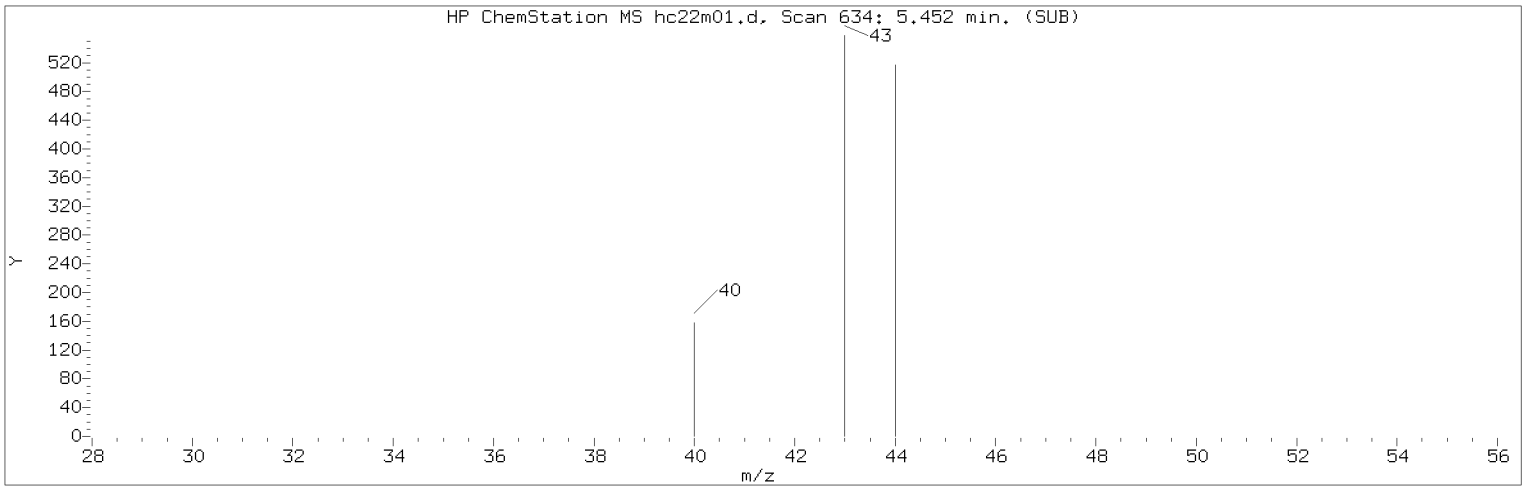
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:30
Date, time and analyst ID of latest file update: 22-Oct-2017 21:42 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

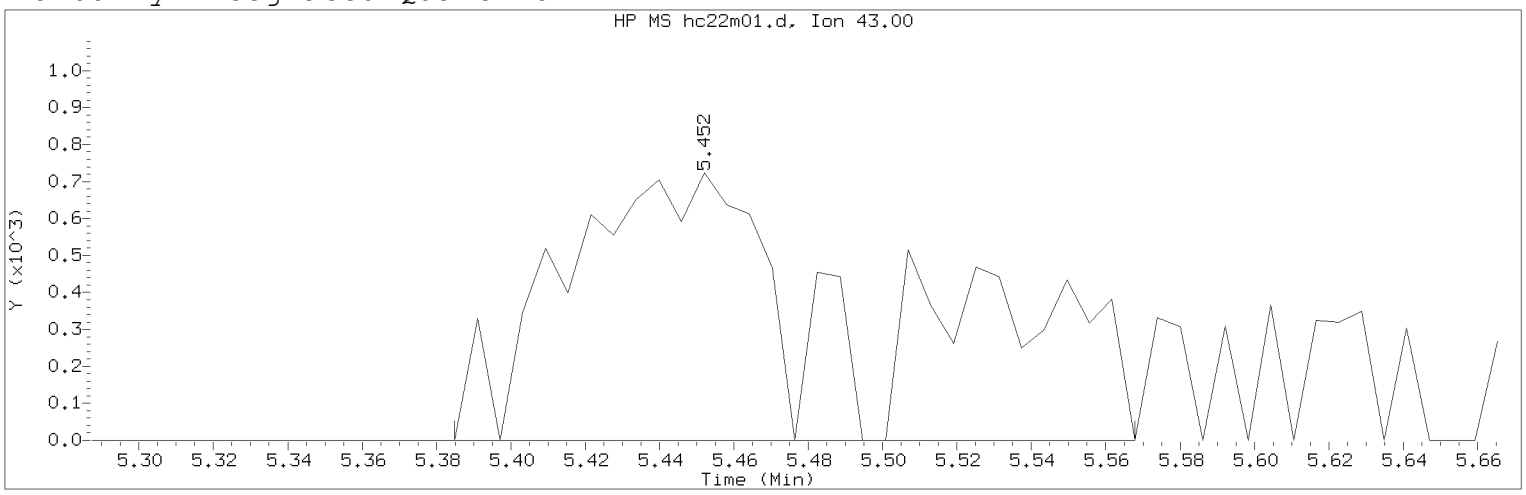
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 403
Retention Time (minutes): 4.044
Quant Ion : 41.00
Area : 5694
On-column Amount (ng) : 1.5330
Integration start scan : 388 Integration stop scan: 406
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/23/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

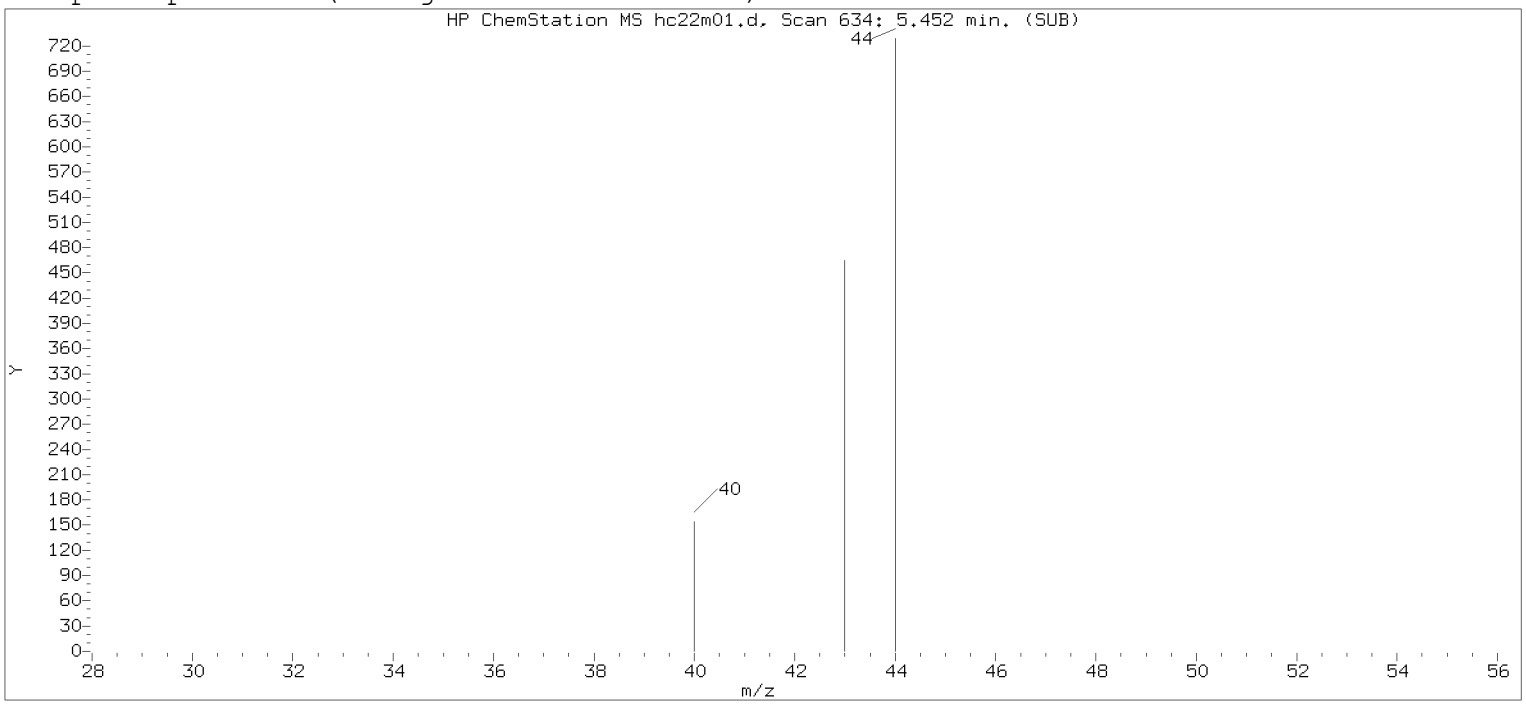
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 634
Retention Time (minutes): 5.452
Quant Ion : 43.00
Area (flag) : 4307M
On-Column Amount (ng) : 0.0643
Integration start scan : 622 Integration stop scan: 652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

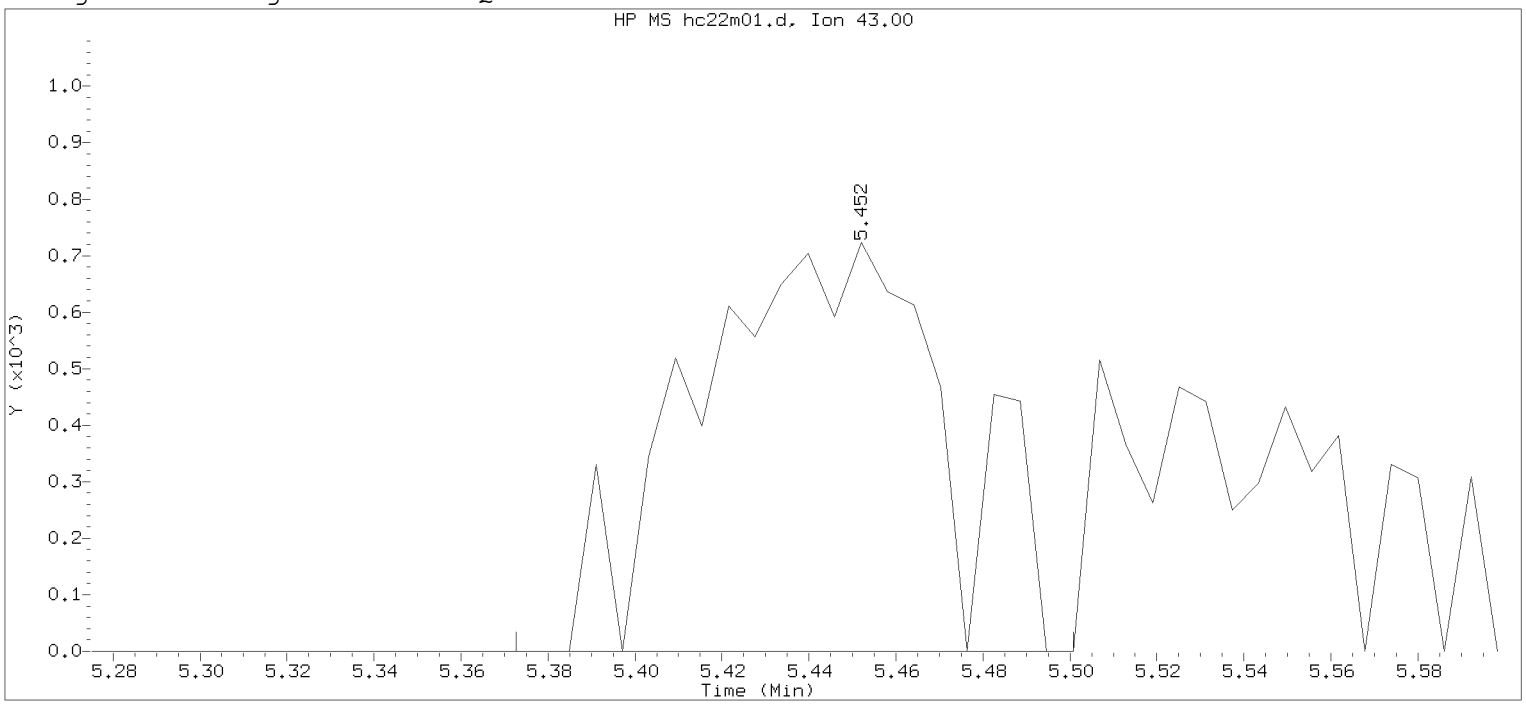
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

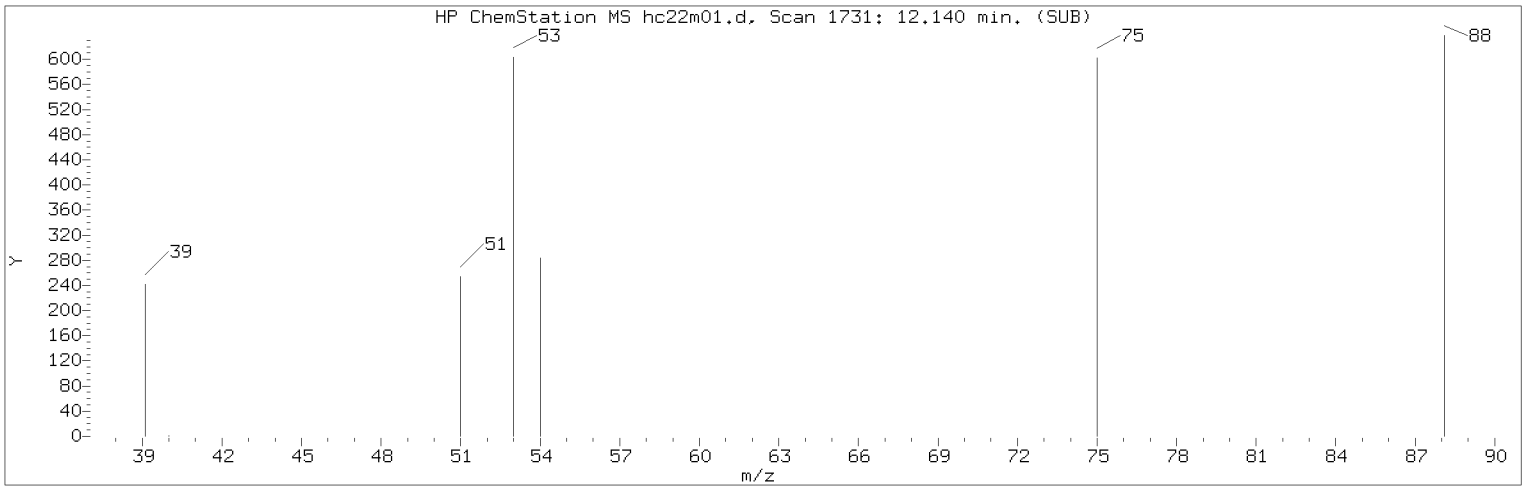
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:30
Date, time and analyst ID of latest file update: 22-Oct-2017 21:42 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

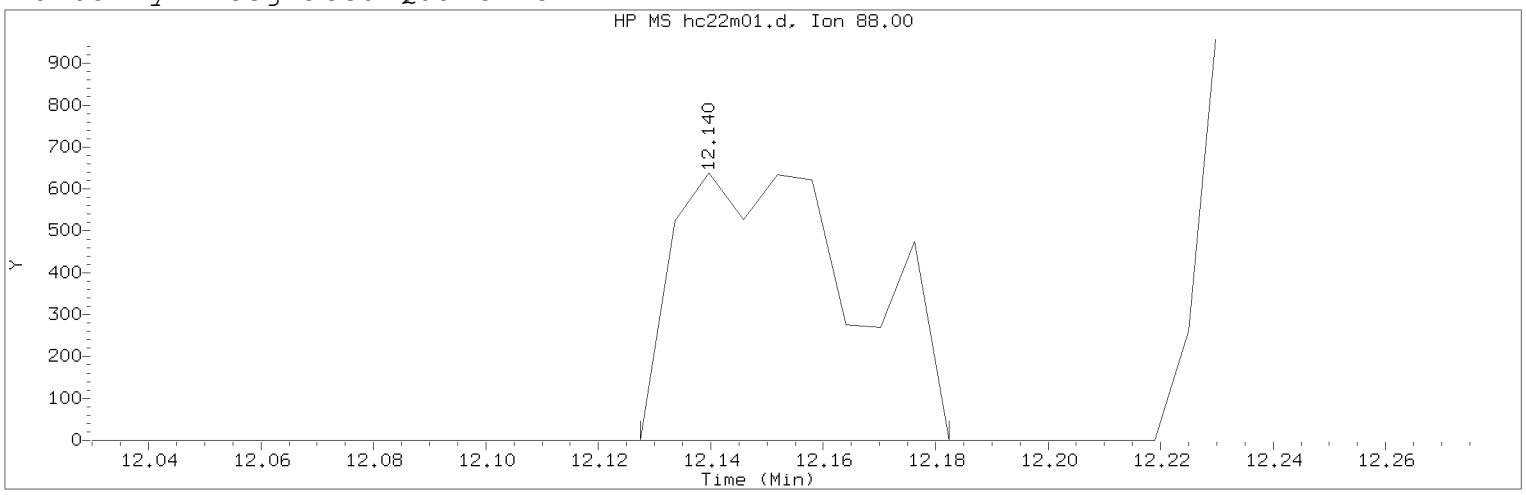
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 634		
Retention Time (minutes)	: 5.452		
Quant Ion	: 43.00		
Area	: 2941		
On-column Amount (ng)	: 0.0439		
Integration start scan	: 620	Integration stop scan:	641
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

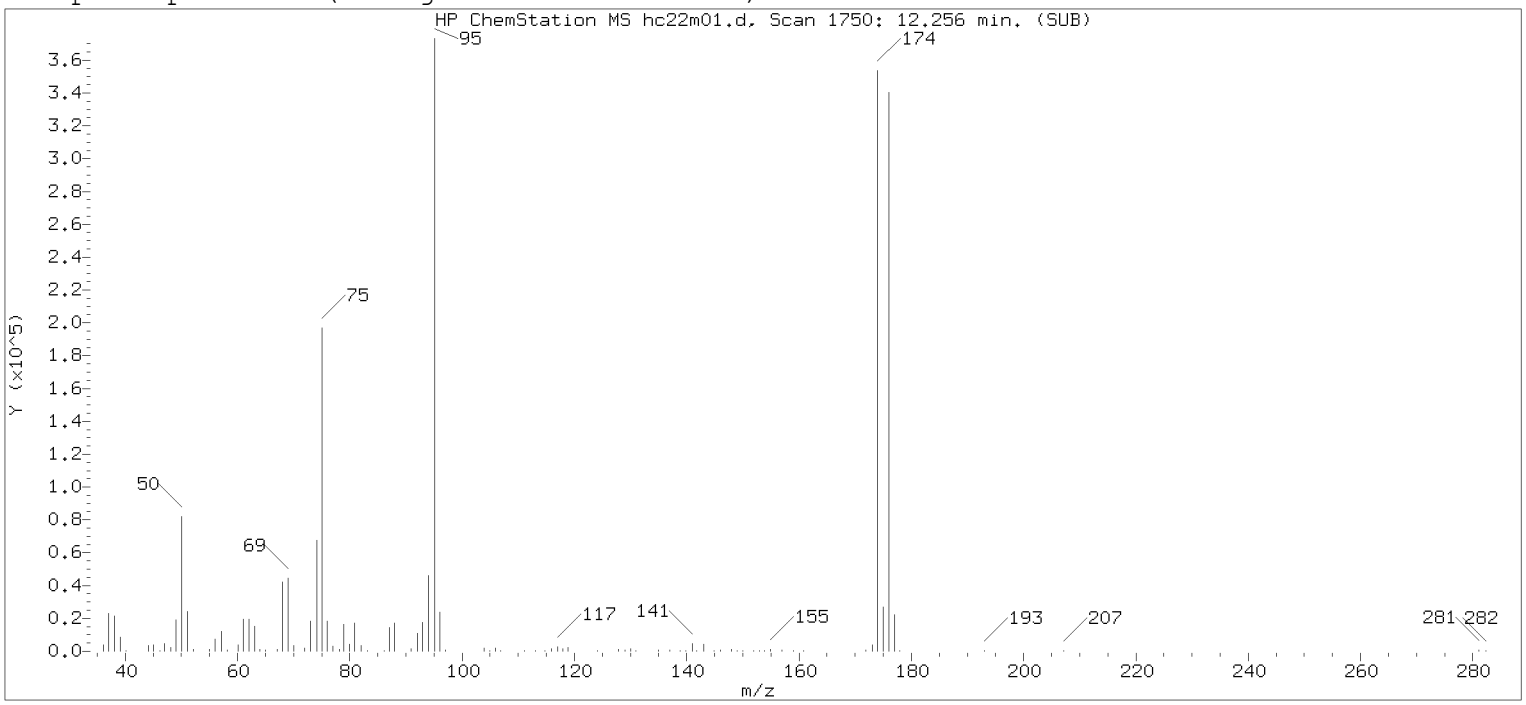
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1731
Retention Time (minutes): 12.140
Quant Ion : 88.00
Area (flag) : 1449M
On-Column Amount (ng) : 0.1279
Integration start scan : 1728 Integration stop scan: 1737
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

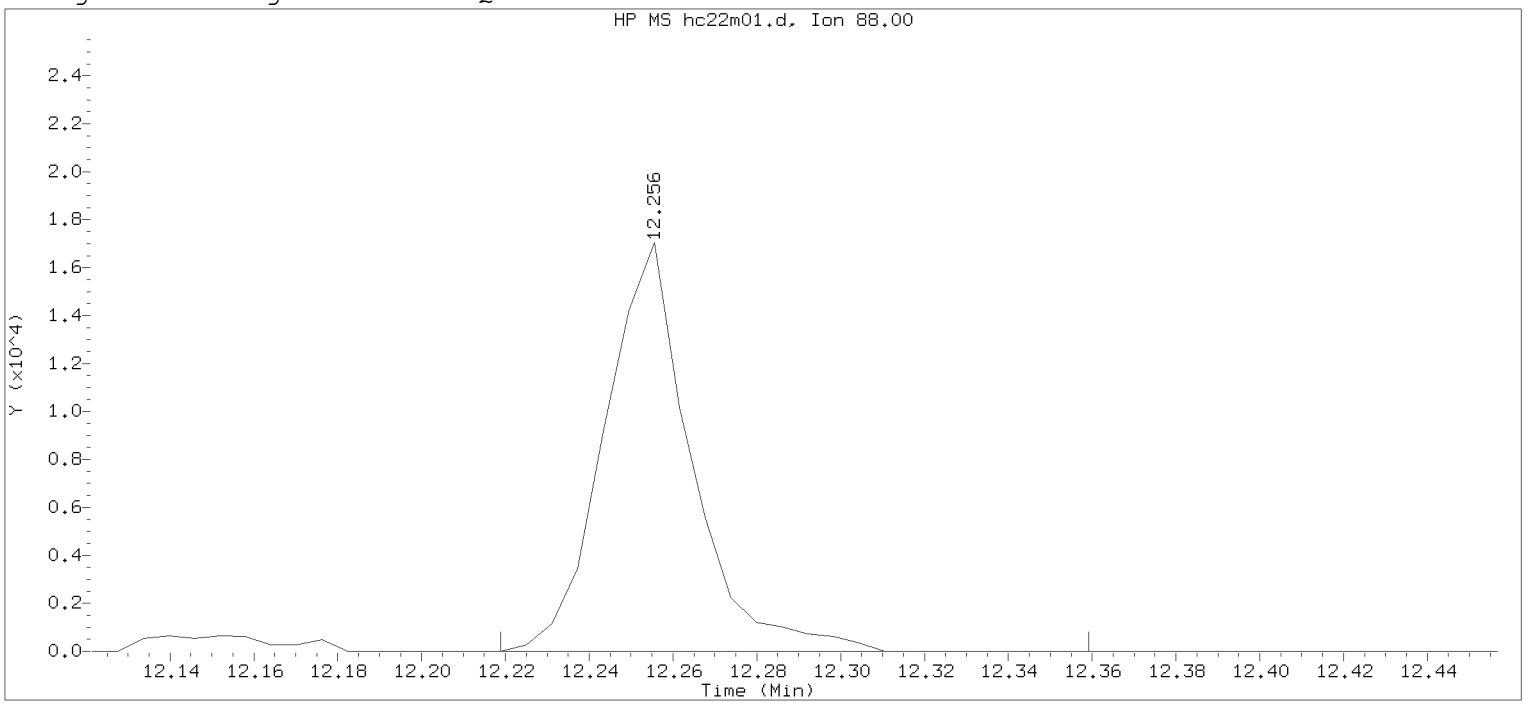
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

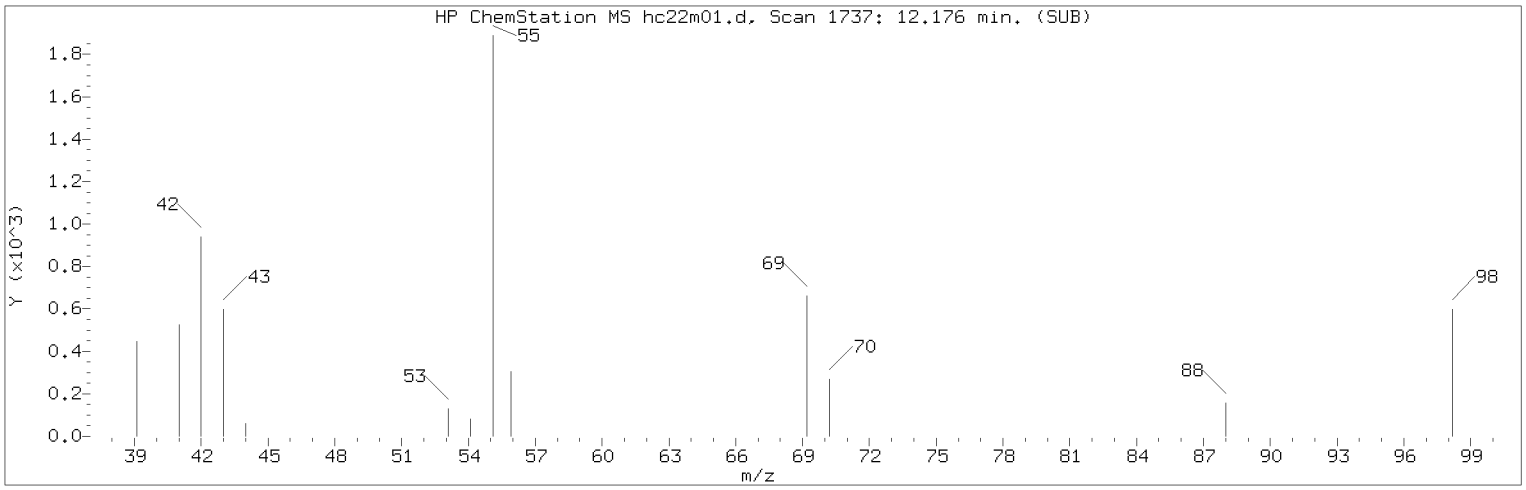
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:30
Date, time and analyst ID of latest file update: 22-Oct-2017 21:42 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

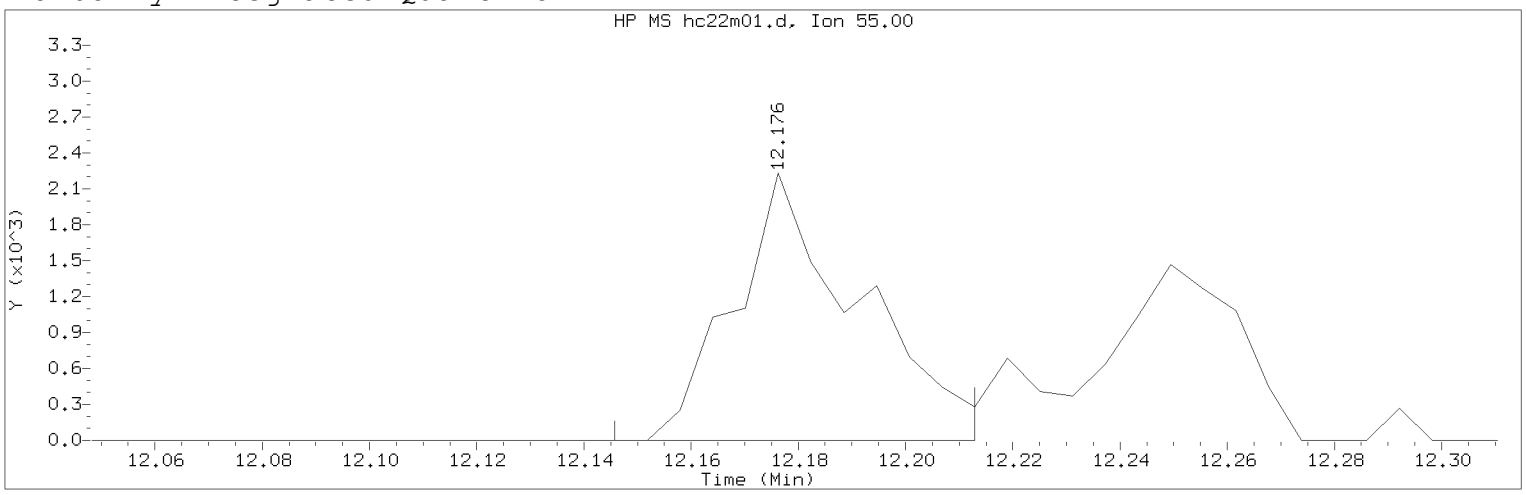
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1750
Retention Time (minutes): 12.256
Quant Ion : 88.00
Area : 24580
On-column Amount (ng) : 2.1700
Integration start scan : 1743 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:52
Date, time and analyst ID of latest file update: 22-Oct-2017 21:55 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

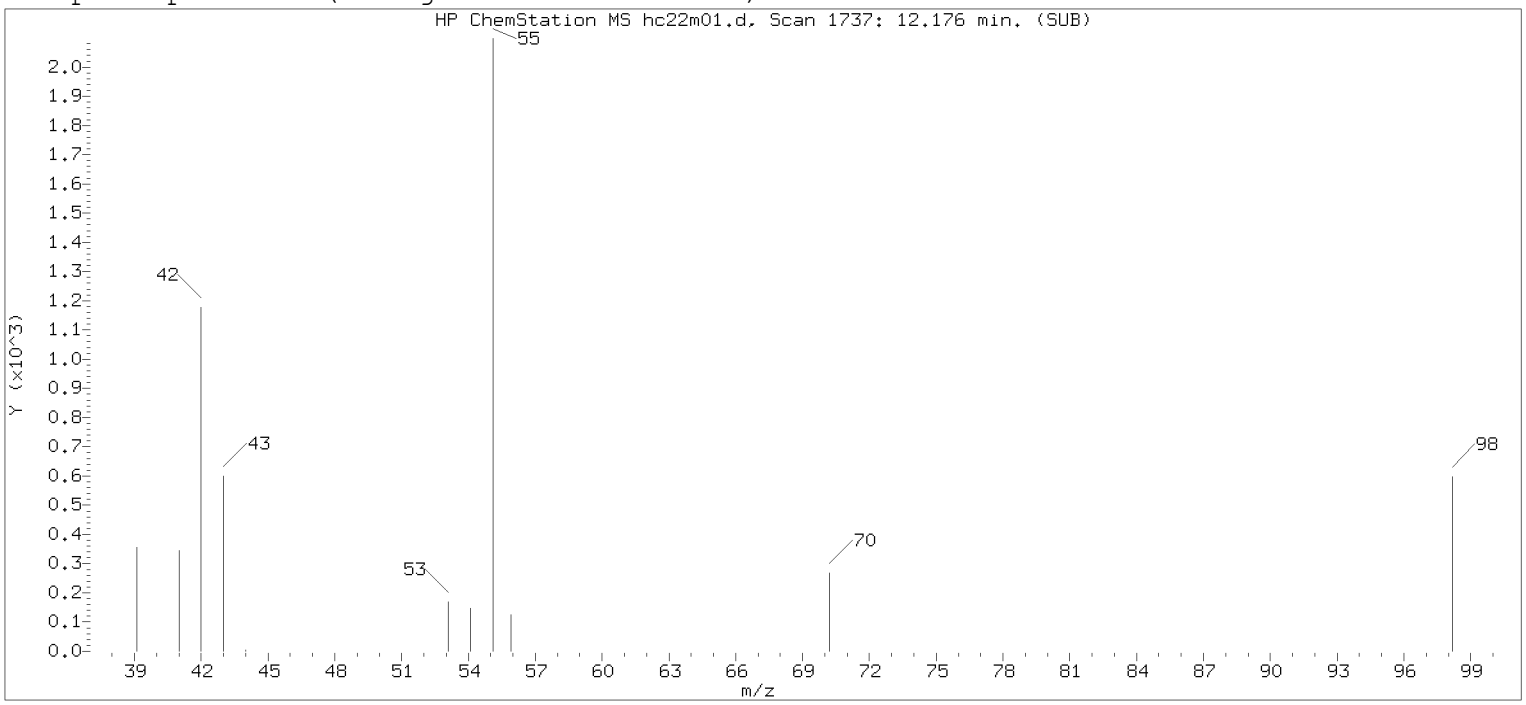
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1737
Retention Time (minutes): 12.176
Quant Ion : 55.00
Area (flag) : 3613M
On-Column Amount (ng) : 3.7953
Integration start scan : 1731 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

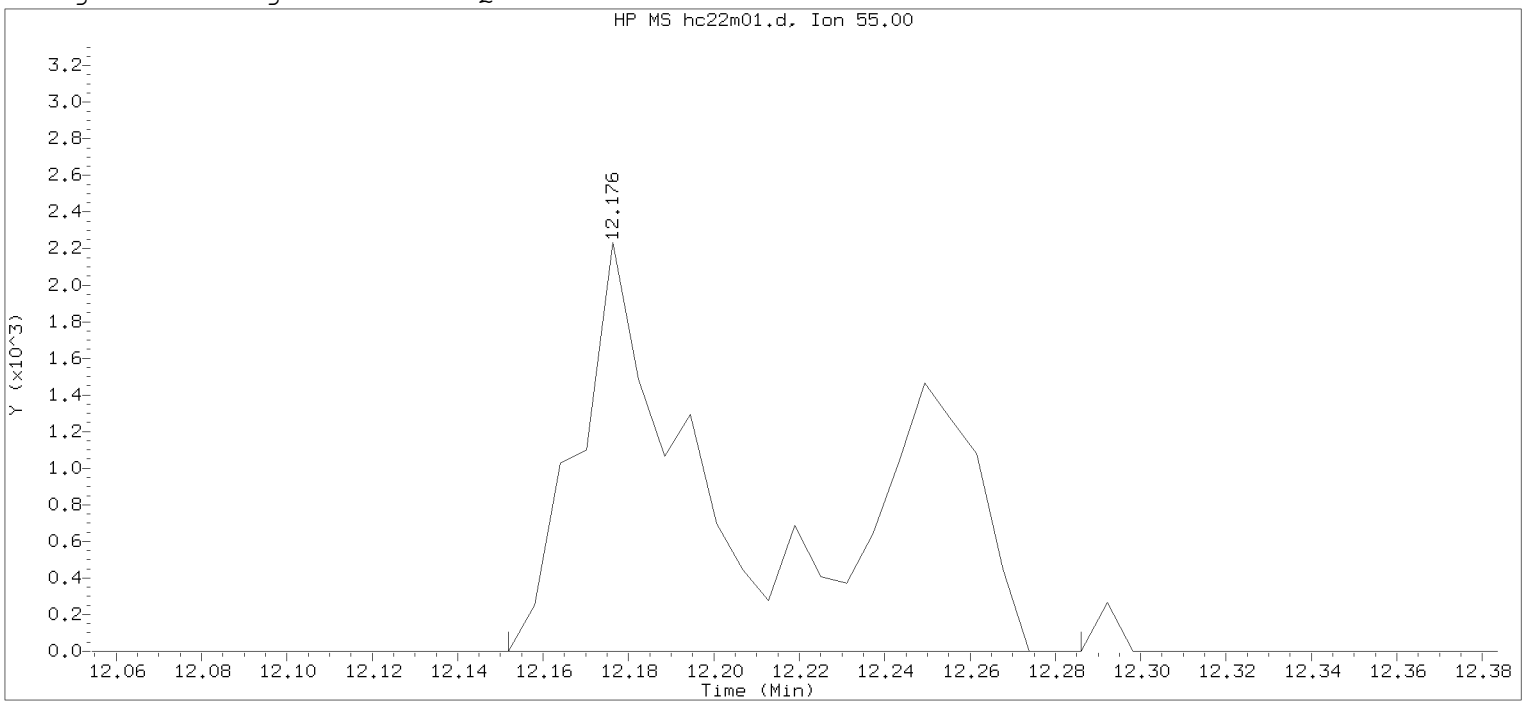
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



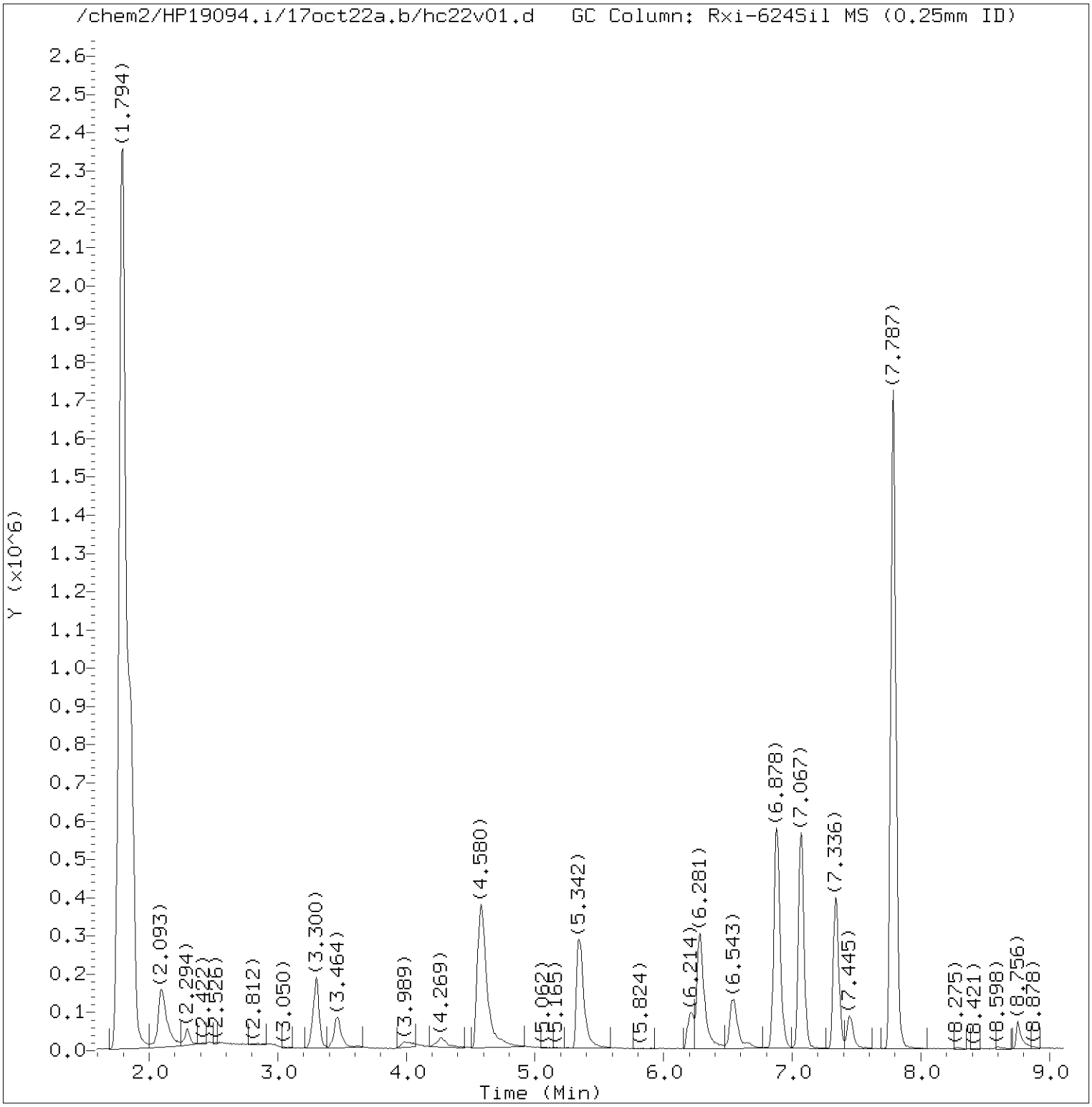
Data File: /chem2/HP19094.i/17oct22a.b/hc22m01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:24 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 21:30
Date, time and analyst ID of latest file update: 22-Oct-2017 21:42 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1737		
Retention Time (minutes)	: 12.176		
Quant Ion	: 55.00		
Area	: 6319		
On-column Amount (ng)	: 6.6385		
Integration start scan	: 1732	Integration stop scan:	1754
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/22/2017



Total Ion Chromatogram (TIC)

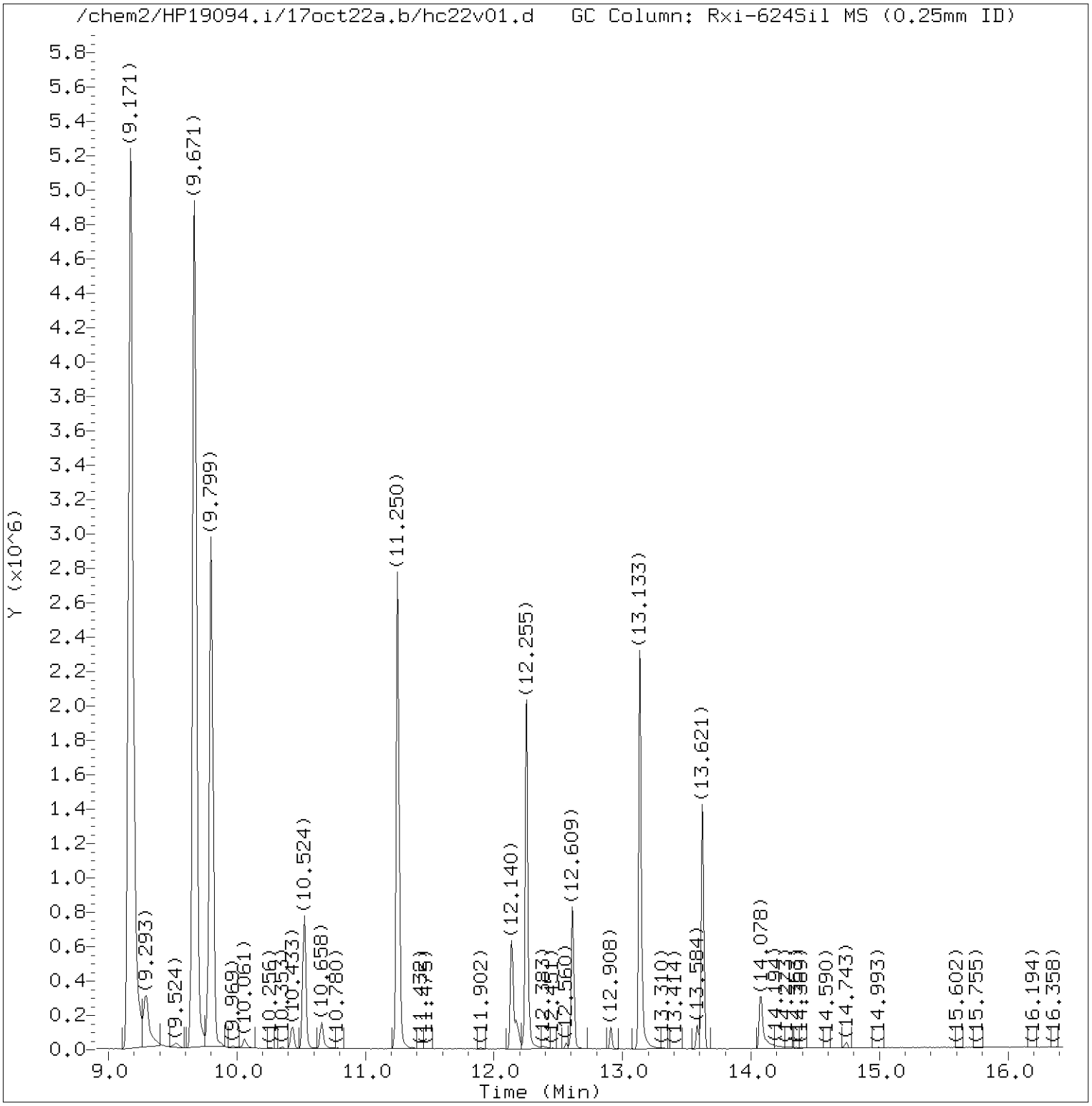
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

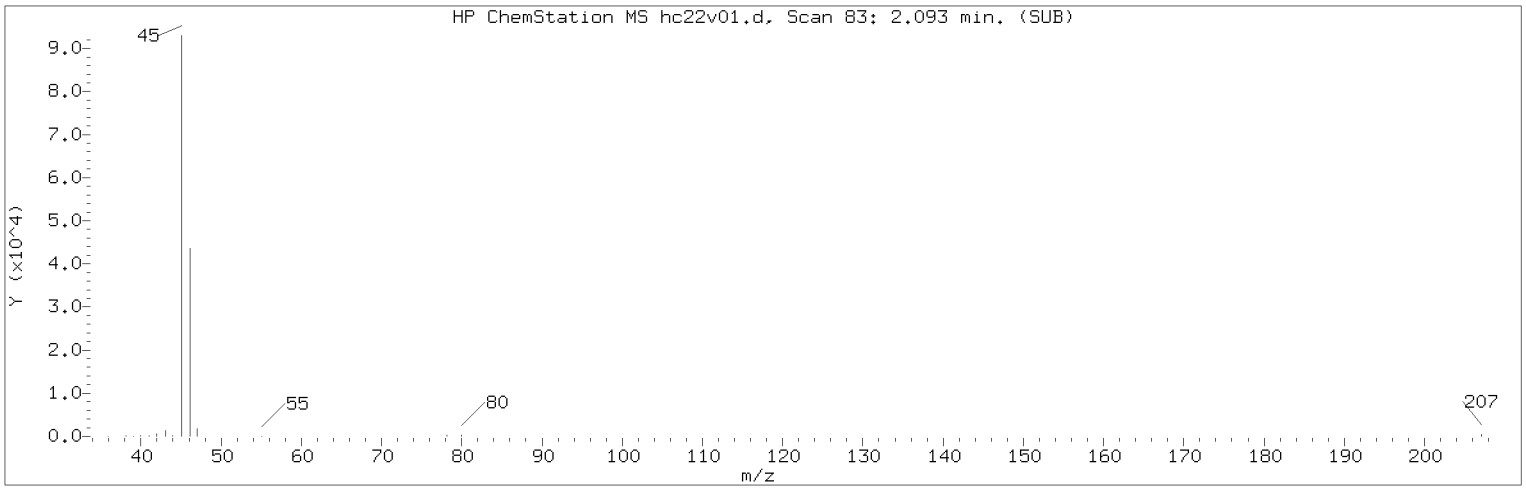
Sample Name: LCSHSM Lab Sample ID: LCSHSM

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	440001M	4.808
25) Acetonitrile	(1)	3.983	41	123992M	43.295
26)*t-Butyl Alcohol-d10	(1)	4.263	65	67388M	50.000
36) Vinyl Acetate	(2)	5.348	43	942172	14.157
43) Methyl Acrylate	(2)	6.281	55	653097	26.778
50)$Dibromofluoromethane	(2)	6.872	113	513295	9.503
53) 1-Chlorobutane	(2)	7.074	56	650544	5.760
57)$1,2-Dichloroethane-d4	(2)	7.342	102	81777	9.668
63)*Fluorobenzene	(2)	7.787	96	2236670	10.000
77) Chloroacetonitrile	(2)	9.213	75	277202M	226.382
78) 2-Chloroethyl vinyl ether	(2)	9.299	63	120944	5.207
82)$Toluene-d8	(3)	9.799	98	2267163	10.625
97)*Chlorobenzene-d5	(3)	11.250	117	1468248	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	141820A	16.238
112) Cyclohexanone	(1)	12.176	55	82509A	112.409
111)$4-Bromofluorobenzene	(3)	12.249	95	611637	9.437
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	595301	10.000
142) Hexachloroethane	(4)	13.621	117	216527	5.564

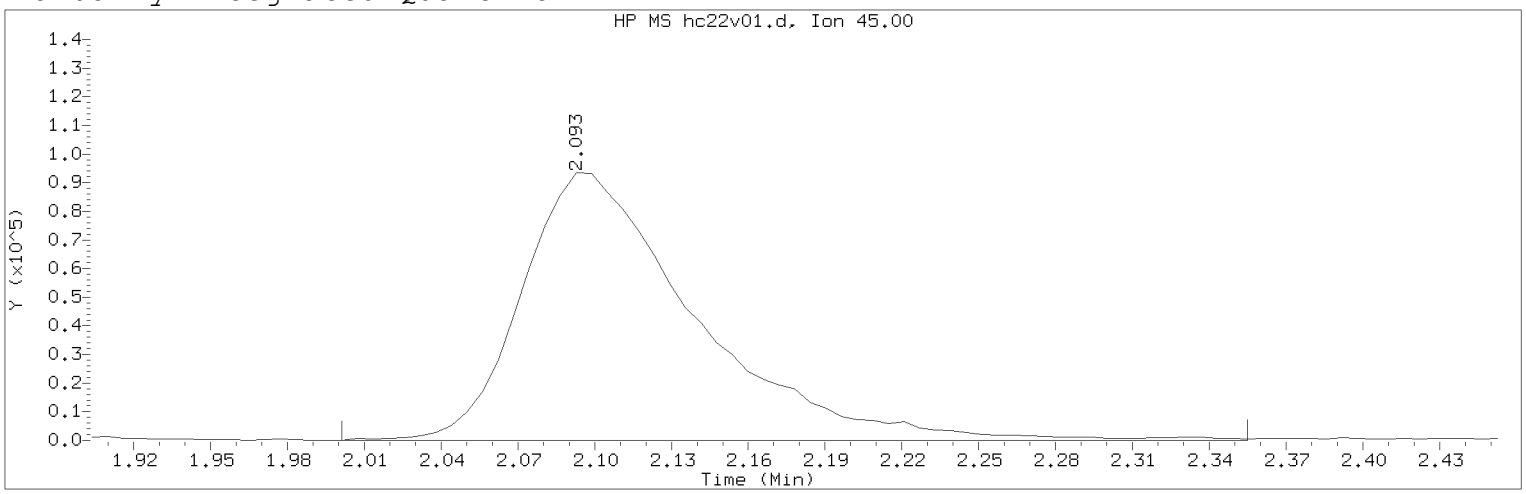
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

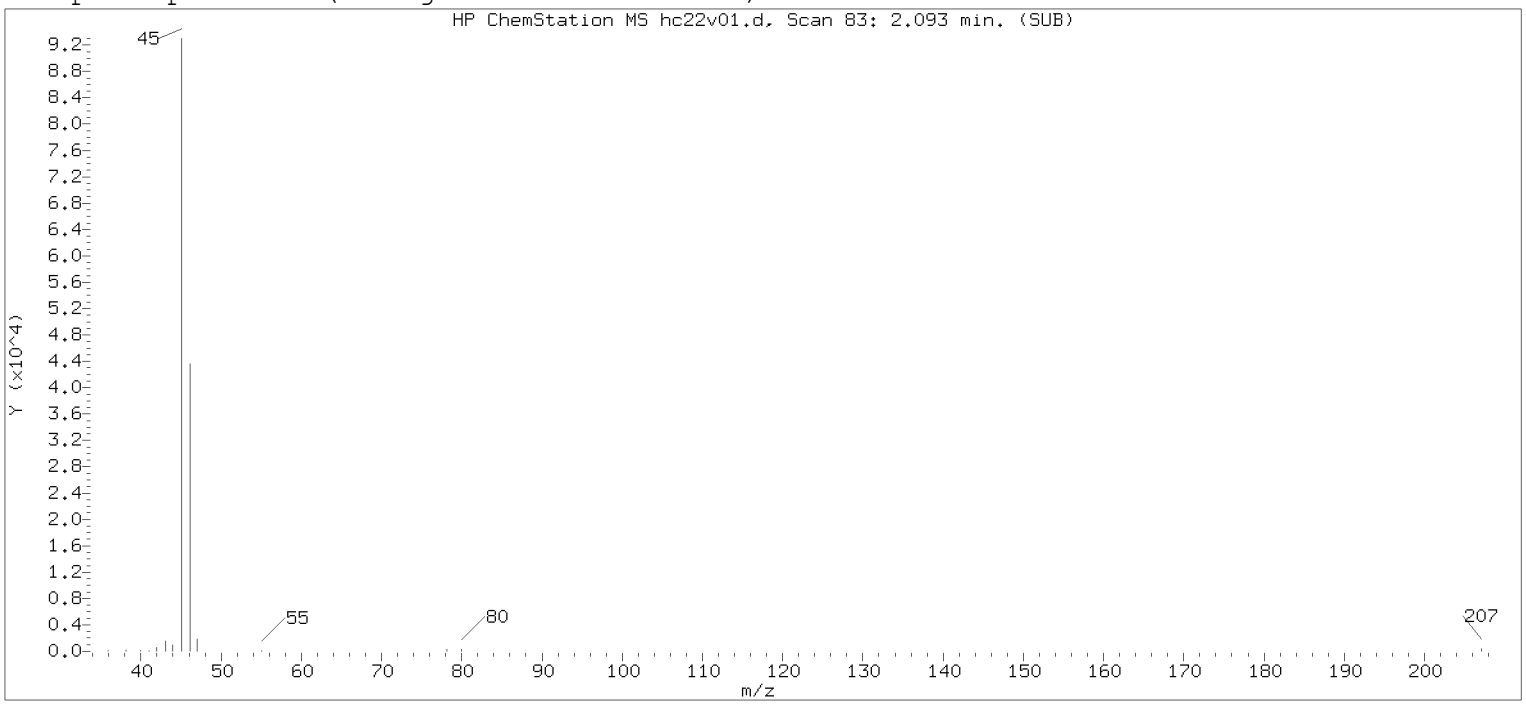
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 440001M
On-Column Amount (ng) : 4.8083
Integration start scan : 67 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

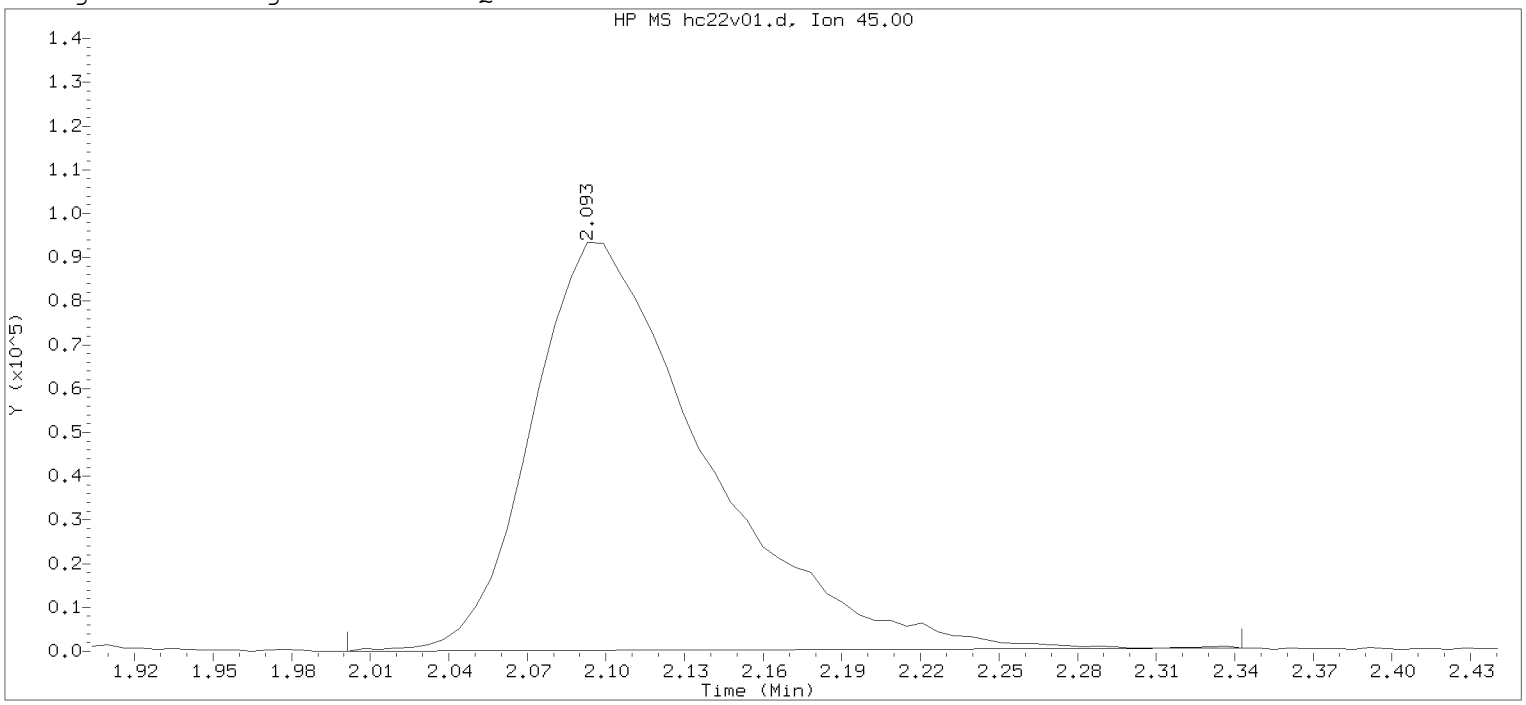
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

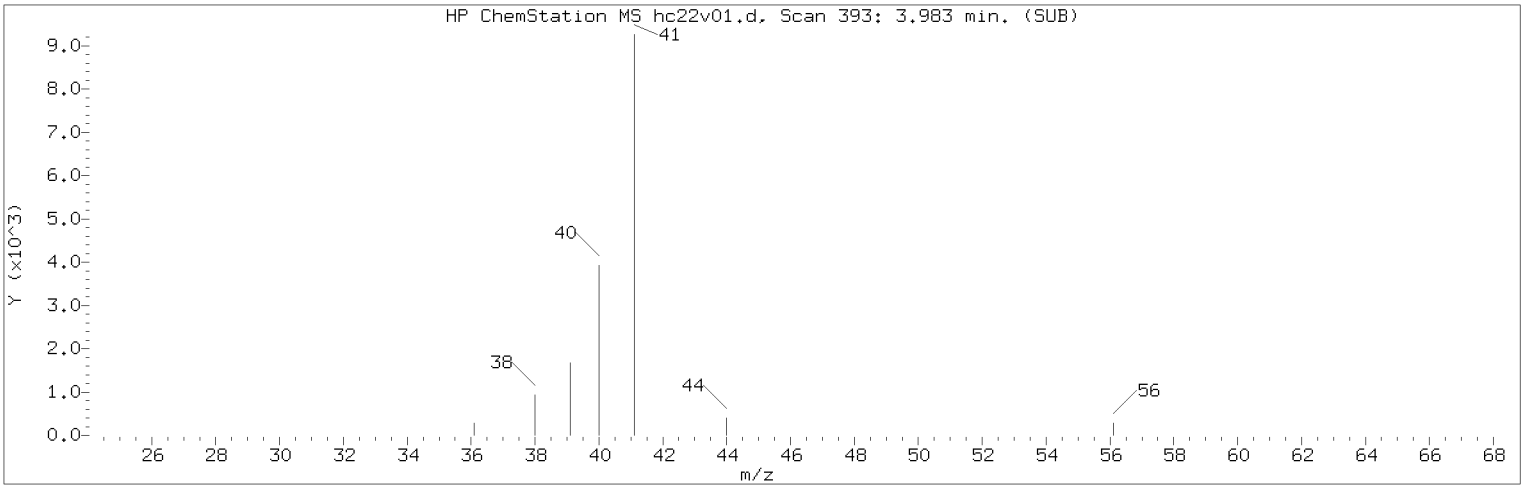
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

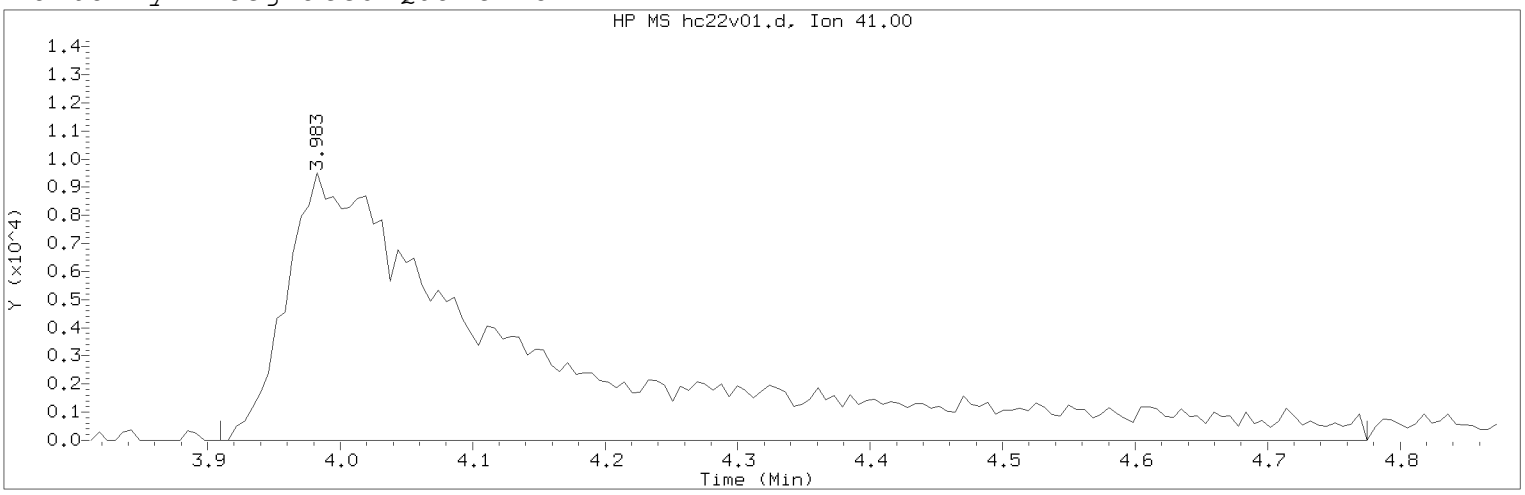
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area : 432554
On-column Amount (ng) : 4.7269
Integration start scan : 67 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 677

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

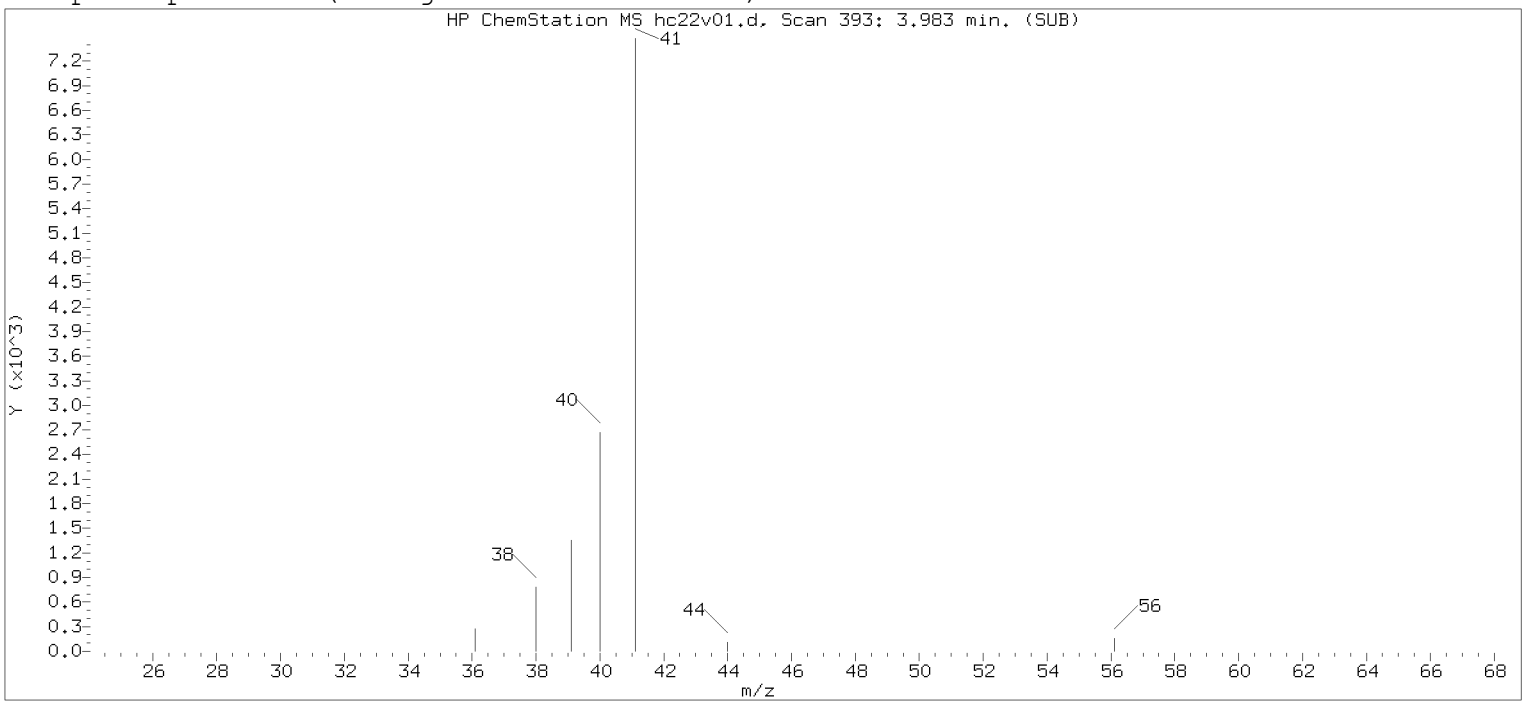
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area (flag) : 123992M
On-Column Amount (ng) : 43.2954
Integration start scan : 380 Integration stop scan: 522
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

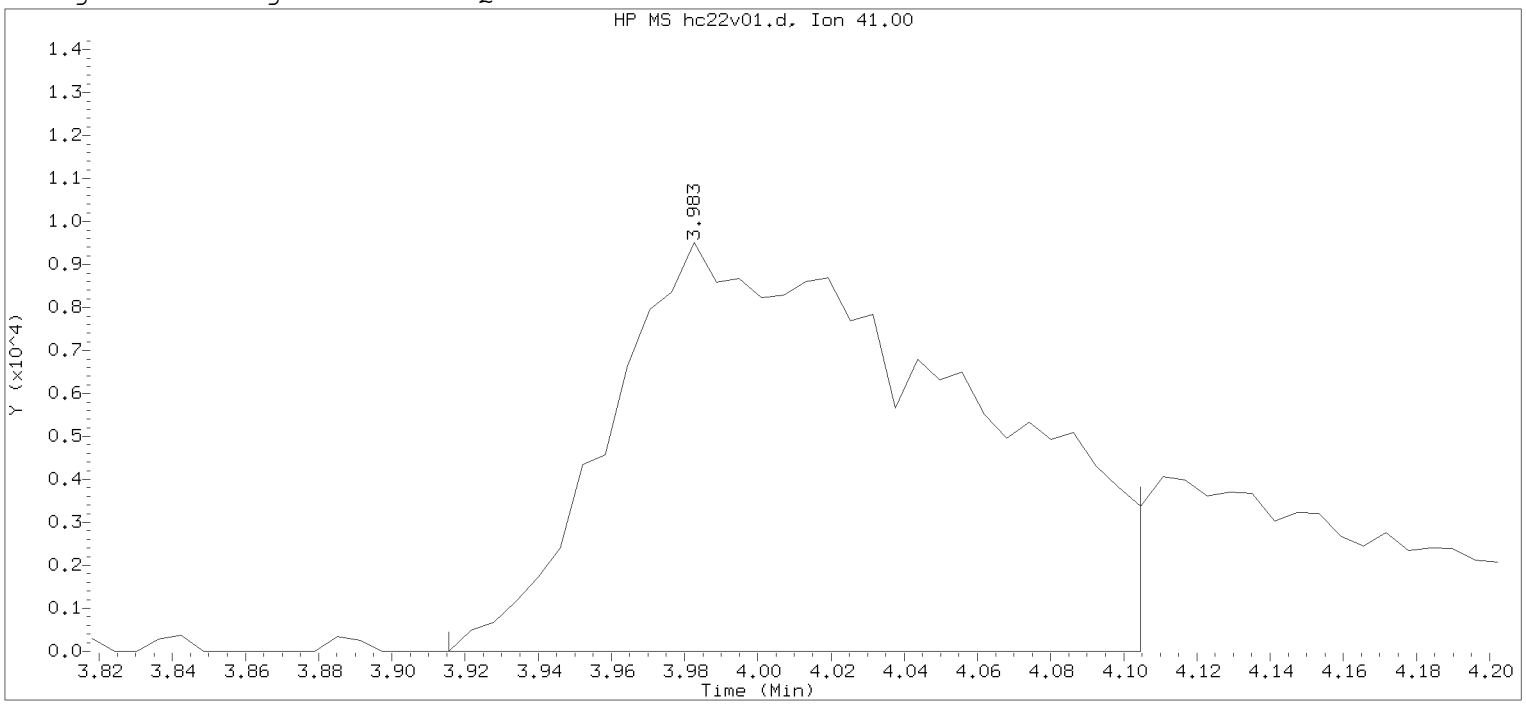
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

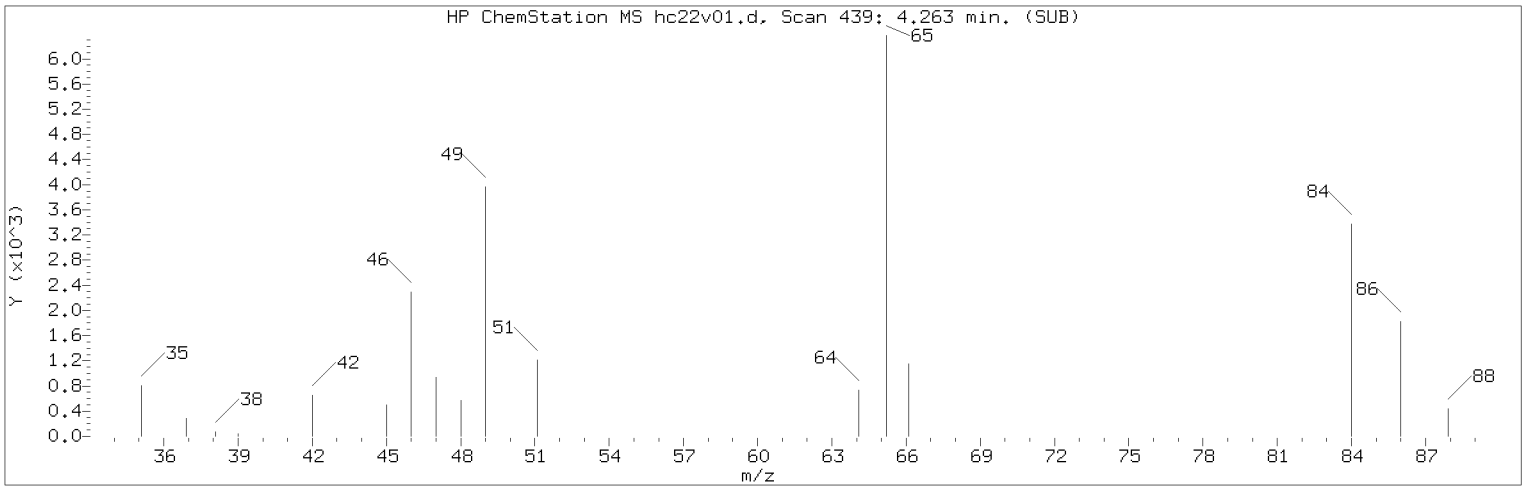
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

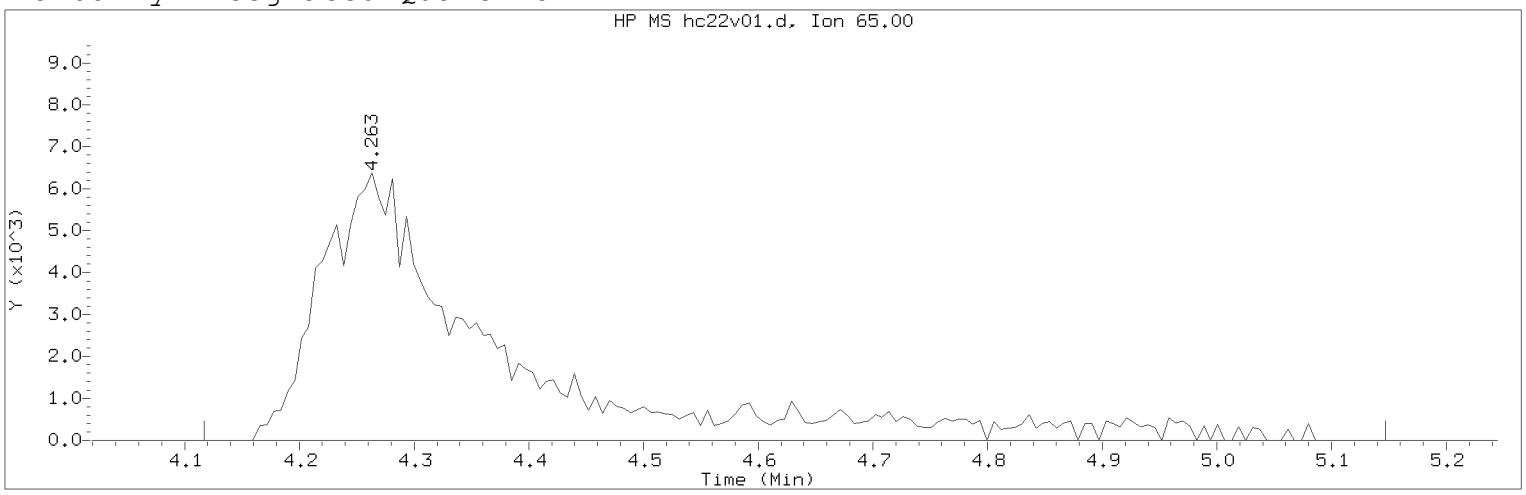
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area : 64114
On-column Amount (ng) : 27.3913
Integration start scan : 381 Integration stop scan: 412
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/20/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

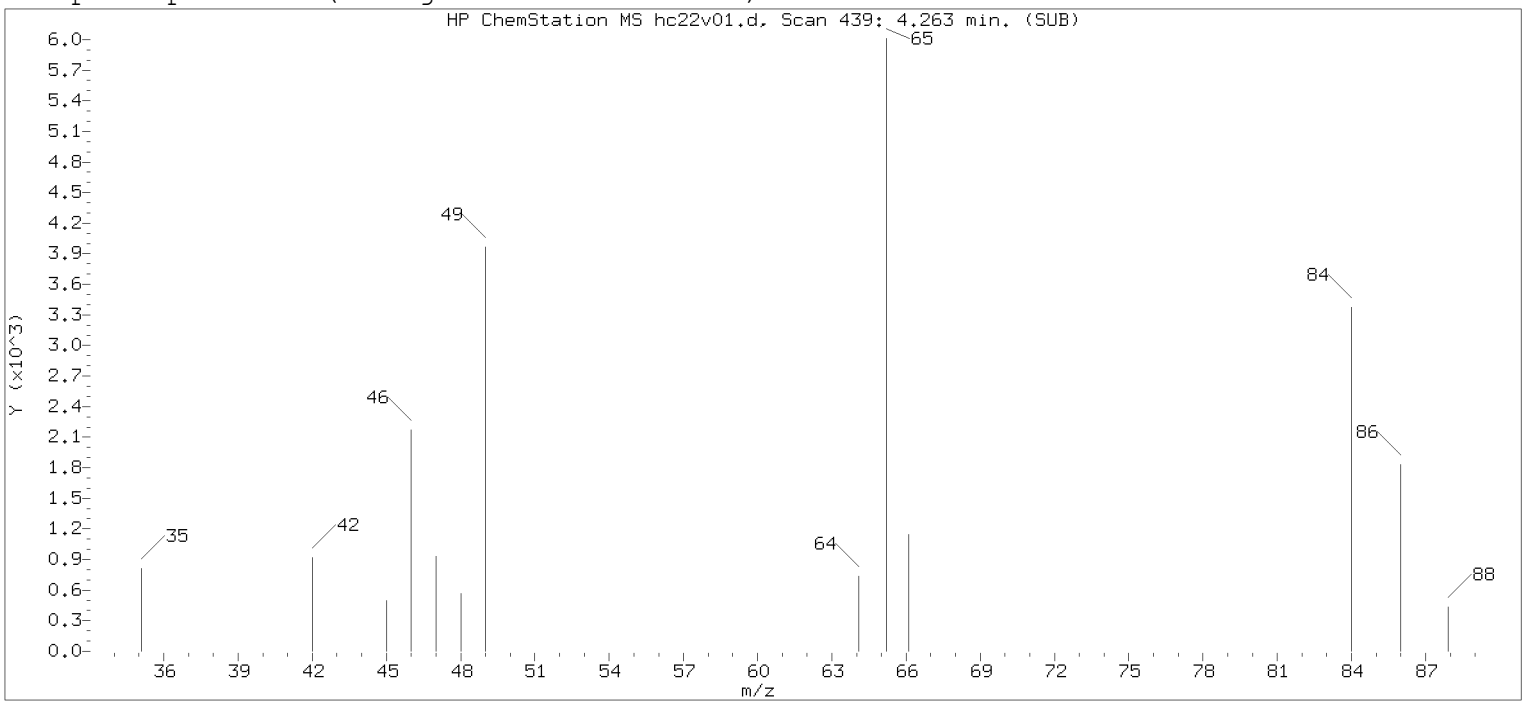
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area (flag) : 67388M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 583
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

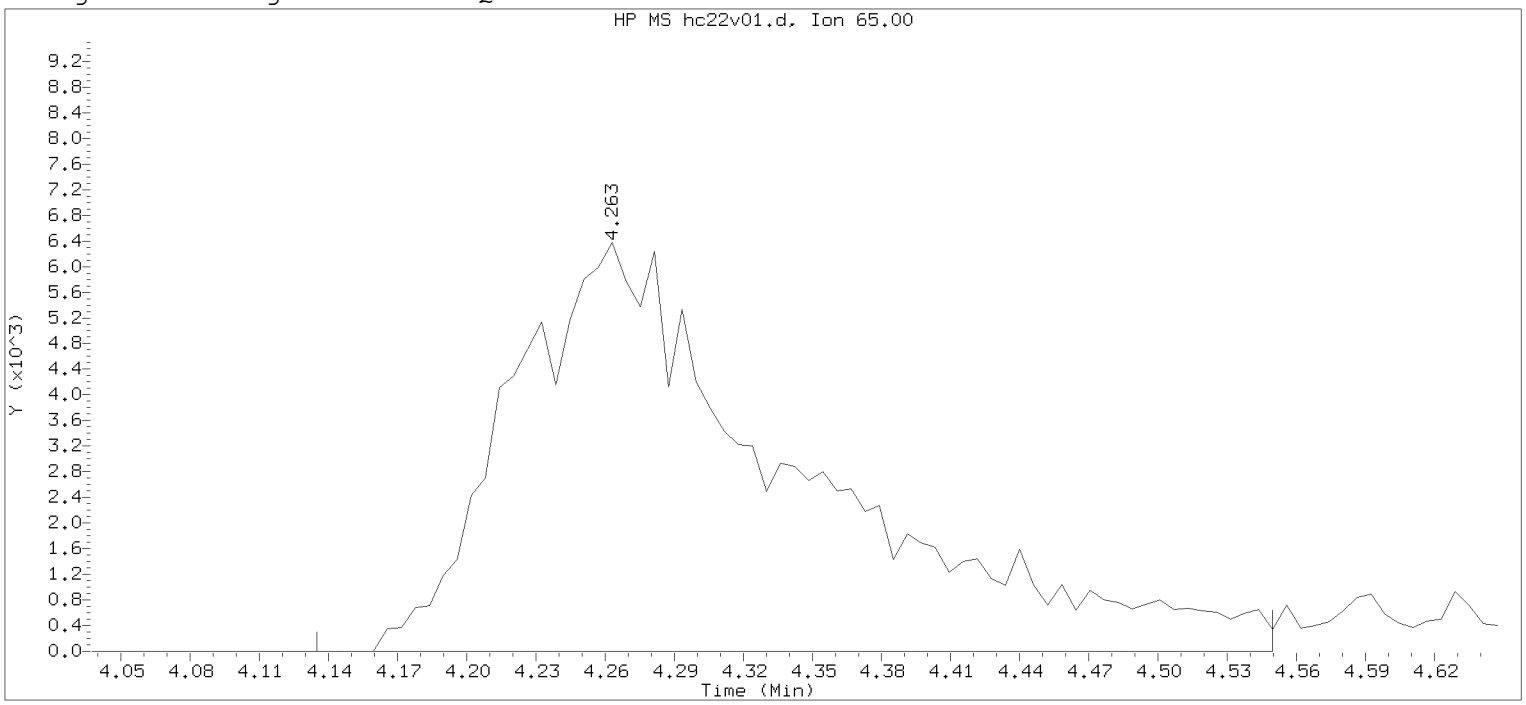
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

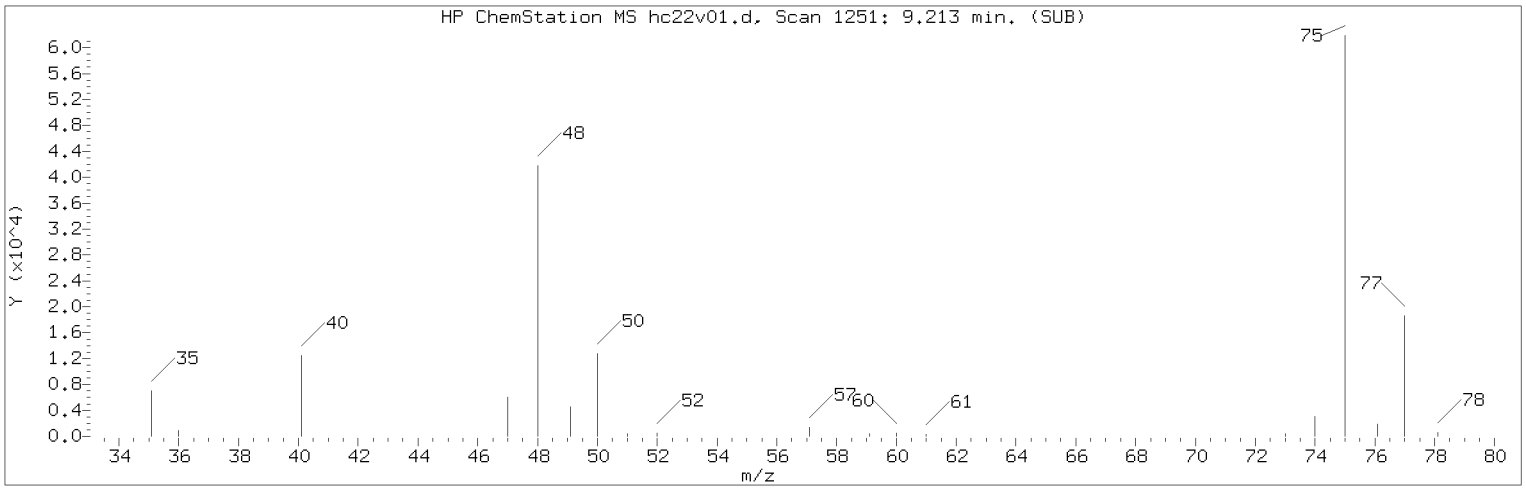
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

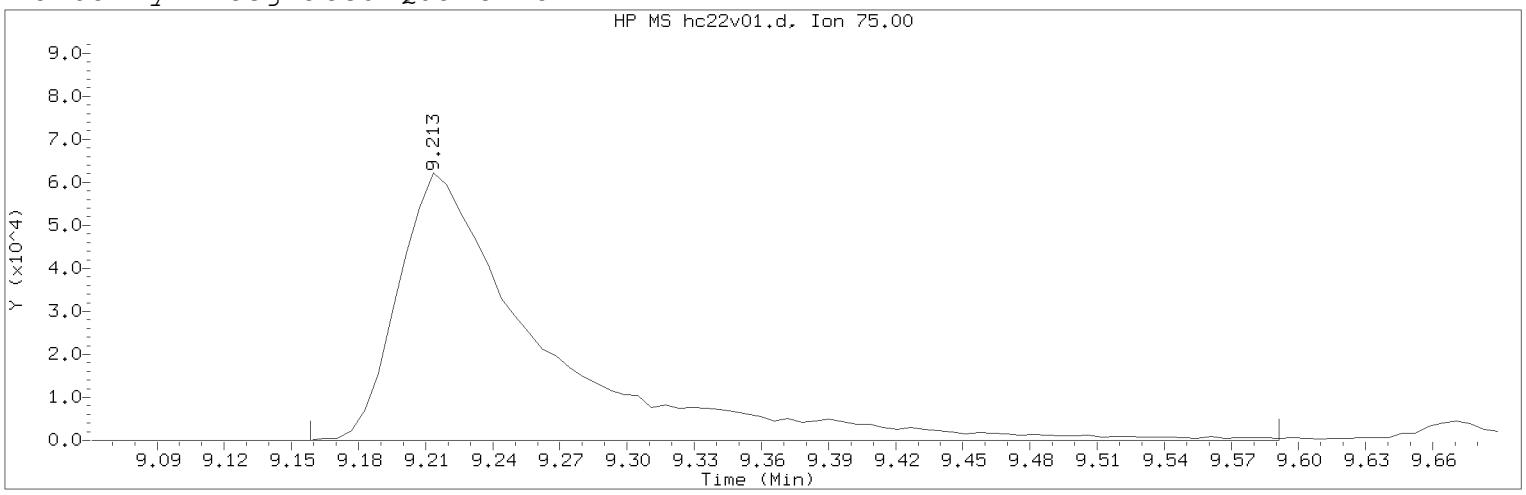
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area : 55077
On-column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/22/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

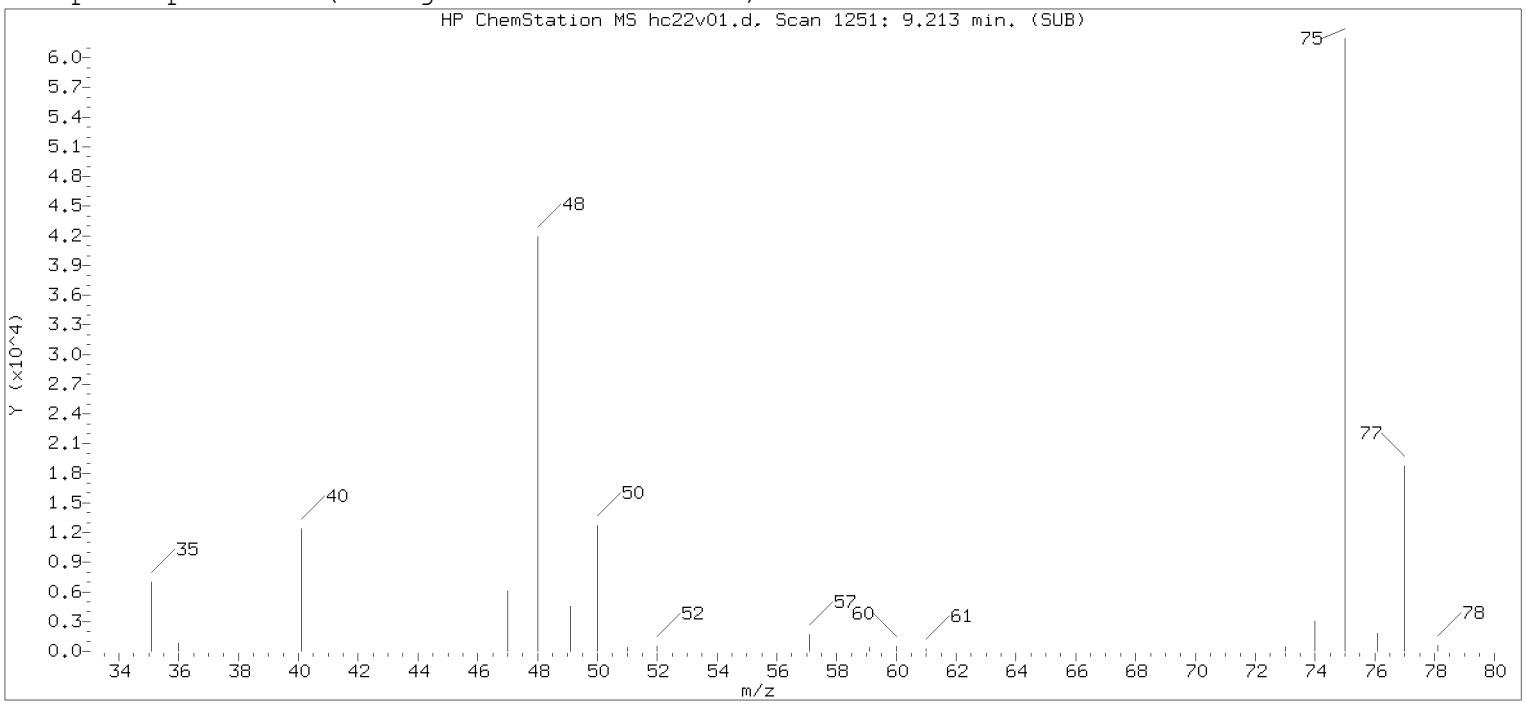
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1251
Retention Time (minutes): 9.213
Quant Ion : 75.00
Area (flag) : 277202M
On-Column Amount (ng) : 226.3821
Integration start scan : 1241 Integration stop scan: 1312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

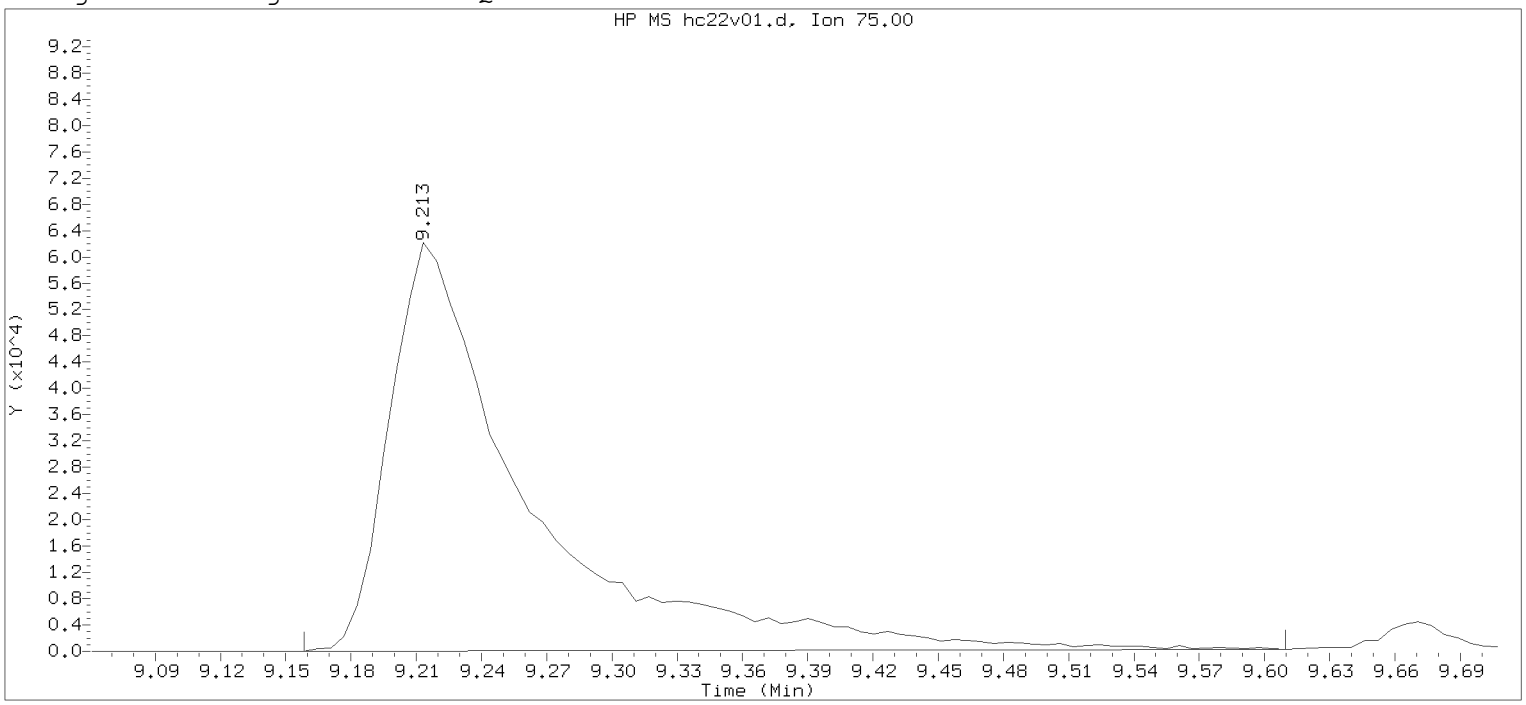
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

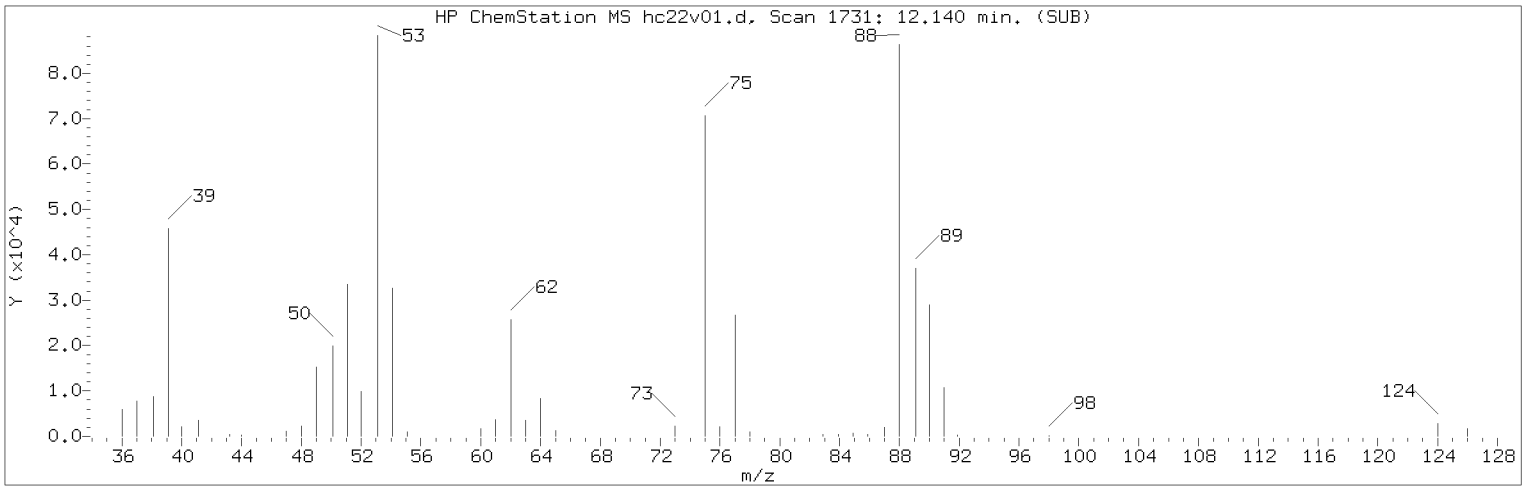
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

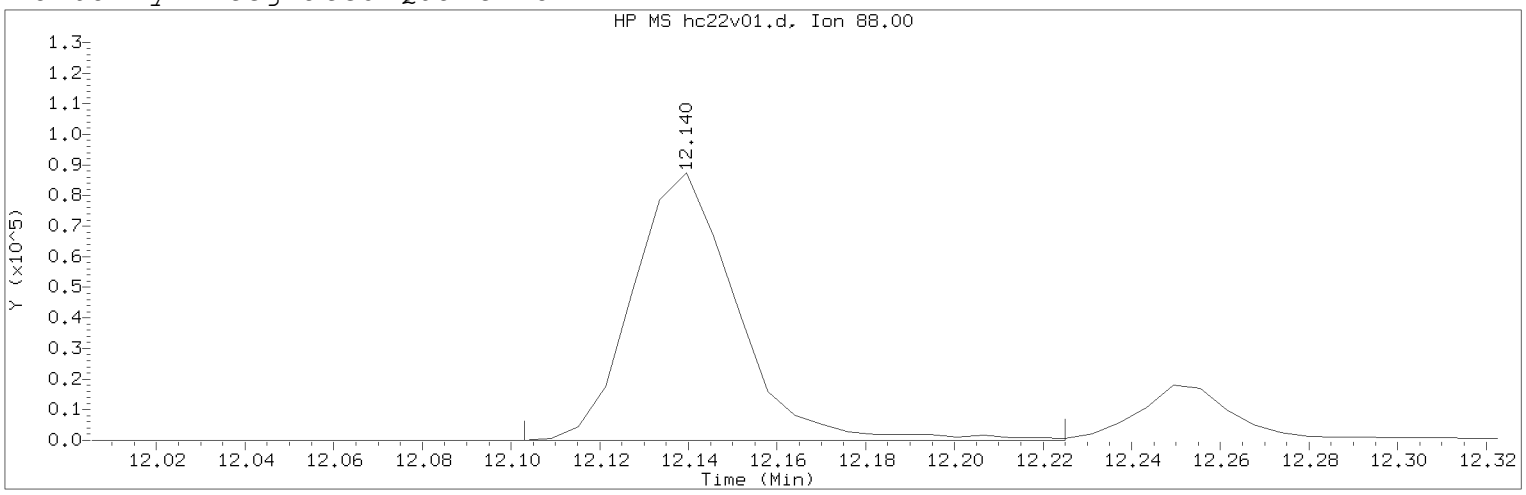
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1251
Retention Time (minutes): 9.213
Quant Ion : 75.00
Area : 273732
On-column Amount (ng) : 223.5481
Integration start scan : 1241 Integration stop scan: 1315
Y at integration start : 0 Y at integration end: 286

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/20/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

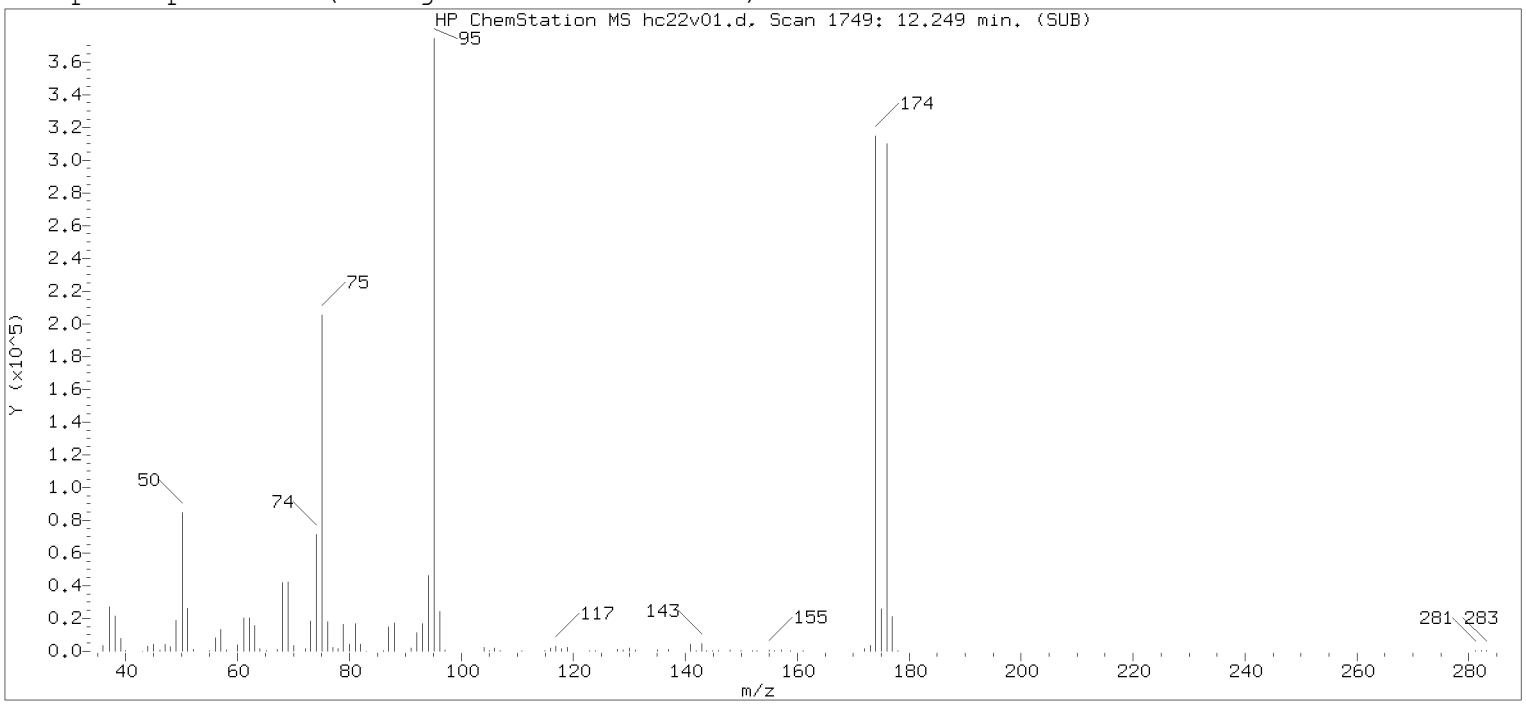
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1731
Retention Time (minutes): 12.140
Quant Ion : 88.00
Area (flag) : 141820A
On-Column Amount (ng) : 16.2375
Integration start scan : 1724 Integration stop scan: 1744
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

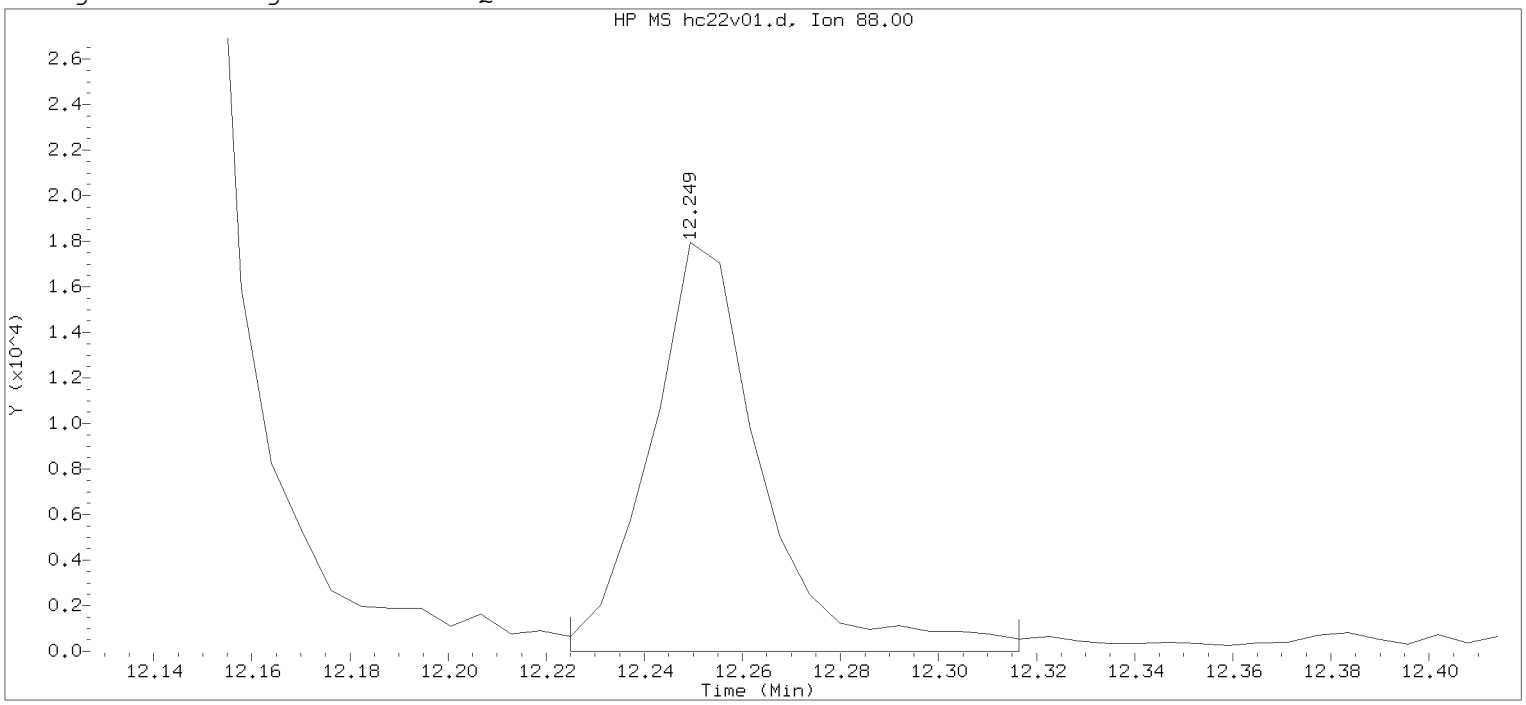
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

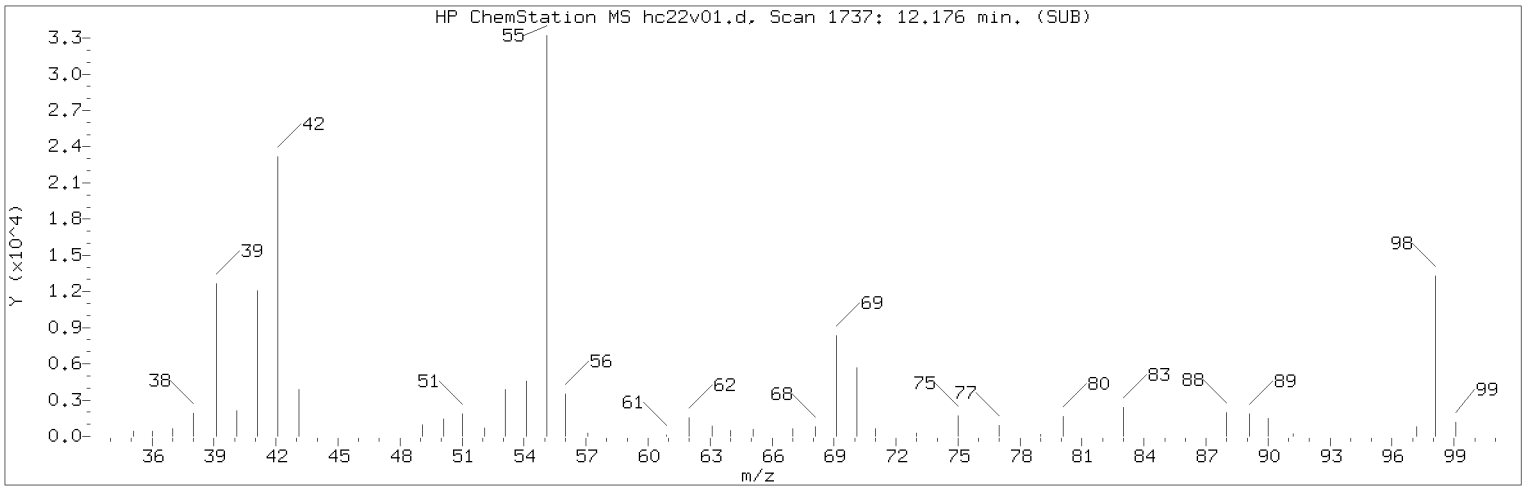
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

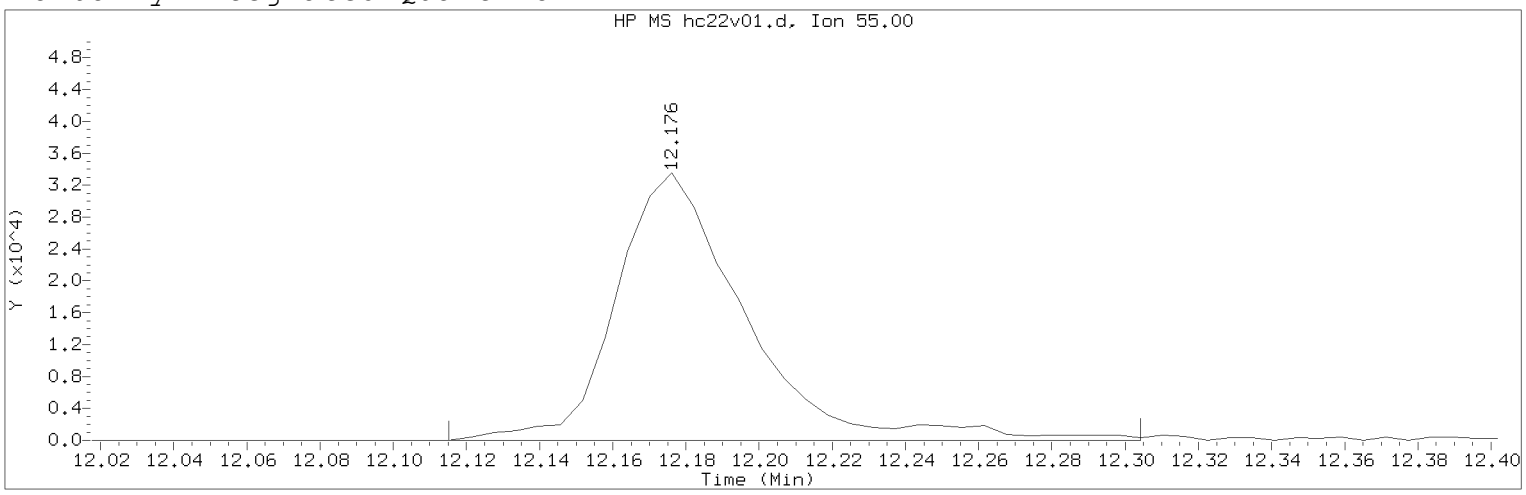
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.249
Quant Ion : 88.00
Area : 28215
On-column Amount (ng) : 3.9525
Integration start scan : 1744 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used during 10/2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:08 dvv10203

Sample Name: LCSHSM Lab Sample ID: LCSHSM

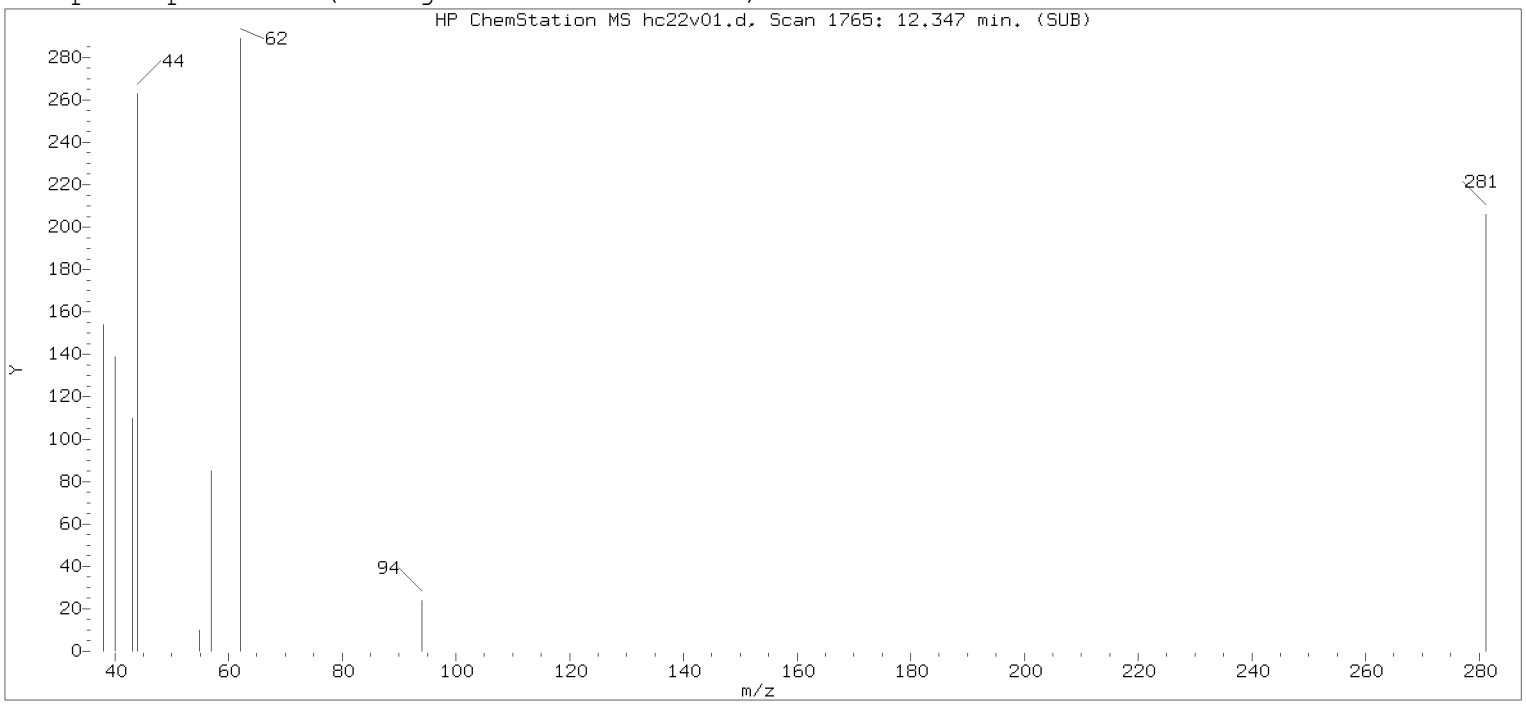
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1737
Retention Time (minutes): 12.176
Quant Ion : 55.00
Area (flag) : 82509A
On-Column Amount (ng) : 112.4089
Integration start scan : 1726 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

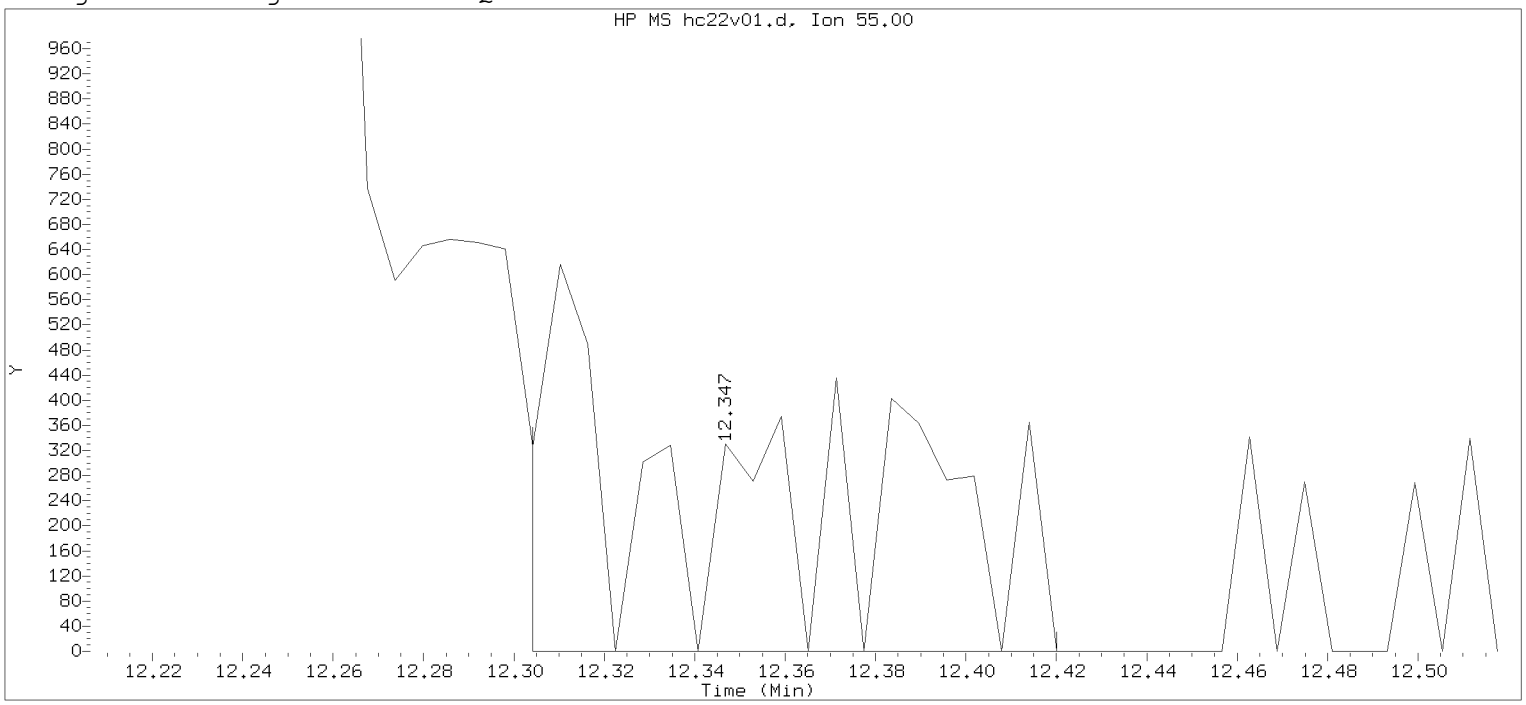
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/22/2017 at 22:08.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 13:15.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



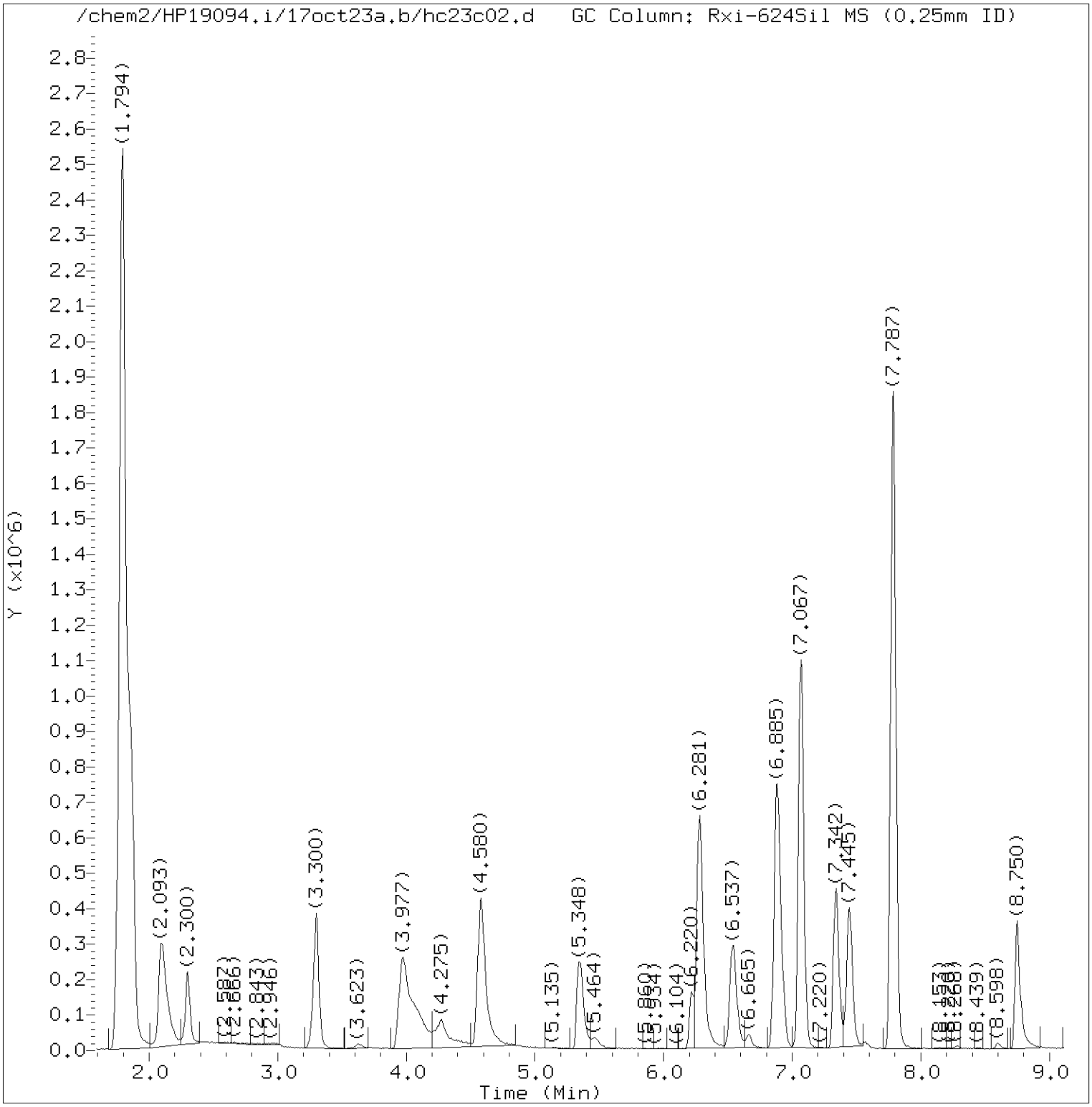
Data File: /chem2/HP19094.i/17oct22a.b/hc22v01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:01
Date, time and analyst ID of latest file update: 22-Oct-2017 22:02 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 55.00
Area : 1826
On-column Amount (ng) : 3.0443
Integration start scan : 1757 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/22/2017 at 22:08.
Target 3.5 esignature used on 10/20/2017.



Total Ion Chromatogram (TIC)

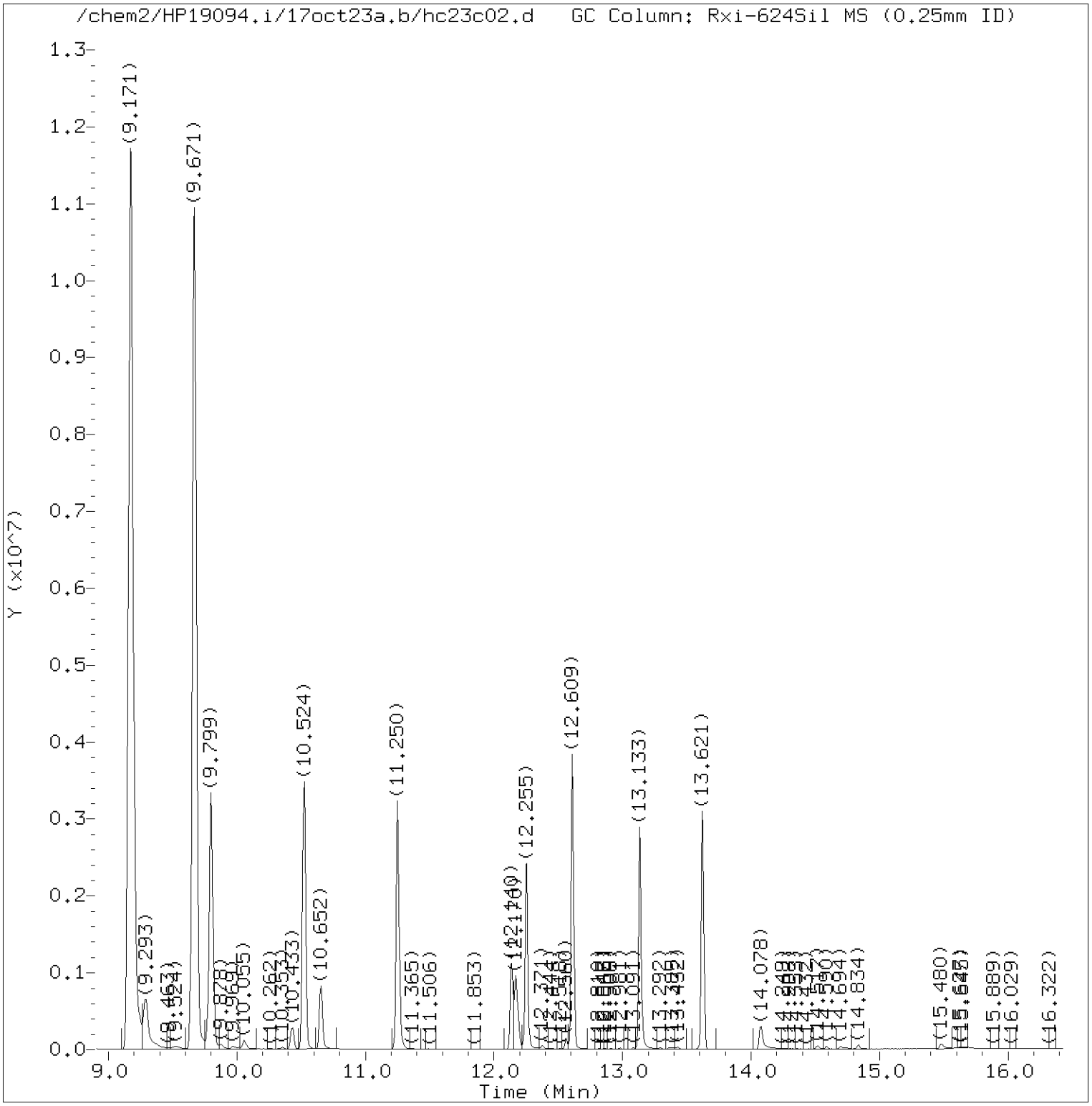
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:31 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-OCT-2017 09:49
Date, time and analyst ID of latest file update: 23-Oct-2017 09:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:41.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:31 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-OCT-2017 09:49
Date, time and analyst ID of latest file update: 23-Oct-2017 09:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:41.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23c02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:31 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-OCT-2017 09:49
Date, time and analyst ID of latest file update: 23-Oct-2017 09:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	847262	8.571
25) Acetonitrile	(1)	3.971	41	1310514	337.153
26)*t-Butyl Alcohol-d10	(1)	4.239	65	91462	50.000
36) Vinyl Acetate	(2)	5.342	43	794499	11.051
43) Methyl Acrylate	(2)	6.281	55	1413034	53.631
53) 1-Chlorobutane	(2)	7.067	56	1250916	10.253
63)*Fluorobenzene	(2)	7.787	96	2416272	10.000
77) Chloroacetonitrile	(2)	9.207	75	761639	575.772
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	267242	10.651
97)*Chlorobenzene-d5	(3)	11.250	117	1693195	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	248690	20.979
112) Cyclohexanone	(1)	12.170	55	456441	458.168
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	701869	10.000
142) Hexachloroethane	(4)	13.621	117	490079	10.681

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 10:41.
Target 3.5 esignature user ID: kas02648

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH96

Data file: /chem2/HP19094.i/17oct22a.b/hc22b05.d Injection date and time: **23-OCT-2017 00:06**
Data file Sample Info. Line: VBLKH96;VBLKH96;1;3;;;DRAPERLOQ;;; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:26 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.269	(-0.037)	440	65	72221	(-15)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2325630	(-4)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1524958	(-11)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	605917	(-23)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	539753	9.611	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.002)	102	84777	9.640	96%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2294926	10.355	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	619653	9.205	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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Don V. Viray on 10/23/2017 at 00:27. Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH96

Data file: /chem2/HP19094.i/17oct22a.b/hc22b05.d Injection date and time: **23-OCT-2017 00:06**
Data file Sample Info. Line: VBLKH96;VBLKH96;1;3;;;DRAPERLOQ;;; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:26 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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

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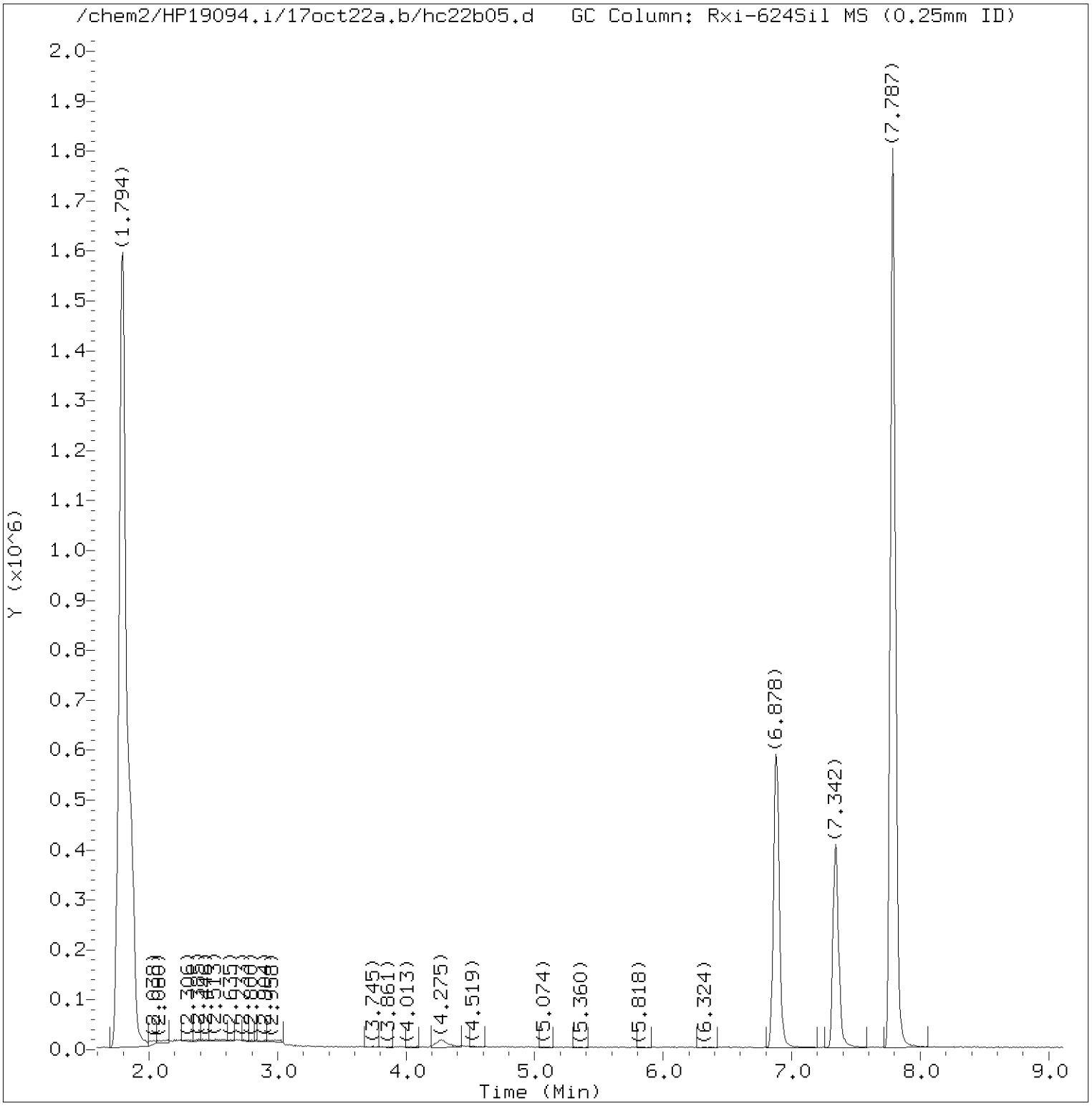
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Total number of targets = 22

Digitally signed by Don V. Viray on 10/23/2017 at 00:27. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:19. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

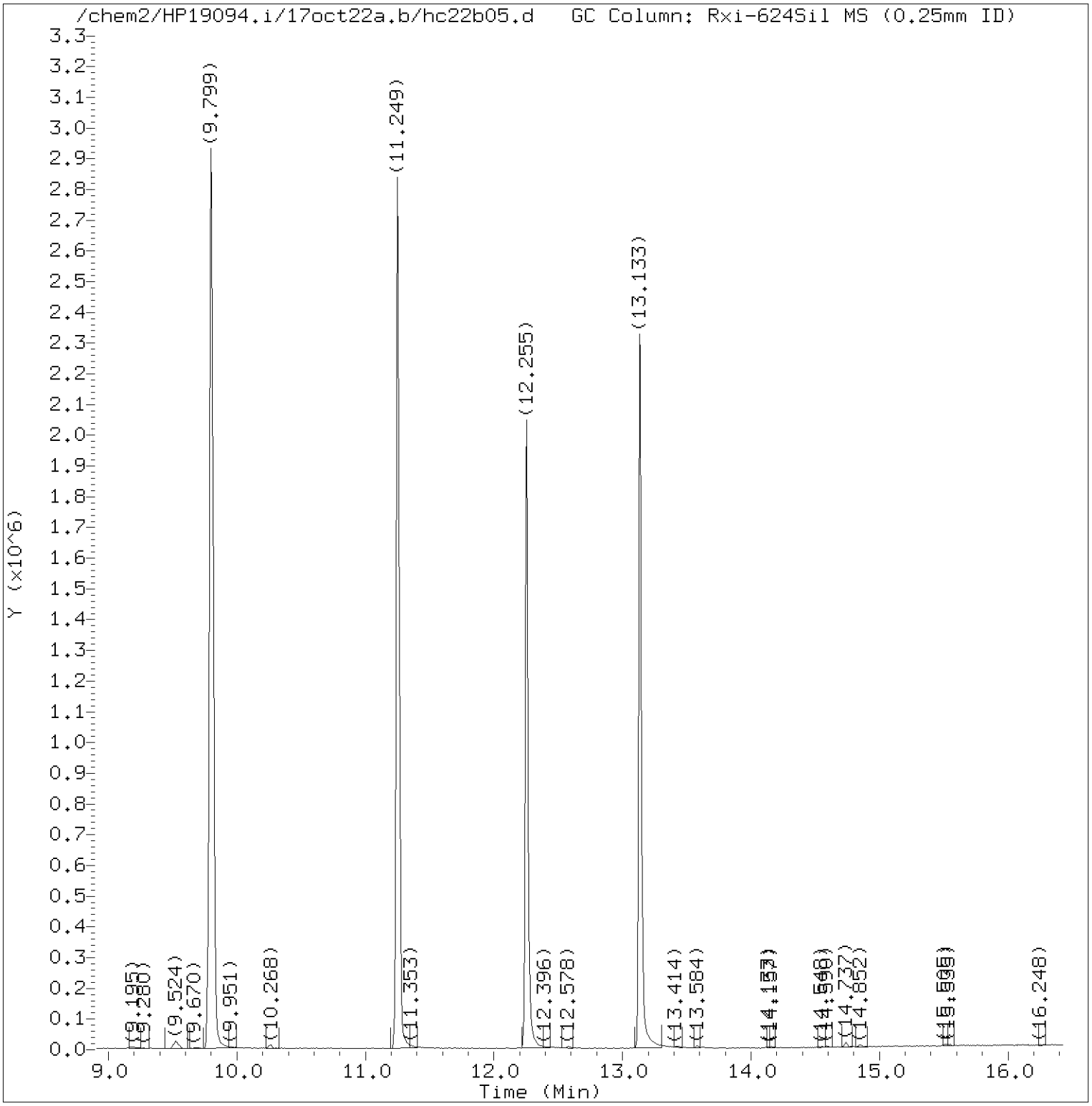
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22b05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:06 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:26 dvv10203

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:27.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22b05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:06 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:26 dvv10203

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:27.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22b05.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 00:06 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:26 dvv10203

Sample Name: VBLKH96 Lab Sample ID: VBLKH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	72221	50.000
50)$Dibromofluoromethane	(2)	6.878	113	539753	9.611
57)$1,2-Dichloroethane-d4	(2)	7.336	102	84777	9.640
63)*Fluorobenzene	(2)	7.787	96	2325630	10.000
82)$Toluene-d8	(3)	9.799	98	2294926	10.355
97)*Chlorobenzene-d5	(3)	11.249	117	1524958	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	619653	9.205
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	605917	10.000

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

Digitally signed by Don V. Viray
on 10/23/2017 at 00:27.
Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH98

Data file: /chem2/HP19094.i/17oct23a.b/hc23b01.d
Injection date and time: **23-OCT-2017 11:13**
Data file Sample Info. Line: VBLKH98;VBLKH98;1;3;;;DRAPERLOQ;;;
Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:39 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 10:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.275	(-0.037)	441	65	87488	(0)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2314281	(-5)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1525878	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139	(-0.006)	1895	152	626275	(-22)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	542724	9.711	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.002)	102	84778	9.687	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2287846	10.317	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.256	(-0.001)	95	633951	9.411	94%		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					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:40. Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23b01.d Injection date and time: **23-OCT-2017 11:13**
Data file Sample Info. Line: VBLKH98;VBLKH98;1;3;;;DRAPERLOQ;;; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:39 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-OCT-2017 10:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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

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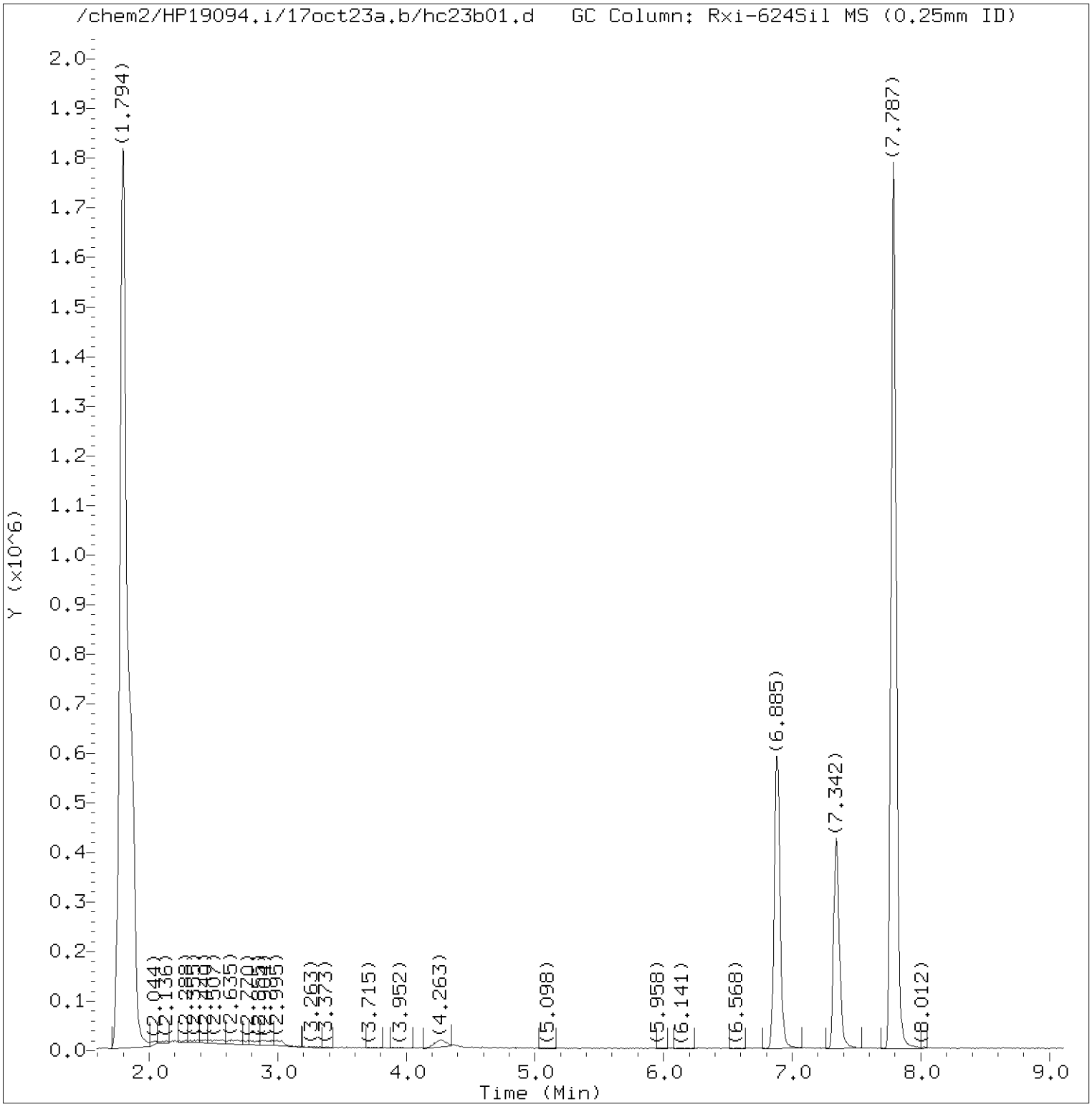
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Total number of targets = 22

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:40. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 15:47. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

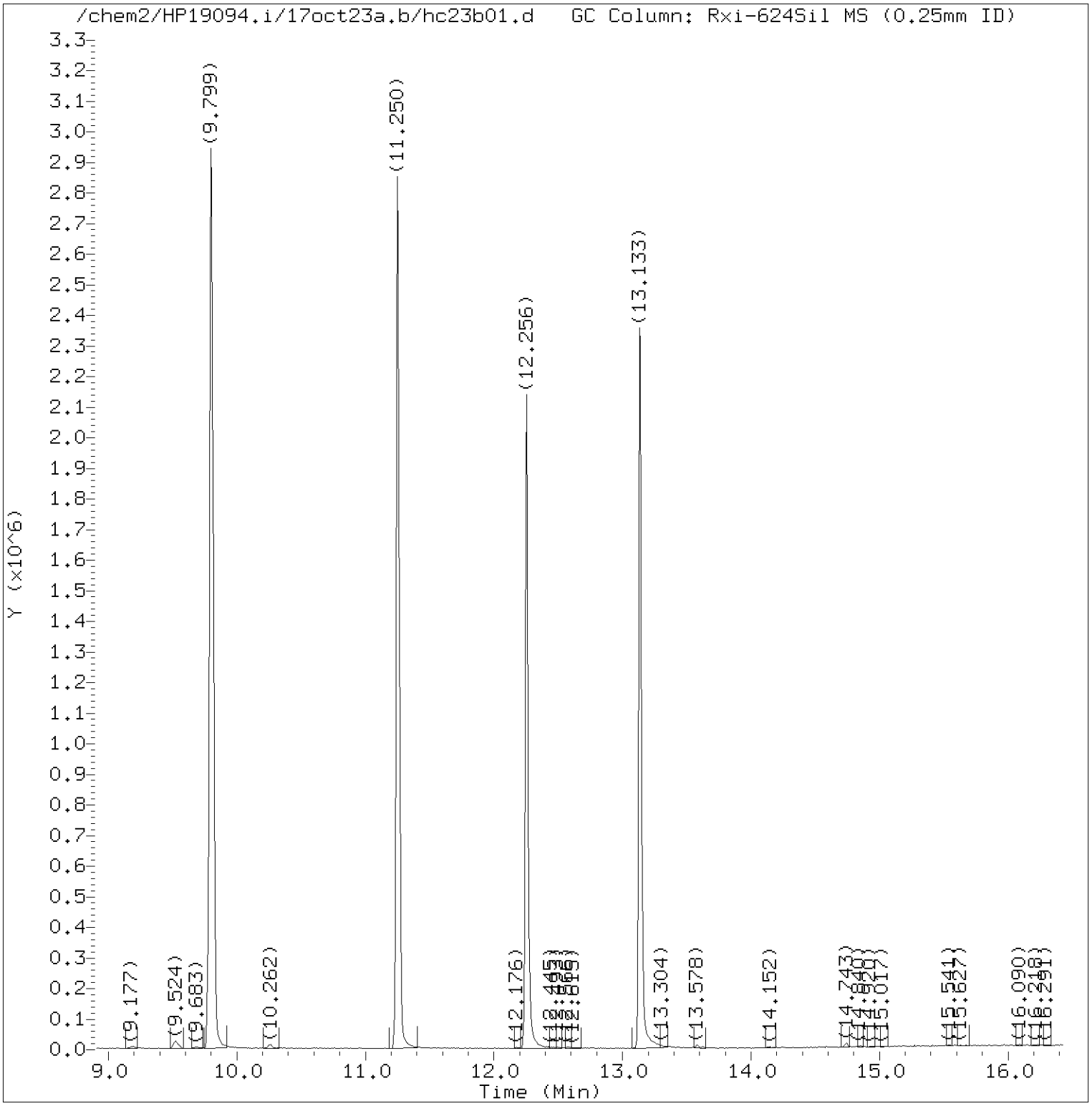
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23b01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 11:13 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 10:42
Date, time and analyst ID of latest file update: 23-Oct-2017 11:39 kas02648

Sample Name: VBLKH98 Lab Sample ID: VBLKH98

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:40.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23b01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 11:13 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 10:42
Date, time and analyst ID of latest file update: 23-Oct-2017 11:39 kas02648

Sample Name: VBLKH98 Lab Sample ID: VBLKH98

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:40.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23b01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 11:13 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-OCT-2017 10:42
Date, time and analyst ID of latest file update: 23-Oct-2017 11:39 kas02648

Sample Name: VBLKH98 Lab Sample ID: VBLKH98

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	87488	50.000
50)$Dibromofluoromethane	(2)	6.879	113	542724	9.711
57)$1,2-Dichloroethane-d4	(2)	7.348	102	84778	9.687
63)*Fluorobenzene	(2)	7.787	96	2314281	10.000
82)$Toluene-d8	(3)	9.799	98	2287846	10.317
97)*Chlorobenzene-d5	(3)	11.250	117	1525878	10.000
111)$4-Bromofluorobenzene	(3)	12.256	95	633951	9.411
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	626275	10.000

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:40.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s08.d Injection date and time: **23-OCT-2017 03:01**
Data file Sample Info. Line: 16WC1MS1;9262026MS;1;3;MS;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H17295**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.d**

Bottle Code: **038B** 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
26) t-Butyl Alcohol-d10	4.257(-0.024)	438	65	73441 (-14)	50.00	
63) Fluorobenzene	7.787(-0.006)	1017	96	2359358 (-3)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1596648 (-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139(-0.006)	1895	152	651759 (-17)	10.00	

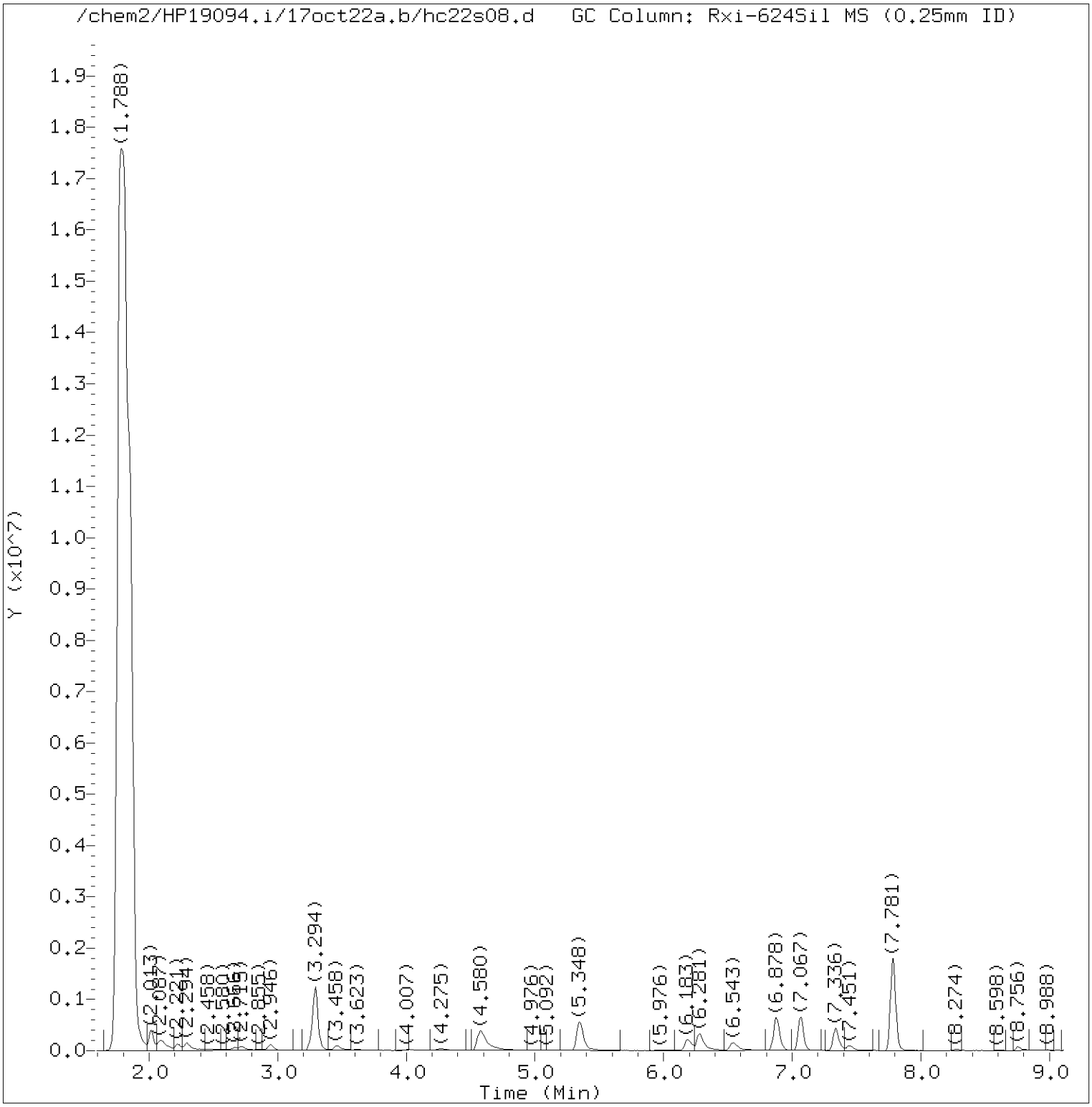
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878(0.000)	113	554193	9.727	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336(0.002)	102	86165	9.657	97%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2399794	10.342	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255(-0.001)	95	662888	9.405	94%		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)
4) Dimethyl ether	(2)	2.093(-0.000)	45	493855	5.116	5.12		J	0.1	13

Total number of targets = 1

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

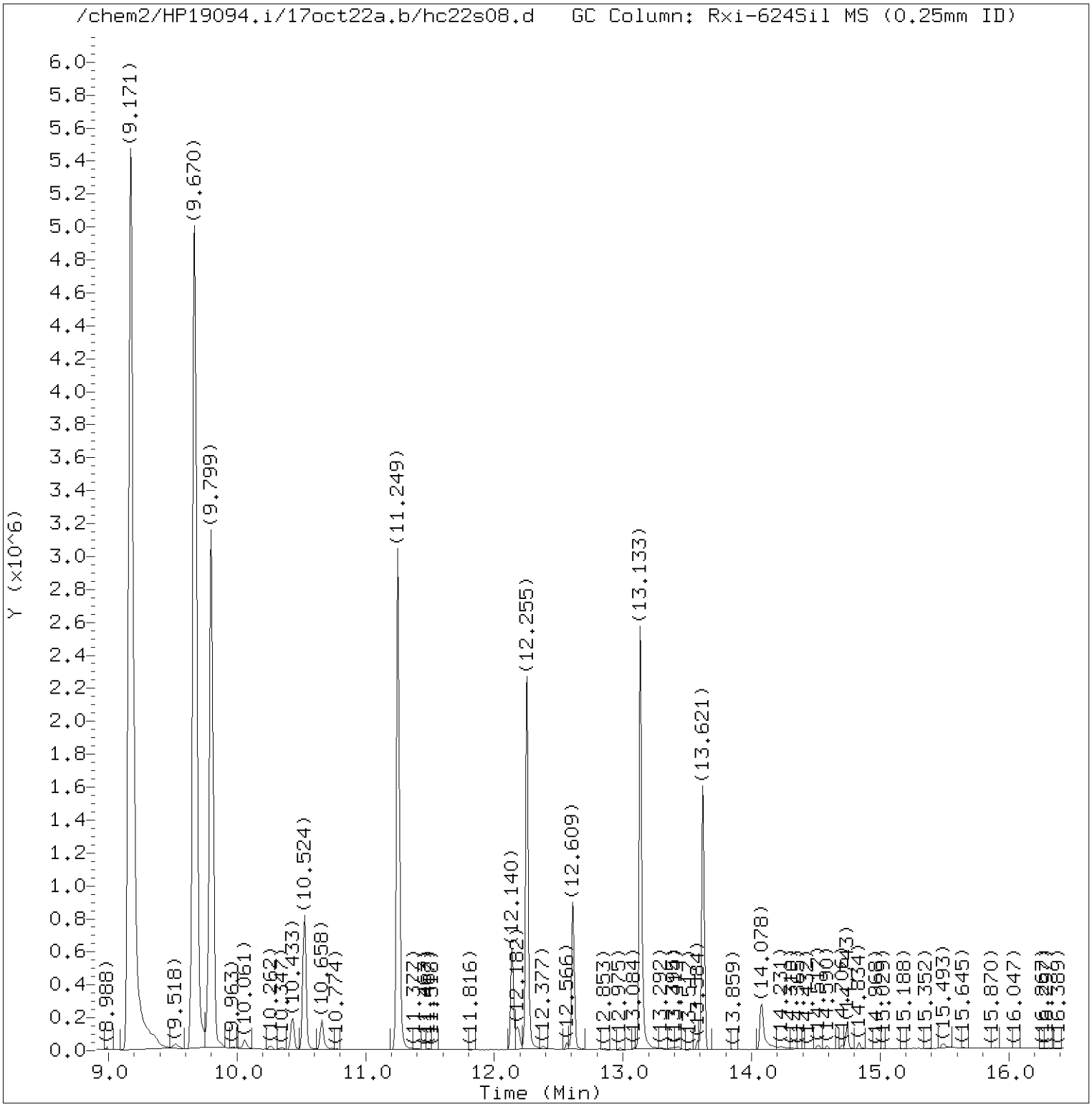
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:01 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS1 Lab Sample ID: 9262026MS

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:01 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS1 Lab Sample ID: 9262026MS

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:01 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS1 Lab Sample ID: 9262026MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	493855	5.116
26)*t-Butyl Alcohol-d10	(1)	4.257	65	73441	50.000
50)$Dibromofluoromethane	(2)	6.878	113	554193	9.727
57)$1,2-Dichloroethane-d4	(2)	7.336	102	86165	9.657
63)*Fluorobenzene	(2)	7.787	96	2359358	10.000
82)$Toluene-d8	(3)	9.799	98	2399794	10.342
97)*Chlorobenzene-d5	(3)	11.249	117	1596648	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	662888	9.405
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	651759	10.000

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

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s09.d Injection date and time: **23-OCT-2017 03:21**
Data file Sample Info. Line: 16WC1MSD1;9262027MSD;1;3;MSD;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H17**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.d**

Bottle Code: **038B** 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
26) t-Butyl Alcohol-d10	4.239 (-0.006)	435	65	88023 (4)	50.00	
63) Fluorobenzene	7.787 (-0.006)	1017	96	2386188 (-2)	10.00	
97) Chlorobenzene-d5	11.249 (0.000)	1585	117	1612545 (-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139 (-0.006)	1895	152	650789 (-17)	10.00	

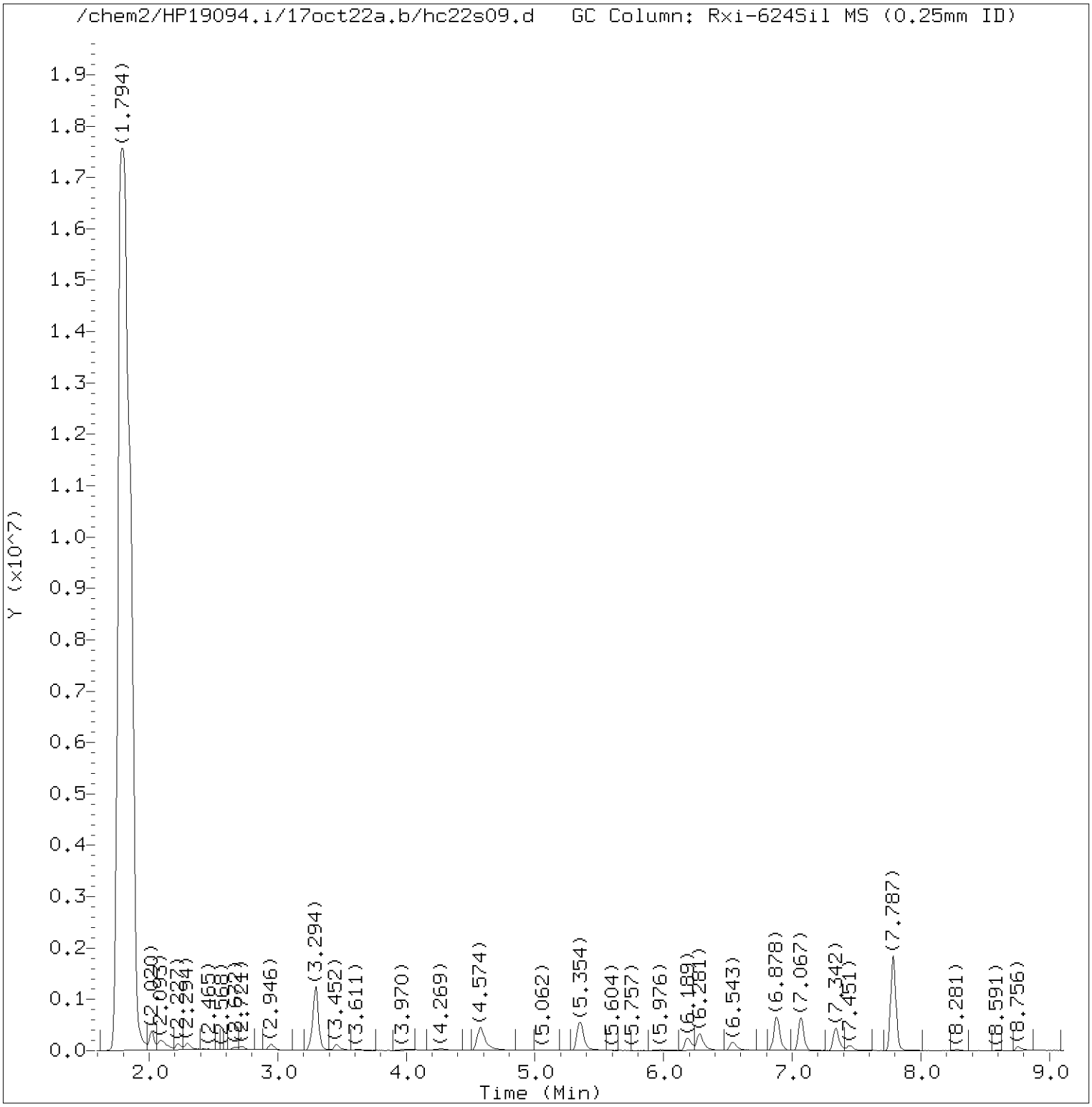
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878 (0.000)	113	559616	9.712	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336 (0.002)	102	86254	9.559	96%		80 - 120
82) Toluene-d8	(3)	9.799 (0.000)	98	2429838	10.369	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255 (-0.001)	95	660385	9.277	93%		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
4) Dimethyl ether	(2)	2.093 (-0.000)	45	473949	4.855	4.85		J	0.1	13

Total number of targets = 1

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:19. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

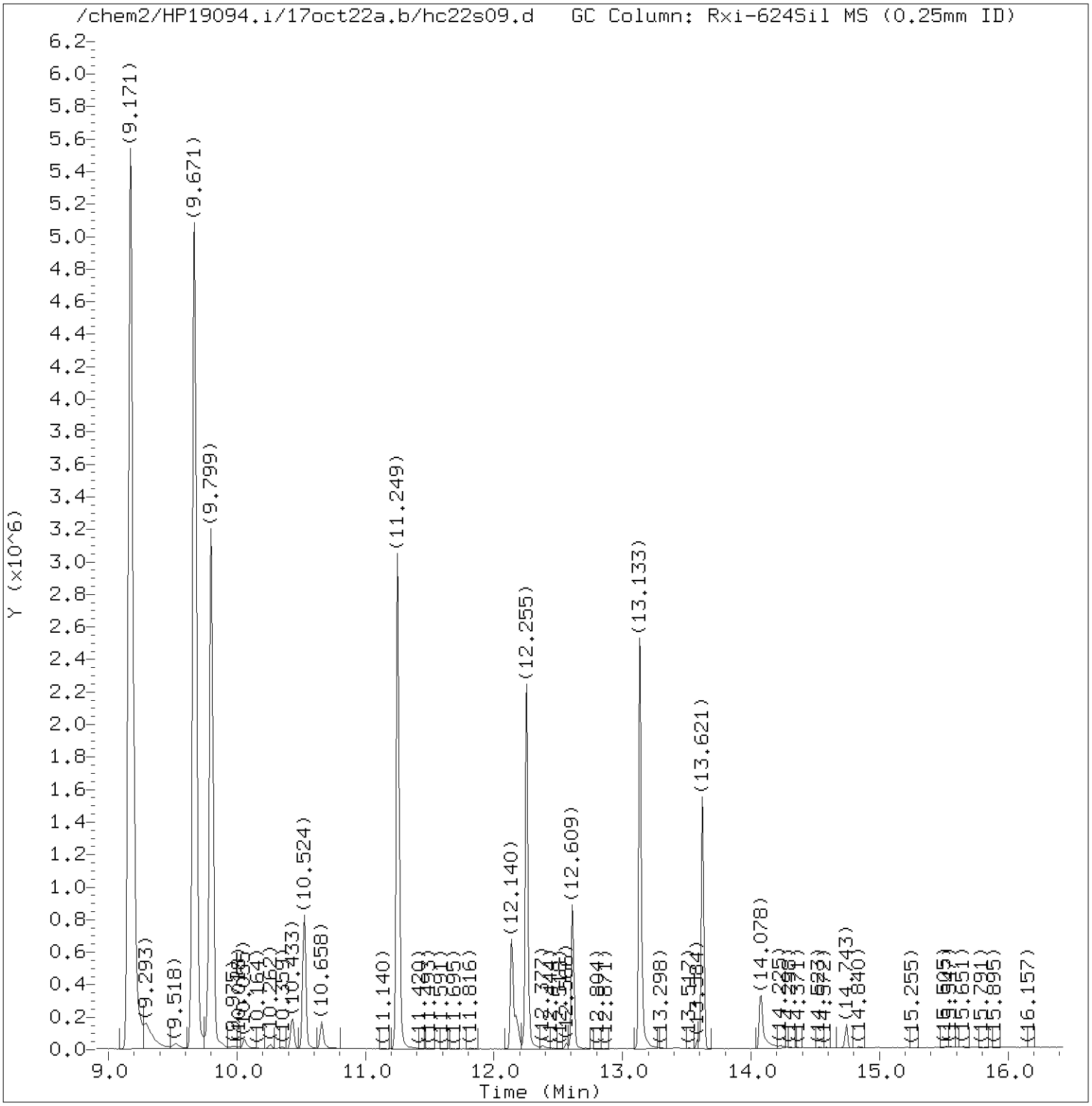
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WC1MSD1 Lab Sample ID: 9262027MSD

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:19.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WC1MSD1 Lab Sample ID: 9262027MSD

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:19.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s09.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 03:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:10 kas02648

Sample Name: 16WC1MSD1 Lab Sample ID: 9262027MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	473949	4.855
26)*t-Butyl Alcohol-d10	(1)	4.239	65	88023	50.000
50)$Dibromofluoromethane	(2)	6.878	113	559616	9.712
57)$1,2-Dichloroethane-d4	(2)	7.336	102	86254	9.559
63)*Fluorobenzene	(2)	7.787	96	2386188	10.000
82)$Toluene-d8	(3)	9.799	98	2429838	10.369
97)*Chlorobenzene-d5	(3)	11.249	117	1612545	10.000
111)$4-Bromofluorobenzene	(3)	12.255	95	660385	9.277
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	650789	10.000

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

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on 10/23/2017 at 11:19.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s06.d Injection date and time: **23-OCT-2017 02:21**
Data file Sample Info. Line: 16WC1MS;9262026MS;1;3;MS;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.030)	439	65	76202	(-10)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2337853	(-4)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1581016	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	697068	(-12)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	550963	9.759	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	86585	9.794	98%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2345184	10.207	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.255	(-0.001)	95	672919	9.642	96%		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)	2.013	(-0.000)	85	450139	4.377	4.38			0.1	1
2) Chloromethane	(2)	2.160	(-0.001)	50	463649	4.566	4.57			0.2	1
8) Chloroethane	(2)	2.733	(-0.001)	64	353851	6.660	6.66			0.1	1
10) Trichlorofluoromethane	(2)	3.050	(-0.002)	101	679537	5.466	5.47			0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	1151180	29.012	29.01		E	0.1	13
15) 1,1-Dichloroethene	(2)	3.623	(-0.001)	96	318604	6.405	6.41			0.1	1
16) Freon 113	(2)	3.660	(-0.001)	101	351262	6.342	6.34			0.2	1
23) Methylene Chloride	(2)	4.281	(-0.001)	84	312275	5.504	5.50			0.2	1
33) 1,1-Dichloroethane	(2)	5.360	(-0.000)	63	1055929	9.128	9.13			0.1	1
38) 2-Butanone	(1)	6.135	(0.007)	43	495278	41.128	41.13			1	10
48) Tetrahydrofuran	(1)	6.543	(0.006)	71	85948	31.470	31.47			2	25
51) 1,1,1-Trichloroethane	(2)	6.915	(-0.000)	97	589863	5.856	5.86			0.1	1
54) Carbon Tetrachloride	(2)	7.140	(-0.000)	117	517019	5.877	5.88			0.1	1
58) Benzene	(2)	7.390	(-0.000)	78	1428111	5.862	5.86			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	383466	5.875	5.88			0.1	1
83) Toluene	(3)	9.878	(0.000)	92	872577	5.812	5.81			0.1	1
89) Tetrachloroethene	(3)	10.432	(0.000)	166	443360	6.292	6.29			0.1	1
100) Ethylbenzene	(3)	11.365	(0.000)	91	1765283	5.847	5.85			0.1	1
101) m+p-Xylene	(3)	11.481	(-0.000)	106	1331325	11.702	11.70			0.1	0.5
104) o-Xylene	(3)	11.804	(0.000)	106	626752	5.634	5.63			0.1	0.5
105) Xylene (Total)	(3)			106	1958077	17.335	17.34			0.1	3

E = Compound concentration above calibration range.

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s06.d Injection date and time: **23-OCT-2017 02:21**
Data file Sample Info. Line: 16WC1MS;9262026MS;1;3;MS;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

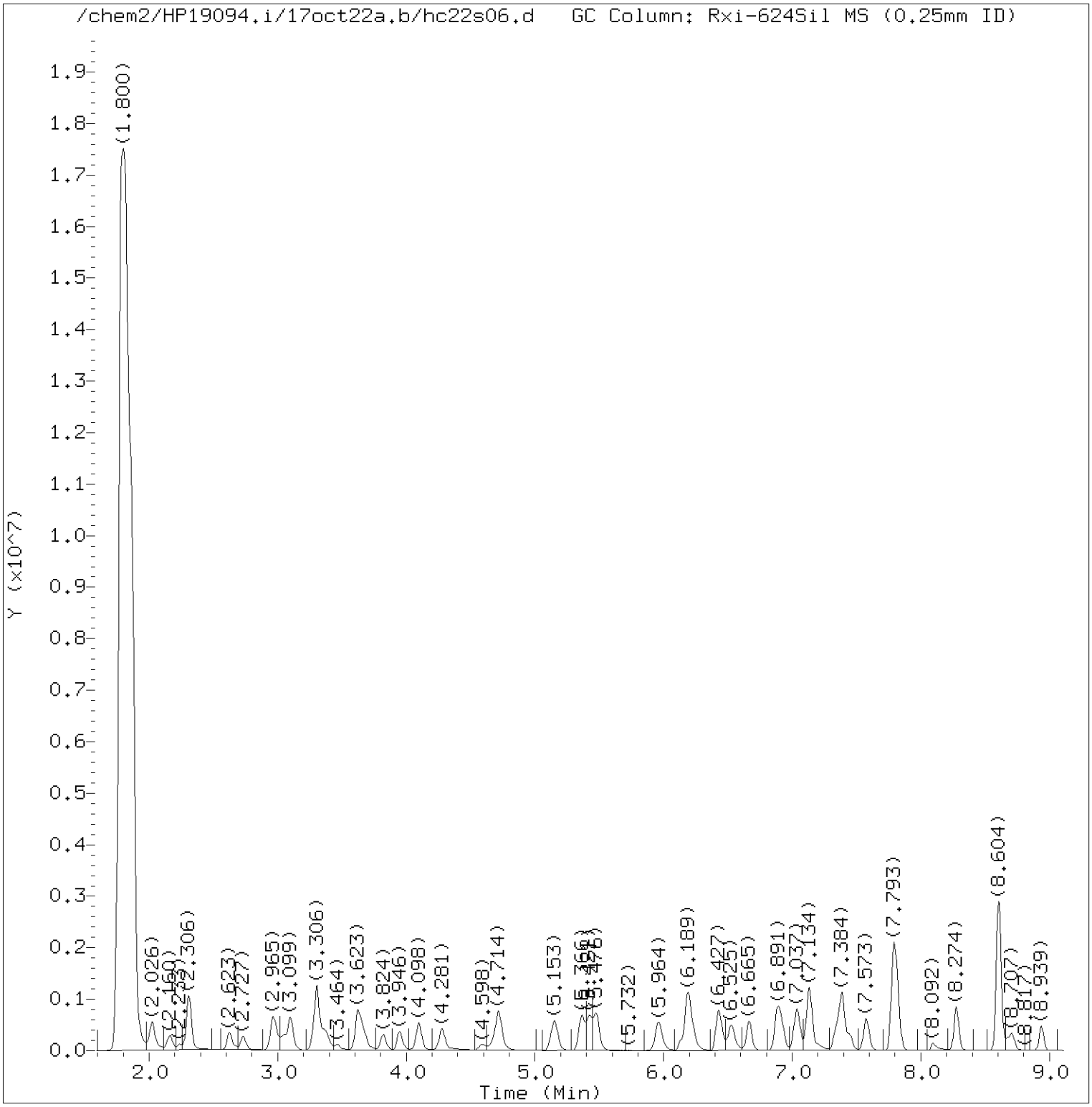
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 21

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:11. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

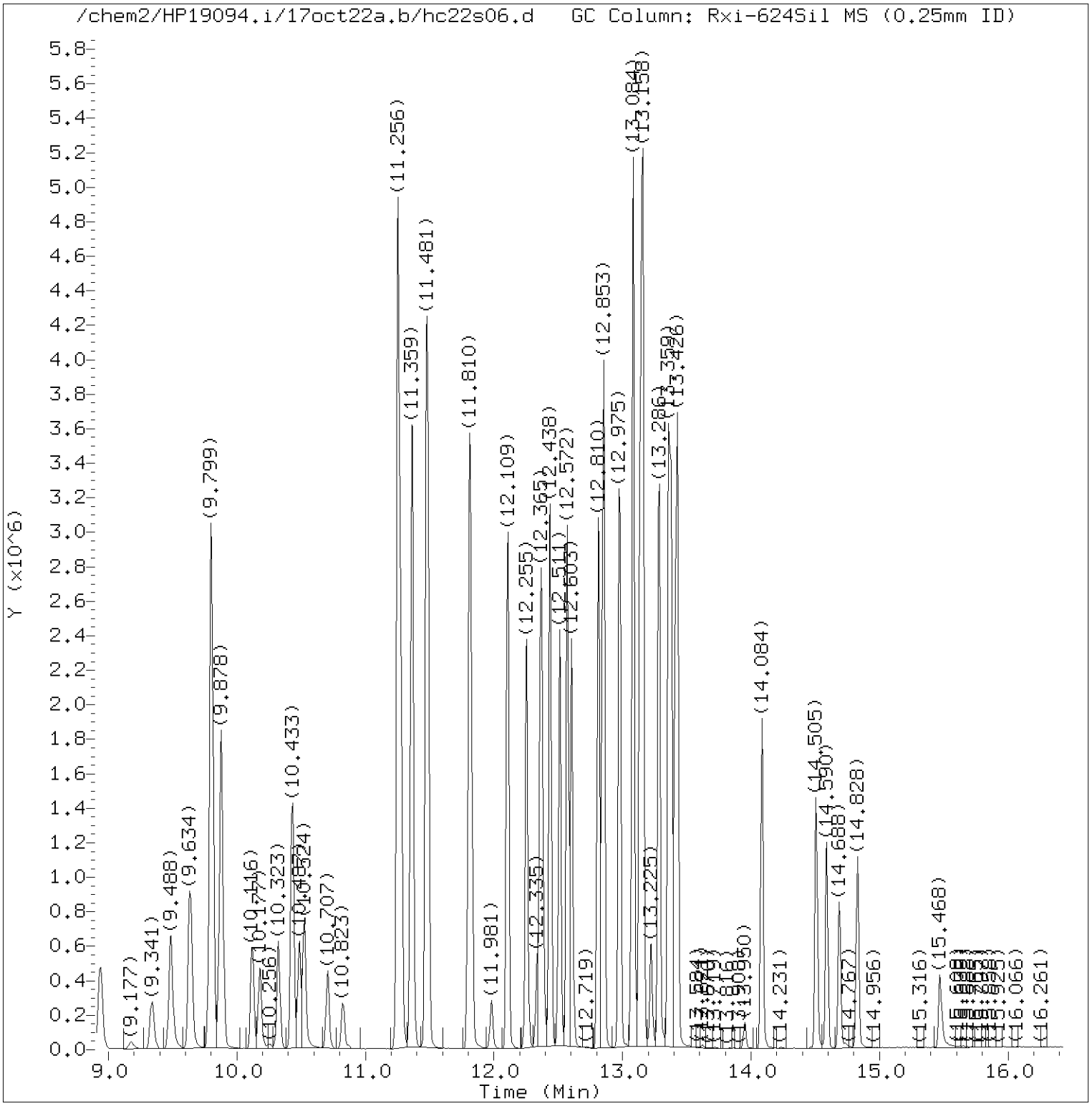
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS Lab Sample ID: 9262026MS

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS Lab Sample ID: 9262026MS

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s06.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:21 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MS Lab Sample ID: 9262026MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.013	85	450139	4.377
2) Chloromethane	(2)	2.160	50	463649	4.566
8) Chloroethane	(2)	2.733	64	353851	6.660
10) Trichlorofluoromethane	(2)	3.050	101	679537	5.466
11) Ethyl ether	(2)	3.300	59	1151180	29.012
15) 1,1-Dichloroethene	(2)	3.623	96	318604	6.405
16) Freon 113	(2)	3.660	101	351262	6.342
26)*t-Butyl Alcohol-d10	(1)	4.263	65	76202	50.000
23) Methylene Chloride	(2)	4.281	84	312275	5.504
33) 1,1-Dichloroethane	(2)	5.360	63	1055929	9.128
38) 2-Butanone	(1)	6.135	43	495278	41.128
48) Tetrahydrofuran	(1)	6.543	71	85948	31.470
50)$Dibromofluoromethane	(2)	6.878	113	550963	9.759
51) 1,1,1-Trichloroethane	(2)	6.915	97	589863	5.856
54) Carbon Tetrachloride	(2)	7.141	117	517019	5.877
57)$1,2-Dichloroethane-d4	(2)	7.342	102	86585	9.794
58) Benzene	(2)	7.390	78	1428111	5.862
63)*Fluorobenzene	(2)	7.787	96	2337853	10.000
67) Trichloroethene	(2)	8.274	95	383466	5.875
82)$Toluene-d8	(3)	9.799	98	2345184	10.207
83) Toluene	(3)	9.878	92	872577	5.812
89) Tetrachloroethene	(3)	10.433	166	443360	6.292
97)*Chlorobenzene-d5	(3)	11.249	117	1581016	10.000
100) Ethylbenzene	(3)	11.365	91	1765283	5.847
101) m+p-Xylene	(3)	11.481	106	1331325	11.702
105) Xylene (Total)	(3)		106	1958077	17.335
104) o-Xylene	(3)	11.804	106	626752	5.634
111)$4-Bromofluorobenzene	(3)	12.255	95	672919	9.642
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	697068	10.000

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

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on 10/23/2017 at 11:11.
Target 3.5 esignature user ID: kas02648

16WC1MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9262027MSD

Data file: /chem2/HP19094.i/17oct22a.b/hc22s07.d Injection date and time: **23-OCT-2017 02:41**
Data file Sample Info. Line: 16WC1MSD;9262027MSD;1;3;MSD;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.031)	439	65	75204	(-12)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2410284	(-1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1662071	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	740020	(-6)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	572170	9.830	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	89463M	9.815	98%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2419746	10.018	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	706176	9.625	96%		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)	2.014	(-0.000)	85	448626	4.232	4.23			0.1	1
2) Chloromethane	(2)	2.160	(-0.001)	50	450074	4.299	4.30			0.2	1
8) Chloroethane	(2)	2.733	(-0.001)	64	345545	6.308	6.31			0.1	1
10) Trichlorofluoromethane	(2)	3.044	(-0.001)	101	661386	5.160	5.16			0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	1180492	28.857	28.86		E	0.1	13
15) 1,1-Dichloroethene	(2)	3.617	(-0.000)	96	323143	6.302	6.30			0.1	1
16) Freon 113	(2)	3.653	(-0.000)	101	358809	6.284	6.28			0.2	1
23) Methylene Chloride	(2)	4.275	(-0.001)	84	318100	5.438	5.44			0.2	1
33) 1,1-Dichloroethane	(2)	5.360	(-0.000)	63	1089480	9.135	9.14			0.1	1
38) 2-Butanone	(1)	6.141	(0.006)	43	505267	42.514	42.51			1	10
48) Tetrahydrofuran	(1)	6.537	(0.008)	71	88506	32.836	32.84			2	25
51) 1,1,1-Trichloroethane	(2)	6.915	(-0.000)	97	609294	5.867	5.87			0.1	1
54) Carbon Tetrachloride	(2)	7.140	(-0.000)	117	536178	5.912	5.91			0.1	1
58) Benzene	(2)	7.384	(0.000)	78	1465365	5.834	5.83			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	389455	5.788	5.79			0.1	1
83) Toluene	(3)	9.878	(-0.000)	92	895579	5.674	5.67			0.1	1
89) Tetrachloroethene	(3)	10.433	(-0.000)	166	454167	6.131	6.13			0.1	1
100) Ethylbenzene	(3)	11.365	(0.000)	91	1798313	5.665	5.67			0.1	1
101) m+p-Xylene	(3)	11.481	(-0.000)	106	1366363	11.424	11.42			0.1	0.5
104) o-Xylene	(3)	11.804	(0.000)	106	649755	5.556	5.56			0.1	0.5
105) Xylene (Total)	(3)			106	2016118	16.980	16.98			0.1	3

E = Compound concentration above calibration range.

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/17oct22a.b/hc22s07.d Injection date and time: **23-OCT-2017 02:41**
Data file Sample Info. Line: 16WC1MSD;9262027MSD;1;3;MSD;RAE95;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172**
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

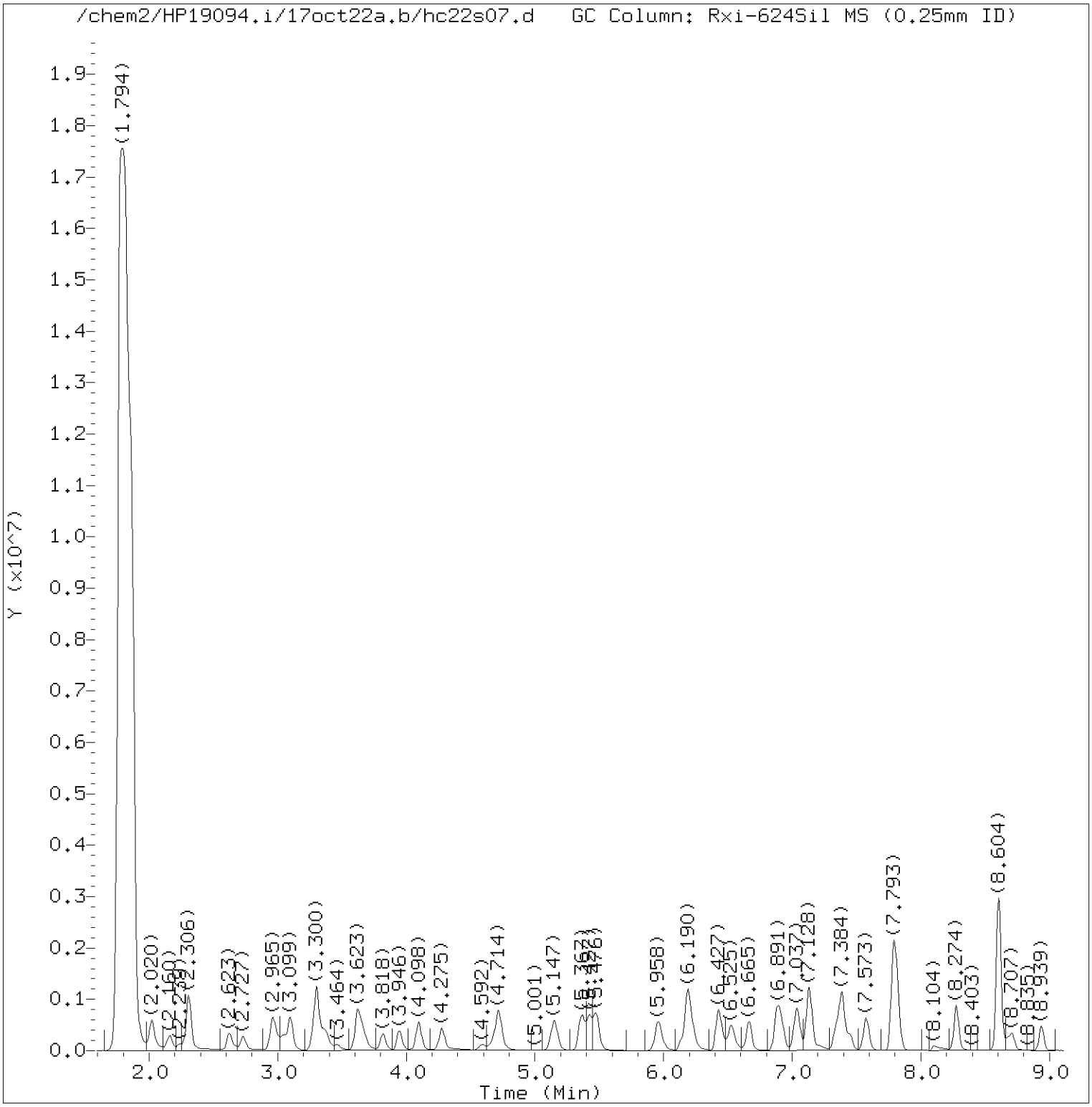
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

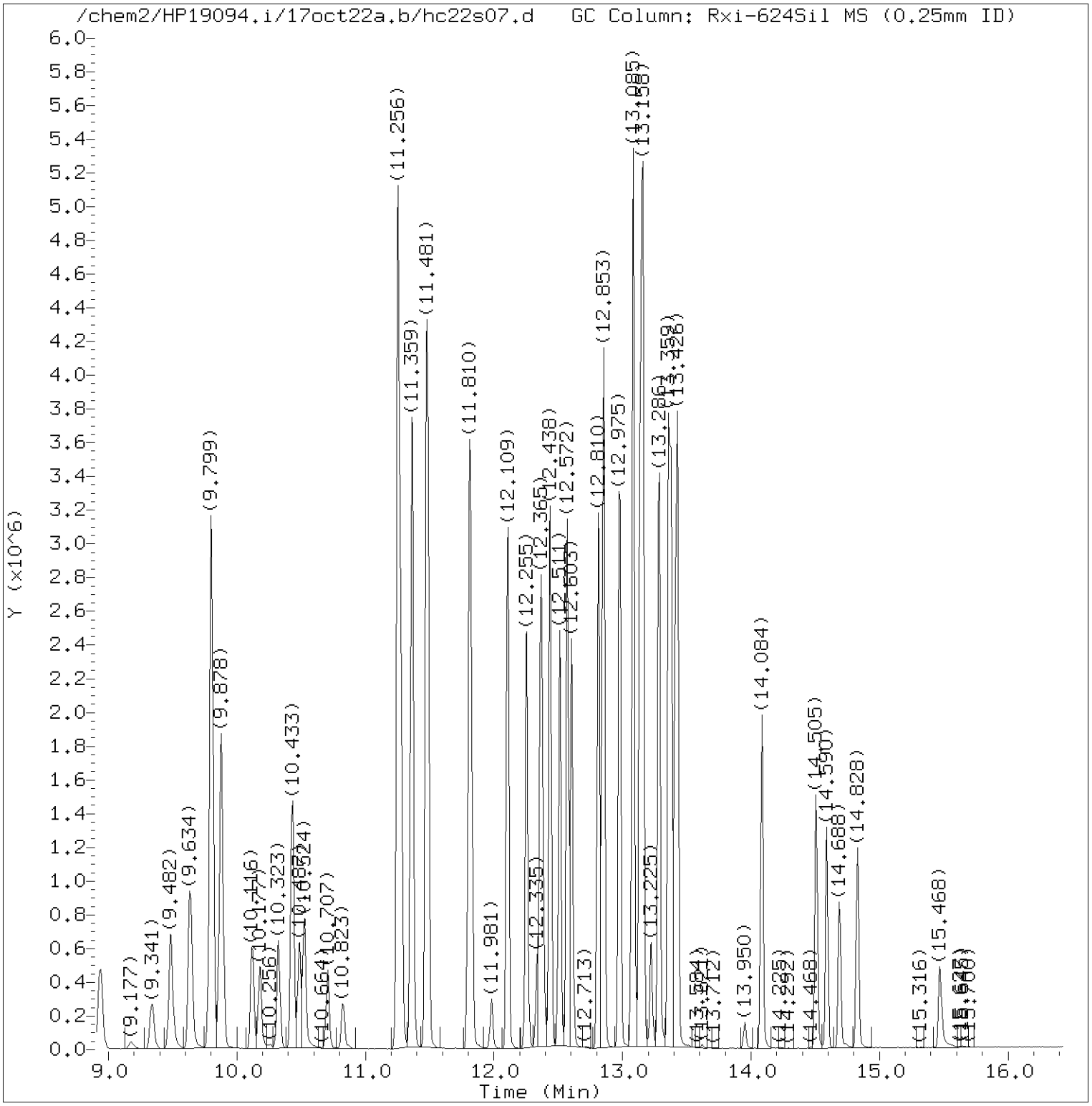
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:41 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MSD Lab Sample ID: 9262027MSD

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:41 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MSD Lab Sample ID: 9262027MSD

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:41 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

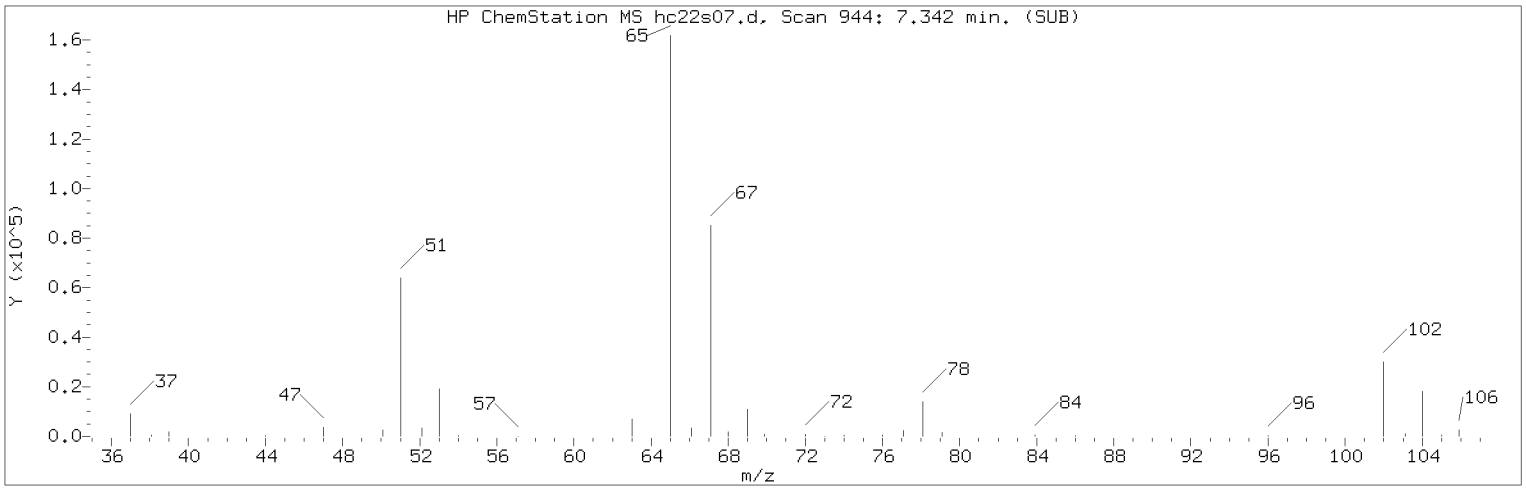
Sample Name: 16WC1MSD Lab Sample ID: 9262027MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	448626	4.232
2) Chloromethane	(2)	2.160	50	450074	4.299
8) Chloroethane	(2)	2.733	64	345545	6.308
10) Trichlorofluoromethane	(2)	3.044	101	661386	5.160
11) Ethyl ether	(2)	3.300	59	1180492	28.857
15) 1,1-Dichloroethene	(2)	3.617	96	323143	6.302
16) Freon 113	(2)	3.653	101	358809	6.284
26)*t-Butyl Alcohol-d10	(1)	4.263	65	75204	50.000
23) Methylene Chloride	(2)	4.275	84	318100	5.438
33) 1,1-Dichloroethane	(2)	5.360	63	1089480	9.135
38) 2-Butanone	(1)	6.141	43	505267	42.514
48) Tetrahydrofuran	(1)	6.537	71	88506	32.836
50)$Dibromofluoromethane	(2)	6.878	113	572170	9.830
51) 1,1,1-Trichloroethane	(2)	6.915	97	609294	5.867
54) Carbon Tetrachloride	(2)	7.141	117	536178	5.912
57)$1,2-Dichloroethane-d4	(2)	7.342	102	89463M	9.815
58) Benzene	(2)	7.384	78	1465365	5.834
63)*Fluorobenzene	(2)	7.787	96	2410284	10.000
67) Trichloroethene	(2)	8.274	95	389455	5.788
82)$Toluene-d8	(3)	9.799	98	2419746	10.018
83) Toluene	(3)	9.878	92	895579	5.674
89) Tetrachloroethene	(3)	10.433	166	454167	6.131
97)*Chlorobenzene-d5	(3)	11.250	117	1662071	10.000
100) Ethylbenzene	(3)	11.365	91	1798313	5.665
101) m+p-Xylene	(3)	11.481	106	1366363	11.424
105) Xylene (Total)	(3)		106	2016118	16.980
104) o-Xylene	(3)	11.804	106	649755	5.556
111)$4-Bromofluorobenzene	(3)	12.249	95	706176	9.625
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	740020	10.000

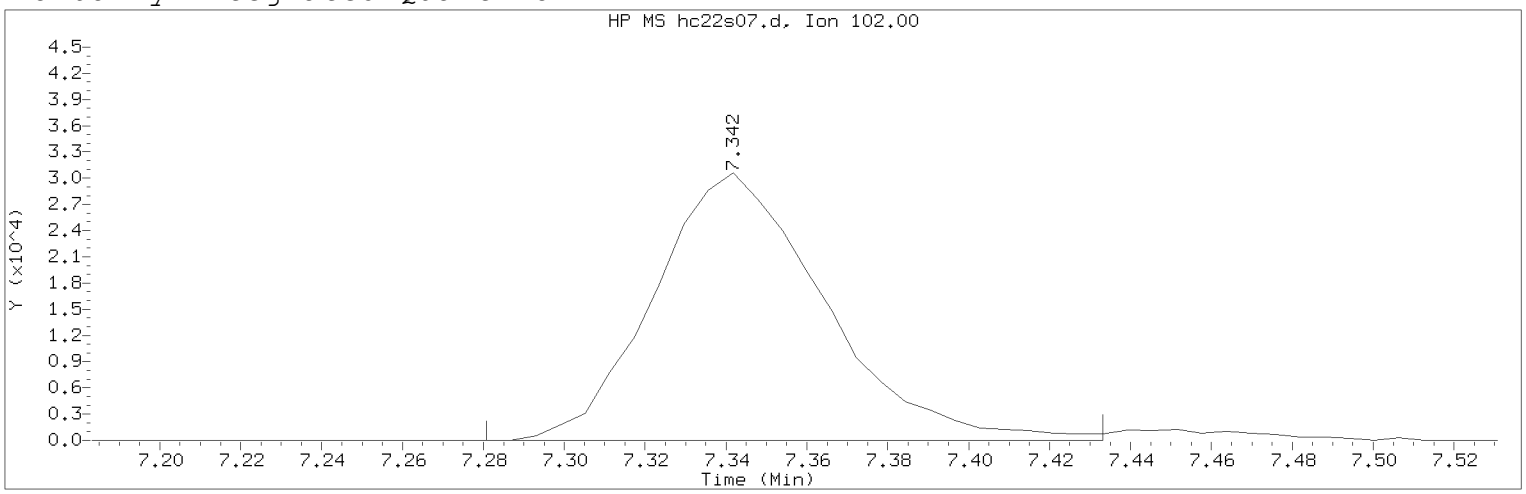
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:41 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 11:09 kas02648

Sample Name: 16WC1MSD Lab Sample ID: 9262027MSD

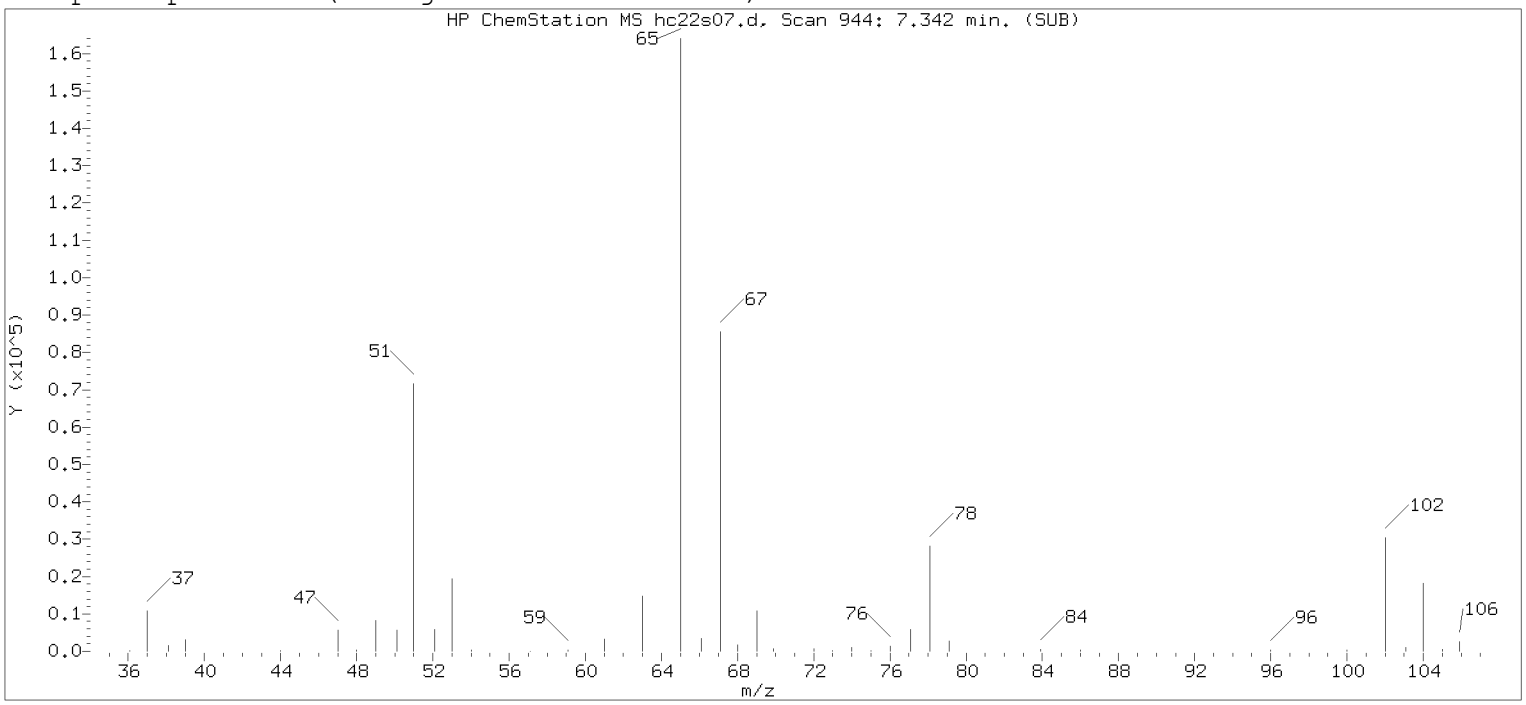
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area (flag) : 89463M
On-Column Amount (ng) : 9.8151
Integration start scan : 933 Integration stop scan: 958
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

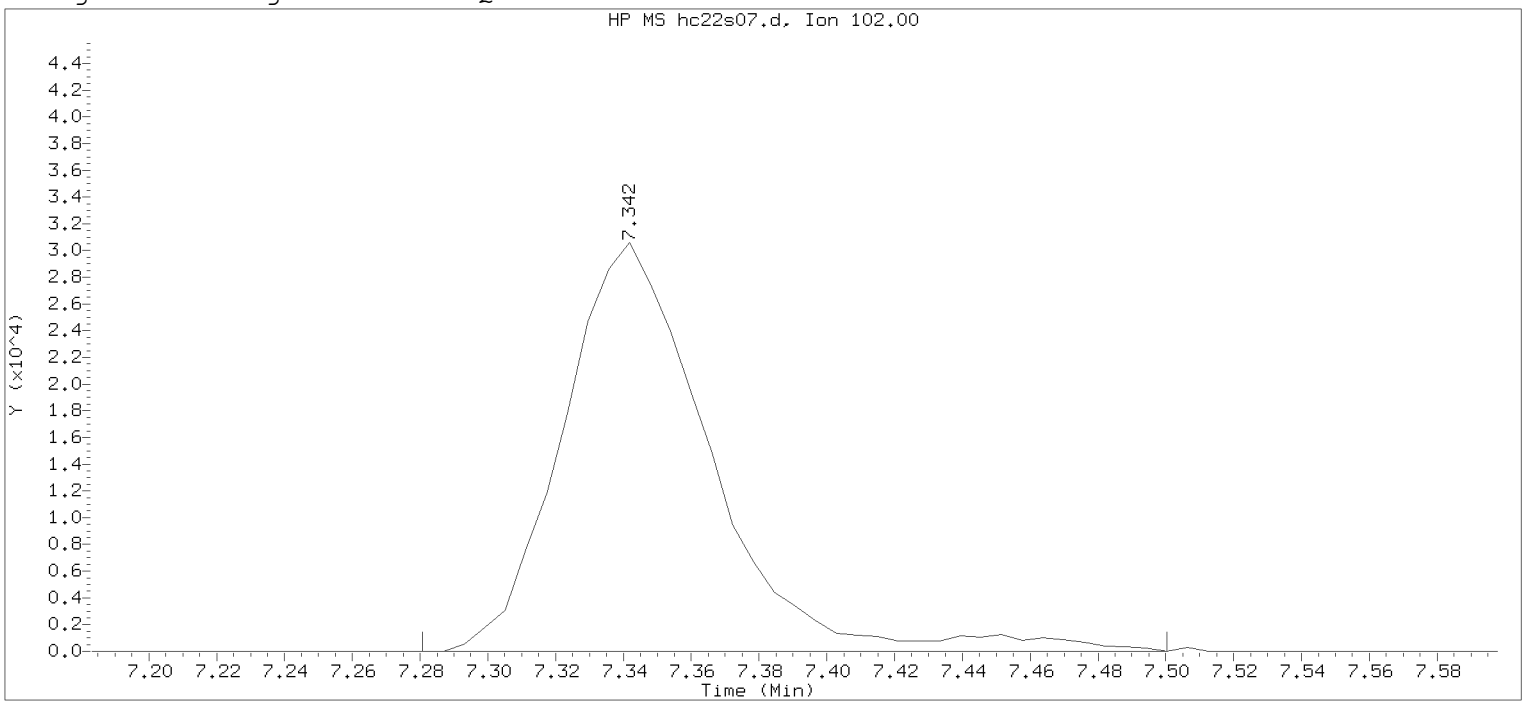
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2017 at 11:12.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:29.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 02:41 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 02:59 Automation

Sample Name: 16WC1MSD Lab Sample ID: 9262027MSD

Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area : 92321
On-column Amount (ng) : 10.1287
Integration start scan : 933 Integration stop scan: 969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2017 at 11:12.
Target 3.5 esignature used. Key: 2.5

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s33.d Injection date and time: **22-OCT-2017 21:44**
Data file Sample Info. Line: LCSH97;LCSH97;1;3;LCS;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263(-0.031)	439	65	67388M (-21)	50.00	
63) Fluorobenzene	7.787(-0.006)	1017	96	2239738 (-8)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1468248 (-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139(-0.006)	1895	152	595301 (-25)	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
50) Dibromofluoromethane	(2)	6.872(0.001)	113	513295	9.490	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342(0.001)	102	81777	9.655	97%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2267163	10.625	106%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249(0.000)	95	611637	9.437	94%		80 - 120

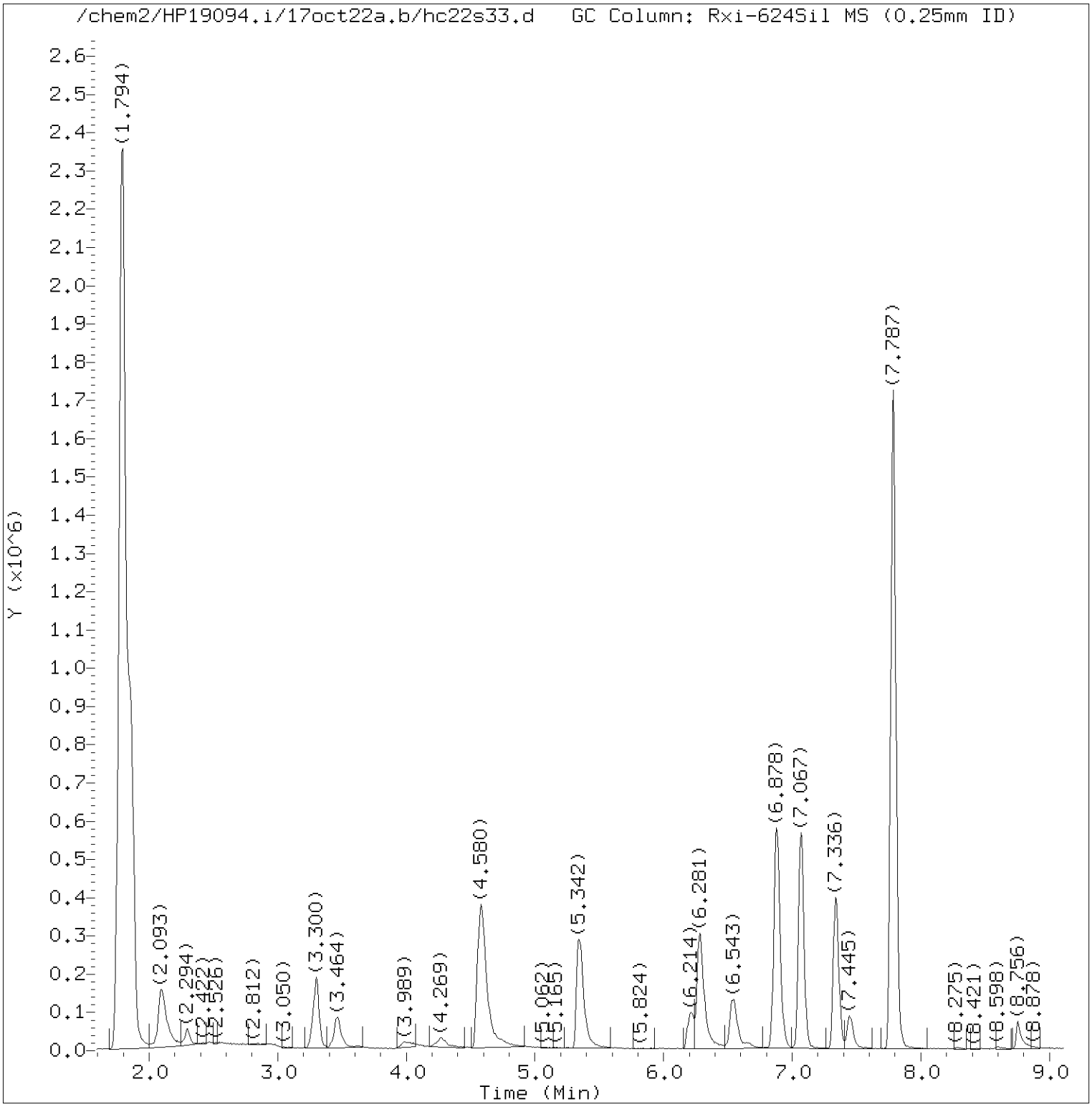
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.093(-0.000)	45	440001M	4.802	4.80		J	0.1	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

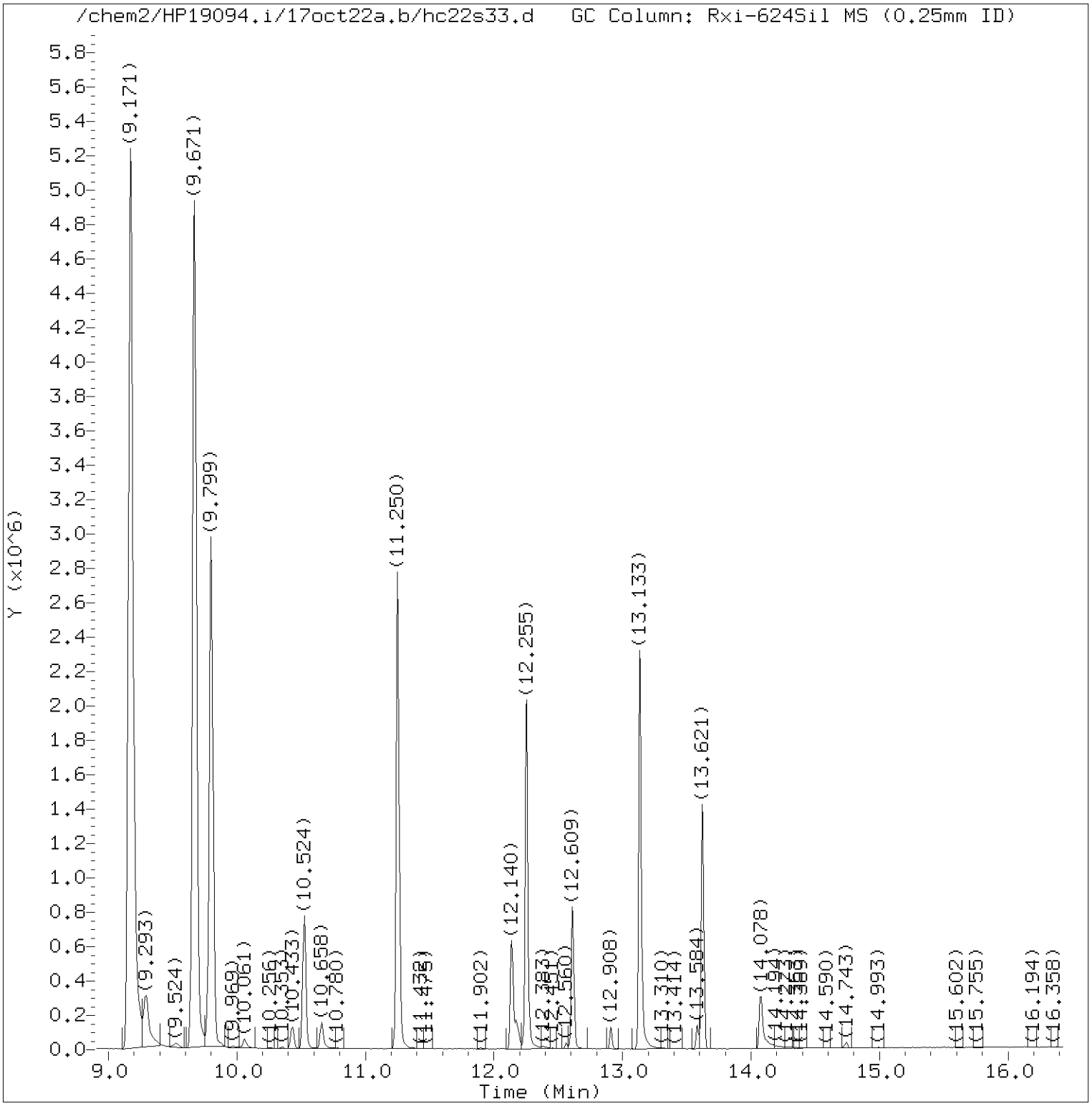
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

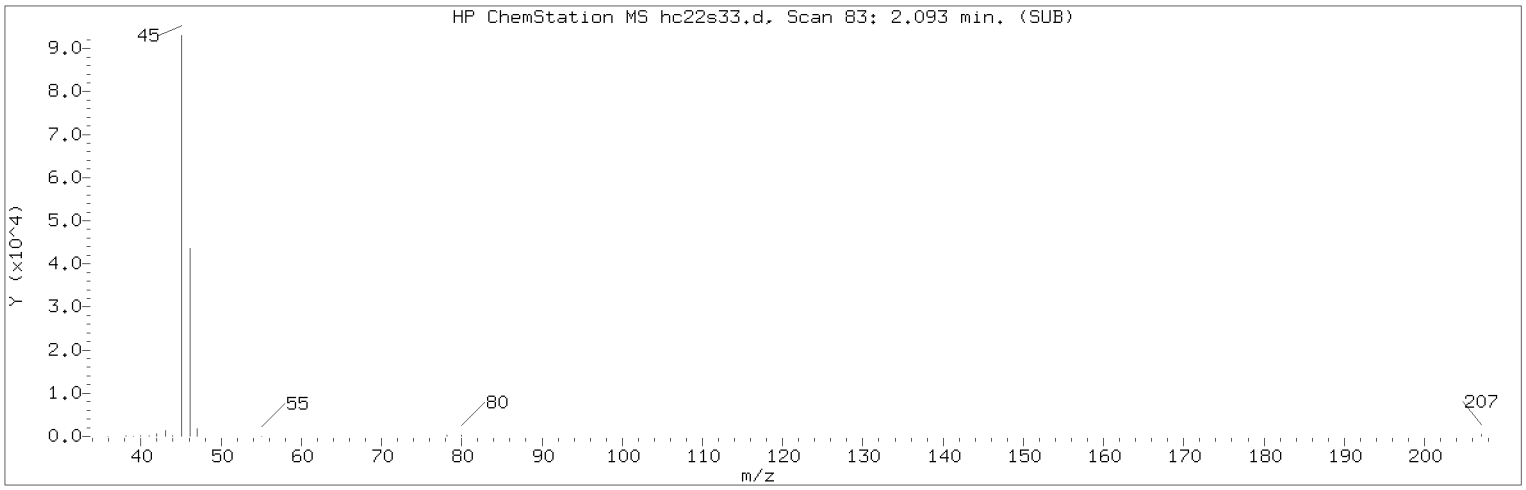
Sample Name: LCSH97 Lab Sample ID: LCSH97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	440001M	4.802
26)*t-Butyl Alcohol-d10	(1)	4.263	65	67388M	50.000
50)$Dibromofluoromethane	(2)	6.872	113	513295	9.490
57)$1,2-Dichloroethane-d4	(2)	7.342	102	81777	9.655
63)*Fluorobenzene	(2)	7.787	96	2239738	10.000
82)$Toluene-d8	(3)	9.799	98	2267163	10.625
97)*Chlorobenzene-d5	(3)	11.250	117	1468248	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	611637	9.437
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	595301	10.000

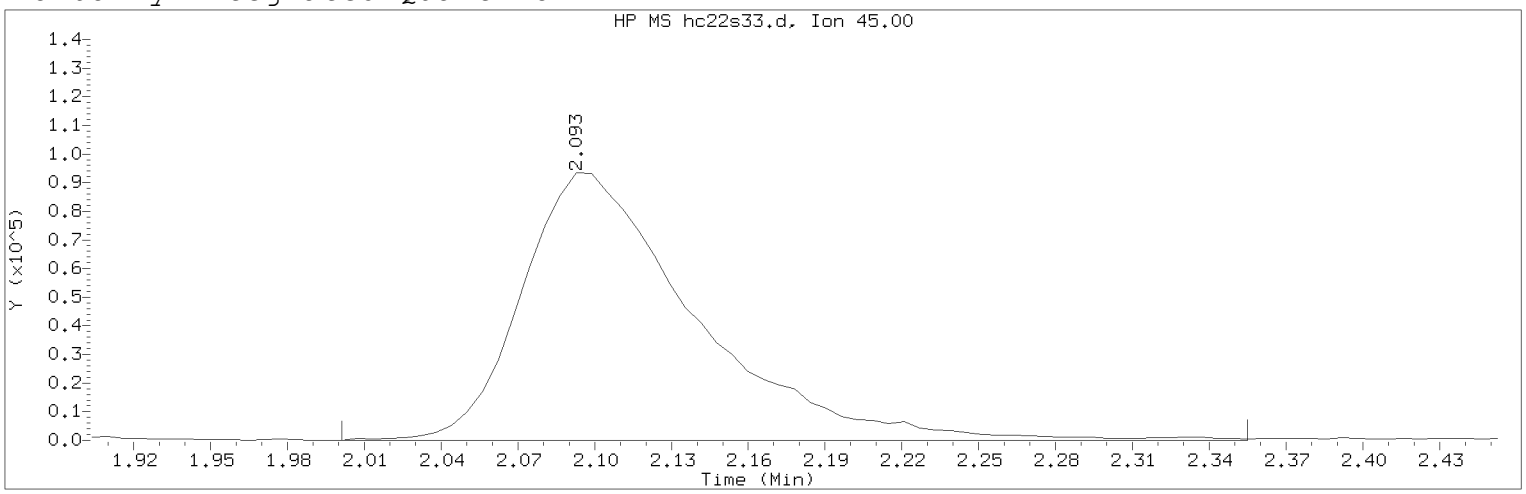
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

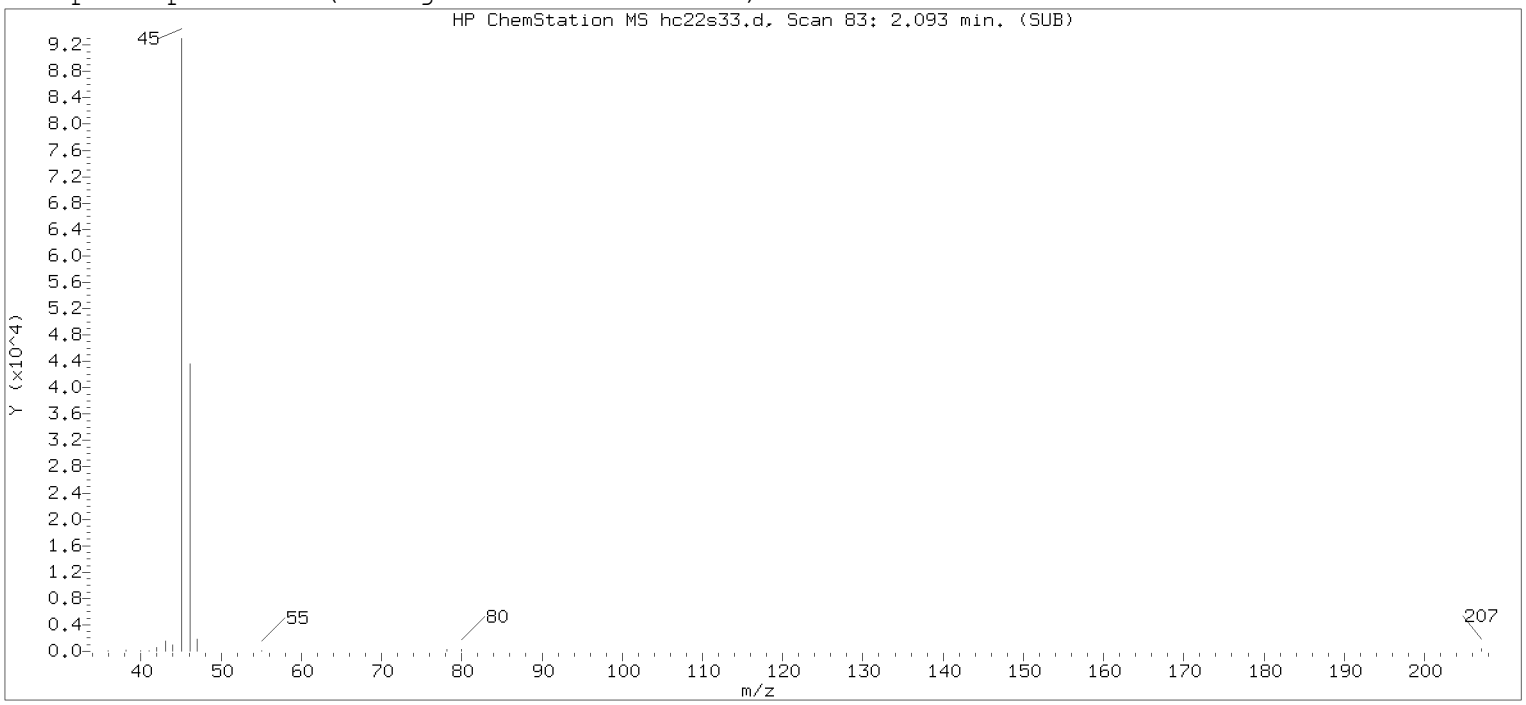
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 440001M
On-Column Amount (ng) : 4.8017
Integration start scan : 67 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

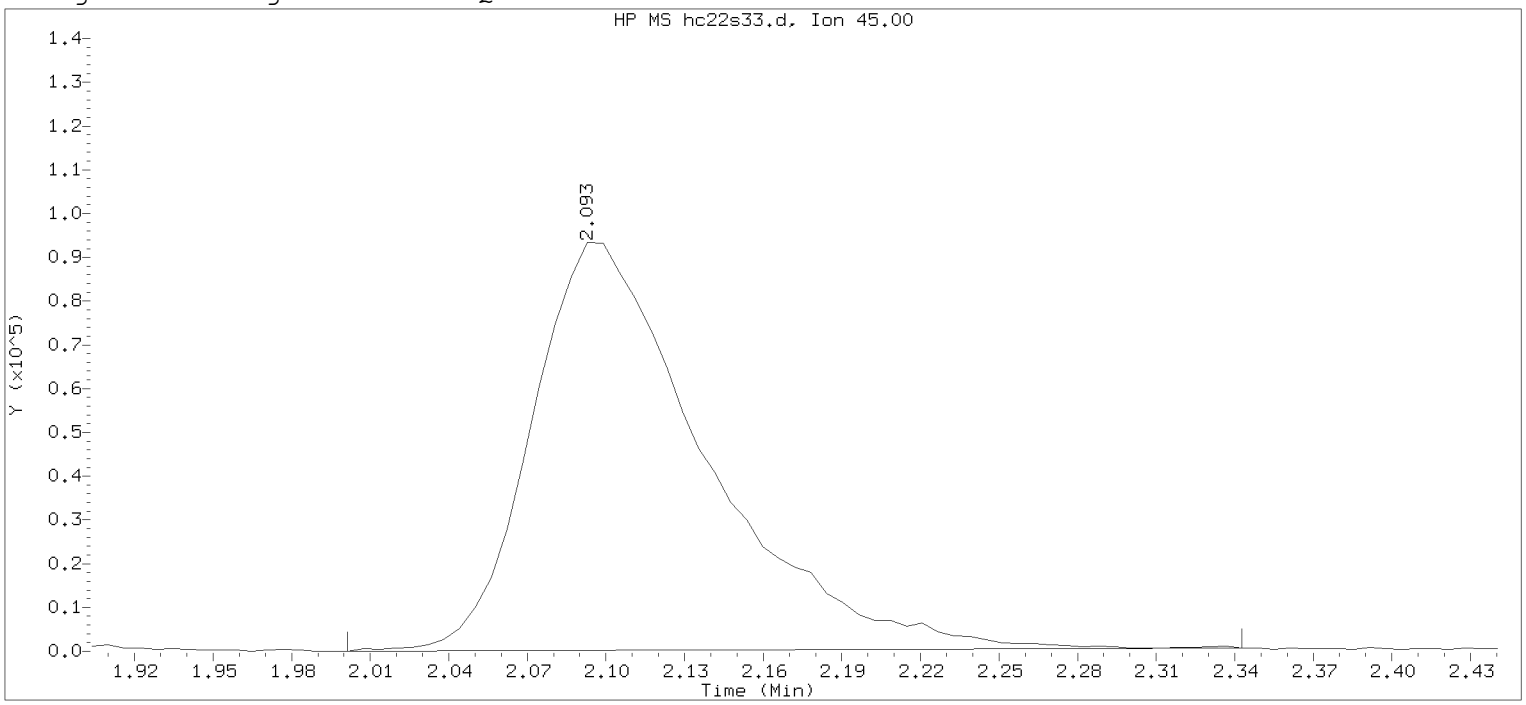
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

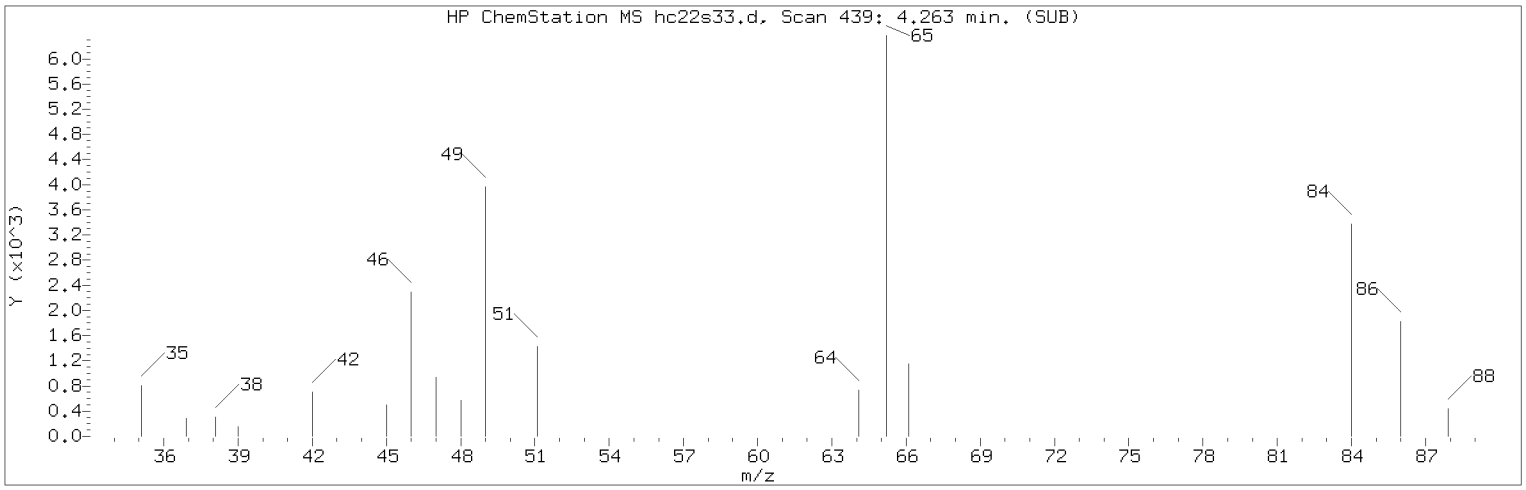
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:23 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

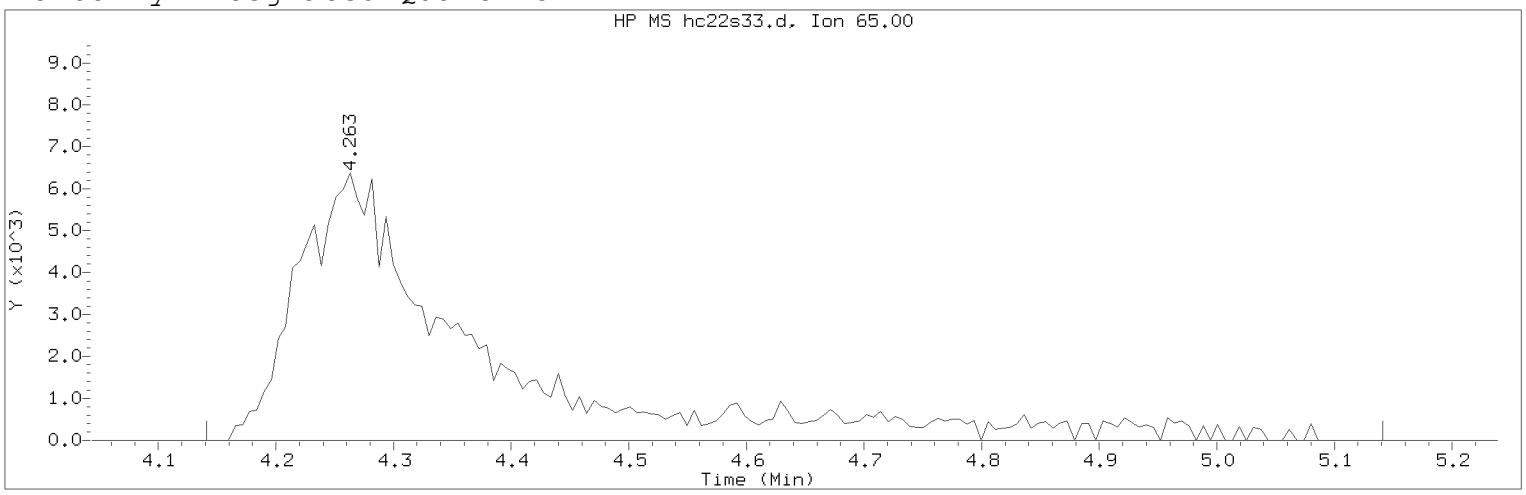
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area : 432554
On-column Amount (ng) : 4.7205
Integration start scan : 67 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 677

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

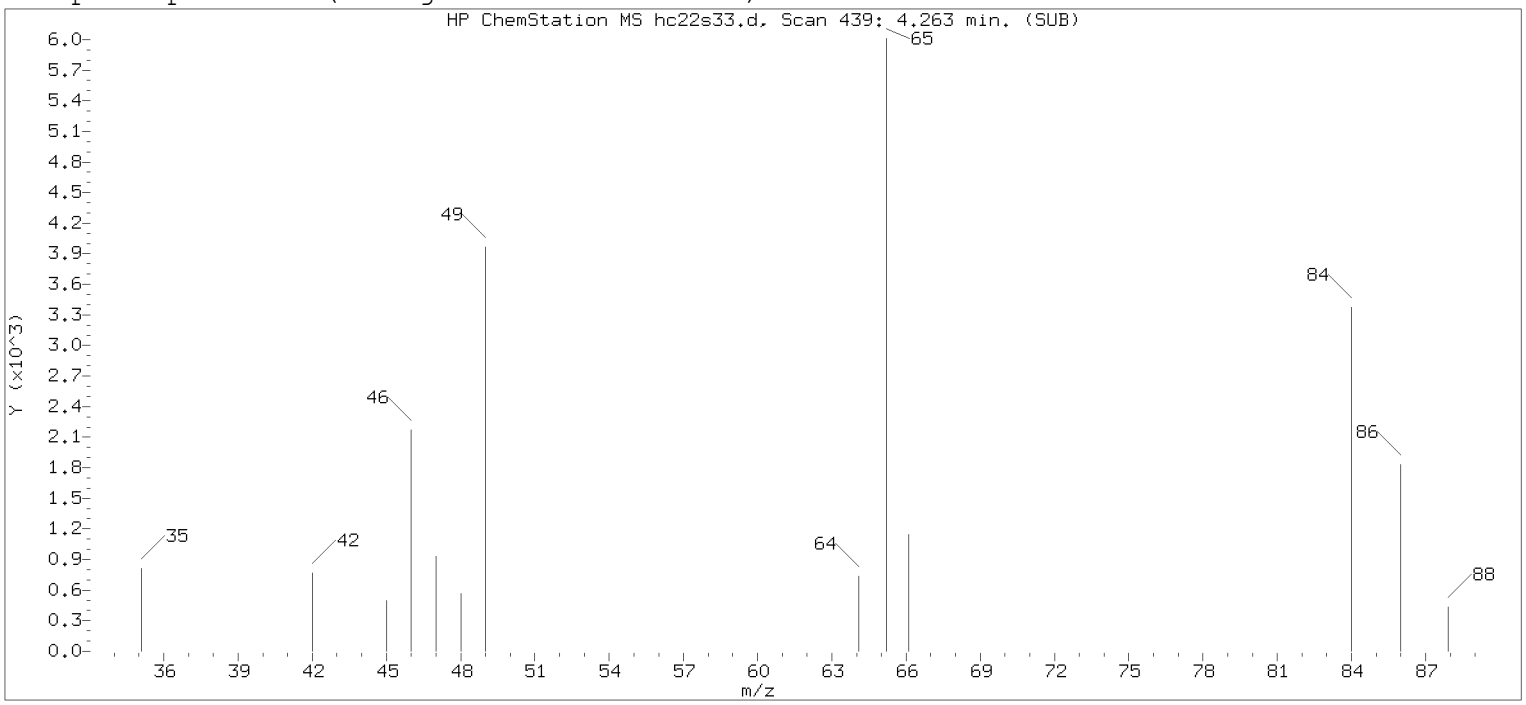
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area (flag) : 67388M
On-Column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

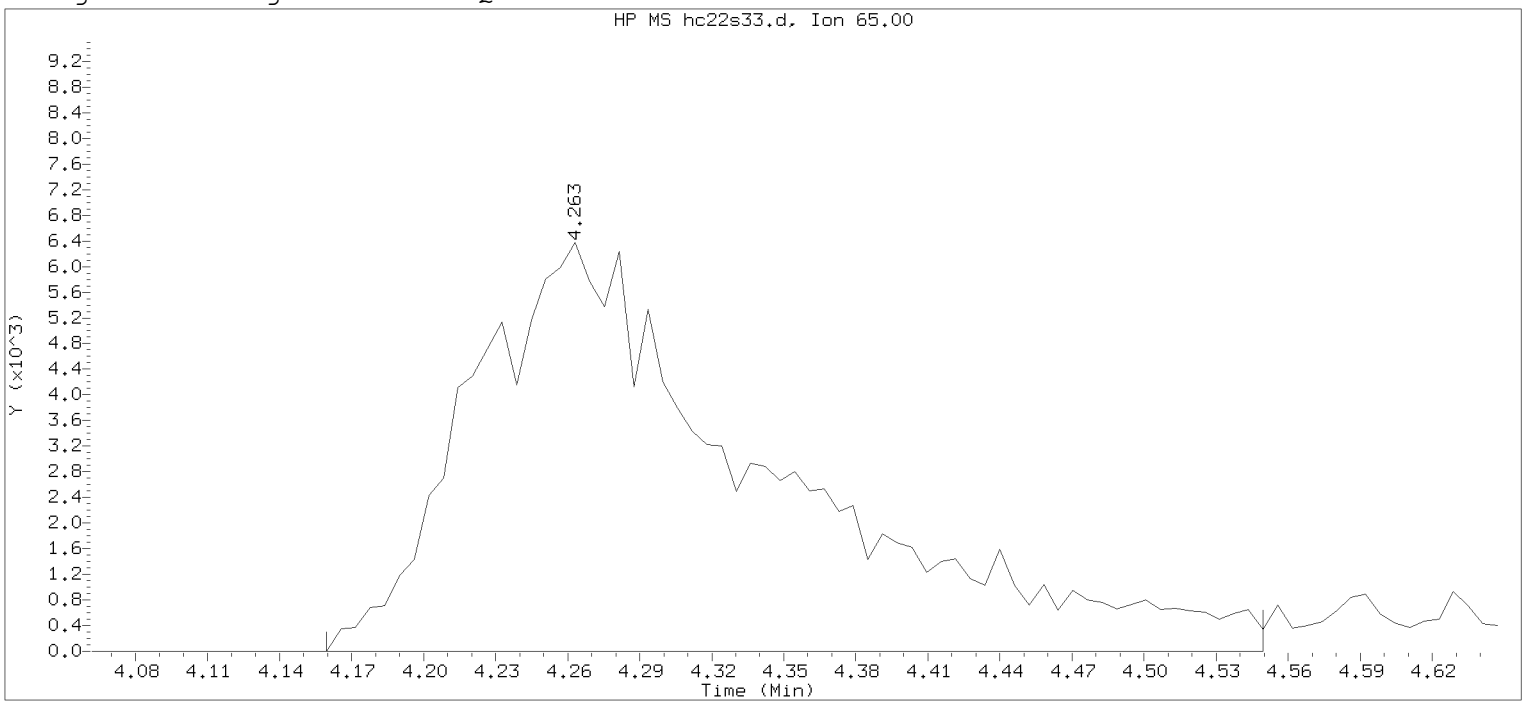
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s33.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 21:44 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 22-OCT-2017 22:06
Date, time and analyst ID of latest file update: 22-Oct-2017 22:23 dvv10203

Sample Name: LCSH97 Lab Sample ID: LCSH97

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area : 55077
On-column Amount (ng) : 50.0000
Integration start scan : 421 Integration stop scan: 485
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used during data review.

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s34.d Injection date and time: **22-OCT-2017 23:45**
Data file Sample Info. Line: LCDH97;LCDH97;1;3;LCSD;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.245 (-0.012)	436	65	81836M (-4)	50.00	
63) Fluorobenzene	7.787 (-0.006)	1017	96	2379888 (-2)	10.00	
97) Chlorobenzene-d5	11.250 (0.000)	1585	117	1594868 (-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.139 (-0.006)	1895	152	640929 (-19)	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
50) Dibromofluoromethane	(2)	6.872 (0.001)	113	557617	9.703	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336 (0.002)	102	87384	9.709	97%		80 - 120
82) Toluene-d8	(3)	9.799 (0.000)	98	2420992	10.445	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249 (0.000)	95	661608	9.397	94%		80 - 120

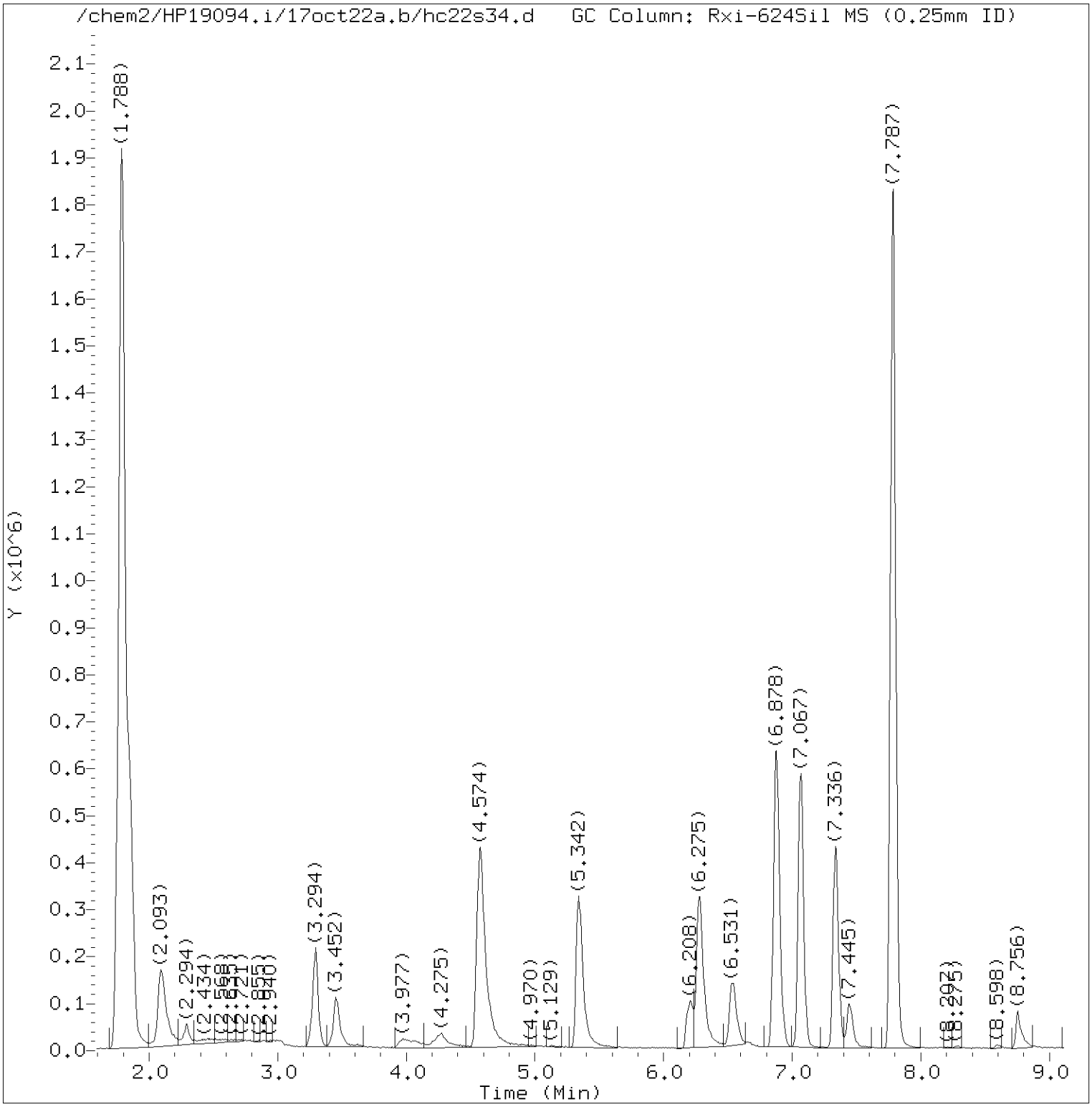
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.093 (-0.000)	45	455217M	4.675	4.68		J	0.1	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:19. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

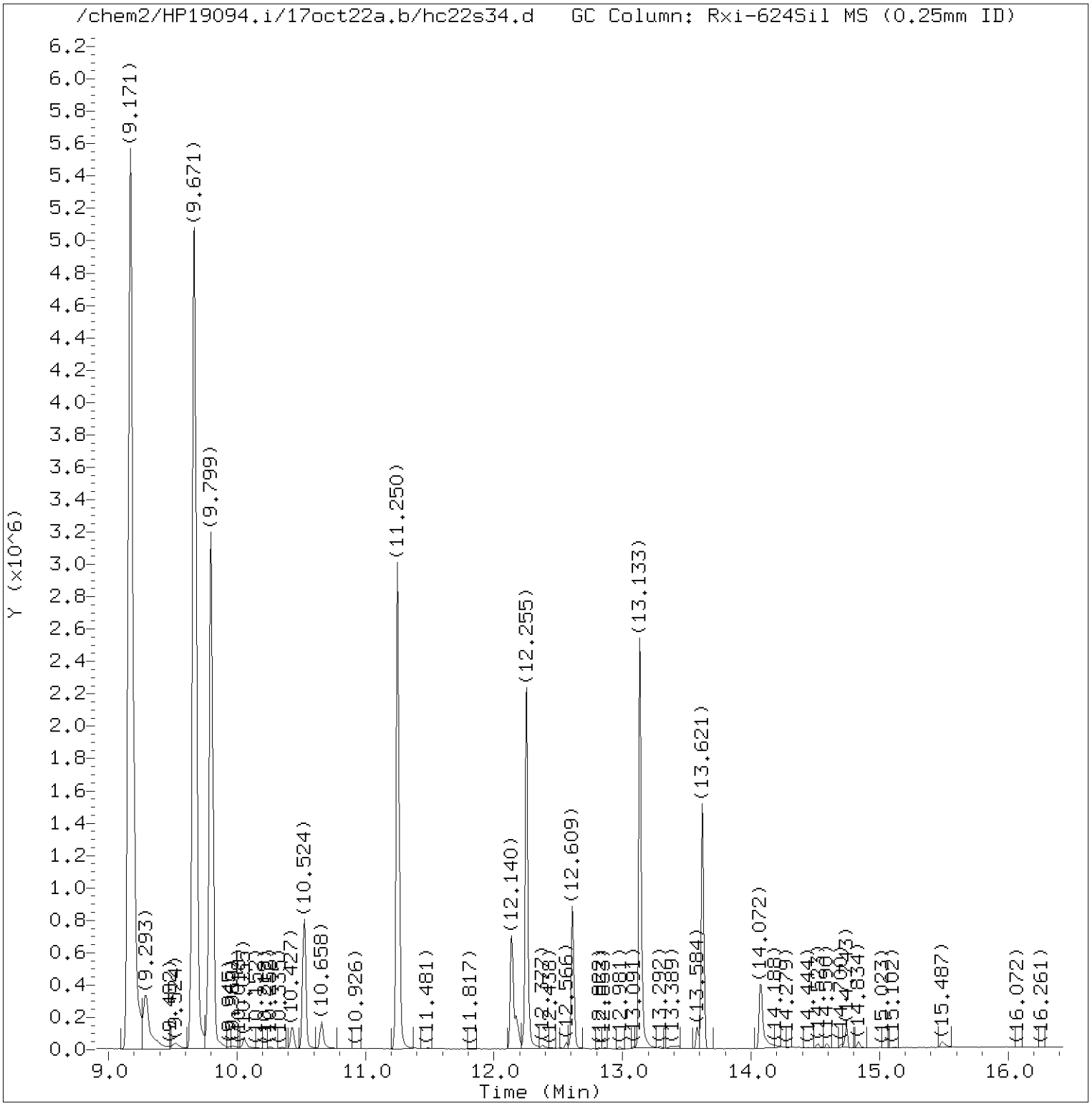
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH97 Lab Sample ID: LCDH97

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH97 Lab Sample ID: LCDH97

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

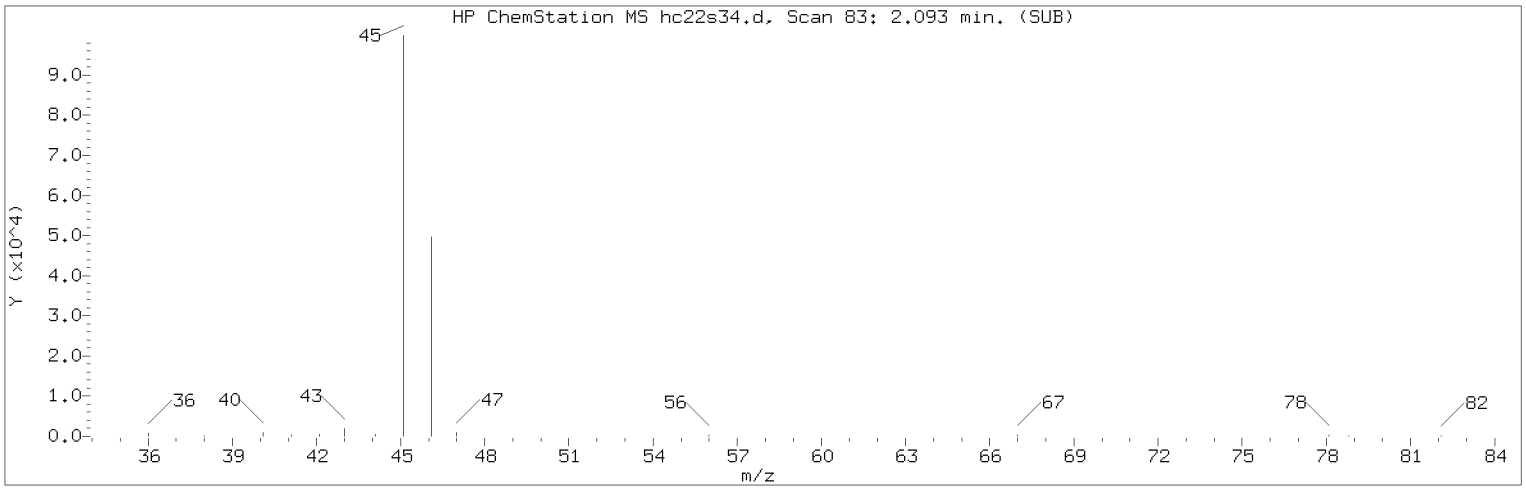
Sample Name: LCDH97 Lab Sample ID: LCDH97

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	455217M	4.675
26)*t-Butyl Alcohol-d10	(1)	4.245	65	81836M	50.000
50)$Dibromofluoromethane	(2)	6.872	113	557617	9.703
57)$1,2-Dichloroethane-d4	(2)	7.336	102	87384	9.709
63)*Fluorobenzene	(2)	7.787	96	2379888	10.000
82)$Toluene-d8	(3)	9.799	98	2420992	10.445
97)*Chlorobenzene-d5	(3)	11.250	117	1594868	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	661608	9.397
133)*1,4-Dichlorobenzene-d4	(4)	13.139	152	640929	10.000

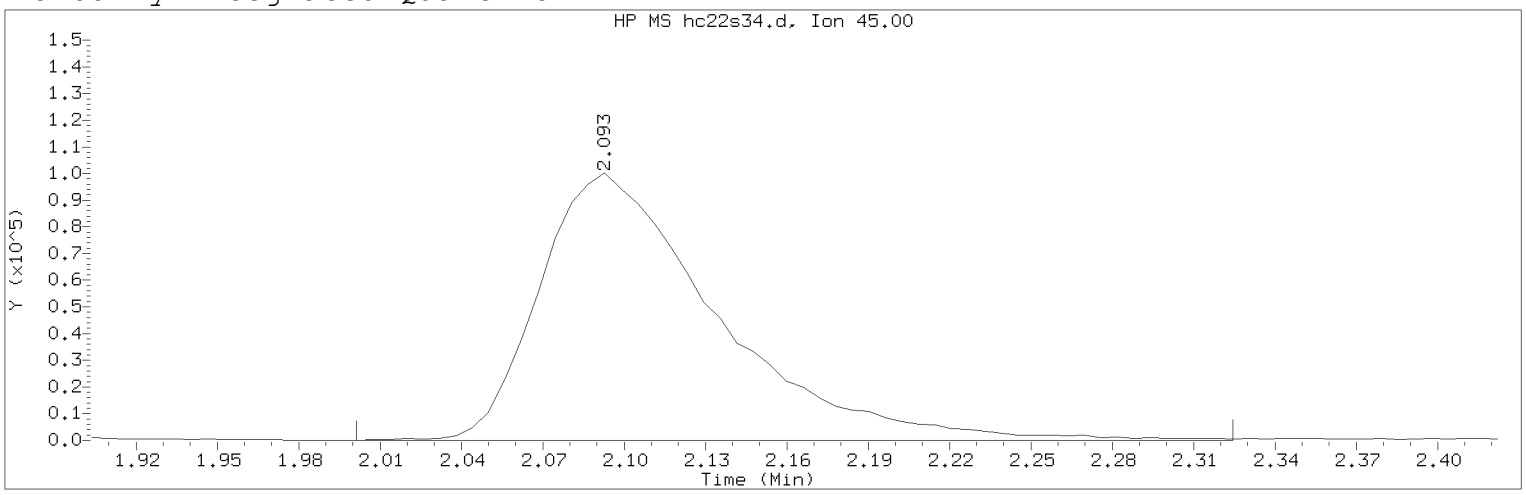
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH97 Lab Sample ID: LCDH97

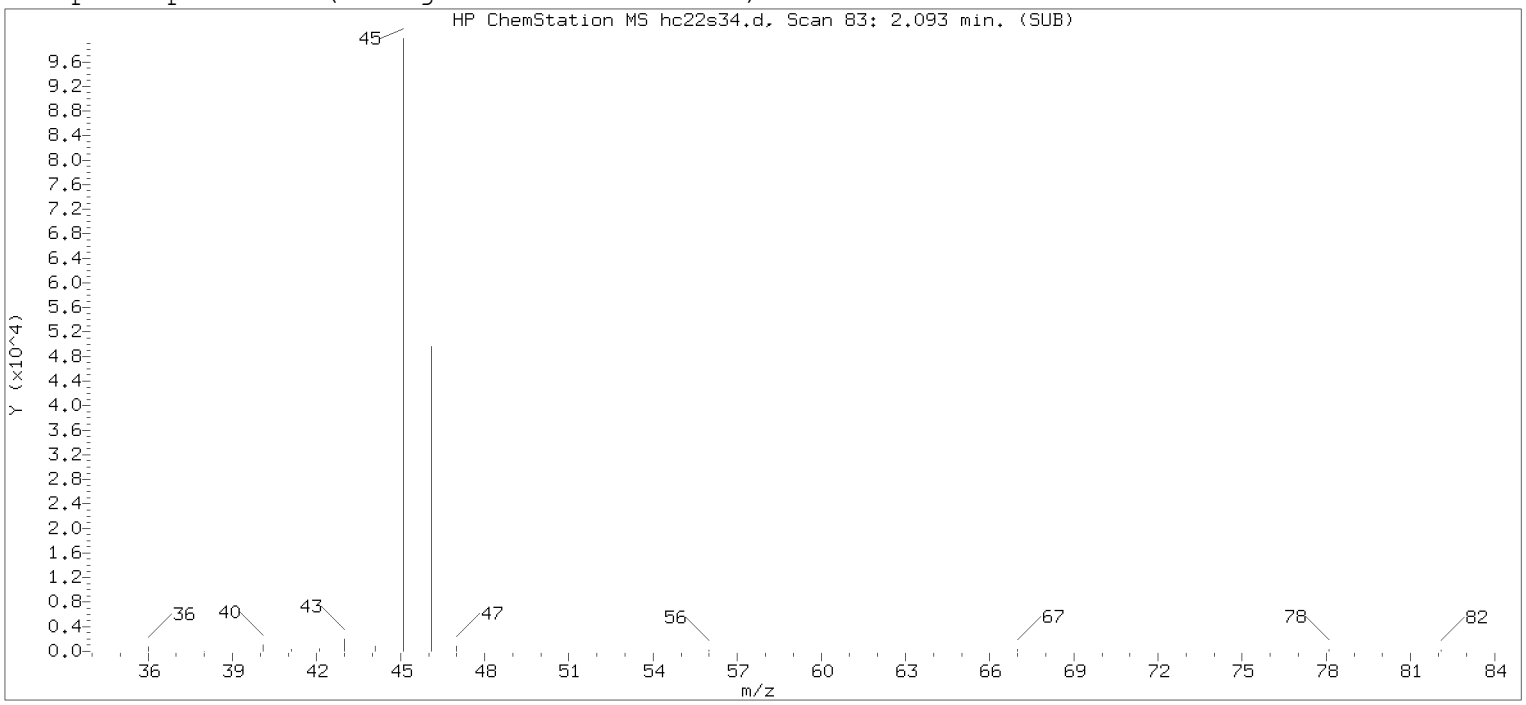
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 455217M
On-Column Amount (ng) : 4.6752
Integration start scan : 67 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

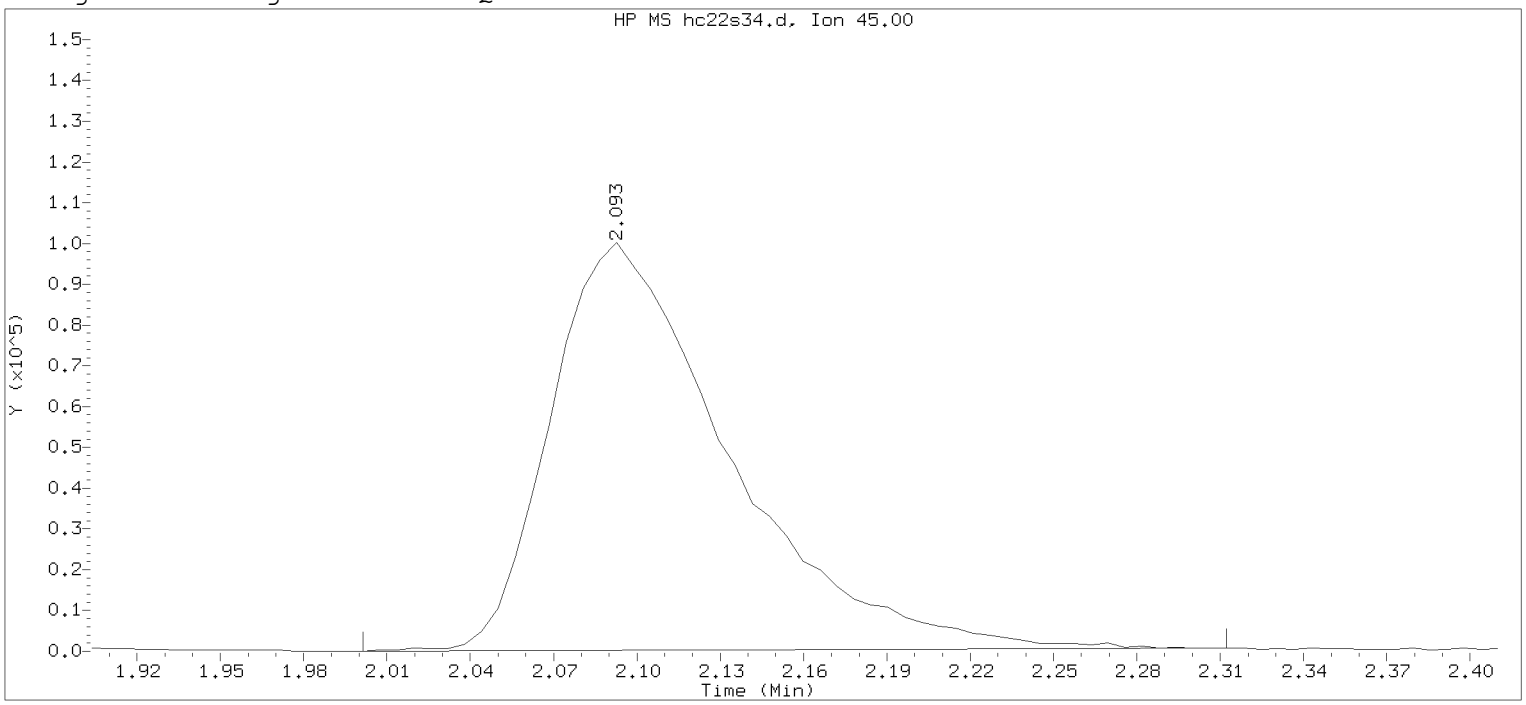
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

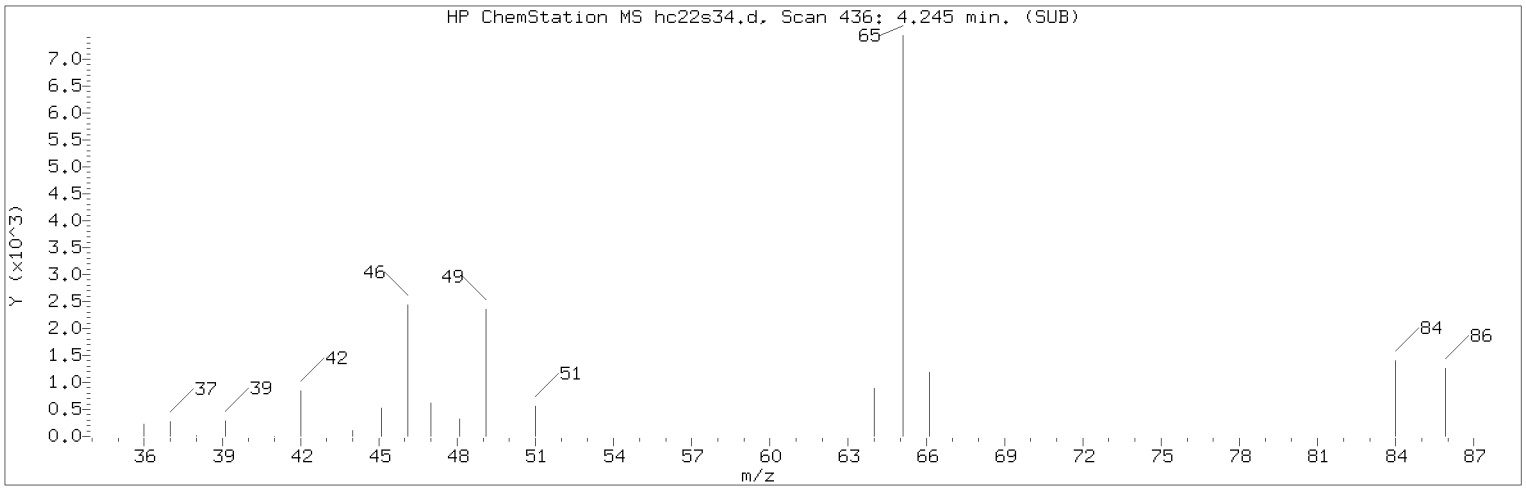
Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:03 Automation

Sample Name: LCDH97 Lab Sample ID: LCDH97

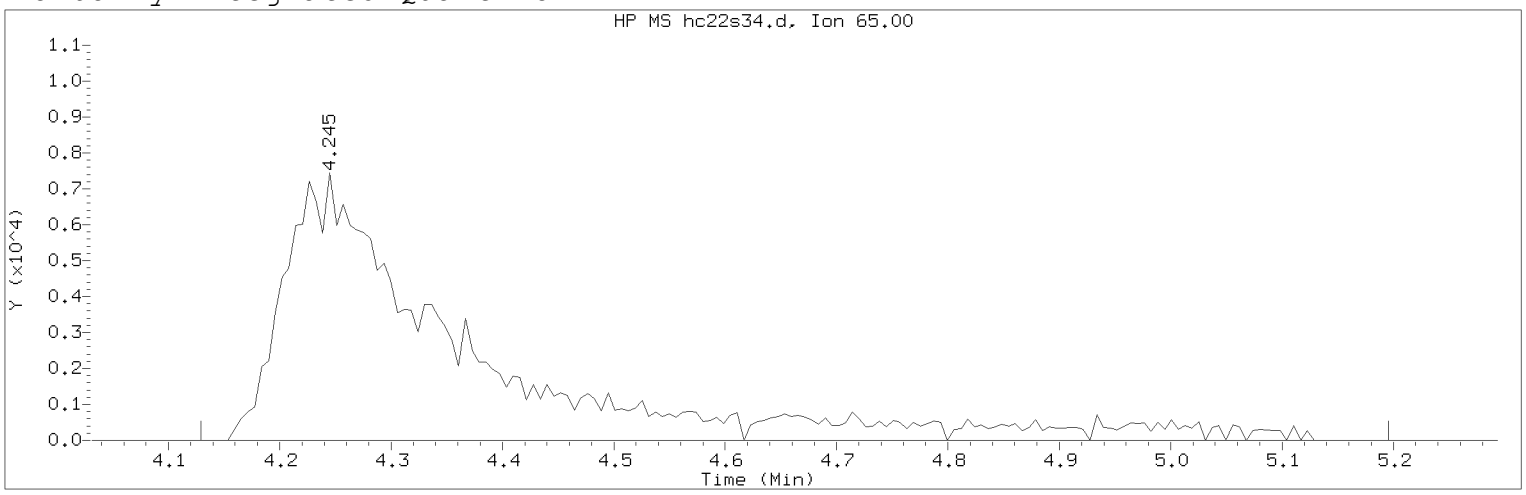
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area : 447589
On-column Amount (ng) : 4.5969
Integration start scan : 67 Integration stop scan: 118
Y at integration start : 0 Y at integration end: 755

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH97 Lab Sample ID: LCDH97

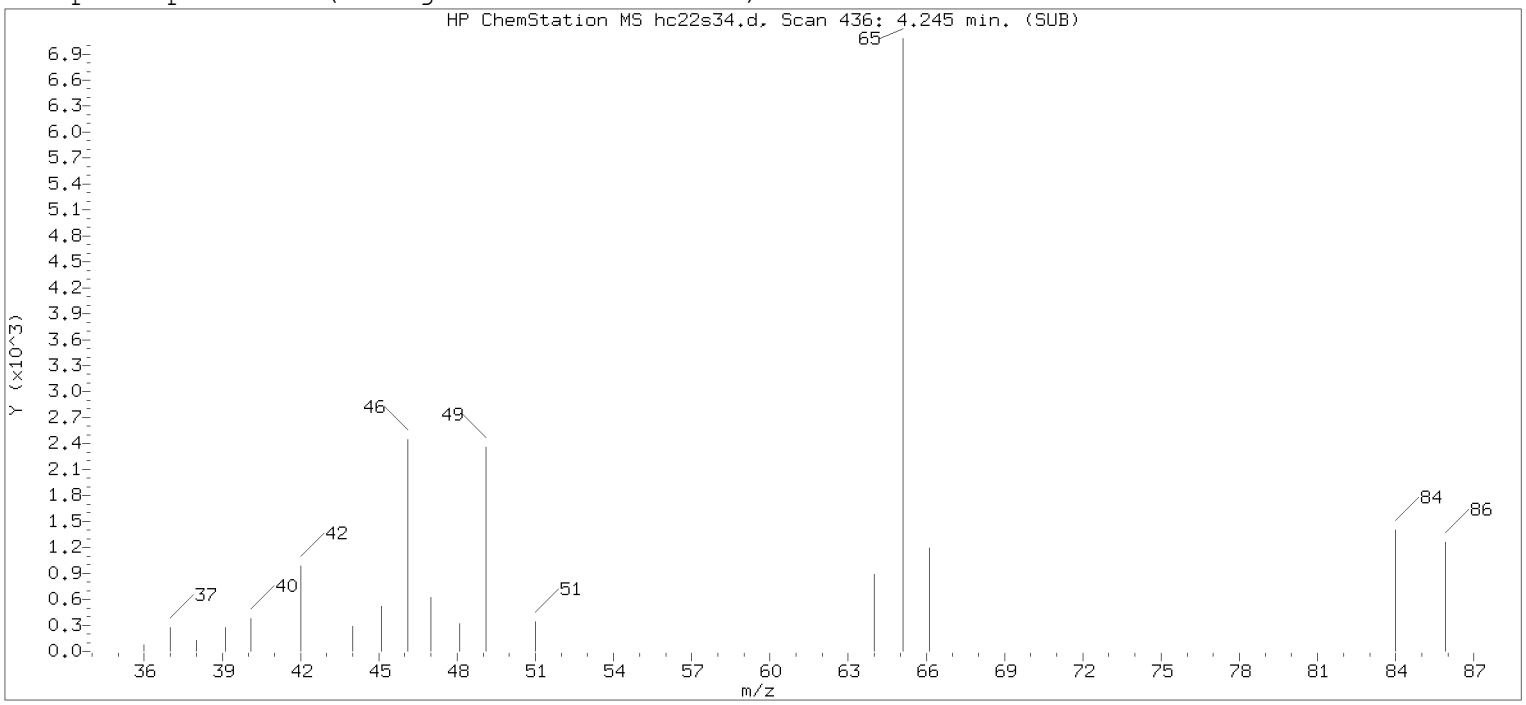
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 436
Retention Time (minutes): 4.245
Quant Ion : 65.00
Area (flag) : 81836M
On-Column Amount (ng) : 50.0000
Integration start scan : 416 Integration stop scan: 591
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

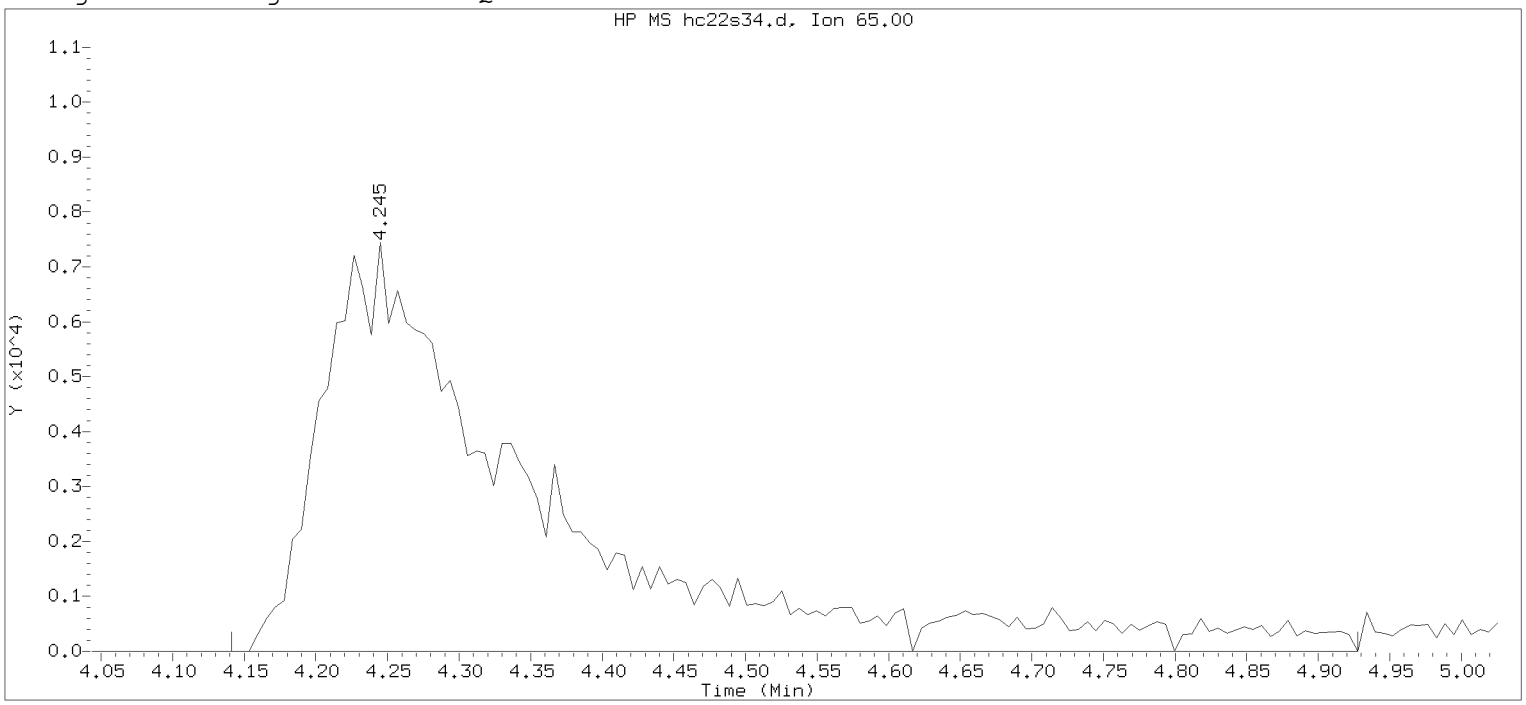
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s34.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:03 Automation

Sample Name: LCDH97 Lab Sample ID: LCDH97

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 436		
Retention Time (minutes)	: 4.245		
Quant Ion	: 65.00		
Area	: 78056		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 418	Integration stop scan:	547
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used on 10/23/2017

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s31.d Injection date and time: **22-OCT-2017 23:05**
Data file Sample Info. Line: LCSH96;LCSH96;1;3;LCS;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.239(-0.006)	435	65	81932M (-4)	50.00	
63) Fluorobenzene	7.787(-0.006)	1017	96	2430888 (0)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1647790 (-4)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133(0.000)	1894	152	726039 (-8)	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
50) Dibromofluoromethane	(2)	6.878(0.000)	113	575765	9.808	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342(0.001)	102	86712	9.433	94%		80 - 120
82) Toluene-d8	(3)	9.799(0.000)	98	2422347	10.115	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249(0.000)	95	693805	9.538	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)	2.007(0.000)	85	402285	3.762	3.76			0.1	1
2) Chloromethane	(2)	2.148(0.000)	50	437308	4.142	4.14			0.2	1
8) Chloroethane	(2)	2.727(-0.000)	64	260686	4.719	4.72			0.1	1
10) Trichlorofluoromethane	(2)	3.044(-0.001)	101	573574	4.437	4.44			0.1	1
11) Ethyl ether	(2)	3.300(-0.000)	59	205624	4.984	4.98		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.617(-0.000)	96	288663	5.581	5.58			0.1	1
16) Freon 113	(2)	3.659(-0.001)	101	313635	5.446	5.45			0.2	1
23) Methylene Chloride	(2)	4.275(-0.001)	84	307391	5.210	5.21			0.2	1
33) 1,1-Dichloroethane	(2)	5.360(-0.000)	63	634524	5.275	5.28			0.1	1
38) 2-Butanone	(1)	6.134(-0.000)	43	512818	39.606	39.61			1	10
48) Tetrahydrofuran	(1)	6.537(-0.000)	71	83137	28.311	28.31			2	25
51) 1,1,1-Trichloroethane	(2)	6.909(-0.000)	97	566204	5.406	5.41			0.1	1
54) Carbon Tetrachloride	(2)	7.140(-0.000)	117	492312	5.382	5.38			0.1	1
58) Benzene	(2)	7.384(0.000)	78	1340272	5.291	5.29			0.1	1
67) Trichloroethene	(2)	8.274(0.000)	95	361883	5.332	5.33			0.1	1
83) Toluene	(3)	9.878(0.000)	92	854672	5.462	5.46			0.1	1
89) Tetrachloroethene	(3)	10.432(0.000)	166	412367	5.615	5.62			0.1	1
100) Ethylbenzene	(3)	11.365(-0.000)	91	1706282	5.422	5.42			0.1	1
101) m+p-Xylene	(3)	11.475(-0.000)	106	1300507	10.968	10.97			0.1	0.5
104) o-Xylene	(3)	11.804(-0.000)	106	617435	5.325	5.32			0.1	0.5
105) Xylene (Total)	(3)		106	1917942	16.293	16.29			0.1	3

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP19094.i/17oct22a.b/hc22s31.d Injection date and time: **22-OCT-2017 23:05**
Data file Sample Info. Line: LCSH96;LCSH96;1;3;LCS;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

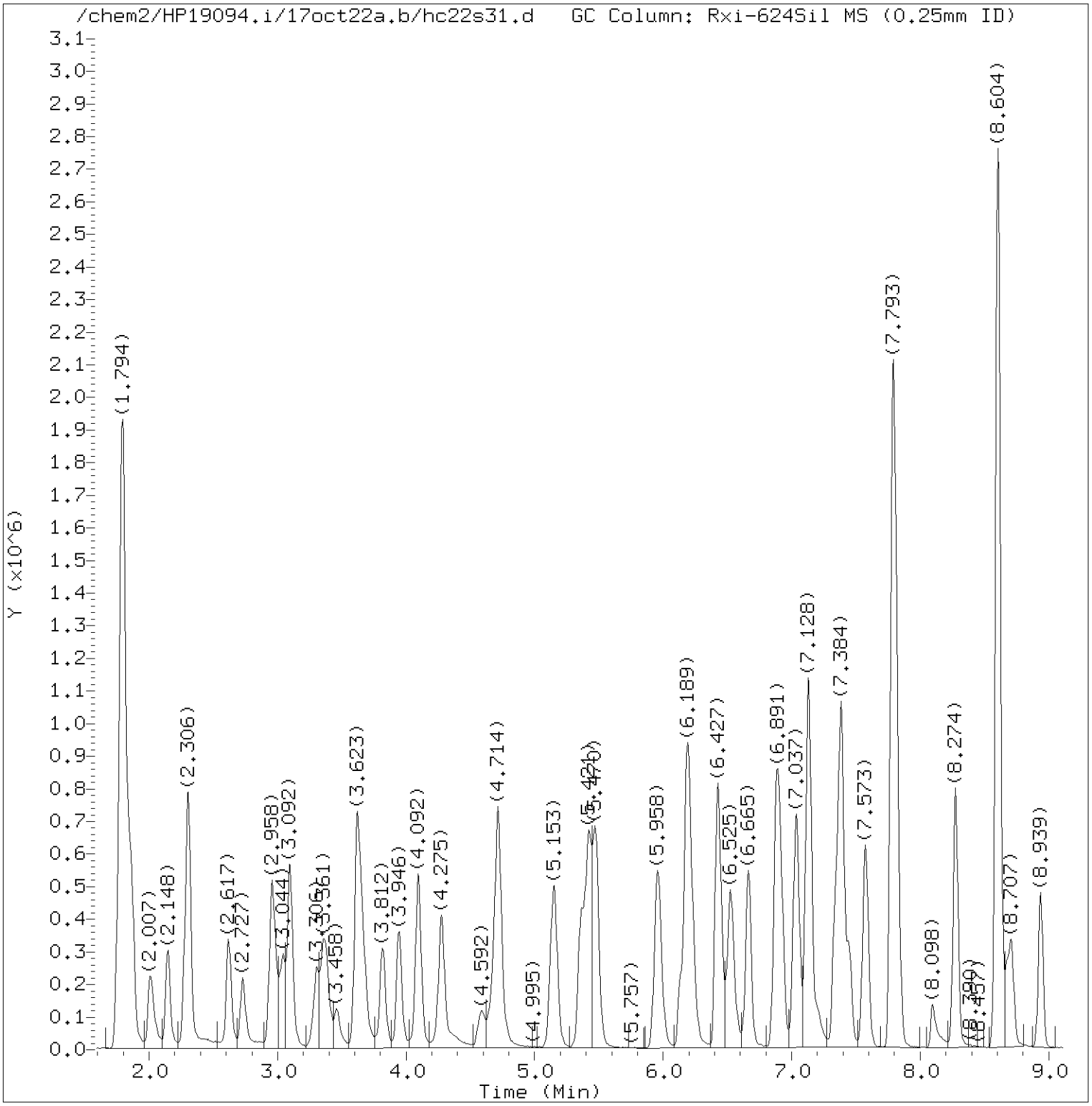
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

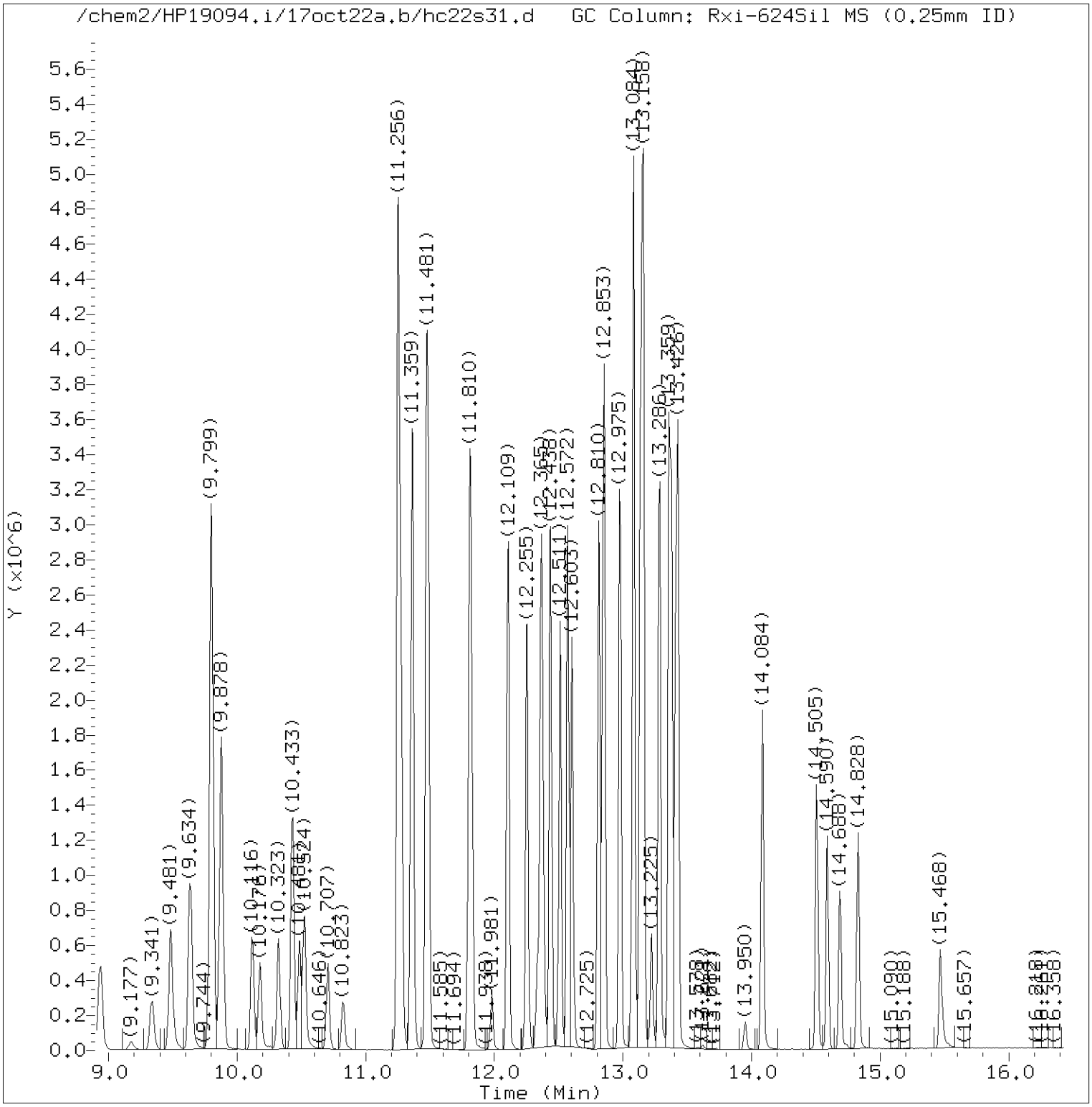
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s31.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:05 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH96 Lab Sample ID: LCSH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s31.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:05 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH96 Lab Sample ID: LCSH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s31.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:05 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

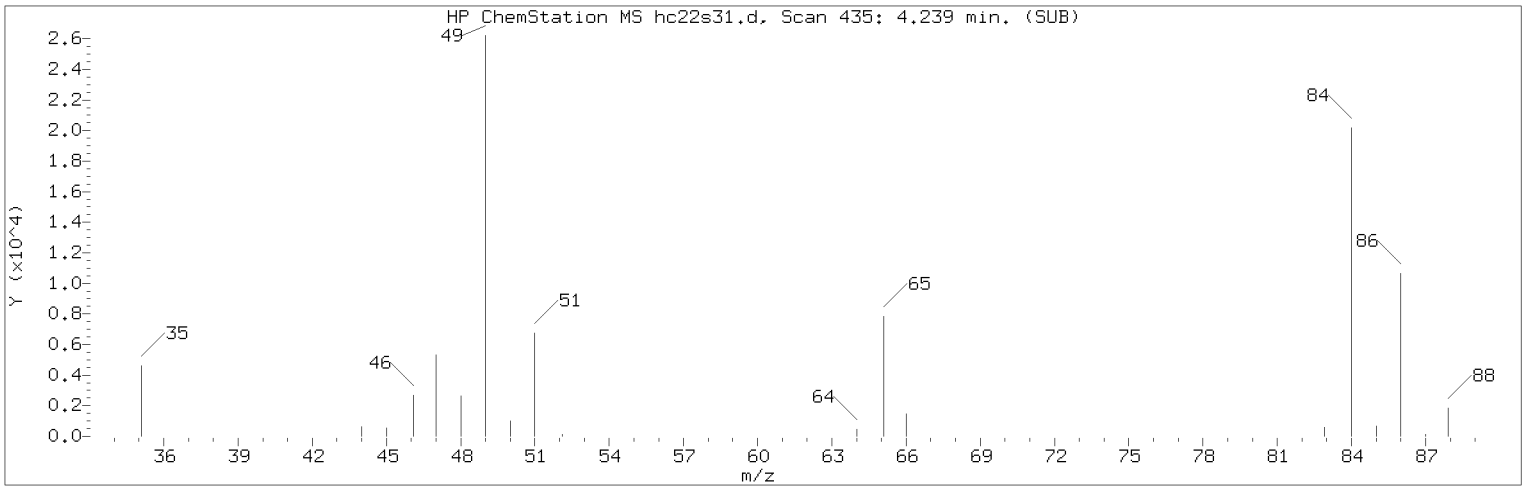
Sample Name: LCSH96 Lab Sample ID: LCSH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	402285	3.762
2) Chloromethane	(2)	2.148	50	437308	4.142
8) Chloroethane	(2)	2.727	64	260686	4.719
10) Trichlorofluoromethane	(2)	3.044	101	573574	4.437
11) Ethyl ether	(2)	3.300	59	205624	4.984
15) 1,1-Dichloroethene	(2)	3.617	96	288663	5.581
16) Freon 113	(2)	3.659	101	313635	5.446
26)*t-Butyl Alcohol-d10	(1)	4.239	65	81932M	50.000
23) Methylene Chloride	(2)	4.275	84	307391	5.210
33) 1,1-Dichloroethane	(2)	5.360	63	634524	5.275
38) 2-Butanone	(1)	6.135	43	512818	39.606
48) Tetrahydrofuran	(1)	6.537	71	83137	28.311
50)$Dibromofluoromethane	(2)	6.878	113	575765	9.808
51) 1,1,1-Trichloroethane	(2)	6.909	97	566204	5.406
54) Carbon Tetrachloride	(2)	7.140	117	492312	5.382
57)$1,2-Dichloroethane-d4	(2)	7.342	102	86712	9.433
58) Benzene	(2)	7.384	78	1340272	5.291
63)*Fluorobenzene	(2)	7.787	96	2430888	10.000
67) Trichloroethene	(2)	8.274	95	361883	5.332
82)$Toluene-d8	(3)	9.799	98	2422347	10.115
83) Toluene	(3)	9.878	92	854672	5.462
89) Tetrachloroethene	(3)	10.433	166	412367	5.615
97)*Chlorobenzene-d5	(3)	11.249	117	1647790	10.000
100) Ethylbenzene	(3)	11.365	91	1706282	5.422
101) m+p-Xylene	(3)	11.475	106	1300507	10.968
105) Xylene (Total)	(3)		106	1917942	16.293
104) o-Xylene	(3)	11.804	106	617435	5.325
111)$4-Bromofluorobenzene	(3)	12.249	95	693805	9.538
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	726039	10.000

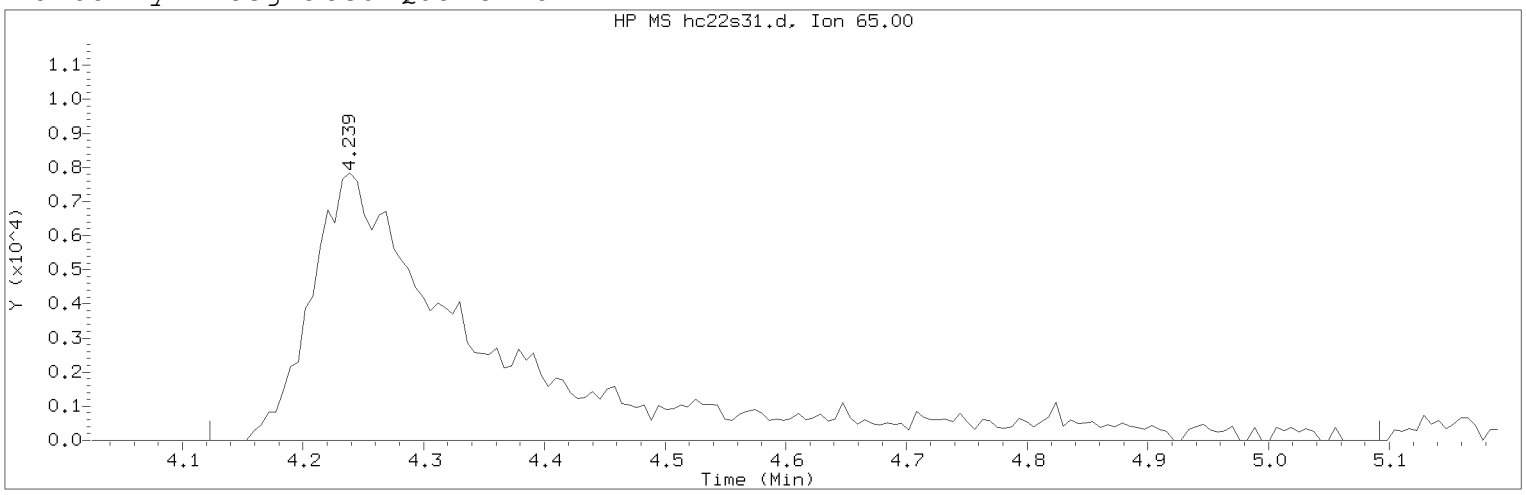
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s31.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:05 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCSH96 Lab Sample ID: LCSH96

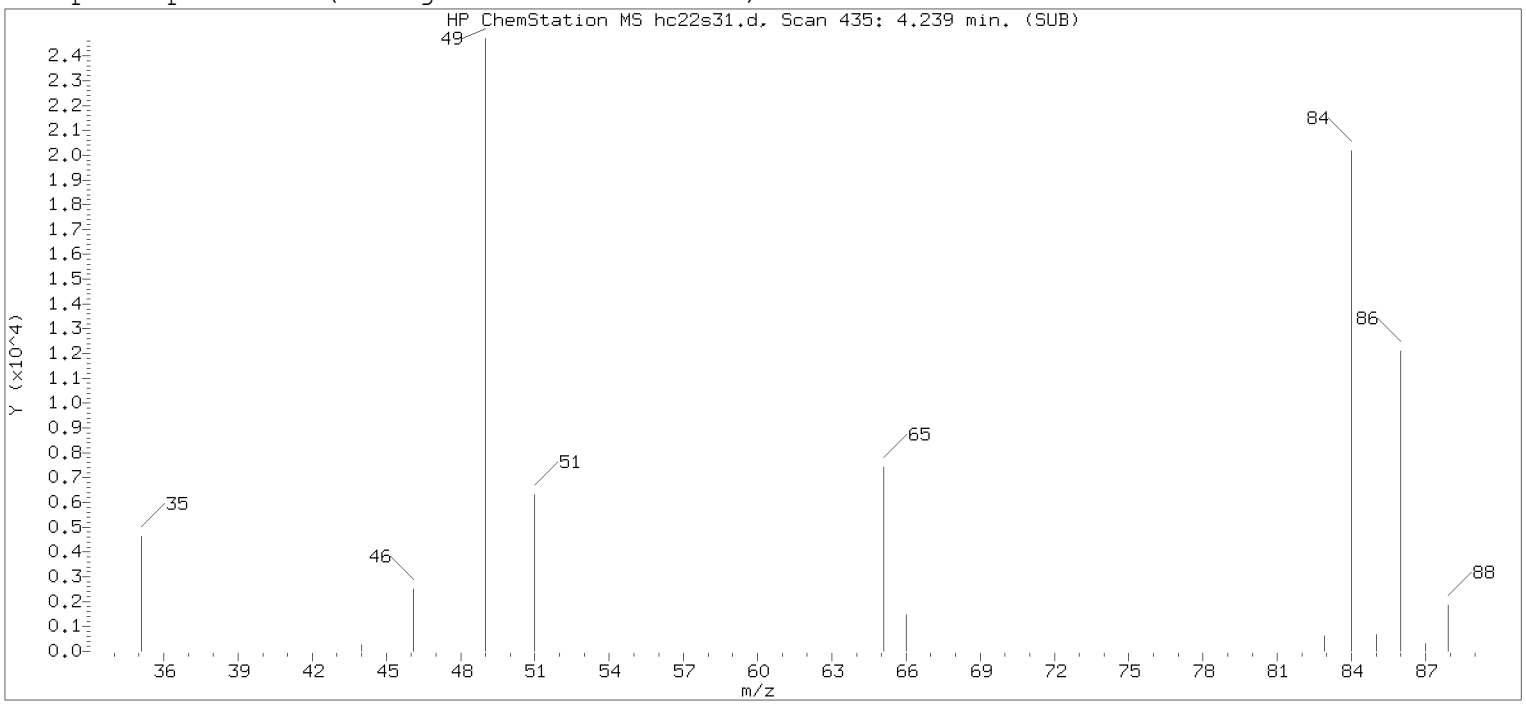
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 65.00
Area (flag) : 81932M
On-Column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

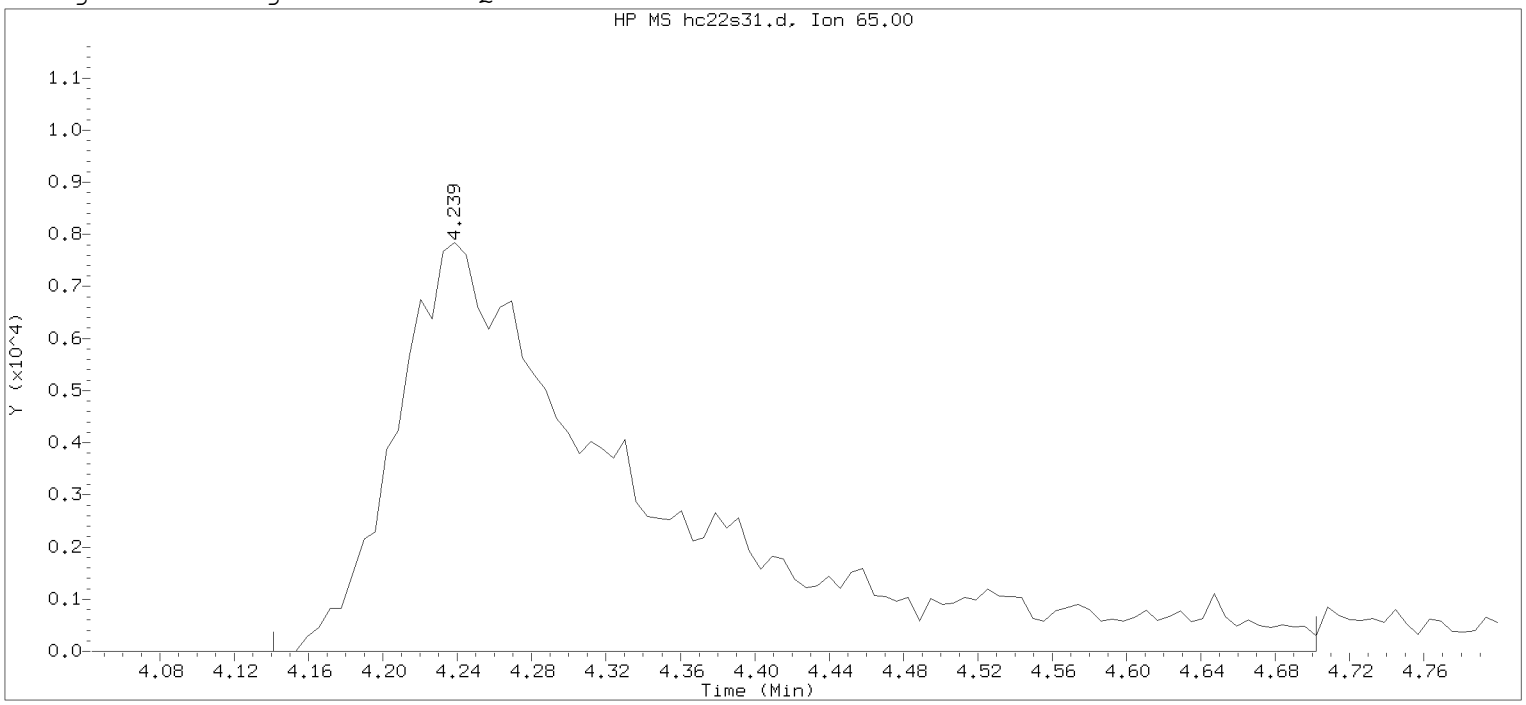
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s31.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:05 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:42 dvv10203

Sample Name: LCSH96 Lab Sample ID: LCSH96

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 65.00
Area : 73363
On-column Amount (ng) : 50.0000
Integration start scan : 418 Integration stop scan: 510
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used on 10/23/2017.

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct22a.b/hc22s32.d Injection date and time: **22-OCT-2017 23:25**
Data file Sample Info. Line: LCDH96;LCDH96;1;3;LCSD;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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
26) t-Butyl Alcohol-d10	4.263	(-0.030)	439	65	72110M	(-15)	50.00	
63) Fluorobenzene	7.787	(-0.006)	1017	96	2445336	(1)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1665006	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	737098	(-7)	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
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	581171	9.842	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	88627	9.584	96%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2452399	10.135	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	710329	9.664	97%		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)	2.001	(0.000)	85	408700	3.800	3.80			0.1	1
2) Chloromethane	(2)	2.135	(0.001)	50	447596	4.214	4.21			0.2	1
8) Chloroethane	(2)	2.721	(0.000)	64	260664	4.690	4.69			0.1	1
10) Trichlorofluoromethane	(2)	3.025	(0.001)	101	618473	4.756	4.76			0.1	1
11) Ethyl ether	(2)	3.294	(0.000)	59	209769	5.054	5.05		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.611	(0.000)	96	290608	5.586	5.59			0.1	1
16) Freon 113	(2)	3.647	(0.000)	101	311259	5.373	5.37			0.2	1
23) Methylene Chloride	(2)	4.263	(0.000)	84	309644	5.217	5.22			0.2	1
33) 1,1-Dichloroethane	(2)	5.354	(0.000)	63	642611	5.311	5.31			0.1	1
38) 2-Butanone	(1)	6.135	(0.007)	43	519842	45.617	45.62			1	10
48) Tetrahydrofuran	(1)	6.537	(0.008)	71	86295	33.390	33.39			2	25
51) 1,1,1-Trichloroethane	(2)	6.909	(-0.000)	97	567956	5.391	5.39			0.1	1
54) Carbon Tetrachloride	(2)	7.134	(0.000)	117	494229	5.371	5.37			0.1	1
58) Benzene	(2)	7.384	(0.000)	78	1357412	5.327	5.33			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	369318	5.410	5.41			0.1	1
83) Toluene	(3)	9.878	(0.000)	92	861486	5.448	5.45			0.1	1
89) Tetrachloroethene	(3)	10.432	(0.000)	166	416953	5.619	5.62			0.1	1
100) Ethylbenzene	(3)	11.365	(-0.000)	91	1733760	5.452	5.45			0.1	1
101) m+p-Xylene	(3)	11.475	(-0.000)	106	1326548	11.072	11.07			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.000)	106	630818	5.384	5.38			0.1	0.5
105) Xylene (Total)	(3)			106	1957366	16.456	16.46			0.1	3

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP19094.i/17oct22a.b/hc22s32.d Injection date and time: **22-OCT-2017 23:25**
Data file Sample Info. Line: LCDH96;LCDH96;1;3;LCSD;;DRAPERLOQ;;hc22b05; Instrument ID: **HP19094.i** Batch: **H172952AA**
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Blank Data file reference: **/chem2/HP19094.i/17oct22a.b/hc22b05.d**

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2017 23:03
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct22a.b/hc22c01.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**

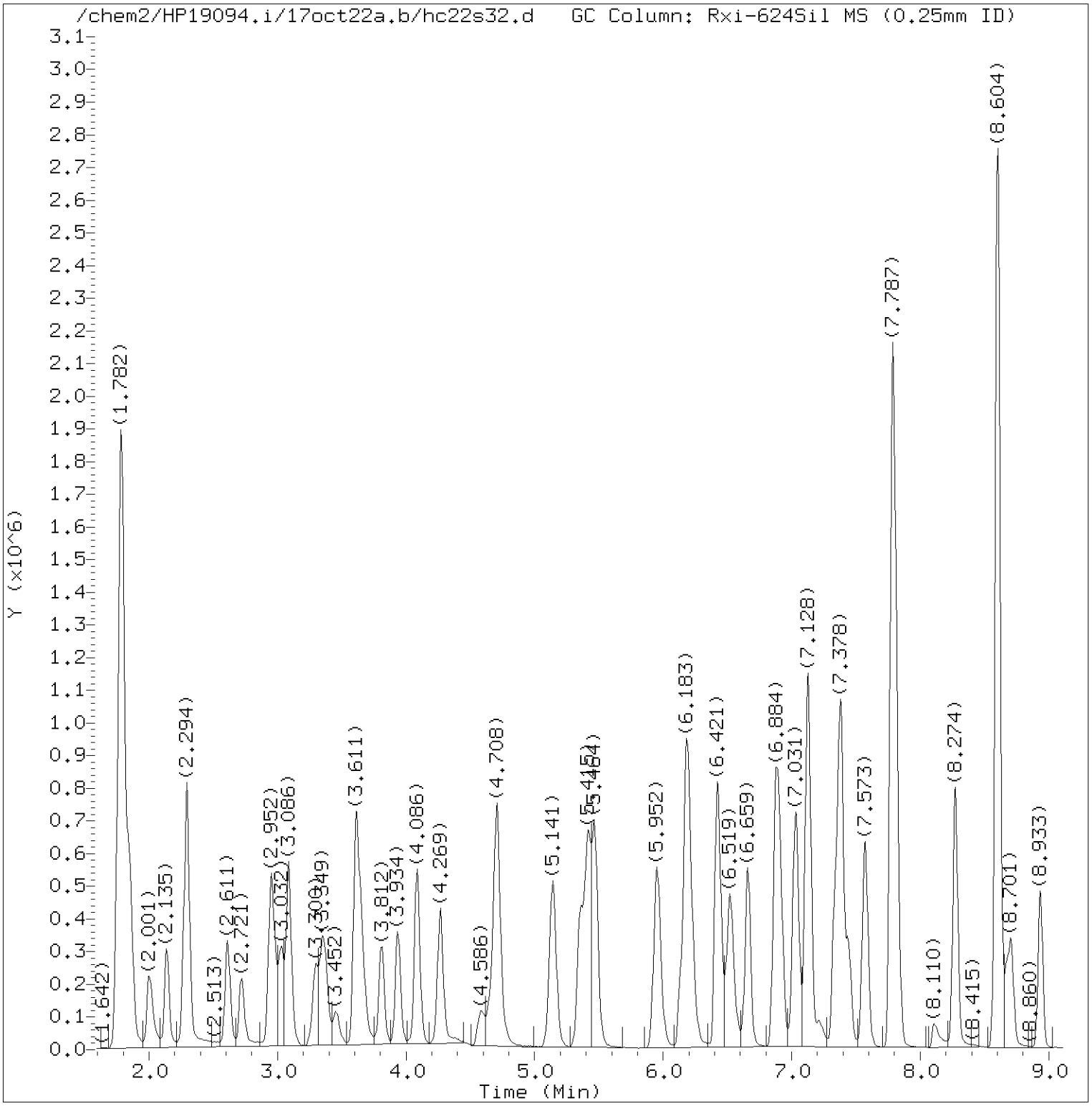
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Don V. Viray on 10/23/2017 at 00:28. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06. PARALLAX ID: prc00685



Total Ion Chromatogram (TIC)

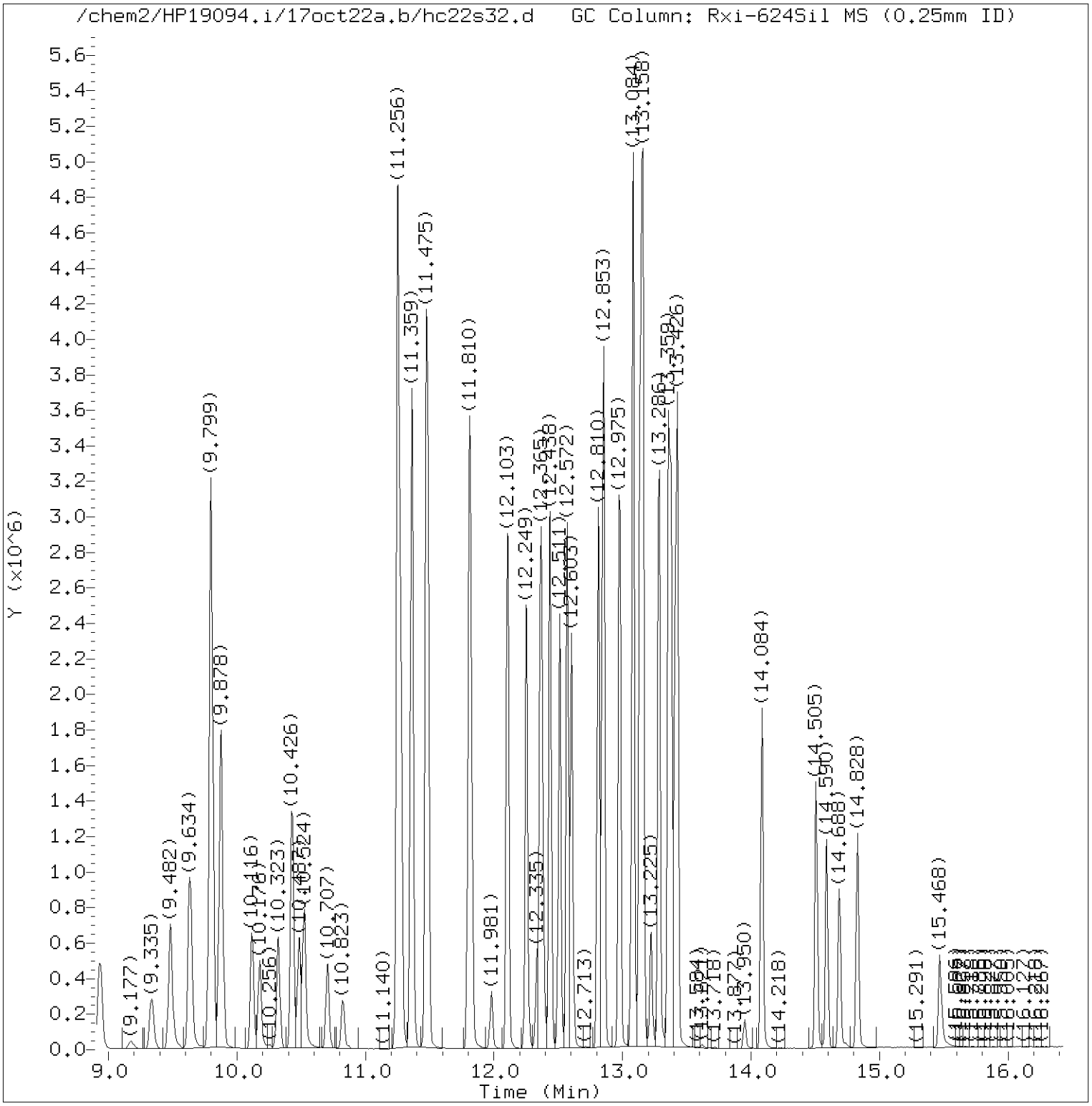
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s32.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:25 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH96 Lab Sample ID: LCDH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s32.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:25 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH96 Lab Sample ID: LCDH96

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct22a.b/hc22s32.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:25 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

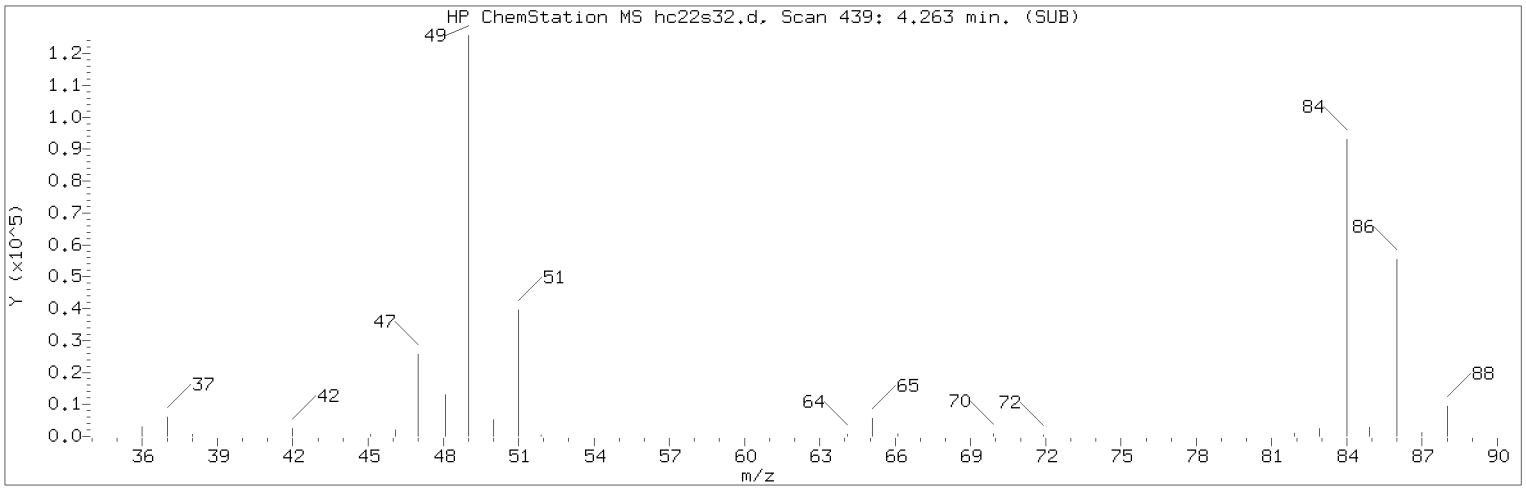
Sample Name: LCDH96 Lab Sample ID: LCDH96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.001	85	408700	3.800
2) Chloromethane	(2)	2.135	50	447596	4.214
8) Chloroethane	(2)	2.721	64	260664	4.690
10) Trichlorofluoromethane	(2)	3.025	101	618473	4.756
11) Ethyl ether	(2)	3.294	59	209769	5.054
15) 1,1-Dichloroethene	(2)	3.611	96	290608	5.586
16) Freon 113	(2)	3.647	101	311259	5.373
23) Methylene Chloride	(2)	4.263	84	309644	5.217
26)*t-Butyl Alcohol-d10	(1)	4.263	65	72110M	50.000
33) 1,1-Dichloroethane	(2)	5.354	63	642611	5.311
38) 2-Butanone	(1)	6.135	43	519842	45.617
48) Tetrahydrofuran	(1)	6.537	71	86295	33.390
50)$Dibromofluoromethane	(2)	6.878	113	581171	9.842
51) 1,1,1-Trichloroethane	(2)	6.909	97	567956	5.391
54) Carbon Tetrachloride	(2)	7.134	117	494229	5.371
57)$1,2-Dichloroethane-d4	(2)	7.342	102	88627	9.584
58) Benzene	(2)	7.384	78	1357412	5.327
63)*Fluorobenzene	(2)	7.787	96	2445336	10.000
67) Trichloroethene	(2)	8.274	95	369318	5.410
82)$Toluene-d8	(3)	9.799	98	2452399	10.135
83) Toluene	(3)	9.878	92	861486	5.448
89) Tetrachloroethene	(3)	10.433	166	416953	5.619
97)*Chlorobenzene-d5	(3)	11.249	117	1665006	10.000
100) Ethylbenzene	(3)	11.365	91	1733760	5.452
101) m+p-Xylene	(3)	11.475	106	1326548	11.072
105) Xylene (Total)	(3)		106	1957366	16.456
104) o-Xylene	(3)	11.804	106	630818	5.384
111)$4-Bromofluorobenzene	(3)	12.249	95	710329	9.664
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	737098	10.000

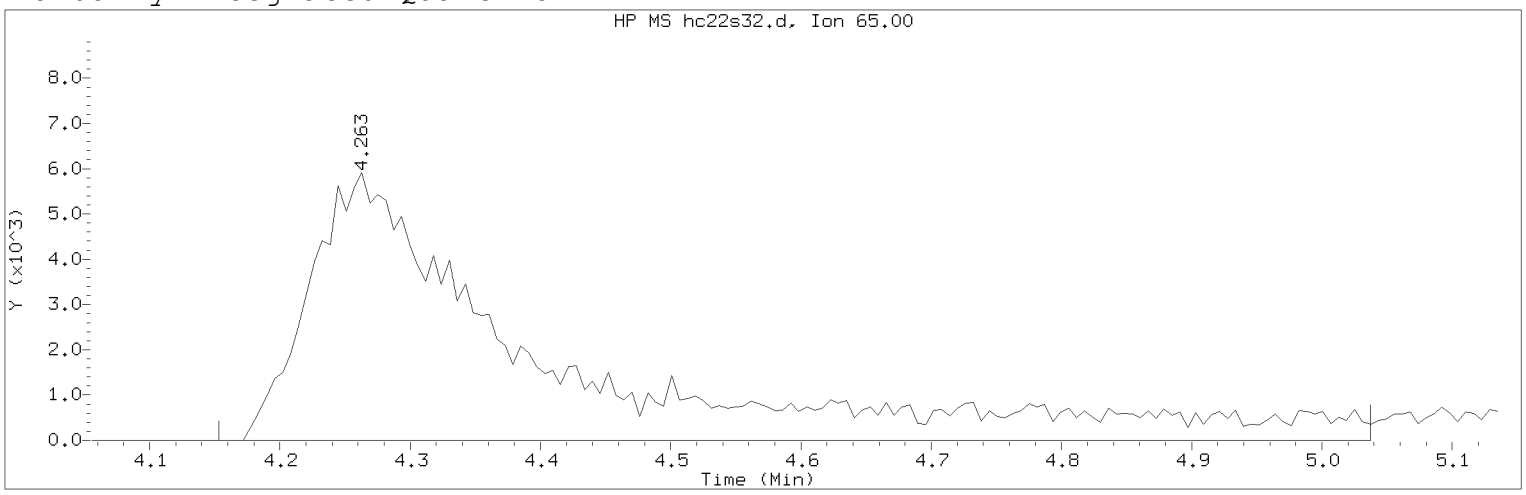
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s32.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:25 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 23-Oct-2017 00:27 dvv10203

Sample Name: LCDH96 Lab Sample ID: LCDH96

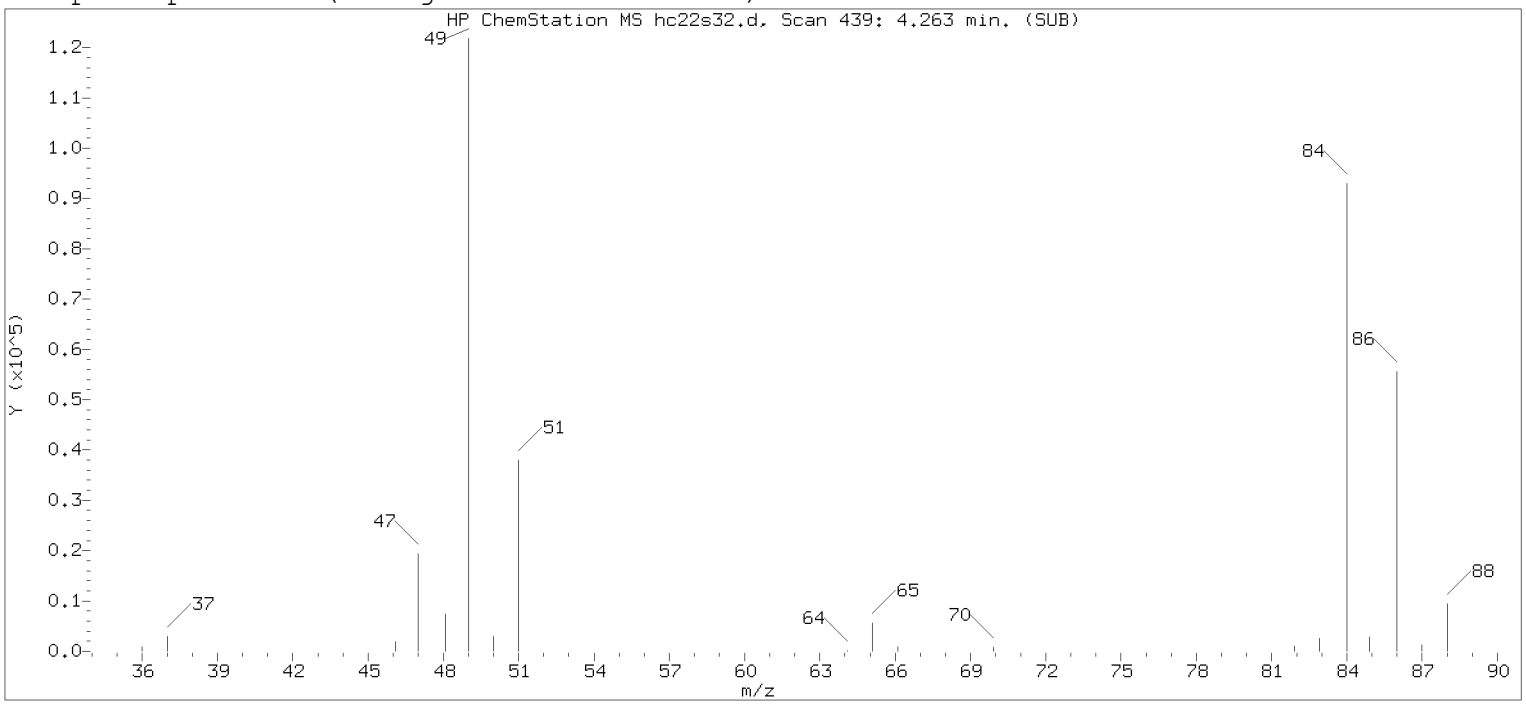
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area (flag) : 72110M
On-Column Amount (ng) : 50.0000
Integration start scan : 420 Integration stop scan: 565
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

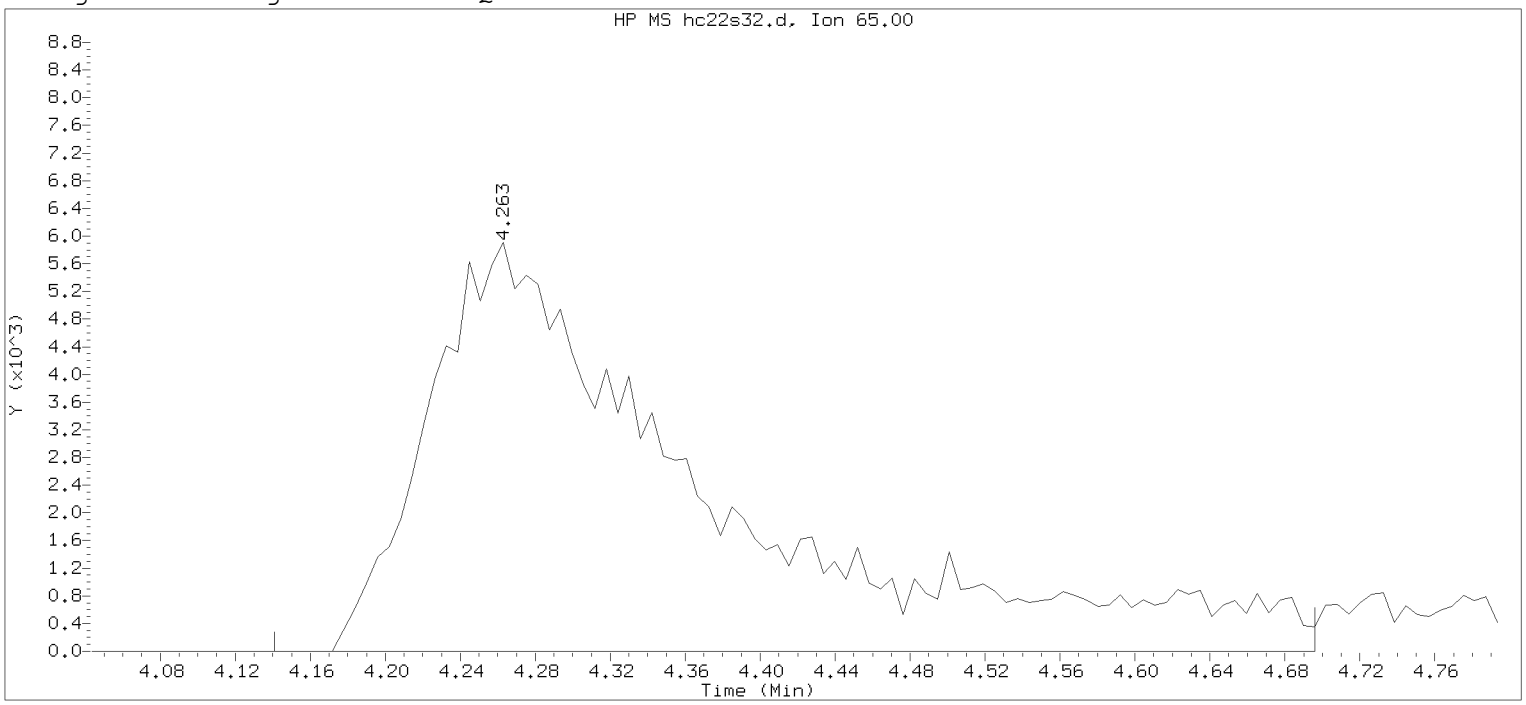
Analyst responsible for change: Digitally signed by Don V. Viray
on 10/23/2017 at 00:28.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 10/24/2017 at 15:06.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/17oct22a.b/hc22s32.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2017 23:25 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/17oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2017 23:03
Date, time and analyst ID of latest file update: 22-Oct-2017 23:46 dvv10203

Sample Name: LCDH96 Lab Sample ID: LCDH96

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 439		
Retention Time (minutes)	: 4.263		
Quant Ion	: 65.00		
Area	: 60581		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 418	Integration stop scan:	509
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 10/23/2017 at 00:28.
Target 3.5 esignature used during data review.

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s03.d Injection date and time: **23-OCT-2017 10:32**
Data file Sample Info. Line: LCSH99;LCSH99;1;3;LCS;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.245 (-0.006)	436	65	72116 (-18)	50.00	
63) Fluorobenzene	7.787 (0.000)	1017	96	2401889 (-1)	10.00	
97) Chlorobenzene-d5	11.250 (0.000)	1585	117	1613293 (-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.140 (-0.006)	1895	152	660916 (-18)	10.00	

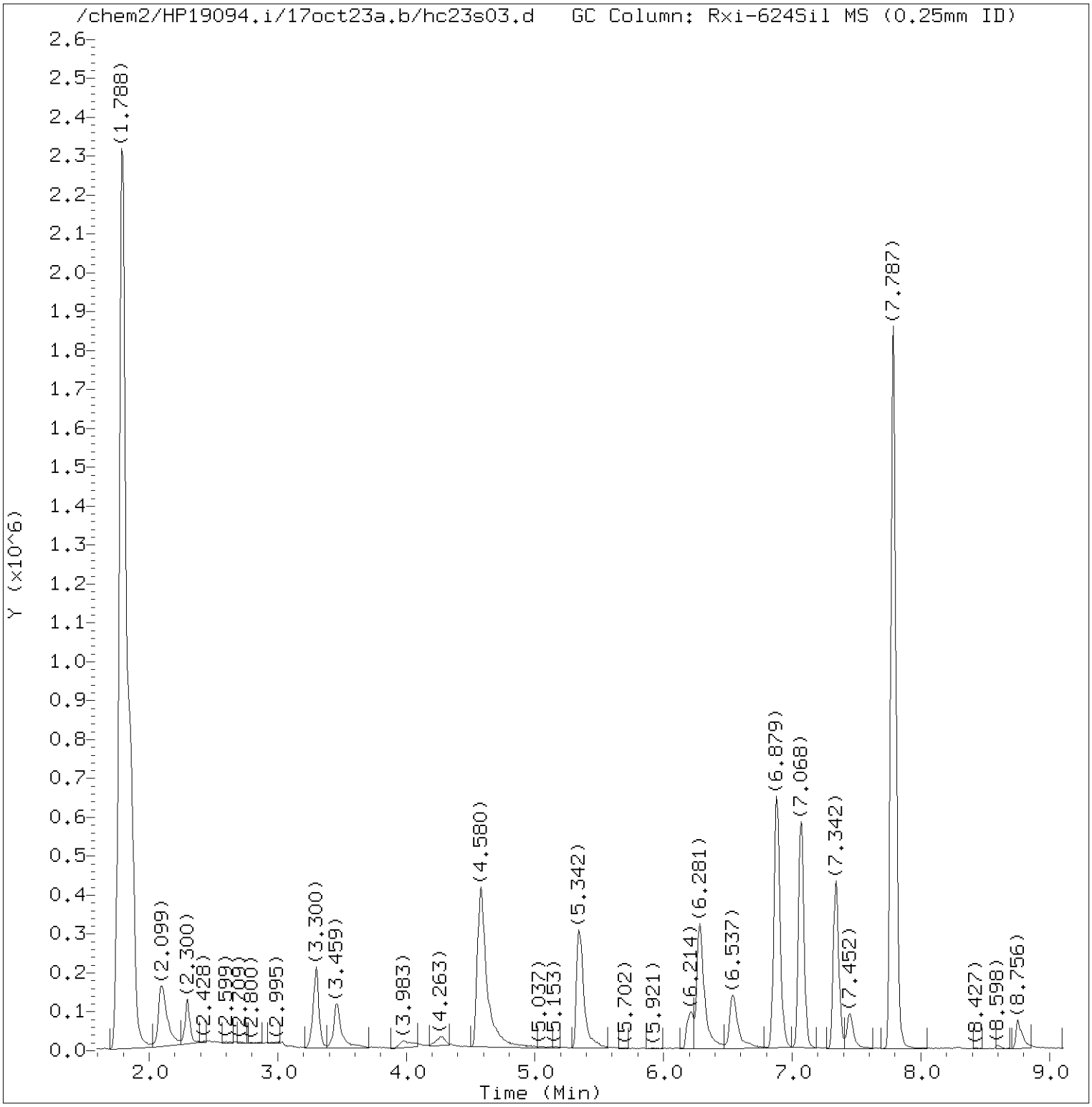
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879 (0.000)	113	562285	9.694	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342 (-0.001)	102	84735	9.329	93%		80 - 120
82) Toluene-d8	(3)	9.799 (0.000)	98	2447476	10.439	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249 (0.000)	95	673569	9.458	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
4) Dimethyl ether	(2)	2.093 (-0.000)	45	456694	4.647	4.65		J	0.1	13

Total number of targets = 1

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 17:11. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

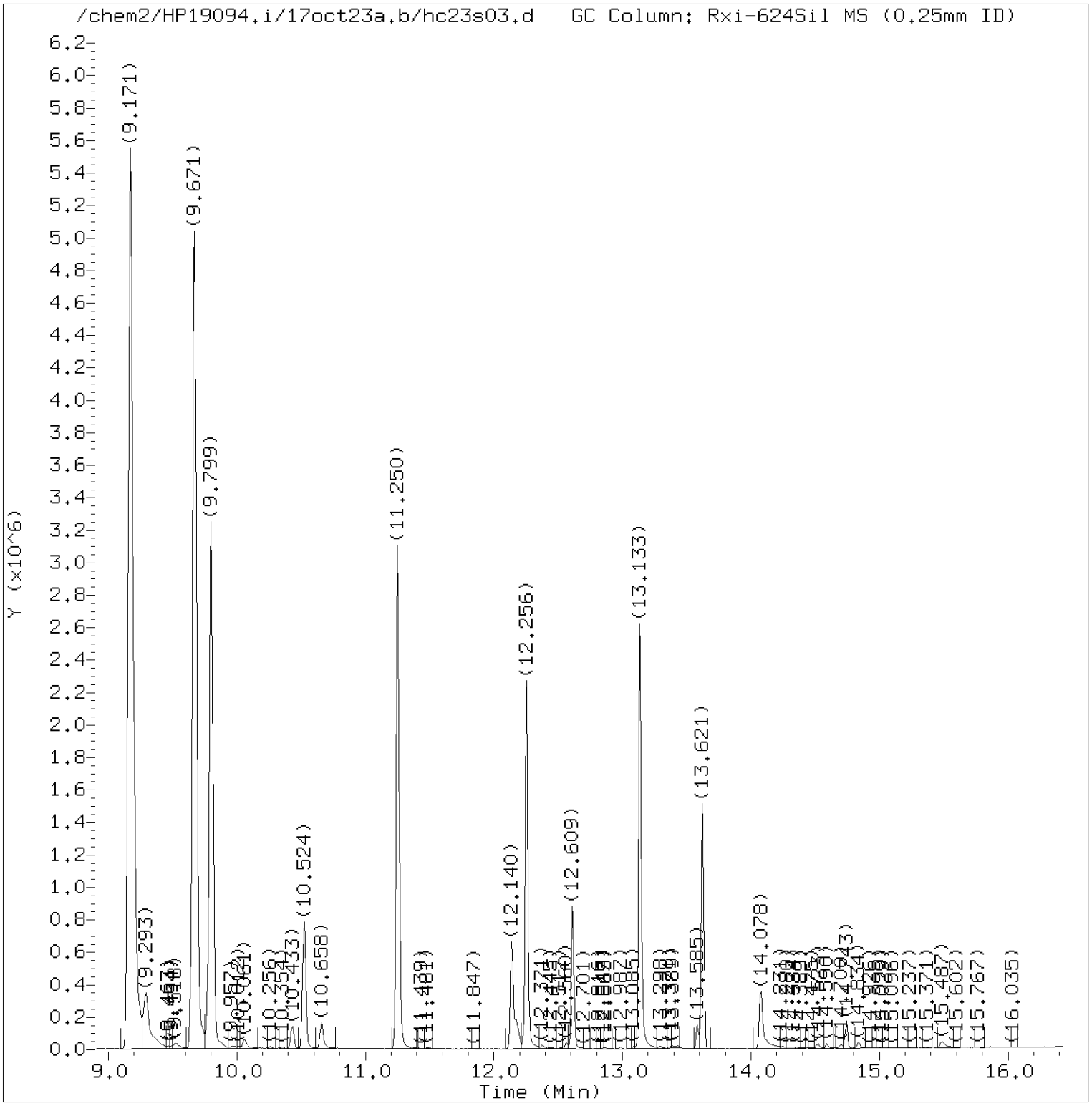
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH99 Lab Sample ID: LCSH99

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH99 Lab Sample ID: LCSH99

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s03.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:32 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH99 Lab Sample ID: LCSH99

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	456694	4.647
26)*t-Butyl Alcohol-d10	(1)	4.245	65	72116	50.000
50)$Dibromofluoromethane	(2)	6.879	113	562285	9.694
57)$1,2-Dichloroethane-d4	(2)	7.342	102	84735	9.329
63)*Fluorobenzene	(2)	7.787	96	2401889	10.000
82)$Toluene-d8	(3)	9.799	98	2447476	10.439
97)*Chlorobenzene-d5	(3)	11.250	117	1613293	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	673569	9.458
133)*1,4-Dichlorobenzene-d4	(4)	13.140	152	660916	10.000

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

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s04.d Injection date and time: **23-OCT-2017 10:52**
Data file Sample Info. Line: LCDH99;LCDH99;1;3;LCSD;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.245	(-0.006)	436	65	82443	(-6)	50.00	
63) Fluorobenzene	7.781	(0.006)	1016	96	2377411	(-2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1607332	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	652147	(-19)	10.00	

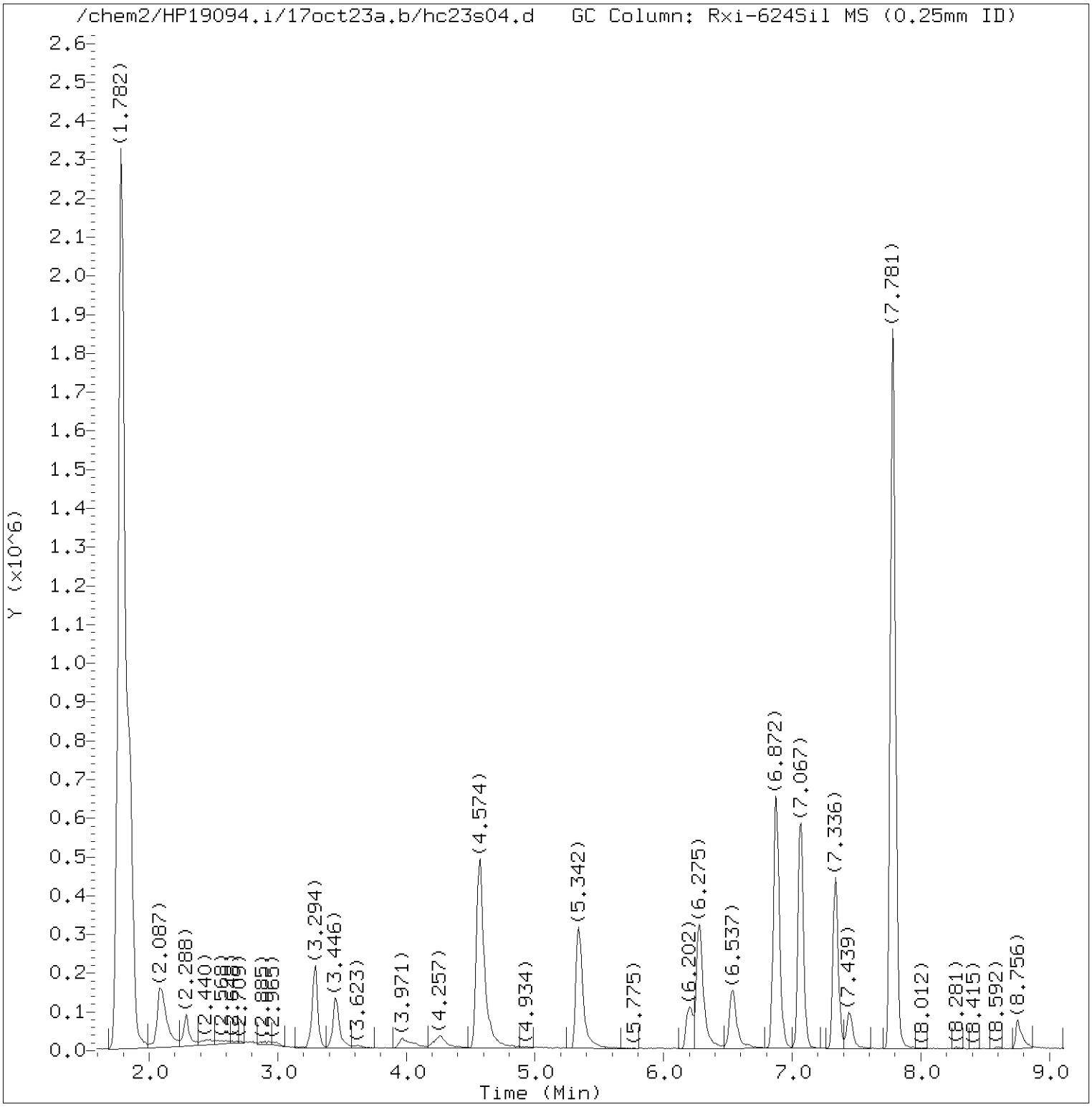
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.872	(0.000)	113	558884	9.735	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(-0.001)	102	87138	9.692	97%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2434527	10.422	104%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	667728	9.411	94%		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)
4) Dimethyl ether	(2)	2.081	(0.001)	45	448121	4.607	4.61		J	0.1	13

Total number of targets = 1

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 17:11. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

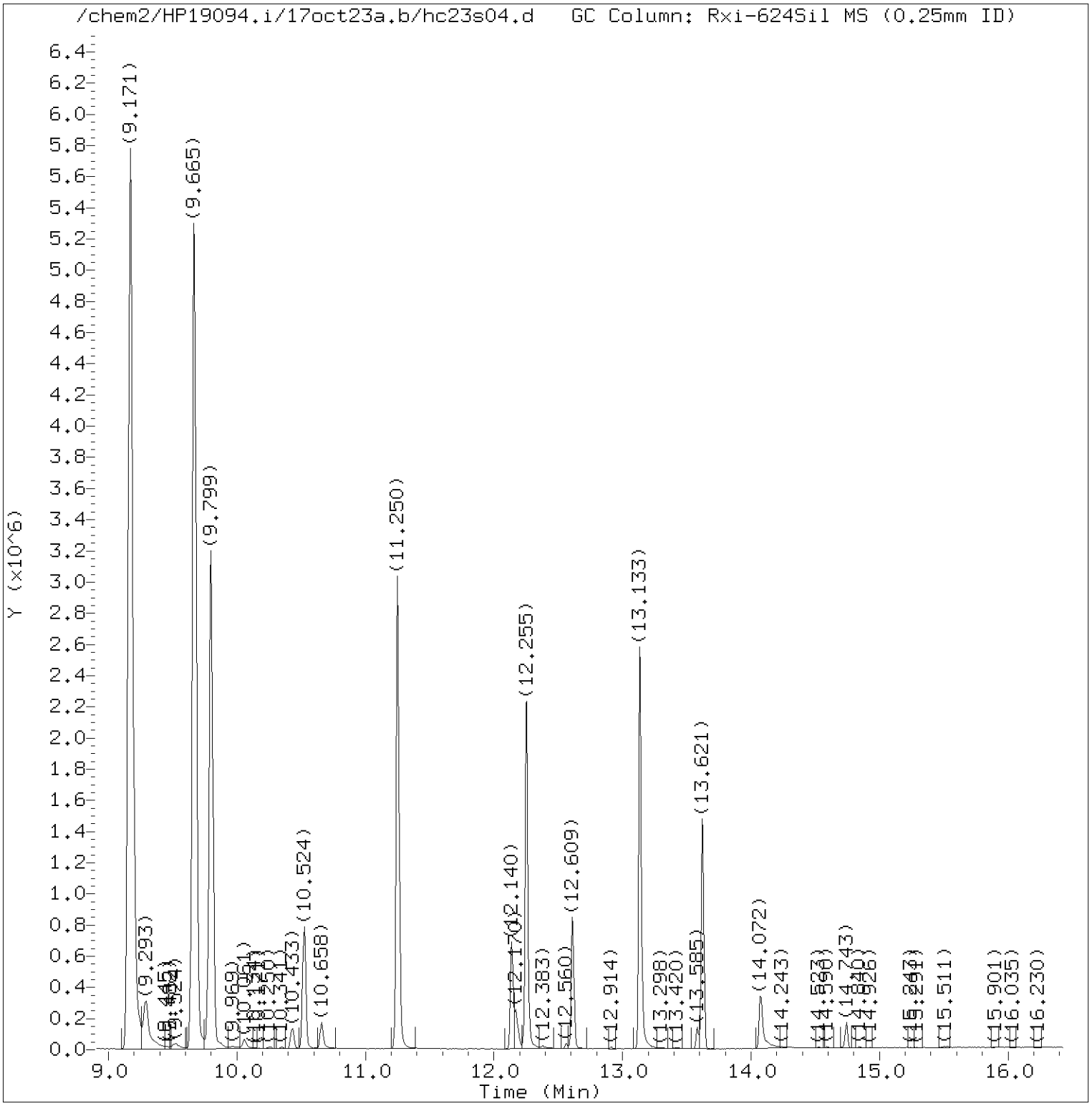
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH99 Lab Sample ID: LCDH99

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH99 Lab Sample ID: LCDH99

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s04.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:52 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH99 Lab Sample ID: LCDH99

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.081	45	448121	4.607
26)*t-Butyl Alcohol-d10	(1)	4.245	65	82443	50.000
50)$Dibromofluoromethane	(2)	6.872	113	558884	9.735
57)$1,2-Dichloroethane-d4	(2)	7.336	102	87138	9.692
63)*Fluorobenzene	(2)	7.781	96	2377411	10.000
82)$Toluene-d8	(3)	9.799	98	2434527	10.422
97)*Chlorobenzene-d5	(3)	11.250	117	1607332	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	667728	9.411
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	652147	10.000

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

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s01.d Injection date and time: **23-OCT-2017 09:51**
Data file Sample Info. Line: LCSH98;LCSH98;1;3;LCS;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.251	(-0.012)	437	65	76752	(-12)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2397091	(-2)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1613713	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	707063	(-12)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.000)	113	556687	9.617	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.336	(0.000)	102	84140	9.282	93%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2395891	10.216	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	683114	9.589	96%		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)	2.007	(0.000)	85	371941	3.528	3.53			0.1	1
2) Chloromethane	(2)	2.142	(0.001)	50	407236	3.911	3.91			0.2	1
8) Chloroethane	(2)	2.721	(0.000)	64	245755	4.511	4.51			0.1	1
10) Trichlorofluoromethane	(2)	3.032	(0.001)	101	601897	4.722	4.72			0.1	1
11) Ethyl ether	(2)	3.294	(0.000)	59	200254	4.922	4.92		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.611	(0.000)	96	274268	5.378	5.38			0.1	1
16) Freon 113	(2)	3.653	(0.000)	101	311988	5.494	5.49			0.2	1
23) Methylene Chloride	(2)	4.269	(0.000)	84	296579	5.098	5.10			0.2	1
33) 1,1-Dichloroethane	(2)	5.354	(0.000)	63	611655	5.157	5.16			0.1	1
38) 2-Butanone	(1)	6.128	(0.004)	43	517763	42.687	42.69			1	10
48) Tetrahydrofuran	(1)	6.537	(0.002)	71	85701	31.154	31.15			2	25
51) 1,1,1-Trichloroethane	(2)	6.909	(0.000)	97	537000	5.200	5.20			0.1	1
54) Carbon Tetrachloride	(2)	7.134	(0.000)	117	480780	5.330	5.33			0.1	1
58) Benzene	(2)	7.384	(0.000)	78	1311039	5.248	5.25			0.1	1
67) Trichloroethene	(2)	8.268	(0.000)	95	352757	5.271	5.27			0.1	1
83) Toluene	(3)	9.878	(-0.000)	92	829698	5.414	5.41			0.1	1
89) Tetrachloroethene	(3)	10.432	(-0.000)	166	405601	5.640	5.64			0.1	1
100) Ethylbenzene	(3)	11.365	(-0.000)	91	1668276	5.413	5.41			0.1	1
101) m+p-Xylene	(3)	11.481	(-0.000)	106	1270614	10.942	10.94			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.000)	106	608531	5.359	5.36			0.1	0.5
105) Xylene (Total)	(3)			106	1879145	16.301	16.30			0.1	3

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP19094.i/17oct23a.b/hc23s01.d Injection date and time: **23-OCT-2017 09:51**
Data file Sample Info. Line: LCSH98;LCSH98;1;3;LCS;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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**

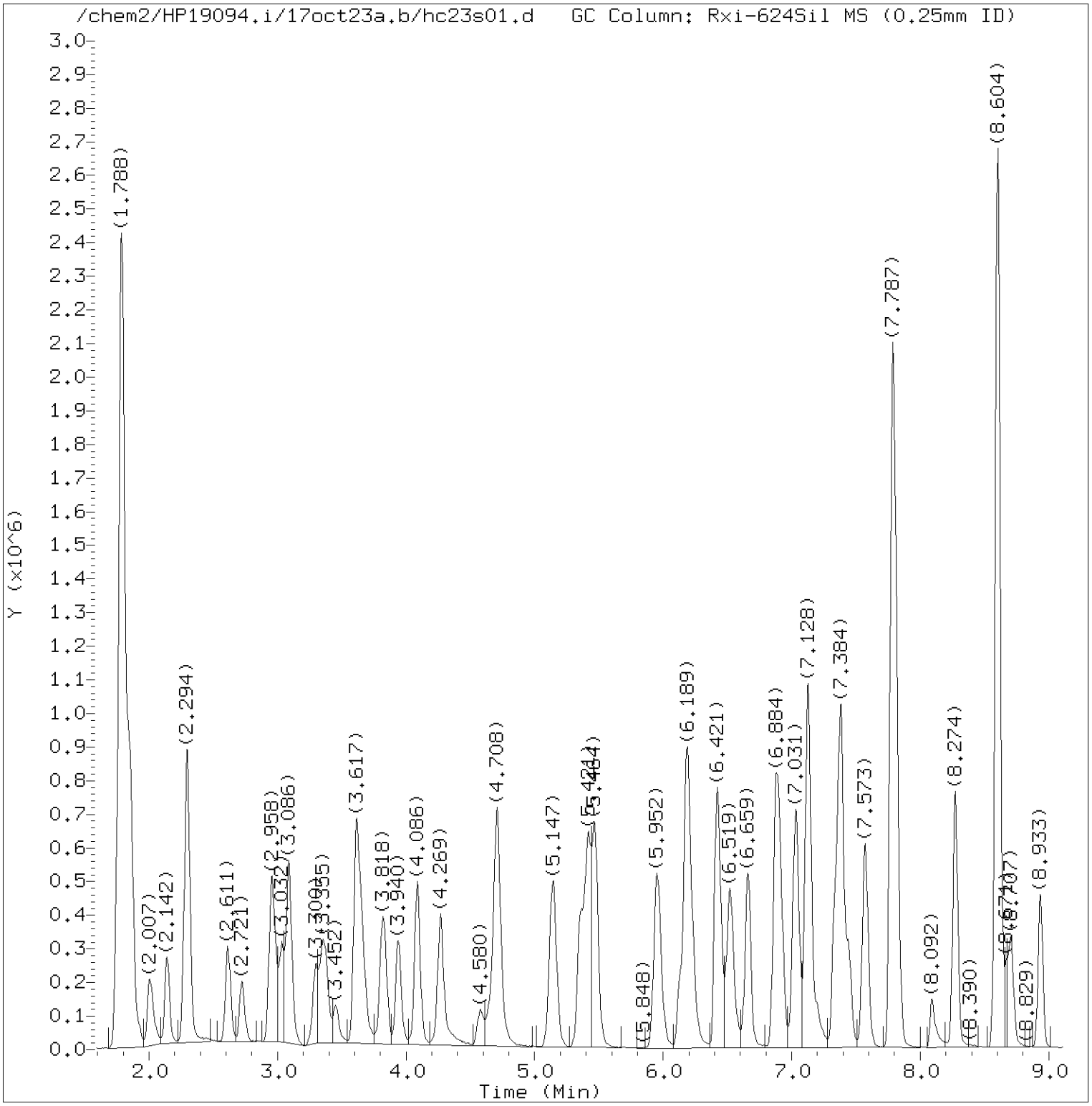
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 21

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 17:11. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

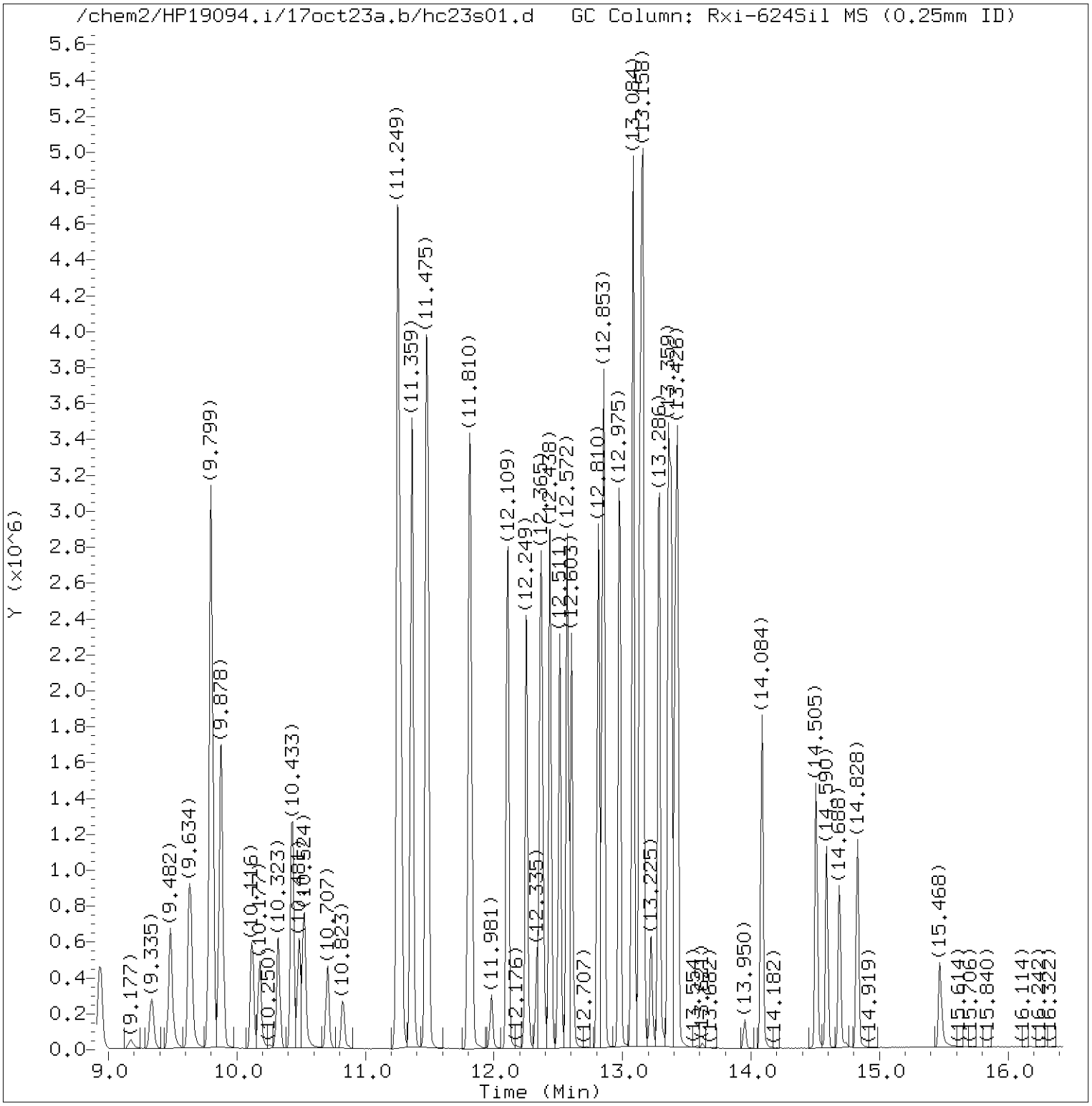
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:51 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH98 Lab Sample ID: LCSH98

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:51 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH98 Lab Sample ID: LCSH98

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s01.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 09:51 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCSH98 Lab Sample ID: LCSH98

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	371941	3.528
2) Chloromethane	(2)	2.142	50	407236	3.911
8) Chloroethane	(2)	2.721	64	245755	4.511
10) Trichlorofluoromethane	(2)	3.032	101	601897	4.722
11) Ethyl ether	(2)	3.294	59	200254	4.922
15) 1,1-Dichloroethene	(2)	3.611	96	274268	5.378
16) Freon 113	(2)	3.653	101	311988	5.494
26)*t-Butyl Alcohol-d10	(1)	4.251	65	76752	50.000
23) Methylene Chloride	(2)	4.269	84	296579	5.098
33) 1,1-Dichloroethane	(2)	5.354	63	611655	5.157
38) 2-Butanone	(1)	6.129	43	517763	42.687
48) Tetrahydrofuran	(1)	6.537	71	85701	31.154
50)$Dibromofluoromethane	(2)	6.878	113	556687	9.617
51) 1,1,1-Trichloroethane	(2)	6.909	97	537000	5.200
54) Carbon Tetrachloride	(2)	7.134	117	480780	5.330
57)$1,2-Dichloroethane-d4	(2)	7.336	102	84140	9.282
58) Benzene	(2)	7.384	78	1311039	5.248
63)*Fluorobenzene	(2)	7.787	96	2397091	10.000
67) Trichloroethene	(2)	8.268	95	352757	5.271
82)$Toluene-d8	(3)	9.799	98	2395891	10.216
83) Toluene	(3)	9.878	92	829698	5.414
89) Tetrachloroethene	(3)	10.433	166	405601	5.640
97)*Chlorobenzene-d5	(3)	11.249	117	1613713	10.000
100) Ethylbenzene	(3)	11.365	91	1668276	5.413
101) m+p-Xylene	(3)	11.481	106	1270614	10.942
105) Xylene (Total)	(3)		106	1879145	16.301
104) o-Xylene	(3)	11.804	106	608531	5.359
111)$4-Bromofluorobenzene	(3)	12.249	95	683114	9.589
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	707063	10.000

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

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/17oct23a.b/hc23s02.d Injection date and time: **23-OCT-2017 10:11**
Data file Sample Info. Line: LCDH98;LCDH98;1;3;LCSD;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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
26) t-Butyl Alcohol-d10	4.233	(0.006)	434	65	88618	(1)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2435413	(0)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1658737	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.133	(0.000)	1894	152	738925	(-8)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	577180	9.814	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.342	(-0.001)	102	88221	9.579	96%		80 - 120
82) Toluene-d8	(3)	9.799	(0.000)	98	2432206	10.090	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	704655	9.623	96%		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)	2.014	(-0.000)	85	379445	3.542	3.54			0.1	1
2) Chloromethane	(2)	2.148	(0.000)	50	405896	3.837	3.84			0.2	1
8) Chloroethane	(2)	2.727	(-0.000)	64	252453	4.561	4.56			0.1	1
10) Trichlorofluoromethane	(2)	3.044	(-0.000)	101	619665	4.785	4.79			0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	204630	4.951	4.95		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.617	(-0.000)	96	282960	5.461	5.46			0.1	1
16) Freon 113	(2)	3.660	(-0.000)	101	317514	5.503	5.50			0.2	1
23) Methylene Chloride	(2)	4.275	(-0.000)	84	298913	5.057	5.06			0.2	1
33) 1,1-Dichloroethane	(2)	5.361	(-0.000)	63	627174	5.205	5.20			0.1	1
38) 2-Butanone	(1)	6.135	(-0.003)	43	531501	37.952	37.95			1	10
48) Tetrahydrofuran	(1)	6.543	(-0.005)	71	85727	26.991	26.99			2	25
51) 1,1,1-Trichloroethane	(2)	6.909	(0.000)	97	562770	5.363	5.36			0.1	1
54) Carbon Tetrachloride	(2)	7.141	(-0.000)	117	484169	5.283	5.28			0.1	1
58) Benzene	(2)	7.385	(0.000)	78	1323523	5.215	5.21			0.1	1
67) Trichloroethene	(2)	8.275	(0.000)	95	361948	5.324	5.32			0.1	1
83) Toluene	(3)	9.878	(-0.000)	92	852516	5.412	5.41			0.1	1
89) Tetrachloroethene	(3)	10.433	(-0.000)	166	407553	5.513	5.51			0.1	1
100) Ethylbenzene	(3)	11.366	(0.000)	91	1695861	5.353	5.35			0.1	1
101) m+p-Xylene	(3)	11.481	(-0.000)	106	1290214	10.809	10.81			0.1	0.5
104) o-Xylene	(3)	11.804	(0.000)	106	613964	5.260	5.26			0.1	0.5
105) Xylene (Total)	(3)			106	1904178	16.069	16.07			0.1	3

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP19094.i/17oct23a.b/hc23s02.d Injection date and time: **23-OCT-2017 10:11**
Data file Sample Info. Line: LCDH98;LCDH98;1;3;LCSD;;DRAPERLOQ;;hc23b01; Instrument ID: **HP19094.i** Batch: **H172961AA**
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Blank Data file reference: **/chem2/HP19094.i/17oct23a.b/hc23b01.d**

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-OCT-2017 16:54
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/17oct23a.b/hc23c01.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**

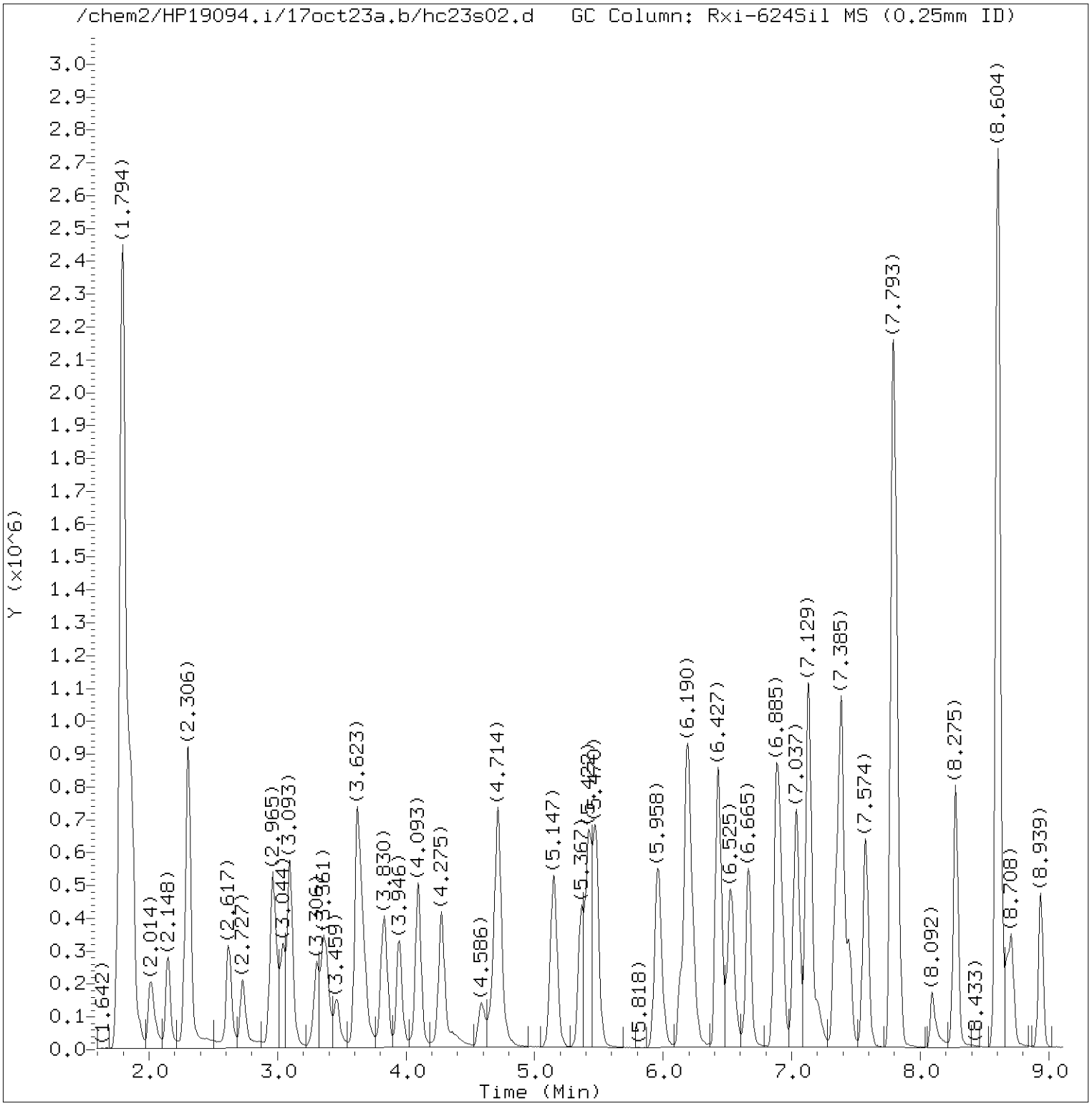
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Don V. Viray on 10/25/2017 at 16:42. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 10/25/2017 at 17:11. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

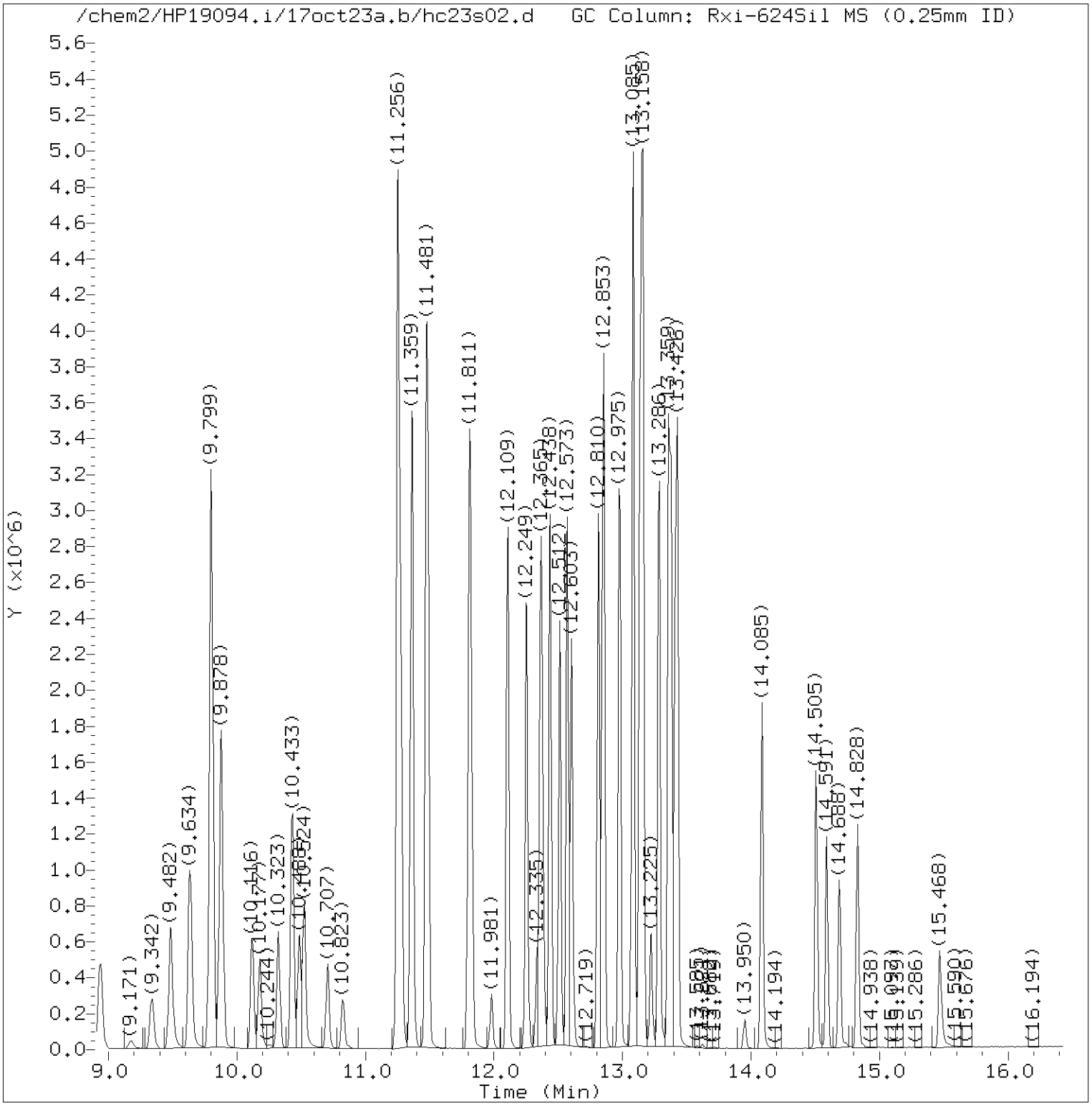
Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH98 Lab Sample ID: LCDH98

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH98 Lab Sample ID: LCDH98

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/17oct23a.b/hc23s02.d Instrument ID: HP19094.i
Injection date and time: 23-OCT-2017 10:11 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/17oct23a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-OCT-2017 16:54
Date, time and analyst ID of latest file update: 25-Oct-2017 15:45 jeb12641

Sample Name: LCDH98 Lab Sample ID: LCDH98

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	379445	3.542
2) Chloromethane	(2)	2.148	50	405896	3.837
8) Chloroethane	(2)	2.727	64	252453	4.561
10) Trichlorofluoromethane	(2)	3.044	101	619665	4.785
11) Ethyl ether	(2)	3.300	59	204630	4.951
15) 1,1-Dichloroethene	(2)	3.617	96	282960	5.461
16) Freon 113	(2)	3.660	101	317514	5.503
26)*t-Butyl Alcohol-d10	(1)	4.233	65	88618	50.000
23) Methylene Chloride	(2)	4.275	84	298913	5.057
33) 1,1-Dichloroethane	(2)	5.361	63	627174	5.205
38) 2-Butanone	(1)	6.135	43	531501	37.952
48) Tetrahydrofuran	(1)	6.543	71	85727	26.991
50)$Dibromofluoromethane	(2)	6.879	113	577180	9.814
51) 1,1,1-Trichloroethane	(2)	6.909	97	562770	5.363
54) Carbon Tetrachloride	(2)	7.141	117	484169	5.283
57)$1,2-Dichloroethane-d4	(2)	7.342	102	88221	9.579
58) Benzene	(2)	7.385	78	1323523	5.215
63)*Fluorobenzene	(2)	7.787	96	2435413	10.000
67) Trichloroethene	(2)	8.275	95	361948	5.324
82)$Toluene-d8	(3)	9.799	98	2432206	10.090
83) Toluene	(3)	9.878	92	852516	5.412
89) Tetrachloroethene	(3)	10.433	166	407553	5.513
97)*Chlorobenzene-d5	(3)	11.250	117	1658737	10.000
100) Ethylbenzene	(3)	11.366	91	1695861	5.353
101) m+p-Xylene	(3)	11.481	106	1290214	10.809
105) Xylene (Total)	(3)		106	1904178	16.069
104) o-Xylene	(3)	11.804	106	613964	5.260
111)$4-Bromofluorobenzene	(3)	12.249	95	704655	9.623
133)*1,4-Dichlorobenzene-d4	(4)	13.133	152	738925	10.000

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

Digitally signed by Don V. Viray
on 10/25/2017 at 16:42.
Target 3.5 esignature user ID: dvv10203

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: RAE95

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9262022	16C1	X		1	
9262023	16MW8	X		1	
9262024	16MW9	X		1	
9262025	16WC1A	X		1	Unspiked
9262026	16WC1A MS	X		1	Matrix Spike
9262027	16WC1A MSD	X		1	Matrix Spike Duplicate
9262028	16WDUP	X		1	Field Duplicate Sample
9262029	16WC1B	X		1	
9262030	16-2	X		1	
9262031	16-3	X		1	
9262032	16-5	X		1	
9262033	16WC2B	X		1	
9262034	16SPRING	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:

LCS/LCSD

Batch#: 17290WAE026 (Sample number(s): 9262029)
The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeded the acceptance window indicating a positive bias. 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Diethylphthalate

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE95

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Refer to the QC Summary forms for more information.

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted. For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

Batch#: 17290WAE026 (Sample number(s): 9262029)
The recovery(ies) for the following surrogate(s) were below the acceptance window:
Terphenyl-d14 (9262029)

(Sample number(s): 9262029: Analysis: 14241)
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

SAMPLE ANALYSIS:

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

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE95

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
3 SVOCs 8270D	17286WAP026	SBLKWP286	10/25/2017 12:04:00
		286WPLCS	10/25/2017 12:32:00
		9262022	10/25/2017 14:25:00
		9262023	10/25/2017 14:53:00
		9262024	10/25/2017 15:21:00
		9262025 UNSPK	10/25/2017 13:01:00
		9262026 MS	10/25/2017 13:28:00
		9262027 MSD	10/25/2017 13:57:00
		9262028	10/25/2017 15:49:00
		9262030	10/25/2017 16:17:00
		9262031	10/25/2017 16:45:00
		9262032	10/25/2017 17:13:00
		9262033	10/25/2017 17:41:00
		9262034	10/25/2017 18:09:00
3 SVOCs 8270D	17290WAE026	SBLKWE290	10/24/2017 23:38:00
		290WELCS	10/25/2017 00:05:00
		290WELCSD	10/25/2017 00:33:00
		9262029	10/25/2017 01:00:00
3 SVOCs 8270D	17299WAZ026	SBLKWZ299	10/31/2017 12:33:00
		299WZLCS	10/31/2017 13:00:00
		9262029RE	10/31/2017 14:50:00

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Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAE95
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

17286WAP026 / SBLKWP286 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	10/25/17	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	10/25/17	N.D.	ug/l	1	10
Diethylphthalate	10/25/17	N.D.	ug/l	2	5

17290WAE026 / SBLKWE290 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	10/24/17	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	10/24/17	N.D.	ug/l	1	10
Diethylphthalate	10/24/17	N.D.	ug/l	2	5

17299WAZ026 / SBLKWZ299 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	10/31/17	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	10/31/17	N.D.	ug/l	1	10
Diethylphthalate	10/31/17	N.D.	ug/l	2	5

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAE95
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

17286WAP026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWP286	78	13 - 149	73	46 - 104	34	10 - 83	63	40 - 113	25	10 - 69	74	35 - 119
286WPLCS	95	13 - 149	81	46 - 104	45	10 - 83	74	40 - 113	32	10 - 69	82	35 - 119
9262022	92	13 - 149	81	46 - 104	46	10 - 83	72	40 - 113	44	10 - 69	88	35 - 119
9262023	92	13 - 149	77	46 - 104	40	10 - 83	68	40 - 113	34	10 - 69	59	35 - 119
9262024	83	13 - 149	74	46 - 104	46	10 - 83	67	40 - 113	43	10 - 69	82	35 - 119
9262025 UNSPK	76	13 - 149	78	46 - 104	37	10 - 83	72	40 - 113	39	10 - 69	82	35 - 119
9262026 MS	46	13 - 149	84	46 - 104	51	10 - 83	76	40 - 113	50	10 - 69	83	35 - 119
9262027 MSD	57	13 - 149	84	46 - 104	51	10 - 83	76	40 - 113	53	10 - 69	86	35 - 119
9262028	62	13 - 149	80	46 - 104	40	10 - 83	73	40 - 113	43	10 - 69	71	35 - 119
9262030	80	13 - 149	71	46 - 104	39	10 - 83	66	40 - 113	31	10 - 69	79	35 - 119
9262031	89	13 - 149	83	46 - 104	41	10 - 83	76	40 - 113	29	10 - 69	90	35 - 119
9262032	88	13 - 149	76	46 - 104	39	10 - 83	67	40 - 113	30	10 - 69	89	35 - 119
9262033	81	13 - 149	79	46 - 104	41	10 - 83	69	40 - 113	29	10 - 69	85	35 - 119
9262034	87	13 - 149	81	46 - 104	39	10 - 83	70	40 - 113	29	10 - 69	87	35 - 119

17290WAE026	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
SBLKWE290	79	46 - 104	78	40 - 113	80	35 - 119
290WELCS	86	46 - 104	85	40 - 113	89	35 - 119
290WELCSD	78	46 - 104	79	40 - 113	83	35 - 119
9262029	81	46 - 104	79	40 - 113	33 *	35 - 119

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted. For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAE95
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

17299WAZ026	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
SBLKWZ299	74	46 - 104	73	40 - 113	85	35 - 119
299WZLCS	77	46 - 104	77	40 - 113	71	35 - 119
9262029RE	75	46 - 104	76	40 - 113	47	35 - 119

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted. For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9262025 MS: 9262026 MSD: 9262027 **Analyte**	Batch: **17286WAP026** (Sample number(s): 9262022-9262028, 9262030-9262034)								
	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**
2,6-Dinitrotoluene	50.2 / 50.61	N.D.	49.72	49.46	99	98	75-121	1	30
2,4-Dinitrotoluene	50.2 / 50.61	N.D.	49.35	49.2	98	97	70-122	0	30
Diethylphthalate	50.2 / 50.61	N.D.	48.69	49.71	97	98	55-113	2	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: RAE95
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 286WPLCS	Batch: **17286WAP026** (Sample number(s): 9262022-9262028, 9262030-9262034)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	47.13	NA	94	NA	75-121	NA	NA
2,4-Dinitrotoluene	50	46.68	NA	93	NA	70-122	NA	NA
Diethylphthalate	50	44.85	NA	90	NA	55-113	NA	NA

LCS: 290WELCS LCSD: 290WELCSD	Batch: **17290WAE026** (Sample number(s): 9262029)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	93.91	89.55	188 *	179 *	75-121	5	30
2,4-Dinitrotoluene	50	90.66	84.08	181 *	168 *	70-122	8	30
Diethylphthalate	50	82.17	77.59	164 *	155 *	55-113	6	30

LCS: 299WZLCS	Batch: **17299WAZ026** (Sample number(s): 9262029)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	45.47	NA	91	NA	75-121	NA	NA
2,4-Dinitrotoluene	50	42.98	NA	86	NA	70-122	NA	NA
Diethylphthalate	50	41.08	NA	82	NA	55-113	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1100b.d DFTPP Injection Date: 10/23/17

Instrument ID: HP19760 DFTPP Injection Time: 12:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	41.9
68	Less than 2.0% of mass 69	0.73 (1.6)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.26 (0.58)1
127	10.0 - 80.00% of mass 198	46.0
197	Less than 2.0% of mass 198	0.89
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.44
275	10.0 - 60.0% of mass 198	25.5
365	Greater than 1.00% of mass 198	2.6
441	Present, and less than mass 443	12.1
442	Greater than 50.00% of mass 198	76.1
443	15.00 - 24.00% of mass 442	14.9 (19.6)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	rvSTD2857 - SSTD7.5	dj1101.d	10/23/17	12:24
02	RVSTD2857 - SSTD.125	dj1102.d	10/23/17	12:54
03	RVSTD2857 - SSTD30	dj1103.d	10/23/17	13:21
04	RVSTD2857 - SSTD20	dj1104.d	10/23/17	13:49
05	RVSTD2857 - SSTD12.5	dj1105.d	10/23/17	14:17
06	RVSTD2857 - SSTD3.75	dj1106.d	10/23/17	14:44
07	RVSTD2857 - SSTD1.25	dj1107.d	10/23/17	15:12
08	RVSTD2857 - SSTD.25	dj1108.d	10/23/17	15:39
09	RVMDL2857 - SSTD0.125	dj1109.d	10/23/17	16:07
10	PAHMDL2287 - SSTD0.025	dj1110.d	10/23/17	16:35
11	rvICV2917 - SSTD12.5	dj1111.d	10/23/17	17:02
12	rvBASICV2487 - SSTD12.5	dj1112.d	10/23/17	17:30
13	rvHBICV2917 - SSTD25	dj1113.d	10/23/17	17:58

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1210b.d DFTPP Injection Date: 10/24/17

Instrument ID: HP19760 DFTPP Injection Time: 22:17

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	40.6
68	Less than 2.0% of mass 69	0.75 (1.68)1
69	Mass 69 relative abundance	44.9
70	Less than 2.0% of mass 69	0.27 (0.61)1
127	10.0 - 80.00% of mass 198	47.6
197	Less than 2.0% of mass 198	0.87
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.74
275	10.0 - 60.0% of mass 198	24.0
365	Greater than 1.00% of mass 198	2.24
441	Present, and less than mass 443	10.4
442	Greater than 50.00% of mass 198	66.5
443	15.00 - 24.00% of mass 442	12.4 (18.7)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	rvAMINO1997 - SSTD125	dj1212.d	10/24/17	22:36
02	rvSTD2857 - SSTD7.5	dj1211.d	10/24/17	23:05
03	SBLKWE290	dj1213.d	10/24/17	23:38
04	290WELCS	dj1214.d	10/25/17	00:05
05	290WELCSD	dj1215.d	10/25/17	00:33
06	9262029	dj1216.d	10/25/17	01:00
07	9256527DL	dj1217.d	10/25/17	01:28
08	9256534	dj1218.d	10/25/17	01:55
09	9256541	dj1219.d	10/25/17	02:23
10	9256542	dj1220.d	10/25/17	02:51
11	9271227	dj1221.d	10/25/17	03:18
12	9271228	dj1222.d	10/25/17	03:46
13	9271233	dj1223.d	10/25/17	04:13
14	9272417	dj1224.d	10/25/17	04:41
15	9272418	dj1225.d	10/25/17	05:08
16	9272488	dj1226.d	10/25/17	05:36
17	9272489	dj1227.d	10/25/17	06:03
18	9272490	dj1228.d	10/25/17	06:31

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1210b.d DFTPP Injection Date: 10/24/17

Instrument ID: HP19760 DFTPP Injection Time: 22:17

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	40.6
68	Less than 2.0% of mass 69	0.75 (1.68)1
69	Mass 69 relative abundance	44.9
70	Less than 2.0% of mass 69	0.27 (0.61)1
127	10.0 - 80.00% of mass 198	47.6
197	Less than 2.0% of mass 198	0.87
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.74
275	10.0 - 60.0% of mass 198	24.0
365	Greater than 1.00% of mass 198	2.24
441	Present, and less than mass 443	10.4
442	Greater than 50.00% of mass 198	66.5
443	15.00 - 24.00% of mass 442	12.4 (18.7)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	9261885	dj1229.d	10/25/17	06:58

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1610a.d DFTPP Injection Date: 10/30/17

Instrument ID: HP19760 DFTPP Injection Time: 20:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.6
68	Less than 2.0% of mass 69	0.81 (1.8)1
69	Mass 69 relative abundance	45.0
70	Less than 2.0% of mass 69	0.31 (0.69)1
127	10.0 - 80.00% of mass 198	47.8
197	Less than 2.0% of mass 198	0.08
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.6
275	10.0 - 60.0% of mass 198	23.2
365	Greater than 1.00% of mass 198	2.13
441	Present, and less than mass 443	10.6
442	Greater than 50.00% of mass 198	66.9
443	15.00 - 24.00% of mass 442	13.3 (19.8)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	rvSTD2857 - SSTD7.5	dj1611.d	10/30/17	21:05
02	RVSTD2857 - SSTD.125	dj1612.d	10/30/17	21:35
03	RVSTD2857 - SSTD30	dj1613.d	10/30/17	22:03
04	RVSTD2857 - SSTD20	dj1614.d	10/30/17	22:30
05	RVSTD2857 - SSTD12.5	dj1615.d	10/30/17	22:58
06	RVSTD2857 - SSTD3.75	dj1616.d	10/30/17	23:25
07	RVSTD2857 - SSTD1.25	dj1617.d	10/30/17	23:52
08	RVSTD2857 - SSTD.25	dj1618.d	10/31/17	00:20
09	RVMDL2857 - SSTD0.125	dj1619.d	10/31/17	00:47
10	PAHMDL2287 - SSTD0.025	dj1620.d	10/31/17	01:15
11	rvICV2917 - SSTD12.5	dj1621.d	10/31/17	01:42
12	rvBASICV2487 - SSTD12.5	dj1622.d	10/31/17	02:10
13	rvHBICV2917 - SSTD12.5	dj1623.d	10/31/17	02:37

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1630.d DFTPP Injection Date: 10/31/17

Instrument ID: HP19760 DFTPP Injection Time: 09:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.6
68	Less than 2.0% of mass 69	0.89 (1.79)1
69	Mass 69 relative abundance	49.8
70	Less than 2.0% of mass 69	0.17 (0.33)1
127	10.0 - 80.00% of mass 198	50.1
197	Less than 2.0% of mass 198	0.18
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.85
275	10.0 - 60.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.43
441	Present, and less than mass 443	11.7
442	Greater than 50.00% of mass 198	74.5
443	15.00 - 24.00% of mass 442	14.4 (19.4)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	rvSTD2857 - SSTD7.5	dj1631.d	10/31/17	09:37
02	SBLKWI299	dj1633.d	10/31/17	12:33
03	SBLKWZ299	dj1633z.d	10/31/17	12:33
04	299WILCS	dj1634.d	10/31/17	13:00
05	299WZLCS	dj1634z.d	10/31/17	13:00
06	SBLKWH299	dj1635.d	10/31/17	13:28
07	299WHLCS	dj1636.d	10/31/17	13:55
08	299WHLCSD	dj1637.d	10/31/17	14:23
09	9262029RE	dj1638.d	10/31/17	14:50
10	9267528RE	dj1639.d	10/31/17	15:17
11	9267529RE	dj1640.d	10/31/17	15:45
12	9267530RE	dj1641.d	10/31/17	16:13
13	9267531RE	dj1642.d	10/31/17	16:40
14	9267532RE	dj1643.d	10/31/17	17:08
15	9267533RE	dj1644.d	10/31/17	17:35
16	9267536RE	dj1645.d	10/31/17	18:03
17	9267537RE	dj1646.d	10/31/17	18:30
18	9279647	dj1647.d	10/31/17	18:57

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: dj1630.d DFTPP Injection Date: 10/31/17

Instrument ID: HP19760 DFTPP Injection Time: 09:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.6
68	Less than 2.0% of mass 69	0.89 (1.79)1
69	Mass 69 relative abundance	49.8
70	Less than 2.0% of mass 69	0.17 (0.33)1
127	10.0 - 80.00% of mass 198	50.1
197	Less than 2.0% of mass 198	0.18
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.85
275	10.0 - 60.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.43
441	Present, and less than mass 443	11.7
442	Greater than 50.00% of mass 198	74.5
443	15.00 - 24.00% of mass 442	14.4 (19.4)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	9279648	dj1648.d	10/31/17	19:25
20	9279649	dj1649.d	10/31/17	19:52

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: lj0480d.d DFTPP Injection Date: 10/12/17

Instrument ID: HP20296 DFTPP Injection Time: 16:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	44.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.0
70	Less than 2.0% of mass 69	0.06 (0.12)1
127	10.0 - 80.00% of mass 198	54.4
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.74
275	10.0 - 60.0% of mass 198	20.4
365	Greater than 1.00% of mass 198	2.12
441	Present, and less than mass 443	8.3
442	Greater than 50.00% of mass 198	52.9
443	15.00 - 24.00% of mass 442	10.3 (19.5)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	RVSTD2857 - SSTD7.5	lj0481d.d	10/12/17	17:35
02	RVSTD2857 - SSTD.125	lj0482d.d	10/12/17	19:04
03	RVSTD2857 - SSTD30	lj0483d.d	10/12/17	19:32
04	RVSTD2857 - SSTD20	lj0484d.d	10/12/17	20:00
05	RVSTD2857 - SSTD12.5	lj0485d.d	10/12/17	20:28
06	RVSTD2857 - SSTD3.75	lj0486d.d	10/12/17	20:56
07	RVSTD2857 - SSTD1.25	lj0487d.d	10/12/17	21:24
08	RVSTD2857 - SSTD.25	lj0488d.d	10/12/17	22:01
09	RVMDL2857 - SSTD0.125	lj0489d.d	10/12/17	22:29
10	PAHMDL2857 - SSTD0.025	lj0490d.d	10/12/17	22:57
11	RVICV1147 - SSTD12.5	lj0491d.d	10/12/17	23:25
12	RVBASICV2487 - SSTD12.5	lj0492d.d	10/12/17	23:53

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: lj1240z.d DFTPP Injection Date: 10/25/17

Instrument ID: HP20296 DFTPP Injection Time: 08:31

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	39.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	45.7
70	Less than 2.0% of mass 69	0.27 (0.59)1
127	10.0 - 80.00% of mass 198	51.0
197	Less than 2.0% of mass 198	0.51
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.39
275	10.0 - 60.0% of mass 198	21.5
365	Greater than 1.00% of mass 198	1.9
441	Present, and less than mass 443	8.4
442	Greater than 50.00% of mass 198	51.7
443	15.00 - 24.00% of mass 442	10.1 (19.6)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	RVSTD2857 - SSTD7.5	lj1241.d	10/25/17	08:46
02	SBLKWQ291	lj1242.d	10/25/17	09:44
03	291WQLCS	lj1243.d	10/25/17	10:12
04	9267619	lj1244.d	10/25/17	10:40
05	9267620MS	lj1245.d	10/25/17	11:08
06	9267621MSD	lj1246.d	10/25/17	11:36
07	SBLKWP286	lj1247.d	10/25/17	12:04
08	286WPLCS	lj1248.d	10/25/17	12:32
09	9262025	lj1249.d	10/25/17	13:01
10	9262026MS	lj1250.d	10/25/17	13:28
11	9262027MSD	lj1251.d	10/25/17	13:57
12	9262022	lj1252.d	10/25/17	14:25
13	9262023	lj1253.d	10/25/17	14:53
14	9262024	lj1254.d	10/25/17	15:21
15	9262028	lj1255.d	10/25/17	15:49
16	9262030	lj1256.d	10/25/17	16:17
17	9262031	lj1257.d	10/25/17	16:45
18	9262032	lj1258.d	10/25/17	17:13

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: lj1240z.d DFTPP Injection Date: 10/25/17

Instrument ID: HP20296 DFTPP Injection Time: 08:31

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	39.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	45.7
70	Less than 2.0% of mass 69	0.27 (0.59)1
127	10.0 - 80.00% of mass 198	51.0
197	Less than 2.0% of mass 198	0.51
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.39
275	10.0 - 60.0% of mass 198	21.5
365	Greater than 1.00% of mass 198	1.9
441	Present, and less than mass 443	8.4
442	Greater than 50.00% of mass 198	51.7
443	15.00 - 24.00% of mass 442	10.1 (19.6)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	9262033	lj1259.d	10/25/17	17:41
20	9262034	lj1260.d	10/25/17	18:09

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): 10/23/17 10/23/17

Calibration Times: 12:24 15:39

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1102.d RRF0.25 = dj1108.d RRF1.25 = dj1107.d RRF3.75 = dj1106.d
RRF7.5 = dj1101.d RRF12.5 = dj1105.d RRF20 = dj1104.d RRF30 = dj1103.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.613	0.675	0.703	0.680	0.695	0.684	0.675	5	AVG
N-Nitrosodimethylamine			0.994	0.995	1.069	1.096	1.126	1.104	1.064	5	AVG
Pyridine			1.685	1.547	1.689	1.710	1.812	1.845	1.715	6	AVG
2-Picoline			1.645	1.793	1.807	1.873	1.936	1.891	1.824	6	AVG
N-Nitrosomethylethylamine			0.746	0.752	0.785	0.791	0.800	0.779	0.776	3	AVG
Methyl methanesulfonate			0.786	0.803	0.852	0.839	0.842	0.839	0.827	3	AVG
N-Nitrosodiethylamine		0.683	0.692	0.707	0.756	0.759	0.781	0.759	0.734	5	AVG
Ethyl methanesulfonate		0.730	0.730	0.739	0.793	0.775	0.798	0.780	0.764	4	AVG
Benzaldehyde			1.516	1.494	1.416	1.377	1.364	1.257	1.404	7	AVG
Phenol		2.128	2.013	2.233	2.322	2.317	2.350	2.294	2.237	6	AVG
Aniline		2.485	2.538	2.540	2.684	2.664	2.693	2.649	2.608	3	AVG
a-methylstyrene			1.592	1.632	1.623	1.590	1.575	1.592	1.601	1	AVG
bis(2-Chloroethyl)ether		1.678	1.639	1.684	1.727	1.675	1.697	1.657	1.680	2	AVG
2-Chlorophenol		1.435	1.455	1.491	1.542	1.533	1.547	1.499	1.500	3	AVG
1,3-Dichlorobenzene		1.651	1.563	1.616	1.667	1.640	1.667	1.627	1.633	2	AVG
1,4-Dichlorobenzene		1.687	1.599	1.648	1.684	1.679	1.677	1.649	1.661	2	AVG
Benzyl alcohol			0.986	1.003	1.023	1.008	0.997	1.021	1.006	1	AVG
1,2-Dichlorobenzene		1.589	1.533	1.551	1.609	1.581	1.583	1.562	1.572	2	AVG
Indene			2.912	2.974	2.969	2.894	2.885	2.909	2.924	1	AVG
2-Methylphenol		1.331	1.368	1.407	1.470	1.449	1.474	1.442	1.420	4	AVG
2,2'-oxybis(1-Chloropropane)		2.202	2.108	2.145	2.233	2.178	2.208	2.173	2.178	2	AVG
bis(2-Chloroisopropyl)ether		2.202	2.108	2.145	2.233	2.178	2.208	2.173	2.178	2	AVG
N-Nitrosopyrrolidine		0.686	0.728	0.761	0.810	0.815	0.839	0.822	0.780	7	AVG
Acetophenone		2.239	2.404	2.388	2.298	2.275	2.377	2.473	2.350	4	AVG
4-Methylphenol		1.469	1.437	1.480	1.694	1.678	1.690	1.662	1.587	7	AVG
Total Cresols		1.400	1.403	1.444	1.582	1.563	1.582	1.552	1.504	6	AVG
N-Nitroso-di-n-propylamine		1.205	1.233	1.263	1.325	1.305	1.334	1.318	1.283	4	AVG
N-Nitrosomorpholine			0.880	0.944	1.017	0.978	0.985	0.961	0.961	5	AVG
o-Toluidine		2.457	2.464	2.555	2.646	2.613	2.637	2.570	2.563	3	AVG
Hexachloroethane			0.619	0.656	0.699	0.681	0.682	0.676	0.669	4	AVG
Nitrobenzene		0.459	0.475	0.483	0.505	0.492	0.496	0.488	0.486	3	AVG
N-Nitrosopiperidine		0.178	0.185	0.192	0.205	0.204	0.207	0.204	0.196	6	AVG
Isophorone		0.787	0.793	0.823	0.881	0.868	0.880	0.879	0.844	5	AVG
2-Nitrophenol		0.147	0.158	0.176	0.189	0.194	0.201	0.198	0.180	12	AVG
2,4-Dimethylphenol		0.373	0.401	0.412	0.440	0.435	0.438	0.438	0.419	6	AVG
O,O,O-Triethylphosphorothioat			0.178	0.183	0.190	0.191	0.195	0.192	0.188	3	AVG
bis(2-Chloroethoxy)methane		0.496	0.507	0.523	0.543	0.543	0.534	0.531	0.525	3	AVG
Benzoic acid			0.165	0.207	0.283	0.334	0.355	0.375	0.286	30	1STDEG
1,2,3,4-Tetrahydronaphthalene			0.607	0.615	0.629	0.604	0.597	0.618	0.612	2	AVG
2,4-Dichlorophenol		0.259	0.294	0.311	0.330	0.324	0.328	0.325	0.310	8	AVG
1,2,4-Trichlorobenzene		0.365	0.345	0.353	0.367	0.366	0.366	0.362	0.360	2	AVG
Naphthalene	1.184	1.094	1.107	1.101	1.150	1.141	1.138	1.127	1.130	3	AVG
4-Chloroaniline		0.433	0.447	0.462	0.480	0.476	0.481	0.477	0.465	4	AVG
2,6-Dichlorophenol		0.274	0.284	0.305	0.322	0.316	0.317	0.317	0.305	6	AVG
Hexachloropropene			0.159	0.169	0.174	0.181	0.185	0.183	0.175	6	AVG
Hexachlorobutadiene		0.188	0.198	0.198	0.209	0.205	0.208	0.205	0.202	4	AVG
Quinoline			0.670	0.671	0.707	0.689	0.700	0.688	0.687	2	AVG
Caprolactam			0.096	0.103	0.097	0.101	0.103	0.109	0.102	5	AVG
N-Nitrosodi-n-butylamine			0.331	0.326	0.402	0.391	0.407	0.353	0.368	10	AVG
4-Chloro-3-methylphenol		0.299	0.324	0.349	0.365	0.365	0.371	0.363	0.348	8	AVG
Safrole			0.268	0.280	0.298	0.294	0.296	0.299	0.289	4	AVG
2-Methylnaphthalene	0.739	0.733	0.716	0.732	0.776	0.762	0.771	0.770	0.750	3	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): 10/23/17 10/23/17

Calibration Times: 12:24 15:39

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1102.d RRF0.25 = dj1108.d RRF1.25 = dj1107.d RRF3.75 = dj1106.d
RRF7.5 = dj1101.d RRF12.5 = dj1105.d RRF20 = dj1104.d RRF30 = dj1103.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1-Methylnaphthalene	0.686	0.660	0.654	0.659	0.696	0.685	0.698	0.693	0.679	3	AVG
Hexachlorocyclopentadiene			0.271	0.295	0.336	0.333	0.338	0.334	0.318	9	AVG
1,2,4,5-Tetrachlorobenzene		0.679	0.650	0.673	0.692	0.686	0.674	0.683	0.677	2	AVG
cis-Isosafrole			0.539	0.523	0.573	0.556	0.563	0.569	0.554	4	AVG
2,4,6-Trichlorophenol		0.347	0.380	0.403	0.431	0.427	0.438	0.429	0.408	8	AVG
2,4,5-Trichlorophenol		0.373	0.410	0.427	0.456	0.455	0.445	0.444	0.430	7	AVG
trans-Isosafrole			0.460	0.484	0.524	0.504	0.506	0.520	0.500	5	AVG
Isosafrole			0.474	0.490	0.533	0.513	0.516	0.529	0.509	4	AVG
1,1'-Biphenyl		1.649	1.705	1.690	1.649	1.606	1.625	1.720	1.663	3	AVG
2-Chloronaphthalene		1.320	1.241	1.314	1.383	1.398	1.362	1.431	1.350	5	AVG
1-Chloronaphthalene		1.135	1.254	1.192	1.285	1.154	1.178	1.103	1.186	5	AVG
Diphenyl ether		0.869	0.853	0.885	0.931	0.903	0.896	0.900	0.891	3	AVG
2-Nitroaniline		0.292	0.335	0.374	0.402	0.408	0.412	0.419	0.378	13	AVG
1,4-Naphthoquinone			0.469	0.512	0.553	0.548	0.534	0.544	0.527	6	AVG
1,4-Dinitrobenzene			0.157	0.179	0.200	0.208	0.207	0.214	0.194	11	AVG
Dimethylphthalate			1.426	1.420	1.473	1.459	1.458	1.392	1.438	2	AVG
1,3-Dinitrobenzene			0.179	0.204	0.218	0.230	0.234	0.229	0.216	10	AVG
2,6-Dinitrotoluene		0.223	0.271	0.298	0.319	0.325	0.323	0.331	0.299	13	AVG
Acenaphthylene	1.817	1.666	1.707	1.774	1.906	1.850	1.843	1.832	1.799	4	AVG
3-Nitroaniline		0.274	0.303	0.334	0.354	0.367	0.366	0.380	0.340	11	AVG
Acenaphthene	1.332	1.348	1.326	1.344	1.425	1.395	1.373	1.362	1.363	2	AVG
2,4-Dinitrophenol			0.114	0.143	0.163	0.189	0.204	0.213	0.171	22	1STDEG
4-Nitrophenol				0.239	0.268	0.265	0.260	0.270	0.260	5	AVG
Pentachlorobenzene		0.508	0.549	0.553	0.583	0.573	0.567	0.564	0.557	4	AVG
2,4-Dinitrotoluene			0.373	0.403	0.431	0.446	0.455	0.461	0.428	8	AVG
2,4_2,6-Dinitrotoluenes		0.268	0.322	0.351	0.375	0.386	0.389	0.396	0.355	13	AVG
Dibenzofuran		1.742	1.782	1.767	1.829	1.798	1.764	1.764	1.778	2	AVG
1-Naphthylamine				1.298	1.395	1.396	1.407	1.423	1.384	4	AVG
2,3,4,6-Tetrachlorophenol		0.267	0.303	0.324	0.358	0.358	0.366	0.377	0.336	12	AVG
2-Naphthylamine				1.269	1.345	1.365	1.374	1.386	1.348	3	AVG
Diethylphthalate			1.328	1.369	1.510	1.434	1.433	1.445	1.420	4	AVG
Thionazin			0.264	0.278	0.305	0.296	0.257	0.295	0.282	7	AVG
Fluorene	1.433	1.397	1.375	1.400	1.483	1.446	1.440	1.464	1.430	3	AVG
4-Chlorophenyl-phenylether		0.671	0.680	0.664	0.700	0.685	0.681	0.696	0.683	2	AVG
5-Nitro-o-toluidine		0.334	0.346	0.377	0.418	0.424	0.426	0.434	0.394	10	AVG
4-Nitroaniline		0.261	0.317	0.347	0.374	0.372	0.371	0.375	0.345	12	AVG
4,6-Dinitro-2-methylphenol				0.108	0.122	0.131	0.136	0.135	0.126	9	AVG
N-Nitrosodiphenylamine (1)		0.579	0.601	0.619	0.659	0.632	0.632	0.625	0.621	4	AVG
NDPA as diphenylamine		0.579	0.601	0.619	0.659	0.632	0.632	0.625	0.621	4	AVG
1,2-Diphenylhydrazine		0.878	0.871	0.889	0.953	0.887	0.879	0.848	0.887	4	AVG
Tetraethyldithiopyrophosphate			0.136	0.146	0.158	0.149	0.148	0.147	0.147	5	AVG
1,3,5-Trinitrobenzene				0.070	0.078	0.085	0.091	0.091	0.083	11	AVG
Diallate (peak 1)			0.366	0.382	0.407	0.393	0.390	0.385	0.387	3	AVG
Phorate		0.467	0.529	0.561	0.618	0.585	0.580	0.559	0.557	9	AVG
Phenacetin		0.349	0.383	0.432	0.469	0.447	0.447	0.442	0.424	10	AVG
4-Bromophenyl-phenylether		0.224	0.211	0.215	0.222	0.217	0.217	0.216	0.218	2	AVG
Diallate (peak 2)			0.299	0.313	0.337	0.309	0.325	0.324	0.318	4	AVG
Diallate trans/cis			0.355	0.370	0.395	0.379	0.379	0.375	0.375	4	AVG
Hexachlorobenzene	0.236	0.227	0.212	0.219	0.229	0.218	0.222	0.221	0.223	3	AVG
Dimethoate			0.305	0.352	0.382	0.368	0.373	0.367	0.358	8	AVG
Atrazine			0.212	0.223	0.212	0.204	0.212	0.211	0.212	3	AVG
Pentachlorophenol			0.110	0.134	0.146	0.149	0.152	0.154	0.141	12	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): 10/23/17 10/23/17

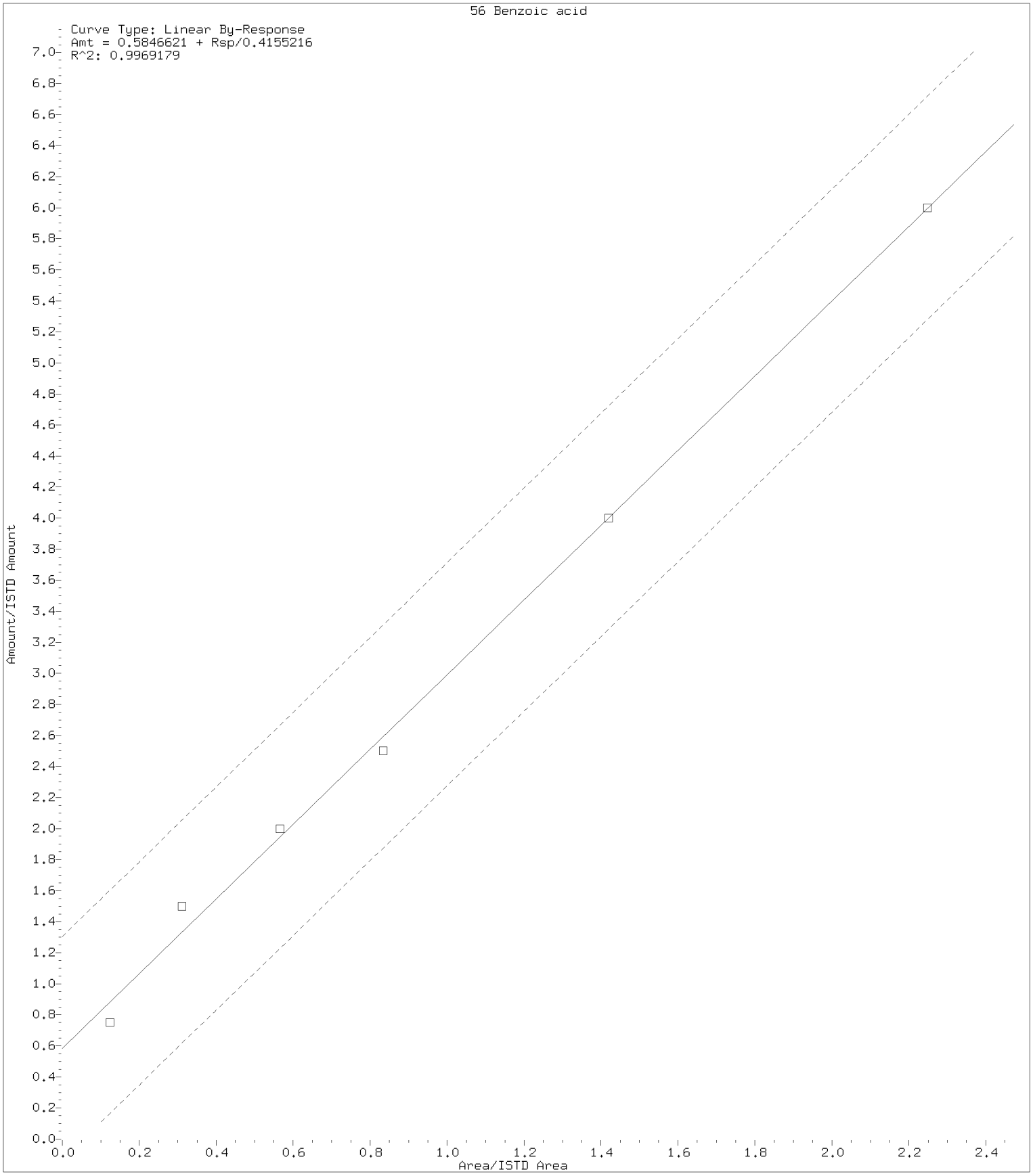
Calibration Times: 12:24 15:39

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

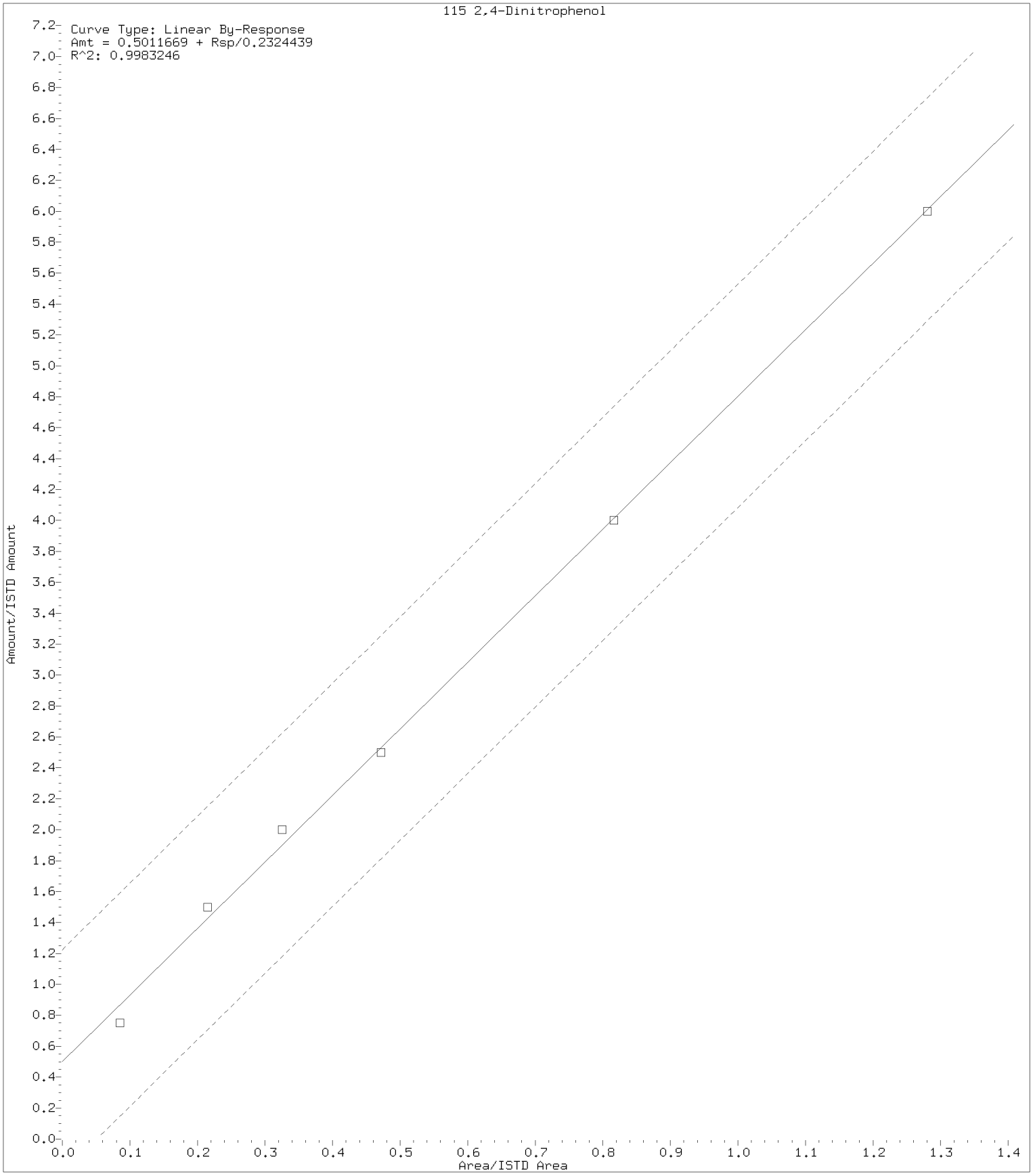
LAB FILE ID:RRF0.125 = dj1102.d RRF0.25 = dj1108.d RRF1.25 = dj1107.d RRF3.75 = dj1106.d
RRF7.5 = dj1101.d RRF12.5 = dj1105.d RRF20 = dj1104.d RRF30 = dj1103.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
4-Aminobiphenyl		0.170	0.183	0.184	0.215	0.206	0.211	0.203	0.196	9	AVG
Pentachloronitrobenzene			0.084	0.092	0.101	0.098	0.101	0.099	0.096	7	AVG
Pronamide		0.289	0.322	0.356	0.388	0.380	0.380	0.373	0.355	10	AVG
Dinoseb			0.119	0.162	0.185	0.204	0.219	0.221	0.185	21	1STDEG
Phenanthrene	1.137	1.109	1.115	1.120	1.180	1.151	1.151	1.136	1.137	2	AVG
Anthracene	1.080	1.089	1.082	1.131	1.191	1.152	1.148	1.122	1.124	4	AVG
Carbazole		0.936	0.993	1.046	1.134	1.084	1.102	1.083	1.054	7	AVG
Methyl parathion			0.215	0.255	0.292	0.292	0.299	0.296	0.275	12	AVG
Di-n-butylphthalate			1.171	1.288	1.419	1.343	1.366	1.346	1.322	6	AVG
Parathion			0.133	0.165	0.190	0.188	0.194	0.197	0.178	14	AVG
4-Nitroquinoline-1-oxide				0.067	0.084	0.111	0.126	0.129	0.103	26	1STDEG
Octachlorostyrene			0.090	0.093	0.090	0.089	0.088	0.090	0.090	2	AVG
Isodrin		0.143	0.134	0.130	0.141	0.136	0.136	0.134	0.136	3	AVG
Fluoranthene	1.249	1.174	1.199	1.270	1.406	1.352	1.379	1.359	1.299	7	AVG
Benzidine				0.729	0.786	0.768	0.746	0.702	0.746	4	AVG
Pyrene	1.195	1.161	1.125	1.125	1.181	1.160	1.149	1.126	1.153	2	AVG
p-Dimethylaminoazobenzene		0.106	0.126	0.150	0.162	0.172	0.172	0.170	0.151	17	AVG
Chlorobenzilate			0.289	0.324	0.348	0.352	0.347	0.345	0.334	7	AVG
3,3'-Dimethylbenzidine			0.599	0.677	0.756	0.748	0.756	0.733	0.712	9	AVG
Butylbenzylphthalate			0.444	0.483	0.525	0.524	0.521	0.513	0.502	6	AVG
2-Acetylaminofluorene			0.327	0.408	0.454	0.491	0.499	0.499	0.447	15	AVG
3,3'-Dichlorobenzidine			0.344	0.377	0.409	0.419	0.424	0.417	0.398	8	AVG
4,4'-Methylenebis(2-chloroani				0.194	0.208	0.211	0.210	0.208	0.206	3	AVG
Benzo(a)anthracene	0.945	0.942	1.010	1.081	1.123	1.162	1.139	1.102	1.063	8	AVG
Chrysene	0.957	0.907	1.002	1.020	1.050	1.061	1.042	1.007	1.006	5	AVG
bis(2-Ethylhexyl)phthalate			0.644	0.708	0.773	0.788	0.776	0.764	0.742	8	AVG
6-Methylchrysene			0.655	0.697	0.761	0.776	0.783	0.774	0.741	7	AVG
Di-n-octylphthalate			1.236	1.428	1.550	1.583	1.573	1.565	1.489	9	AVG
Benzo(b)fluoranthene	1.101	1.060	1.123	1.191	1.281	1.292	1.322	1.300	1.209	9	AVG
7,12-Dimethylbenz[a]anthracen		0.346	0.445	0.511	0.549	0.557	0.559	0.554	0.503	16	AVG
Benzo(k)fluoranthene	1.131	1.015	1.118	1.210	1.259	1.264	1.221	1.216	1.179	7	AVG
Benzo(a)pyrene	0.969	0.922	1.024	1.115	1.183	1.208	1.219	1.200	1.105	11	AVG
3-Methylcholanthrene		0.320	0.373	0.404	0.429	0.447	0.451	0.453	0.411	12	AVG
Dibenz(a,h)acridine			0.818	0.887	0.962	0.971	0.980	0.980	0.933	7	AVG
Dibenz(a,j)acridine			0.871	0.965	1.033	1.033	1.024	1.013	0.990	6	AVG
Indeno(1,2,3-cd)pyrene	1.179	1.165	1.242	1.326	1.410	1.386	1.378	1.334	1.302	7	AVG
Dibenz(a,h)anthracene	0.915	0.946	1.052	1.149	1.163	1.186	1.166	1.130	1.088	10	AVG
Benzo(g,h,i)perylene	1.014	1.009	1.057	1.120	1.169	1.152	1.128	1.088	1.092	6	AVG
Total PAHs	1.030	0.998	1.015	1.053	1.081	1.071	1.056	1.038	1.043	3	AVG
2-Fluorophenol		1.455	1.437	1.481	1.563	1.553	1.570	1.548	1.515	4	AVG
Phenol-d6		1.888	1.884	1.946	2.045	2.029	2.059	2.025	1.982	4	AVG
Nitrobenzene-d5		0.451	0.464	0.474	0.509	0.493	0.497	0.491	0.483	4	AVG
2-Fluorobiphenyl		1.486	1.473	1.492	1.594	1.530	1.508	1.518	1.514	3	AVG
2,4,6-Tribromophenol		0.154	0.177	0.184	0.194	0.202	0.208	0.213	0.190	11	AVG
Terphenyl-d14		0.711	0.739	0.744	0.791	0.771	0.762	0.745	0.752	3	AVG
								Average %RSD		6	

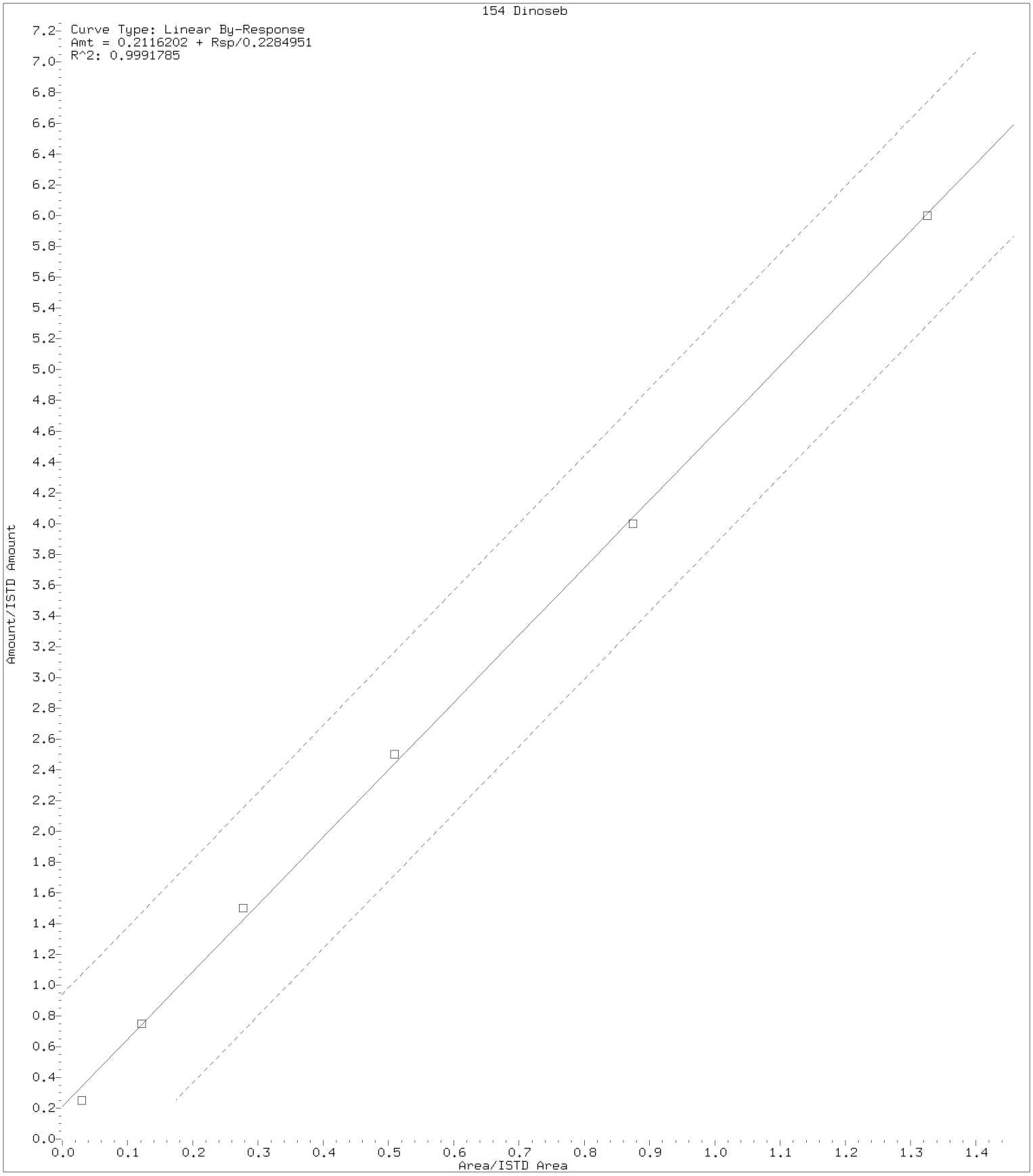
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



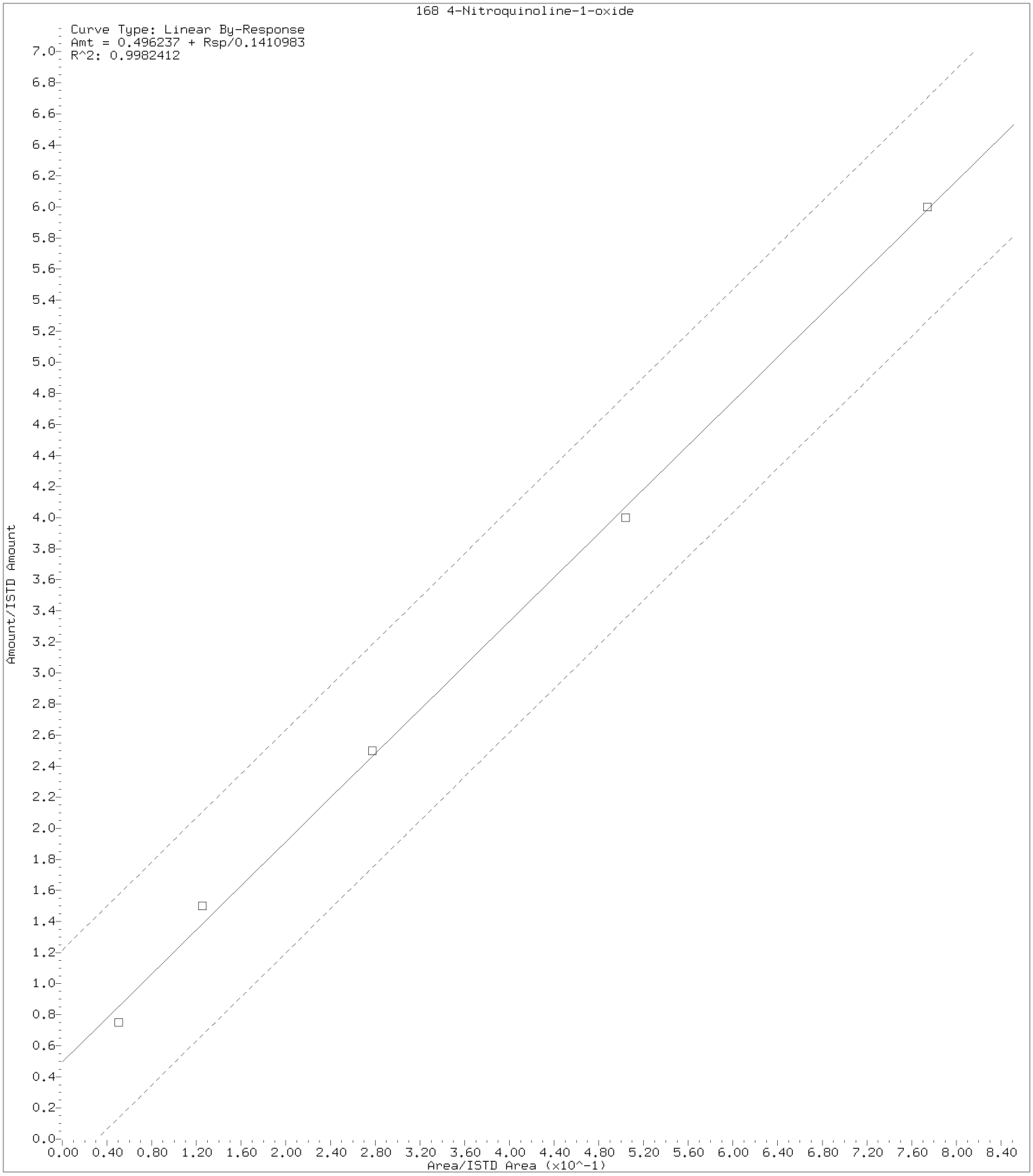
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Target 3.5 esignature user ID: em10340



Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340



Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340



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Target 3.5 esignature user ID: em10340

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/17oct23.b/dj1101.d SSTD7.5
/chem/HP19760.i/17oct23.b/dj1102.d SSTD0.125
/chem/HP19760.i/17oct23.b/dj1103.d SSTD030
/chem/HP19760.i/17oct23.b/dj1104.d SSTD020
/chem/HP19760.i/17oct23.b/dj1105.d SSTD12.5
/chem/HP19760.i/17oct23.b/dj1106.d SSTD3.75
/chem/HP19760.i/17oct23.b/dj1107.d SSTD1.25
/chem/HP19760.i/17oct23.b/dj1108.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	dj1101.d	dj1102.d	dj1103.d	dj1104.d	dj1105.d	dj1106.d	dj1107.d	dj1108.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	188854	193483	197448	194079	198947	193957	198784	192116	194708	2	Yes
Naphthalene-d8	717122	729185	753222	739280	756272	742243	762387	743768	742935	2	Yes
Acenaphthene-d10	377147	393791	404118	404041	405495	398155	408601	394743	398261	3	Yes
Phenanthrene-d10	710425	713630	809784	784408	788265	742213	767509	715006	753905	5	Yes
Pyrene-d10	889904	869382	1005833	975268	963048	906855	909338	862810	922805	6	Yes
Perylene-d12	780310	725684	878014	858284	848093	775528	785491	726340	797218	7	Yes

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

RT Summary

File ID:

Internal Standard Name	dj1101.d	dj1102.d	dj1103.d	dj1104.d	dj1105.d	dj1106.d	dj1107.d	dj1108.d	Avg. RT
1,4-Dichlorobenzene-d4	6.876	6.876	6.882	6.882	6.882	6.876	6.876	6.876	6.878
Naphthalene-d8	8.811	8.811	8.817	8.817	8.811	8.811	8.811	8.811	8.813
Acenaphthene-d10	11.597	11.592	11.597	11.597	11.597	11.597	11.592	11.591	11.595
Phenanthrene-d10	13.474	13.474	13.480	13.480	13.480	13.474	13.474	13.474	13.476
Pyrene-d10	15.456	15.456	15.462	15.462	15.462	15.456	15.456	15.456	15.458
Perylene-d12	19.950	19.950	19.961	19.956	19.956	19.950	19.950	19.950	19.953

Comments:_____

_____

Report generated on 10/23/2017 at 16:28

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dj1111.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT23026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.51	0	30	YES
N-Nitrosodimethylamine	12.50	12.43	-1	30	YES
Pyridine	12.50	11.70	-6	30	YES
2-Picoline	12.50	12.86	3	30	YES
N-Nitrosomethylethylamine	12.50	12.15	-3	30	YES
Methyl methanesulfonate	12.50	14.22	14	30	YES
N-Nitrosodiethylamine	12.50	12.32	-1	30	YES
Ethyl methanesulfonate	12.50	12.50	0	30	YES
Phenol	12.50	12.45	0	30	YES
Aniline	12.50	9.63	-23	30	YES
bis(2-Chloroethyl)ether	12.50	12.22	-2	30	YES
2-Chlorophenol	12.50	12.61	1	30	YES
1,3-Dichlorobenzene	12.50	12.70	2	30	YES
1,4-Dichlorobenzene	12.50	12.86	3	30	YES
Benzyl alcohol	12.50	12.66	1	30	YES
1,2-Dichlorobenzene	12.50	12.78	2	30	YES
Indene	12.50	12.44	-1	30	YES
2-Methylphenol	12.50	12.53	0	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.27	-2	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.27	-2	30	YES
N-Nitrosopyrrolidine	12.50	12.38	-1	30	YES
Acetophenone	12.50	12.40	-1	30	YES
4-Methylphenol	12.50	11.82	-5	30	YES
N-Nitroso-di-n-propylamine	12.50	12.67	1	30	YES
N-Nitrosomorpholine	12.50	12.60	1	30	YES
o-Toluidine	12.50	11.65	-7	30	YES
Total Cresols	25.00	24.32	-3	30	YES
Hexachloroethane	12.50	12.54	0	30	YES
Nitrobenzene	12.50	12.05	-4	30	YES
N-Nitrosopiperidine	12.50	11.72	-6	30	YES
Isophorone	12.50	10.74	-14	30	YES
2-Nitrophenol	12.50	12.71	2	30	YES
2,4-Dimethylphenol	12.50	9.41	-25	30	YES
bis(2-Chloroethoxy)methane	12.50	12.52	0	30	YES
Benzoic acid	25.00	18.83	-25	30	YES
O,O,O-Triethylphosphorothio	12.50	11.99	-4	30	YES
2,4-Dichlorophenol	12.50	12.34	-1	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: dj1111.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT23026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	12.03	-4	30	YES
Naphthalene	12.50	12.27	-2	30	YES
4-Chloroaniline	12.50	11.03	-12	30	YES
2,6-Dichlorophenol	12.50	12.35	-1	30	YES
Hexachloropropene	12.50	15.97	28	30	YES
Hexachlorobutadiene	12.50	12.23	-2	30	YES
Quinoline	12.50	12.31	-2	30	YES
N-Nitrosodi-n-butylamine	12.50	10.17	-19	30	YES
4-Chloro-3-methylphenol	12.50	12.74	2	30	YES
Safrole	12.50	11.81	-6	30	YES
2-Methylnaphthalene	12.50	12.17	-3	30	YES
1-Methylnaphthalene	12.50	12.39	-1	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.51	0	30	YES
cis-Isosafrole	1.50	1.56	4	30	YES
2,4,6-Trichlorophenol	12.50	13.27	6	30	YES
2,4,5-Trichlorophenol	12.50	13.26	6	30	YES
trans-Isosafrole	11.00	13.99	27	30	YES
1,1'-Biphenyl	12.50	12.53	0	30	YES
2-Chloronaphthalene	12.50	11.98	-4	30	YES
Isosafrole	12.50	15.43	23	30	YES
1-Chloronaphthalene	12.50	12.75	2	30	YES
Diphenyl ether	12.50	12.30	-2	30	YES
2-Nitroaniline	12.50	12.92	3	30	YES
1,4-Naphthoquinone	15.63	15.55	0	30	YES
1,4-Dinitrobenzene	12.50	12.42	-1	30	YES
Dimethylphthalate	12.50	12.44	0	30	YES
1,3-Dinitrobenzene	12.50	12.78	2	30	YES
2,6-Dinitrotoluene	12.50	12.92	3	30	YES
Acenaphthylene	12.50	11.25	-10	30	YES
3-Nitroaniline	12.50	12.90	3	30	YES
Acenaphthene	12.50	13.03	4	30	YES
2,4-Dinitrophenol	25.00	22.99	-8	30	YES
4-Nitrophenol	12.50	12.47	0	30	YES
Pentachlorobenzene	12.50	12.33	-1	30	YES
2,4-Dinitrotoluene	12.50	12.71	2	30	YES
Dibenzofuran	12.50	12.45	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: dj1111.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT23026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	26.19	5	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.62	9	30	YES
Diethylphthalate	12.50	12.92	3	30	YES
Thionazin	12.50	11.06	-12	30	YES
Fluorene	12.50	12.66	1	30	YES
4-Chlorophenyl-phenylether	12.50	12.46	0	30	YES
5-Nitro-o-toluidine	12.50	13.29	6	30	YES
4-Nitroaniline	12.50	12.87	3	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.79	2	30	YES
N-Nitrosodiphenylamine	12.50	12.77	2	30	YES
NDPA as diphenylamine	12.50	12.77	2	30	YES
1,2-Diphenylhydrazine	12.50	12.94	4	30	YES
Tetraethyldithiopyrophospha	12.50	11.83	-5	30	YES
1,3,5-Trinitrobenzene	12.50	13.02	4	30	YES
Diallate (peak 1)	9.38	8.73	-7	30	YES
Phorate	12.50	12.32	-1	30	YES
Phenacetin	12.50	12.84	3	30	YES
4-Bromophenyl-phenylether	12.50	12.50	0	30	YES
Diallate (peak 2)	3.13	3.50	12	30	YES
Hexachlorobenzene	12.50	12.28	-2	30	YES
Diallate trans/cis	12.50	11.97	-4	30	YES
Dimethoate	12.50	12.83	3	30	YES
Pentachlorophenol	12.50	13.77	10	30	YES
4-Aminobiphenyl	12.50	51.70	314	30	NO*
Pentachloronitrobenzene	12.50	12.80	2	30	YES
Pronamide	12.50	12.84	3	30	YES
Dinoseb	12.50	11.72	-6	30	YES
Phenanthrene	12.50	12.45	0	30	YES
Anthracene	12.50	12.51	0	30	YES
Carbazole	12.50	12.80	2	30	YES
Methyl parathion	12.50	13.55	8	30	YES
Di-n-butylphthalate	12.50	12.93	3	30	YES
Parathion	12.50	13.05	4	30	YES
4-Nitroquinoline-1-oxide	150.00	159.93	7	30	YES
Isodrin	12.50	12.52	0	30	YES

NC = Could not calculate

Comments: __*OOS high, rerun hits under valid ICV._____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dj1111.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT23026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	12.82	3	30	YES
Benzidine	62.50	57.43	-8	30	YES
Pyrene	12.50	12.13	-3	30	YES
p-Dimethylaminoazobenzene	12.50	17.67	41	30	NO*
Chlorobenzilate	12.50	13.46	8	30	YES
3,3'-Dimethylbenzidine	25.00	24.76	-1	30	YES
Butylbenzylphthalate	12.50	13.09	5	30	YES
2-Acetylaminofluorene	12.50	12.97	4	30	YES
3,3'-Dichlorobenzidine	12.50	12.67	1	30	YES
Benzo(a)anthracene	12.50	13.30	6	30	YES
Chrysene	12.50	13.23	6	30	YES
4,4'-Methylenebis(2-chloroa	12.50	13.58	9	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.07	5	30	YES
6-Methylchrysene	12.50	12.34	-1	30	YES
Di-n-octylphthalate	12.50	12.73	2	30	YES
Benzo(b)fluoranthene	12.50	12.65	1	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.38	7	30	YES
Benzo(k)fluoranthene	12.50	12.88	3	30	YES
Benzo(a)pyrene	12.50	12.08	-3	30	YES
3-Methylcholanthrene	12.50	18.21	46	30	NO*
Dibenz(a,h)acridine	12.50	12.30	-2	30	YES
Dibenz(a,j)acridine	12.50	12.12	-3	30	YES
Indeno(1,2,3-cd)pyrene	12.50	12.83	3	30	YES
Dibenz(a,h)anthracene	12.50	13.07	5	30	YES
Benzo(g,h,i)perylene	12.50	12.61	1	30	YES
Total PAHs	225.00	220.94	-2	30	YES

NC = Could not calculate

Comments: __*OOS high, if hit rerun under valid ICV._____

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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: dj1112.d

ICV SAMPLE ID: rvBASICV2487 BATCH: 17OCT23026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.14	5	30	YES
Caprolactam	12.50	11.71	-6	30	YES
Atrazine	12.50	12.94	4	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: dj1113.d

ICV SAMPLE ID: rvHBICV2917 BATCH: 17OCT23026 Sample Name: SSTD25

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Hexachlorocyclopentadiene	25.00	20.08	-20	30	YES
1-Naphthylamine	25.00	20.15	-19	30	YES
2-Naphthylamine	25.00	19.58	-22	30	YES
Benzidine	62.50	45.27	-28	30	YES

NC = Could not calculate

Comments: _____

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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): 10/30/17 10/31/17

Calibration Times: 21:05 00:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1612.d RRF0.25 = dj1618.d RRF1.25 = dj1617.d RRF3.75 = dj1616.d
RRF7.5 = dj1611.d RRF12.5 = dj1615.d RRF20 = dj1614.d RRF30 = dj1613.d

COMPOUND	RRF0.125	RF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.425	0.599	0.611	0.652	0.652	0.685	0.604	15	AVG
N-Nitrosodimethylamine			0.595	0.635	0.654	0.759	0.848	0.932	0.737	18	AVG
Pyridine			1.524	1.639	1.467	1.540	1.681	1.745	1.599	7	AVG
2-Picoline			1.483	1.674	1.791	1.798	1.844	1.863	1.742	8	AVG
N-Nitrosomethylethylamine			0.715	0.722	0.762	0.759	0.777	0.780	0.752	4	AVG
Methyl methanesulfonate			0.704	0.716	0.791	0.773	0.797	0.807	0.765	6	AVG
N-Nitrosodiethylamine		0.627	0.622	0.686	0.751	0.732	0.750	0.760	0.704	8	AVG
Ethyl methanesulfonate		0.528	0.657	0.725	0.774	0.756	0.783	0.791	0.716	13	AVG
Benzaldehyde			1.427	1.457	1.336	1.273	1.230	1.119	1.307	10	AVG
Phenol		1.943	1.903	2.021	2.137	2.067	2.075	2.103	2.035	4	AVG
Aniline		2.253	2.371	2.485	2.589	2.562	2.572	2.616	2.493	5	AVG
a-methylstyrene			1.597	1.634	1.648	1.593	1.566	1.615	1.609	2	AVG
bis(2-Chloroethyl)ether		1.493	1.597	1.599	1.707	1.653	1.657	1.667	1.625	4	AVG
2-Chlorophenol		1.450	1.431	1.496	1.574	1.546	1.541	1.544	1.512	4	AVG
1,3-Dichlorobenzene		1.697	1.612	1.612	1.671	1.629	1.638	1.645	1.643	2	AVG
1,4-Dichlorobenzene		1.727	1.598	1.653	1.711	1.660	1.667	1.660	1.668	3	AVG
Benzyl alcohol			0.961	1.000	1.015	0.995	0.989	1.030	0.998	2	AVG
1,2-Dichlorobenzene		1.623	1.525	1.547	1.615	1.578	1.572	1.553	1.573	2	AVG
Indene			2.865	2.880	2.876	2.791	2.730	2.841	2.830	2	AVG
2-Methylphenol		1.326	1.362	1.417	1.476	1.465	1.464	1.461	1.424	4	AVG
2,2'-oxybis(1-Chloropropane)		2.269	2.179	2.197	2.328	2.200	2.208	2.225	2.229	2	AVG
bis(2-Chloroisopropyl)ether		2.269	2.179	2.197	2.328	2.200	2.208	2.225	2.229	2	AVG
N-Nitrosopyrrolidine		0.540	0.676	0.721	0.781	0.785	0.795	0.762	0.723	13	AVG
Acetophenone		2.086	2.352	2.315	2.237	2.185	2.265	2.403	2.264	5	AVG
4-Methylphenol		1.357	1.410	1.506	1.539	1.524	1.516	1.531	1.483	5	AVG
Total Cresols		1.342	1.386	1.462	1.507	1.495	1.490	1.496	1.454	4	AVG
N-Nitroso-di-n-propylamine		1.109	1.206	1.240	1.316	1.252	1.265	1.259	1.235	5	AVG
N-Nitrosomorpholine			0.867	0.899	0.951	0.922	0.908	0.875	0.904	3	AVG
o-Toluidine		2.329	2.414	2.495	2.602	2.526	2.539	2.559	2.495	4	AVG
Hexachloroethane			0.649	0.674	0.709	0.682	0.682	0.683	0.680	3	AVG
Nitrobenzene		0.445	0.459	0.469	0.503	0.488	0.487	0.478	0.475	4	AVG
N-Nitrosopiperidine		0.184	0.173	0.183	0.199	0.198	0.201	0.199	0.191	6	AVG
Isophorone		0.701	0.753	0.779	0.837	0.826	0.833	0.829	0.794	7	AVG
2-Nitrophenol		0.138	0.163	0.183	0.199	0.199	0.204	0.202	0.184	14	AVG
2,4-Dimethylphenol		0.356	0.395	0.402	0.434	0.425	0.427	0.420	0.408	7	AVG
O,O,O-Triethylphosphorothioat			0.178	0.181	0.191	0.192	0.189	0.184	0.186	3	AVG
bis(2-Chloroethoxy)methane		0.452	0.488	0.500	0.540	0.522	0.527	0.512	0.506	6	AVG
Benzoic acid			0.229	0.257	0.308	0.346	0.357	0.370	0.311	18	AVG
1,2,3,4-Tetrahydronaphthalene			0.613	0.604	0.621	0.597	0.590	0.598	0.604	2	AVG
2,4-Dichlorophenol		0.259	0.294	0.305	0.332	0.326	0.329	0.320	0.309	8	AVG
1,2,4-Trichlorobenzene		0.347	0.349	0.350	0.372	0.362	0.362	0.354	0.357	3	AVG
Naphthalene	1.190	1.113	1.106	1.100	1.169	1.146	1.139	1.119	1.135	3	AVG
4-Chloroaniline		0.426	0.437	0.452	0.481	0.476	0.479	0.470	0.460	5	AVG
2,6-Dichlorophenol		0.274	0.282	0.292	0.321	0.318	0.315	0.312	0.302	6	AVG
Hexachloropropene			0.176	0.179	0.196	0.193	0.194	0.190	0.188	4	AVG
Hexachlorobutadiene		0.201	0.197	0.195	0.206	0.203	0.201	0.199	0.200	2	AVG
Quinoline			0.642	0.653	0.698	0.693	0.701	0.680	0.678	4	AVG
Caprolactam			0.086	0.088	0.088	0.093	0.098	0.101	0.092	7	AVG
N-Nitrosodi-n-butylamine			0.333	0.354	0.378	0.376	0.326	0.309	0.346	8	AVG
4-Chloro-3-methylphenol		0.289	0.321	0.338	0.361	0.359	0.361	0.354	0.340	8	AVG
Safrole			0.256	0.266	0.290	0.289	0.293	0.289	0.280	5	AVG
2-Methylnaphthalene	0.715	0.700	0.712	0.721	0.782	0.761	0.759	0.747	0.737	4	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): 10/30/17 10/31/17

Calibration Times: 21:05 00:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1612.d RRF0.25 = dj1618.d RRF1.25 = dj1617.d RRF3.75 = dj1616.d
RRF7.5 = dj1611.d RRF12.5 = dj1615.d RRF20 = dj1614.d RRF30 = dj1613.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1-Methylnaphthalene	0.676	0.640	0.641	0.653	0.696	0.678	0.687	0.676	0.668	3	AVG
Hexachlorocyclopentadiene			0.311	0.326	0.356	0.345	0.350	0.342	0.338	5	AVG
1,2,4,5-Tetrachlorobenzene		0.717	0.667	0.676	0.692	0.677	0.685	0.679	0.685	2	AVG
cis-Isosafrole			0.520	0.513	0.575	0.544	0.566	0.572	0.548	5	AVG
2,4,6-Trichlorophenol		0.338	0.359	0.401	0.431	0.436	0.445	0.448	0.408	11	AVG
2,4,5-Trichlorophenol		0.373	0.417	0.439	0.460	0.450	0.450	0.433	0.432	7	AVG
trans-Isosafrole			0.454	0.482	0.512	0.495	0.510	0.516	0.495	5	AVG
Isosafrole			0.465	0.487	0.523	0.503	0.520	0.526	0.504	5	AVG
1,1'-Biphenyl		1.610	1.679	1.694	1.635	1.593	1.644	1.719	1.653	3	AVG
2-Chloronaphthalene		1.354	1.305	1.313	1.375	1.400	1.452	1.450	1.378	4	AVG
1-Chloronaphthalene		1.204	1.208	1.229	1.308	1.178	1.129	1.109	1.195	6	AVG
Diphenyl ether		0.863	0.860	0.876	0.919	0.893	0.907	0.906	0.889	3	AVG
2-Nitroaniline		0.311	0.352	0.388	0.414	0.417	0.423	0.405	0.387	11	AVG
1,4-Naphthoquinone			0.431	0.476	0.522	0.523	0.524	0.527	0.501	8	AVG
1,4-Dinitrobenzene			0.169	0.193	0.207	0.209	0.214	0.209	0.200	8	AVG
Dimethylphthalate			1.407	1.404	1.456	1.384	1.395	1.373	1.403	2	AVG
1,3-Dinitrobenzene			0.193	0.219	0.226	0.232	0.229	0.227	0.221	7	AVG
2,6-Dinitrotoluene		0.248	0.284	0.312	0.317	0.316	0.324	0.331	0.305	10	AVG
Acenaphthylene	1.677	1.652	1.677	1.755	1.876	1.815	1.834	1.814	1.763	5	AVG
3-Nitroaniline		0.249	0.304	0.341	0.348	0.356	0.371	0.362	0.333	13	AVG
Acenaphthene	1.363	1.338	1.327	1.362	1.411	1.367	1.378	1.375	1.365	2	AVG
2,4-Dinitrophenol			0.133	0.167	0.183	0.205	0.222	0.222	0.189	19	AVG
4-Nitrophenol				0.237	0.262	0.257	0.268	0.265	0.258	5	AVG
Pentachlorobenzene		0.535	0.540	0.539	0.560	0.549	0.551	0.548	0.546	2	AVG
2,4-Dinitrotoluene			0.363	0.411	0.435	0.444	0.440	0.440	0.422	7	AVG
2,4_2,6-Dinitrotoluenes		0.293	0.324	0.361	0.376	0.380	0.382	0.386	0.357	10	AVG
Dibenzofuran		1.753	1.748	1.763	1.810	1.766	1.774	1.752	1.767	1	AVG
1-Naphthylamine				1.260	1.347	1.346	1.383	1.395	1.346	4	AVG
2,3,4,6-Tetrachlorophenol		0.272	0.290	0.321	0.339	0.350	0.357	0.366	0.328	11	AVG
2-Naphthylamine				1.250	1.312	1.318	1.342	1.287	1.302	3	AVG
Diethylphthalate			1.297	1.331	1.425	1.378	1.389	1.384	1.367	3	AVG
Thionazin			0.254	0.227	0.242	0.240	0.242	0.244	0.242	4	AVG
Fluorene	1.394	1.413	1.382	1.391	1.438	1.417	1.420	1.427	1.410	1	AVG
4-Chlorophenyl-phenylether		0.649	0.657	0.649	0.681	0.658	0.671	0.666	0.661	2	AVG
5-Nitro-o-toluidine		0.322	0.369	0.371	0.406	0.395	0.411	0.408	0.383	8	AVG
4-Nitroaniline		0.244	0.313	0.338	0.372	0.353	0.361	0.365	0.335	13	AVG
4,6-Dinitro-2-methylphenol				0.125	0.137	0.143	0.149	0.146	0.140	7	AVG
N-Nitrosodiphenylamine (1)		0.573	0.607	0.627	0.663	0.634	0.653	0.622	0.625	5	AVG
NDPA as diphenylamine		0.573	0.607	0.627	0.663	0.634	0.653	0.622	0.625	5	AVG
1,2-Diphenylhydrazine		0.820	0.835	0.886	0.939	0.877	0.877	0.864	0.871	4	AVG
Tetraethyldithiopyrophosphate			0.138	0.145	0.157	0.144	0.144	0.143	0.145	4	AVG
1,3,5-Trinitrobenzene				0.074	0.083	0.086	0.089	0.090	0.084	8	AVG
Diallate (peak 1)			0.349	0.376	0.410	0.381	0.387	0.378	0.380	5	AVG
Phorate		0.476	0.521	0.561	0.621	0.564	0.586	0.823	0.593	19	AVG
Phenacetin		0.320	0.373	0.416	0.456	0.431	0.439	0.439	0.411	12	AVG
4-Bromophenyl-phenylether		0.202	0.211	0.216	0.220	0.217	0.220	0.217	0.215	3	AVG
Diallate (peak 2)			0.285	0.303	0.321	0.315	0.322	0.314	0.310	5	AVG
Diallate trans/cis			0.338	0.363	0.395	0.370	0.376	0.367	0.368	5	AVG
Hexachlorobenzene	0.245	0.225	0.215	0.223	0.236	0.224	0.230	0.230	0.228	4	AVG
Dimethoate			0.299	0.338	0.373	0.354	0.360	0.351	0.346	7	AVG
Atrazine			0.202	0.217	0.209	0.195	0.198	0.194	0.203	5	AVG
Pentachlorophenol			0.117	0.140	0.151	0.153	0.157	0.159	0.146	11	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): 10/30/17 10/31/17

Calibration Times: 21:05 00:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1612.d RRF0.25 = dj1618.d RRF1.25 = dj1617.d RRF3.75 = dj1616.d
RRF7.5 = dj1611.d RRF12.5 = dj1615.d RRF20 = dj1614.d RRF30 = dj1613.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
4-Aminobiphenyl		0.154	0.162	0.177	0.192	0.183	0.180	0.173	0.174	7	AVG
Pentachloronitrobenzene			0.086	0.091	0.104	0.098	0.099	0.099	0.096	7	AVG
Pronamide		0.272	0.317	0.347	0.375	0.363	0.367	0.368	0.344	11	AVG
Dinoseb			0.140	0.181	0.209	0.215	0.229	0.230	0.201	17	AVG
Phenanthrene	1.189	1.125	1.115	1.139	1.182	1.163	1.182	1.145	1.155	2	AVG
Anthracene	1.104	1.022	1.089	1.127	1.199	1.155	1.170	1.153	1.127	5	AVG
Carbazole		0.913	0.995	1.040	1.133	1.070	1.076	1.077	1.043	7	AVG
Methyl parathion			0.216	0.255	0.290	0.279	0.288	0.283	0.268	11	AVG
Di-n-butylphthalate			1.113	1.214	1.336	1.272	1.292	1.288	1.252	6	AVG
Parathion			0.132	0.157	0.175	0.181	0.186	0.189	0.170	13	AVG
4-Nitroquinoline-1-oxide				0.091	0.113	0.127	0.140	0.140	0.122	17	AVG
Octachlorostyrene			0.086	0.089	0.088	0.083	0.085	0.086	0.086	3	AVG
Isodrin		0.161	0.134	0.133	0.136	0.133	0.134	0.132	0.138	8	AVG
Fluoranthene	1.234	1.157	1.188	1.252	1.366	1.285	1.315	1.313	1.264	6	AVG
Benzidine				0.732	0.775	0.752	0.739	0.697	0.739	4	AVG
Pyrene	1.252	1.147	1.116	1.132	1.185	1.147	1.145	1.131	1.157	4	AVG
p-Dimethylaminoazobenzene		0.099	0.116	0.144	0.152	0.165	0.169	0.168	0.145	19	AVG
Chlorobenzilate			0.301	0.331	0.350	0.346	0.347	0.342	0.336	5	AVG
3,3'-Dimethylbenzidine			0.567	0.642	0.710	0.720	0.725	0.704	0.678	9	AVG
Butylbenzylphthalate			0.430	0.472	0.513	0.515	0.512	0.511	0.492	7	AVG
2-Acetylaminofluorene			0.312	0.391	0.434	0.484	0.502	0.515	0.440	18	AVG
3,3'-Dichlorobenzidine			0.345	0.382	0.418	0.422	0.435	0.434	0.406	9	AVG
4,4'-Methylenebis(2-chloroani				0.191	0.196	0.209	0.212	0.210	0.204	5	AVG
Benzo(a)anthracene	0.944	0.901	0.986	1.060	1.094	1.129	1.141	1.140	1.049	9	AVG
Chrysene	0.909	0.918	0.968	1.006	1.037	1.054	1.049	1.043	0.998	6	AVG
bis(2-Ethylhexyl)phthalate			0.589	0.672	0.736	0.757	0.767	0.760	0.714	10	AVG
6-Methylchrysene			0.638	0.685	0.746	0.761	0.781	0.801	0.735	8	AVG
Di-n-octylphthalate			1.092	1.325	1.511	1.508	1.547	1.521	1.417	13	AVG
Benzo(b)fluoranthene	1.118	1.128	1.187	1.257	1.363	1.317	1.360	1.353	1.260	8	AVG
7,12-Dimethylbenz[a]anthracen		0.337	0.435	0.499	0.571	0.549	0.570	0.556	0.502	17	AVG
Benzo(k)fluoranthene	1.163	1.162	1.180	1.247	1.339	1.264	1.295	1.255	1.238	5	AVG
Benzo(a)pyrene	1.104	1.004	1.071	1.165	1.280	1.259	1.280	1.272	1.179	9	AVG
3-Methylcholanthrene		0.389	0.362	0.407	0.442	0.458	0.464	0.456	0.426	9	AVG
Dibenz(a,h)acridine			0.855	0.943	1.045	1.020	1.050	1.029	0.990	8	AVG
Dibenz(a,j)acridine			0.912	0.983	1.101	1.074	1.084	1.040	1.032	7	AVG
Indeno(1,2,3-cd)pyrene	1.007	0.972	1.036	1.096	1.185	1.194	1.182	1.183	1.107	8	AVG
Dibenz(a,h)anthracene	0.940	1.034	1.119	1.175	1.262	1.247	1.245	1.180	1.150	10	AVG
Benzo(g,h,i)perylene	1.100	1.060	1.088	1.173	1.246	1.217	1.210	1.144	1.155	6	AVG
Total PAHs	1.054	1.012	1.026	1.066	1.136	1.076	1.078	1.043	1.061	4	AVG
2-Fluorophenol		1.311	1.393	1.438	1.551	1.511	1.530	1.534	1.467	6	AVG
Phenol-d6		1.756	1.820	1.919	2.024	1.987	2.002	2.013	1.932	5	AVG
Nitrobenzene-d5		0.440	0.448	0.458	0.493	0.479	0.483	0.472	0.468	4	AVG
2-Fluorobiphenyl		1.488	1.473	1.499	1.574	1.509	1.527	1.508	1.511	2	AVG
2,4,6-Tribromophenol		0.144	0.171	0.187	0.197	0.200	0.213	0.208	0.189	13	AVG
Terphenyl-d14		0.700	0.718	0.732	0.778	0.754	0.747	0.727	0.737	3	AVG
								Average %RSD		7	

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/17oct30a.b/dj1611.d SSTD7.5
/chem/HP19760.i/17oct30a.b/dj1612.d SSTD0.125
/chem/HP19760.i/17oct30a.b/dj1613.d SSTD030
/chem/HP19760.i/17oct30a.b/dj1614.d SSTD020
/chem/HP19760.i/17oct30a.b/dj1615.d SSTD12.5
/chem/HP19760.i/17oct30a.b/dj1616.d SSTD3.75
/chem/HP19760.i/17oct30a.b/dj1617.d SSTD1.25
/chem/HP19760.i/17oct30a.b/dj1618.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	dj1611.d	dj1612.d	dj1613.d	dj1614.d	dj1615.d	dj1616.d	dj1617.d	dj1618.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	167612	169978	172247	169791	172921	168143	169975	162731	169175	2	Yes
Naphthalene-d8	633145	650799	661496	637948	648784	644540	646566	634432	644714	1	Yes
Acenaphthene-d10	334248	339506	344219	336852	346455	334882	340706	326564	337929	2	Yes
Phenanthrene-d10	603710	611520	643521	628663	641592	611162	625629	594067	619983	3	Yes
Pyrene-d10	734686	732897	775003	746017	748819	724783	737873	692396	736559	3	Yes
Perylene-d12	622975	607536	717002	676269	679817	626685	633563	591116	644370	7	Yes

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

RT Summary

File ID:

Internal Standard Name	dj1611.d	dj1612.d	dj1613.d	dj1614.d	dj1615.d	dj1616.d	dj1617.d	dj1618.d	Avg. RT
1,4-Dichlorobenzene-d4	6.989	6.989	6.995	6.989	6.989	6.989	6.989	6.989	6.990
Naphthalene-d8	8.930	8.930	8.936	8.930	8.930	8.924	8.924	8.924	8.928
Acenaphthene-d10	11.710	11.710	11.716	11.710	11.710	11.704	11.704	11.704	11.709
Phenanthrene-d10	13.599	13.598	13.604	13.598	13.593	13.593	13.593	13.587	13.596
Pyrene-d10	15.615	15.609	15.615	15.609	15.604	15.604	15.603	15.598	15.607
Perylene-d12	20.150	20.150	20.156	20.144	20.138	20.132	20.132	20.132	20.142

Comments:_____

_____

Report generated on 10/31/2017 at 02:52

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP19760

Method: SW-846 8270D MINI | File ID: dj1621.d

ICV SAMPLE ID: rvICV2917 | BATCH: 17OCT30A026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	13.01	4	30	YES
Pyridine	12.50	11.07	-11	30	YES
2-Picoline	12.50	12.78	2	30	YES
N-Nitrosomethylethylamine	12.50	12.05	-4	30	YES
Methyl methanesulfonate	12.50	14.41	15	30	YES
N-Nitrosodiethylamine	12.50	12.39	-1	30	YES
Ethyl methanesulfonate	12.50	12.97	4	30	YES
Phenol	12.50	12.41	-1	30	YES
Aniline	12.50	9.63	-23	30	YES
bis(2-Chloroethyl)ether	12.50	12.67	1	30	YES
2-Chlorophenol	12.50	12.66	1	30	YES
1,3-Dichlorobenzene	12.50	12.60	1	30	YES
1,4-Dichlorobenzene	12.50	12.74	2	30	YES
Benzyl alcohol	12.50	12.79	2	30	YES
1,2-Dichlorobenzene	12.50	12.66	1	30	YES
Indene	12.50	12.43	-1	30	YES
2-Methylphenol	12.50	12.48	0	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.21	-2	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.21	-2	30	YES
N-Nitrosopyrrolidine	12.50	13.13	5	30	YES
Acetophenone	12.50	12.45	0	30	YES
4-Methylphenol	12.50	12.80	2	30	YES
N-Nitroso-di-n-propylamine	12.50	12.78	2	30	YES
N-Nitrosomorpholine	12.50	12.69	2	30	YES
o-Toluidine	12.50	11.71	-6	30	YES
Total Cresols	25.00	25.28	1	30	YES
Hexachloroethane	12.50	12.47	0	30	YES
Nitrobenzene	12.50	12.20	-2	30	YES
N-Nitrosopiperidine	12.50	11.70	-6	30	YES
Isophorone	12.50	11.04	-12	30	YES
2-Nitrophenol	12.50	13.12	5	30	YES
2,4-Dimethylphenol	12.50	9.65	-23	30	YES
bis(2-Chloroethoxy)methane	12.50	12.92	3	30	YES
Benzoic acid	25.00	23.40	-6	30	YES
O,O,O-Triethylphosphorothio	12.50	12.06	-4	30	YES
2,4-Dichlorophenol	12.50	12.58	1	30	YES
1,2,4-Trichlorobenzene	12.50	12.27	-2	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: dj1621.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT30A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	12.50	12.31	-2	30	YES
4-Chloroaniline	12.50	11.10	-11	30	YES
2,6-Dichlorophenol	12.50	12.35	-1	30	YES
Hexachloropropene	12.50	16.30	30	30	YES
Hexachlorobutadiene	12.50	12.12	-3	30	YES
Quinoline	12.50	12.56	0	30	YES
N-Nitrosodi-n-butylamine	12.50	10.52	-16	30	YES
4-Chloro-3-methylphenol	12.50	12.73	2	30	YES
Safrole	12.50	12.05	-4	30	YES
2-Methylnaphthalene	12.50	12.27	-2	30	YES
1-Methylnaphthalene	12.50	12.57	1	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.19	-3	30	YES
cis-Isosafrole	1.50	1.59	6	30	YES
2,4,6-Trichlorophenol	12.50	13.21	6	30	YES
2,4,5-Trichlorophenol	12.50	13.22	6	30	YES
trans-Isosafrole	11.00	14.09	28	30	YES
1,1'-Biphenyl	12.50	12.65	1	30	YES
2-Chloronaphthalene	12.50	12.73	2	30	YES
Isosafrole	12.50	15.56	24	30	YES
1-Chloronaphthalene	12.50	11.64	-7	30	YES
Diphenyl ether	12.50	12.45	0	30	YES
2-Nitroaniline	12.50	13.02	4	30	YES
1,4-Naphthoquinone	15.63	15.57	0	30	YES
1,4-Dinitrobenzene	12.50	12.47	0	30	YES
Dimethylphthalate	12.50	11.98	-4	30	YES
1,3-Dinitrobenzene	12.50	12.54	0	30	YES
2,6-Dinitrotoluene	12.50	12.61	1	30	YES
Acenaphthylene	12.50	11.23	-10	30	YES
3-Nitroaniline	12.50	13.04	4	30	YES
Acenaphthene	12.50	12.66	1	30	YES
2,4-Dinitrophenol	25.00	27.33	9	30	YES
4-Nitrophenol	12.50	12.54	0	30	YES
Pentachlorobenzene	12.50	11.96	-4	30	YES
2,4-Dinitrotoluene	12.50	12.59	1	30	YES
Dibenzofuran	12.50	12.34	-1	30	YES
2,4_2,6-Dinitrotoluenes	25.00	25.62	2	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: dj1621.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT30A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,3,4,6-Tetrachlorophenol	12.50	13.71	10	30	YES
Diethylphthalate	12.50	12.31	-1	30	YES
Thionazin	12.50	12.35	-1	30	YES
Fluorene	12.50	12.36	-1	30	YES
4-Chlorophenyl-phenylether	12.50	12.31	-1	30	YES
5-Nitro-o-toluidine	12.50	13.18	5	30	YES
4-Nitroaniline	12.50	13.00	4	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.35	-1	30	YES
N-Nitrosodiphenylamine	12.50	12.51	0	30	YES
NDPA as diphenylamine	12.50	12.51	0	30	YES
1,2-Diphenylhydrazine	12.50	12.55	0	30	YES
Tetraethyldithiopyrophospha	12.50	11.41	-9	30	YES
1,3,5-Trinitrobenzene	12.50	11.92	-5	30	YES
Diallate (peak 1)	9.38	8.49	-9	30	YES
Phorate	12.50	10.95	-12	30	YES
Phenacetin	12.50	12.44	0	30	YES
4-Bromophenyl-phenylether	12.50	12.26	-2	30	YES
Diallate (peak 2)	3.13	3.39	9	30	YES
Hexachlorobenzene	12.50	11.84	-5	30	YES
Diallate trans/cis	12.50	11.62	-7	30	YES
Dimethoate	12.50	12.14	-3	30	YES
Pentachlorophenol	12.50	13.34	7	30	YES
4-Aminobiphenyl	12.50	53.79	330	30	NO*
Pentachloronitrobenzene	12.50	12.22	-2	30	YES
Pronamide	12.50	12.43	-1	30	YES
Dinoseb	12.50	12.76	2	30	YES
Phenanthrene	12.50	12.07	-3	30	YES
Anthracene	12.50	12.05	-4	30	YES
Carbazole	12.50	12.39	-1	30	YES
Methyl parathion	12.50	12.87	3	30	YES
Di-n-butylphthalate	12.50	12.54	0	30	YES
Parathion	12.50	12.58	1	30	YES
4-Nitroquinoline-1-oxide	150.00	177.70	18	30	YES
Isodrin	12.50	11.77	-6	30	YES
Fluoranthene	12.50	12.27	-2	30	YES
Benzidine	62.50	50.71	-19	30	YES

NC = Could not calculate

Comments: _*OOS high, if hit rerun under valid ICV._____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dj1621.d

ICV SAMPLE ID: rvICV2917 BATCH: 17OCT30A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Pyrene	12.50	12.23	-2	30	YES
p-Dimethylaminoazobenzene	12.50	17.71	42	30	NO*
Chlorobenzilate	12.50	13.34	7	30	YES
3,3'-Dimethylbenzidine	25.00	24.46	-2	30	YES
Butylbenzylphthalate	12.50	13.35	7	30	YES
2-Acetylaminofluorene	12.50	13.13	5	30	YES
3,3'-Dichlorobenzidine	12.50	12.56	1	30	YES
Benzo(a)anthracene	12.50	13.40	7	30	YES
Chrysene	12.50	13.44	8	30	YES
4,4'-Methylenebis(2-chloroa	12.50	13.36	7	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.31	7	30	YES
6-Methylchrysene	12.50	12.49	0	30	YES
Di-n-octylphthalate	12.50	13.15	5	30	YES
Benzo(b)fluoranthene	12.50	12.94	3	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.82	11	30	YES
Benzo(k)fluoranthene	12.50	12.76	2	30	YES
Benzo(a)pyrene	12.50	12.21	-2	30	YES
3-Methylcholanthrene	12.50	18.00	44	30	NO*
Dibenz(a,h)acridine	12.50	12.47	0	30	YES
Dibenz(a,j)acridine	12.50	12.41	-1	30	YES
Indeno(1,2,3-cd)pyrene	12.50	12.83	3	30	YES
Dibenz(a,h)anthracene	12.50	13.31	7	30	YES
Benzo(g,h,i)perylene	12.50	12.82	3	30	YES
Total PAHs	225.00	225.59	0	30	YES

NC = Could not calculate

Comments: __*OOS high, if hit rerun under valid ICV._____

^

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dj1622.d

ICV SAMPLE ID: rvBASICV2487 BATCH: 17OCT30A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.83	11	30	YES
Caprolactam	12.50	12.25	-2	30	YES
Atrazine	12.50	12.88	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: dj1623.d

ICV SAMPLE ID: rvHBICV2917 BATCH: 17OCT30A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Hexachlorocyclopentadiene	25.00	20.25	-19	30	YES
1-Naphthylamine	25.00	20.27	-19	30	YES
2-Naphthylamine	25.00	19.86	-21	30	YES

NC = Could not calculate

Comments: _____

^

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP20296 Calibration Date(s): 10/12/17 10/12/17

Calibration Times: 17:35 22:01

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = lj0482d.d RRF0.25 = lj0488d.d RRF1.25 = lj0487d.d RRF3.75 = lj0486d.d
RRF7.5 = lj0481d.d RRF12.5 = lj0485d.d RRF20 = lj0484d.d RRF30 = lj0483d.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.574	0.625	0.715	0.702	0.693	0.707	0.669	8	AVG
N-Nitrosodimethylamine			0.796	0.965	1.123	1.101	1.113	1.108	1.035	13	AVG
Pyridine			1.610	1.731	1.879	1.874	1.887	1.875	1.809	6	AVG
2-Picoline			1.791	1.928	2.015	1.996	1.989	1.988	1.951	4	AVG
N-Nitrosomethylethylamine			0.770	0.758	0.835	0.828	0.820	0.808	0.803	4	AVG
Methyl methanesulfonate			0.673	0.749	0.802	0.788	0.795	0.782	0.765	6	AVG
N-Nitrosodiethylamine		0.698	0.707	0.763	0.819	0.804	0.800	0.791	0.769	6	AVG
Ethyl methanesulfonate		0.732	0.758	0.791	0.814	0.816	0.800	0.802	0.788	4	AVG
Benzaldehyde			1.512	1.513	1.479	1.466	1.495	1.553	1.503	2	AVG
Phenol		2.251	2.094	2.171	2.454	2.458	2.442	2.398	2.324	6	AVG
Aniline		2.697	2.671	2.716	2.889	2.865	2.801	2.785	2.775	3	AVG
a-methylstyrene			1.693	1.691	1.686	1.679	1.637	1.654	1.673	1	AVG
bis(2-Chloroethyl)ether		1.727	1.681	1.688	1.737	1.716	1.672	1.667	1.698	2	AVG
2-Chlorophenol		1.506	1.465	1.510	1.559	1.552	1.550	1.524	1.524	2	AVG
1,3-Dichlorobenzene		1.709	1.619	1.652	1.681	1.695	1.666	1.649	1.667	2	AVG
1,4-Dichlorobenzene		1.721	1.609	1.656	1.669	1.727	1.693	1.675	1.678	2	AVG
Benzyl alcohol			1.076	1.108	1.122	1.076	1.064	1.084	1.089	2	AVG
1,2-Dichlorobenzene		1.700	1.528	1.556	1.601	1.615	1.593	1.570	1.595	3	AVG
Indene			2.983	3.044	3.014	3.006	2.915	2.959	2.987	2	AVG
2-Methylphenol		1.488	1.442	1.531	1.560	1.565	1.537	1.517	1.520	3	AVG
2,2'-oxybis(1-Chloropropane)		2.015	1.958	2.015	2.131	2.062	2.020	2.002	2.029	3	AVG
bis(2-Chloroisopropyl)ether		2.015	1.958	2.015	2.131	2.062	2.020	2.002	2.029	3	AVG
N-Nitrosopyrrolidine		0.801	0.724	0.785	0.845	0.844	0.846	0.834	0.811	6	AVG
Acetophenone		2.190	2.314	2.397	2.284	2.316	2.348	2.455	2.329	4	AVG
4-Methylphenol		1.548	1.502	1.644	1.639	1.666	1.653	1.629	1.611	4	AVG
Total Cresols		1.518	1.472	1.587	1.599	1.616	1.595	1.573	1.566	3	AVG
N-Nitroso-di-n-propylamine		1.254	1.170	1.224	1.261	1.253	1.223	1.231	1.231	2	AVG
N-Nitrosomorpholine			0.922	0.916	0.991	0.951	0.937	0.911	0.938	3	AVG
o-Toluidine		2.657	2.592	2.673	2.733	2.738	2.691	2.637	2.675	2	AVG
Hexachloroethane			0.642	0.672	0.712	0.693	0.691	0.672	0.680	4	AVG
Nitrobenzene		0.453	0.456	0.472	0.490	0.475	0.480	0.479	0.472	3	AVG
N-Nitrosopiperidine		0.190	0.194	0.196	0.208	0.202	0.206	0.206	0.200	3	AVG
Isophorone		0.756	0.827	0.822	0.855	0.839	0.867	0.866	0.833	5	AVG
2-Nitrophenol		0.148	0.166	0.178	0.197	0.192	0.201	0.199	0.183	11	AVG
2,4-Dimethylphenol		0.395	0.409	0.404	0.436	0.424	0.434	0.429	0.419	4	AVG
O,O,O-Triethylphosphorothioat			0.172	0.167	0.173	0.172	0.177	0.177	0.173	2	AVG
bis(2-Chloroethoxy)methane		0.505	0.508	0.514	0.538	0.525	0.531	0.525	0.521	2	AVG
Benzoic acid			0.145	0.170	0.169	0.234	0.248	0.233	0.200	22	2NDDEG
1,2,3,4-Tetrahydronaphthalene			0.629	0.627	0.617	0.603	0.606	0.620	0.617	2	AVG
2,4-Dichlorophenol		0.296	0.296	0.307	0.314	0.314	0.317	0.316	0.308	3	AVG
1,2,4-Trichlorobenzene		0.331	0.332	0.329	0.339	0.332	0.338	0.338	0.334	1	AVG
Naphthalene	1.109	1.138	1.127	1.129	1.157	1.143	1.162	1.157	1.140	2	AVG
4-Chloroaniline		0.464	0.458	0.463	0.482	0.472	0.483	0.476	0.471	2	AVG
2,6-Dichlorophenol		0.278	0.296	0.297	0.305	0.309	0.310	0.310	0.301	4	AVG
Hexachloropropene			0.150	0.153	0.171	0.169	0.170	0.170	0.164	6	AVG
Hexachlorobutadiene		0.160	0.178	0.173	0.180	0.178	0.182	0.182	0.176	5	AVG
Quinoline			0.685	0.690	0.716	0.711	0.722	0.711	0.706	2	AVG
Caprolactam			0.109	0.108	0.103	0.104	0.107	0.114	0.107	4	AVG
N-Nitrosodi-n-butylamine			0.291	0.293	0.324	0.373	0.387	0.392	0.343	14	AVG
4-Chloro-3-methylphenol		0.323	0.349	0.349	0.368	0.364	0.371	0.366	0.356	5	AVG
Safrole			0.273	0.271	0.284	0.282	0.290	0.290	0.282	3	AVG
2-Methylnaphthalene	0.728	0.712	0.731	0.735	0.768	0.753	0.768	0.768	0.745	3	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: HP20296 Calibration Date(s): 10/12/17 10/12/17

Calibration Times: 17:35 22:01

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = lj0482d.d RRF0.25 = lj0488d.d RRF1.25 = lj0487d.d RRF3.75 = lj0486d.d
RRF7.5 = lj0481d.d RRF12.5 = lj0485d.d RRF20 = lj0484d.d RRF30 = lj0483d.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1-Methylnaphthalene	0.708	0.633	0.691	0.658	0.684	0.684	0.699	0.692	0.681	4	AVG
Hexachlorocyclopentadiene			0.251	0.266	0.324	0.295	0.306	0.304	0.291	9	AVG
1,2,4,5-Tetrachlorobenzene		0.638	0.567	0.577	0.618	0.596	0.607	0.603	0.601	4	AVG
cis-Isosafrole			0.524	0.534	0.583	0.534	0.558	0.548	0.547	4	AVG
2,4,6-Trichlorophenol		0.338	0.352	0.367	0.411	0.393	0.406	0.401	0.381	8	AVG
2,4,5-Trichlorophenol		0.412	0.388	0.404	0.450	0.419	0.426	0.417	0.417	5	AVG
trans-Isosafrole			0.456	0.473	0.518	0.482	0.498	0.490	0.486	4	AVG
Isosafrole			0.467	0.483	0.529	0.491	0.508	0.500	0.496	4	AVG
1,1'-Biphenyl		1.523	1.664	1.642	1.633	1.557	1.618	1.700	1.620	4	AVG
2-Chloronaphthalene		1.211	1.248	1.285	1.318	1.243	1.311	1.347	1.281	4	AVG
1-Chloronaphthalene		1.232	1.185	1.129	1.270	1.185	1.164	1.088	1.179	5	AVG
Diphenyl ether		0.814	0.797	0.827	0.883	0.847	0.861	0.842	0.839	3	AVG
2-Nitroaniline		0.277	0.344	0.373	0.437	0.414	0.419	0.422	0.384	15	AVG
1,4-Naphthoquinone			0.452	0.494	0.549	0.522	0.535	0.524	0.513	7	AVG
1,4-Dinitrobenzene			0.169	0.176	0.199	0.192	0.202	0.203	0.190	8	AVG
Dimethylphthalate			1.347	1.365	1.435	1.364	1.398	1.397	1.384	2	AVG
1,3-Dinitrobenzene			0.197	0.205	0.224	0.218	0.227	0.227	0.216	6	AVG
2,6-Dinitrotoluene		0.226	0.269	0.295	0.325	0.309	0.314	0.311	0.293	12	AVG
Acenaphthylene	1.732	1.649	1.721	1.737	1.885	1.821	1.838	1.814	1.775	4	AVG
3-Nitroaniline		0.257	0.315	0.347	0.367	0.367	0.374	0.371	0.343	12	AVG
Acenaphthene	1.425	1.333	1.316	1.329	1.387	1.343	1.358	1.336	1.353	3	AVG
2,4-Dinitrophenol				0.140	0.154	0.174	0.187	0.187	0.168	12	AVG
4-Nitrophenol				0.216	0.241	0.235	0.247	0.240	0.236	5	AVG
Pentachlorobenzene		0.476	0.433	0.435	0.472	0.447	0.452	0.446	0.452	4	AVG
2,4-Dinitrotoluene			0.352	0.398	0.426	0.419	0.420	0.428	0.407	7	AVG
2,4_2,6-Dinitrotoluenes		0.259	0.311	0.347	0.376	0.364	0.367	0.370	0.342	12	AVG
Dibenzofuran		1.770	1.679	1.730	1.812	1.746	1.772	1.732	1.749	2	AVG
1-Naphthylamine				1.296	1.402	1.360	1.402	1.392	1.370	3	AVG
2,3,4,6-Tetrachlorophenol		0.241	0.276	0.277	0.302	0.305	0.308	0.309	0.288	9	AVG
2-Naphthylamine				1.264	1.349	1.303	1.346	1.363	1.325	3	AVG
Diethylphthalate			1.268	1.330	1.471	1.395	1.395	1.386	1.374	5	AVG
Thionazin			0.276	0.275	0.311	0.253	0.258	0.291	0.277	8	AVG
Fluorene	1.459	1.409	1.372	1.399	1.474	1.400	1.436	1.423	1.421	2	AVG
4-Chlorophenyl-phenylether		0.645	0.625	0.613	0.653	0.620	0.632	0.622	0.630	2	AVG
5-Nitro-o-toluidine		0.321	0.357	0.365	0.415	0.404	0.417	0.406	0.384	10	AVG
4-Nitroaniline		0.287	0.335	0.354	0.384	0.372	0.377	0.372	0.354	10	AVG
4,6-Dinitro-2-methylphenol				0.108	0.124	0.131	0.135	0.131	0.126	8	AVG
N-Nitrosodiphenylamine (1)		0.642	0.638	0.660	0.684	0.679	0.684	0.671	0.665	3	AVG
NDPA as diphenylamine		0.642	0.638	0.660	0.684	0.679	0.684	0.671	0.665	3	AVG
1,2-Diphenylhydrazine		0.925	0.908	0.944	0.989	0.946	0.941	0.916	0.938	3	AVG
Tetraethyldithiopyrophosphate			0.146	0.157	0.164	0.159	0.159	0.153	0.156	4	AVG
1,3,5-Trinitrobenzene				0.066	0.076	0.079	0.085	0.083	0.078	9	AVG
Diallate (peak 1)			0.384	0.418	0.444	0.426	0.423	0.413	0.418	5	AVG
Phorate		0.492	0.554	0.593	0.645	0.613	0.605	0.590	0.585	8	AVG
Phenacetin		0.370	0.425	0.465	0.497	0.479	0.485	0.467	0.456	10	AVG
4-Bromophenyl-phenylether		0.175	0.176	0.183	0.185	0.183	0.190	0.183	0.182	3	AVG
Diallate (peak 2)			0.303	0.336	0.362	0.349	0.351	0.341	0.340	6	AVG
Diallate trans/cis			0.370	0.404	0.430	0.413	0.411	0.400	0.405	5	AVG
Hexachlorobenzene	0.184	0.131	0.176	0.183	0.187	0.184	0.187	0.183	0.177	11	AVG
Dimethoate			0.338	0.373	0.411	0.386	0.388	0.373	0.378	6	AVG
Atrazine			0.201	0.217	0.202	0.200	0.200	0.200	0.204	3	AVG
Pentachlorophenol			0.089	0.105	0.117	0.123	0.128	0.122	0.114	13	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: HP20296 Calibration Date(s): 10/12/17 10/12/17

Calibration Times: 17:35 22:01

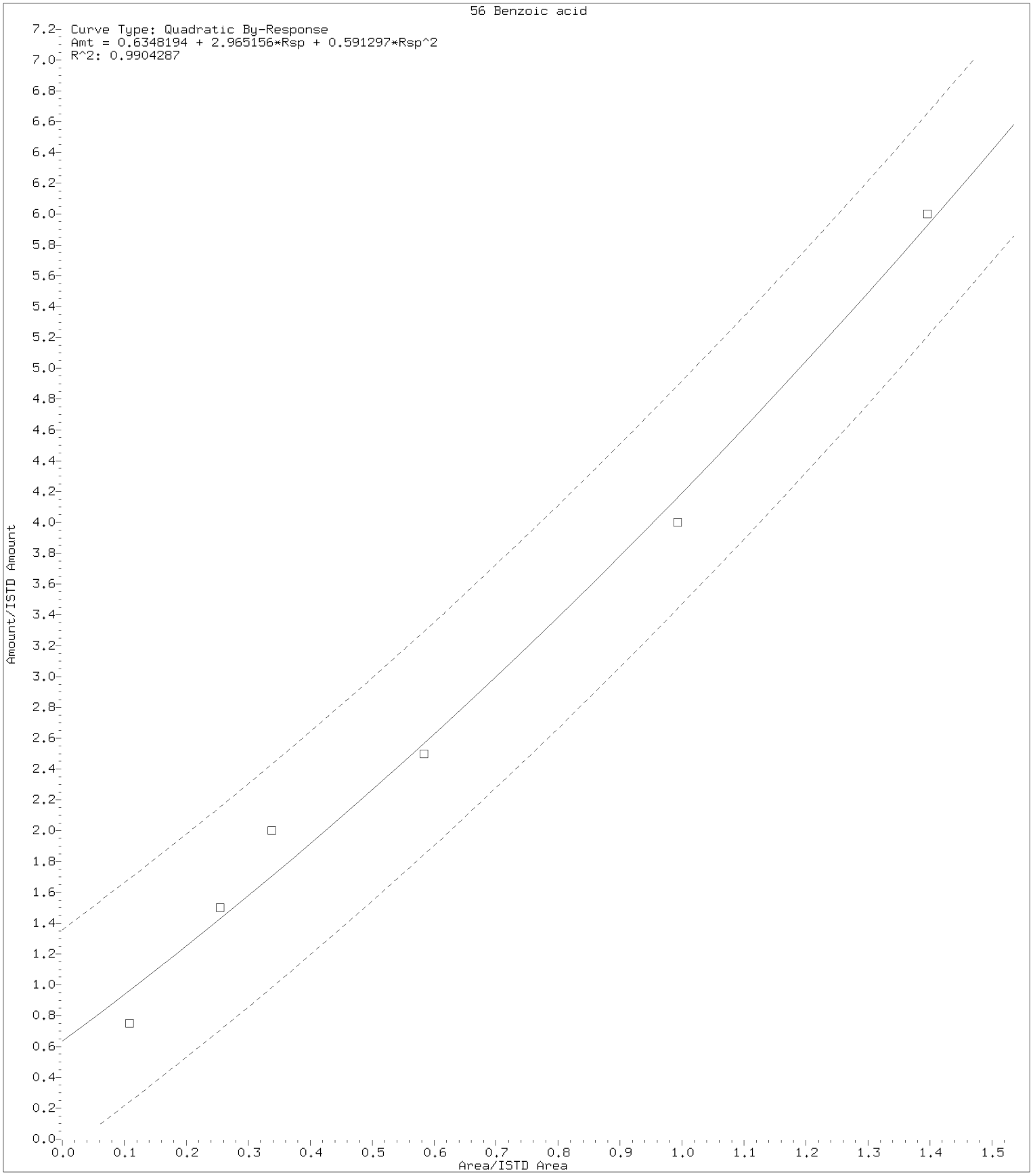
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = lj0482d.d RRF0.25 = lj0488d.d RRF1.25 = lj0487d.d RRF3.75 = lj0486d.d
RRF7.5 = lj0481d.d RRF12.5 = lj0485d.d RRF20 = lj0484d.d RRF30 = lj0483d.d

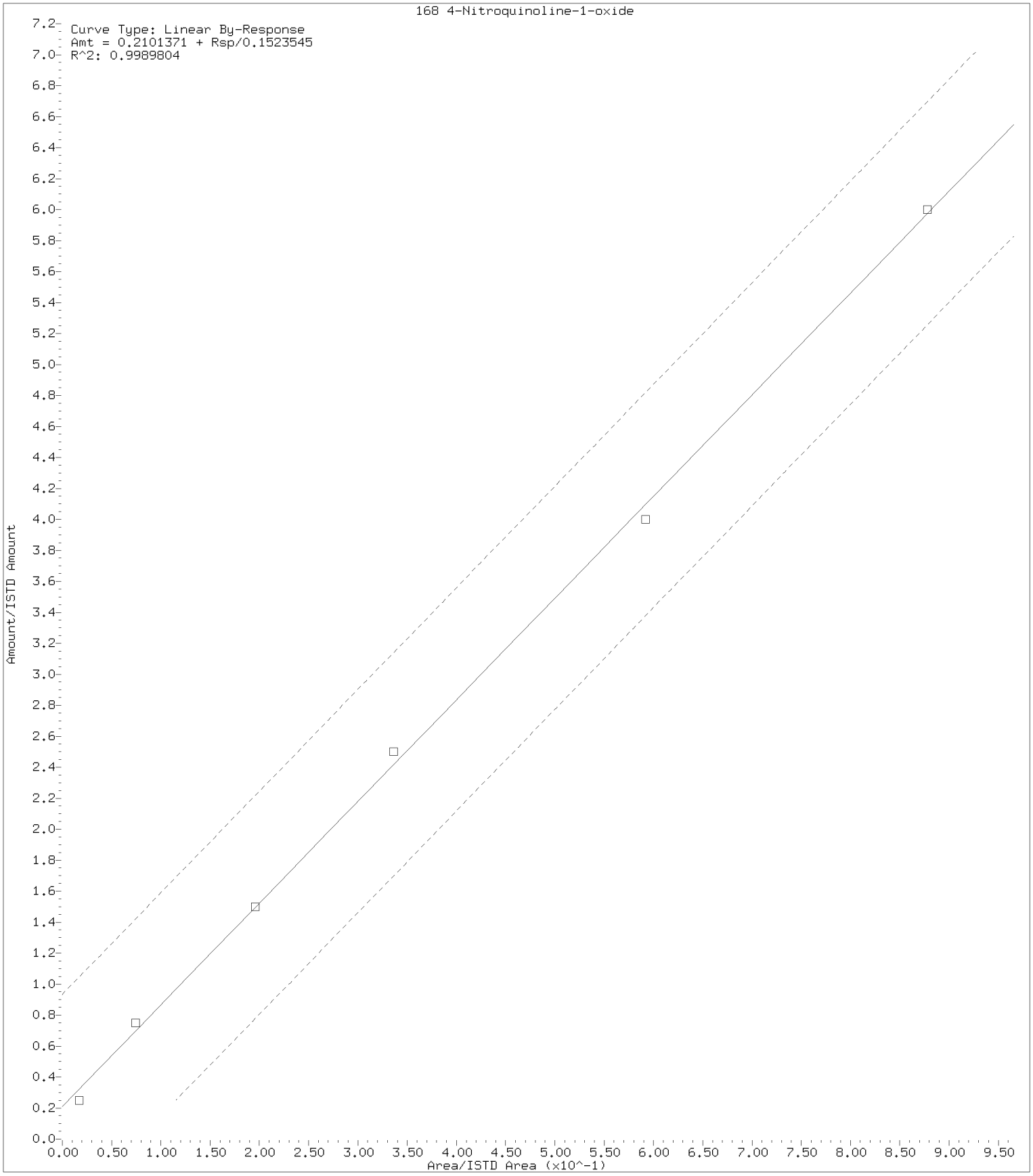
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD	
4-Aminobiphenyl		0.214	0.191	0.212	0.227	0.223	0.228	0.217	0.216	6	AVG	
Pentachloronitrobenzene			0.070	0.085	0.091	0.087	0.090	0.087	0.085	9	AVG	
Pronamide		0.293	0.329	0.356	0.386	0.374	0.380	0.367	0.355	9	AVG	
Dinoseb			0.116	0.152	0.181	0.191	0.207	0.202	0.175	20	AVG	+
Phenanthrene	1.219	1.145	1.115	1.150	1.189	1.167	1.211	1.172	1.171	3	AVG	
Anthracene	1.128	1.070	1.105	1.151	1.202	1.182	1.201	1.155	1.149	4	AVG	
Carbazole		1.049	1.012	1.094	1.159	1.140	1.164	1.116	1.105	5	AVG	
Methyl parathion			0.222	0.269	0.303	0.301	0.312	0.297	0.284	12	AVG	
Di-n-butylphthalate			1.232	1.334	1.474	1.416	1.450	1.409	1.386	6	AVG	
Parathion			0.137	0.159	0.195	0.190	0.197	0.194	0.178	14	AVG	
4-Nitroquinoline-1-oxide			0.068	0.099	0.131	0.135	0.148	0.146	0.121	26	1STDEG	
Octachlorostyrene			0.056	0.064	0.070	0.067	0.064	0.065	0.064	7	AVG	
Isodrin		0.135	0.123	0.130	0.136	0.132	0.133	0.131	0.131	3	AVG	
Fluoranthene	1.237	1.163	1.199	1.230	1.300	1.296	1.329	1.273	1.254	4	AVG	
Benzidine				0.824	0.876	0.852	0.861	0.818	0.846	3	AVG	
Pyrene	1.258	1.195	1.125	1.143	1.194	1.177	1.190	1.177	1.183	3	AVG	
p-Dimethylaminoazobenzene		0.109	0.126	0.151	0.177	0.172	0.175	0.176	0.155	18	AVG	
Chlorobenzilate			0.334	0.363	0.389	0.383	0.388	0.381	0.373	6	AVG	
3,3'-Dimethylbenzidine			0.660	0.732	0.842	0.800	0.811	0.797	0.774	9	AVG	
Butylbenzylphthalate			0.480	0.543	0.584	0.573	0.580	0.563	0.554	7	AVG	
2-Acetylaminofluorene			0.389	0.455	0.530	0.512	0.540	0.535	0.493	12	AVG	
3,3'-Dichlorobenzidine			0.346	0.365	0.411	0.397	0.410	0.407	0.389	7	AVG	
4,4'-Methylenebis(2-chloroani				0.191	0.200	0.202	0.207	0.206	0.201	3	AVG	
Benzo(a)anthracene	1.057	0.955	0.989	1.043	1.108	1.107	1.128	1.118	1.063	6	AVG	
Chrysene	0.992	0.894	0.953	0.962	1.008	1.004	1.020	0.999	0.979	4	AVG	
bis(2-Ethylhexyl)phthalate			0.686	0.754	0.876	0.832	0.861	0.846	0.809	9	AVG	
6-Methylchrysene			0.633	0.669	0.734	0.714	0.741	0.732	0.704	6	AVG	
Di-n-octylphthalate			1.514	1.717	2.036	1.939	1.962	1.957	1.854	11	AVG	
Benzo(b)fluoranthene	1.255	1.164	1.232	1.275	1.376	1.335	1.392	1.378	1.301	6	AVG	
7,12-Dimethylbenz[a]anthracen		0.468	0.488	0.536	0.603	0.587	0.604	0.605	0.556	11	AVG	
Benzo(k)fluoranthene	1.194	1.226	1.168	1.265	1.273	1.277	1.277	1.269	1.244	3	AVG	
Benzo(a)pyrene	1.252	1.073	1.113	1.183	1.282	1.252	1.297	1.281	1.217	7	AVG	
3-Methylcholanthrene		0.371	0.383	0.407	0.470	0.453	0.470	0.465	0.431	10	AVG	
Dibenz(a,h)acridine			0.879	0.944	1.027	1.003	1.035	1.031	0.986	6	AVG	
Dibenz(a,j)acridine			0.903	0.996	1.063	1.058	1.067	1.049	1.023	6	AVG	
Indeno(1,2,3-cd)pyrene	1.093	0.990	1.005	1.085	1.154	1.161	1.178	1.175	1.105	7	AVG	
Dibenz(a,h)anthracene	1.035	0.995	1.050	1.122	1.192	1.177	1.194	1.180	1.118	7	AVG	
Benzo(g,h,i)perylene	1.127	1.077	1.056	1.115	1.192	1.173	1.190	1.158	1.136	4	AVG	
Total PAHs	1.079	1.029	1.022	1.051	1.086	1.064	1.056	1.048	1.054	2	AVG	
2-Fluorophenol		1.545	1.416	1.526	1.598	1.620	1.597	1.584	1.555	4	AVG	
Phenol-d6		1.914	1.950	2.022	2.146	2.129	2.116	2.091	2.053	4	AVG	
Nitrobenzene-d5		0.458	0.455	0.456	0.486	0.478	0.480	0.478	0.470	3	AVG	
2-Fluorobiphenyl		1.416	1.448	1.431	1.515	1.458	1.490	1.470	1.461	2	AVG	
2,4,6-Tribromophenol			0.119	0.119	0.137	0.135	0.138	0.140	0.131	8	AVG	
Terphenyl-d14		0.710	0.685	0.713	0.734	0.741	0.755	0.749	0.727	3	AVG	
								Average %RSD		6		

+ %RSD is less than or equal to 20%; however, value rounds to 20.

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.



Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:09.
Target 3.5 esignature user ID: bkc25363



Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:09.
Target 3.5 esignature user ID: bkc25363

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/17oct12d.b/lj0481d.d SSTD7.5
/chem/HP20296.i/17oct12d.b/lj0482d.d SSTD0.125
/chem/HP20296.i/17oct12d.b/lj0483d.d SSTD030
/chem/HP20296.i/17oct12d.b/lj0484d.d SSTD020
/chem/HP20296.i/17oct12d.b/lj0485d.d SSTD12.5
/chem/HP20296.i/17oct12d.b/lj0486d.d SSTD3.75
/chem/HP20296.i/17oct12d.b/lj0487d.d SSTD1.25
/chem/HP20296.i/17oct12d.b/lj0488d.d SSTD0.25

Area Summary

	File ID:									
Internal Standard Name	lj0481d.d	lj0482d.d	lj0483d.d	lj0484d.d	lj0485d.d	lj0486d.d	lj0487d.d	lj0488d.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	183794	171578	171805	175835	175206	178828	183596	179060	177463	3	Yes
Naphthalene-d8	715672	686609	656866	677062	696329	700990	700591	712287	693301	3	Yes
Acenaphthene-d10	371349	366666	356693	365053	375508	374708	382069	378936	371373	2	Yes
Phenanthrene-d10	660950	640024	649157	646311	658288	642370	666126	660359	652948	1	Yes
Pyrene-d10	759549	722855	724219	739354	748478	732715	753805	730101	738884	2	Yes
Perylene-d12	582640	544702	573628	590478	581958	555989	569100	548089	568323	3	Yes

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

RT Summary

	File ID:								
Internal Standard Name	lj0481d.d	lj0482d.d	lj0483d.d	lj0484d.d	lj0485d.d	lj0486d.d	lj0487d.d	lj0488d.d	Avg. RT
1,4-Dichlorobenzene-d4	6.978	6.978	6.978	6.978	6.978	6.973	6.973	6.978	6.977
Naphthalene-d8	8.963	8.957	8.963	8.962	8.957	8.957	8.957	8.957	8.959
Acenaphthene-d10	11.787	11.787	11.792	11.787	11.787	11.787	11.781	11.787	11.787
Phenanthrene-d10	13.712	13.707	13.712	13.712	13.707	13.707	13.707	13.707	13.709
Pyrene-d10	15.761	15.755	15.766	15.761	15.761	15.755	15.755	15.755	15.759
Perylene-d12	20.339	20.334	20.344	20.339	20.339	20.334	20.334	20.334	20.337

Comments:_____

_____

Report generated on 10/23/2017 at 21:14

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP20296

Method: SW-846 8270D MINI | File ID: lj0491d.d

ICV SAMPLE ID: RVICV1147 | BATCH: 17OCT12A026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.27	-2	30	YES
N-Nitrosodimethylamine	12.50	12.75	2	30	YES
Pyridine	12.50	12.06	-4	30	YES
2-Picoline	12.50	12.52	0	30	YES
N-Nitrosomethylethylamine	12.50	11.78	-6	30	YES
Methyl methanesulfonate	12.50	13.80	10	30	YES
N-Nitrosodiethylamine	12.50	12.18	-3	30	YES
Ethyl methanesulfonate	12.50	12.14	-3	30	YES
Phenol	12.50	12.99	4	30	YES
Aniline	12.50	11.14	-11	30	YES
bis(2-Chloroethyl)ether	12.50	12.27	-2	30	YES
2-Chlorophenol	12.50	12.62	1	30	YES
1,3-Dichlorobenzene	12.50	12.60	1	30	YES
1,4-Dichlorobenzene	12.50	12.77	2	30	YES
Benzyl alcohol	12.50	13.09	5	30	YES
1,2-Dichlorobenzene	12.50	12.77	2	30	YES
Indene	12.50	12.29	-2	30	YES
2-Methylphenol	12.50	12.60	1	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	12.32	-1	30	YES
Acetophenone	12.50	12.68	1	30	YES
4-Methylphenol	12.50	12.44	0	30	YES
N-Nitroso-di-n-propylamine	12.50	12.51	0	30	YES
N-Nitrosomorpholine	12.50	12.04	-4	30	YES
o-Toluidine	12.50	12.11	-3	30	YES
Total Cresols	25.00	25.04	0	30	YES
Hexachloroethane	12.50	12.29	-2	30	YES
Nitrobenzene	12.50	12.53	0	30	YES
N-Nitrosopiperidine	12.50	11.95	-4	30	YES
Isophorone	12.50	12.87	3	30	YES
2-Nitrophenol	12.50	13.50	8	30	YES
2,4-Dimethylphenol	12.50	10.26	-18	30	YES
bis(2-Chloroethoxy)methane	12.50	12.99	4	30	YES
Benzoic acid	25.00	30.58	22	30	YES
O,O,O-Triethylphosphorothio	12.50	12.47	0	30	YES
2,4-Dichlorophenol	12.50	12.92	3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: lj0491d.d

ICV SAMPLE ID: RVICV1147 BATCH: 17OCT12A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	12.70	2	30	YES
Naphthalene	12.50	12.89	3	30	YES
4-Chloroaniline	12.50	12.45	0	30	YES
2,6-Dichlorophenol	12.50	12.62	1	30	YES
Hexachloropropene	12.50	16.23	30	30	YES
Hexachlorobutadiene	12.50	12.93	3	30	YES
Quinoline	12.50	12.89	3	30	YES
N-Nitrosodi-n-butylamine	12.50	10.90	-13	30	YES
4-Chloro-3-methylphenol	12.50	13.31	6	30	YES
Safrole	12.50	12.47	0	30	YES
2-Methylnaphthalene	12.50	12.98	4	30	YES
1-Methylnaphthalene	12.50	13.26	6	30	YES
Hexachlorocyclopentadiene	25.00	21.56	-14	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.57	1	30	YES
cis-Isosafrole	1.50	1.59	6	30	YES
2,4,6-Trichlorophenol	12.50	13.38	7	30	YES
2,4,5-Trichlorophenol	12.50	12.92	3	30	YES
trans-Isosafrole	11.00	14.22	29	30	YES
1,1'-Biphenyl	12.50	12.90	3	30	YES
2-Chloronaphthalene	12.50	12.42	-1	30	YES
Isosafrole	12.50	15.81	26	30	YES
1-Chloronaphthalene	12.50	12.83	3	30	YES
Diphenyl ether	12.50	12.79	2	30	YES
2-Nitroaniline	12.50	13.69	10	30	YES
1,4-Naphthoquinone	15.63	15.65	0	30	YES
1,4-Dinitrobenzene	12.50	13.13	5	30	YES
Dimethylphthalate	12.50	12.75	2	30	YES
1,3-Dinitrobenzene	12.50	13.28	6	30	YES
2,6-Dinitrotoluene	12.50	13.72	10	30	YES
Acenaphthylene	12.50	13.32	7	30	YES
3-Nitroaniline	12.50	13.60	9	30	YES
Acenaphthene	12.50	13.12	5	30	YES
2,4-Dinitrophenol	25.00	28.63	15	30	YES
4-Nitrophenol	12.50	12.72	2	30	YES
Pentachlorobenzene	12.50	12.18	-3	30	YES
2,4-Dinitrotoluene	12.50	13.46	8	30	YES
Dibenzofuran	12.50	12.77	2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: lj0491d.d

ICV SAMPLE ID: RVICV1147 BATCH: 17OCT12A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	27.18	9	30	YES
1-Naphthylamine	25.00	21.51	-14	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.84	11	30	YES
2-Naphthylamine	25.00	21.77	-13	30	YES
Diethylphthalate	12.50	12.72	2	30	YES
Thionazin	12.50	11.60	-7	30	YES
Fluorene	12.50	12.74	2	30	YES
4-Chlorophenyl-phenylether	12.50	12.55	0	30	YES
5-Nitro-o-toluidine	12.50	13.51	8	30	YES
4-Nitroaniline	12.50	13.02	4	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.49	0	30	YES
N-Nitrosodiphenylamine	12.50	12.73	2	30	YES
NDPA as diphenylamine	12.50	12.73	2	30	YES
1,2-Diphenylhydrazine	12.50	12.73	2	30	YES
Tetraethyldithiopyrophospha	12.50	11.67	-7	30	YES
1,3,5-Trinitrobenzene	12.50	12.85	3	30	YES
Diallate (peak 1)	9.38	8.52	-9	30	YES
Phorate	12.50	12.38	-1	30	YES
Phenacetin	12.50	12.62	1	30	YES
4-Bromophenyl-phenylether	12.50	12.87	3	30	YES
Diallate (peak 2)	3.13	3.47	11	30	YES
Hexachlorobenzene	12.50	12.94	4	30	YES
Diallate trans/cis	12.50	11.98	-4	30	YES
Dimethoate	12.50	12.33	-1	30	YES
Pentachlorophenol	12.50	14.49	16	30	YES
4-Aminobiphenyl	12.50	49.56	296	30	NO*
Pentachloronitrobenzene	12.50	12.73	2	30	YES
Pronamide	12.50	12.84	3	30	YES
Dinoseb	12.50	13.59	9	30	YES
Phenanthrene	12.50	12.54	0	30	YES
Anthracene	12.50	12.68	1	30	YES
Carbazole	12.50	12.88	3	30	YES
Methyl parathion	12.50	13.51	8	30	YES
Di-n-butylphthalate	12.50	12.83	3	30	YES
Parathion	12.50	13.07	5	30	YES
4-Nitroquinoline-1-oxide	150.00	157.95	5	30	YES
Isodrin	12.50	12.33	-1	30	YES

NC = Could not calculate

Comments: *Re-run any detections under a valid ICV

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: lj0491d.d

ICV SAMPLE ID: RVICV1147 BATCH: 17OCT12A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	12.82	3	30	YES
Benzidine	62.50	48.50	-22	30	YES
Pyrene	12.50	12.54	0	30	YES
p-Dimethylaminoazobenzene	12.50	18.18	45	30	NO*
Chlorobenzilate	12.50	13.21	6	30	YES
3,3'-Dimethylbenzidine	25.00	22.07	-12	30	YES
Butylbenzylphthalate	12.50	13.17	5	30	YES
2-Acetylaminofluorene	12.50	12.78	2	30	YES
3,3'-Dichlorobenzidine	12.50	12.37	-1	30	YES
Benzo(a)anthracene	12.50	13.53	8	30	YES
Chrysene	12.50	13.45	8	30	YES
4,4'-Methylenebis(2-chloroa	12.50	13.46	8	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.38	7	30	YES
6-Methylchrysene	12.50	12.75	2	30	YES
Di-n-octylphthalate	12.50	13.08	5	30	YES
Benzo(b)fluoranthene	12.50	13.07	5	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	12.81	2	30	YES
Benzo(k)fluoranthene	12.50	13.07	5	30	YES
Benzo(a)pyrene	12.50	12.67	1	30	YES
3-Methylcholanthrene	12.50	18.38	47	30	NO*
Dibenz(a,h)acridine	12.50	12.57	1	30	YES
Dibenz(a,j)acridine	12.50	12.23	-2	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.14	5	30	YES
Dibenz(a,h)anthracene	12.50	13.41	7	30	YES
Benzo(g,h,i)perylene	12.50	12.75	2	30	YES
Total PAHs	225.00	207.86	-8	30	YES

NC = Could not calculate

Comments: *Non-CCC; OK if under 50% D

^

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: lj0492d.d

ICV SAMPLE ID: RVBASICV2487 BATCH: 17OCT12A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	12.35	-1	30	YES
Caprolactam	12.50	11.89	-5	30	YES
Atrazine	12.50	12.54	0	30	YES

NC = Could not calculate

Comments: _____

^

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19760 Calibration Date: 10/24/17 Time: 23:05

Lab File ID: dj1211.d Init. Calib. Date(s): 10/23/17 10/23/17

Init. Calib. Times(s): 12:24 15:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.675	0.690	7.660	7.5	2
N-Nitrosodimethylamine	1.064	1.110	7.820	7.5	4
Pyridine	1.715	1.630	7.130	7.5	-5
2-Picoline	1.824	1.856	7.630	7.5	2
N-Nitrosomethylethylamine	0.776	0.791	7.650	7.5	2
Methyl methanesulfonate	0.827	0.850	7.710	7.5	3
N-Nitrosodiethylamine	0.734	0.756	7.730	7.5	3
Ethyl methanesulfonate	0.764	0.801	7.860	7.5	5
Benzaldehyde	1.404	1.404	7.500	7.5	0
Phenol	2.237	2.342	7.850	7.5	5
Aniline	2.608	2.696	7.760	7.5	3
a-methylstyrene	1.600	1.637	7.670	7.5	2
bis(2-Chloroethyl)ether	1.680	1.698	7.580	7.5	1
2-Chlorophenol	1.500	1.557	7.780	7.5	4
1,3-Dichlorobenzene	1.633	1.696	7.790	7.5	4
1,4-Dichlorobenzene	1.661	1.727	7.800	7.5	4
Benzyl alcohol	1.006	1.007	7.510	7.5	0
1,2-Dichlorobenzene	1.572	1.643	7.840	7.5	4
Indene	2.924	2.983	7.650	7.5	2
2-Methylphenol	1.420	1.482	7.830	7.5	4
2,2'-oxybis(1-Chloropropane)	2.178	2.202	7.580	7.5	1
bis(2-Chloroisopropyl)ether	2.178	2.202	7.580	7.5	1
N-Nitrosopyrrolidine	0.780	0.817	7.850	7.5	5
Acetophenone	2.350	2.295	7.320	7.5	-2
4-Methylphenol	1.587	1.696	8.020	7.5	7
Total Cresols	1.504	1.589	15.850	15.0	6
N-Nitroso-di-n-propylamine	1.283	1.305	7.630	7.5	2
N-Nitrosomorpholine	0.961	1.005	7.840	7.5	5
o-Toluidine	2.563	2.687	7.860	7.5	5
Hexachloroethane	0.669	0.705	7.910	7.5	5
Nitrobenzene	0.486	0.501	7.740	7.5	3
N-Nitrosopiperidine	0.196	0.203	7.770	7.5	4
Isophorone	0.844	0.854	7.580	7.5	1
2-Nitrophenol	0.180	0.191	7.950	7.5	6
2,4-Dimethylphenol	0.419	0.432	7.730	7.5	3
O,O,O-Triethylphosphorothioate	0.188	0.190	7.570	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: 10/24/17 Time: 23:05

Lab File ID: dj1211.d Init. Calib. Date(s): 10/23/17 10/23/17

Init. Calib. Times(s): 12:24 15:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.525	0.541	7.730	7.5	3
Benzoic acid	0.286	0.258	9.120	10.0	-9
1,2,3,4-Tetrahydronaphthalene	0.612	0.628	7.710	7.5	3
2,4-Dichlorophenol	0.310	0.332	8.030	7.5	7
1,2,4-Trichlorobenzene	0.360	0.364	7.570	7.5	1
Naphthalene	1.130	1.147	7.610	7.5	1
4-Chloroaniline	0.465	0.480	7.740	7.5	3
2,6-Dichlorophenol	0.305	0.321	7.900	7.5	5
Hexachloropropene	0.175	0.186	7.990	7.5	6
Hexachlorobutadiene	0.202	0.209	7.770	7.5	4
Quinoline	0.687	0.706	7.710	7.5	3
Caprolactam	0.102	0.094	6.920	7.5	-8
N-Nitrosodi-n-butylamine	0.368	0.391	7.960	7.5	6
4-Chloro-3-methylphenol	0.348	0.363	7.820	7.5	4
Safrole	0.289	0.297	7.710	7.5	3
2-Methylnaphthalene	0.750	0.769	7.690	7.5	3
1-Methylnaphthalene	0.679	0.696	7.680	7.5	2
Hexachlorocyclopentadiene	0.318	0.338	7.960	7.5	6
1,2,4,5-Tetrachlorobenzene	0.677	0.707	7.840	7.5	4
cis-Isosafrole	0.554	0.573	1.320	1.3	3
2,4,6-Trichlorophenol	0.408	0.432	7.950	7.5	6
2,4,5-Trichlorophenol	0.430	0.463	8.090	7.5	8
trans-Isosafrole	0.500	0.513	6.390	6.2	3
Isosafrole	0.509	0.523	7.710	7.5	3
1,1'-Biphenyl	1.663	1.644	7.410	7.5	-1
2-Chloronaphthalene	1.350	1.404	7.800	7.5	4
1-Chloronaphthalene	1.186	1.241	7.850	7.5	5
Diphenyl ether	0.891	0.920	7.750	7.5	3
2-Nitroaniline	0.378	0.401	7.960	7.5	6
1,4-Naphthoquinone	0.527	0.521	7.420	7.5	-1
1,4-Dinitrobenzene	0.194	0.193	7.470	7.5	0
Dimethylphthalate	1.438	1.448	7.550	7.5	1
1,3-Dinitrobenzene	0.216	0.222	7.730	7.5	3
2,6-Dinitrotoluene	0.299	0.322	8.090	7.5	8
Acenaphthylene	1.799	1.889	7.870	7.5	5
3-Nitroaniline	0.340	0.348	7.670	7.5	2

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19760 Calibration Date: 10/24/17 Time: 23:05

Lab File ID: dj1211.d Init. Calib. Date(s): 10/23/17 10/23/17

Init. Calib. Times(s): 12:24 15:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.363	1.415	7.790	7.5	4
2,4-Dinitrophenol	0.171	0.131	8.140	10.0	-19
4-Nitrophenol	0.260	0.238	6.860	7.5	-8
Pentachlorobenzene	0.557	0.584	7.860	7.5	5
2,4-Dinitrotoluene	0.428	0.425	7.440	7.5	-1
2,4_2,6-Dinitrotoluenes	0.355	0.373	15.770	15.0	5
Dibenzofuran	1.778	1.848	7.800	7.5	4
1-Naphthylamine	1.384	1.355	7.340	7.5	-2
2,3,4,6-Tetrachlorophenol	0.336	0.311	6.940	7.5	-7
2-Naphthylamine	1.348	1.323	7.360	7.5	-2
Diethylphthalate	1.420	1.445	7.630	7.5	2
Thionazin	0.282	0.288	7.640	7.5	2
Fluorene	1.430	1.465	7.690	7.5	3
4-Chlorophenyl-phenylether	0.683	0.701	7.700	7.5	3
5-Nitro-o-toluidine	0.394	0.405	7.710	7.5	3
4-Nitroaniline	0.345	0.361	7.840	7.5	5
4,6-Dinitro-2-methylphenol	0.126	0.109	6.470	7.5	-14
N-Nitrosodiphenylamine (1)	0.621	0.671	8.100	7.5	8
NDPA as diphenylamine	0.621	0.671	8.100	7.5	8
1,2-Diphenylhydrazine	0.887	0.951	8.050	7.5	7
Tetraethyldithiopyrophosphate	0.147	0.154	7.850	7.5	5
1,3,5-Trinitrobenzene	0.083	0.076	6.870	7.5	-8
Diallate (peak 1)	0.387	0.401	6.440	6.2	4
Phorate	0.557	0.610	8.210	7.5	9
Phenacetin	0.424	0.440	7.780	7.5	4
4-Bromophenyl-phenylether	0.218	0.227	7.840	7.5	5
Diallate (peak 2)	0.318	0.314	1.260	1.3	-1
Diallate trans/cis	0.375	0.386	7.710	7.5	3
Hexachlorobenzene	0.223	0.238	8.020	7.5	7
Dimethoate	0.358	0.367	7.690	7.5	3
Atrazine	0.212	0.208	7.350	7.5	-2
Pentachlorophenol	0.141	0.084	4.450	7.5	-41
4-Aminobiphenyl	0.196	0.203	7.770	7.5	4
Pentachloronitrobenzene	0.096	0.100	7.860	7.5	5
Pronamide	0.355	0.374	7.880	7.5	5
Dinoseb	0.185	0.169	6.600	7.5	-12

(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: 10/24/17 Time: 23:05

Lab File ID: dj1211.d Init. Calib. Date(s): 10/23/17 10/23/17

Init. Calib. Times(s): 12:24 15:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.137	1.193	7.870	7.5	5
Anthracene	1.124	1.192	7.950	7.5	6
Carbazole	1.054	1.113	7.920	7.5	6
Methyl parathion	0.275	0.281	7.680	7.5	2
Di-n-butylphthalate	1.322	1.346	7.640	7.5	2
Parathion	0.178	0.177	7.450	7.5	-1
4-Nitroquinoline-1-oxide	0.103	0.087	7.110	7.5	-5
Octachlorostyrene	0.090	0.089	7.420	7.5	-1
Isodrin	0.136	0.137	7.520	7.5	0
Fluoranthene	1.299	1.354	7.820	7.5	4
Benzidine	0.746	0.767	23.140	22.5	3
Pyrene	1.153	1.184	7.700	7.5	3
p-Dimethylaminoazobenzene	0.151	0.154	7.670	7.5	2
Chlorobenzilate	0.334	0.349	7.840	7.5	5
3,3'-Dimethylbenzidine	0.712	0.739	7.790	7.5	4
Butylbenzylphthalate	0.502	0.534	7.980	7.5	6
2-Acetylaminofluorene	0.447	0.462	7.760	7.5	3
3,3'-Dichlorobenzidine	0.398	0.423	7.960	7.5	6
4,4'-Methylenebis(2-chloroanil	0.206	0.217	7.870	7.5	5
Benzo(a)anthracene	1.063	1.135	8.010	7.5	7
Chrysene	1.006	1.073	8.000	7.5	7
bis(2-Ethylhexyl)phthalate	0.742	0.796	8.040	7.5	7
6-Methylchrysene	0.741	0.775	7.840	7.5	4
Di-n-octylphthalate	1.489	1.470	7.400	7.5	-1
Benzo(b)fluoranthene	1.209	1.228	7.620	7.5	2
7,12-Dimethylbenz[a]anthracene	0.503	0.531	7.920	7.5	6
Benzo(k)fluoranthene	1.179	1.239	7.880	7.5	5
Benzo(a)pyrene	1.105	1.172	7.950	7.5	6
3-Methylcholanthrene	0.411	0.418	7.630	7.5	2
Dibenz(a,h)acridine	0.933	0.959	7.710	7.5	3
Dibenz(a,j)acridine	0.990	1.037	7.860	7.5	5
Indeno(1,2,3-cd)pyrene	1.302	1.412	8.130	7.5	8
Dibenz(a,h)anthracene	1.088	1.182	8.150	7.5	9
Benzo(g,h,i)perylene	1.092	1.188	8.160	7.5	9
Total PAHs	1.043	1.055	136.570	135.0	1
2-Fluorophenol	1.515	1.564	15.480	15.0	3

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19760 Calibration Date: 10/24/17 Time: 23:05

Lab File ID: dj1211.d Init. Calib. Date(s): 10/23/17 10/23/17

Init. Calib. Times(s): 12:24 15:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.982	2.055	15.550	15.0	4
Nitrobenzene-d5	0.483	0.497	15.440	15.0	3
2-Fluorobiphenyl	1.514	1.577	15.620	15.0	4
2,4,6-Tribromophenol	0.190	0.189	14.930	15.0	0
Terphenyl-d14	0.752	0.784	15.640	15.0	4
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/17oct23.b/dj1101.d **
/chem/HP19760.i/17oct23.b/dj1102.d
/chem/HP19760.i/17oct23.b/dj1103.d
/chem/HP19760.i/17oct23.b/dj1104.d
/chem/HP19760.i/17oct23.b/dj1105.d
/chem/HP19760.i/17oct23.b/dj1106.d
/chem/HP19760.i/17oct23.b/dj1107.d
/chem/HP19760.i/17oct23.b/dj1108.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/17oct24a.b/dj1211.d

Area Summary

Internal Standard Name	File ID: dj1211.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	202430	188854	94427	377708	Yes
Naphthalene-d8	777633	717122	358561	1434244	Yes
Acenaphthene-d10	411719	377147	188574	754294	Yes
Phenanthrene-d10	744504	710425	355212	1420850	Yes
Pyrene-d10	906937	889904	444952	1779808	Yes
Perylene-d12	852090	780310	390155	1560620	Yes

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

RT Summary

Internal Standard Name	File ID: dj1211.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.723	6.876	Yes
Naphthalene-d8	8.658	8.811	Yes
Acenaphthene-d10	11.450	11.597	Yes
Phenanthrene-d10	13.338	13.474	Yes
Pyrene-d10	15.297	15.456	Yes
Perylene-d12	19.761	19.950	No

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

Comments: # Column maintenance ECM10340 10/24/17

Report generated on 10/24/2017 at 23:33

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP19760 Calibration Date: 10/31/17 Time: 09:37

Lab File ID: dj1631.d Init. Calib. Date(s): 10/30/17 10/31/17

Init. Calib. Times(s): 21:05 00:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.604	0.636	7.900	7.5	5
N-Nitrosodimethylamine	0.737	0.683	6.950	7.5	-7
Pyridine	1.599	1.483	6.950	7.5	-7
2-Picoline	1.742	1.822	7.850	7.5	5
N-Nitrosomethylethylamine	0.752	0.762	7.600	7.5	1
Methyl methanesulfonate	0.765	0.805	7.890	7.5	5
N-Nitrosodiethylamine	0.704	0.737	7.850	7.5	5
Ethyl methanesulfonate	0.716	0.778	8.140	7.5	9
Benzaldehyde	1.307	1.327	7.610	7.5	2
Phenol	2.036	2.124	7.830	7.5	4
Aniline	2.493	2.584	7.780	7.5	4
a-methylstyrene	1.609	1.636	7.630	7.5	2
bis(2-Chloroethyl)ether	1.625	1.722	7.950	7.5	6
2-Chlorophenol	1.512	1.557	7.720	7.5	3
1,3-Dichlorobenzene	1.643	1.664	7.600	7.5	1
1,4-Dichlorobenzene	1.668	1.697	7.630	7.5	2
Benzyl alcohol	0.998	1.019	7.660	7.5	2
1,2-Dichlorobenzene	1.573	1.611	7.680	7.5	2
Indene	2.830	2.889	7.660	7.5	2
2-Methylphenol	1.424	1.488	7.840	7.5	4
2,2'-oxybis(1-Chloropropane)	2.230	2.312	7.780	7.5	4
bis(2-Chloroisopropyl)ether	2.230	2.312	7.780	7.5	4
N-Nitrosopyrrolidine	0.723	0.790	8.200	7.5	9
Acetophenone	2.263	2.261	7.490	7.5	0
4-Methylphenol	1.483	1.559	7.890	7.5	5
Total Cresols	1.454	1.524	15.720	15.0	5
N-Nitroso-di-n-propylamine	1.235	1.319	8.010	7.5	7
N-Nitrosomorpholine	0.904	0.952	7.900	7.5	5
o-Toluidine	2.495	2.637	7.930	7.5	6
Hexachloroethane	0.680	0.708	7.810	7.5	4
Nitrobenzene	0.475	0.503	7.930	7.5	6
N-Nitrosopiperidine	0.191	0.200	7.850	7.5	5
Isophorone	0.794	0.850	8.030	7.5	7
2-Nitrophenol	0.184	0.200	8.150	7.5	9
2,4-Dimethylphenol	0.408	0.437	8.030	7.5	7
O,O,O-Triethylphosphorothioate	0.186	0.191	7.730	7.5	3

FORM VII SV-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: 10/31/17 Time: 09:37

Lab File ID: dj1631.d Init. Calib. Date(s): 10/30/17 10/31/17

Init. Calib. Times(s): 21:05 00:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.506	0.542	8.040	7.5	7
Benzoic acid	0.311	0.275	10.800	10.0	8
1,2,3,4-Tetrahydronaphthalene	0.604	0.619	7.690	7.5	3
2,4-Dichlorophenol	0.309	0.334	8.090	7.5	8
1,2,4-Trichlorobenzene	0.357	0.364	7.660	7.5	2
Naphthalene	1.135	1.167	7.710	7.5	3
4-Chloroaniline	0.460	0.492	8.020	7.5	7
2,6-Dichlorophenol	0.302	0.322	8.000	7.5	7
Hexachloropropene	0.188	0.194	7.720	7.5	3
Hexachlorobutadiene	0.200	0.204	7.660	7.5	2
Quinoline	0.678	0.712	7.880	7.5	5
Caprolactam	0.093	0.091	7.400	7.5	-1
N-Nitrosodi-n-butylamine	0.346	0.385	8.340	7.5	11
4-Chloro-3-methylphenol	0.340	0.373	8.220	7.5	10
Safrole	0.280	0.297	7.940	7.5	6
2-Methylnaphthalene	0.737	0.777	7.910	7.5	5
1-Methylnaphthalene	0.668	0.700	7.860	7.5	5
Hexachlorocyclopentadiene	0.338	0.349	7.730	7.5	3
1,2,4,5-Tetrachlorobenzene	0.685	0.685	7.500	7.5	0
cis-Isosafrole	0.548	0.569	1.320	1.3	4
2,4,6-Trichlorophenol	0.408	0.435	8.000	7.5	7
2,4,5-Trichlorophenol	0.432	0.454	7.890	7.5	5
trans-Isosafrole	0.495	0.511	6.430	6.2	3
Isosafrole	0.504	0.521	7.750	7.5	3
1,1'-Biphenyl	1.653	1.626	7.370	7.5	-2
2-Chloronaphthalene	1.378	1.324	7.200	7.5	-4
1-Chloronaphthalene	1.195	1.338	8.400	7.5	12
Diphenyl ether	0.889	0.927	7.820	7.5	4
2-Nitroaniline	0.387	0.415	8.030	7.5	7
1,4-Naphthoquinone	0.501	0.526	7.880	7.5	5
1,4-Dinitrobenzene	0.200	0.209	7.830	7.5	4
Dimethylphthalate	1.403	1.462	7.810	7.5	4
1,3-Dinitrobenzene	0.221	0.230	7.800	7.5	4
2,6-Dinitrotoluene	0.305	0.329	8.110	7.5	8
Acenaphthylene	1.763	1.875	7.980	7.5	6
3-Nitroaniline	0.333	0.355	7.990	7.5	7

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: 10/31/17 Time: 09:37

Lab File ID: dj1631.d Init. Calib. Date(s): 10/30/17 10/31/17

Init. Calib. Times(s): 21:05 00:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.365	1.429	7.850	7.5	5
2,4-Dinitrophenol	0.189	0.188	9.950	10.0	-1
4-Nitrophenol	0.258	0.260	7.550	7.5	1
Pentachlorobenzene	0.546	0.561	7.700	7.5	3
2,4-Dinitrotoluene	0.422	0.438	7.770	7.5	4
2,4_2,6-Dinitrotoluenes	0.357	0.384	16.090	15.0	7
Dibenzofuran	1.767	1.834	7.790	7.5	4
1-Naphthylamine	1.346	1.343	7.480	7.5	0
2,3,4,6-Tetrachlorophenol	0.328	0.348	7.960	7.5	6
2-Naphthylamine	1.302	1.312	7.560	7.5	1
Diethylphthalate	1.367	1.445	7.930	7.5	6
Thionazin	0.242	0.257	7.980	7.5	6
Fluorene	1.410	1.456	7.740	7.5	3
4-Chlorophenyl-phenylether	0.661	0.682	7.730	7.5	3
5-Nitro-o-toluidine	0.383	0.410	8.030	7.5	7
4-Nitroaniline	0.335	0.373	8.350	7.5	11
4,6-Dinitro-2-methylphenol	0.140	0.140	7.480	7.5	0
N-Nitrosodiphenylamine (1)	0.625	0.660	7.920	7.5	6
NDPA as diphenylamine	0.625	0.660	7.920	7.5	6
1,2-Diphenylhydrazine	0.871	0.936	8.060	7.5	7
Tetraethyldithiopyrophosphate	0.145	0.156	8.060	7.5	8
1,3,5-Trinitrobenzene	0.084	0.083	7.380	7.5	-2
Diallate (peak 1)	0.380	0.402	6.580	6.2	6
Phorate	0.593	0.594	7.500	7.5	0
Phenacetin	0.411	0.446	8.160	7.5	9
4-Bromophenyl-phenylether	0.215	0.221	7.720	7.5	3
Diallate (peak 2)	0.310	0.321	1.320	1.3	4
Diallate trans/cis	0.368	0.388	7.910	7.5	5
Hexachlorobenzene	0.228	0.229	7.520	7.5	0
Dimethoate	0.346	0.372	8.060	7.5	7
Atrazine	0.203	0.206	7.630	7.5	2
Pentachlorophenol	0.146	0.150	7.720	7.5	3
4-Aminobiphenyl	0.174	0.193	8.300	7.5	11
Pentachloronitrobenzene	0.096	0.099	7.760	7.5	3
Pronamide	0.344	0.381	8.300	7.5	11
Dinoseb	0.201	0.210	7.850	7.5	5

(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: 10/31/17 Time: 09:37

Lab File ID: dj1631.d Init. Calib. Date(s): 10/30/17 10/31/17

Init. Calib. Times(s): 21:05 00:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.155	1.198	7.780	7.5	4
Anthracene	1.127	1.202	7.990	7.5	7
Carbazole	1.043	1.118	8.040	7.5	7
Methyl parathion	0.268	0.292	8.170	7.5	9
Di-n-butylphthalate	1.252	1.354	8.110	7.5	8
Parathion	0.170	0.181	8.000	7.5	7
4-Nitroquinoline-1-oxide	0.122	0.116	7.110	7.5	-5
Octachlorostyrene	0.086	0.089	7.720	7.5	3
Isodrin	0.138	0.138	7.540	7.5	1
Fluoranthene	1.263	1.347	8.000	7.5	7
Benzidine	0.739	0.766	23.330	22.5	4
Pyrene	1.157	1.197	7.760	7.5	3
p-Dimethylaminoazobenzene	0.145	0.159	8.240	7.5	10
Chlorobenzilate	0.336	0.355	7.920	7.5	6
3,3'-Dimethylbenzidine	0.678	0.710	7.850	7.5	5
Butylbenzylphthalate	0.492	0.518	7.900	7.5	5
2-Acetylaminofluorene	0.440	0.441	7.520	7.5	0
3,3'-Dichlorobenzidine	0.406	0.416	7.680	7.5	2
4,4'-Methylenebis(2-chloroanil	0.204	0.200	7.370	7.5	-2
Benzo(a)anthracene	1.049	1.128	8.060	7.5	8
Chrysene	0.998	1.056	7.940	7.5	6
bis(2-Ethylhexyl)phthalate	0.714	0.751	7.890	7.5	5
6-Methylchrysene	0.735	0.746	7.610	7.5	2
Di-n-octylphthalate	1.417	1.555	8.230	7.5	10
Benzo(b)fluoranthene	1.260	1.388	8.260	7.5	10
7,12-Dimethylbenz[a]anthracene	0.502	0.553	8.260	7.5	10
Benzo(k)fluoranthene	1.238	1.347	8.160	7.5	9
Benzo(a)pyrene	1.179	1.284	8.170	7.5	9
3-Methylcholanthrene	0.426	0.449	7.910	7.5	5
Dibenz(a,h)acridine	0.990	1.023	7.750	7.5	3
Dibenz(a,j)acridine	1.032	1.076	7.820	7.5	4
Indeno(1,2,3-cd)pyrene	1.107	1.205	8.160	7.5	9
Dibenz(a,h)anthracene	1.150	1.284	8.370	7.5	12
Benzo(g,h,i)perylene	1.155	1.236	8.030	7.5	7
Total PAHs	1.061	1.152	146.520	135.0	9
2-Fluorophenol	1.467	1.532	15.670	15.0	4

FORM VII SV-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: 10/31/17 Time: 09:37

Lab File ID: dj1631.d Init. Calib. Date(s): 10/30/17 10/31/17

Init. Calib. Times(s): 21:05 00:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.931	2.013	15.640	15.0	4
Nitrobenzene-d5	0.468	0.485	15.570	15.0	4
2-Fluorobiphenyl	1.511	1.572	15.610	15.0	4
2,4,6-Tribromophenol	0.189	0.201	15.950	15.0	6
Terphenyl-d14	0.737	0.772	15.710	15.0	5
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/17oct30a.b/dj1611.d **
/chem/HP19760.i/17oct30a.b/dj1612.d
/chem/HP19760.i/17oct30a.b/dj1613.d
/chem/HP19760.i/17oct30a.b/dj1614.d
/chem/HP19760.i/17oct30a.b/dj1615.d
/chem/HP19760.i/17oct30a.b/dj1616.d
/chem/HP19760.i/17oct30a.b/dj1617.d
/chem/HP19760.i/17oct30a.b/dj1618.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/17oct31.b/dj1631.d

Area Summary

File ID:

Internal Standard Name	dj1631.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	193016	167612	83806	335224	Yes
Naphthalene-d8	730635	633145	316572	1266290	Yes
Acenaphthene-d10	390968	334248	167124	668496	Yes
Phenanthrene-d10	718246	603710	301855	1207420	Yes
Pyrene-d10	860639	734686	367343	1469372	Yes
Perylene-d12	722922	622975	311488	1245950	Yes

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

RT Summary

File ID:

Internal Standard Name	dj1631.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.989	6.989	Yes
Naphthalene-d8	8.930	8.930	Yes
Acenaphthene-d10	11.704	11.710	Yes
Phenanthrene-d10	13.593	13.599	Yes
Pyrene-d10	15.603	15.615	Yes
Perylene-d12	20.132	20.150	Yes

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

Comments: _____

Report generated on 10/31/2017 at 10:22

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP20296 Calibration Date: 10/25/17 Time: 08:46

Lab File ID: lj1241.d Init. Calib. Date(s): 10/12/17 10/12/17

Init. Calib. Times(s): 17:35 22:01

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.669	0.656	7.360	7.5	-2
N-Nitrosodimethylamine	1.035	0.963	6.980	7.5	-7
Pyridine	1.809	1.576	6.530	7.5	-13
2-Picoline	1.951	1.919	7.380	7.5	-2
N-Nitrosomethylethylamine	0.803	0.748	6.990	7.5	-7
Methyl methanesulfonate	0.765	0.742	7.280	7.5	-3
N-Nitrosodiethylamine	0.769	0.764	7.450	7.5	-1
Ethyl methanesulfonate	0.788	0.805	7.670	7.5	2
Benzaldehyde	1.503	1.291	6.440	7.5	-14
Phenol	2.324	2.343	7.560	7.5	1
Aniline	2.775	2.738	7.400	7.5	-1
a-methylstyrene	1.673	1.702	7.630	7.5	2
bis(2-Chloroethyl)ether	1.698	1.705	7.530	7.5	0
2-Chlorophenol	1.524	1.567	7.710	7.5	3
1,3-Dichlorobenzene	1.667	1.753	7.890	7.5	5
1,4-Dichlorobenzene	1.678	1.771	7.910	7.5	6
Benzyl alcohol	1.089	1.059	7.300	7.5	-3
1,2-Dichlorobenzene	1.595	1.663	7.820	7.5	4
Indene	2.987	3.035	7.620	7.5	2
2-Methylphenol	1.520	1.554	7.670	7.5	2
2,2'-oxybis(1-Chloropropane)	2.029	1.885	6.970	7.5	-7
bis(2-Chloroisopropyl)ether	2.029	1.885	6.970	7.5	-7
N-Nitrosopyrrolidine	0.811	0.793	7.330	7.5	-2
Acetophenone	2.329	2.331	7.500	7.5	0
4-Methylphenol	1.612	1.789	8.330	7.5	11
Total Cresols	1.566	1.671	15.990	15.0	7
N-Nitroso-di-n-propylamine	1.231	1.208	7.360	7.5	-2
N-Nitrosomorpholine	0.938	0.876	7.000	7.5	-7
o-Toluidine	2.675	2.784	7.810	7.5	4
Hexachloroethane	0.680	0.698	7.690	7.5	3
Nitrobenzene	0.472	0.446	7.090	7.5	-5
N-Nitrosopiperidine	0.200	0.204	7.630	7.5	2
Isophorone	0.833	0.817	7.350	7.5	-2
2-Nitrophenol	0.183	0.196	8.020	7.5	7
2,4-Dimethylphenol	0.419	0.424	7.590	7.5	1
O,O,O-Triethylphosphorothioate	0.173	0.191	8.290	7.5	11

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP20296 Calibration Date: 10/25/17 Time: 08:46

Lab File ID: lj1241.d Init. Calib. Date(s): 10/12/17 10/12/17

Init. Calib. Times(s): 17:35 22:01

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.521	0.529	7.610	7.5	1
Benzoic acid	0.200	0.182	8.950	10.0	-10
1,2,3,4-Tetrahydronaphthalene	0.617	0.613	7.450	7.5	-1
2,4-Dichlorophenol	0.308	0.327	7.940	7.5	6
1,2,4-Trichlorobenzene	0.334	0.349	7.840	7.5	5
Naphthalene	1.140	1.163	7.650	7.5	2
4-Chloroaniline	0.471	0.468	7.460	7.5	-1
2,6-Dichlorophenol	0.301	0.314	7.830	7.5	4
Hexachloropropene	0.164	0.163	7.470	7.5	0
Hexachlorobutadiene	0.176	0.195	8.300	7.5	11
Quinoline	0.706	0.728	7.740	7.5	3
Caprolactam	0.107	0.099	6.910	7.5	-8
N-Nitrosodi-n-butylamine	0.343	0.370	8.100	7.5	8
4-Chloro-3-methylphenol	0.356	0.372	7.850	7.5	5
Safrole	0.282	0.303	8.060	7.5	8
2-Methylnaphthalene	0.745	0.804	8.090	7.5	8
1-Methylnaphthalene	0.681	0.720	7.930	7.5	6
Hexachlorocyclopentadiene	0.291	0.224	5.770	7.5	-23
1,2,4,5-Tetrachlorobenzene	0.601	0.629	7.850	7.5	5
cis-Isosafrole	0.547	0.554	1.290	1.3	1
2,4,6-Trichlorophenol	0.381	0.395	7.760	7.5	3
2,4,5-Trichlorophenol	0.417	0.425	7.660	7.5	2
trans-Isosafrole	0.486	0.493	6.310	6.2	1
Isosafrole	0.496	0.503	7.610	7.5	1
1,1'-Biphenyl	1.620	1.580	7.320	7.5	-2
2-Chloronaphthalene	1.281	1.291	7.560	7.5	1
1-Chloronaphthalene	1.179	1.183	7.520	7.5	0
Diphenyl ether	0.839	0.893	7.990	7.5	6
2-Nitroaniline	0.384	0.406	7.940	7.5	6
1,4-Naphthoquinone	0.513	0.515	7.540	7.5	1
1,4-Dinitrobenzene	0.190	0.193	7.610	7.5	1
Dimethylphthalate	1.384	1.448	7.850	7.5	5
1,3-Dinitrobenzene	0.216	0.219	7.580	7.5	1
2,6-Dinitrotoluene	0.293	0.326	8.350	7.5	11
Acenaphthylene	1.775	1.836	7.760	7.5	3
3-Nitroaniline	0.343	0.332	7.280	7.5	-3

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP20296 Calibration Date: 10/25/17 Time: 08:46

Lab File ID: lj1241.d Init. Calib. Date(s): 10/12/17 10/12/17

Init. Calib. Times(s): 17:35 22:01

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.353	1.361	7.540	7.5	1
2,4-Dinitrophenol	0.168	0.126	7.470	10.0	-25
4-Nitrophenol	0.236	0.196	6.220	7.5	-17
Pentachlorobenzene	0.452	0.481	7.990	7.5	7
2,4-Dinitrotoluene	0.407	0.422	7.780	7.5	4
2,4_2,6-Dinitrotoluenes	0.342	0.374	16.130	15.0	8
Dibenzofuran	1.749	1.829	7.840	7.5	5
1-Naphthylamine	1.370	1.293	7.080	7.5	-6
2,3,4,6-Tetrachlorophenol	0.288	0.309	8.030	7.5	7
2-Naphthylamine	1.325	1.235	6.990	7.5	-7
Diethylphthalate	1.374	1.447	7.900	7.5	5
Thionazin	0.277	0.291	7.870	7.5	5
Fluorene	1.421	1.469	7.750	7.5	3
4-Chlorophenyl-phenylether	0.630	0.682	8.110	7.5	8
5-Nitro-o-toluidine	0.384	0.396	7.730	7.5	3
4-Nitroaniline	0.354	0.341	7.220	7.5	-4
4,6-Dinitro-2-methylphenol	0.126	0.108	6.430	7.5	-14
N-Nitrosodiphenylamine (1)	0.665	0.679	7.650	7.5	2
NDPA as diphenylamine	0.665	0.679	7.650	7.5	2
1,2-Diphenylhydrazine	0.938	0.872	6.970	7.5	-7
Tetraethyldithiopyrophosphate	0.156	0.152	7.270	7.5	-3
1,3,5-Trinitrobenzene	0.078	0.076	7.340	7.5	-2
Diallate (peak 1)	0.418	0.408	6.070	6.2	-2
Phorate	0.585	0.600	7.700	7.5	3
Phenacetin	0.456	0.430	7.090	7.5	-6
4-Bromophenyl-phenylether	0.182	0.199	8.200	7.5	9
Diallate (peak 2)	0.340	0.326	1.220	1.3	-4
Diallate trans/cis	0.405	0.394	7.290	7.5	-3
Hexachlorobenzene	0.177	0.200	8.460	7.5	13
Dimethoate	0.378	0.356	7.050	7.5	-6
Atrazine	0.204	0.204	7.540	7.5	1
Pentachlorophenol	0.114	0.110	7.210	7.5	-4
4-Aminobiphenyl	0.216	0.208	7.210	7.5	-4
Pentachloronitrobenzene	0.085	0.091	8.040	7.5	7
Pronamide	0.355	0.383	8.090	7.5	8
Dinoseb	0.175	0.165	7.060	7.5	-6

(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: HP20296 Calibration Date: 10/25/17 Time: 08:46

Lab File ID: lj1241.d Init. Calib. Date(s): 10/12/17 10/12/17

Init. Calib. Times(s): 17:35 22:01

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.171	1.192	7.630	7.5	2
Anthracene	1.149	1.196	7.810	7.5	4
Carbazole	1.105	1.086	7.370	7.5	-2
Methyl parathion	0.284	0.283	7.470	7.5	0
Di-n-butylphthalate	1.386	1.428	7.730	7.5	3
Parathion	0.178	0.180	7.560	7.5	1
4-Nitroquinoline-1-oxide	0.121	0.069	4.450	7.5	-41
Octachlorostyrene	0.064	0.072	8.440	7.5	12
Isodrin	0.131	0.136	7.780	7.5	4
Fluoranthene	1.254	1.295	7.750	7.5	3
Benzidine	0.846	0.684	18.200	22.5	-19
Pyrene	1.183	1.211	7.680	7.5	2
p-Dimethylaminoazobenzene	0.155	0.166	8.050	7.5	7
Chlorobenzilate	0.373	0.373	7.490	7.5	0
3,3'-Dimethylbenzidine	0.774	0.666	6.450	7.5	-14
Butylbenzylphthalate	0.554	0.556	7.520	7.5	0
2-Acetylaminofluorene	0.493	0.397	6.030	7.5	-20
3,3'-Dichlorobenzidine	0.389	0.341	6.570	7.5	-12
4,4'-Methylenebis(2-chloroanil	0.201	0.182	6.790	7.5	-10
Benzo(a)anthracene	1.063	1.035	7.300	7.5	-3
Chrysene	0.979	0.962	7.370	7.5	-2
bis(2-Ethylhexyl)phthalate	0.809	0.803	7.440	7.5	-1
6-Methylchrysene	0.704	0.664	7.080	7.5	-6
Di-n-octylphthalate	1.854	2.041	8.260	7.5	10
Benzo(b)fluoranthene	1.301	1.387	8.000	7.5	7
7,12-Dimethylbenz[a]anthracene	0.556	0.616	8.310	7.5	11
Benzo(k)fluoranthene	1.244	1.391	8.390	7.5	12
Benzo(a)pyrene	1.217	1.270	7.830	7.5	4
3-Methylcholanthrene	0.431	0.437	7.590	7.5	1
Dibenz(a,h)acridine	0.986	0.883	6.720	7.5	-10
Dibenz(a,j)acridine	1.023	0.920	6.750	7.5	-10
Indeno(1,2,3-cd)pyrene	1.105	1.006	6.830	7.5	-9
Dibenz(a,h)anthracene	1.118	1.051	7.050	7.5	-6
Benzo(g,h,i)perylene	1.136	1.014	6.700	7.5	-11
Total PAHs	1.054	1.204	120.660	135.0	-11
2-Fluorophenol	1.555	1.552	14.970	15.0	0

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP20296 Calibration Date: 10/25/17 Time: 08:46

Lab File ID: lj1241.d Init. Calib. Date(s): 10/12/17 10/12/17

Init. Calib. Times(s): 17:35 22:01

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.053	2.031	14.840	15.0	-1
Nitrobenzene-d5	0.470	0.447	14.240	15.0	-5
2-Fluorobiphenyl	1.461	1.536	15.770	15.0	5
2,4,6-Tribromophenol	0.131	0.143	16.310	15.0	9
Terphenyl-d14	0.727	0.777	16.040	15.0	7
			Average %Drift:		6

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/17oct12d.b/lj0481d.d **
/chem/HP20296.i/17oct12d.b/lj0482d.d
/chem/HP20296.i/17oct12d.b/lj0483d.d
/chem/HP20296.i/17oct12d.b/lj0484d.d
/chem/HP20296.i/17oct12d.b/lj0485d.d
/chem/HP20296.i/17oct12d.b/lj0486d.d
/chem/HP20296.i/17oct12d.b/lj0487d.d
/chem/HP20296.i/17oct12d.b/lj0488d.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/17oct25.b/lj1241.d

Area Summary

File ID:

Internal Standard Name	lj1241.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	182370	183794	91897	367588	Yes
Naphthalene-d8	735261	715672	357836	1431344	Yes
Acenaphthene-d10	418929	371349	185674	742698	Yes
Phenanthrene-d10	760076	660950	330475	1321900	Yes
Pyrene-d10	842577	759549	379774	1519098	Yes
Perylene-d12	544235	582640	291320	1165280	Yes

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

RT Summary

File ID:

Internal Standard Name	lj1241.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.791	6.978	No
Naphthalene-d8	8.765	8.963	No
Acenaphthene-d10	11.600	11.787	No
Phenanthrene-d10	13.520	13.712	No
Pyrene-d10	15.531	15.761	No
Perylene-d12	20.077	20.339	No

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

Comments: * Column Maintenance

BB 10/26/17

Report generated on 10/25/2017 at 09:20

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

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

Lab File ID (Standard): dj1211.d Date Analyzed: 10/24/17

Instrument ID: HP19760 Time Analyzed: 23:05

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	202430	6.723	777633	8.658	411719	11.450
UPPER LIMIT	404860	7.223	1555266	9.158	823438	11.950
LOWER LIMIT	101215	6.223	388817	8.158	205860	10.950
LLI SAMPLE NO.						
01 SBLKWE290	180002	6.723	680919	8.658	354016	11.444
02 290WELCS	187570	6.729	708701	8.658	375921	11.450
03 290WELCSD	175522	6.729	650934	8.658	340246	11.450
04 9262029	189657	6.723	733775	8.658	380699	11.450
05 9256527DL	183826	6.723	728216	8.658	369524	11.444
06 9256534	196182	6.723	745202	8.658	413308	11.450
07 9256541	186833	6.723	712095	8.658	369586	11.450
08 9256542	190345	6.723	726398	8.658	381731	11.444
09 9271227	203424	6.723	765056	8.658	418396	11.444
10 9271228	187714	6.723	715702	8.658	396398	11.444
11 9271233	200043	6.723	763927	8.658	412883	11.444
12 9272417	202591	6.723	765260	8.658	401612	11.444
13 9272418	188642	6.723	713218	8.658	369372	11.444
14 9272488	184422	6.723	697348	8.658	360898	11.444
15 9272489	180953	6.723	698424	8.658	364378	11.444
16 9272490	185421	6.723	716259	8.658	374233	11.444
17 9261885	222227	6.723	850187	8.658	444641	11.444

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.:_____ SDG No.:_____

Lab File ID (Standard): dj1211.d Date Analyzed: 10/24/17

Instrument ID: HP19760 Time Analyzed: 23:05

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	744504	13.338	906937	15.297	852090	19.761
UPPER LIMIT	1489008	13.838	1813874	15.797	1704180	20.261
LOWER LIMIT	372252	12.838	453469	14.797	426045	19.261
LLI SAMPLE NO.						
01 SBLKWE290	635530	13.338	742199	15.291	621670	19.761
02 290WELCS	659797	13.338	840838	15.297	797800	19.767
03 290WELCSD	616137	13.338	784657	15.297	765288	19.767
04 9262029	688151	13.338	817370	15.291	687489	19.761
05 9256527DL	678559	13.338	799600	15.291	678067	19.761
06 9256534	613840	13.338	868723	15.297	858302	19.767
07 9256541	654895	13.338	757006	15.291	706296	19.761
08 9256542	682437	13.338	789681	15.291	700240	19.761
09 9271227	752941	13.338	884975	15.291	760533	19.762
10 9271228	715124	13.338	846655	15.291	769193	19.761
11 9271233	734275	13.338	882416	15.291	771337	19.762
12 9272417	717212	13.338	831528	15.291	724428	19.762
13 9272418	647627	13.338	754938	15.291	670576	19.761
14 9272488	634383	13.338	762046	15.291	738551	19.762
15 9272489	645644	13.338	763283	15.291	648159	19.761
16 9272490	671400	13.338	773651	15.291	653770	19.761
17 9261885	790159	13.338	855105	15.291	801499	19.762

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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

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

Lab File ID (Standard): dj1631.d Date Analyzed: 10/31/17

Instrument ID: HP19760 Time Analyzed: 09:37

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	193016	6.989	730635	8.930	390968	11.704
UPPER LIMIT	386032	7.489	1461270	9.430	781936	12.204
LOWER LIMIT	96508	6.489	365318	8.430	195484	11.204
LLI SAMPLE NO.						
01 SBLKWI299	156014	6.989	588548	8.924	302765	11.704
02 SBLKWZ299	156014	6.989	588548	8.924	302765	11.704
03 299WILCS	150237	6.989	583253	8.924	307529	11.710
04 299WZLCS	150237	6.989	583253	8.924	307529	11.710
05 SBLKWH299	157840	6.989	604417	8.924	313921	11.704
06 299WHLCS	157950	6.994	608530	8.924	320993	11.704
07 299WHLCSD	160514	6.989	617332	8.924	328270	11.710
08 9262029RE	166908	6.989	648209	8.924	333511	11.704
09 9267528RE	157276	6.989	598627	8.924	315386	11.704
10 9267529RE	156449	6.989	602742	8.924	313507	11.704
11 9267530RE	154697	6.989	594326	8.924	310608	11.704
12 9267531RE	153072	6.989	589406	8.924	306133	11.704
13 9267532RE	155745	6.989	594257	8.924	309852	11.704
14 9267533RE	153473	6.989	585430	8.924	306181	11.704
15 9267536RE	159603	6.989	606138	8.924	319410	11.704
16 9267537RE	158459	6.989	611011	8.924	317763	11.704
17 9279647	164042	6.989	630483	8.924	327228	11.704

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.:_____ SDG No.:_____

Lab File ID (Standard): dj1631.d Date Analyzed: 10/31/17

Instrument ID: HP19760 Time Analyzed: 09:37

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	718246	13.593	860639	15.603	722922	20.132
UPPER LIMIT	1436492	14.093	1721278	16.103	1445844	20.632
LOWER LIMIT	359123	13.093	430320	15.103	361461	19.632
LLI SAMPLE NO.						
01 SBLKWI299	547231	13.593	643321	15.604	525118	20.132
02 SBLKWZ299	547231	13.593	643321	15.604	525118	20.132
03 299WILCS	594780	13.593	662596	15.603	618974	20.138
04 299WZLCS	594780	13.593	662596	15.603	618974	20.138
05 SBLKWH299	571301	13.593	668277	15.598	569326	20.132
06 299WHLCS	602523	13.592	685440	15.603	639560	20.138
07 299WHLCSD	612066	13.592	701592	15.603	624995	20.132
08 9262029RE	591149	13.593	704262	15.604	588661	20.132
09 9267528RE	568862	13.593	666826	15.603	548706	20.132
10 9267529RE	559740	13.587	648725	15.597	541895	20.132
11 9267530RE	563703	13.593	654903	15.598	540864	20.132
12 9267531RE	556695	13.593	656965	15.598	543531	20.132
13 9267532RE	563591	13.592	650152	15.597	538924	20.132
14 9267533RE	552595	13.587	637609	15.598	536310	20.132
15 9267536RE	583507	13.587	690996	15.598	565117	20.132
16 9267537RE	575482	13.587	667796	15.598	554524	20.132
17 9279647	574823	13.587	676930	15.598	543757	20.132

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.:_____ SDG No.:_____

Lab File ID (Standard): dj1631.d Date Analyzed: 10/31/17

Instrument ID: HP19760 Time Analyzed: 09:37

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	193016	6.989	730635	8.930	390968	11.704
UPPER LIMIT	386032	7.489	1461270	9.430	781936	12.204
LOWER LIMIT	96508	6.489	365318	8.430	195484	11.204
LLI SAMPLE NO.						
18 9279648	165434	6.989	626765	8.924	322811	11.704
19 9279649	168289	6.989	643330	8.924	329274	11.704

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.:_____ SDG No.:_____

Lab File ID (Standard): dj1631.d Date Analyzed: 10/31/17

Instrument ID: HP19760 Time Analyzed: 09:37

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	718246	13.593	860639	15.603	722922	20.132
	UPPER LIMIT	1436492	14.093	1721278	16.103	1445844	20.632
	LOWER LIMIT	359123	13.093	430320	15.103	361461	19.632
	LLI SAMPLE NO.						
18	9279648	579858	13.587	678225	15.598	556056	20.132
19	9279649	593625	13.587	686987	15.598	554479	20.132

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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

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

Lab File ID (Standard): lj1241.d Date Analyzed: 10/25/17

Instrument ID: HP20296 Time Analyzed: 08:46

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	182370	6.791	735261	8.765	418929	11.600
UPPER LIMIT	364740	7.291	1470522	9.265	837858	12.100
LOWER LIMIT	91185	6.291	367631	8.265	209465	11.100
LLI SAMPLE NO.						
01 SBLKWQ291	167363	6.791	659759	8.760	366462	11.594
02 291WQLCS	159125	6.796	616539	8.765	352459	11.599
03 9267619	163419	6.791	648271	8.759	363709	11.594
04 9267620MS	160917	6.796	639758	8.765	357727	11.599
05 9267621MSD	161392	6.796	641330	8.765	361493	11.600
06 SBLKWP286	170564	6.791	658550	8.765	373165	11.594
07 286WPLCS	168326	6.796	655474	8.765	381504	11.599
08 9262025	145038	6.791	567910	8.765	317018	11.599
09 9262026MS	154545	6.796	596105	8.765	342127	11.599
10 9262027MSD	152535	6.796	601605	8.765	343217	11.599
11 9262022	148240	6.796	577608	8.765	321657	11.600
12 9262023	151645	6.796	594460	8.765	329857	11.599
13 9262024	152409	6.796	593292	8.765	333707	11.599
14 9262028	148652	6.791	579659	8.765	326766	11.594
15 9262030	153952	6.796	607298	8.765	340438	11.599
16 9262031	154065	6.791	596738	8.765	334867	11.600
17 9262032	157396	6.796	617289	8.765	344300	11.599

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.:_____ SDG No.:_____

Lab File ID (Standard): lj1241.d Date Analyzed: 10/25/17

Instrument ID: HP20296 Time Analyzed: 08:46

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	760076	13.520	842577	15.531	544235	20.077
UPPER LIMIT	1520152	14.020	1685154	16.031	1088470	20.577
LOWER LIMIT	380038	13.020	421289	15.031	272118	19.577
LLI SAMPLE NO.						
01 SBLKWQ291	669655	13.515	711547	15.531	431733	20.077
02 291WQLCS	623078	13.520	719357	15.531	449417	20.077
03 9267619	655193	13.514	716054	15.531	431417	20.072
04 9267620MS	646681	13.520	734099	15.531	465915	20.077
05 9267621MSD	652206	13.520	733880	15.536	469476	20.077
06 SBLKWP286	680809	13.514	727352	15.531	444562	20.077
07 286WPLCS	687558	13.520	759894	15.536	474321	20.077
08 9262025	572766	13.520	628024	15.531	375514	20.077
09 9262026MS	637710	13.520	693459	15.536	441202	20.077
10 9262027MSD	627313	13.520	697309	15.536	440675	20.077
11 9262022	583086	13.520	632219	15.531	381787	20.077
12 9262023	606545	13.520	651310	15.531	387258	20.077
13 9262024	598553	13.520	667922	15.531	373474	20.077
14 9262028	586522	13.520	636303	15.531	371505	20.077
15 9262030	608911	13.520	666092	15.531	387677	20.077
16 9262031	603939	13.520	650318	15.531	372557	20.077
17 9262032	622116	13.520	667549	15.531	386506	20.077

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.:_____ SDG No.:_____

Lab File ID (Standard): lj1241.d Date Analyzed: 10/25/17

Instrument ID: HP20296 Time Analyzed: 08:46

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	182370	6.791	735261	8.765	418929	11.600
UPPER LIMIT	364740	7.291	1470522	9.265	837858	12.100
LOWER LIMIT	91185	6.291	367631	8.265	209465	11.100
LLI SAMPLE NO.						
18 9262033	157123	6.791	628011	8.765	349780	11.600
19 9262034	146946	6.796	574479	8.765	318420	11.599

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.:_____ SDG No.:_____

Lab File ID (Standard): lj1241.d Date Analyzed: 10/25/17

Instrument ID: HP20296 Time Analyzed: 08:46

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	760076	13.520	842577	15.531	544235	20.077
	UPPER LIMIT	1520152	14.020	1685154	16.031	1088470	20.577
	LOWER LIMIT	380038	13.020	421289	15.031	272118	19.577
	LLI SAMPLE NO.						
18	9262033	624736	13.520	676521	15.531	382485	20.077
19	9262034	573479	13.514	617648	15.531	355888	20.077

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

Fraction: Semivolatiles by GC/MS

14241: 3 SVOCs 8270D Analyte Name	Default MDL	Default LOQ	Units
2,6-Dinitrotoluene	0.5	10	ug/l
2,4-Dinitrotoluene	1	10	ug/l
Diethylphthalate	2	5	ug/l

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1252.d
Injection date and time: **25-OCT-2017 14:25**
Data file Sample Info. Line: 16C1-;9262022;1;0;SAMPLE;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796	(-0.005)	974	152	148240	(-19)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	577608	(-21)	5.00	
113) Acenaphthene-d10	11.600	(0.000)	1872	164	321657	(-23)	5.00	
153) Phenanthrene-d10	13.520	(0.000)	2231	188	583086	(-23)	5.00	
175) Pyrene-d10	15.531	(0.000)	2607	212	632219	(-25)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	381787	(-30)	5.00	

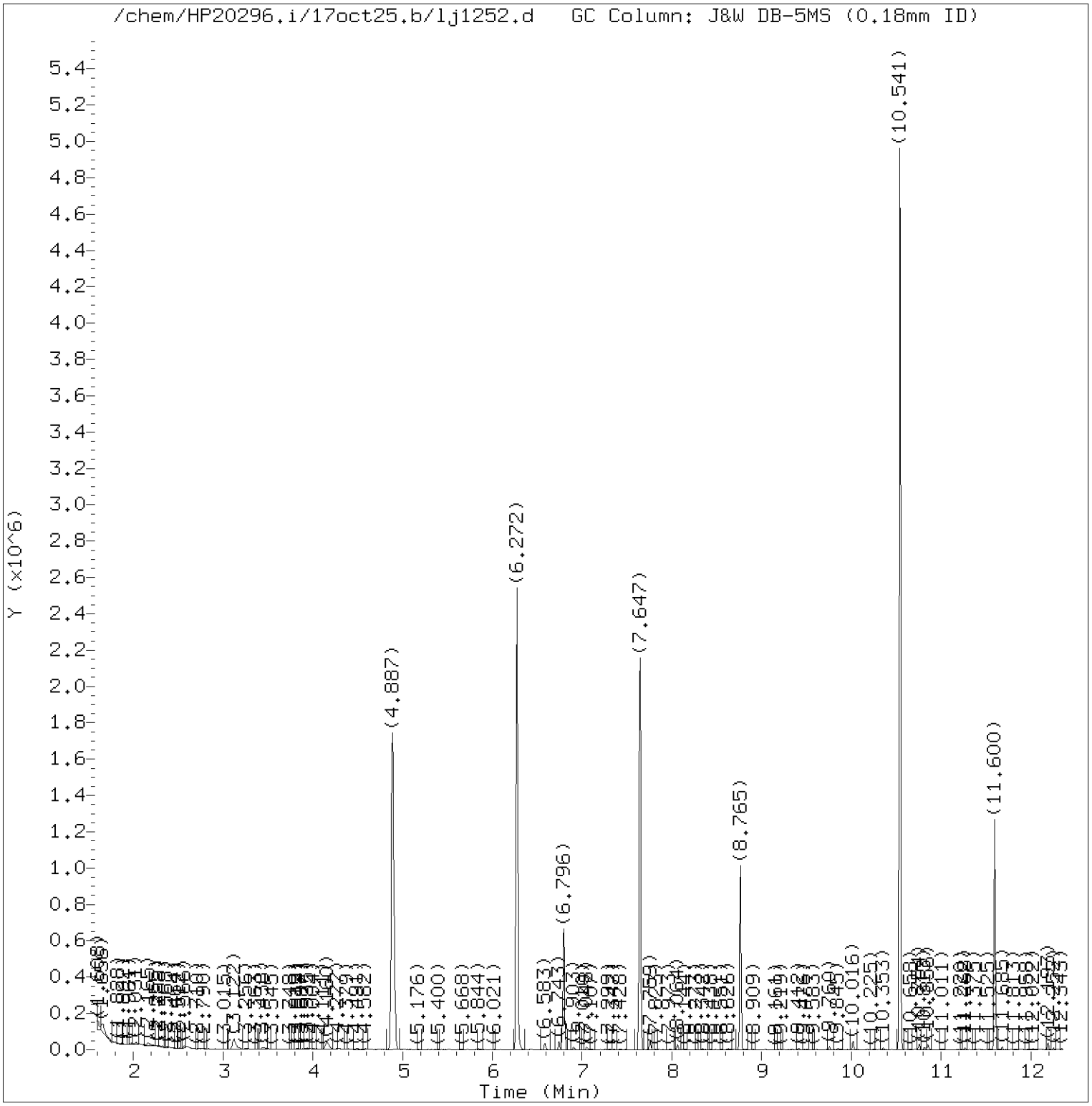
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887	(0.001)	112	1062446	23.045	46%		10 - 83
17) Phenol-d6	(1)	6.272	(0.001)	99	1326632	21.800	44%		10 - 69
44) Nitrobenzene-d5	(2)	7.647	(0.000)	82	975928	17.962	72%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.541	(0.000)	172	1899501	20.208	81%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.648	(0.000)	330	390309	46.219	92%		13 - 149
179) Terphenyl-d14	(5)	15.852	(0.000)	244	2031724	22.114	88%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

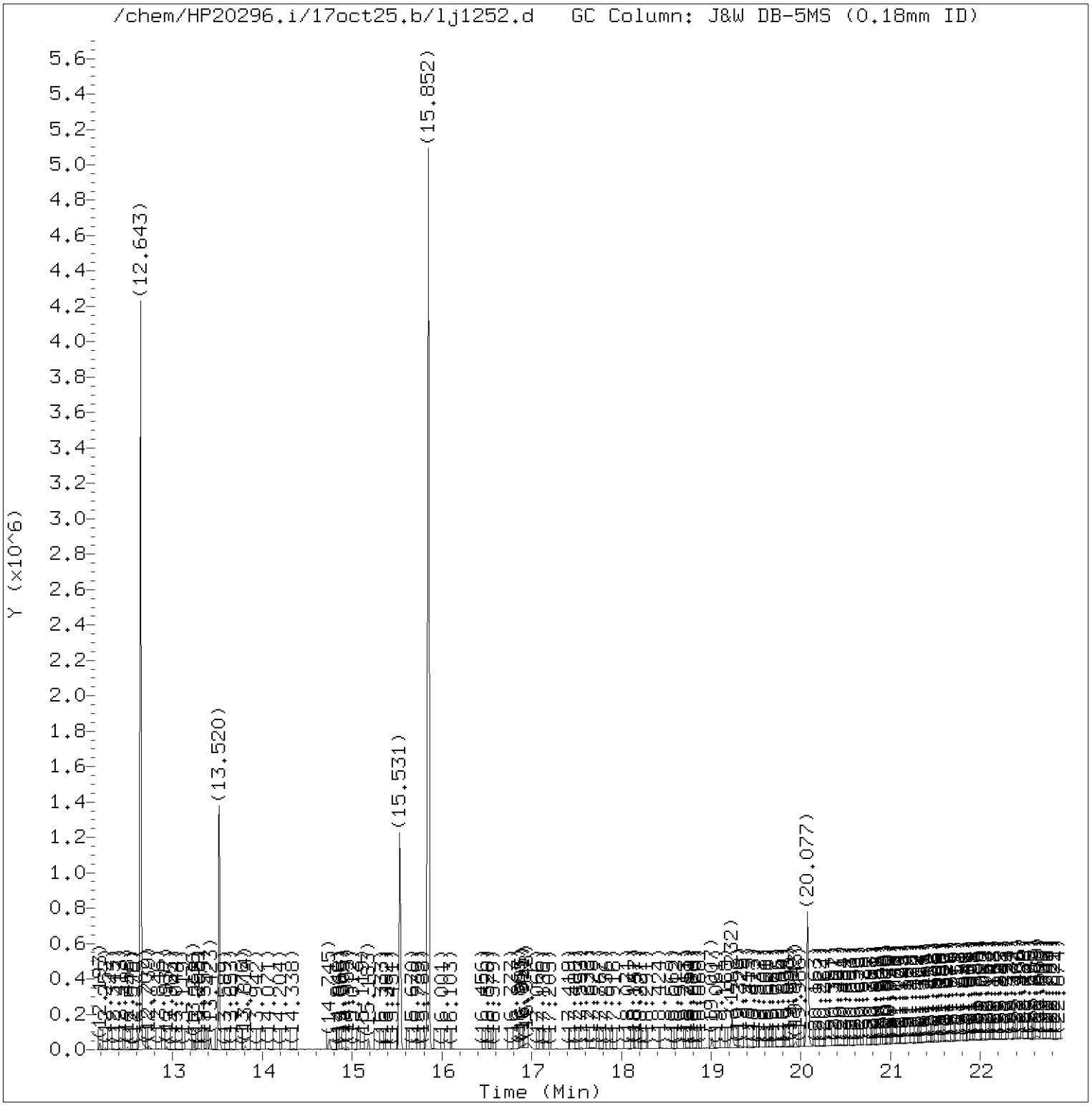
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1252.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16C1- Lab Sample ID: 9262022

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1252.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16C1- Lab Sample ID: 9262022

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1252.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16C1- Lab Sample ID: 9262022

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	1062446	23.045
17)$Phenol-d6	(1)	6.272	99	1326632	21.800
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	148240	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	975928	17.962
65)*Naphthalene-d8	(2)	8.765	136	577608	5.000
93)$2-Fluorobiphenyl	(3)	10.541	172	1899501	20.208
113)*Acenaphthene-d10	(3)	11.600	164	321657	5.000
135)$2,4,6-Tribromophenol	(3)	12.648	330	390309	46.219
153)*Phenanthrene-d10	(4)	13.520	188	583086	5.000
175)*Pyrene-d10	(5)	15.531	212	632219	5.000
179)$Terphenyl-d14	(5)	15.852	244	2031724	22.114
213)*Perylene-d12	(6)	20.077	264	381787	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1253.d Injection date and time: **25-OCT-2017 14:53**
Data file Sample Info. Line: 16MW8;9262023;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796	(-0.005)	974	152	151645	(-17)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	594460	(-19)	5.00	
113) Acenaphthene-d10	11.599	(0.000)	1872	164	329857	(-21)	5.00	
153) Phenanthrene-d10	13.520	(0.000)	2231	188	606545	(-20)	5.00	
175) Pyrene-d10	15.531	(0.000)	2607	212	651310	(-23)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	387258	(-29)	5.00	

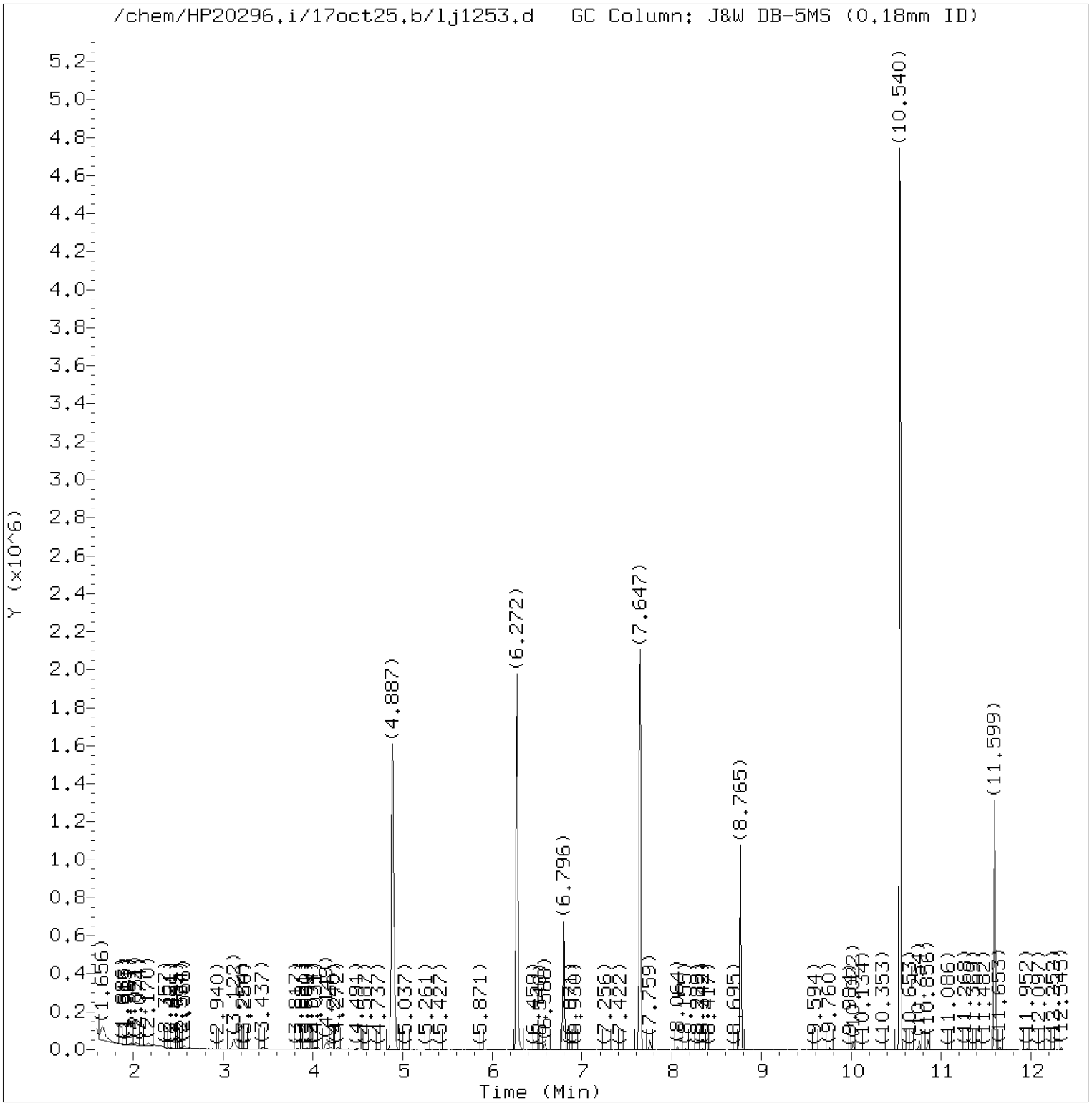
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887	(0.001)	112	947421	20.089	40%		10 - 83
17) Phenol-d6	(1)	6.272	(0.001)	99	1047832	16.832	34%		10 - 69
44) Nitrobenzene-d5	(2)	7.647	(0.000)	82	944780	16.895	68%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540	(0.000)	172	1853732	19.231	77%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642	(0.000)	330	399043	46.078	92%		13 - 149
179) Terphenyl-d14	(5)	15.846	(0.000)	244	1401708	14.809	59%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

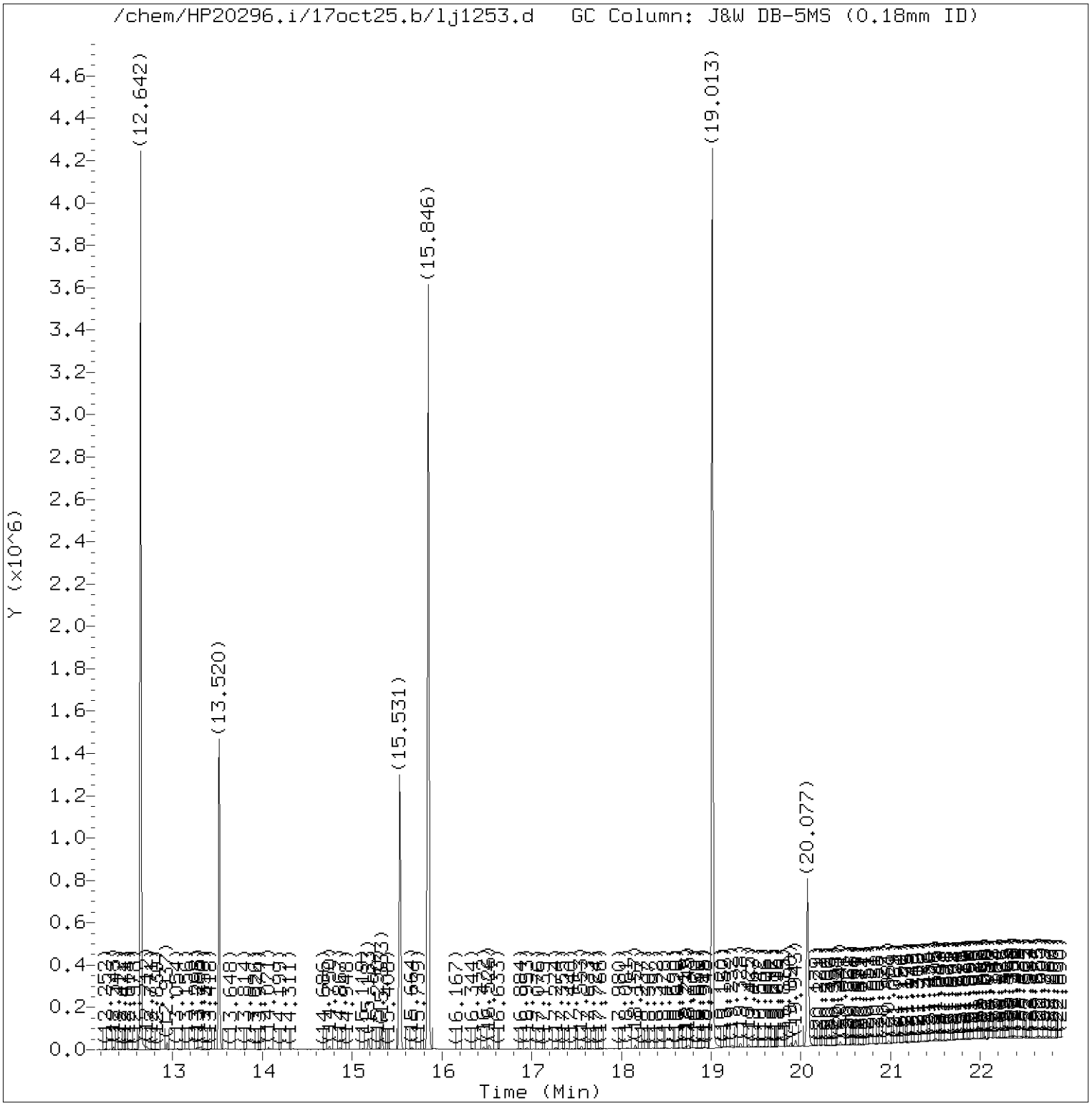
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1253.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW8 Lab Sample ID: 9262023

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1253.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW8 Lab Sample ID: 9262023

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1253.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 14:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW8 Lab Sample ID: 9262023

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	947421	20.089
17)$Phenol-d6	(1)	6.272	99	1047832	16.832
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	151645	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	944780	16.895
65)*Naphthalene-d8	(2)	8.765	136	594460	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1853732	19.231
113)*Acenaphthene-d10	(3)	11.599	164	329857	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	399043	46.078
153)*Phenanthrene-d10	(4)	13.520	188	606545	5.000
175)*Pyrene-d10	(5)	15.531	212	651310	5.000
179)$Terphenyl-d14	(5)	15.846	244	1401708	14.809
213)*Perylene-d12	(6)	20.077	264	387258	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

16MW9 Lancaster Laboratories, Inc. Analysis Summary for GC/MS Semivolatiles 9262024

Data file: /chem/HP20296.i/17oct25.b/lj1254.d Injection date and time: **25-OCT-2017 15:21**
Data file Sample Info. Line: 16MW9;9262024;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796(-0.005)	974	152	152409 (-16)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	593292 (-19)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	333707 (-20)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	598553 (-21)	5.00	
175) Pyrene-d10	15.531(0.000)	2607	212	667922 (-21)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	373474 (-31)	5.00	

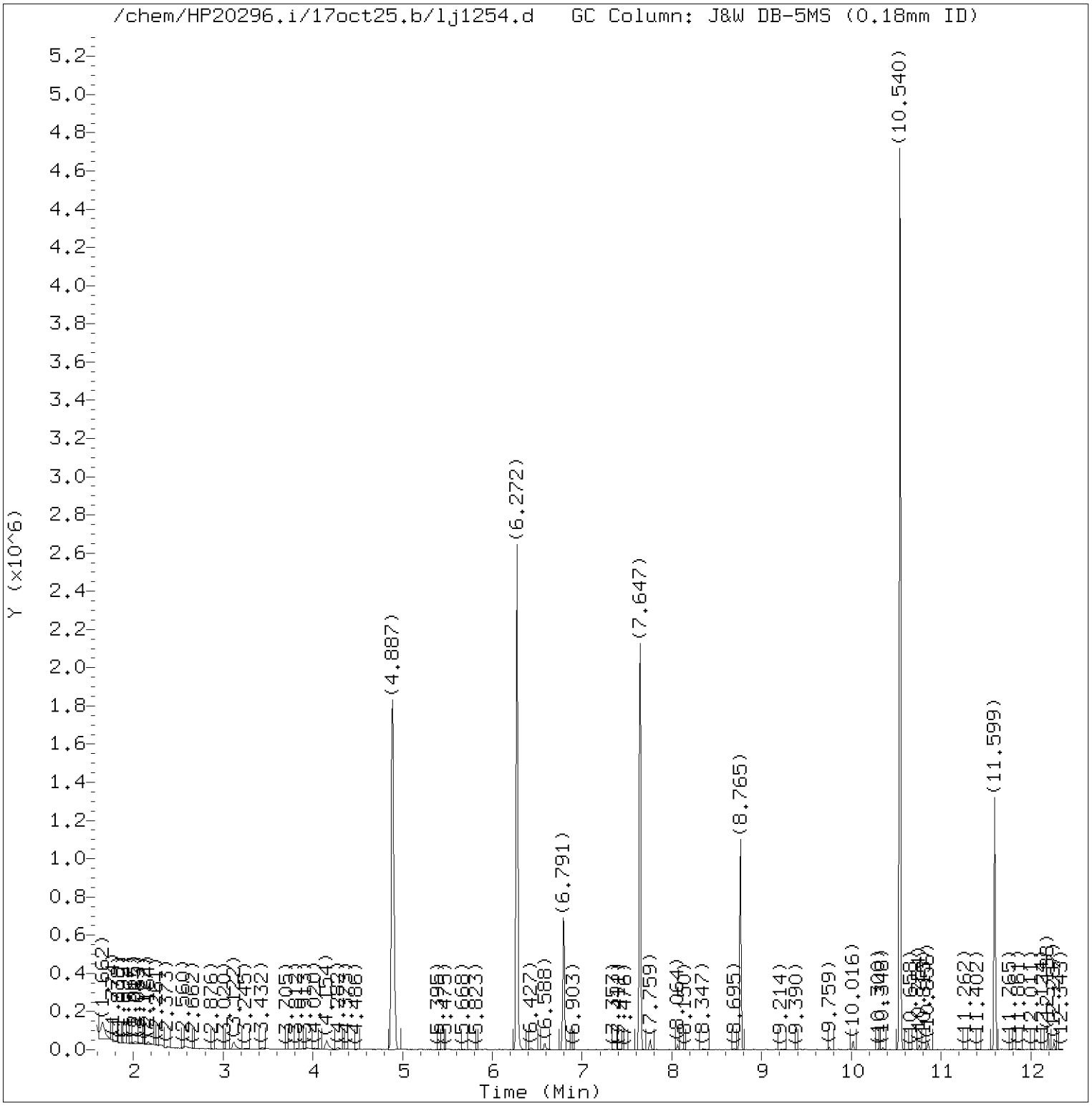
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887(0.001)	112	1094662	23.094	46%		10 - 83
17) Phenol-d6	(1)	6.272(0.001)	99	1349637	21.571	43%		10 - 69
44) Nitrobenzene-d5	(2)	7.647(0.000)	82	935287	16.759	67%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540(0.000)	172	1815082	18.613	74%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.648(0.000)	330	362926	41.424	83%		13 - 149
179) Terphenyl-d14	(5)	15.846(0.000)	244	1978715	20.386	82%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

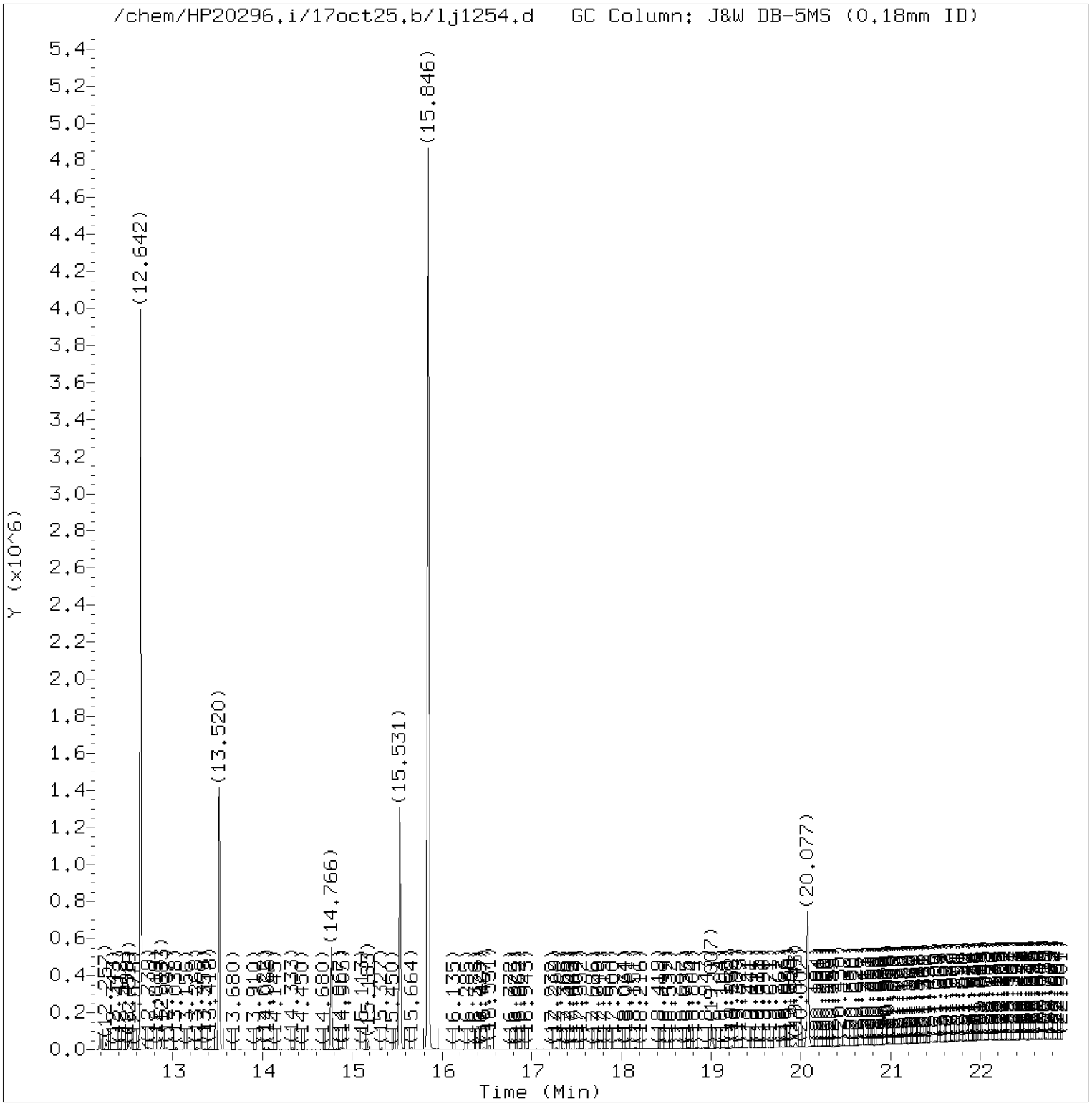
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1254.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW9 Lab Sample ID: 9262024

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1254.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW9 Lab Sample ID: 9262024

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1254.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16MW9 Lab Sample ID: 9262024

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	1094662	23.094
17)$Phenol-d6	(1)	6.272	99	1349637	21.571
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	152409	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	935287	16.759
65)*Naphthalene-d8	(2)	8.765	136	593292	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1815082	18.613
113)*Acenaphthene-d10	(3)	11.599	164	333707	5.000
135)$2,4,6-Tribromophenol	(3)	12.648	330	362926	41.424
153)*Phenanthrene-d10	(4)	13.520	188	598553	5.000
175)*Pyrene-d10	(5)	15.531	212	667922	5.000
179)$Terphenyl-d14	(5)	15.846	244	1978715	20.386
213)*Perylene-d12	(6)	20.077	264	373474	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1249.d
Injection date and time: **25-OCT-2017 13:01**
Data file Sample Info. Line: 16WC1;9262025;1;0;SAMPLE;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.791(0.000)	973	152	145038 (-20)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	567910 (-23)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	317018 (-24)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	572766 (-25)	5.00	
175) Pyrene-d10	15.531(0.000)	2607	212	628024 (-25)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	375514 (-31)	5.00	

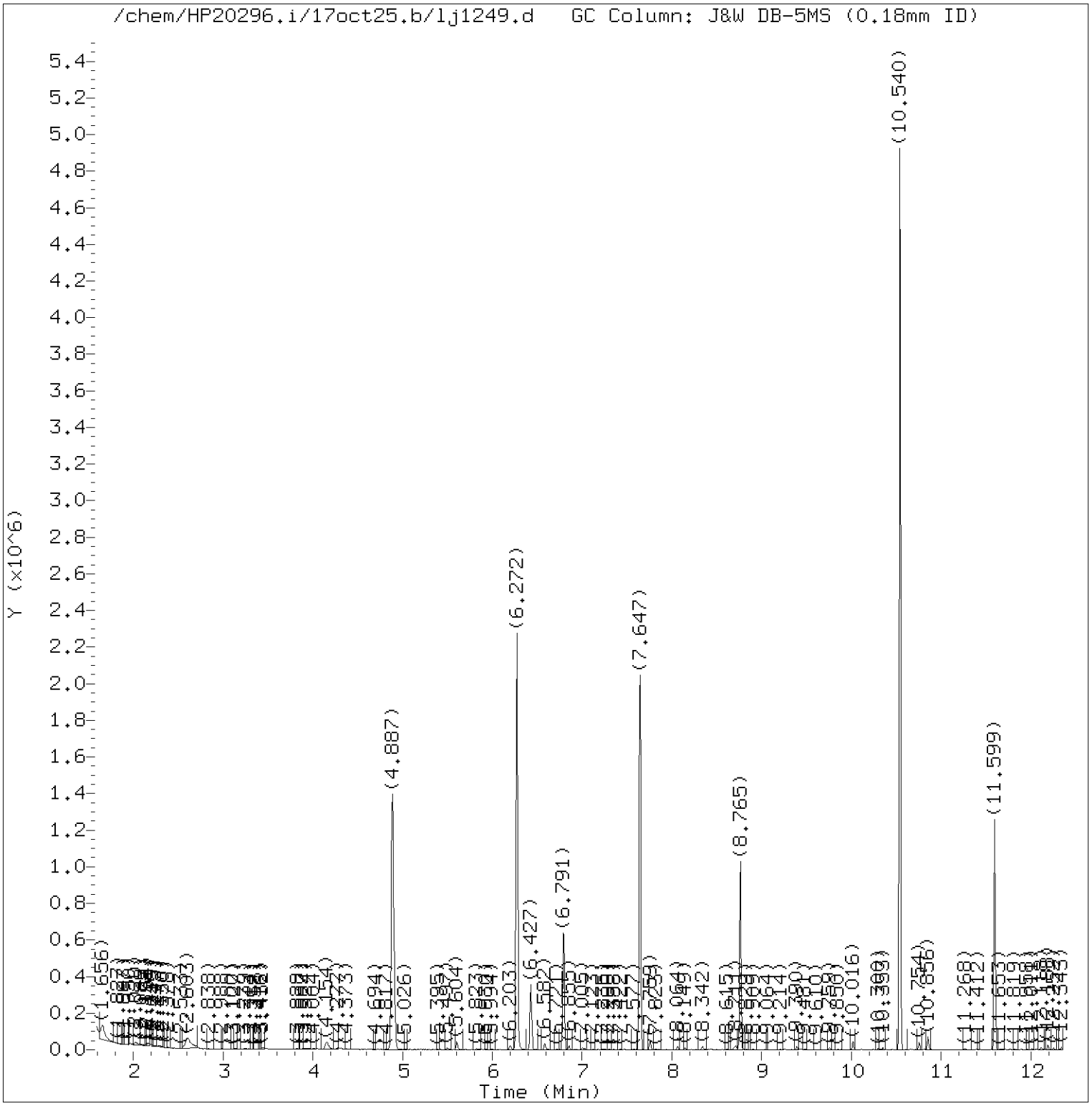
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887(0.000)	112	832719	18.461	37%		10 - 83
17) Phenol-d6	(1)	6.272(0.000)	99	1152933	19.364	39%		10 - 69
44) Nitrobenzene-d5	(2)	7.647(0.000)	82	959304	17.957	72%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540(0.000)	172	1811441	19.553	78%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642(0.000)	330	315368	37.891	76%		13 - 149
179) Terphenyl-d14	(5)	15.852(0.000)	244	1863591	20.419	82%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

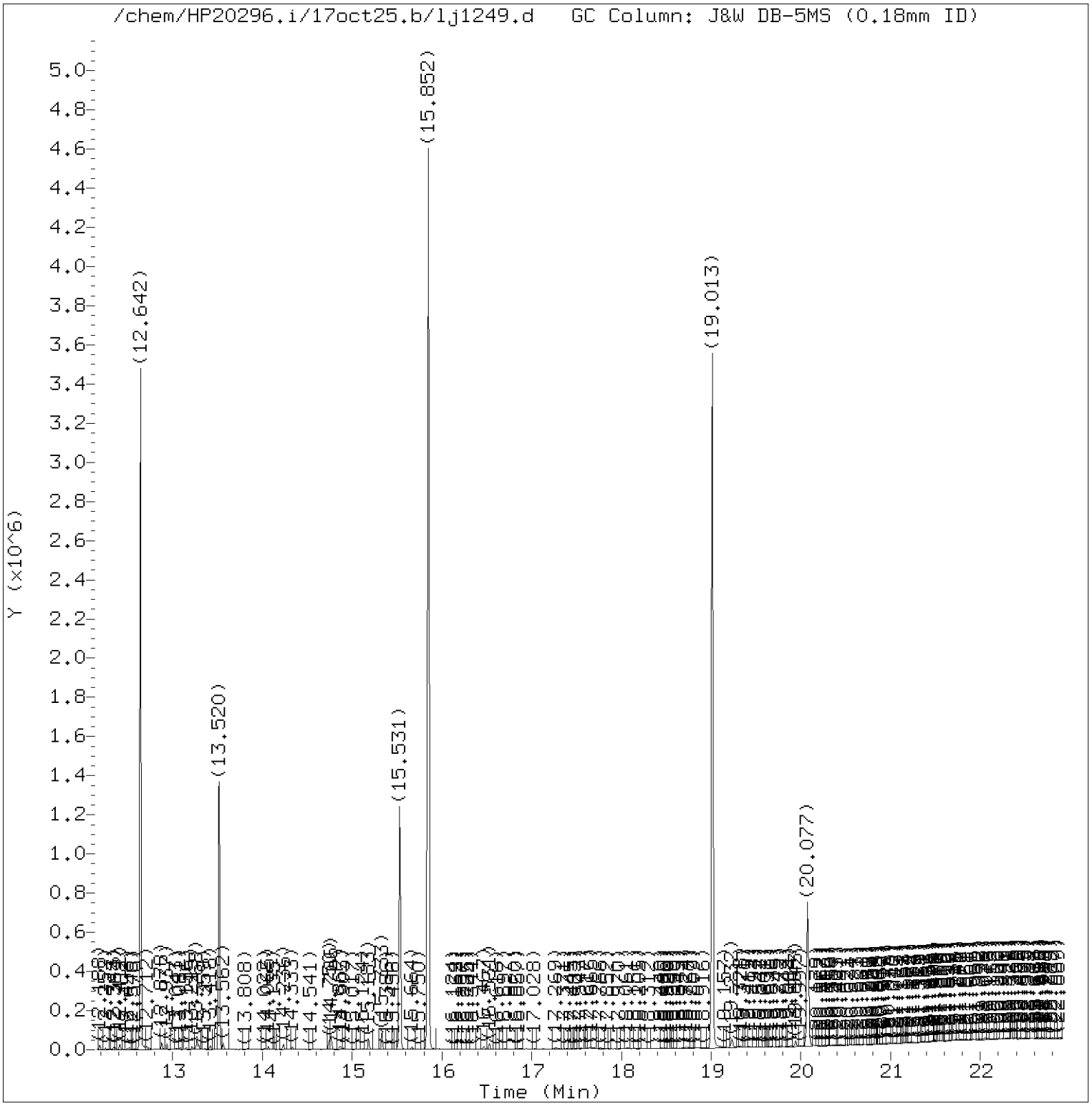
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1249.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1 Lab Sample ID: 9262025

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1249.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1 Lab Sample ID: 9262025

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1249.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1 Lab Sample ID: 9262025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	832719	18.461
17)$Phenol-d6	(1)	6.272	99	1152933	19.364
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	145038	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	959304	17.957
65)*Naphthalene-d8	(2)	8.765	136	567910	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1811441	19.553
113)*Acenaphthene-d10	(3)	11.599	164	317018	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	315368	37.891
153)*Phenanthrene-d10	(4)	13.520	188	572766	5.000
175)*Pyrene-d10	(5)	15.531	212	628024	5.000
179)$Terphenyl-d14	(5)	15.852	244	1863591	20.419
213)*Perylene-d12	(6)	20.077	264	375514	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1255.d
Data file Sample Info. Line: 16WFD;9262028;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Injection date and time: **25-OCT-2017 15:49**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.791	(0.000)	973	152	148652	(-18)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	579659	(-21)	5.00	
113) Acenaphthene-d10	11.594	(0.005)	1871	164	326766	(-22)	5.00	
153) Phenanthrene-d10	13.520	(0.000)	2231	188	586522	(-23)	5.00	
175) Pyrene-d10	15.531	(0.000)	2607	212	636303	(-24)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	371505	(-32)	5.00	

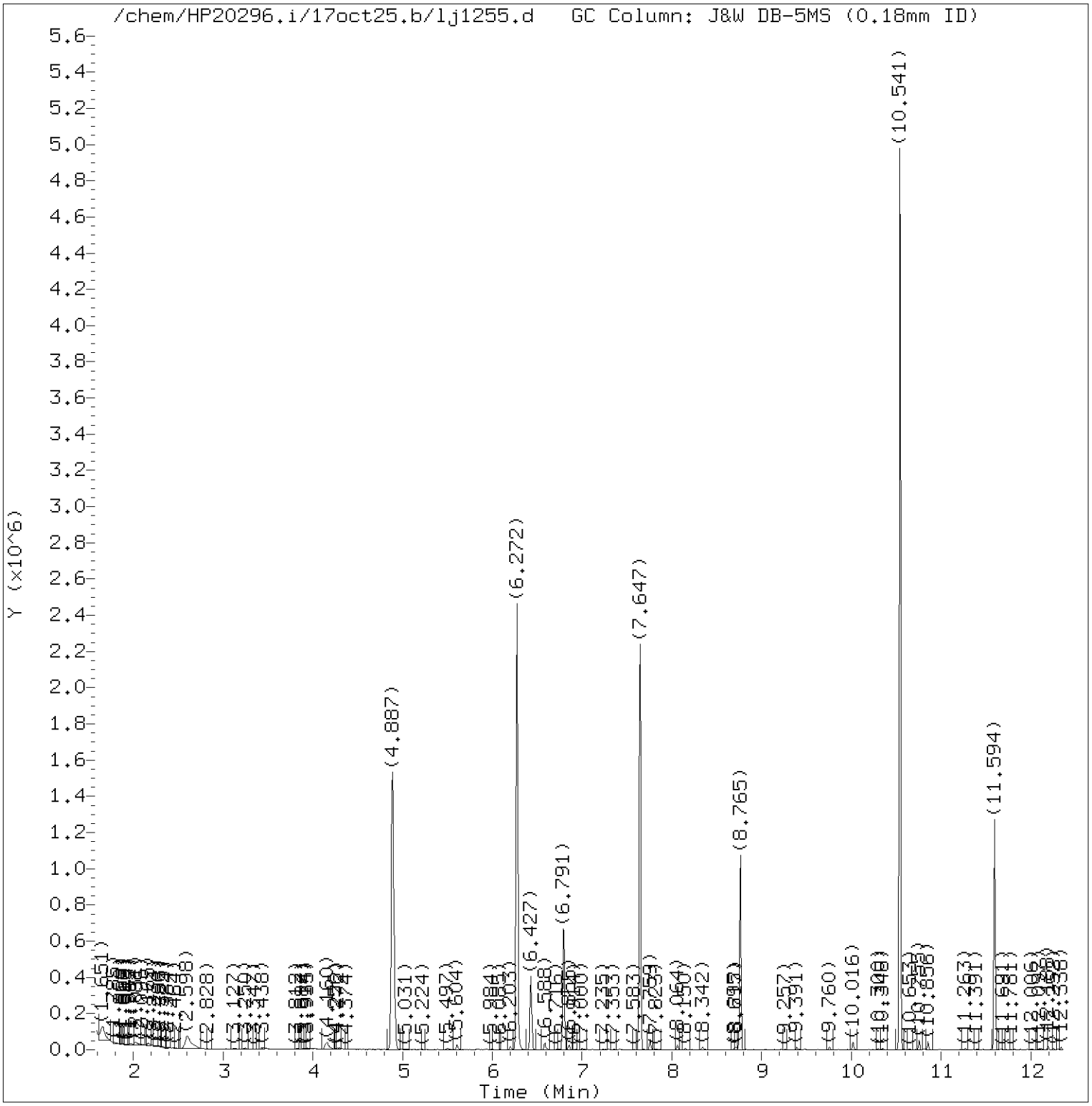
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887	(0.000)	112	932292	20.166	40%		10 - 83
17) Phenol-d6	(1)	6.272	(0.000)	99	1309880	21.465	43%		10 - 69
44) Nitrobenzene-d5	(2)	7.647	(0.000)	82	992353	18.199	73%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.541	(0.000)	172	1904122	19.940	80%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.643	(-0.001)	330	265798	30.983	62%		13 - 149
179) Terphenyl-d14	(5)	15.846	(0.000)	244	1645267	17.793	71%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

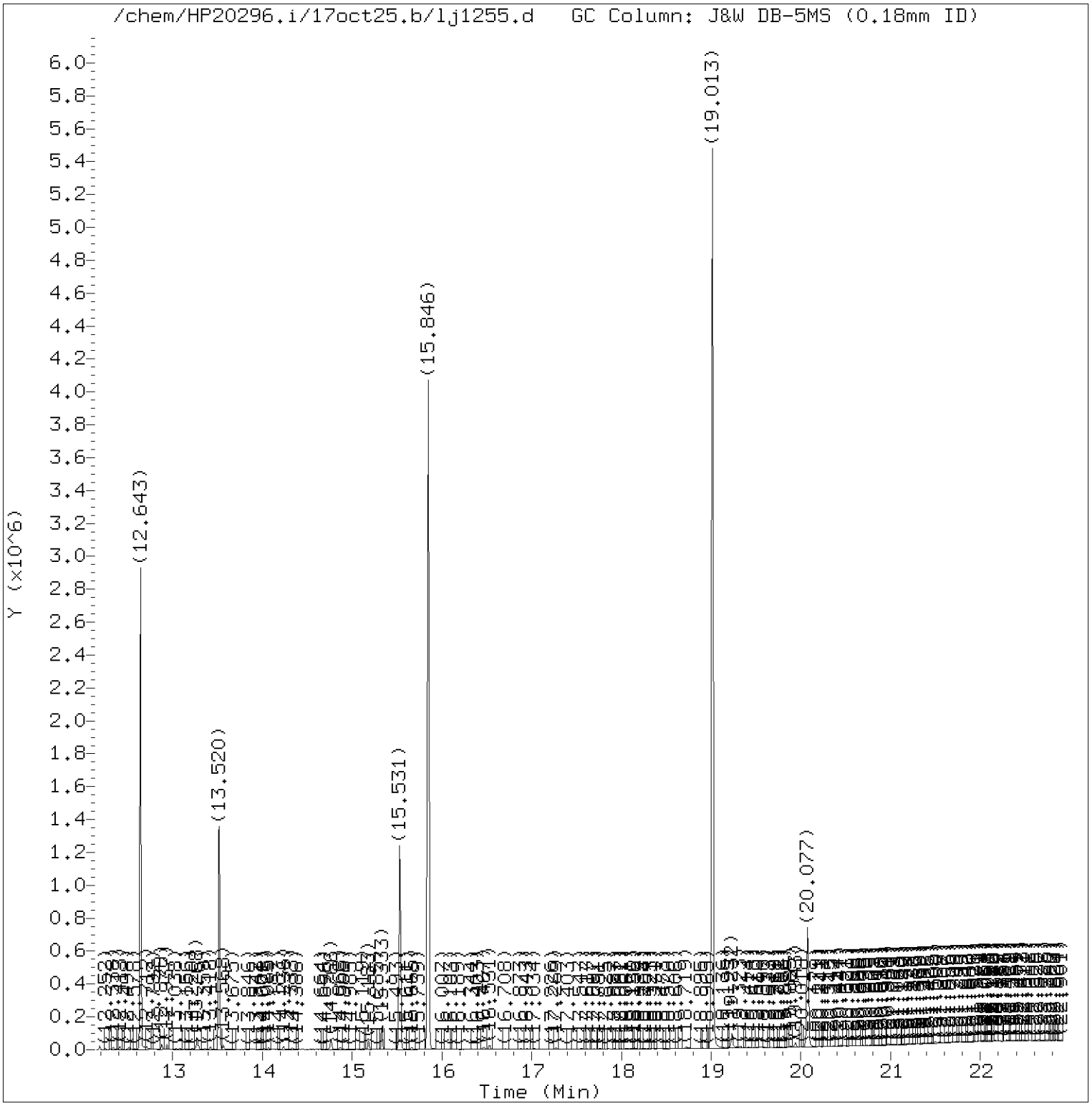
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1255.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WFD Lab Sample ID: 9262028

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1255.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WFD Lab Sample ID: 9262028

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1255.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 15:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WFD Lab Sample ID: 9262028

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	932292	20.166
17)$Phenol-d6	(1)	6.272	99	1309880	21.465
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	148652	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	992353	18.199
65)*Naphthalene-d8	(2)	8.765	136	579659	5.000
93)$2-Fluorobiphenyl	(3)	10.541	172	1904122	19.940
113)*Acenaphthene-d10	(3)	11.594	164	326766	5.000
135)$2,4,6-Tribromophenol	(3)	12.643	330	265798	30.983
153)*Phenanthrene-d10	(4)	13.520	188	586522	5.000
175)*Pyrene-d10	(5)	15.531	212	636303	5.000
179)$Terphenyl-d14	(5)	15.846	244	1645267	17.793
213)*Perylene-d12	(6)	20.077	264	371505	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/17oct24a.b/dj1216.d
Data file Sample Info. Line: 16WCB;9262029;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Injection date and time: **25-OCT-2017 01:00**
Instrument ID: **HP19760.i** Batch: **17290WAE**

Blank Data file reference: **/chem/HP19760.i/17oct24a.b/dj1213.d**

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 25-OCT-2017 14:53
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct24a.b/dj1211.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.723	(0.000)	864	152	189657	(-6)	5.00	
65) Naphthalene-d8	8.658	(0.000)	1196	136	733775	(-6)	5.00	
113) Acenaphthene-d10	11.450	(0.000)	1675	164	380699	(-8)	5.00	
153) Phenanthrene-d10	13.338	(0.000)	1999	188	688151	(-8)	5.00	
175) Pyrene-d10	15.291	(0.006)	2334	212	817370	(-10)	5.00	
213) Perylene-d12	19.761	(0.000)	3101	264	687489	(-19)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.562	(0.000)	82	1398599	19.736	79%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.406	(0.000)	172	2337660	20.275	81%		46 - 104
179) Terphenyl-d14	(5)	15.606	(0.000)	244	1003680M	8.165	33%	*	35 - 119

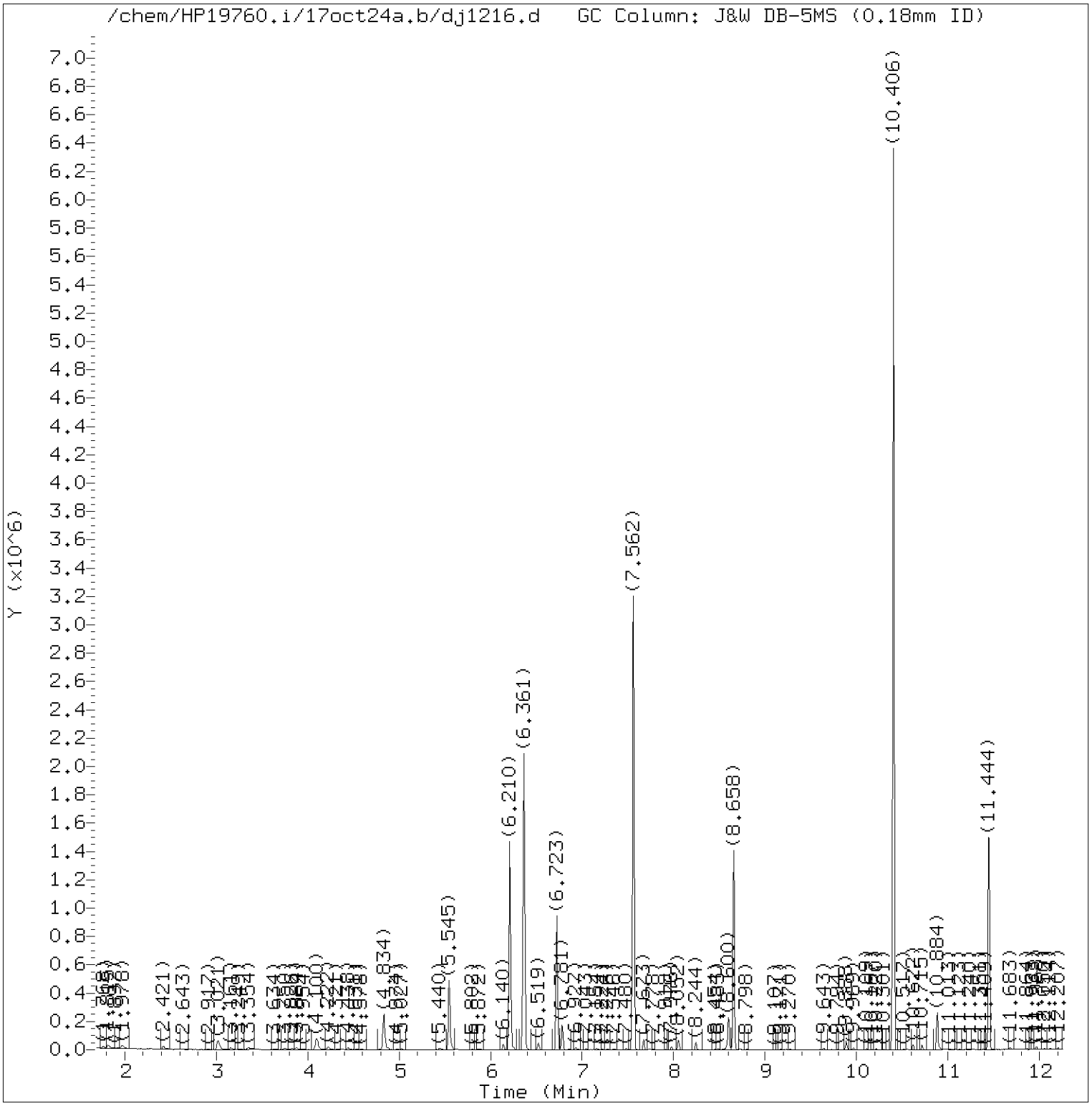
M = Surrogate Standard was manually integrated. * = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/02/2017 at 14:16. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

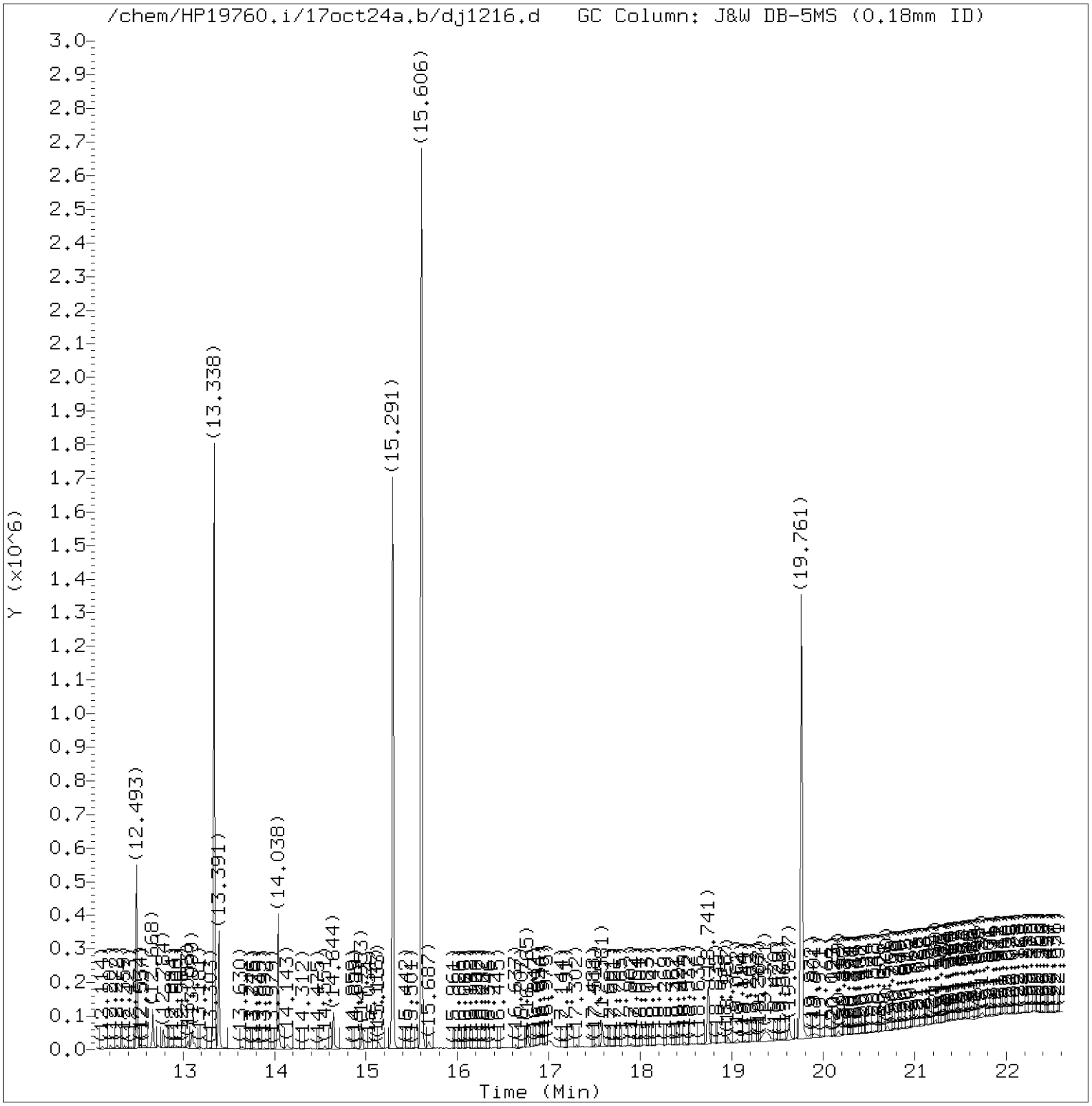
Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1216.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 01:00 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 16WCB Lab Sample ID: 9262029

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1216.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 01:00 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 16WCB Lab Sample ID: 9262029

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1216.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 01:00 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

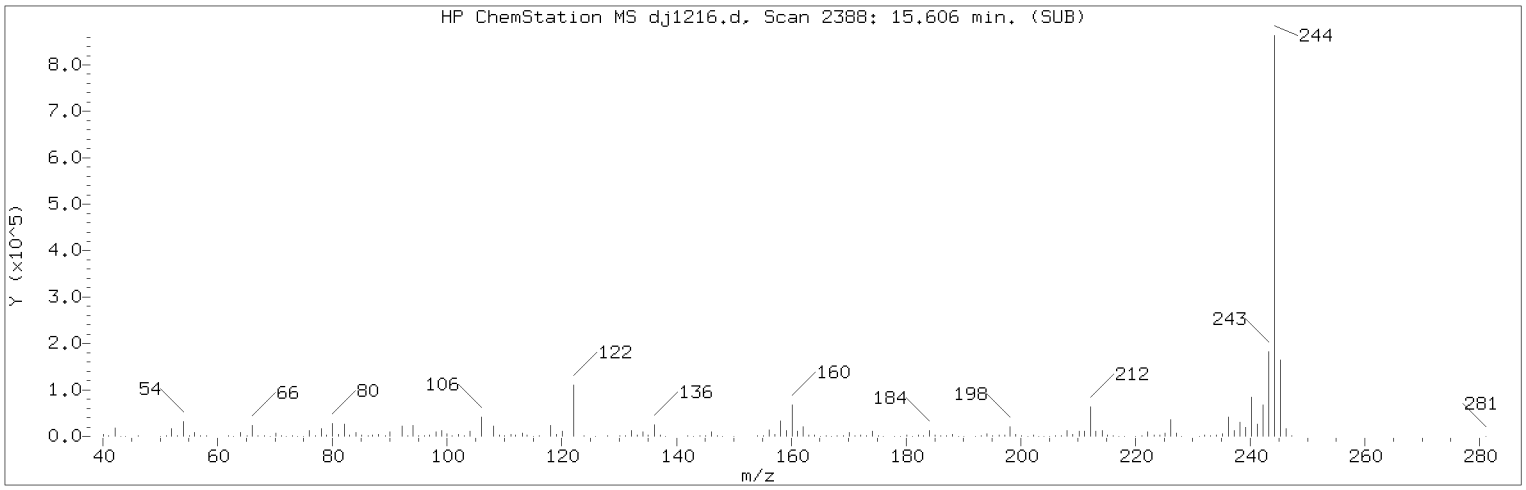
Sample Name: 16WCB Lab Sample ID: 9262029

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.723	152	189657	5.000
44)$Nitrobenzene-d5	(2)	7.562	82	1398599	19.736
65)*Naphthalene-d8	(2)	8.658	136	733775	5.000
93)$2-Fluorobiphenyl	(3)	10.406	172	2337660	20.275
113)*Acenaphthene-d10	(3)	11.450	164	380699	5.000
153)*Phenanthrene-d10	(4)	13.338	188	688151	5.000
175)*Pyrene-d10	(5)	15.291	212	817370	5.000
179)$Terphenyl-d14	(5)	15.606	244	1003680M	8.165
213)*Perylene-d12	(6)	19.761	264	687489	5.000

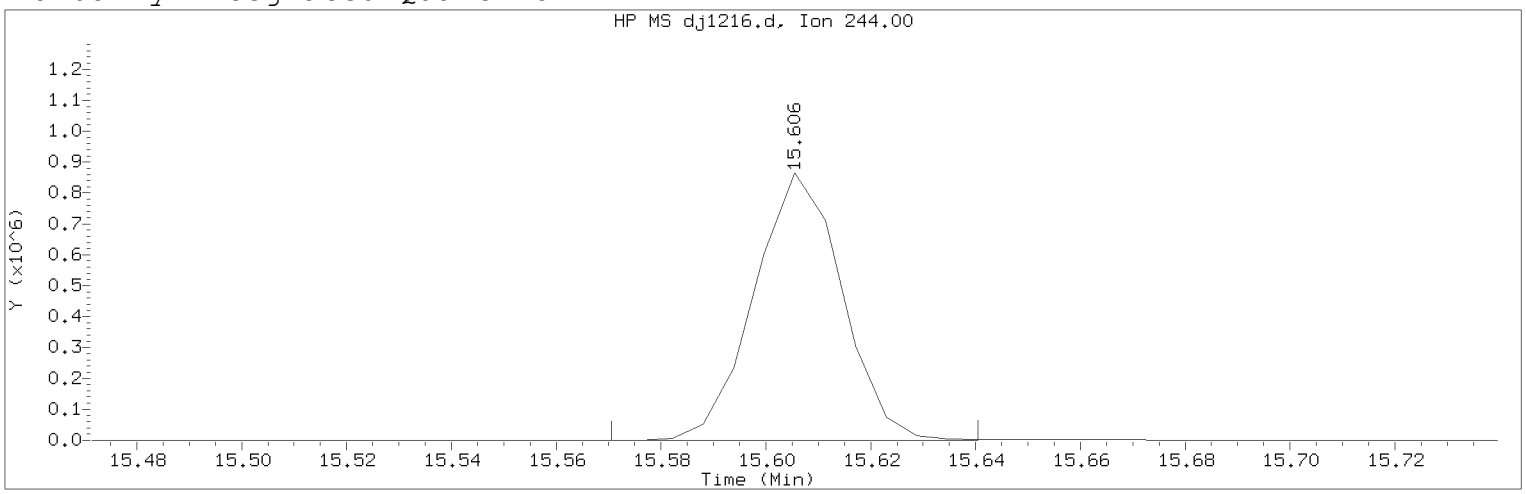
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct24a.b/dj1216.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 01:00 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 16WCB Lab Sample ID: 9262029

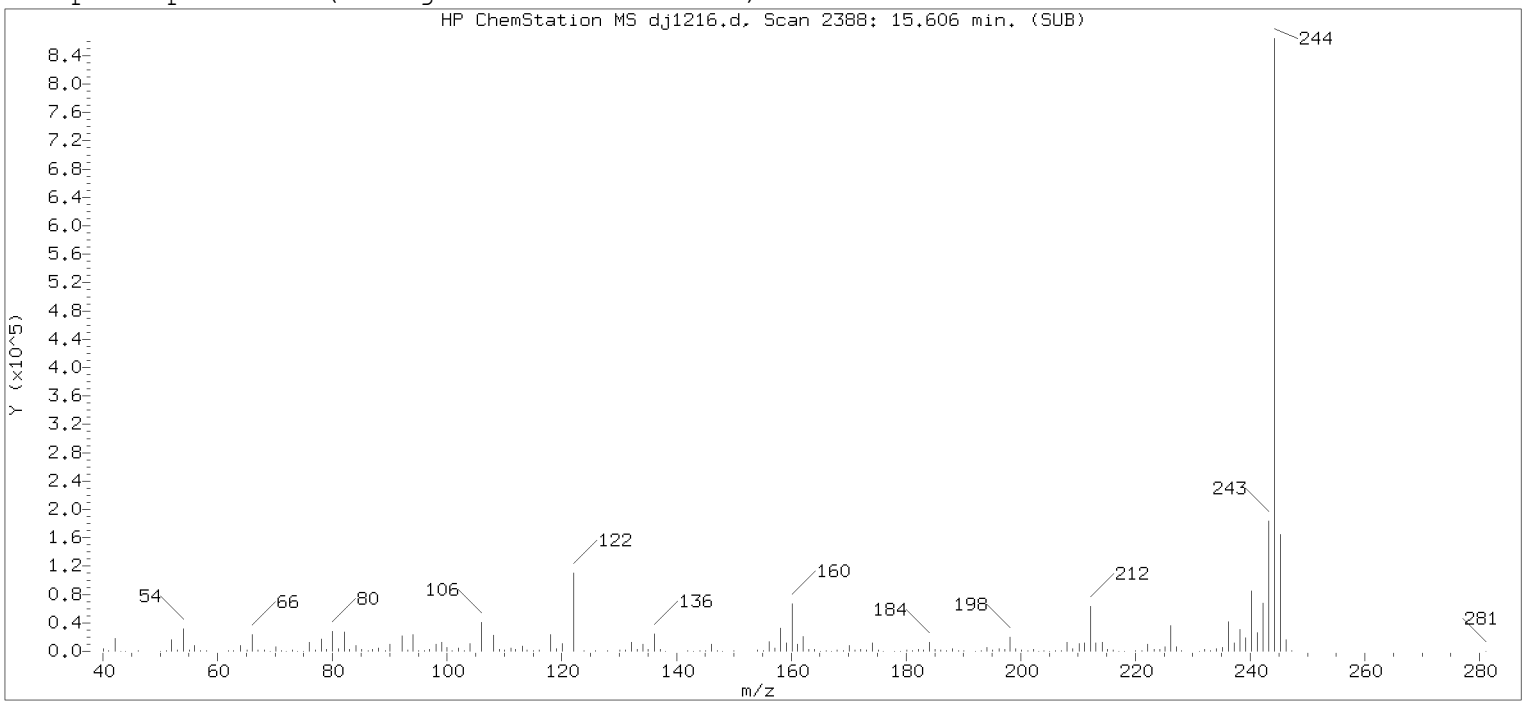
Compound Number : 179
Compound Name : Terphenyl-d14
Scan Number : 2388
Retention Time (minutes) : 15.606
Quant Ion : 244.00
Area (flag) : 1003680M
On-column Amount (ng/ul) : 8.1647
Integration start scan : 2381 Integration stop scan: 2393
Y at integration start : -141 Y at integration end: -141

Reason for manual integration: improper integration

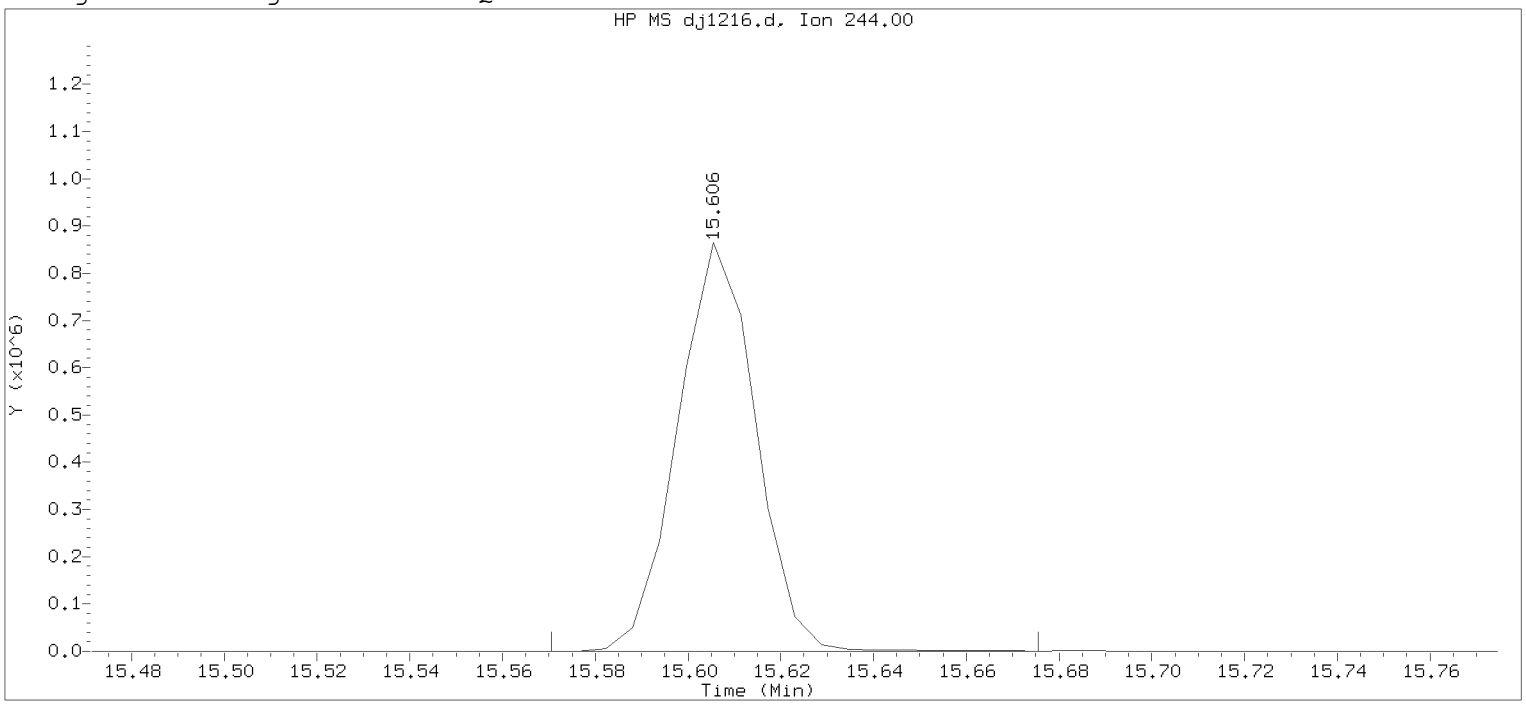
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/02/2017 at 14:16.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct24a.b/dj1216.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 01:00 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:34
Date, time and analyst ID of latest file update: 25-Oct-2017 14:35 knk25316

Sample Name: 16WCB Lab Sample ID: 9262029

Compound Number	: 179		
Compound Name	: Terphenyl-d14		
Scan Number	: 2388		
Retention Time (minutes)	: 15.606		
Quant Ion	: 244.00		
Area	: 1005625		
On-column Amount (ng/ul)	: 8.1806		
Integration start scan	: 2381	Integration stop scan:	2399
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15.
Target 3.5 esignature used. Reason: I am the author of this document

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/17oct31.b/dj1638.d Injection date and time: **31-OCT-2017 14:50**
Data file Sample Info. Line: 16WCBRE;9262029RE;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP19760.i** Batch: **17299WAZ**
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Blank Data file reference: **/chem/HP19760.i/17oct31.b/dj1633z.d**

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 01-NOV-2017 02:56
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct31.b/dj1631.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 * 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): 0.5 ul

Analysis Comments:

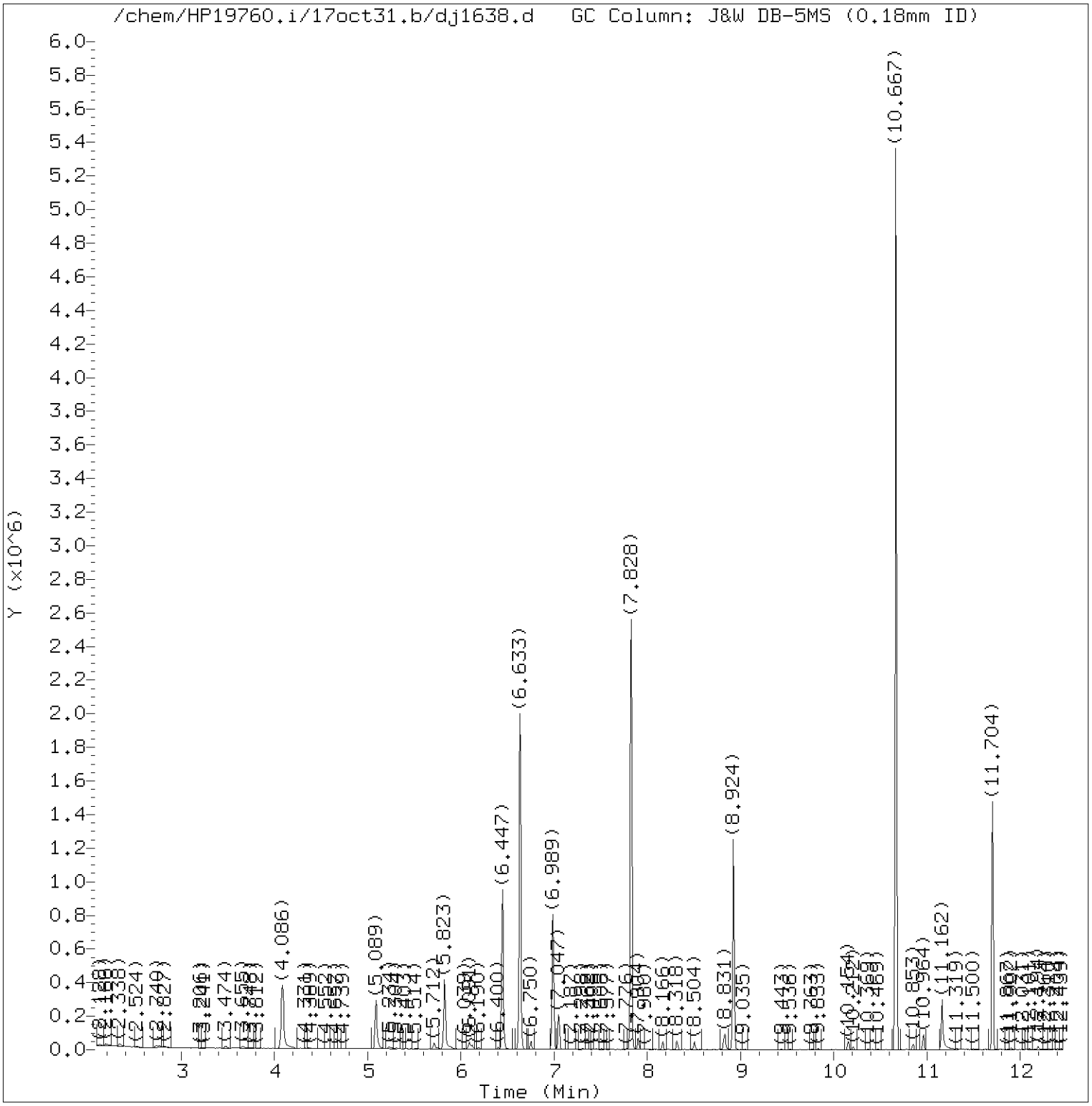
Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.989	(0.000)	841	152	166908	(-14)	5.00	
65) Naphthalene-d8	8.924	(0.006)	1173	136	648209	(-11)	5.00	
113) Acenaphthene-d10	11.704	(0.000)	1650	164	333511	(-15)	5.00	
153) Phenanthrene-d10	13.593	(0.000)	1974	188	591149	(-18)	5.00	
175) Pyrene-d10	15.604	(0.000)	2319	212	704262	(-18)	5.00	
213) Perylene-d12	20.132	(0.000)	3096	264	588661	(-19)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.828	(-0.001)	82	1144653	18.880	76%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.667	(0.000)	172	1900708	18.859	75%		46 - 104
179) Terphenyl-d14	(5)	15.907	(0.000)	244	1211419	11.675	47%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Klaassen on 11/22/2017 at 15:40. Target 3.5 esignature user ID: knk25316



Total Ion Chromatogram (TIC)

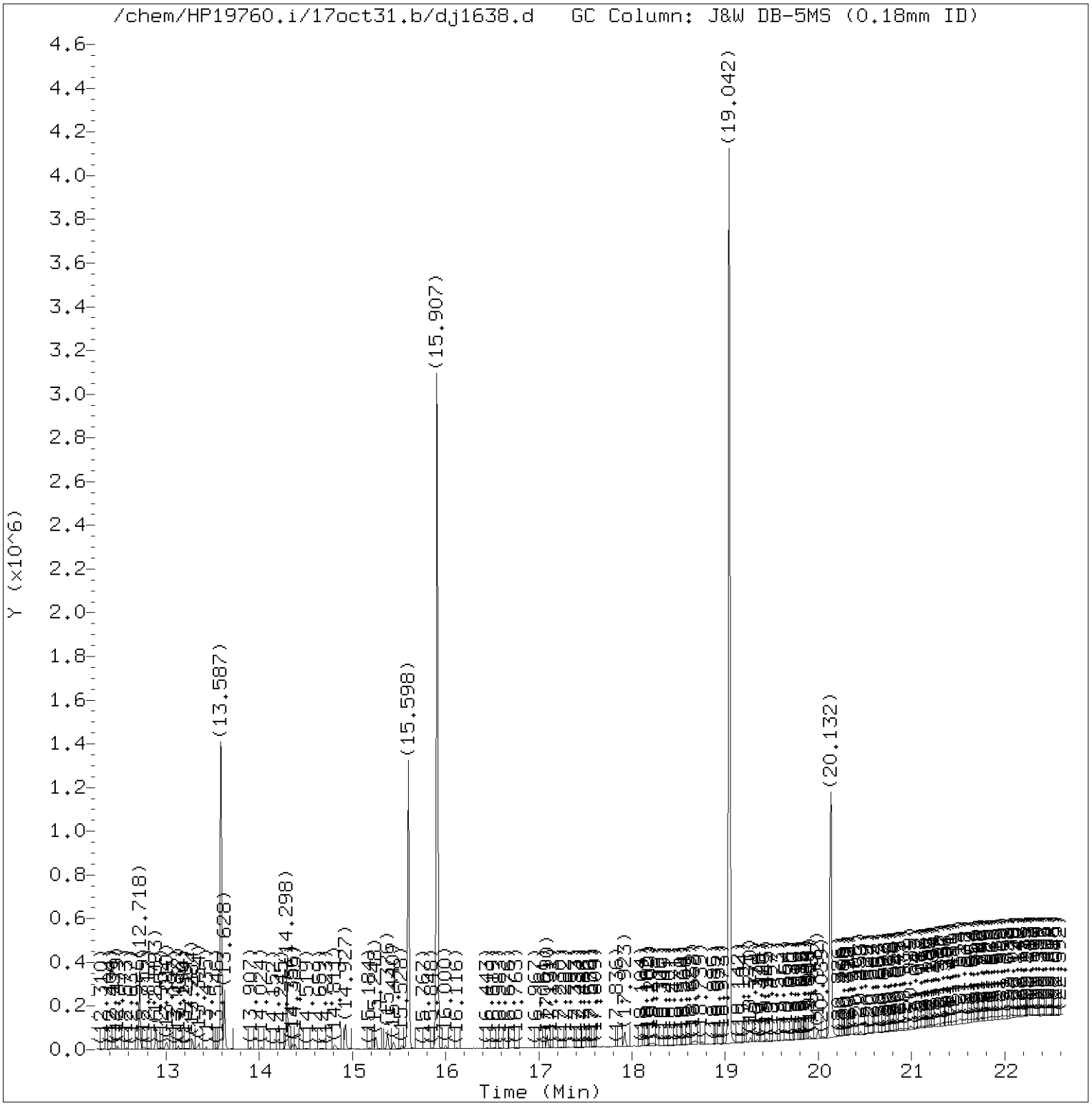
Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1638.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 14:50 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 16WCBRE Lab Sample ID: 9262029RE

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1638.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 14:50 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 16WCBRE Lab Sample ID: 9262029RE

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1638.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 14:50 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 16WCBRE Lab Sample ID: 9262029RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	166908	5.000
44)$Nitrobenzene-d5	(2)	7.828	82	1144653	18.880
65)*Naphthalene-d8	(2)	8.924	136	648209	5.000
93)$2-Fluorobiphenyl	(3)	10.667	172	1900708	18.859
113)*Acenaphthene-d10	(3)	11.704	164	333511	5.000
153)*Phenanthrene-d10	(4)	13.593	188	591149	5.000
175)*Pyrene-d10	(5)	15.604	212	704262	5.000
179)$Terphenyl-d14	(5)	15.907	244	1211419	11.675
213)*Perylene-d12	(6)	20.132	264	588661	5.000

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

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1256.d
Data file Sample Info. Line: 16-2-;9262030;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Injection date and time: **25-OCT-2017 16:17**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796 (-0.005)	974	152	153952 (-16)	5.00	
65) Naphthalene-d8	8.765 (0.000)	1342	136	607298 (-17)	5.00	
113) Acenaphthene-d10	11.599 (0.000)	1872	164	340438 (-19)	5.00	
153) Phenanthrene-d10	13.520 (0.000)	2231	188	608911 (-20)	5.00	
175) Pyrene-d10	15.531 (0.000)	2607	212	666092 (-21)	5.00	
213) Perylene-d12	20.077 (0.000)	3457	264	387677 (-29)	5.00	

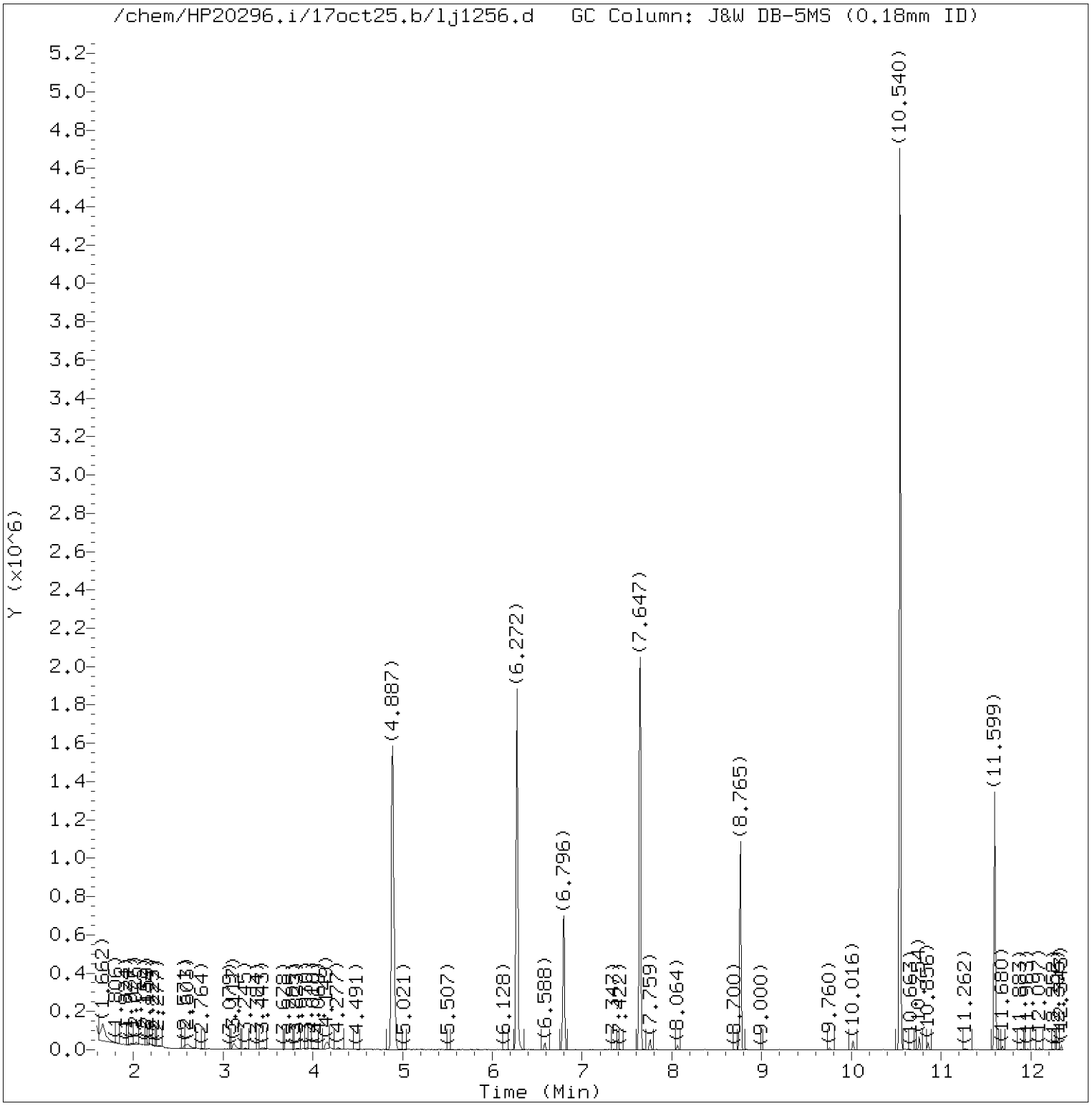
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887 (0.001)	112	935329	19.535	39%		10 - 83
17) Phenol-d6	(1)	6.272 (0.001)	99	987866	15.631	31%		10 - 69
44) Nitrobenzene-d5	(2)	7.647 (0.000)	82	937186	16.405	66%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540 (0.000)	172	1776196	17.854	71%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642 (0.000)	330	355513	39.776	80%		13 - 149
179) Terphenyl-d14	(5)	15.846 (0.000)	244	1913378	19.767	79%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

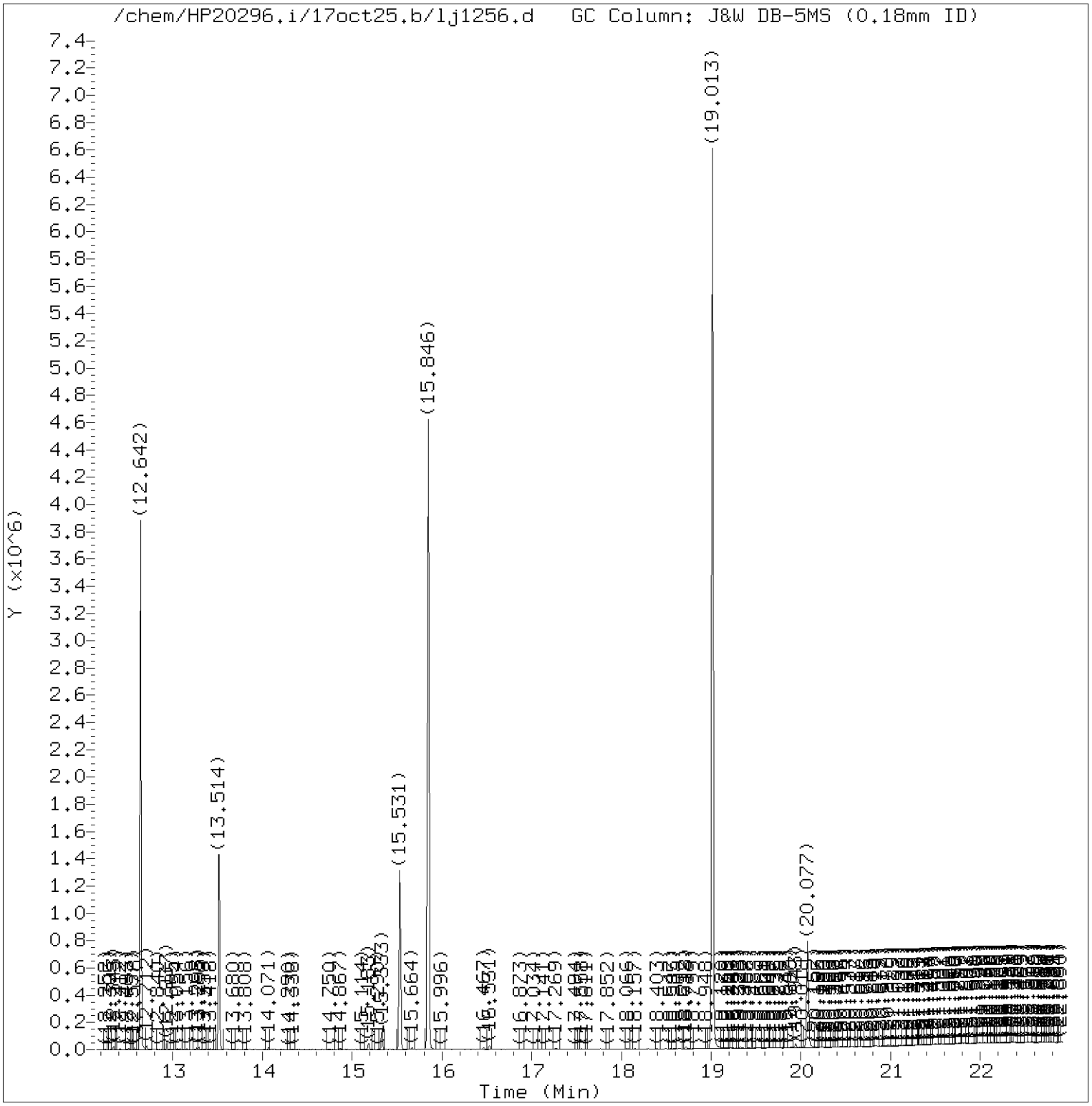
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1256.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-2- Lab Sample ID: 9262030

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1256.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-2- Lab Sample ID: 9262030

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1256.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-2- Lab Sample ID: 9262030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	935329	19.535
17)$Phenol-d6	(1)	6.272	99	987866	15.631
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	153952	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	937186	16.405
65)*Naphthalene-d8	(2)	8.765	136	607298	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1776196	17.854
113)*Acenaphthene-d10	(3)	11.599	164	340438	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	355513	39.776
153)*Phenanthrene-d10	(4)	13.520	188	608911	5.000
175)*Pyrene-d10	(5)	15.531	212	666092	5.000
179)$Terphenyl-d14	(5)	15.846	244	1913378	19.767
213)*Perylene-d12	(6)	20.077	264	387677	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1257.d
Data file Sample Info. Line: 16--3;9262031;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Injection date and time: **25-OCT-2017 16:45**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.791	(0.000)	973	152	154065	(-16)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	596738	(-19)	5.00	
113) Acenaphthene-d10	11.600	(0.000)	1872	164	334867	(-20)	5.00	
153) Phenanthrene-d10	13.520	(0.000)	2231	188	603939	(-21)	5.00	
175) Pyrene-d10	15.531	(0.000)	2607	212	650318	(-23)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	372557	(-32)	5.00	

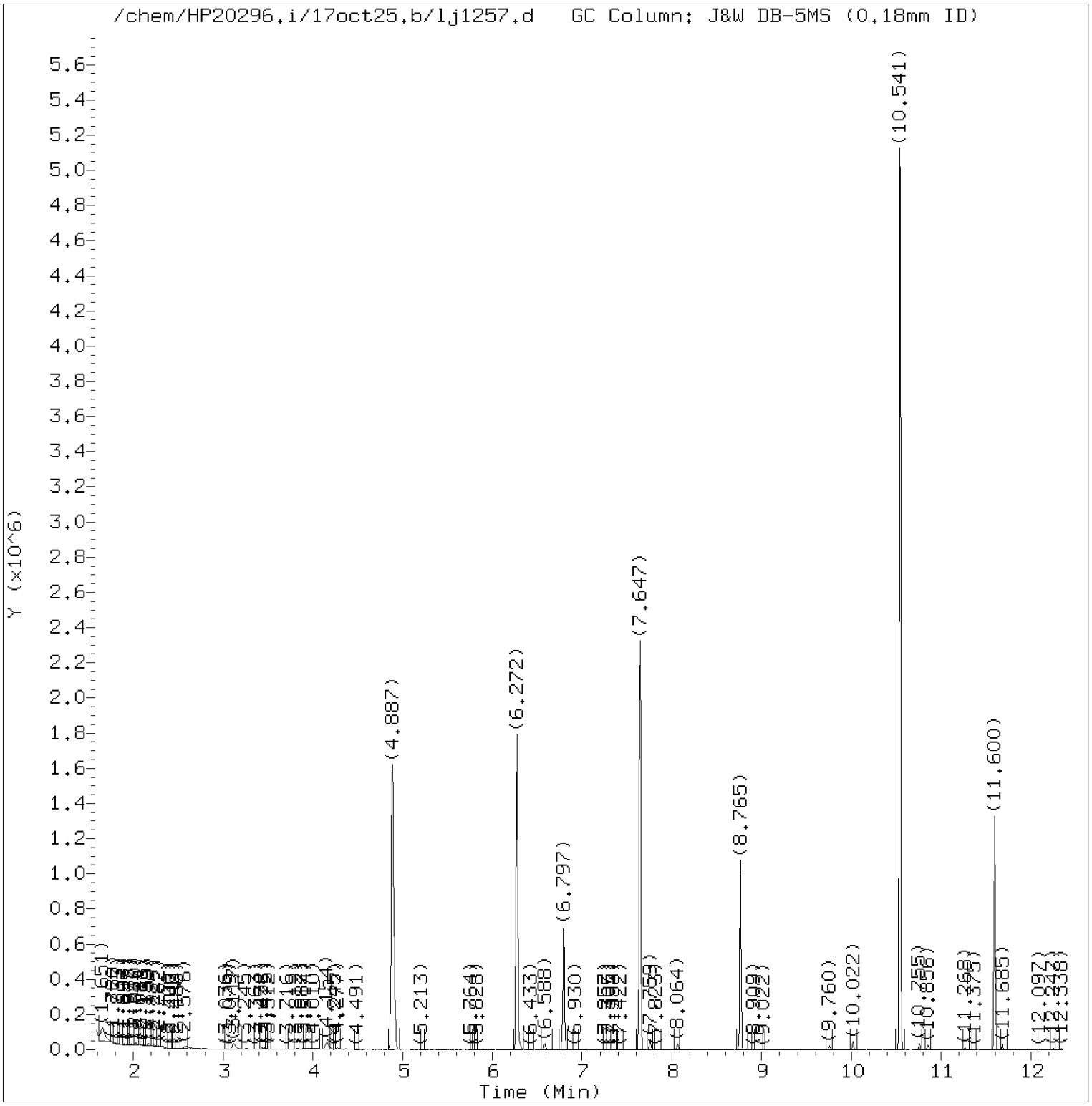
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887	(0.000)	112	978528	20.422	41%		10 - 83
17) Phenol-d6	(1)	6.272	(0.000)	99	907407	14.347	29%		10 - 69
44) Nitrobenzene-d5	(2)	7.647	(0.000)	82	1063247	18.941	76%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.546	(0.000)	172	2036389	20.810	83%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.643	(0.000)	330	390335	44.398	89%		13 - 149
179) Terphenyl-d14	(5)	15.852	(0.000)	244	2132607	22.566	90%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

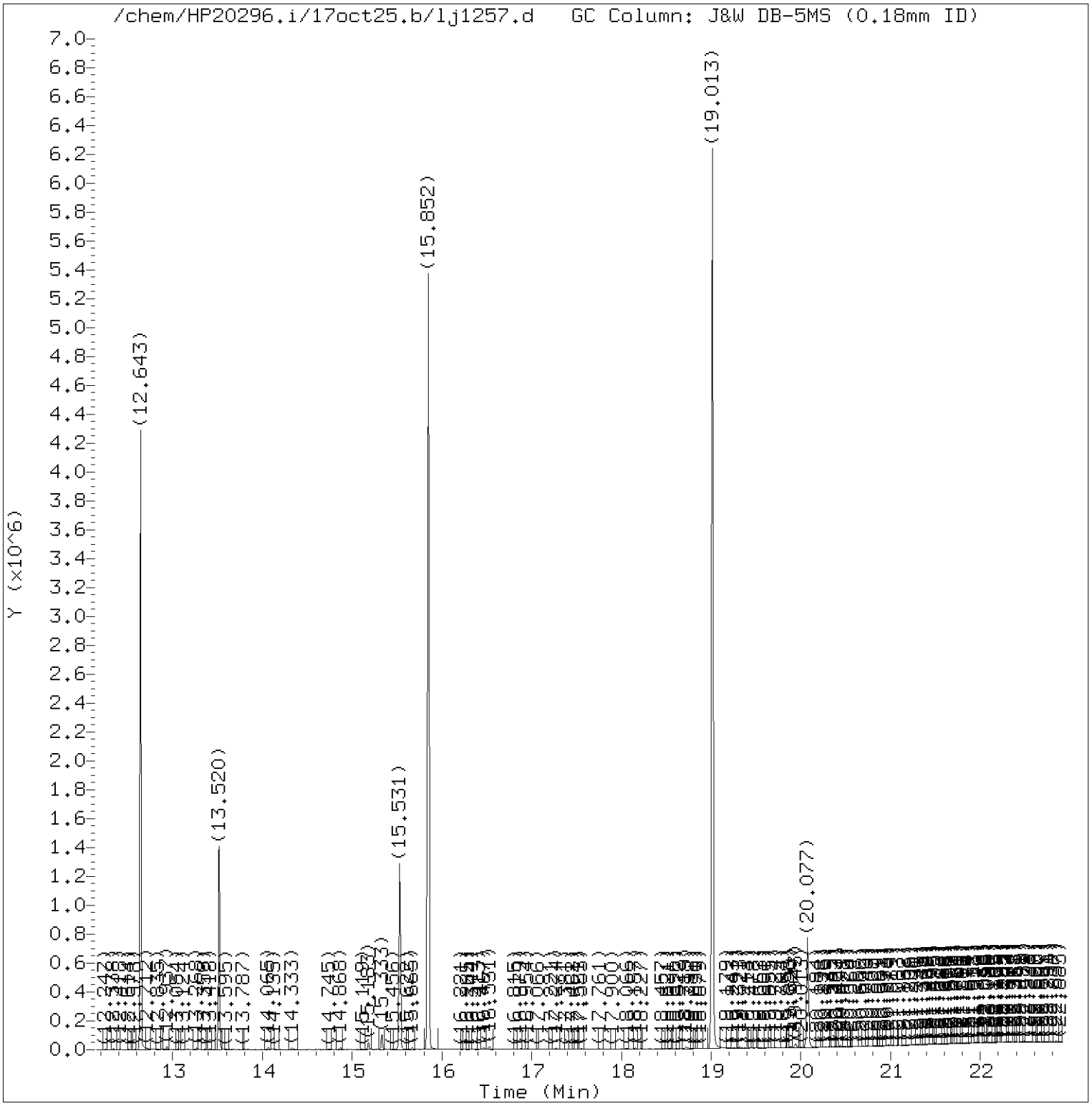
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1257.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16--3 Lab Sample ID: 9262031

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1257.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16--3 Lab Sample ID: 9262031

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1257.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 16:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16--3 Lab Sample ID: 9262031

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	978528	20.422
17)$Phenol-d6	(1)	6.272	99	907407	14.347
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	154065	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	1063247	18.941
65)*Naphthalene-d8	(2)	8.765	136	596738	5.000
93)$2-Fluorobiphenyl	(3)	10.546	172	2036389	20.810
113)*Acenaphthene-d10	(3)	11.600	164	334867	5.000
135)$2,4,6-Tribromophenol	(3)	12.643	330	390335	44.398
153)*Phenanthrene-d10	(4)	13.520	188	603939	5.000
175)*Pyrene-d10	(5)	15.531	212	650318	5.000
179)$Terphenyl-d14	(5)	15.852	244	2132607	22.566
213)*Perylene-d12	(6)	20.077	264	372557	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1258.d
Data file Sample Info. Line: 16-5-;9262032;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Injection date and time: **25-OCT-2017 17:13**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796(-0.005)	974	152	157396 (-14)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	617289 (-16)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	344300 (-18)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	622116 (-18)	5.00	
175) Pyrene-d10	15.531(0.000)	2607	212	667549 (-21)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	386506 (-29)	5.00	

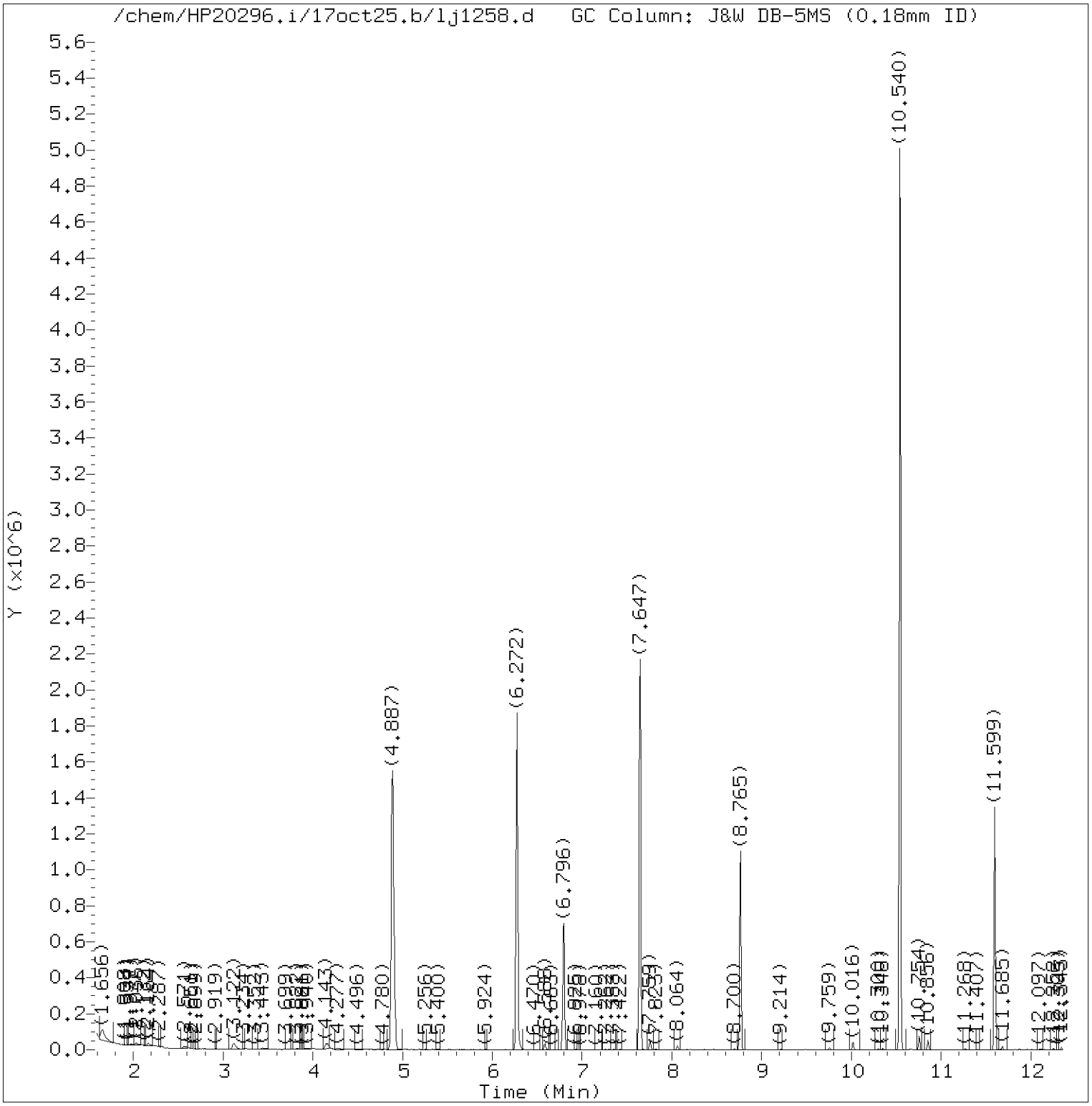
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887(0.001)	112	955794	19.526	39%		10 - 83
17) Phenol-d6	(1)	6.272(0.001)	99	958586	14.835	30%		10 - 69
44) Nitrobenzene-d5	(2)	7.647(0.000)	82	971337	16.728	67%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540(0.000)	172	1915797	19.041	76%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642(0.000)	330	396017	43.811	88%		13 - 149
179) Terphenyl-d14	(5)	15.852(0.000)	244	2147364	22.136	89%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

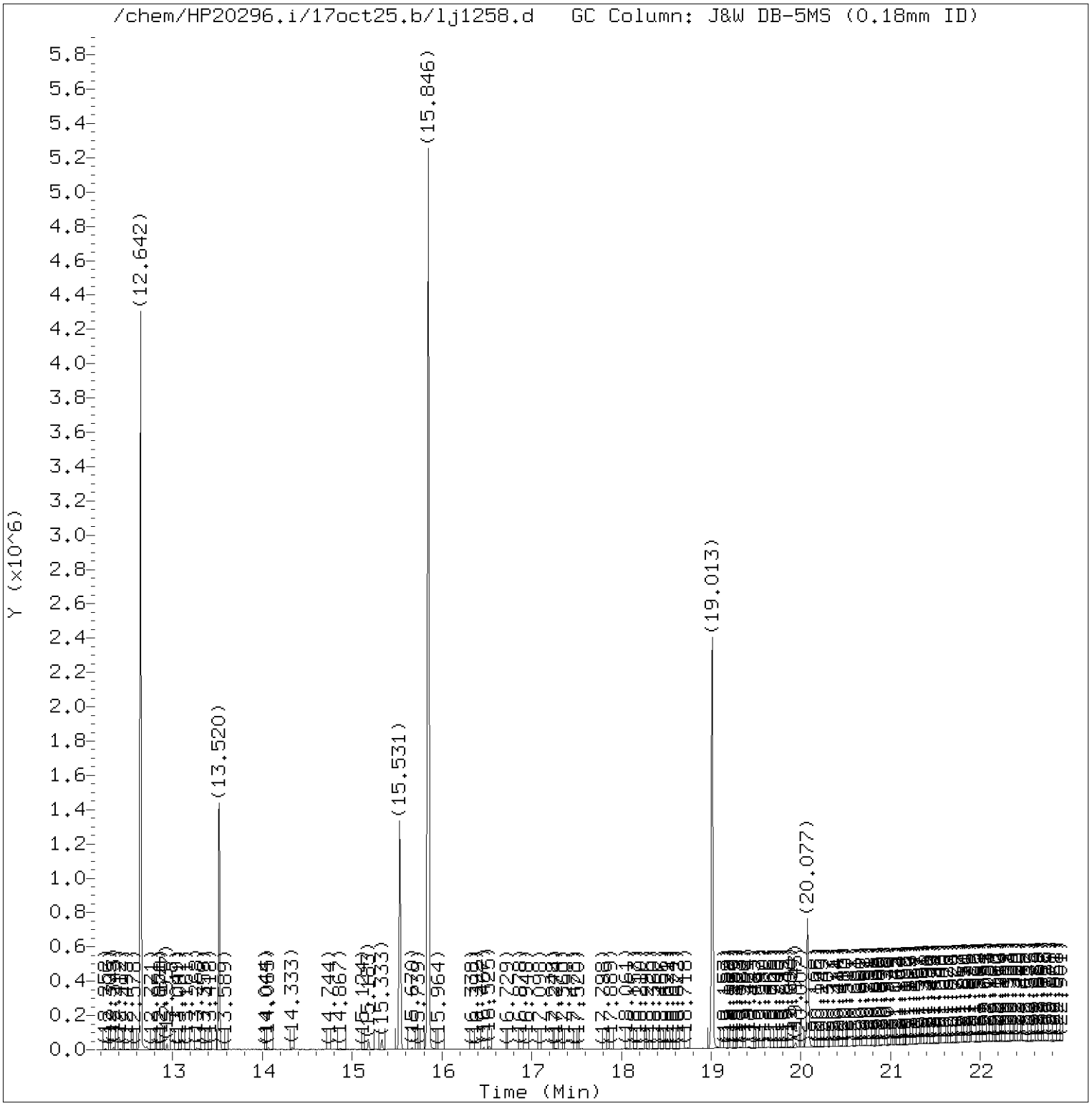
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1258.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-5- Lab Sample ID: 9262032

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1258.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-5- Lab Sample ID: 9262032

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1258.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16-5- Lab Sample ID: 9262032

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	955794	19.526
17)$Phenol-d6	(1)	6.272	99	958586	14.835
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	157396	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	971337	16.728
65)*Naphthalene-d8	(2)	8.765	136	617289	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1915797	19.041
113)*Acenaphthene-d10	(3)	11.599	164	344300	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	396017	43.811
153)*Phenanthrene-d10	(4)	13.520	188	622116	5.000
175)*Pyrene-d10	(5)	15.531	212	667549	5.000
179)$Terphenyl-d14	(5)	15.852	244	2147364	22.136
213)*Perylene-d12	(6)	20.077	264	386506	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1259.d Injection date and time: **25-OCT-2017 17:41**
Data file Sample Info. Line: 16WC2;9262033;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.791(0.000)	973	152	157123 (-14)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	628011 (-15)	5.00	
113) Acenaphthene-d10	11.600(0.000)	1872	164	349780 (-17)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	624736 (-18)	5.00	
175) Pyrene-d10	15.531(0.000)	2607	212	676521 (-20)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	382485 (-30)	5.00	

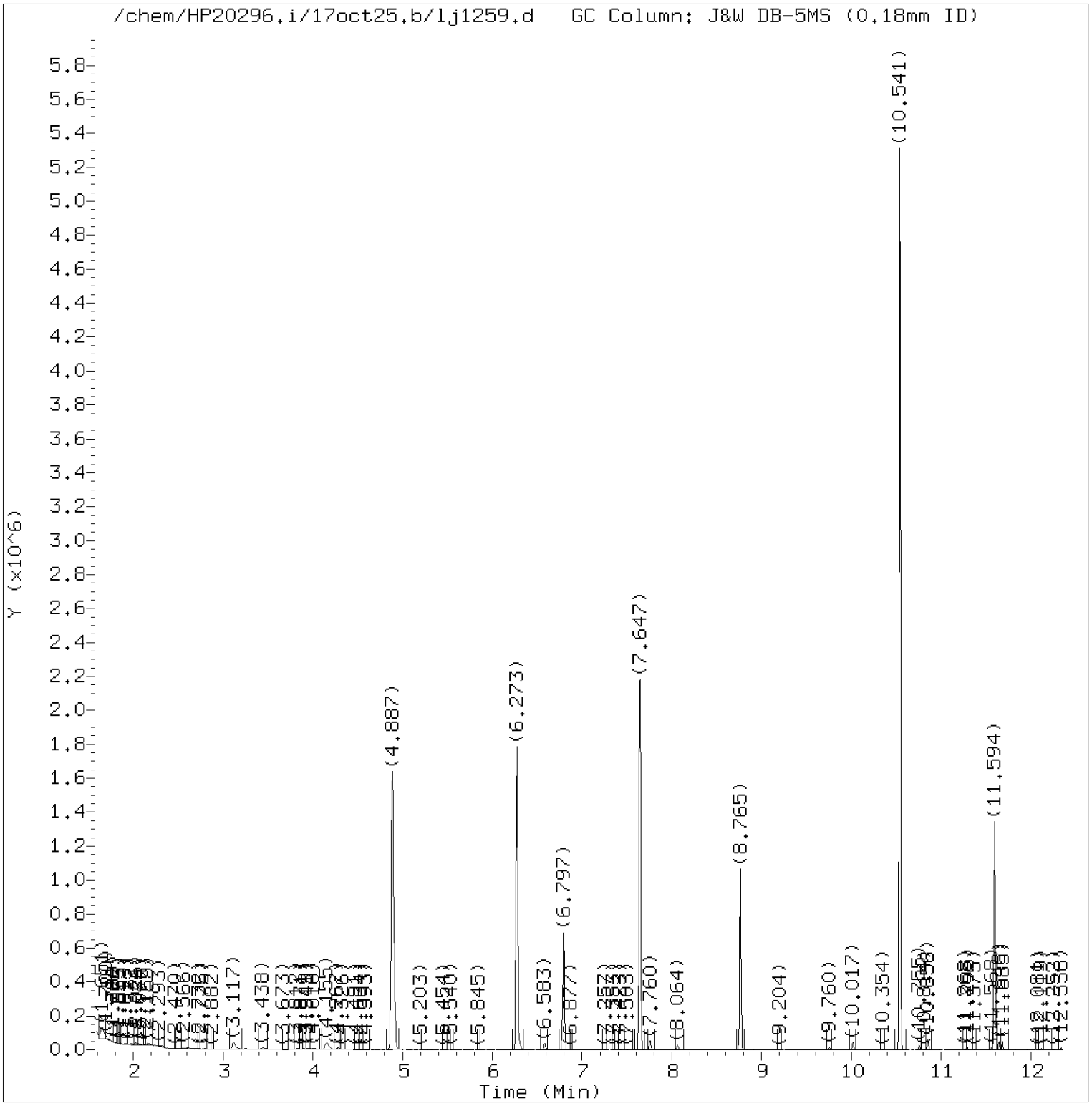
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887(0.000)	112	991878	20.298	41%		10 - 83
17) Phenol-d6	(1)	6.273(0.000)	99	922595	14.303	29%		10 - 69
44) Nitrobenzene-d5	(2)	7.642(0.001)	82	1015702	17.193	69%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.541(0.000)	172	2011214	19.676	79%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.643(0.000)	330	374205	40.749	81%		13 - 149
179) Terphenyl-d14	(5)	15.852(0.000)	244	2088054	21.239	85%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

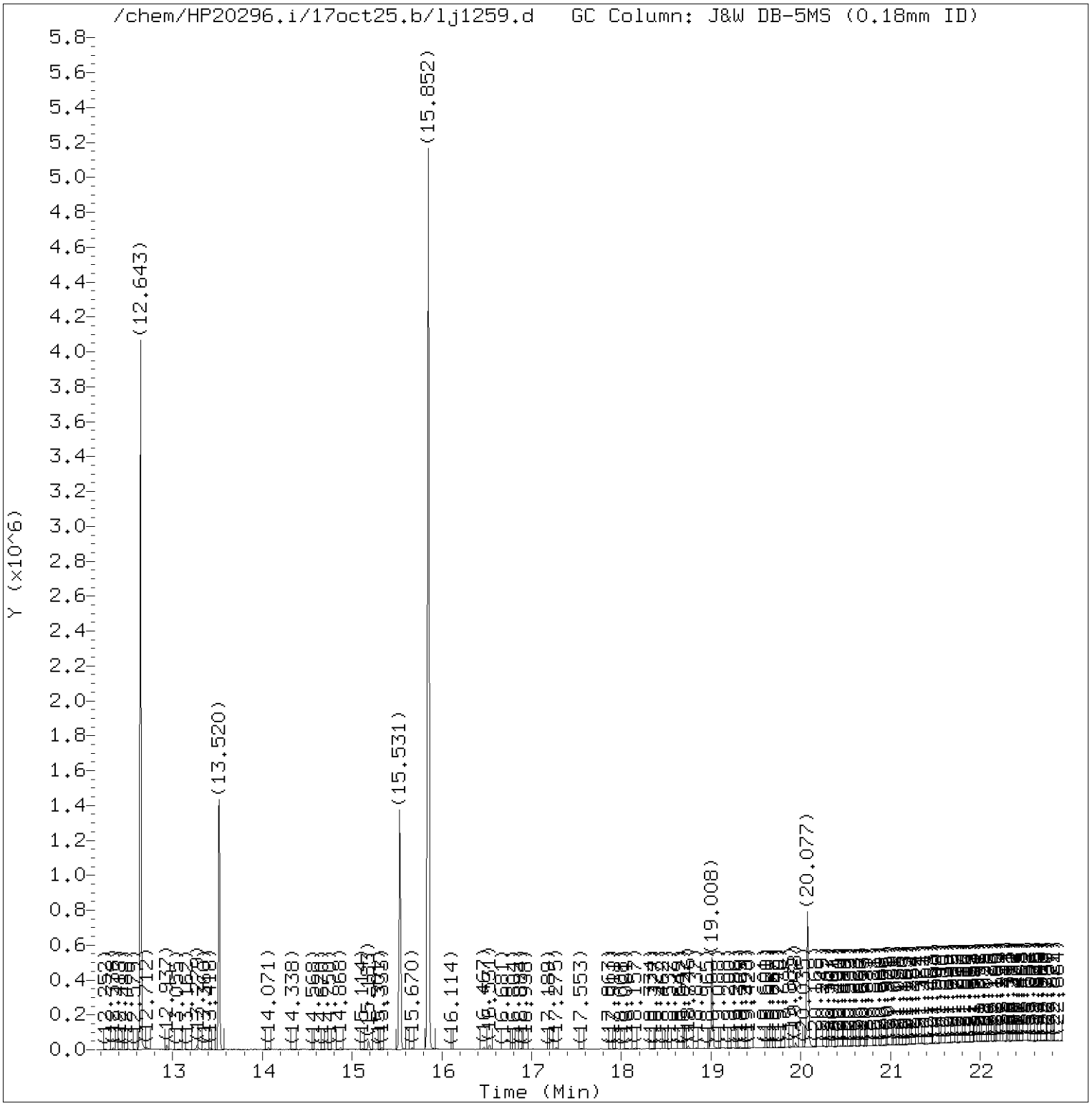
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1259.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:41 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WC2 Lab Sample ID: 9262033

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1259.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:41 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WC2 Lab Sample ID: 9262033

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1259.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 17:41 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16WC2 Lab Sample ID: 9262033

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	991878	20.298
17)$Phenol-d6	(1)	6.273	99	922595	14.303
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	157123	5.000
44)$Nitrobenzene-d5	(2)	7.642	82	1015702	17.193
65)*Naphthalene-d8	(2)	8.765	136	628011	5.000
93)$2-Fluorobiphenyl	(3)	10.541	172	2011214	19.676
113)*Acenaphthene-d10	(3)	11.600	164	349780	5.000
135)$2,4,6-Tribromophenol	(3)	12.643	330	374205	40.749
153)*Phenanthrene-d10	(4)	13.520	188	624736	5.000
175)*Pyrene-d10	(5)	15.531	212	676521	5.000
179)$Terphenyl-d14	(5)	15.852	244	2088054	21.239
213)*Perylene-d12	(6)	20.077	264	382485	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1260.d
Data file Sample Info. Line: 16SPR;9262034;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Injection date and time: **25-OCT-2017 18:09**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796(-0.005)	974	152	146946 (-19)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	574479 (-22)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	318420 (-24)	5.00	
153) Phenanthrene-d10	13.514(0.005)	2230	188	573479 (-25)	5.00	
175) Pyrene-d10	15.531(0.000)	2607	212	617648 (-27)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	355888 (-35)	5.00	

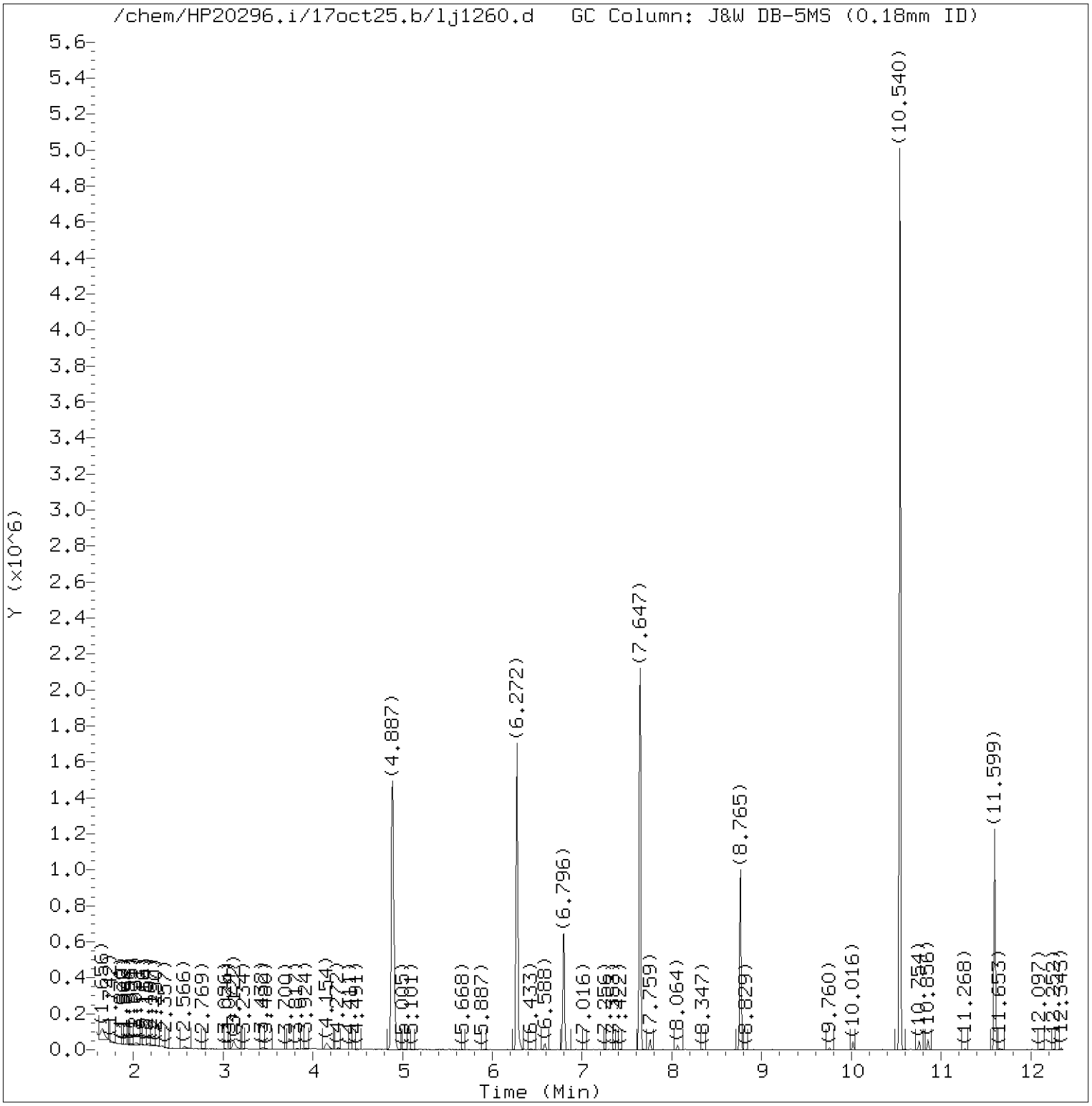
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.887(0.001)	112	887148	19.412	39%		10 - 83
17) Phenol-d6	(1)	6.272(0.001)	99	877784	14.551	29%		10 - 69
44) Nitrobenzene-d5	(2)	7.647(0.000)	82	950744	17.593	70%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540(0.000)	172	1883252	20.239	81%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642(0.000)	330	365308	43.698	87%		13 - 149
179) Terphenyl-d14	(5)	15.846(0.000)	244	1952087	21.748	87%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

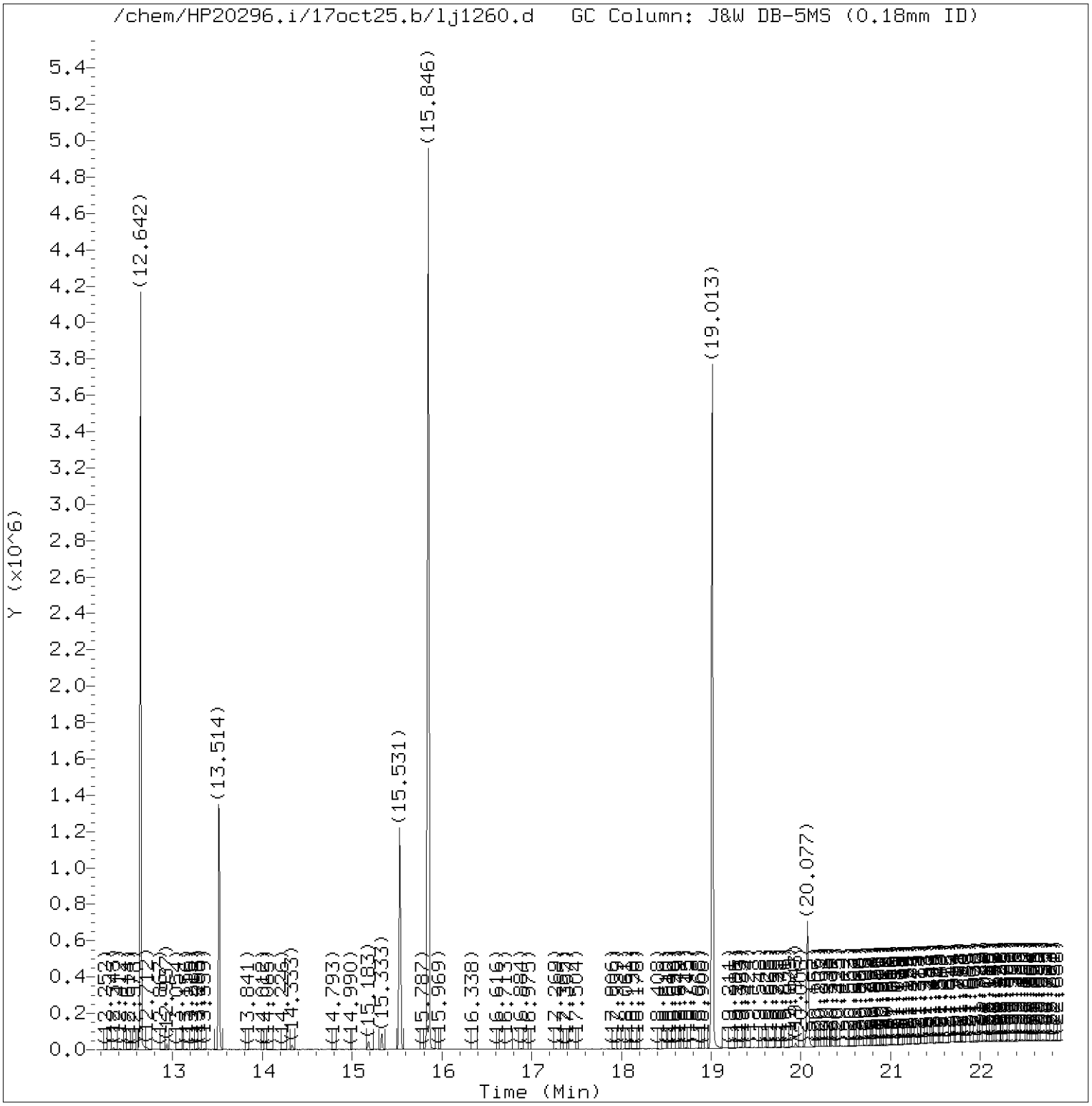
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1260.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 18:09 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16SPR Lab Sample ID: 9262034

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1260.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 18:09 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16SPR Lab Sample ID: 9262034

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1260.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 18:09 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:50 lmh00956

Sample Name: 16SPR Lab Sample ID: 9262034

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.887	112	887148	19.412
17)$Phenol-d6	(1)	6.272	99	877784	14.551
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	146946	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	950744	17.593
65)*Naphthalene-d8	(2)	8.765	136	574479	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1883252	20.239
113)*Acenaphthene-d10	(3)	11.599	164	318420	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	365308	43.698
153)*Phenanthrene-d10	(4)	13.514	188	573479	5.000
175)*Pyrene-d10	(5)	15.531	212	617648	5.000
179)$Terphenyl-d14	(5)	15.846	244	1952087	21.748
213)*Perylene-d12	(6)	20.077	264	355888	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

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\17oct23\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	DJ1100.D	DFTPP2717	10/23/2017	11:02		
ceb05247	DJ1100a.D	DFTPP2717	10/23/2017	11:34		
ceb05247	DJ1100b.D	DFTPP2717	10/23/2017	12:01		
ceb05247	DJ1101.D	rvSTD2857	10/23/2017	12:24		
ceb05247	DJ1102.D	RVSTD2857	10/23/2017	12:54		
ceb05247	DJ1103.D	RVSTD2857	10/23/2017	13:21		
ceb05247	DJ1104.D	RVSTD2857	10/23/2017	13:49		
ceb05247	DJ1105.D	RVSTD2857	10/23/2017	14:17		
ceb05247	DJ1106.D	RVSTD2857	10/23/2017	14:44		
ceb05247	DJ1107.D	RVSTD2857	10/23/2017	15:12		
ceb05247	DJ1108.D	RVSTD2857	10/23/2017	15:39		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\17oct24a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
em10340	DJ1200.D	rvDFTPP2617	10/24/2017	19:44		
em10340	DJ1200a.D	rvDFTPP2617	10/24/2017	20:01		
em10340	DJ1201.D	rvSTD2857	10/24/2017	20:17		
em10340	DJ1202.D	rvAMINO1997	10/24/2017	21:22		
em10340	DJ1210.D	rvDFTPP2617	10/24/2017	21:51		
em10340	DJ1210a.D	rvDFTPP2617	10/24/2017	22:03		
em10340	DJ1210b.D	rvDFTPP2617	10/24/2017	22:17		
em10340	DJ1212.D	rvAMINO1997	10/24/2017	22:36		
em10340	DJ1211.D	rvSTD2857	10/24/2017	23:05		
em10340	DJ1213.D	SBLKWE290	10/24/2017	23:38	17290WAE	
em10340	DJ1214.D	290WELCS	10/25/2017	00:05	17290WAE	
em10340	DJ1215.D	290WELCSD	10/25/2017	00:33	17290WAE	
em10340	DJ1216.D	9262029	10/25/2017	01:00	17290WAE	
em10340	DJ1217.D	9256527DL	10/25/2017	01:28	17284WAK	10
em10340	DJ1218.D	9256534	10/25/2017	01:55	17284WAK	
em10340	DJ1219.D	9256541	10/25/2017	02:23	17284WAK	
em10340	DJ1220.D	9256542	10/25/2017	02:51	17284WAK	
em10340	DJ1221.D	9271227	10/25/2017	03:18	17293WAT	
em10340	DJ1222.D	9271228	10/25/2017	03:46	17293WAT	
em10340	DJ1223.D	9271233	10/25/2017	04:13	17293WAT	
em10340	DJ1224.D	9272417	10/25/2017	04:41	17293WAM	
em10340	DJ1225.D	9272418	10/25/2017	05:08	17293WAM	
em10340	DJ1226.D	9272488	10/25/2017	05:36	17293WAM	
em10340	DJ1227.D	9272489	10/25/2017	06:03	17293WAM	
em10340	DJ1228.D	9272490	10/25/2017	06:31	17293WAM	
em10340	DJ1229.D	9261885	10/25/2017	06:58	17289WAQ	

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/17oct30a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dj1550.d	30-OCT-2017 12:50	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1550a.d	30-OCT-2017 13:03	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1550b.d	30-OCT-2017 13:21	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1600.d	30-OCT-2017 19:51	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1601.d	30-OCT-2017 20:08	Continuing Cal	1.00	HP19760	rv8270d.m	17oct30a.b
dj1610.d	30-OCT-2017 20:38	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1610a.d	30-OCT-2017 20:50	DFTPP	1.00	HP19760	rvdftpp8270d.m	17oct30a.b
dj1611.d	30-OCT-2017 21:05	Cal Level 5	1.00	HP19760	rv8270d.m	17oct30a.b
dj1612.d	30-OCT-2017 21:35	Cal Level 1	1.00	HP19760	rv8270d.m	17oct30a.b
dj1613.d	30-OCT-2017 22:03	Cal Level 8	1.00	HP19760	rv8270d.m	17oct30a.b
dj1614.d	30-OCT-2017 22:30	Cal Level 7	1.00	HP19760	rv8270d.m	17oct30a.b
dj1615.d	30-OCT-2017 22:58	Cal Level 6	1.00	HP19760	rv8270d.m	17oct30a.b
dj1616.d	30-OCT-2017 23:25	Cal Level 4	1.00	HP19760	rv8270d.m	17oct30a.b
dj1617.d	30-OCT-2017 23:52	Cal Level 3	1.00	HP19760	rv8270d.m	17oct30a.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dj1550.d	LIQUID	SV	DFTPP3007	17oct30a	DFTPP12.5	17oct30a
dj1550a.d	LIQUID	SV	DFTPP3007	17oct30a	DFTPP12.5	17oct30a
dj1550b.d	LIQUID	SV	DFTPP3007	17oct30a	DFTPP12.5	17oct30a
dj1600.d	LIQUID	SV	DFTPP2717	17oct30a	DFTPP12.5	17oct30a
dj1601.d	LIQUID	SV	rvSTD2857	17oct30a	SSTD7.5	17oct30a
dj1610.d	LIQUID	SV	DFTPP2717	17oct30a	DFTPP12.5	17oct30a
dj1610a.d	LIQUID	SV	DFTPP2717	17oct30a	DFTPP12.5	17oct30a
dj1611.d	LIQUID	SV	rvSTD2857	17oct30a	SSTD7.5	17oct30a
dj1612.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD0.125	17oct30a
dj1613.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD030	17oct30a
dj1614.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD020	17oct30a
dj1615.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD12.5	17oct30a
dj1616.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD3.75	17oct30a
dj1617.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD1.25	17oct30a

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dj1550.d	all.sub		202146374	202146379	200002637	202146373
dj1550a.d	all.sub		202146402	202146403	200002637	202146373
dj1550b.d	all.sub		202146427	202146428	200002637	202146373
dj1600.d	all.sub		202146898	202146901	200002637	202146373
dj1601.d	all1.sub		202146939	202146901	202135370	202146938
dj1610.d	all.sub		202146959	202146960	200002637	202146373
dj1610a.d	all.sub		202146972	202146973	200002637	202146373
dj1611.d	all1.sub		202147041	202146973	202147292	202146938
dj1612.d	all1.sub		202147070	202146973	202147292	202146938
dj1613.d	all1.sub		202147099	202146973	202147292	202146938
dj1614.d	all1.sub		202147113	202146973	202147292	202146938
dj1615.d	all1.sub		202147137	202146973	202147292	202146938
dj1616.d	all1.sub		202147145	202146973	202147292	202146938
dj1617.d	all1.sub		202147164	202146973	202147292	202146938

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/17oct30a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dj1618.d	31-OCT-2017 00:20	Cal Level 2	1.00	HP19760	rv8270d.m	17oct30a.b
dj1619.d	31-OCT-2017 00:47	MDL/LOQ	1.00	HP19760	rv8270d.m	17oct30a.b
dj1620.d	31-OCT-2017 01:15	MDL/LOQ	1.00	HP19760	rv8270d.m	17oct30a.b
dj1621.d	31-OCT-2017 01:42	ICV	1.00	HP19760	rv8270d.m	17oct30a.b
dj1622.d	31-OCT-2017 02:10	ICV	1.00	HP19760	rv8270d.m	17oct30a.b
dj1623.d	31-OCT-2017 02:37	ICV	1.00	HP19760	rv8270d.m	17oct30a.b
dj1624.d	31-OCT-2017 03:04	ICV	1.00	HP19760	rv8270d.m	17oct30a.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dj1618.d	LIQUID	SV	RVSTD2857	17oct30a	SSTD0.25	17oct30a
dj1619.d	LIQUID	SV	RVMDL2857	17oct30a	SSTD0.125	17oct30a
dj1620.d	LIQUID	SV	PAHMDL2287	17oct30a	SSTD0.025	17oct30a
dj1621.d	LIQUID	SV	rvICV2917	17oct30a	SSTD12.5	17oct30a
dj1622.d	LIQUID	SV	rvBASICV2487	17oct30a	SSTD12.5	17oct30a
dj1623.d	LIQUID	SV	rvHBICV2917	17oct30a	SSTD12.5	17oct30a
dj1624.d	LIQUID	SV	rvBAICV1737	17oct30a	SSTD12.5	17oct30a

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dj1618.d	all1.sub		202147179	202146973	202147292	202146938
dj1619.d	mdlall1.sub		202147192	202146973	202147292	202146938
dj1620.d	pahmdlall1.sub		202147244	202146973	202147292	202146938
dj1621.d	icvall1-f.sub	ICV4X.spk	202147261	202146973	202147292	202146938
dj1622.d	basicvall1.sub	ICV4X.spk	202147279	202146973	202147292	202146938
dj1623.d	hexnaph.sub	ICV4X.spk	202147303	202146973	202147292	202146938
dj1624.d	basicvall1.sub		202147316	202146973	202147292	202146938

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\17oct31\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
knk25316	DJ1630.D	DFTPP2717	10/31/2017	09:22		
knk25316	DJ1631.D	rvSTD2857	10/31/2017	09:37		
knk25316	DJ1632.D	RVNMDL3047	10/31/2017	10:34		
knk25316	DJ1633.D	SBLKWI299	10/31/2017	12:33	17299WAI	
knk25316	DJ1634.D	299WILCS	10/31/2017	13:00	17299WAI	
knk25316	DJ1635.D	SBLKWH299	10/31/2017	13:28	17299WAH	
knk25316	DJ1636.D	299WHLCS	10/31/2017	13:55	17299WAH	
knk25316	DJ1637.D	299WHLCSD	10/31/2017	14:23	17299WAH	
knk25316	DJ1638.D	9262029RE	10/31/2017	14:50	17299WAZ	
knk25316	DJ1639.D	9267528RE	10/31/2017	15:17	17299WAH	
knk25316	DJ1640.D	9267529RE	10/31/2017	15:45	17299WAH	
knk25316	DJ1641.D	9267530RE	10/31/2017	16:13	17299WAH	
knk25316	DJ1642.D	9267531RE	10/31/2017	16:40	17299WAH	
knk25316	DJ1643.D	9267532RE	10/31/2017	17:08	17299WAH	
knk25316	DJ1644.D	9267533RE	10/31/2017	17:35	17299WAH	
knk25316	DJ1645.D	9267536RE	10/31/2017	18:03	17299WAH	
knk25316	DJ1646.D	9267537RE	10/31/2017	18:30	17299WAH	
knk25316	DJ1647.D	9279647	10/31/2017	18:57	17299WAI	
knk25316	DJ1648.D	9279648	10/31/2017	19:25	17299WAI	
knk25316	DJ1649.D	9279649	10/31/2017	19:52	17299WAI	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\17oct12d\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
hbz01996	LJ0480d.D	RVDFTPP2617	10/12/2017	16:57		
hbz01996	LJ0481d.D	RVSTD2857	10/12/2017	17:35		
hbz01996	LJ0482d.D	RVSTD2857	10/12/2017	19:04		
hbz01996	LJ0483d.D	RVSTD2857	10/12/2017	19:32		
hbz01996	LJ0484d.D	RVSTD2857	10/12/2017	20:00		
hbz01996	LJ0485d.D	RVSTD2857	10/12/2017	20:28		
hbz01996	LJ0486d.D	RVSTD2857	10/12/2017	20:56		
hbz01996	LJ0487d.D	RVSTD2857	10/12/2017	21:24		
hbz01996	LJ0488d.D	RVSTD2857	10/12/2017	22:01		
hbz01996	LJ0489d.D	RVMDL2857	10/12/2017	22:29		
hbz01996	LJ0490d.D	PAHMDL2857	10/12/2017	22:57		
hbz01996	LJ0491d.D	RVICV1147	10/12/2017	23:25		
hbz01996	LJ0492d.D	RVBASICV2487	10/12/2017	23:53		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\17oct25\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
hbz01996	LJ1240z.D	RVDFTPP2617	10/25/2017	08:31		
hbz01996	LJ1241.D	RVSTD2857	10/25/2017	08:46		
hbz01996	LJ1242.D	SBLKWQ291	10/25/2017	09:44	17291WAQ	
hbz01996	LJ1243.D	291WQLCS	10/25/2017	10:12	17291WAQ	
hbz01996	LJ1244.D	9267619	10/25/2017	10:40	17291WAQ	
hbz01996	LJ1245.D	9267620	10/25/2017	11:08	17291WAQ	
hbz01996	LJ1246.D	9267621	10/25/2017	11:36	17291WAQ	
hbz01996	LJ1247.D	SBLKWP286	10/25/2017	12:04	17286WAP	
hbz01996	LJ1248.D	286WPLCS	10/25/2017	12:32	17286WAP	
hbz01996	LJ1249.D	9262025	10/25/2017	13:01	17286WAP	
hbz01996	LJ1250.D	9262026	10/25/2017	13:28	17286WAP	
hbz01996	LJ1251.D	9262027	10/25/2017	13:57	17286WAP	
hbz01996	LJ1252.D	9262022	10/25/2017	14:25	17286WAP	
hbz01996	LJ1253.D	9262023	10/25/2017	14:53	17286WAP	
hbz01996	LJ1254.D	9262024	10/25/2017	15:21	17286WAP	
hbz01996	LJ1255.D	9262028	10/25/2017	15:49	17286WAP	
hbz01996	LJ1256.D	9262030	10/25/2017	16:17	17286WAP	

Data File: /chem/HP19760.i/17oct23.b/dj1100b.d

Date : 23-OCT-2017 12:01

Client ID: DFTPP12.5

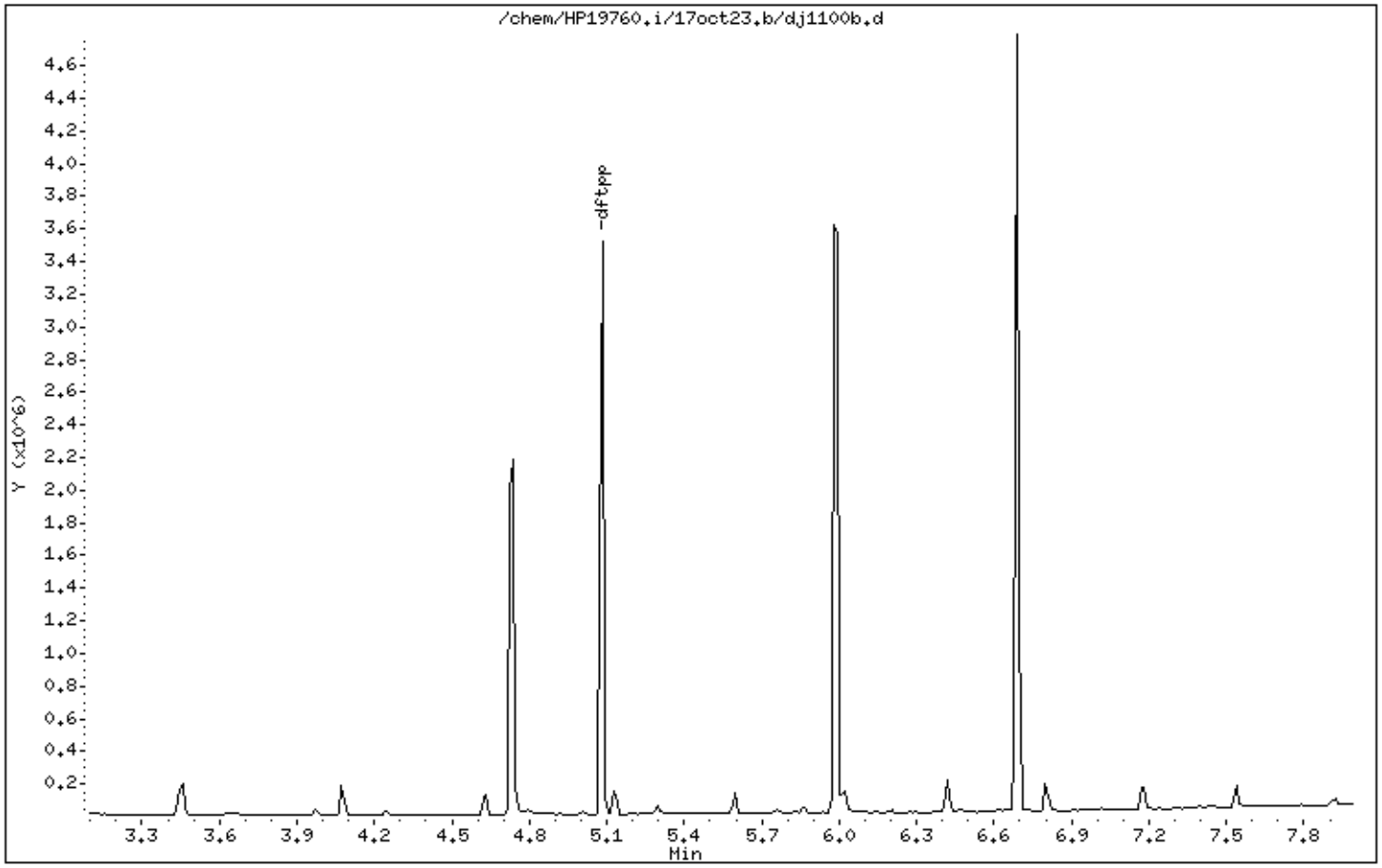
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Catherine E. Bachman on 10/25/2017 at 11:15.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/17oct23.b/dj1100b.d

Date : 23-OCT-2017 12:01

Client ID: DFTPP12.5

Instrument: HP19760.i

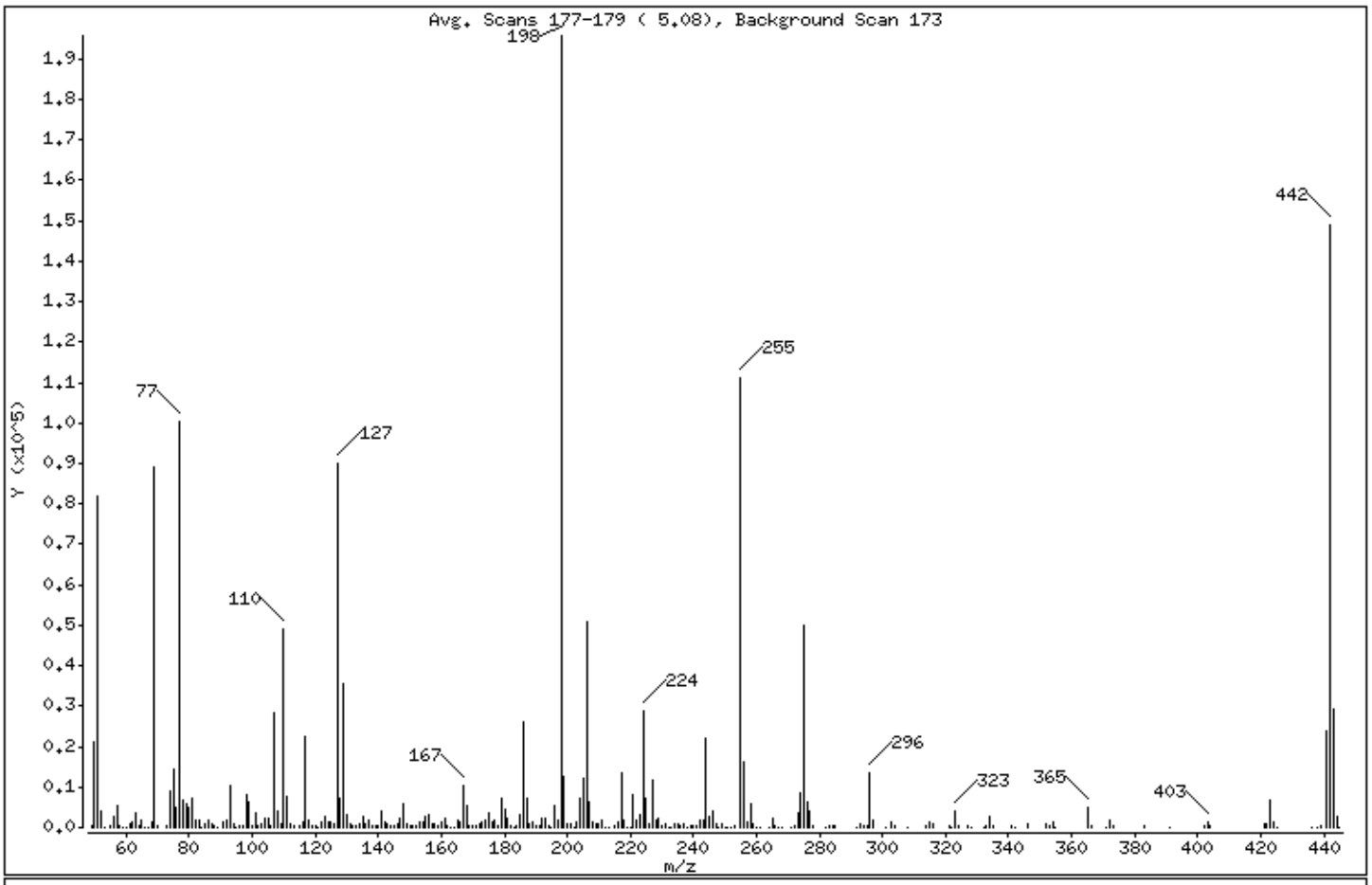
Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: ceb05247

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	41.94
68	Less than 2.00% of mass 69	0.73 (1.60)
69	Mass 69 relative abundance	45.56
70	Less than 2.00% of mass 69	0.26 (0.58)
127	10.00 - 80.00% of mass 198	45.99
197	Less than 2.00% of mass 198	0.89
199	5.00 - 9.00% of mass 198	6.44
275	10.00 - 60.00% of mass 198	25.46
365	Greater than 1.00% of mass 198	2.60
441	0.01 - 24.00% of mass 442	12.09 (15.89)
442	50.00 - 99.99% of mass 198	76.10
443	15.00 - 24.00% of mass 442	14.94 (19.63)

Digitally signed by Catherine E. Bachman on 10/25/2017 at 11:15.
Target 3.5 esignature user ID: ceb05247

Date : 23-OCT-2017 12:01

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1100b.d
Spectrum: Avg. Scans 177-179 (5.08), Background Scan 173
Location of Maximum: 198.00
Number of points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	650	124.00	1302	194.00	589	268.00	93
50.00	21248	125.00	1233	195.00	196	271.00	224
51.00	82128	126.00	687	196.00	5518	272.00	313
52.00	4273	127.00	90056	197.00	1737	273.00	3591
53.00	12	128.00	7244	198.00	195776	274.00	8587
55.00	230	129.00	35344	199.00	12609	275.00	49864
56.00	2502	130.00	2969	200.00	1031	276.00	6438
57.00	5394	131.00	742	201.00	819	277.00	4091
58.00	421	132.00	401	202.00	110	278.00	651
59.00	184	133.00	357	203.00	1314	282.00	217
60.00	105	134.00	1100	204.00	7013	283.00	493
61.00	1018	135.00	2782	205.00	12062	284.00	255
62.00	1297	136.00	1120	206.00	50928	285.00	544
63.00	3471	137.00	1616	207.00	6333	292.00	147
64.00	593	138.00	345	208.00	1462	293.00	919
65.00	1667	139.00	311	209.00	692	294.00	227
66.00	113	140.00	472	210.00	770	295.00	340
67.00	194	141.00	4137	211.00	1951	296.00	13366
68.00	1424	142.00	1386	212.00	175	297.00	1730
69.00	89224	143.00	1022	213.00	165	301.00	93
70.00	515	144.00	264	215.00	503	303.00	1392
73.00	648	145.00	298	216.00	1156	304.00	250
74.00	8988	146.00	785	217.00	13389	308.00	180
75.00	14488	147.00	2269	218.00	1778	314.00	333
76.00	4823	148.00	5752	219.00	100	315.00	1468
77.00	100512	149.00	1117	220.00	86	316.00	758
78.00	6832	150.00	351	221.00	8243	321.00	373
79.00	5992	151.00	575	222.00	1702	322.00	152
80.00	4837	152.00	368	223.00	3120	323.00	3955
81.00	7007	153.00	1506	224.00	28792	324.00	645
82.00	1743	154.00	1160	225.00	7126	327.00	634
83.00	1597	155.00	2665	226.00	880	328.00	206
84.00	89	156.00	3305	227.00	11805	332.00	100
85.00	1009	157.00	762	228.00	1598	333.00	310
86.00	2024	158.00	760	229.00	2424	334.00	2580

Digitally signed by Catherine E. Bachman on 10/25/2017 at 11:15.
Target 3.5 esignature user ID: ceb05247

Date : 23-OCT-2017 12:01

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1100b.d
Spectrum: Avg. Scans 177-179 (5.08), Background Scan 173
Location of Maximum: 198.00
Number of points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	847	159.00	615	230.00	341	335.00	507
88.00	377	160.00	1296	231.00	1031	341.00	533
89.00	210	161.00	2215	232.00	172	342.00	90
91.00	1231	162.00	611	233.00	184	346.00	695
92.00	1614	163.00	193	234.00	849	352.00	1011
93.00	10365	164.00	199	235.00	888	353.00	669
94.00	859	165.00	1751	236.00	611	354.00	1143
95.00	39	166.00	1345	237.00	959	355.00	181
96.00	332	167.00	10268	238.00	134	365.00	5096
97.00	234	168.00	5211	239.00	511	366.00	636
98.00	7940	169.00	619	240.00	399	371.00	208
99.00	6163	170.00	361	241.00	642	372.00	1846
100.00	584	171.00	416	242.00	1645	373.00	426
101.00	3611	172.00	856	243.00	1635	383.00	384
102.00	292	173.00	1137	244.00	22272	391.00	94
103.00	1006	174.00	2002	245.00	2878	402.00	597
104.00	2079	175.00	3408	246.00	4236	403.00	1155
105.00	2117	176.00	1176	247.00	813	404.00	252
106.00	662	177.00	1598	248.00	161	421.00	936
107.00	28288	178.00	636	249.00	750	422.00	999
108.00	3948	179.00	7027	250.00	145	423.00	6680
109.00	833	180.00	4477	251.00	203	424.00	1464
110.00	49128	181.00	2233	252.00	204	425.00	114
111.00	7826	182.00	406	253.00	655	436.00	89
112.00	1080	183.00	151	255.00	111152	438.00	184
113.00	412	184.00	532	256.00	16363	439.00	277
115.00	243	185.00	3335	257.00	1292	441.00	23680
116.00	1449	186.00	26104	258.00	6066	442.00	148992
117.00	22696	187.00	7252	259.00	849	443.00	29248
118.00	1742	188.00	699	260.00	169	444.00	2651
119.00	397	189.00	1478	261.00	99	445.00	106
120.00	444	190.00	226	264.00	174		
121.00	117	191.00	630	265.00	2345		
122.00	1485	192.00	2429	266.00	623		
123.00	2678	193.00	2305	267.00	206		

Digitally signed by Catherine E. Bachman on 10/25/2017 at 11:15.
Target 3.5 esignature user ID: ceb05247

Date : 23-OCT-2017 12:01

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

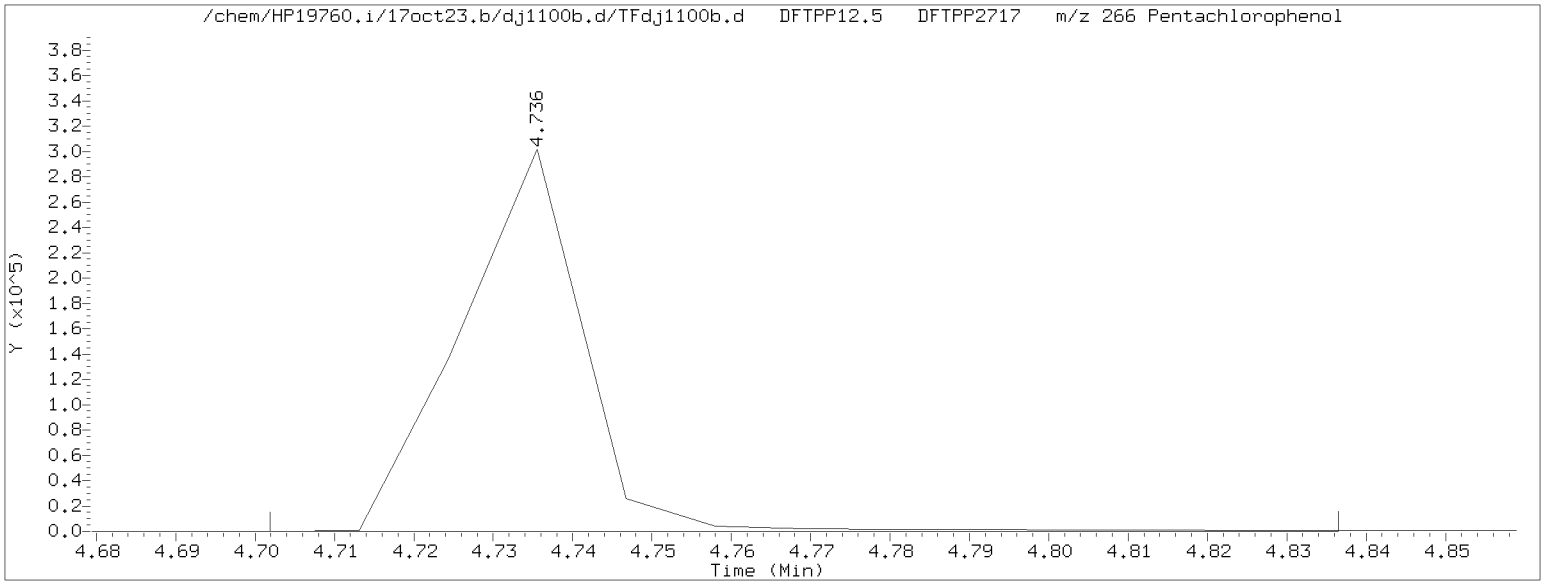
Data File: dj1100b.d
Spectrum: Avg. Scans 177-179 (5.08), Background Scan 173
Location of Maximum: 198.00
Number of points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y

Digitally signed by Catherine E. Bachman on 10/25/2017 at 11:15.
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

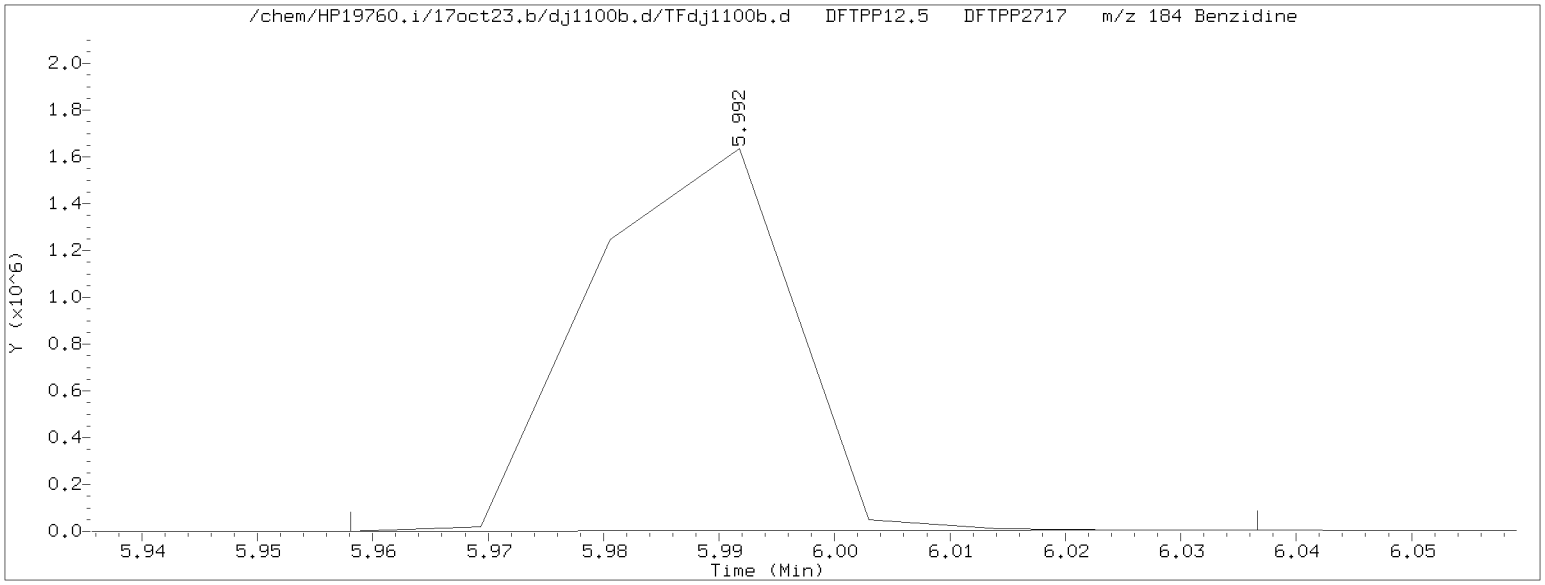
Instrument ID: HP19760.i Injection Date: 23-OCT-2017 12:01 Operator: ceb05247



Pentachlorophenol EICP peak height = 301888 EICP peak height at 10% = 30189 Pentachlorophenol EICP area = 320735

Pentachlorophenol EICP peak apex (min.) = 4.736
RT at 5% of front half of EICP (min.) = 4.714 'Front' peak width (min.) = 0.0212166667
RT at 5% of back half of EICP (min.) = 4.752 'Tailing' peak width (min.) = 0.0167000000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0167000000}{0.0212166667} = 0.787$$



Benzidine EICP peak height = 1633649 EICP peak height at 2.5% = 40841 Benzidine EICP area = 1987668

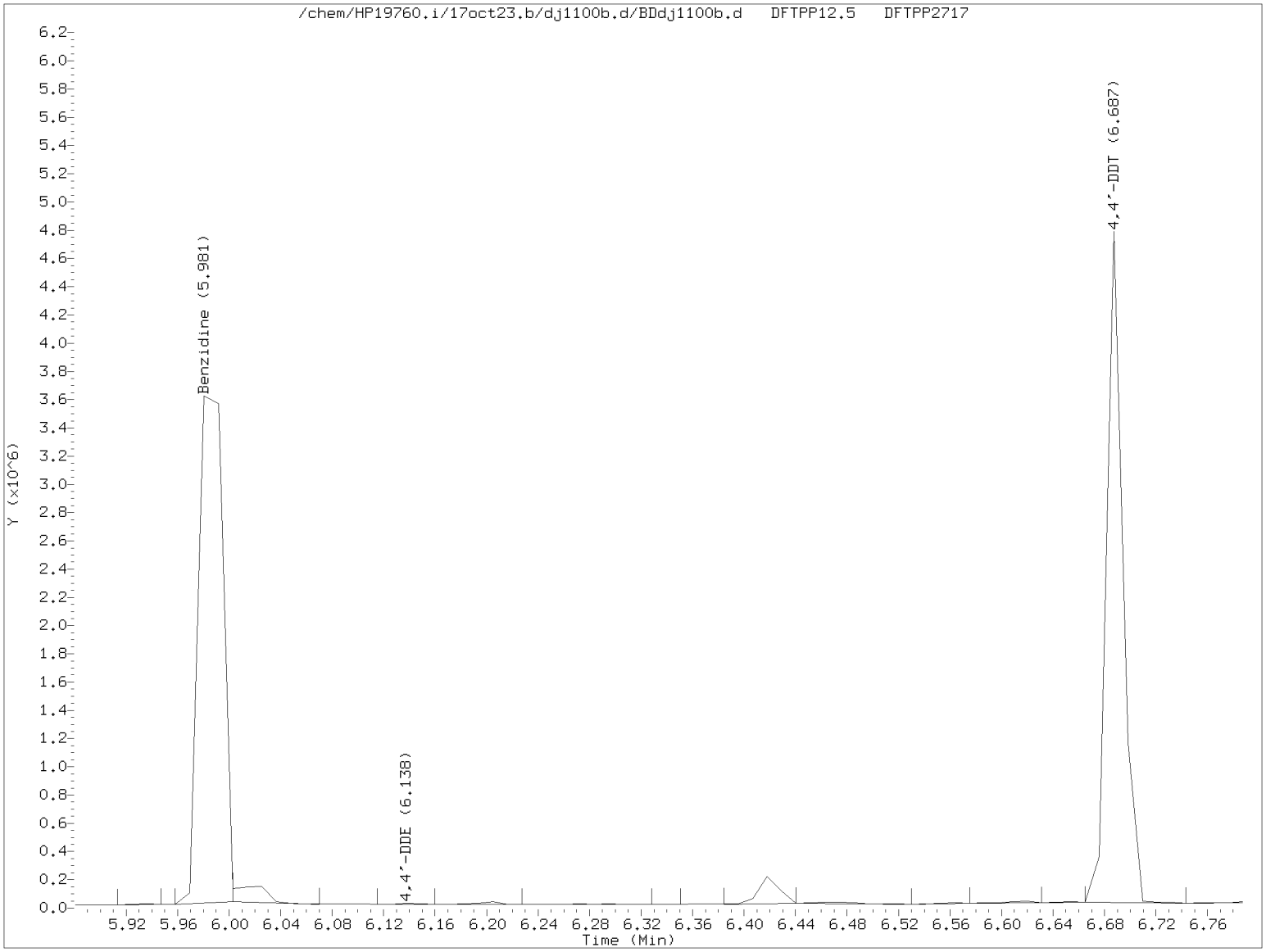
Benzidine EICP peak apex (min.) = 5.992
RT at 2.5% of front half of EICP (min.) = 5.970 'Front' peak width (min.) = 0.0222000000
RT at 2.5% of back half of EICP (min.) = 6.005 'Tailing' peak width (min.) = 0.0131166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0131166667}{0.0222000000} = 0.591$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 11:21. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

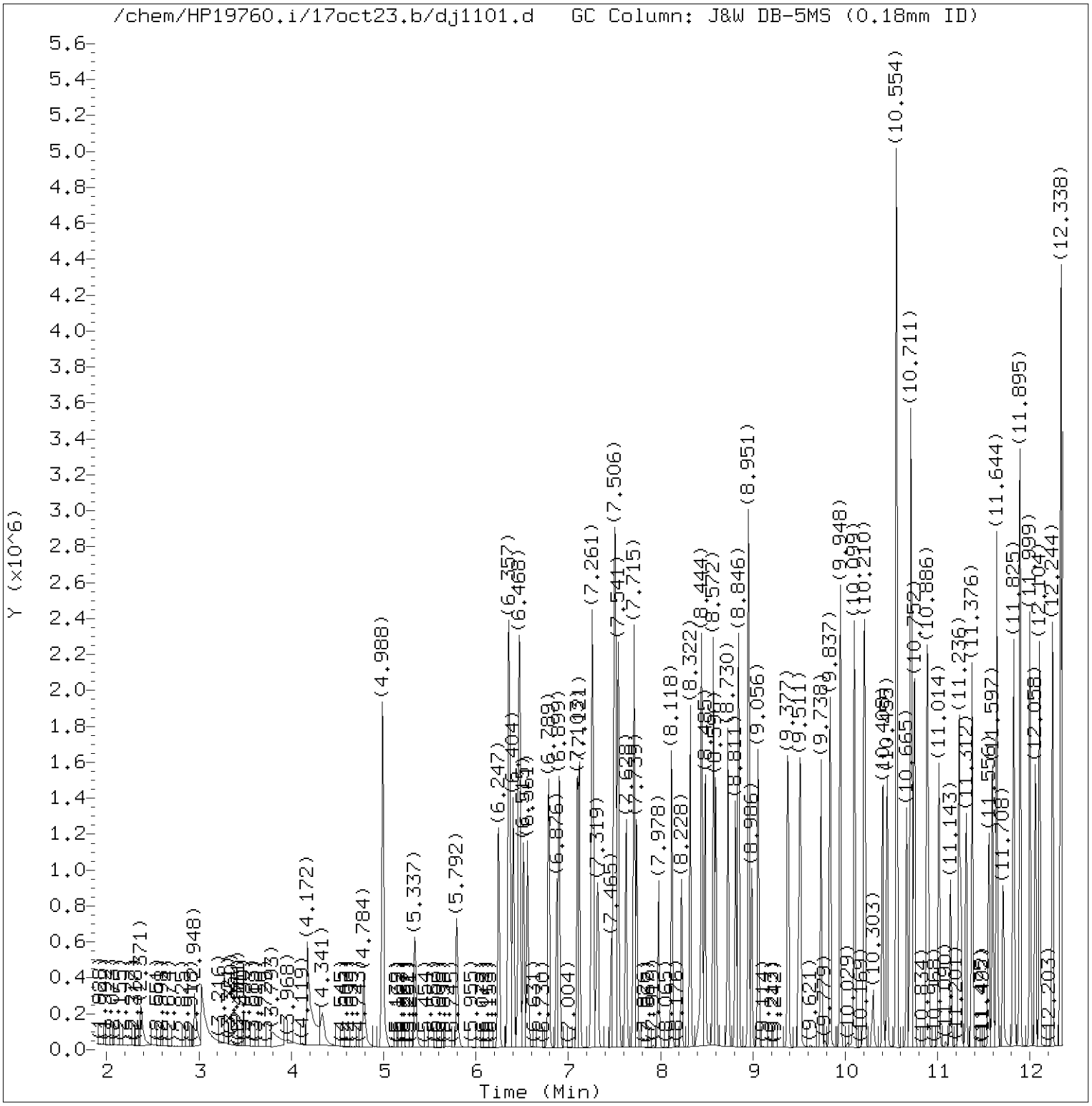
Instrument ID: HP19760.i Injection Date: 23-OCT-2017 12:01 Operator: ceb05247



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{6247 + 0}{6247 + 0 + 4189260} \times 100 = 0.1$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 11:21. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

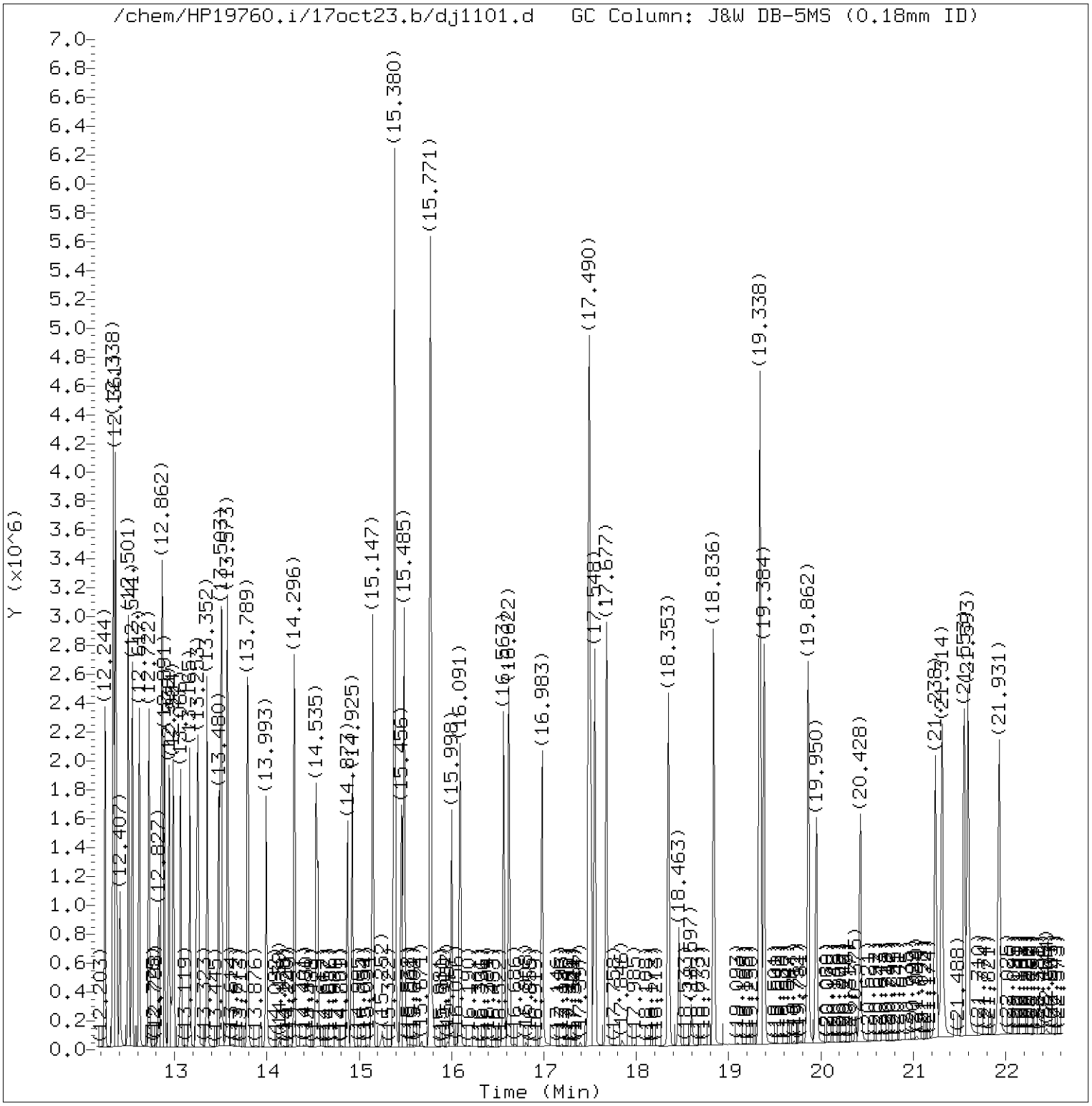
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.371	88	199240	7.814
4) N-Nitrosodimethylamine	(1)	2.948	74	302762	7.534
5) Pyridine	(1)	3.023	79	478401	7.387
7) 2-Picoline	(1)	4.172	93	511998	7.431
8) N-Nitrosomethylethylamine	(1)	4.341	88	222429	7.593
9) Methyl methanesulfonate	(1)	4.784	80	241450	7.731
11)$2-Fluorophenol	(1)	4.988	112	885784	15.476
13) N-Nitrosodiethylamine	(1)	5.337	102	214230	7.729
42) Total Cresols	(1)			896113	15.779
15) Ethyl methanesulfonate	(1)	5.792	109	224763	7.793
16) Benzaldehyde	(1)	6.247	77	401170	7.564
17)$Phenol-d6	(1)	6.351	99	1158529	15.474
18) Phenol	(1)	6.375	94	657836	7.787
19) Aniline	(1)	6.404	93	760386	7.720
20) a-methylstyrene	(1)	6.474	118	459701	7.604
22) bis(2-Chloroethyl)ether	(1)	6.515	93	489141	7.710
23) 2-Chlorophenol	(1)	6.561	128	436860	7.709
24) 1,3-Dichlorobenzene	(1)	6.789	146	472335	7.658
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	188854	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	477143	7.607
27) Benzyl alcohol	(1)	7.098	108	289832	7.625
28) 1,2-Dichlorobenzene	(1)	7.121	146	455667	7.672
30) Indene	(1)	7.255	115	840942	7.615
31) 2-Methylphenol	(1)	7.272	108	416374	7.763
34) bis(2-Chloroisopropyl)ether	(1)	7.319	45	632632	7.689
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.319	45	632632	7.689
97) Isosafrole	(3)			301270	7.848
35) N-Nitrosopyrrolidine	(1)	7.465	100	229386	7.786
36) Acetophenone	(1)	7.494	105	651099	7.334
37) 4-Methylphenol	(1)	7.511	108	479739	8.003
38) N-Nitroso-di-n-propylamine	(1)	7.511	70	375232	7.742
39) N-Nitrosomorpholine	(1)	7.535	56	288069	7.938
40) o-Toluidine	(1)	7.541	106	749463	7.742
43) Hexachloroethane	(1)	7.628	117	198125	7.842
44)$Nitrobenzene-d5	(2)	7.715	82	1094944	15.810
45) Nitrobenzene	(2)	7.739	77	542772	7.796
48) N-Nitrosopiperidine	(2)	7.978	114	219998	7.817
120) 2,4_2,6-Dinitrotoluenes	(3)			423774	15.819
50) Isophorone	(2)	8.118	82	947534	7.824
51) 2-Nitrophenol	(2)	8.228	139	203653	7.879

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

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.322	107	472806	7.860
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	203866	7.558
56) Benzoic acid	(2)	8.456	105	405901M	9.882
55) bis(2-Chloroethoxy)methane	(2)	8.485	93	584165	7.755
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	676668	7.713
60) 2,4-Dichlorophenol	(2)	8.596	162	354906	7.980
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	394307	7.629
146) Diallate trans/cis	(4)			421351	7.898
65)*Naphthalene-d8	(2)	8.811	136	717122	5.000
66) Naphthalene	(2)	8.846	128	1237001	7.630
67) 4-Chloroaniline	(2)	8.951	127	516305	7.738
68) 2,6-Dichlorophenol	(2)	8.957	162	346455	7.921
69) Hexachloropropene	(2)	8.986	213	187430	7.464
71) Hexachlorobutadiene	(2)	9.056	225	225157	7.780
75) Quinoline	(2)	9.377	129	760764	7.716
76) Caprolactam	(2)	9.499	113	104125	7.137
77) N-Nitrosodi-n-butylamine	(2)	9.516	84	432684	8.194
80) 4-Chloro-3-methylphenol	(2)	9.738	107	392716	7.867
82) Safrole	(2)	9.837	162	320486	7.732
83) 2-Methylnaphthalene	(2)	9.948	142	835084	7.765
84) 1-Methylnaphthalene	(2)	10.099	142	748344	7.685
85) Hexachlorocyclopentadiene	(3)	10.204	237	190141	7.929
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	391347	7.668
88) cis-Isosafrole	(3)	10.303	162	55129	1.319
90) 2,4,6-Trichlorophenol	(3)	10.408	196	243700	7.924
92) 2,4,5-Trichlorophenol	(3)	10.455	196	257921	7.956
93)$2-Fluorobiphenyl	(3)	10.554	172	1803081	15.785
94) trans-Isosafrole	(3)	10.665	162	246141	6.531
95) 1,1'-Biphenyl	(3)	10.705	154	933065	7.437
96) 2-Chloronaphthalene	(3)	10.717	162	782522	7.686
98) 1-Chloronaphthalene	(3)	10.752	162	727099	8.129
99) Diphenyl ether	(3)	10.886	170	526776	7.837
100) 2-Nitroaniline	(3)	10.904	138	227555	7.990
104) 1,4-Naphthoquinone	(3)	11.014	158	312855	7.873
105) 1,4-Dinitrobenzene	(3)	11.143	168	112943	7.714
106) Dimethylphthalate	(3)	11.236	163	833351	7.683
107) 1,3-Dinitrobenzene	(3)	11.253	168	123239	7.577
108) 2,6-Dinitrotoluene	(3)	11.312	165	180205	8.000
109) Acenaphthylene	(3)	11.376	152	1078259	7.945
112) 3-Nitroaniline	(3)	11.556	138	200477	7.824

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

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.597	164	377147	5.000
114) Acenaphthene	(3)	11.644	153	806075	7.840
115) 2,4-Dinitrophenol	(3)	11.714	184	122740	9.515
116) 4-Nitrophenol	(3)	11.819	109	151498	7.716
117) Pentachlorobenzene	(3)	11.830	250	329931	7.855
119) Dibenzofuran	(3)	11.889	168	1034556	7.715
118) 2,4-Dinitrotoluene	(3)	11.900	165	243569	7.543
121) 1-Naphthylamine	(3)	11.999	143	788995	7.559
122) 2,3,4,6-Tetrachlorophenol	(3)	12.058	232	202527	7.983
123) 2-Naphthylamine	(3)	12.104	143	760613	7.483
124) Diethylphthalate	(3)	12.244	149	854086	7.975
126) Fluorene	(3)	12.332	166	839039	7.781
125) Thionazin	(3)	12.338	107	172314	8.091
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	396078	7.692
128) 5-Nitro-o-toluidine	(3)	12.361	152	236339	7.948
129) 4-Nitroaniline	(3)	12.367	138	211586	8.124
130) 4,6-Dinitro-2-methylphenol	(4)	12.407	198	129634	7.220
132) NDPA as diphenylamine	(4)	12.501	169	701784	7.957
131) N-Nitrosodiphenylamine	(4)	12.501	169	701784	7.957
134) 1,2-Diphenylhydrazine	(4)	12.541	77	1016051	8.067
135)$2,4,6-Tribromophenol	(3)	12.617	330	219089	15.264
137) Tetraethyldithiopyrophosphate	(4)	12.722	97	168407	8.041
139) 1,3,5-Trinitrobenzene	(4)	12.827	213	83439	7.081
140) Diallate (peak 1)	(4)	12.856	86	360329	6.548
141) Phorate	(4)	12.868	75	659009	8.324
142) Phenacetin	(4)	12.891	108	499833	8.292
143) 4-Bromophenyl-phenylether	(4)	12.944	248	237017	7.670
144) Diallate (peak 2)	(4)	12.961	86	61022	1.352
145) Hexachlorobenzene	(4)	12.984	284	244132	7.707
147) Dimethoate	(4)	13.066	87	406572	7.995
148) Atrazine	(4)	13.165	200	225442	7.471
149) Pentachlorophenol	(4)	13.241	266	156089	7.799
151) Pentachloronitrobenzene	(4)	13.253	237	107749	7.913
150) 4-Aminobiphenyl	(4)	13.258	169	229400	8.230
152) Pronamide	(4)	13.352	173	413161	8.181
153)*Phenanthrene-d10	(4)	13.474	188	710425	5.000
154) Dinoseb	(4)	13.492	211	196850	7.497
155) Phenanthrene	(4)	13.509	178	1257697	7.783
157) Anthracene	(4)	13.573	178	1269268	7.945
163) Carbazole	(4)	13.795	167	1208465	8.070

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$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

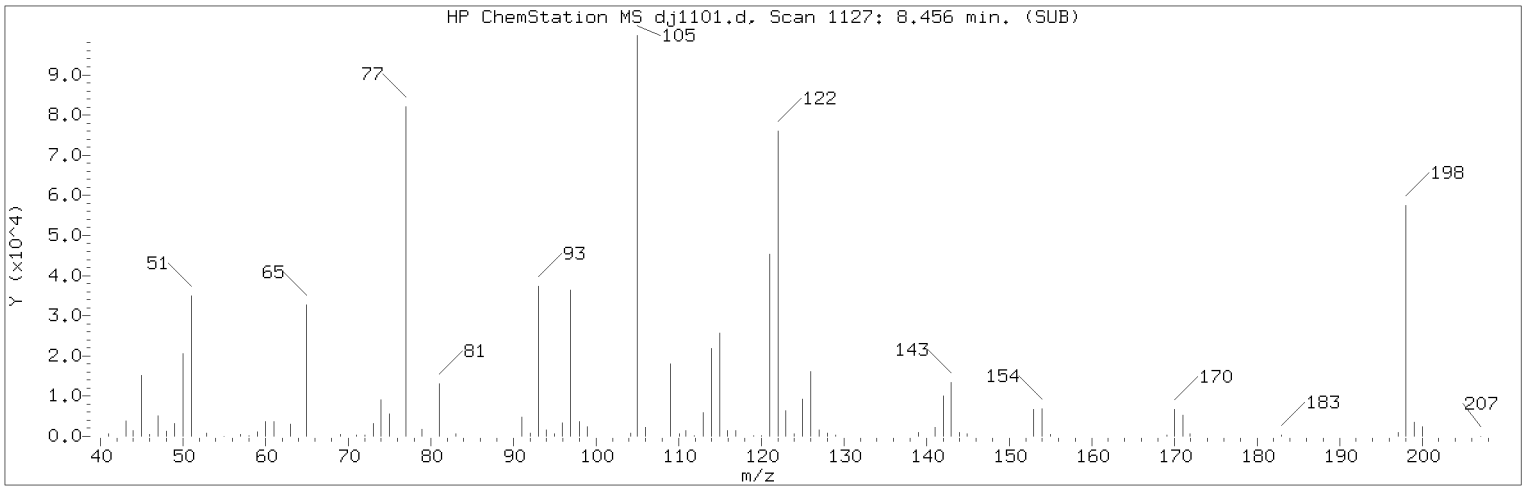
Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.993	109	311449	7.972
165) Di-n-butylphthalate	(4)	14.296	149	1511919	8.049
167) Parathion	(4)	14.535	109	202552	8.015
168) 4-Nitroquinoline-1-oxide	(4)	14.552	190	89003	6.060
169) Octachlorostyrene	(4)	14.873	308	95894	7.510
171) Isodrin	(4)	14.925	193	150423	7.770
222) Total PAHs	(6)			22783512	140.014
173) Fluoranthene	(4)	15.147	202	1498276	8.120
174) Benzidine	(5)	15.386	184	3146513	23.692
175)*Pyrene-d10	(5)	15.456	212	889904	5.000
177) Pyrene	(5)	15.485	202	1575958	7.681
179)$Terphenyl-d14	(5)	15.771	244	2113019	15.788
182) p-Dimethylaminoazobenzene	(5)	16.004	225	216683	8.056
185) Chlorobenzilate	(5)	16.091	139	464543	7.810
187) 3,3'-Dimethylbenzidine	(5)	16.563	212	1008560	7.963
188) Butylbenzylphthalate	(5)	16.622	149	700879	7.851
191) 2-Acetylaminofluorene	(5)	16.983	181	606614	7.634
193) 3,3'-Dichlorobenzidine	(5)	17.490	252	545871	7.697
195) Benzo(a)anthracene	(5)	17.490	228	1499210	7.925
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.508	231	278129	7.570
196) Chrysene	(5)	17.554	228	1402069	7.833
199) bis(2-Ethylhexyl)phthalate	(5)	17.677	149	1031633	7.810
203) 6-Methylchrysene	(5)	18.353	242	1016299	7.704
205) Di-n-octylphthalate	(6)	18.836	149	1814349	7.807
206) Benzo(b)fluoranthene	(6)	19.338	252	1498810	7.945
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.344	256	642126	8.183
208) Benzo(k)fluoranthene	(6)	19.384	252	1473642	8.008
211) Benzo(a)pyrene	(6)	19.862	252	1384932	8.031
213)*Perylene-d12	(6)	19.950	264	780310	5.000
215) 3-Methylcholanthrene	(6)	20.428	268	502655	7.832
217) Dibenz(a,h)acridine	(6)	21.238	279	1125583	7.730
218) Dibenz(a,j)acridine	(6)	21.314	279	1208969	7.827
219) Indeno(1,2,3-cd)pyrene	(6)	21.553	276	1650075	8.118
220) Dibenz(a,h)anthracene	(6)	21.593	278	1361497	8.016
221) Benzo(g,h,i)perylene	(6)	21.931	276	1368276	8.028

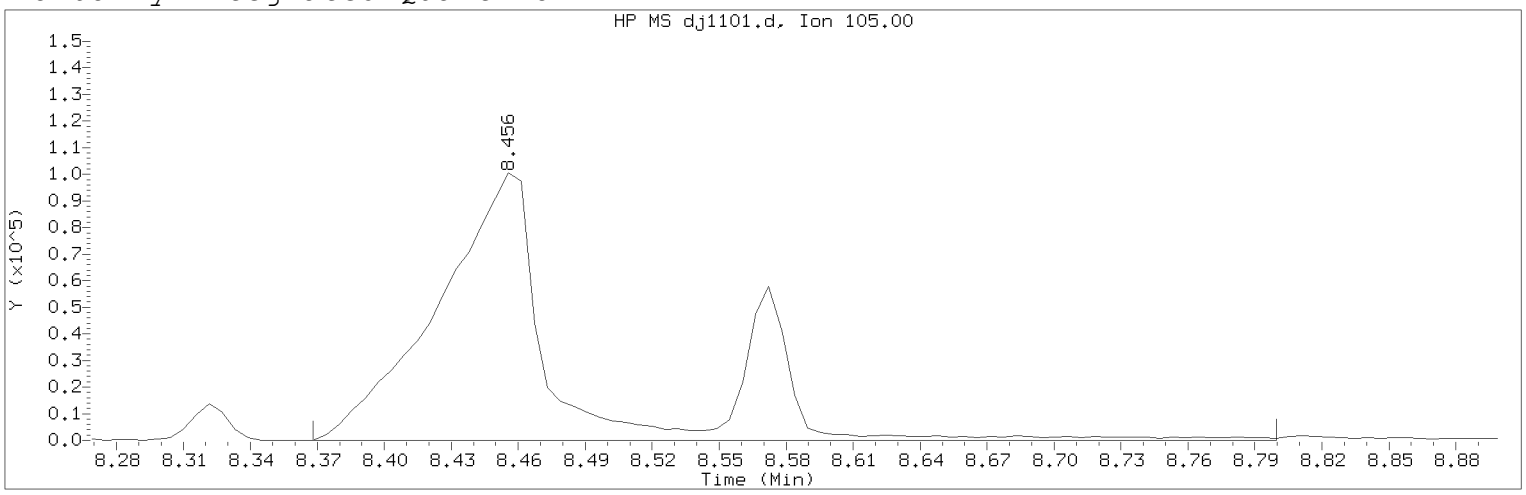
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

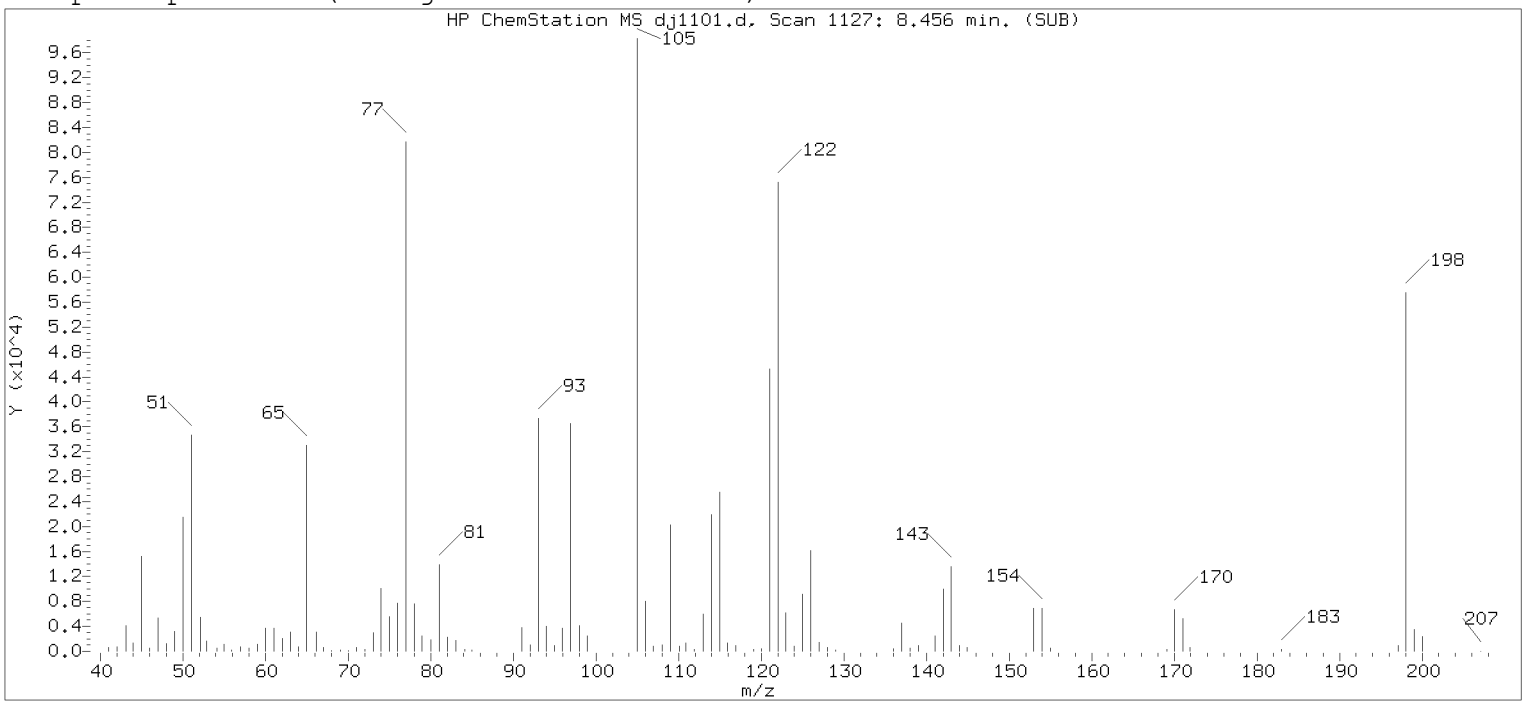
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1127
Retention Time (minutes) : 8.456
Quant Ion : 105.00
Area (flag) : 405901M
On-Column Amount (ng/ul) : 9.8819
Integration start scan : 1111 Integration stop scan: 1185
Y at integration start : 9 Y at integration end: 9

Reason for manual integration: improper integration

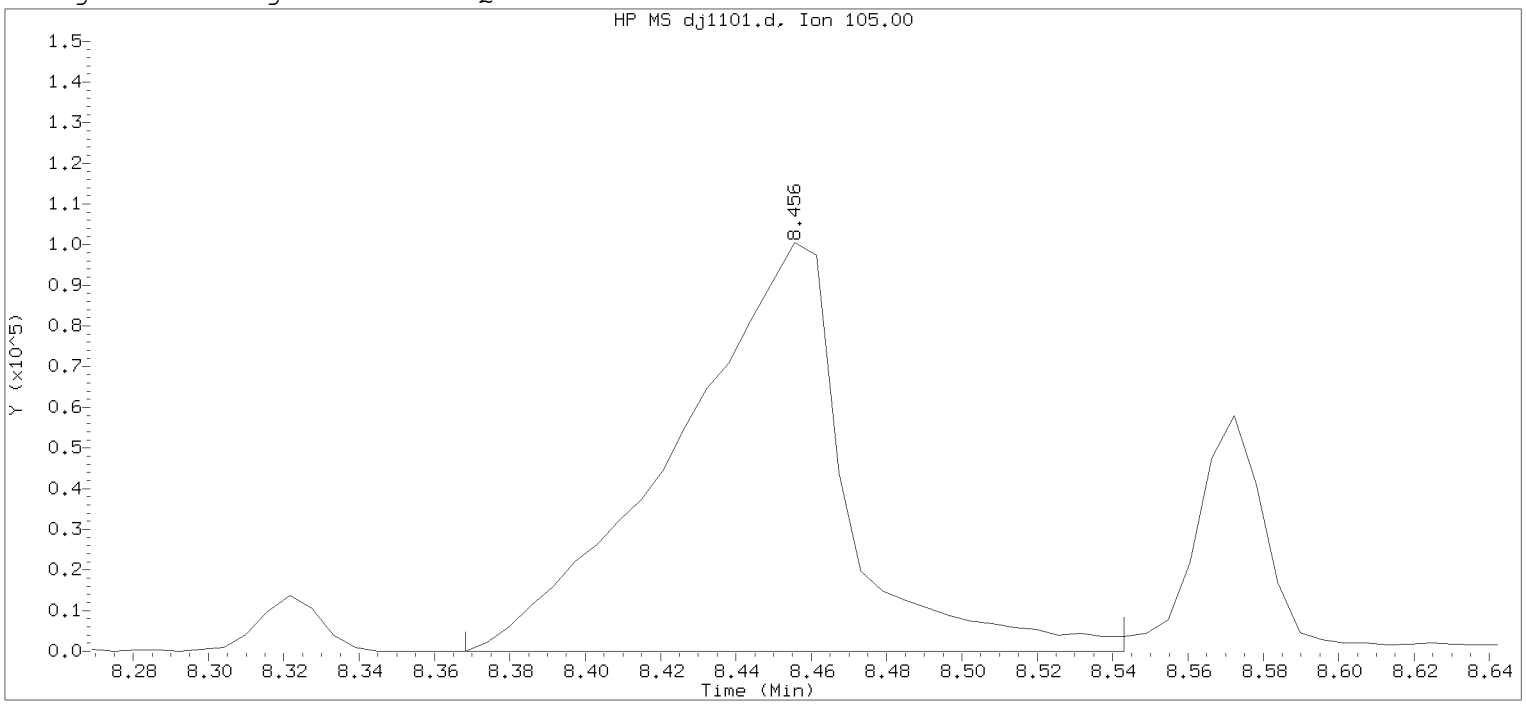
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



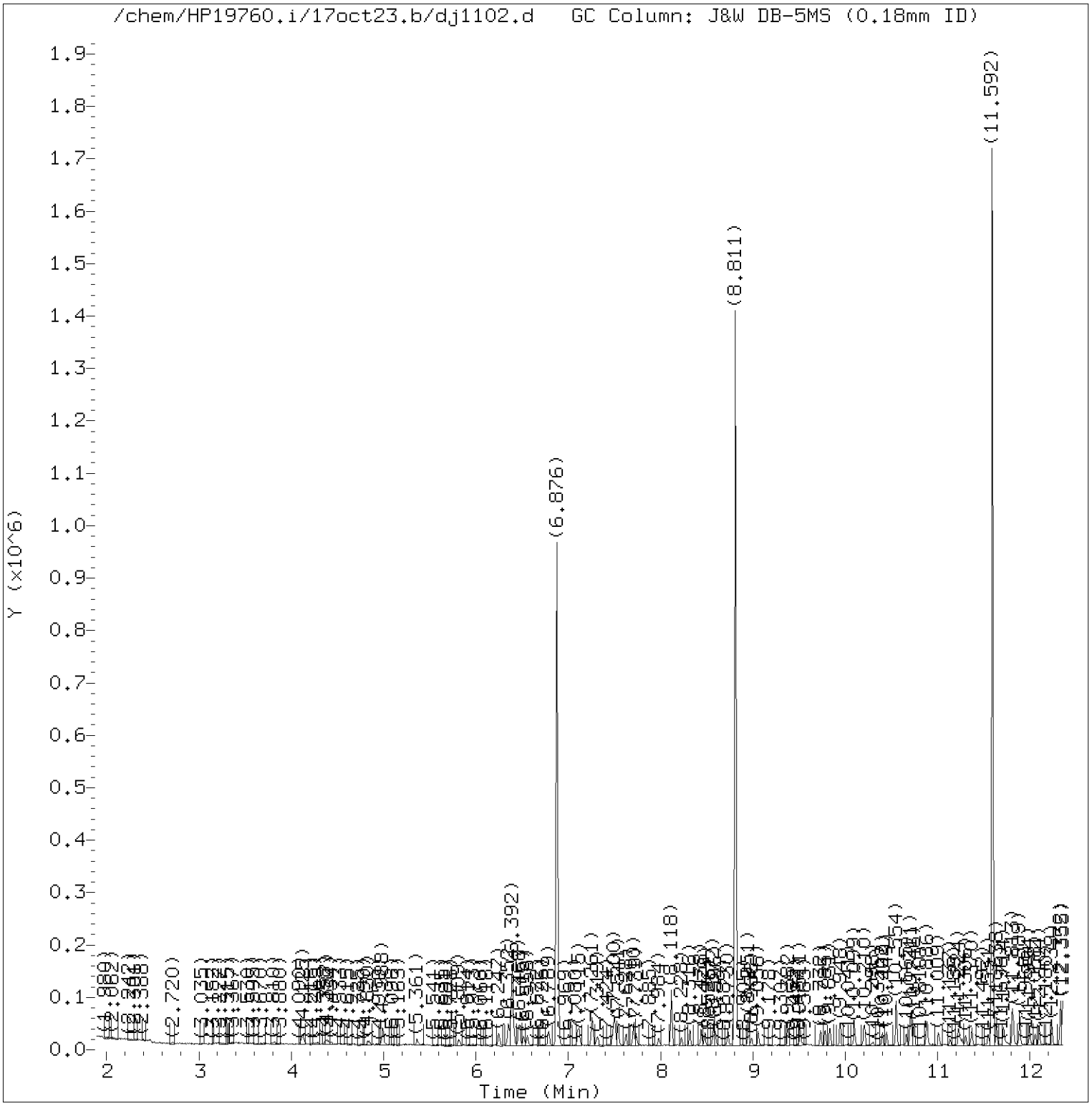
Data File: /chem/HP19760.i/17oct23.b/dj1101.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:24 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1127		
Retention Time (minutes)	: 8.456		
Quant Ion	: 105.00		
Area	: 317727		
On-column Amount (ng/ul)	: 7.8379		
Integration start scan	: 1111	Integration stop scan:	1141
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

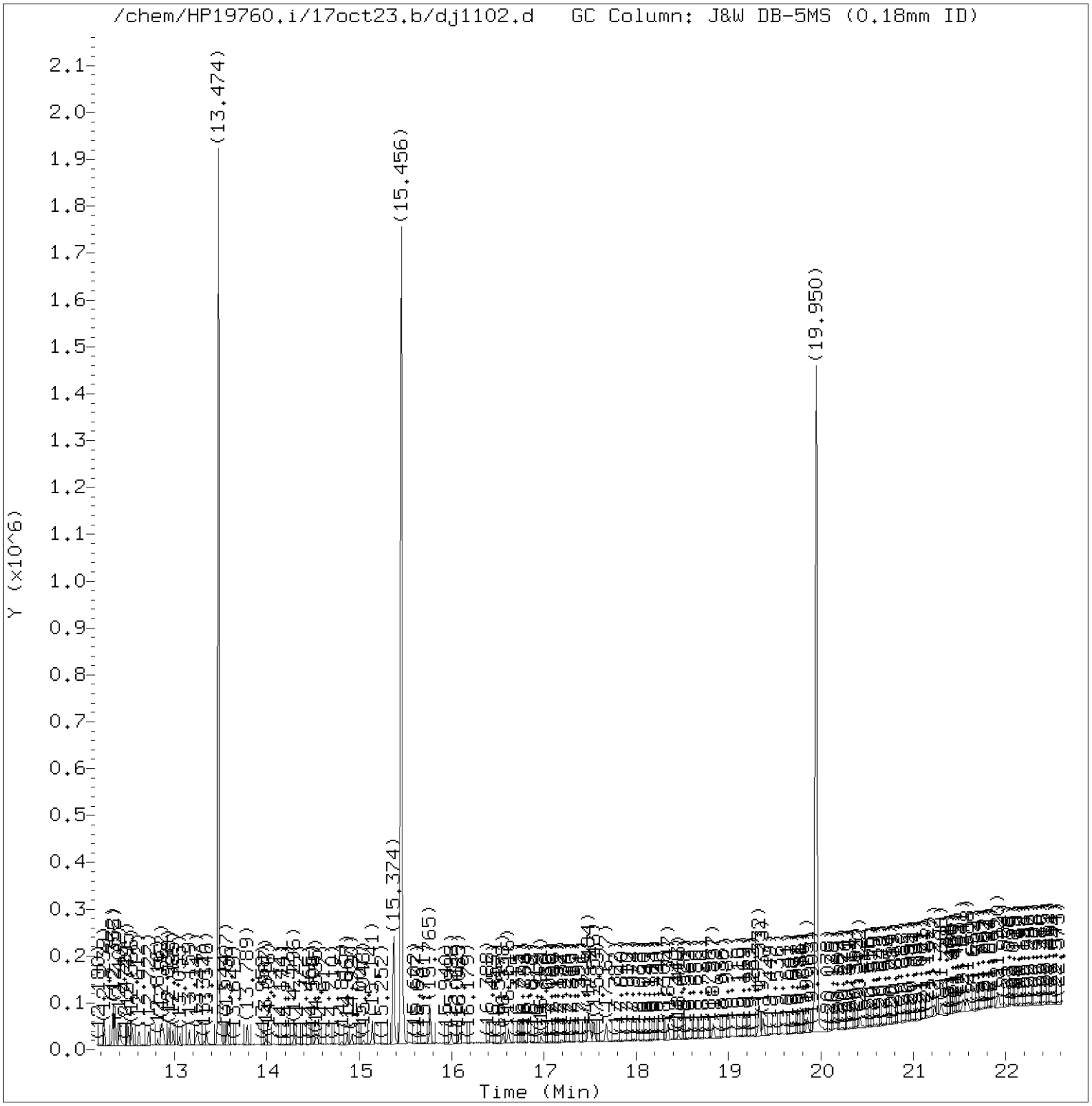
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.481	88	2113	0.081
4) N-Nitrosodimethylamine	(1)	3.175	74	907	0.022
7) 2-Picoline	(1)	4.364	93	5405	0.077
9) Methyl methanesulfonate	(1)	4.830	80	4023	0.126
11)$2-Fluorophenol	(1)	4.988	112	14743	0.251
13) N-Nitrosodiethylamine	(1)	5.361	102	3219	0.113
42) Total Cresols	(1)			14236	0.245
15) Ethyl methanesulfonate	(1)	5.809	109	3621	0.123
16) Benzaldehyde	(1)	6.247	77	7423	0.137
17)$Phenol-d6	(1)	6.352	99	19805	0.258
18) Phenol	(1)	6.369	94	11391	0.132
19) Aniline	(1)	6.410	93	12780	0.127
20) a-methylstyrene	(1)	6.474	118	8009	0.129
22) bis(2-Chloroethyl)ether	(1)	6.515	93	8253	0.127
23) 2-Chlorophenol	(1)	6.556	128	7148	0.123
24) 1,3-Dichlorobenzene	(1)	6.789	146	8161	0.129
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	193483	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	8311	0.129
27) Benzyl alcohol	(1)	7.103	108	5351	0.137
28) 1,2-Dichlorobenzene	(1)	7.121	146	8023	0.132
30) Indene	(1)	7.255	115	15565	0.138
31) 2-Methylphenol	(1)	7.267	108	6551	0.119
34) bis(2-Chloroisopropyl)ether	(1)	7.319	45	10944	0.130
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.319	45	10944	0.130
97) Isosafrole	(3)			5058	0.126
35) N-Nitrosopyrrolidine	(1)	7.476	100	3145	0.104
36) Acetophenone	(1)	7.488	105	11099	0.122
37) 4-Methylphenol	(1)	7.506	108	7685	0.125
38) N-Nitroso-di-n-propylamine	(1)	7.506	70	7132	0.144
39) N-Nitrosomorpholine	(1)	7.541	56	4662	0.125
40) o-Toluidine	(1)	7.541	106	12419	0.125
43) Hexachloroethane	(1)	7.628	117	3292	0.127
44)$Nitrobenzene-d5	(2)	7.710	82	18043	0.256
45) Nitrobenzene	(2)	7.739	77	9686	0.137
48) N-Nitrosopiperidine	(2)	7.978	114	3428	0.120
120) 2,4_2,6-Dinitrotoluenes	(3)			5029	0.180
50) Isophorone	(2)	8.118	82	16055	0.130
51) 2-Nitrophenol	(2)	8.228	139	2628	0.100
53) 2,4-Dimethylphenol	(2)	8.316	107	7039	0.115
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	3345	0.122

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$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) bis(2-Chloroethoxy)methane	(2)	8.485	93	9782	0.128
56) Benzoic acid	(2)	8.572	105	2528	0.061
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	12848	0.144
60) 2,4-Dichlorophenol	(2)	8.596	162	5782	0.128
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	7080	0.135
146) Diallate trans/cis	(4)			6017	0.112
65)*Naphthalene-d8	(2)	8.811	136	729185	5.000
66) Naphthalene	(2)	8.846	128	21580	0.131
67) 4-Chloroaniline	(2)	8.951	127	8532	0.126
68) 2,6-Dichlorophenol	(2)	8.951	162	5394	0.121
69) Hexachloropropene	(2)	8.986	213	2723	0.107
71) Hexachlorobutadiene	(2)	9.056	225	3355	0.114
75) Quinoline	(2)	9.382	129	13708	0.137
77) N-Nitrosodi-n-butylamine	(2)	9.511	84	7105	0.132
80) 4-Chloro-3-methylphenol	(2)	9.732	107	6688	0.132
82) Safrole	(2)	9.831	162	5194	0.123
83) 2-Methylnaphthalene	(2)	9.948	142	13470	0.123
84) 1-Methylnaphthalene	(2)	10.099	142	12501	0.126
85) Hexachlorocyclopentadiene	(3)	10.198	237	2693	0.108
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	6913	0.130
88) cis-Isosafrole	(3)	10.303	162	887	0.020
90) 2,4,6-Trichlorophenol	(3)	10.402	196	3793	0.118
92) 2,4,5-Trichlorophenol	(3)	10.449	196	4138	0.122
93)$2-Fluorobiphenyl	(3)	10.554	172	30509	0.256
94) trans-Isosafrole	(3)	10.665	162	4171	0.106
95) 1,1'-Biphenyl	(3)	10.706	154	16661	0.127
96) 2-Chloronaphthalene	(3)	10.717	162	12572	0.118
98) 1-Chloronaphthalene	(3)	10.746	162	12606	0.135
99) Diphenyl ether	(3)	10.886	170	8888	0.127
100) 2-Nitroaniline	(3)	10.898	138	2927	0.098
104) 1,4-Naphthoquinone	(3)	11.009	158	4351	0.105
106) Dimethylphthalate	(3)	11.230	163	13891	0.123
107) 1,3-Dinitrobenzene	(3)	11.248	168	1465	0.086
105) 1,4-Dinitrobenzene	(3)	11.248	168	1466	0.096
108) 2,6-Dinitrotoluene	(3)	11.306	165	2061	0.088
109) Acenaphthylene	(3)	11.370	152	17888	0.126
112) 3-Nitroaniline	(3)	11.551	138	2610	0.098
113)*Acenaphthene-d10	(3)	11.592	164	393791	5.000
114) Acenaphthene	(3)	11.638	153	13109	0.122
115) 2,4-Dinitrophenol	(3)	11.714	184	4647	0.345

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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	11.813	109	8724	0.426
117) Pentachlorobenzene	(3)	11.830	250	6164	0.141
119) Dibenzofuran	(3)	11.889	168	16775	0.120
118) 2,4-Dinitrotoluene	(3)	11.895	165	2968	0.088
121) 1-Naphthylamine	(3)	12.000	143	11074	0.102
122) 2,3,4,6-Tetrachlorophenol	(3)	12.058	232	2863	0.108
123) 2-Naphthylamine	(3)	12.104	143	12514	0.118
124) Diethylphthalate	(3)	12.239	149	12900	0.115
126) Fluorene	(3)	12.332	166	14104	0.125
125) Thionazin	(3)	12.332	107	2427	0.109
128) 5-Nitro-o-toluidine	(3)	12.355	152	2808	0.090
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	6393	0.119
129) 4-Nitroaniline	(3)	12.361	138	2976	0.109
130) 4,6-Dinitro-2-methylphenol	(4)	12.408	198	4944	0.274
132) NDPA as diphenylamine	(4)	12.495	169	10925	0.123
131) N-Nitrosodiphenylamine	(4)	12.495	169	10925	0.123
134) 1,2-Diphenylhydrazine	(4)	12.536	77	16952	0.134
135)$2,4,6-Tribromophenol	(3)	12.617	330	2897	0.193
137) Tetraethyldithiopyrophosphate	(4)	12.716	97	2843	0.135
140) Diallate (peak 1)	(4)	12.856	86	5254	0.095
141) Phorate	(4)	12.862	75	8410	0.106
142) Phenacetin	(4)	12.880	108	6085	0.100
143) 4-Bromophenyl-phenylether	(4)	12.938	248	3944	0.127
144) Diallate (peak 2)	(4)	12.961	86	763	0.017
145) Hexachlorobenzene	(4)	12.985	284	4202	0.132
147) Dimethoate	(4)	13.055	87	4650	0.091
148) Atrazine	(4)	13.159	200	3634	0.120
149) Pentachlorophenol	(4)	13.241	266	1923	0.096
151) Pentachloronitrobenzene	(4)	13.247	237	1509	0.110
150) 4-Aminobiphenyl	(4)	13.258	169	3001	0.107
152) Pronamide	(4)	13.346	173	5139	0.101
153)*Phenanthrene-d10	(4)	13.474	188	713630	5.000
154) Dinoseb	(4)	13.497	211	1167	0.044
155) Phenanthrene	(4)	13.503	178	20285	0.125
157) Anthracene	(4)	13.567	178	19262	0.120
163) Carbazole	(4)	13.789	167	17605	0.117
164) Methyl parathion	(4)	13.987	109	2856	0.073
165) Di-n-butylphthalate	(4)	14.296	149	21343	0.113
167) Parathion	(4)	14.523	109	2216	0.087
168) 4-Nitroquinoline-1-oxide	(4)	14.547	190	477	0.032

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

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1102.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 12:54 Analyst ID: ceb05247

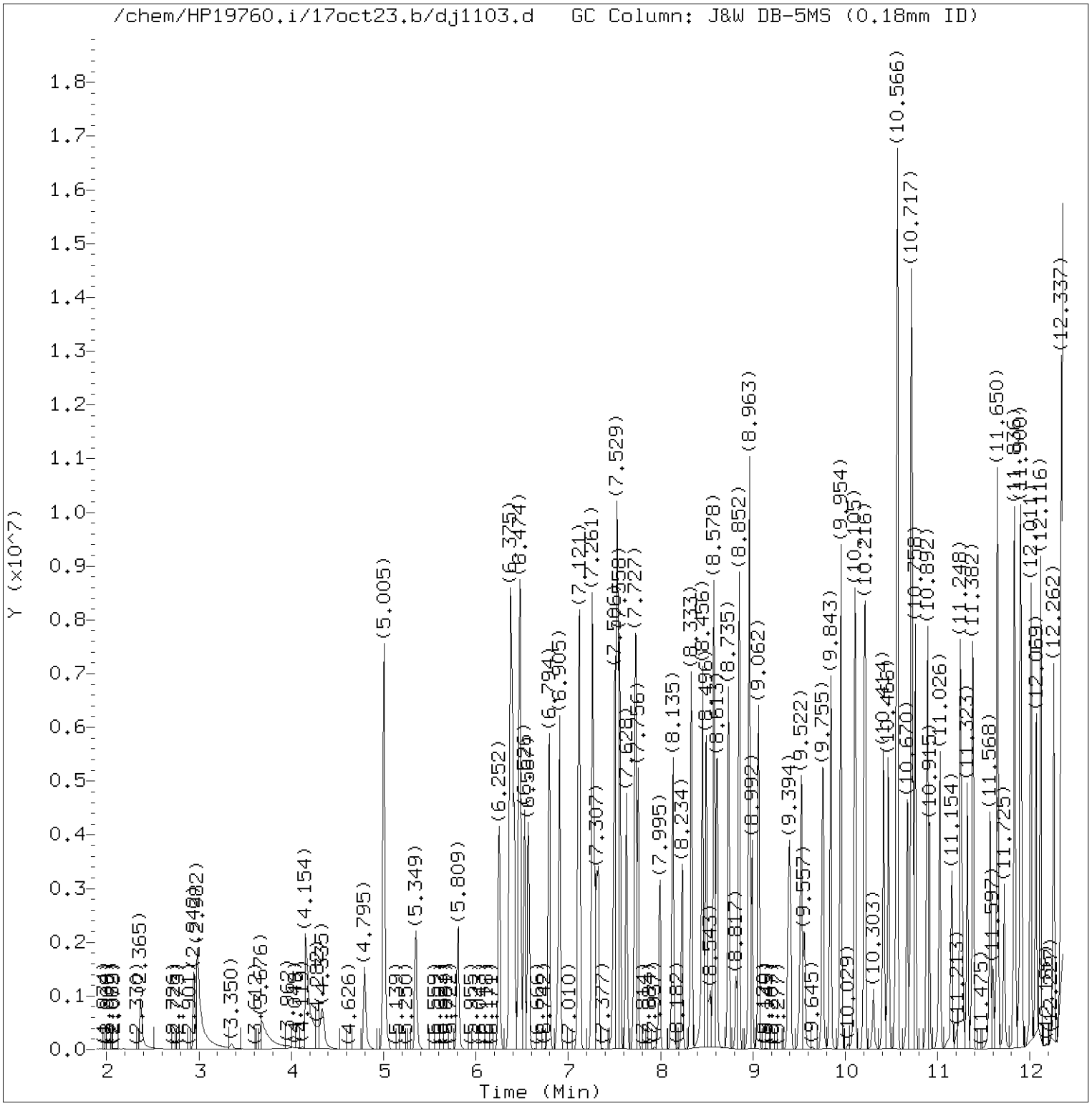
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
169) Octachlorostyrene	(4)	14.873	308	1358	0.106
171) Isodrin	(4)	14.920	193	2521	0.130
222) Total PAHs	(6)			336225	2.222
173) Fluoranthene	(4)	15.141	202	22283	0.120
174) Benzidine	(5)	15.374	184	109509	0.844
175)*Pyrene-d10	(5)	15.456	212	869382	5.000
177) Pyrene	(5)	15.485	202	25969	0.130
179)$Terphenyl-d14	(5)	15.765	244	30371	0.232
182) p-Dimethylaminoazobenzene	(5)	15.998	225	2644	0.101
185) Chlorobenzilate	(5)	16.091	139	5572	0.096
187) 3,3'-Dimethylbenzidine	(5)	16.558	212	12581	0.102
188) Butylbenzylphthalate	(5)	16.616	149	8443	0.097
191) 2-Acetylaminofluorene	(5)	16.971	181	4123	0.053
193) 3,3'-Dichlorobenzidine	(5)	17.484	252	6239	0.090
195) Benzo(a)anthracene	(5)	17.484	228	20540	0.111
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.502	231	3204	0.089
196) Chrysene	(5)	17.543	228	20801	0.119
199) bis(2-Ethylhexyl)phthalate	(5)	17.677	149	12720	0.099
203) 6-Methylchrysene	(5)	18.347	242	14254	0.111
205) Di-n-octylphthalate	(6)	18.837	149	18885	0.087
206) Benzo(b)fluoranthene	(6)	19.332	252	19972	0.114
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.332	256	7376	0.101
208) Benzo(k)fluoranthene	(6)	19.373	252	20511	0.120
211) Benzo(a)pyrene	(6)	19.857	252	17573	0.110
213)*Perylene-d12	(6)	19.950	264	725684	5.000
215) 3-Methylcholanthrene	(6)	20.422	268	6611	0.111
217) Dibenz(a,h)acridine	(6)	21.232	279	12374	0.091
218) Dibenz(a,j)acridine	(6)	21.302	279	15867	0.110
219) Indeno(1,2,3-cd)pyrene	(6)	21.541	276	21381	0.113
220) Dibenz(a,h)anthracene	(6)	21.588	278	16595	0.105
221) Benzo(g,h,i)perylene	(6)	21.920	276	18401	0.116

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

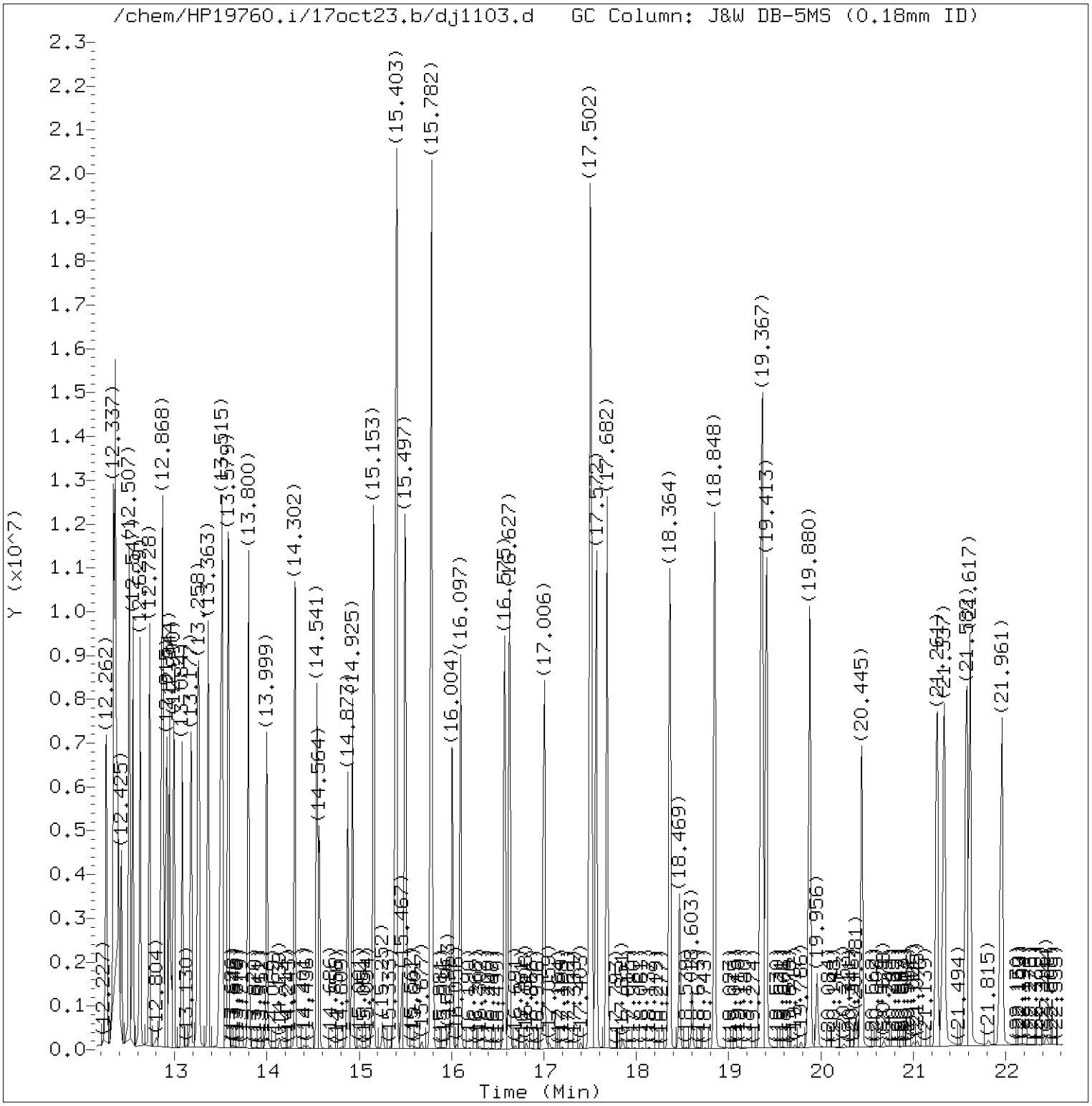
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.365	88	809920	30.383
4) N-Nitrosodimethylamine	(1)	2.942	74	1308182	31.135
5) Pyridine	(1)	2.982	79	2186048	32.284
7) 2-Picoline	(1)	4.154	93	2239893	31.094
8) N-Nitrosomethylethylamine	(1)	4.341	88	922859	30.133
9) Methyl methanesulfonate	(1)	4.795	80	994299	30.451
11)$2-Fluorophenol	(1)	5.005	112	3667719	61.292
13) N-Nitrosodiethylamine	(1)	5.349	102	899143	31.029
42) Total Cresols	(1)			3677170	61.931
15) Ethyl methanesulfonate	(1)	5.809	109	923967	30.640
16) Benzaldehyde	(1)	6.252	77	1489369	26.860
17)$Phenol-d6	(1)	6.375	99	4797353	61.288
18) Phenol	(1)	6.392	94	2717559	30.767
19) Aniline	(1)	6.416	93	3138642	30.479
20) a-methylstyrene	(1)	6.480	118	1885709	29.835
22) bis(2-Chloroethyl)ether	(1)	6.526	93	1962550	29.589
23) 2-Chlorophenol	(1)	6.567	128	1775973	29.974
24) 1,3-Dichlorobenzene	(1)	6.794	146	1927034	29.882
25)*1,4-Dichlorobenzene-d4	(1)	6.882	152	197448	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	1953761	29.794
27) Benzyl alcohol	(1)	7.109	108	1209400	30.434
28) 1,2-Dichlorobenzene	(1)	7.127	146	1850163	29.797
30) Indene	(1)	7.261	115	3446066	29.847
31) 2-Methylphenol	(1)	7.284	108	1707923	30.456
34) bis(2-Chloroisopropyl)ether	(1)	7.325	45	2574102	29.925
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.325	45	2574102	29.925
97) Isosafrole	(3)			1281474	31.155
35) N-Nitrosopyrrolidine	(1)	7.494	100	973538	31.606
36) Acetophenone	(1)	7.506	105	2929335	31.561
37) 4-Methylphenol	(1)	7.529	108	1969247	31.421
38) N-Nitroso-di-n-propylamine	(1)	7.535	70	1561348	30.811
39) N-Nitrosomorpholine	(1)	7.558	56	1138631	30.010
40) o-Toluidine	(1)	7.558	106	3044112	30.078
43) Hexachloroethane	(1)	7.628	117	800440	30.302
44)$Nitrobenzene-d5	(2)	7.727	82	4437685	61.004
45) Nitrobenzene	(2)	7.756	77	2205237	30.155
48) N-Nitrosopiperidine	(2)	7.995	114	921616	31.178
120) 2,4_2,6-Dinitrotoluenes	(3)			1919959	66.889
50) Isophorone	(2)	8.135	82	3971851	31.224
51) 2-Nitrophenol	(2)	8.234	139	893959	32.929

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.333	107	1977407	31.296
57) O,O,O-Triethylphosphorothioate	(2)	8.456	198	865900	30.565
55) bis(2-Chloroethoxy)methane	(2)	8.496	93	2397992	30.307
56) Benzoic acid	(2)	8.543	105	1692961M	39.241
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.578	104	2795209	30.334
60) 2,4-Dichlorophenol	(2)	8.613	162	1468288	31.434
62) 1,2,4-Trichlorobenzene	(2)	8.735	180	1634999	30.118
146) Diallate trans/cis	(4)			1821600	29.957
65)*Naphthalene-d8	(2)	8.817	136	753222	5.000
66) Naphthalene	(2)	8.852	128	5094690	29.921
67) 4-Chloroaniline	(2)	8.963	127	2157581	30.787
68) 2,6-Dichlorophenol	(2)	8.963	162	1432074	31.174
69) Hexachloropropene	(2)	8.992	213	825898	31.313
71) Hexachlorobutadiene	(2)	9.062	225	927843	30.526
75) Quinoline	(2)	9.394	129	3109391	30.026
77) N-Nitrosodi-n-butylamine	(2)	9.522	84	1593261	28.727
76) Caprolactam	(2)	9.563	113	493897A	32.231
80) 4-Chloro-3-methylphenol	(2)	9.761	107	1638789	31.256
82) Safrole	(2)	9.843	162	1350689	31.026
83) 2-Methylnaphthalene	(2)	9.954	142	3477983	30.788
84) 1-Methylnaphthalene	(2)	10.105	142	3133881	30.641
85) Hexachlorocyclopentadiene	(3)	10.204	237	810317	31.536
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.216	216	1655563	30.274
88) cis-Isosafrole	(3)	10.309	162	234730	5.242
90) 2,4,6-Trichlorophenol	(3)	10.414	196	1040459	31.572
92) 2,4,5-Trichlorophenol	(3)	10.466	196	1076466	30.987
93)$2-Fluorobiphenyl	(3)	10.566	172	7360659	60.140
94) trans-Isosafrole	(3)	10.676	162	1046744	25.919
95) 1,1'-Biphenyl	(3)	10.717	154	4169472	31.014
96) 2-Chloronaphthalene	(3)	10.729	162	3469707	31.803
98) 1-Chloronaphthalene	(3)	10.758	162	2674351	27.904
99) Diphenyl ether	(3)	10.892	170	2182869	30.309
100) 2-Nitroaniline	(3)	10.915	138	1016804	33.321
104) 1,4-Naphthoquinone	(3)	11.026	158	1319650	30.993
105) 1,4-Dinitrobenzene	(3)	11.154	168	519852	33.137
106) Dimethylphthalate	(3)	11.248	163	3375822	29.045
107) 1,3-Dinitrobenzene	(3)	11.271	168	555850	31.896
108) 2,6-Dinitrotoluene	(3)	11.323	165	803291	33.280
109) Acenaphthylene	(3)	11.382	152	4442548	30.551
112) 3-Nitroaniline	(3)	11.568	138	921383	33.559

M = Compound was manually integrated.
A = User selected an alternate hit.
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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.597	164	404118	5.000
114) Acenaphthene	(3)	11.650	153	3302525	29.976
115) 2,4-Dinitrophenol	(3)	11.725	184	517345	37.429
117) Pentachlorobenzene	(3)	11.836	250	1368042	30.397
116) 4-Nitrophenol	(3)	11.836	109	654445	31.106
119) Dibenzofuran	(3)	11.900	168	4276509	29.762
118) 2,4-Dinitrotoluene	(3)	11.912	165	1116668	32.272
121) 1-Naphthylamine	(3)	12.011	143	3449848	30.847
122) 2,3,4,6-Tetrachlorophenol	(3)	12.069	232	914742	33.651
123) 2-Naphthylamine	(3)	12.116	143	3360905	30.858
124) Diethylphthalate	(3)	12.262	149	3504853A	30.541
126) Fluorene	(3)	12.337	166	3548924	30.714
125) Thionazin	(3)	12.355	107	714990A	31.332
127) 4-Chlorophenyl-phenylether	(3)	12.361	204	1686594	30.569
128) 5-Nitro-o-toluidine	(3)	12.378	152	1051113	32.991
129) 4-Nitroaniline	(3)	12.396	138	910287A	32.617
130) 4,6-Dinitro-2-methylphenol	(4)	12.425	198	655609	32.034
131) N-Nitrosodiphenylamine	(4)	12.507	169	3035620	30.196
132) NDPA as diphenylamine	(4)	12.507	169	3035620	30.196
134) 1,2-Diphenylhydrazine	(4)	12.547	77	4122418	28.713
135)$2,4,6-Tribromophenol	(3)	12.629	330	1034933	67.293
137) Tetraethyldithiopyrophosphate	(4)	12.728	97	715514	29.973
139) 1,3,5-Trinitrobenzene	(4)	12.856	213	441620	32.878
140) Diallate (peak 1)	(4)	12.862	86	1553637	24.771
141) Phorate	(4)	12.874	75	2717298	30.112
142) Phenacetin	(4)	12.915	108	2149961	31.292
143) 4-Bromophenyl-phenylether	(4)	12.949	248	1048132	29.757
144) Diallate (peak 2)	(4)	12.967	86	267963	5.207
145) Hexachlorobenzene	(4)	12.990	284	1072174	29.694
147) Dimethoate	(4)	13.084	87	1782809	30.756
148) Atrazine	(4)	13.177	200	1026866	29.854
149) Pentachlorophenol	(4)	13.247	266	747568	32.767
151) Pentachloronitrobenzene	(4)	13.258	237	481754	31.037
150) 4-Aminobiphenyl	(4)	13.264	169	986609	31.052
152) Pronamide	(4)	13.363	173	1814420	31.521
153)*Phenanthrene-d10	(4)	13.480	188	809784	5.000
154) Dinoseb	(4)	13.497	211	1073271	35.861
155) Phenanthrene	(4)	13.515	178	5519067	29.963
157) Anthracene	(4)	13.585	178	5452776	29.944
163) Carbazole	(4)	13.800	167	5260316	30.819

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on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

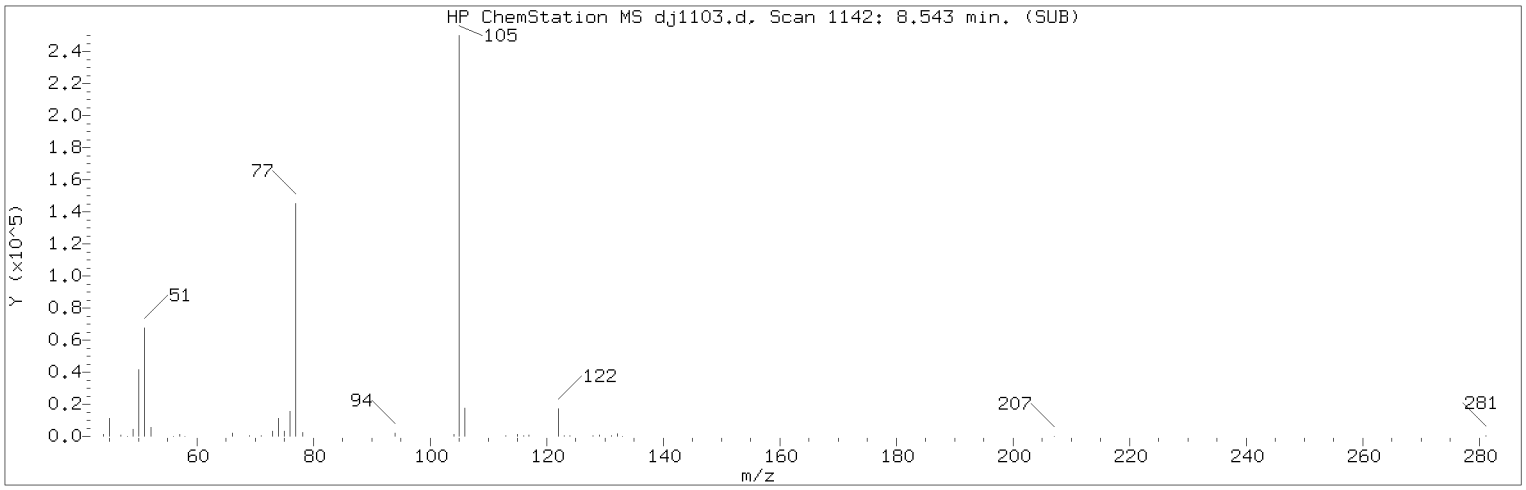
Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.999	109	1438596	32.305
165) Di-n-butylphthalate	(4)	14.308	149	6541960	30.553
167) Parathion	(4)	14.541	109	955433	33.166
168) 4-Nitroquinoline-1-oxide	(4)	14.564	190	626682	37.432
169) Octachlorostyrene	(4)	14.879	308	435158	29.897
171) Isodrin	(4)	14.925	193	649167	29.418
222) Total PAHs	(6)			98382667	537.324
173) Fluoranthene	(4)	15.153	202	6603428	31.397
174) Benzidine	(5)	15.403	184	12710220	84.673
175)*Pyrene-d10	(5)	15.462	212	1005833	5.000
177) Pyrene	(5)	15.497	202	6793098	29.294
179)$Terphenyl-d14	(5)	15.782	244	8990321	59.431
182) p-Dimethylaminoazobenzene	(5)	16.009	225	1024133	33.689
185) Chlorobenzilate	(5)	16.097	139	2080576	30.949
187) 3,3'-Dimethylbenzidine	(5)	16.575	212	4426610	30.923
188) Butylbenzylphthalate	(5)	16.627	149	3095345	30.675
191) 2-Acetylaminofluorene	(5)	17.006	181	3009769	33.511
193) 3,3'-Dichlorobenzidine	(5)	17.502	252	2518680	31.421
195) Benzo(a)anthracene	(5)	17.502	228	6650026	31.101
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.519	231	1257381	30.277
196) Chrysene	(5)	17.572	228	6074834	30.026
199) bis(2-Ethylhexyl)phthalate	(5)	17.682	149	4610376	30.880
203) 6-Methylchrysene	(5)	18.364	242	4673057	31.340
205) Di-n-octylphthalate	(6)	18.848	149	8245418	31.532
206) Benzo(b)fluoranthene	(6)	19.361	252	6850226	32.271
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.367	256	2919429	33.062
208) Benzo(k)fluoranthene	(6)	19.413	252	6406489	30.938
211) Benzo(a)pyrene	(6)	19.880	252	6323466	32.586
213)*Perylene-d12	(6)	19.961	264	878014	5.000
215) 3-Methylcholanthrene	(6)	20.445	268	2385984	33.040
217) Dibenz(a,h)acridine	(6)	21.261	279	5164107	31.517
218) Dibenz(a,j)acridine	(6)	21.337	279	5337197	30.707
219) Indeno(1,2,3-cd)pyrene	(6)	21.582	276	7026314	30.721
220) Dibenz(a,h)anthracene	(6)	21.617	278	5951780	31.144
221) Benzo(g,h,i)perylene	(6)	21.966	276	5730612	29.880

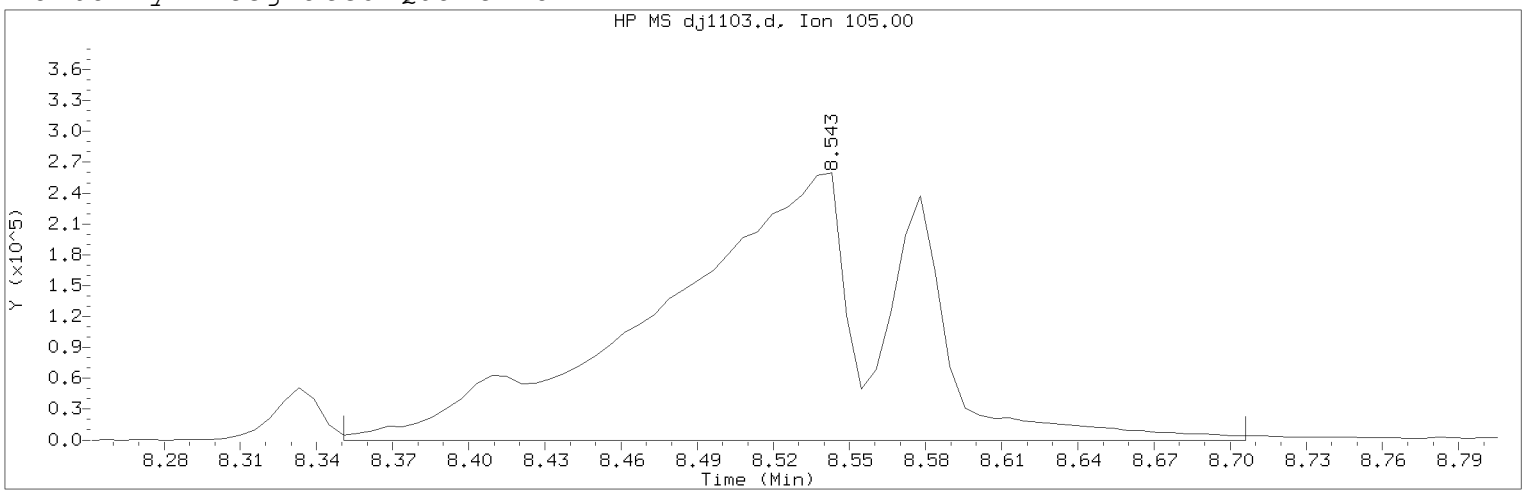
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

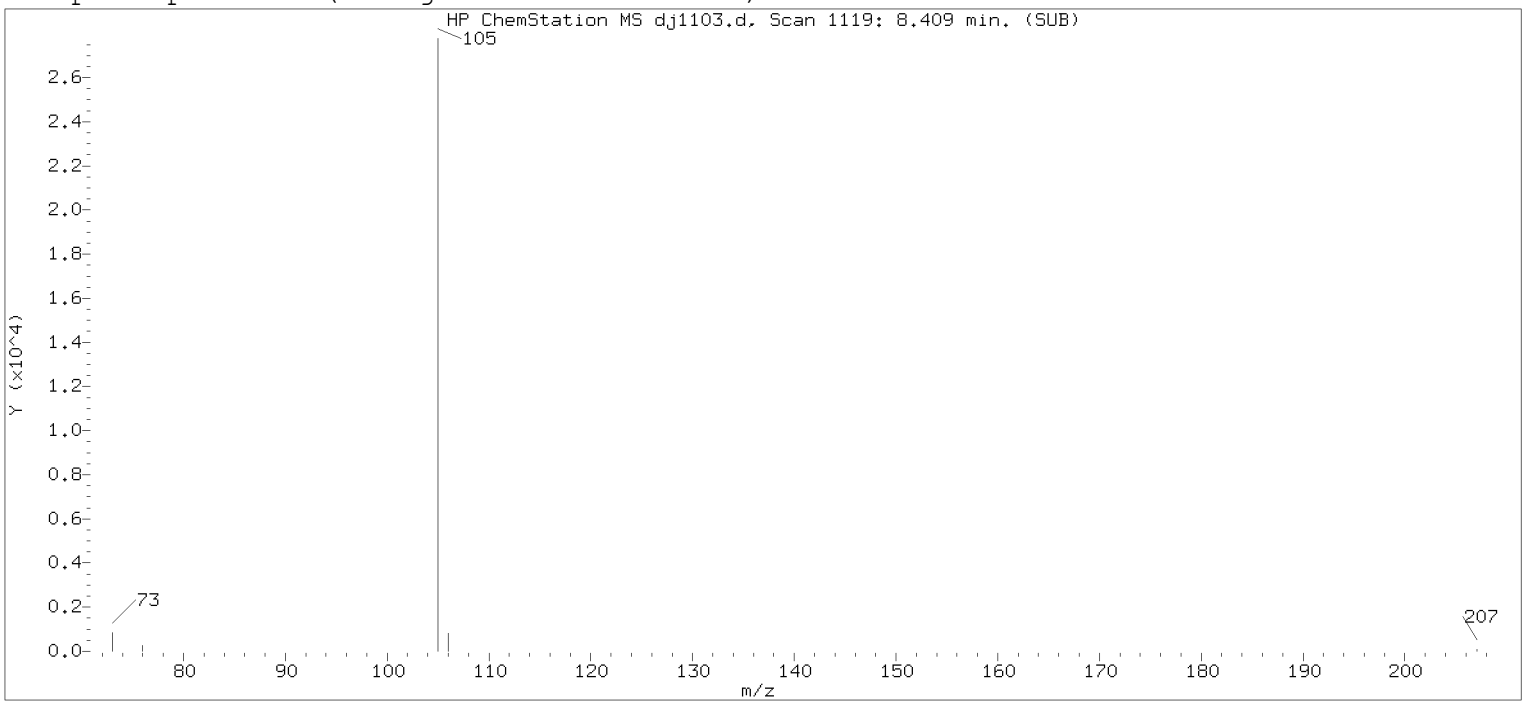
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1142
Retention Time (minutes) : 8.543
Quant Ion : 105.00
Area (flag) : 1692961M
On-Column Amount (ng/ul) : 39.2408
Integration start scan : 1108 Integration stop scan: 1169
Y at integration start : -293 Y at integration end: -31

Reason for manual integration: improper integration

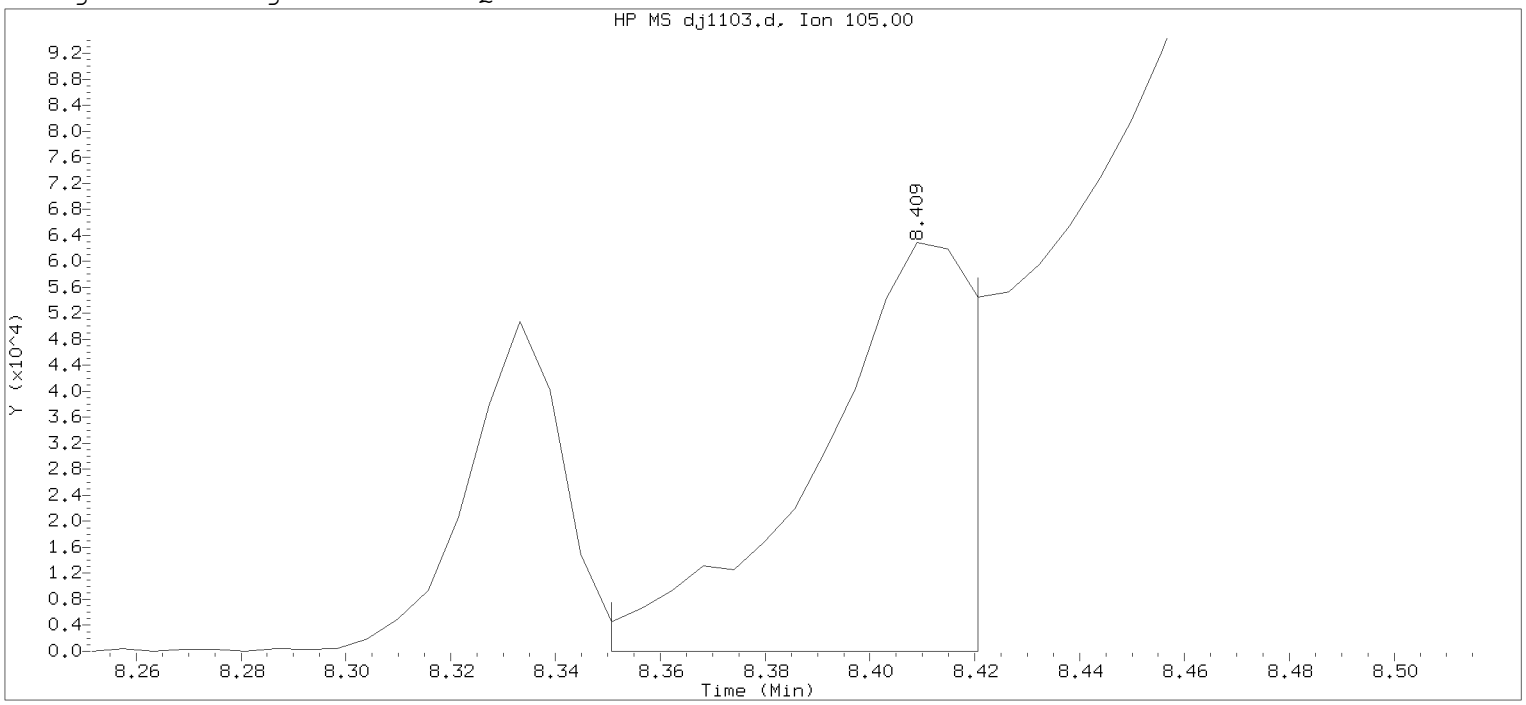
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

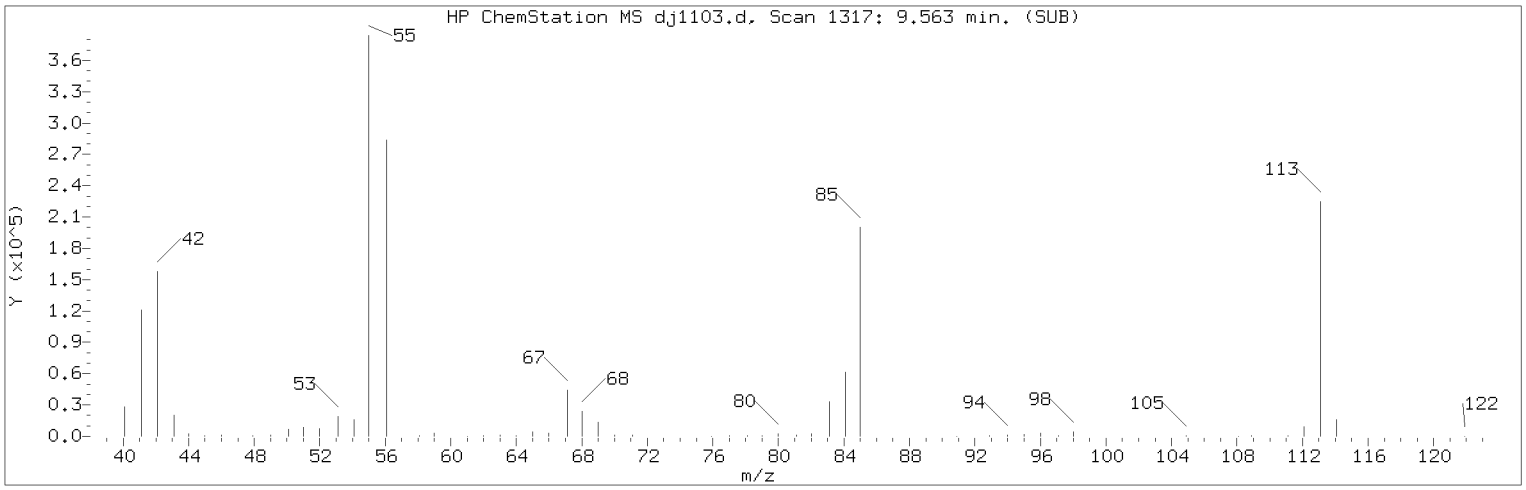
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

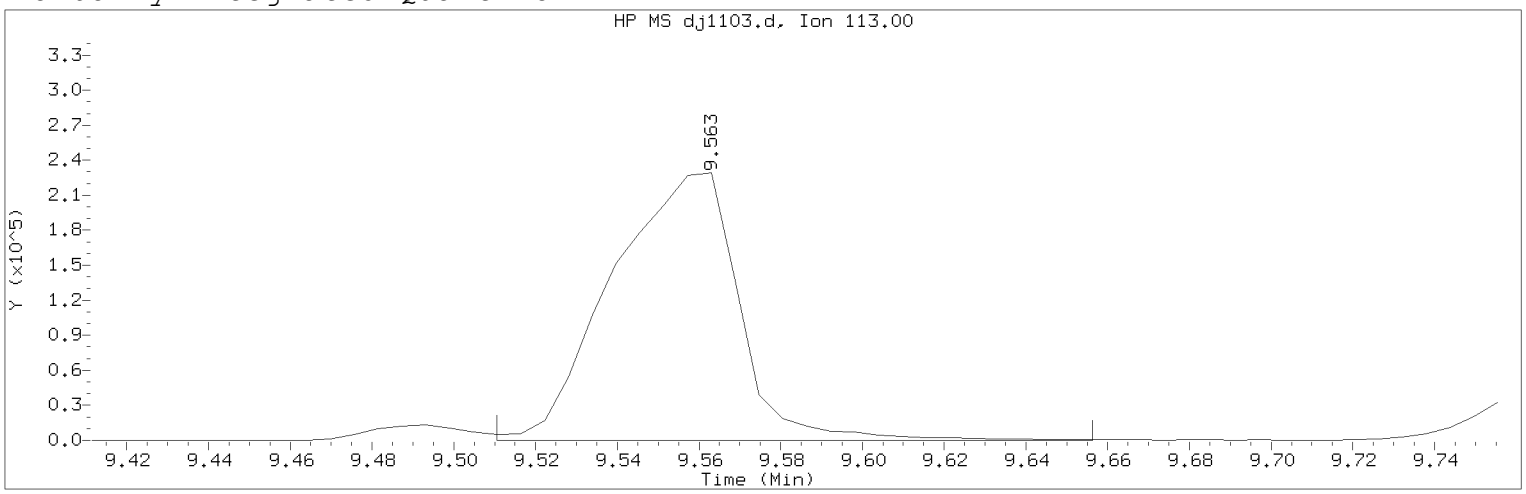
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1119
Retention Time (minutes) : 8.409
Quant Ion : 105.00
Area : 126019
On-column Amount (ng/ul) : 0.0000
Integration start scan : 1108 Integration stop scan: 1120
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature used em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

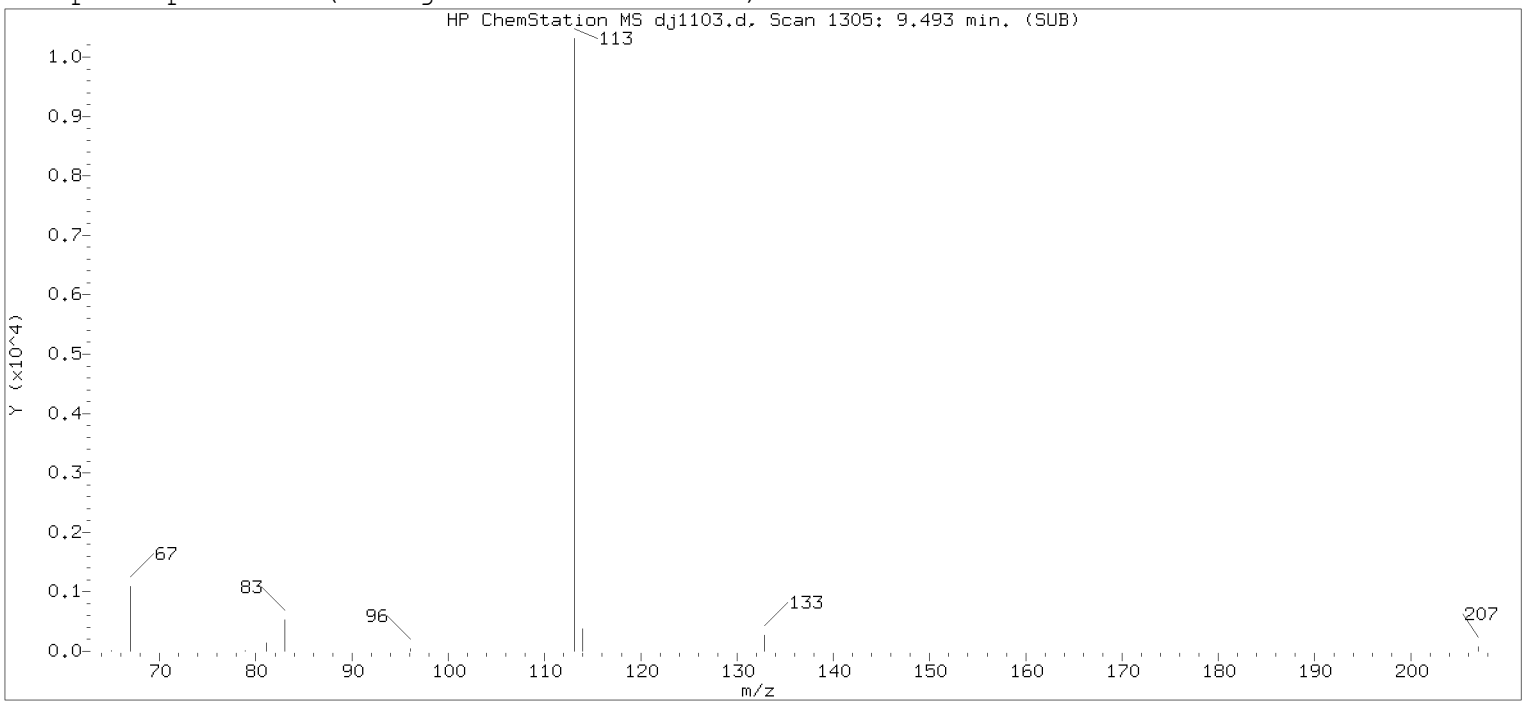
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1317
Retention Time (minutes) : 9.563
Quant Ion : 113.00
Area (flag) : 493897A
On-Column Amount (ng/ul) : 32.2310
Integration start scan : 1307 Integration stop scan: 1332
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

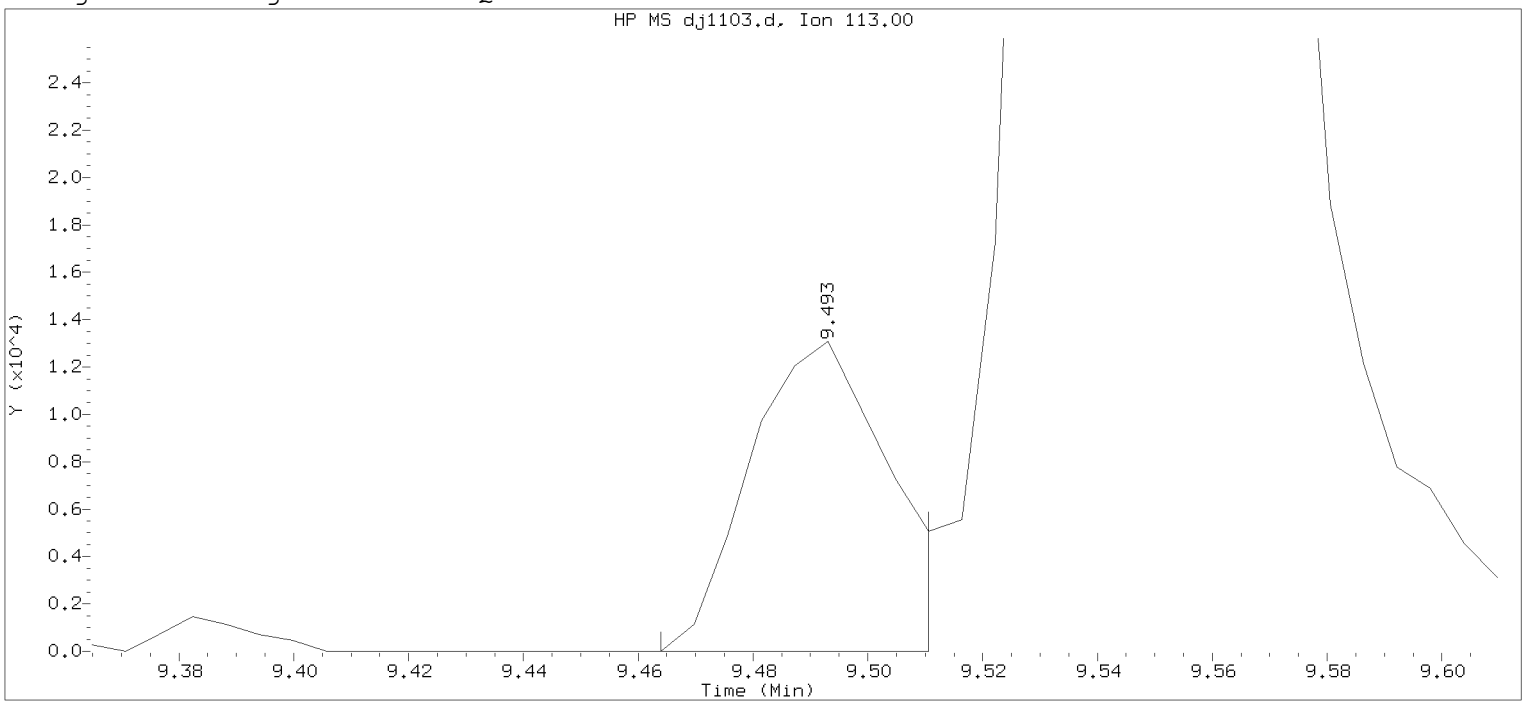
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

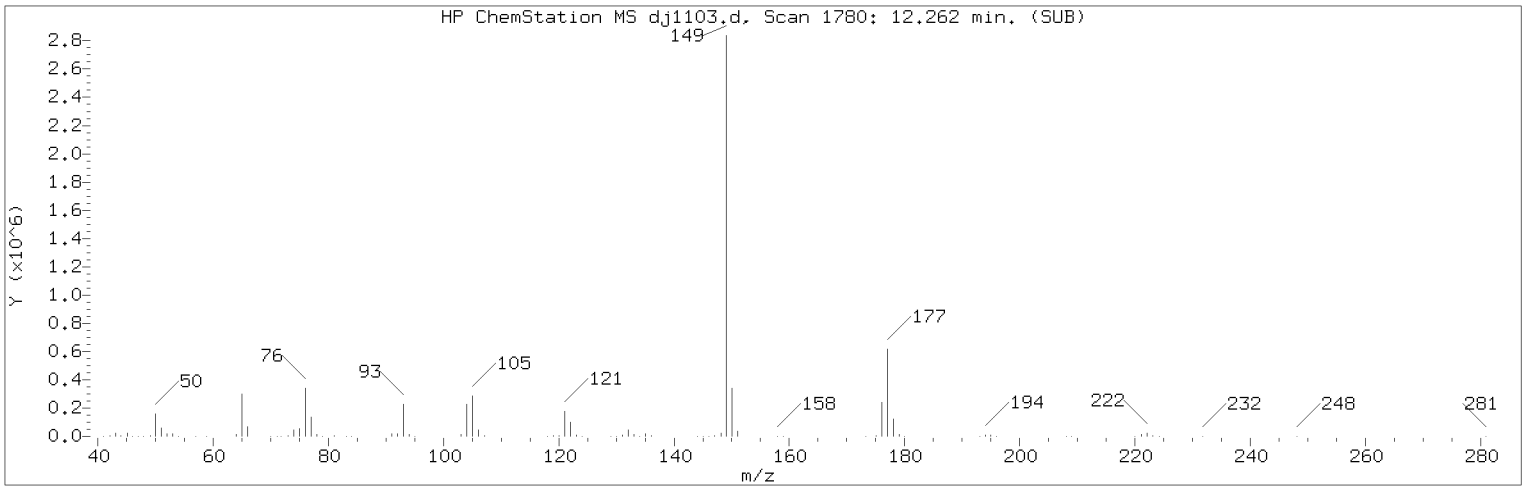
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

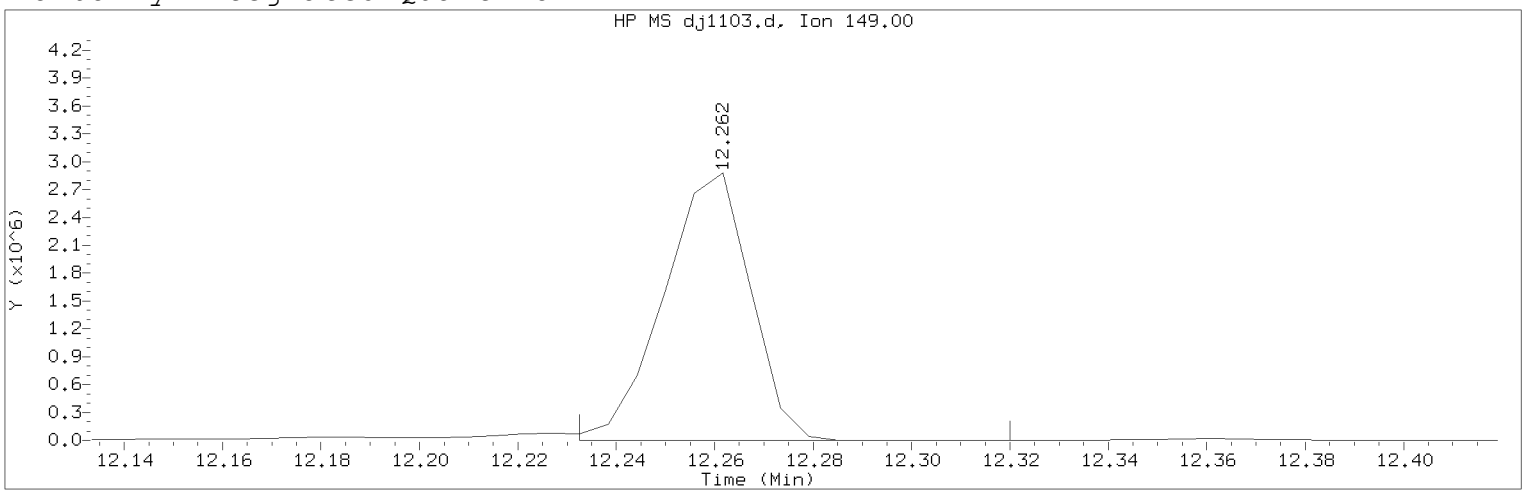
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1305		
Retention Time (minutes)	: 9.493		
Quant Ion	: 113.00		
Area	: 21306		
On-column Amount (ng/ul)	: 0.0606		
Integration start scan	: 1299	Integration stop scan:	1307
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

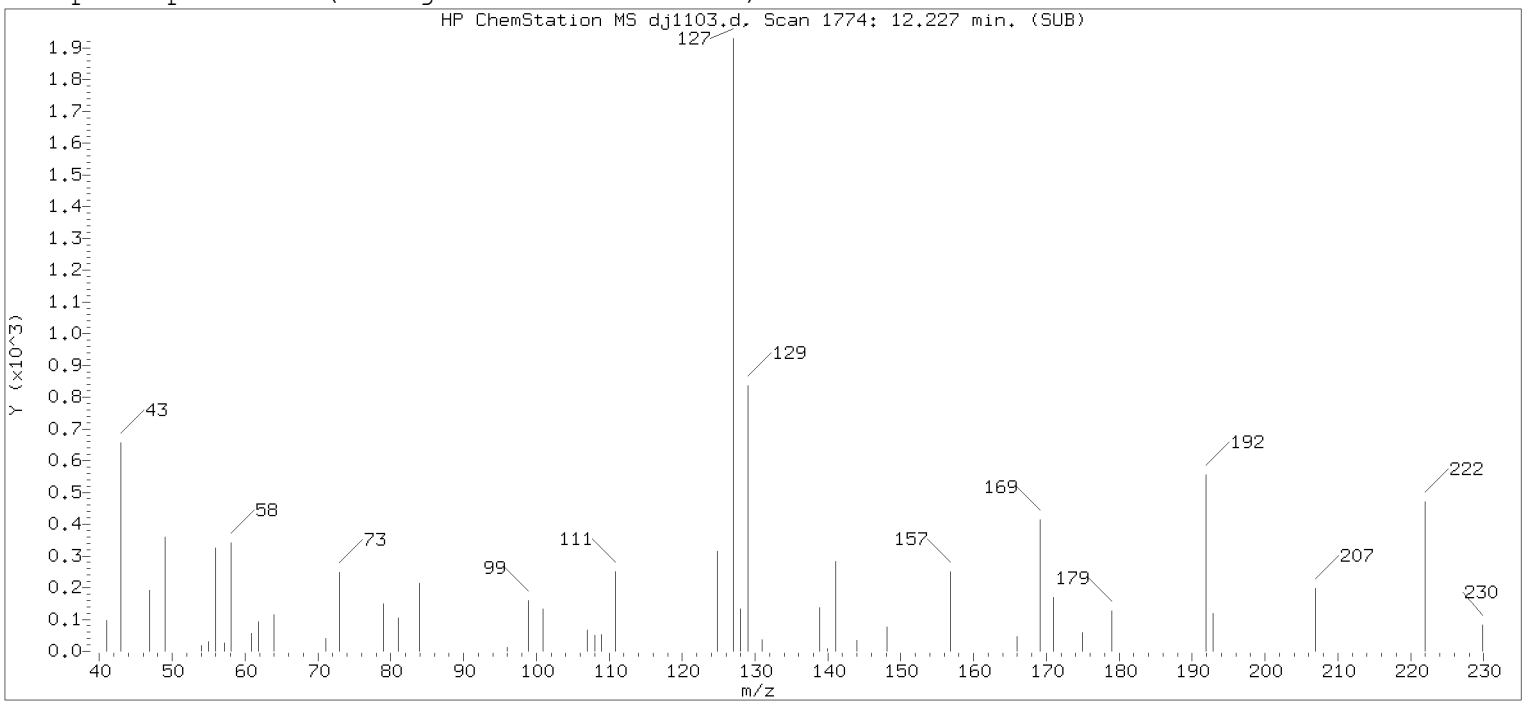
Compound Number : 124
Compound Name : Diethylphthalate
Scan Number : 1780
Retention Time (minutes) : 12.262
Quant Ion : 149.00
Area (flag) : 3504853A
On-Column Amount (ng/ul) : 30.5414
Integration start scan : 1774 Integration stop scan: 1789
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

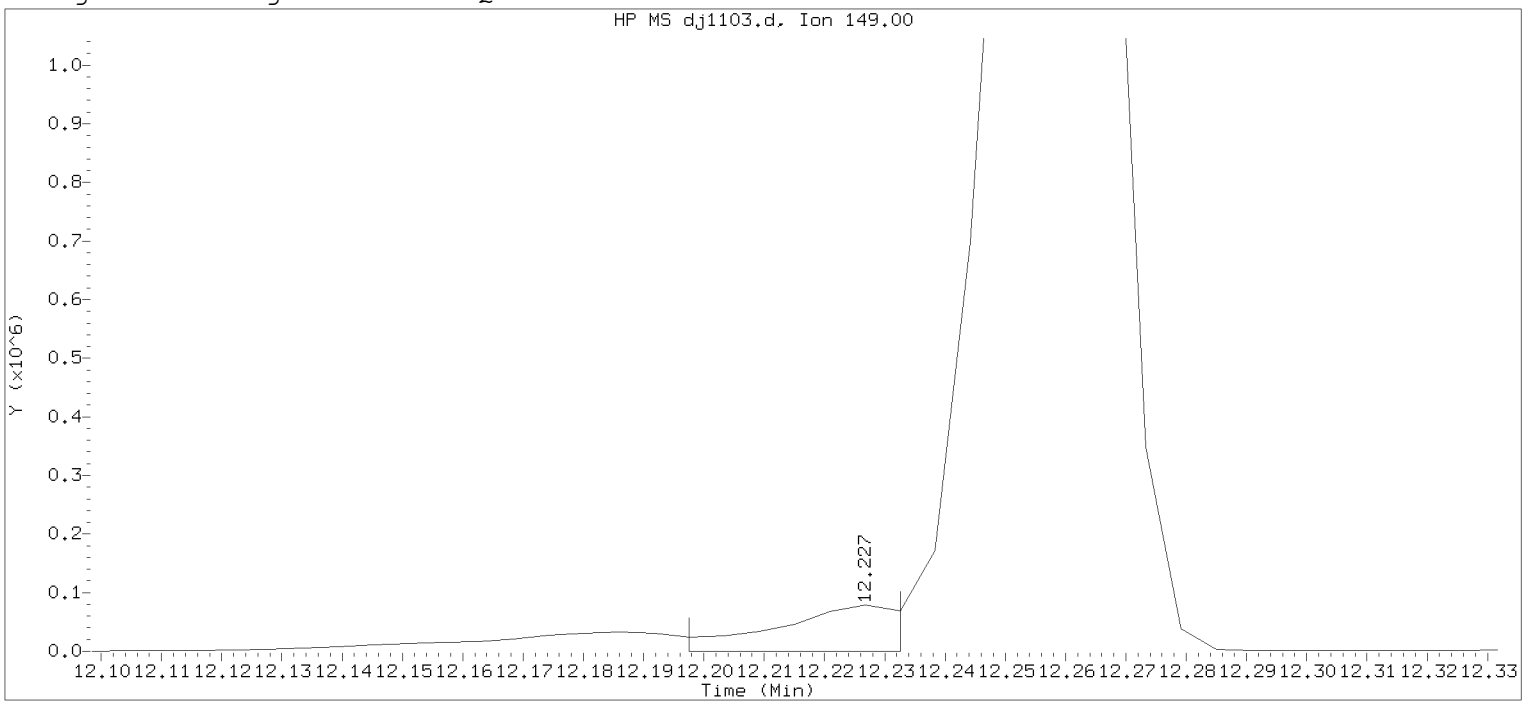
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

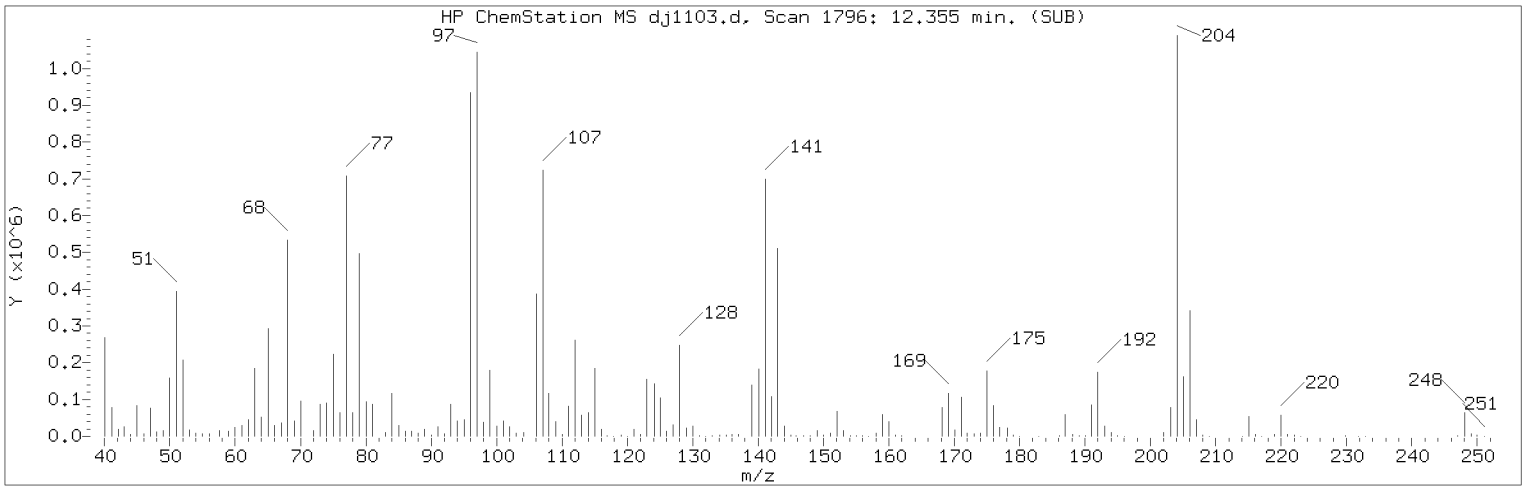
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

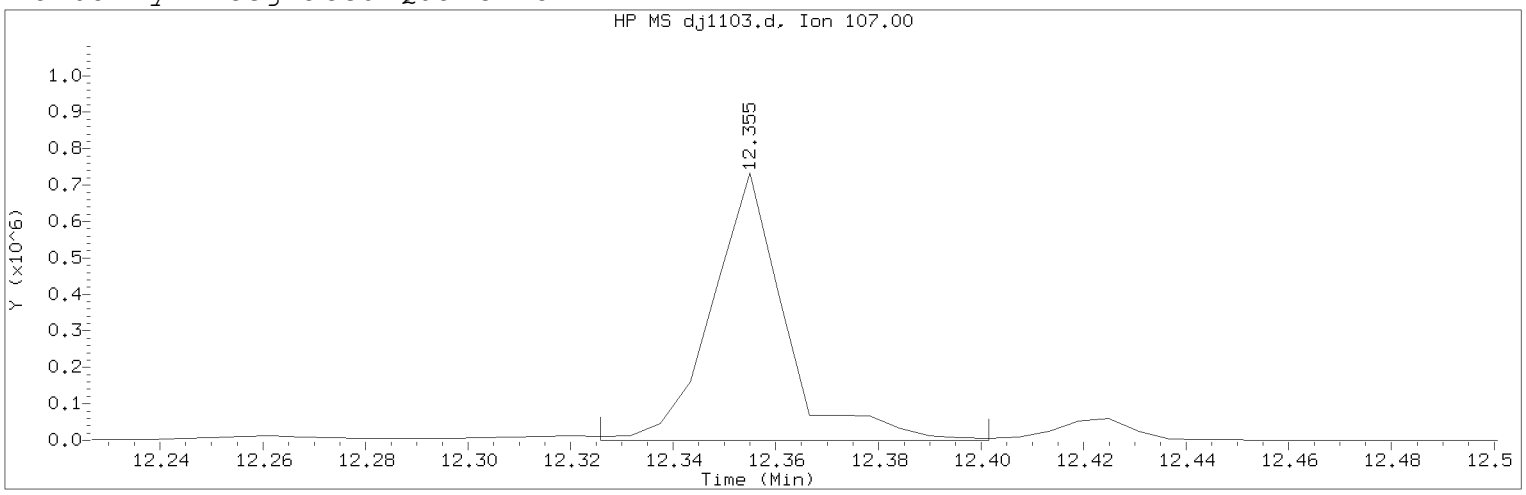
Compound Number	: 124		
Compound Name	: Diethylphthalate		
Scan Number	: 1774		
Retention Time (minutes)	: 12.227		
Quant Ion	: 149.00		
Area	: 105104		
On-column Amount (ng/ul)	: 1.1158		
Integration start scan	: 1768	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

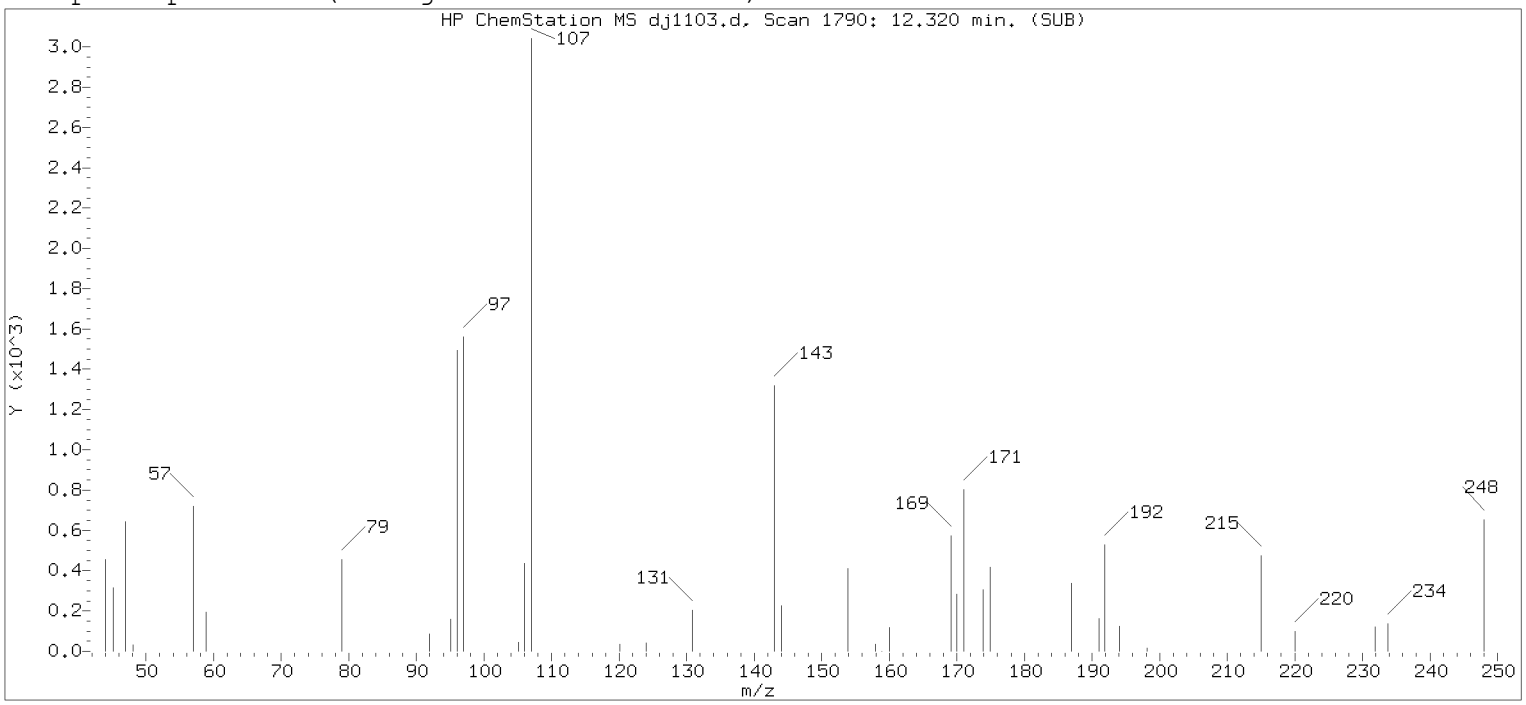
Compound Number : 125
Compound Name : Thionazin
Scan Number : 1796
Retention Time (minutes) : 12.355
Quant Ion : 107.00
Area (flag) : 714990A
On-Column Amount (ng/ul) : 31.3324
Integration start scan : 1790 Integration stop scan: 1803
Y at integration start : 479 Y at integration end: 479

Reason for manual integration: improper integration

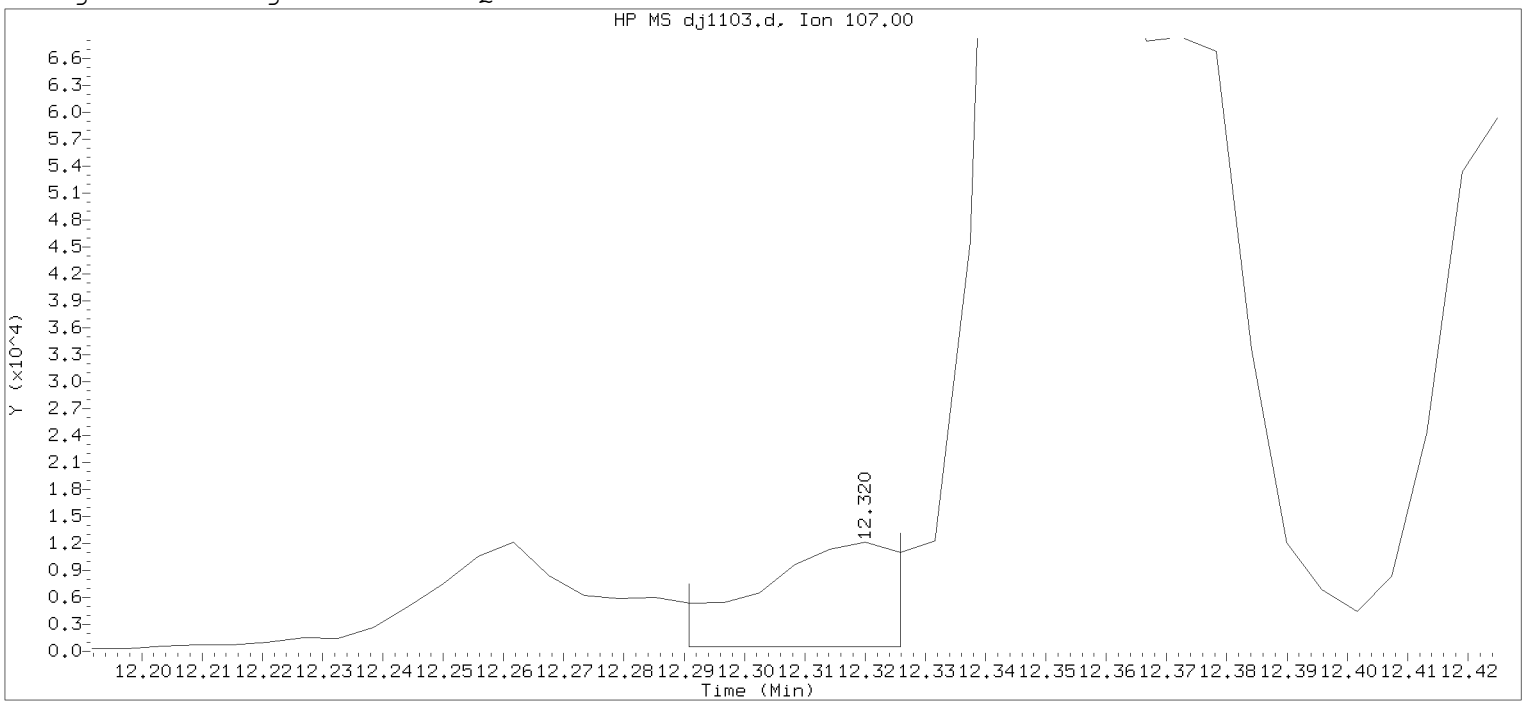
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

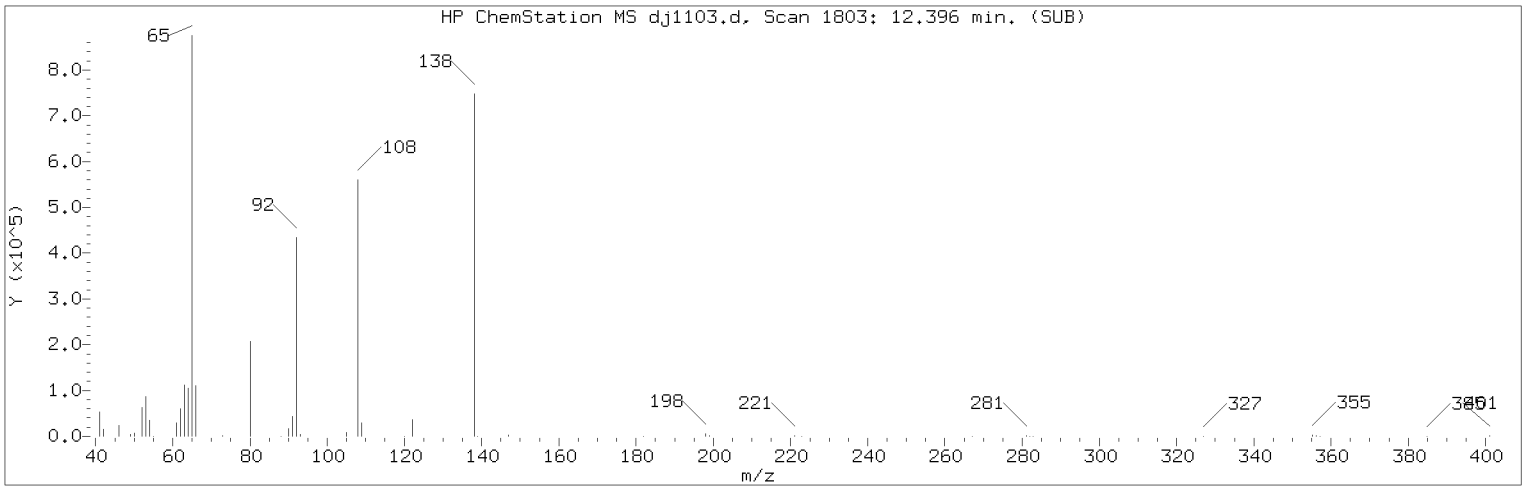
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

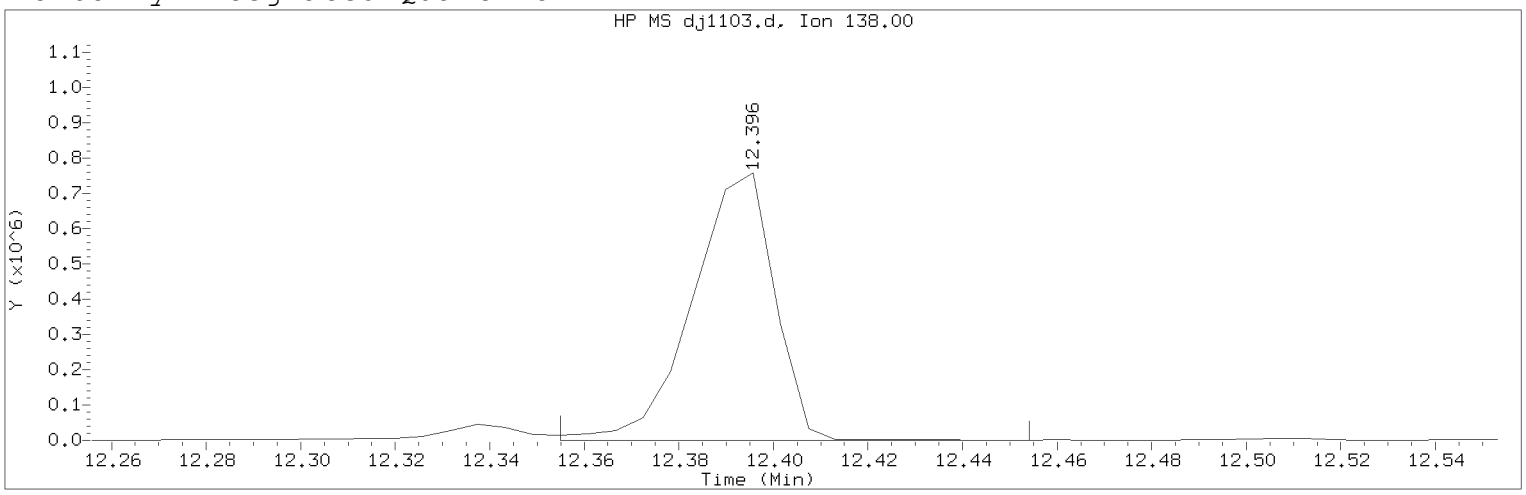
Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1790		
Retention Time (minutes)	: 12.320		
Quant Ion	: 107.00		
Area	: 17635		
On-column Amount (ng/ul)	: 0.9454		
Integration start scan	: 1784	Integration stop scan:	1790
Y at integration start	: 479	Y at integration end:	479

Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

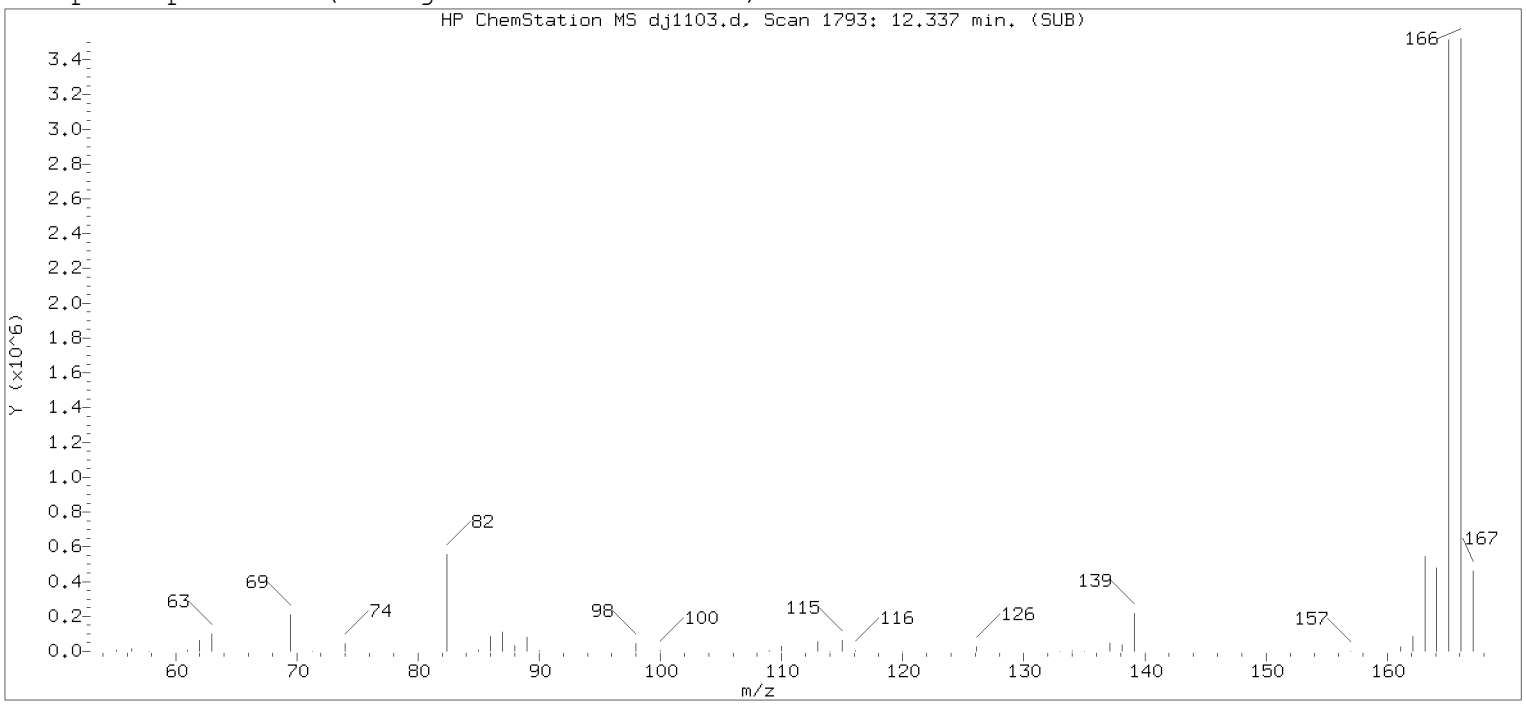
Compound Number : 129
Compound Name : 4-Nitroaniline
Scan Number : 1803
Retention Time (minutes) : 12.396
Quant Ion : 138.00
Area (flag) : 910287A
On-Column Amount (ng/ul) : 32.6170
Integration start scan : 1795 Integration stop scan: 1812
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

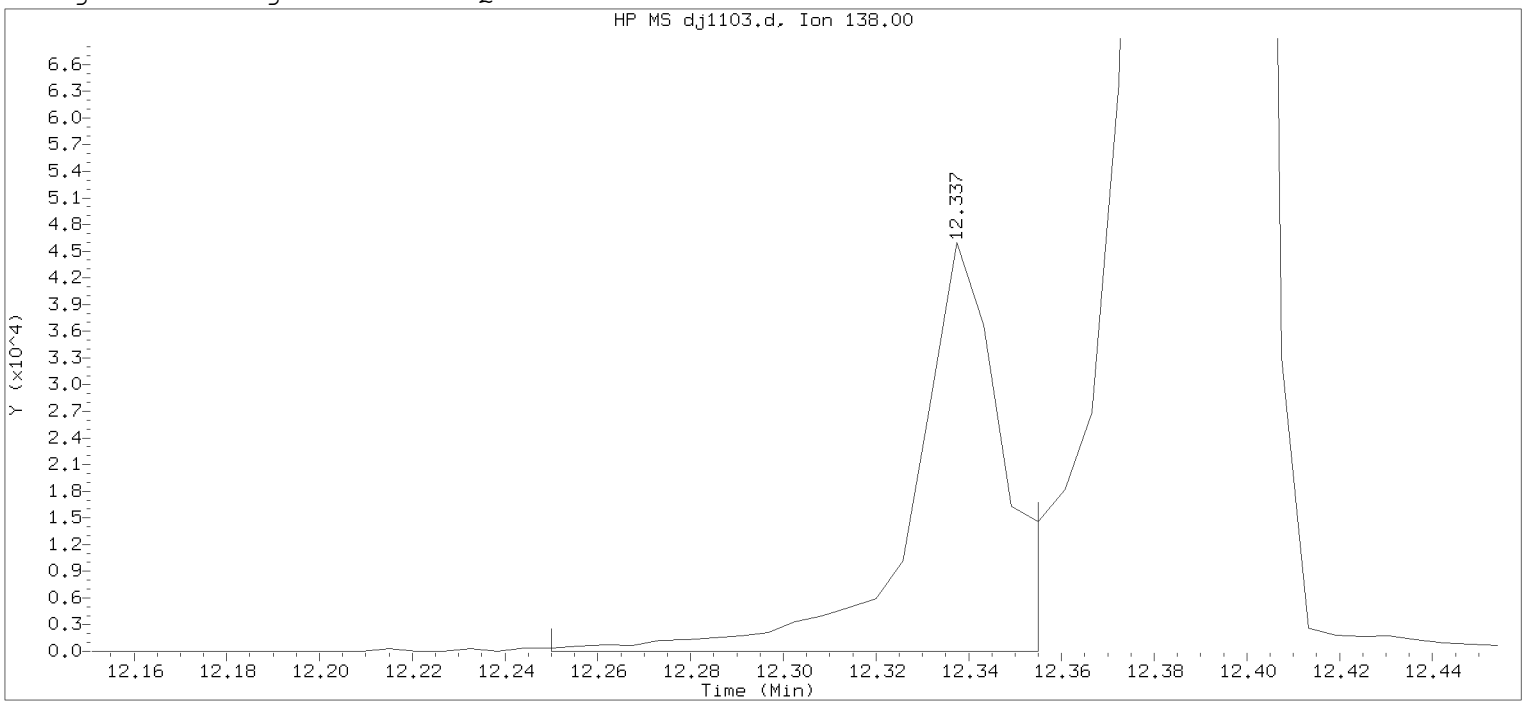
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:38.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



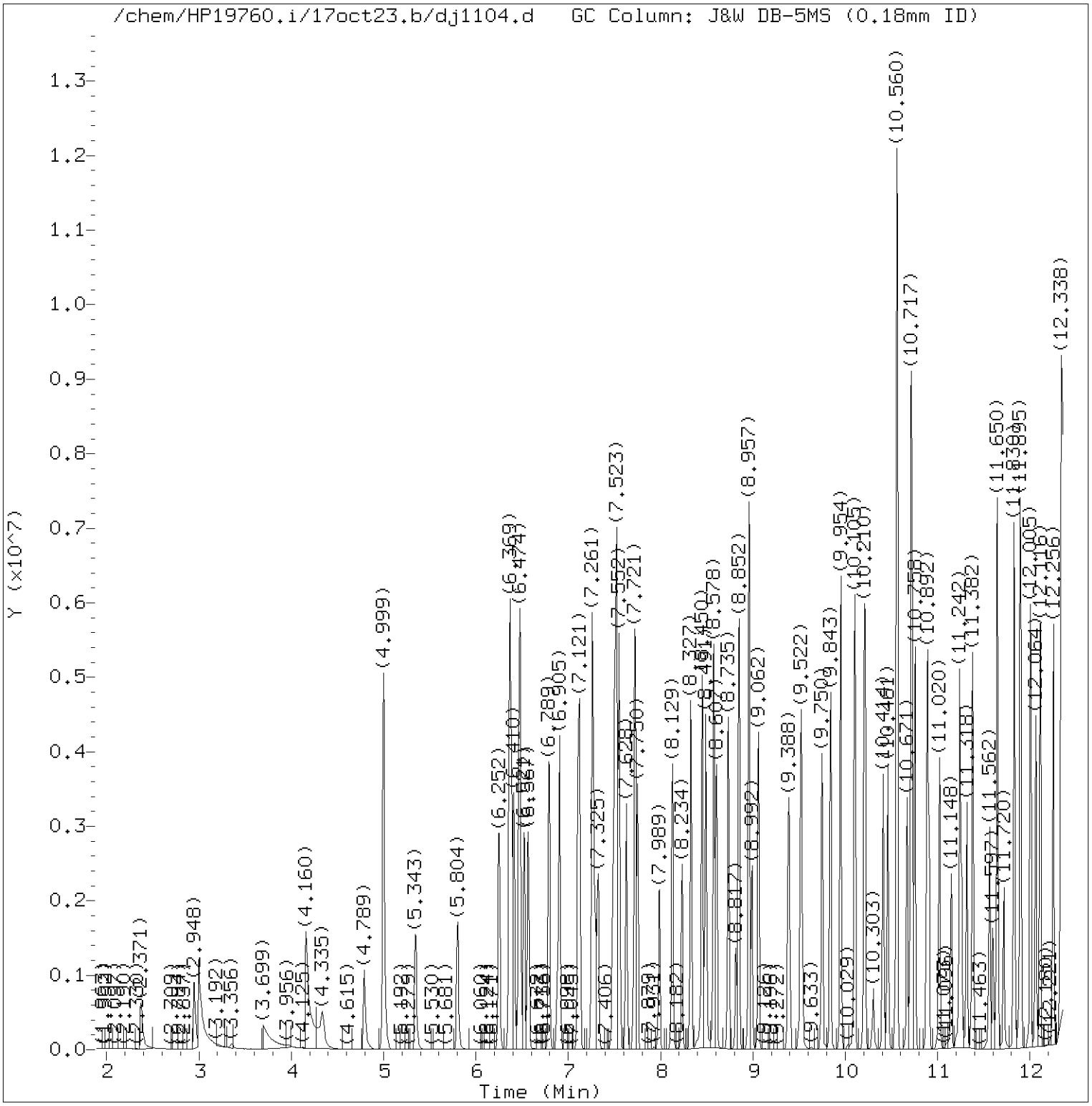
Data File: /chem/HP19760.i/17oct23.b/dj1103.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:21 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compound Number	: 129		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1793		
Retention Time (minutes)	: 12.337		
Quant Ion	: 138.00		
Area	: 60262		
On-column Amount (ng/ul)	: 2.5266		
Integration start scan	: 1777	Integration stop scan:	1795
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:38.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

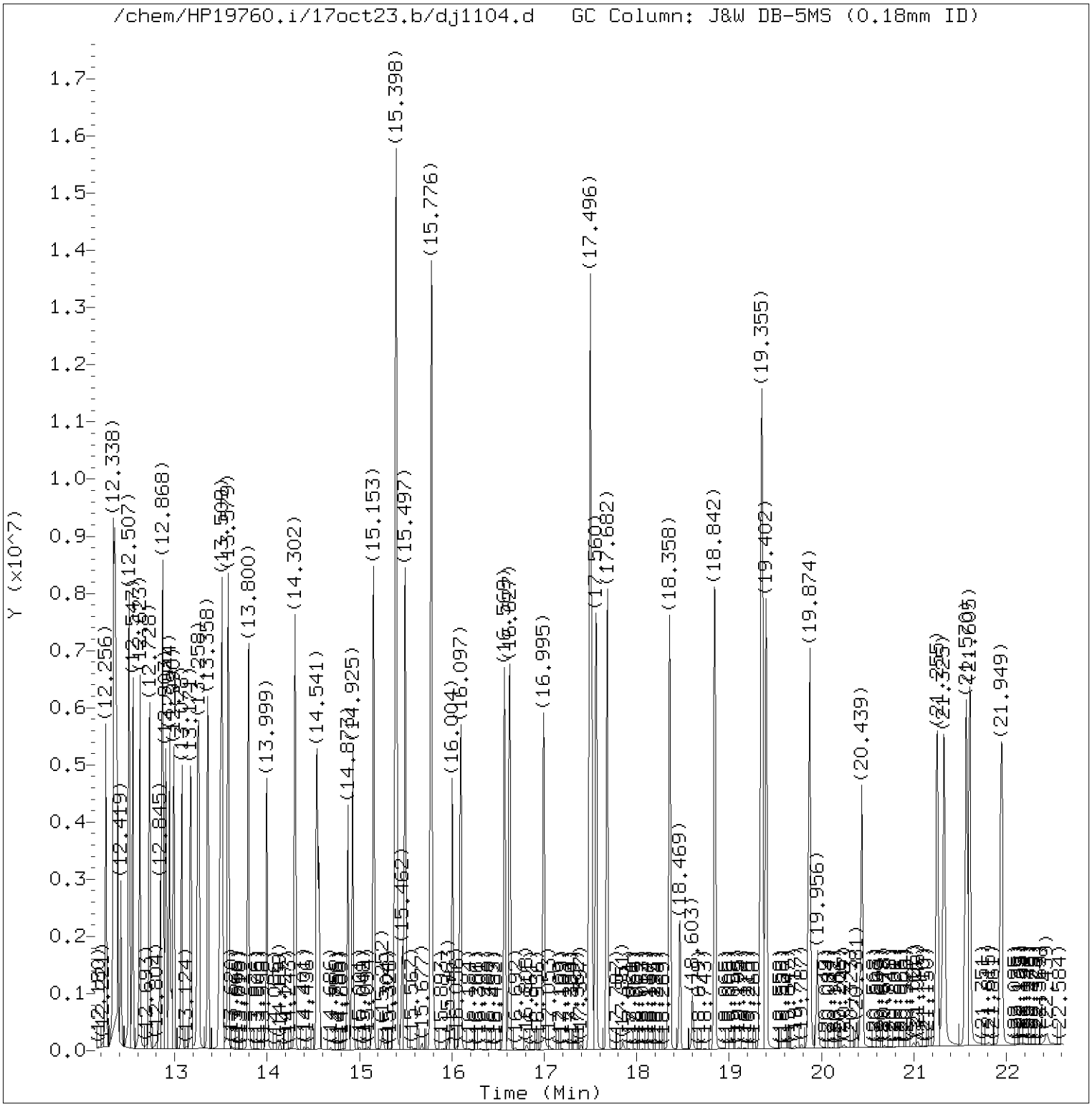
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.371	88	539485	20.590
4) N-Nitrosodimethylamine	(1)	2.948	74	873865	21.159
5) Pyridine	(1)	2.994	79	1406611	21.134
7) 2-Picoline	(1)	4.160	93	1502744	21.223
8) N-Nitrosomethylethylamine	(1)	4.335	88	621121	20.633
9) Methyl methanesulfonate	(1)	4.789	80	653535	20.362
11)$2-Fluorophenol	(1)	4.999	112	2438195	41.452
13) N-Nitrosodiethylamine	(1)	5.349	102	606121	21.280
42) Total Cresols	(1)			2455750	42.078
15) Ethyl methanesulfonate	(1)	5.804	109	619376	20.896
16) Benzaldehyde	(1)	6.252	77	1058967	19.430
17)$Phenol-d6	(1)	6.369	99	3196886	41.550
18) Phenol	(1)	6.386	94	1824520	21.015
19) Aniline	(1)	6.410	93	2090789	20.656
20) a-methylstyrene	(1)	6.480	118	1222603	19.679
22) bis(2-Chloroethyl)ether	(1)	6.521	93	1317655	20.211
23) 2-Chlorophenol	(1)	6.567	128	1200959	20.621
24) 1,3-Dichlorobenzene	(1)	6.794	146	1294059	20.415
25)*1,4-Dichlorobenzene-d4	(1)	6.882	152	194079	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	1301902	20.198
27) Benzyl alcohol	(1)	7.109	108	773766	19.809
28) 1,2-Dichlorobenzene	(1)	7.127	146	1229263	20.141
30) Indene	(1)	7.261	115	2239699	19.735
31) 2-Methylphenol	(1)	7.278	108	1143989	20.754
34) bis(2-Chloroisopropyl)ether	(1)	7.325	45	1714409	20.276
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.325	45	1714409	20.276
97) Isosafrole	(3)			833982	20.280
35) N-Nitrosopyrrolidine	(1)	7.482	100	651043	21.503
36) Acetophenone	(1)	7.500	105	1845051	20.224
38) N-Nitroso-di-n-propylamine	(1)	7.523	70	1035813	20.795
37) 4-Methylphenol	(1)	7.523	108	1311761	21.294
39) N-Nitrosomorpholine	(1)	7.546	56	764391	20.496
40) o-Toluidine	(1)	7.552	106	2046938	20.576
43) Hexachloroethane	(1)	7.628	117	529632	20.398
44)$Nitrobenzene-d5	(2)	7.721	82	2942321	41.211
45) Nitrobenzene	(2)	7.750	77	1467396	20.444
48) N-Nitrosopiperidine	(2)	7.989	114	611206	21.067
120) 2,4_2,6-Dinitrotoluenes	(3)			1258186	43.842
50) Isophorone	(2)	8.129	82	2602440	20.844
51) 2-Nitrophenol	(2)	8.234	139	593207	22.263

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

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.327	107	1295089	20.884
57) O,O,O-Triethylphosphorothioate	(2)	8.450	198	575550	20.699
55) bis(2-Chloroethoxy)methane	(2)	8.491	93	1580483	20.352
56) Benzoic acid	(2)	8.508	105	1049735M	24.790
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.578	104	1765356	19.519
60) 2,4-Dichlorophenol	(2)	8.607	162	968476	21.125
62) 1,2,4-Trichlorobenzene	(2)	8.735	180	1081827	20.304
146) Diallate trans/cis	(4)			1188537	20.178
65)*Naphthalene-d8	(2)	8.817	136	739280	5.000
66) Naphthalene	(2)	8.852	128	3365488	20.138
67) 4-Chloroaniline	(2)	8.957	127	1422636	20.682
68) 2,6-Dichlorophenol	(2)	8.963	162	938493	20.815
69) Hexachloropropene	(2)	8.992	213	546794	21.122
71) Hexachlorobutadiene	(2)	9.062	225	615518	20.632
75) Quinoline	(2)	9.388	129	2069980	20.366
77) N-Nitrosodi-n-butylamine	(2)	9.522	84	1202403	22.088
76) Caprolactam	(2)	9.534	113	305008A	20.280
80) 4-Chloro-3-methylphenol	(2)	9.750	107	1097842	21.334
82) Safrole	(2)	9.843	162	875060	20.480
83) 2-Methylnaphthalene	(2)	9.954	142	2280779	20.571
84) 1-Methylnaphthalene	(2)	10.105	142	2064505	20.566
85) Hexachlorocyclopentadiene	(3)	10.204	237	546630	21.278
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.216	216	1089168	19.920
88) cis-Isosafrole	(3)	10.303	162	154804	3.458
90) 2,4,6-Trichlorophenol	(3)	10.414	196	707510	21.473
92) 2,4,5-Trichlorophenol	(3)	10.461	196	719457	20.714
93)$2-Fluorobiphenyl	(3)	10.560	172	4873015	39.822
94) trans-Isosafrole	(3)	10.671	162	679178	16.821
95) 1,1'-Biphenyl	(3)	10.711	154	2626813	19.543
96) 2-Chloronaphthalene	(3)	10.723	162	2200995	20.178
98) 1-Chloronaphthalene	(3)	10.758	162	1904323	19.874
99) Diphenyl ether	(3)	10.892	170	1447345	20.100
100) 2-Nitroaniline	(3)	10.909	138	666070	21.832
104) 1,4-Naphthoquinone	(3)	11.020	158	863583	20.286
105) 1,4-Dinitrobenzene	(3)	11.148	168	335321	21.379
106) Dimethylphthalate	(3)	11.242	163	2356457	20.278
107) 1,3-Dinitrobenzene	(3)	11.265	168	377790	21.682
108) 2,6-Dinitrotoluene	(3)	11.318	165	522560	21.653
109) Acenaphthylene	(3)	11.382	152	2977901	20.482
112) 3-Nitroaniline	(3)	11.562	138	590715	21.520

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.597	164	404041	5.000
114) Acenaphthene	(3)	11.650	153	2219188	20.147
115) 2,4-Dinitrophenol	(3)	11.720	184	329988	23.879
117) Pentachlorobenzene	(3)	11.830	250	915909	20.355
116) 4-Nitrophenol	(3)	11.830	109	420485	19.989
119) Dibenzofuran	(3)	11.895	168	2851078	19.846
118) 2,4-Dinitrotoluene	(3)	11.906	165	735626	21.264
121) 1-Naphthylamine	(3)	12.005	143	2274221	20.339
122) 2,3,4,6-Tetrachlorophenol	(3)	12.064	232	591244	21.755
123) 2-Naphthylamine	(3)	12.116	143	2220263	20.389
124) Diethylphthalate	(3)	12.256	149	2316123	20.187
126) Fluorene	(3)	12.338	166	2327067	20.143
125) Thionazin	(3)	12.349	107	415542	18.213
127) 4-Chlorophenyl-phenylether	(3)	12.361	204	1101392	19.966
128) 5-Nitro-o-toluidine	(3)	12.372	152	689149	21.634
129) 4-Nitroaniline	(3)	12.384	138	599195	21.474
130) 4,6-Dinitro-2-methylphenol	(4)	12.419	198	426938	21.536
131) N-Nitrosodiphenylamine	(4)	12.507	169	1982782	20.362
132) NDPA as diphenylamine	(4)	12.507	169	1982782	20.362
134) 1,2-Diphenylhydrazine	(4)	12.547	77	2757401	19.827
135)$2,4,6-Tribromophenol	(3)	12.623	330	672148	43.713
137) Tetraethyldithiopyrophosphate	(4)	12.722	97	464829	20.102
139) 1,3,5-Trinitrobenzene	(4)	12.845	213	284746	21.885
140) Diallate (peak 1)	(4)	12.862	86	1015320	16.712
141) Phorate	(4)	12.874	75	1818527	20.804
142) Phenacetin	(4)	12.903	108	1401311	21.055
143) 4-Bromophenyl-phenylether	(4)	12.944	248	680470	19.944
144) Diallate (peak 2)	(4)	12.967	86	173217	3.475
145) Hexachlorobenzene	(4)	12.990	284	696079	19.902
147) Dimethoate	(4)	13.078	87	1170508	20.846
148) Atrazine	(4)	13.177	200	664518	19.945
149) Pentachlorophenol	(4)	13.247	266	478313	21.644
151) Pentachloronitrobenzene	(4)	13.258	237	316595	21.057
150) 4-Aminobiphenyl	(4)	13.264	169	663173	21.548
152) Pronamide	(4)	13.358	173	1192476	21.386
153)*Phenanthrene-d10	(4)	13.480	188	784408	5.000
154) Dinoseb	(4)	13.497	211	685900	23.659
155) Phenanthrene	(4)	13.515	178	3610545	20.236
157) Anthracene	(4)	13.579	178	3601174	20.416
163) Carbazole	(4)	13.800	167	3457927	20.915

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

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

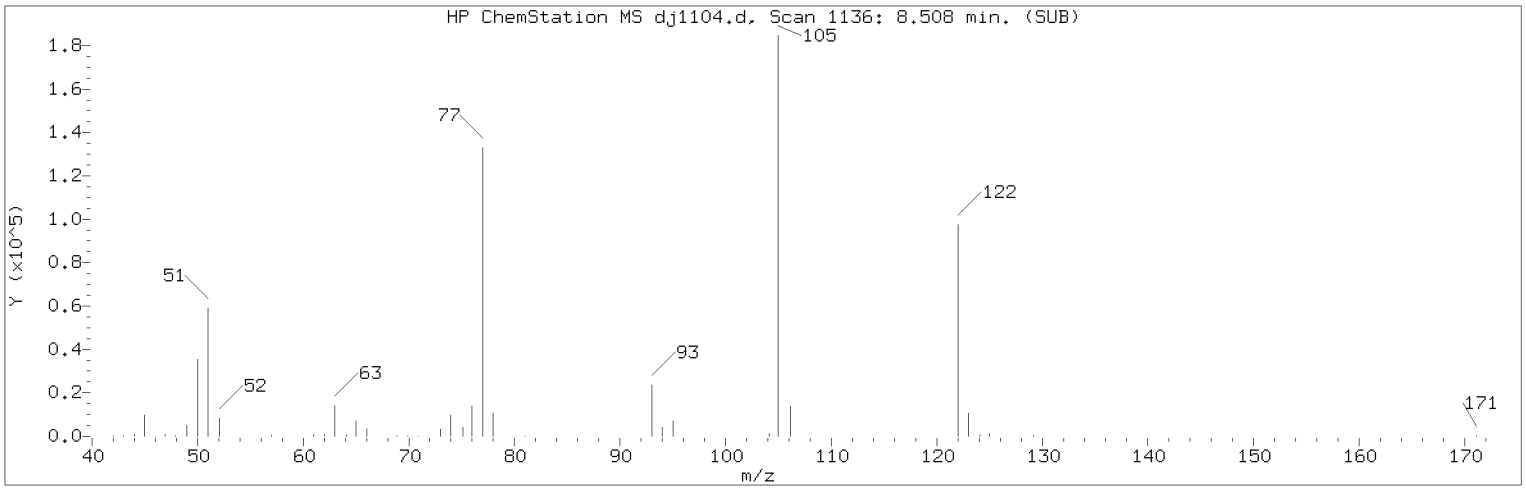
Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.999	109	938655	21.760
165) Di-n-butylphthalate	(4)	14.302	149	4284837	20.659
167) Parathion	(4)	14.535	109	609937	21.858
168) 4-Nitroquinoline-1-oxide	(4)	14.558	190	395376	24.380
169) Octachlorostyrene	(4)	14.873	308	275548	19.544
171) Isodrin	(4)	14.925	193	426964	19.974
222) Total PAHs	(6)			65283375	364.746
173) Fluoranthene	(4)	15.153	202	4328141	21.244
174) Benzidine	(5)	15.398	184	8729820	59.979
175)*Pyrene-d10	(5)	15.462	212	975268	5.000
177) Pyrene	(5)	15.497	202	4483701	19.941
179)$Terphenyl-d14	(5)	15.776	244	5947299	40.547
182) p-Dimethylaminoazobenzene	(5)	16.004	225	670951	22.763
185) Chlorobenzilate	(5)	16.097	139	1354738	20.784
187) 3,3'-Dimethylbenzidine	(5)	16.569	212	2949654	21.251
188) Butylbenzylphthalate	(5)	16.627	149	2032747	20.776
191) 2-Acetylaminofluorene	(5)	16.995	181	1944993	22.334
193) 3,3'-Dichlorobenzidine	(5)	17.496	252	1654482	21.287
195) Benzo(a)anthracene	(5)	17.496	228	4441655	21.424
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.513	231	820765	20.383
196) Chrysene	(5)	17.560	228	4063334	20.713
199) bis(2-Ethylhexyl)phthalate	(5)	17.682	149	3027589	20.914
203) 6-Methylchrysene	(5)	18.358	242	3053825	21.123
205) Di-n-octylphthalate	(6)	18.848	149	5400469	21.127
206) Benzo(b)fluoranthene	(6)	19.349	252	4537164	21.866
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.355	256	1919369	22.236
208) Benzo(k)fluoranthene	(6)	19.402	252	4192987	20.714
211) Benzo(a)pyrene	(6)	19.874	252	4185376	22.064
213)*Perylene-d12	(6)	19.956	264	858284	5.000
215) 3-Methylcholanthrene	(6)	20.439	268	1548736	21.939
217) Dibenz(a,h)acridine	(6)	21.255	279	3366111	21.016
218) Dibenz(a,j)acridine	(6)	21.331	279	3517074	20.700
219) Indeno(1,2,3-cd)pyrene	(6)	21.570	276	4731632	21.164
220) Dibenz(a,h)anthracene	(6)	21.611	278	4001613	21.421
221) Benzo(g,h,i)perylene	(6)	21.955	276	3871125	20.648

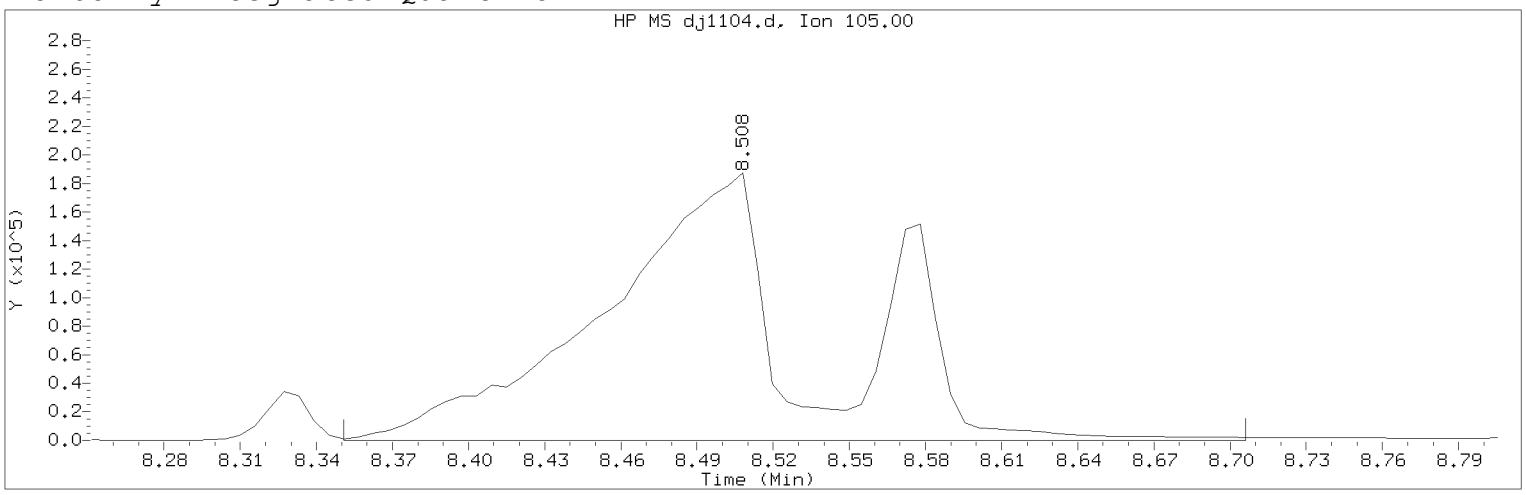
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

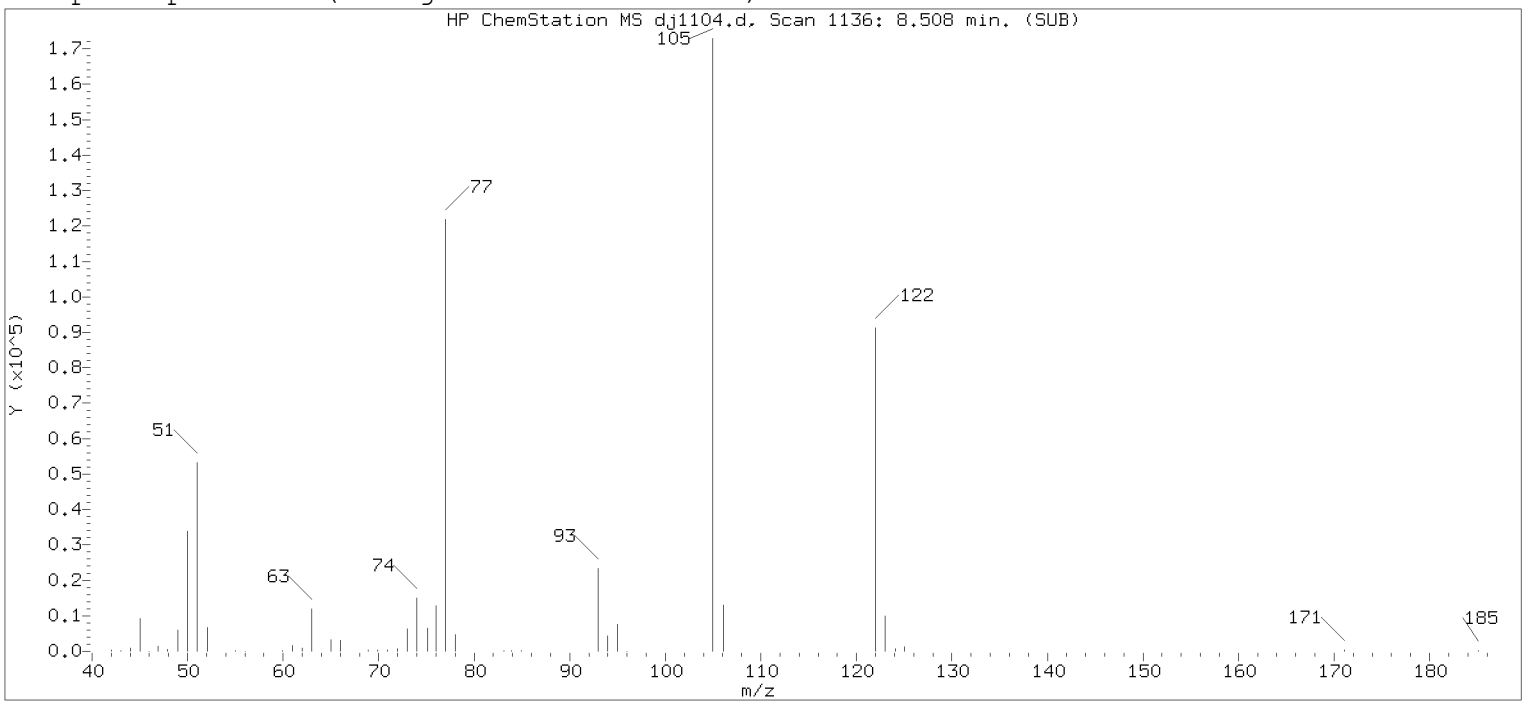
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1136
Retention Time (minutes) : 8.508
Quant Ion : 105.00
Area (flag) : 1049735M
On-Column Amount (ng/ul) : 24.7905
Integration start scan : 1108 Integration stop scan: 1169
Y at integration start : -18 Y at integration end: -18

Reason for manual integration: improper integration

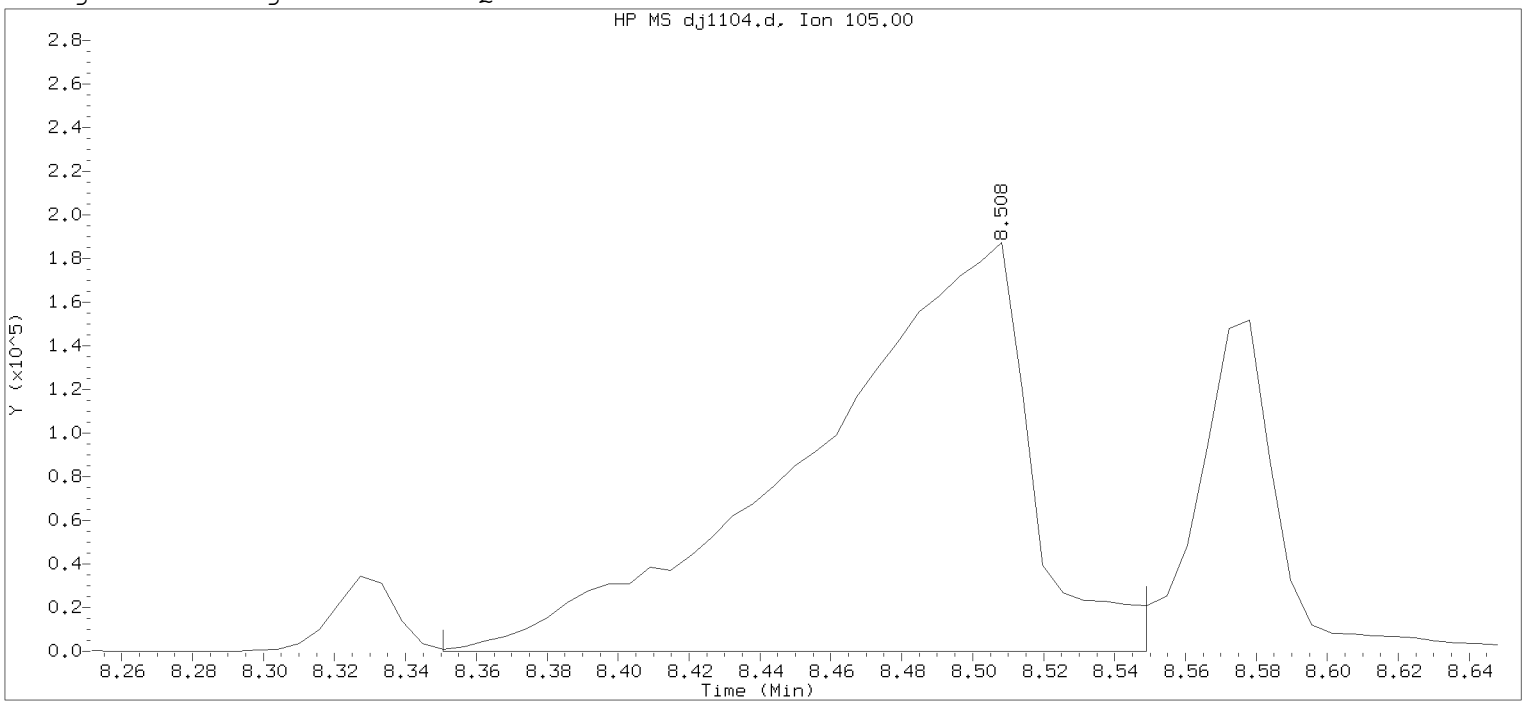
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

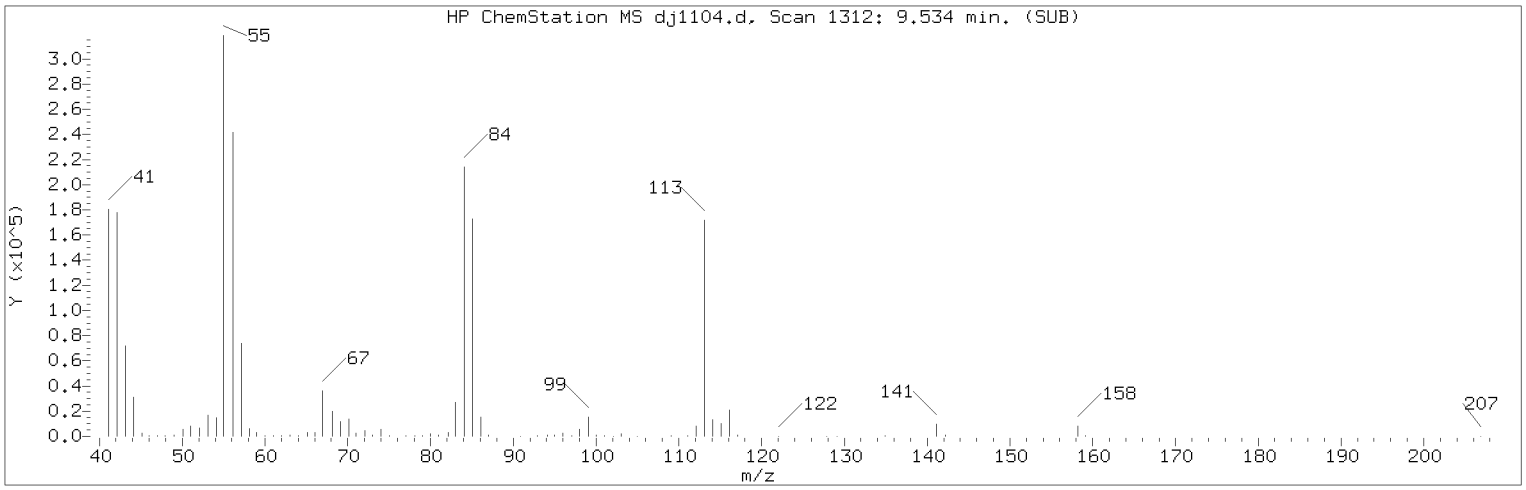
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

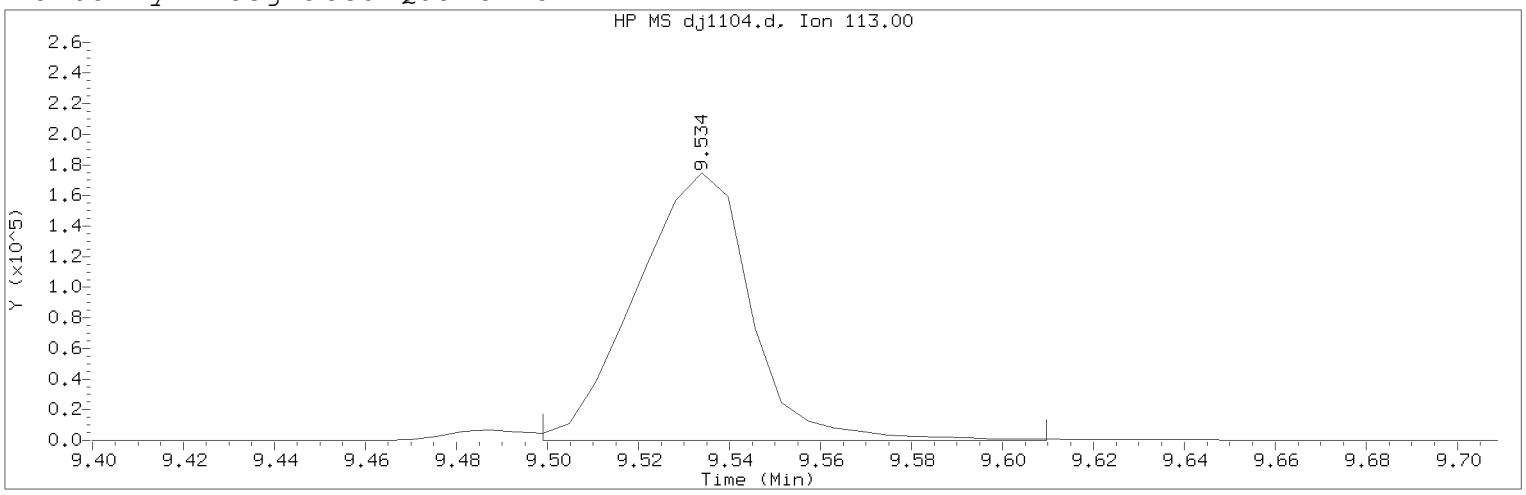
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1136		
Retention Time (minutes)	: 8.508		
Quant Ion	: 105.00		
Area	: 809467		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 1108	Integration stop scan	: 1142
Y at integration start	: 0	Y at integration end	: 0

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Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

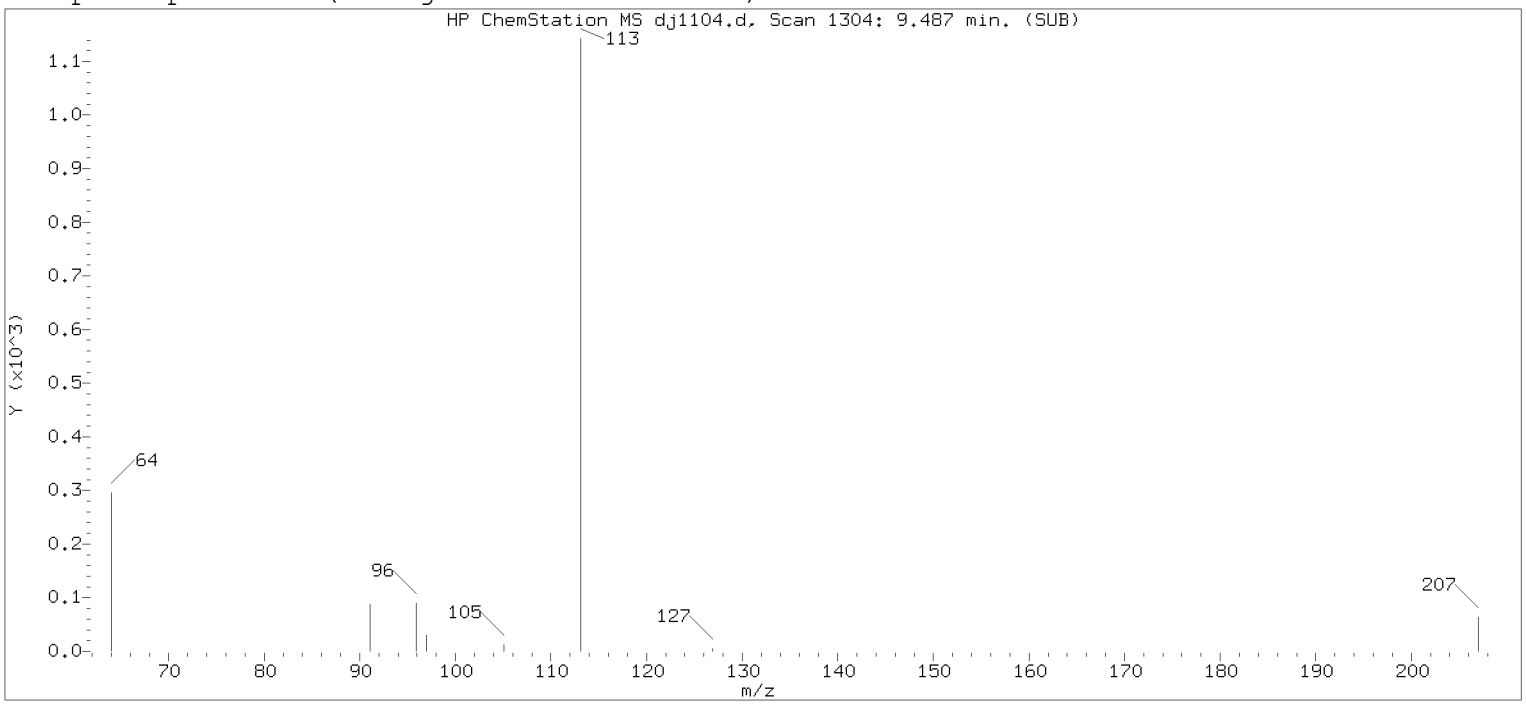
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1312
Retention Time (minutes) : 9.534
Quant Ion : 113.00
Area (flag) : 305008A
On-Column Amount (ng/ul) : 20.2797
Integration start scan : 1305 Integration stop scan: 1324
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

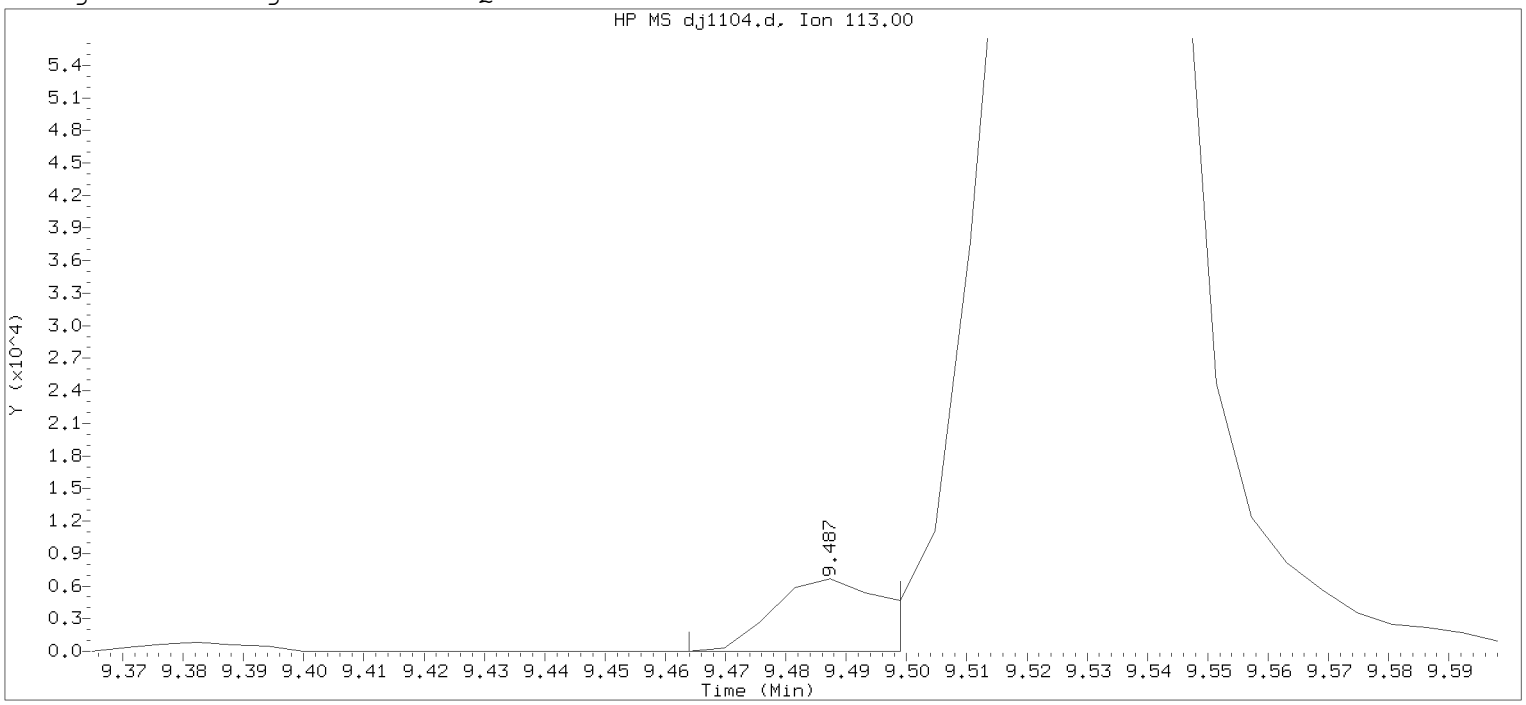
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



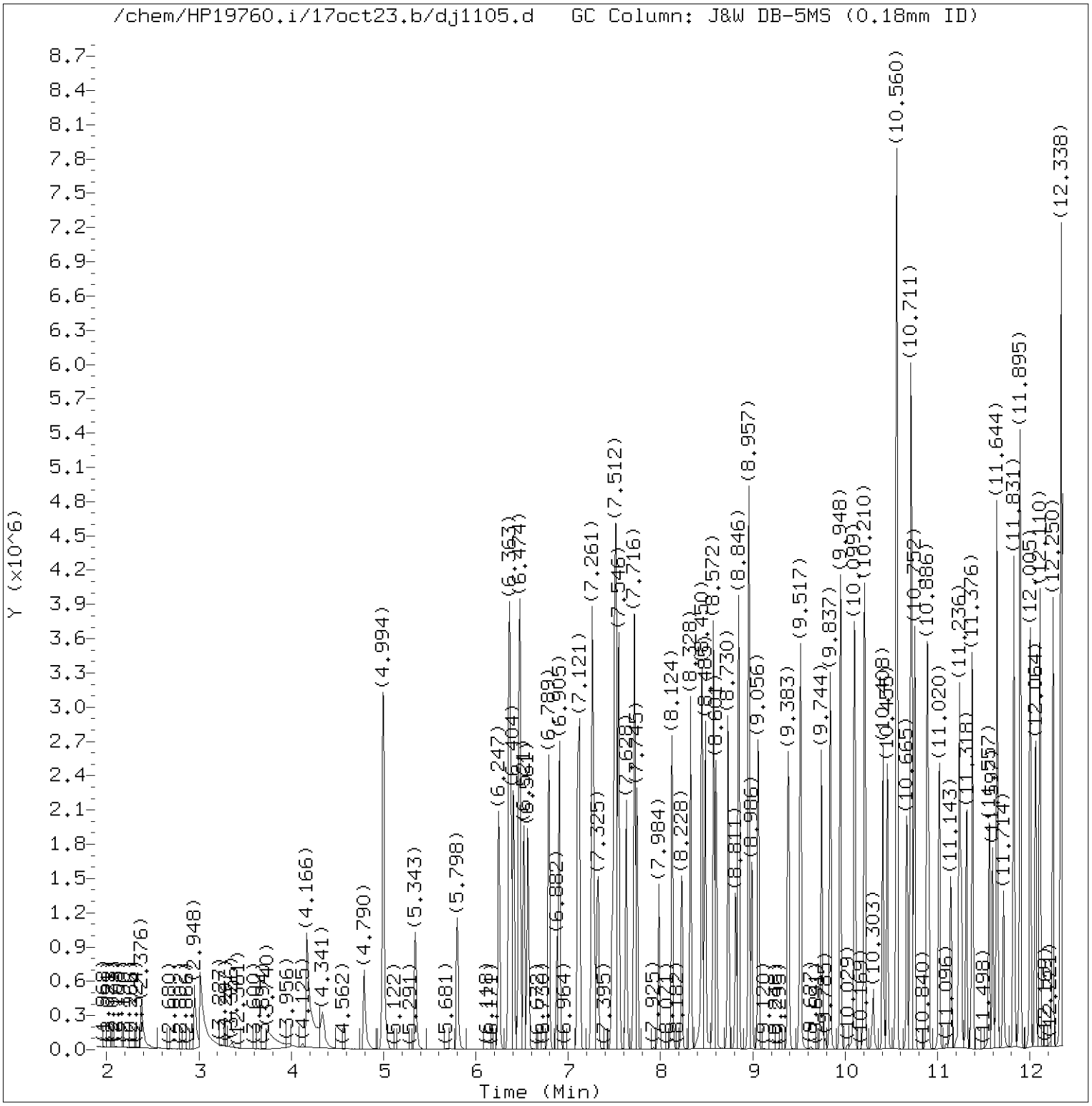
Data File: /chem/HP19760.i/17oct23.b/dj1104.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 13:49 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1304		
Retention Time (minutes)	: 9.487		
Quant Ion	: 113.00		
Area	: 8126		
On-column Amount (ng/ul)	: 0.0269		
Integration start scan	: 1299	Integration stop scan:	1305
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

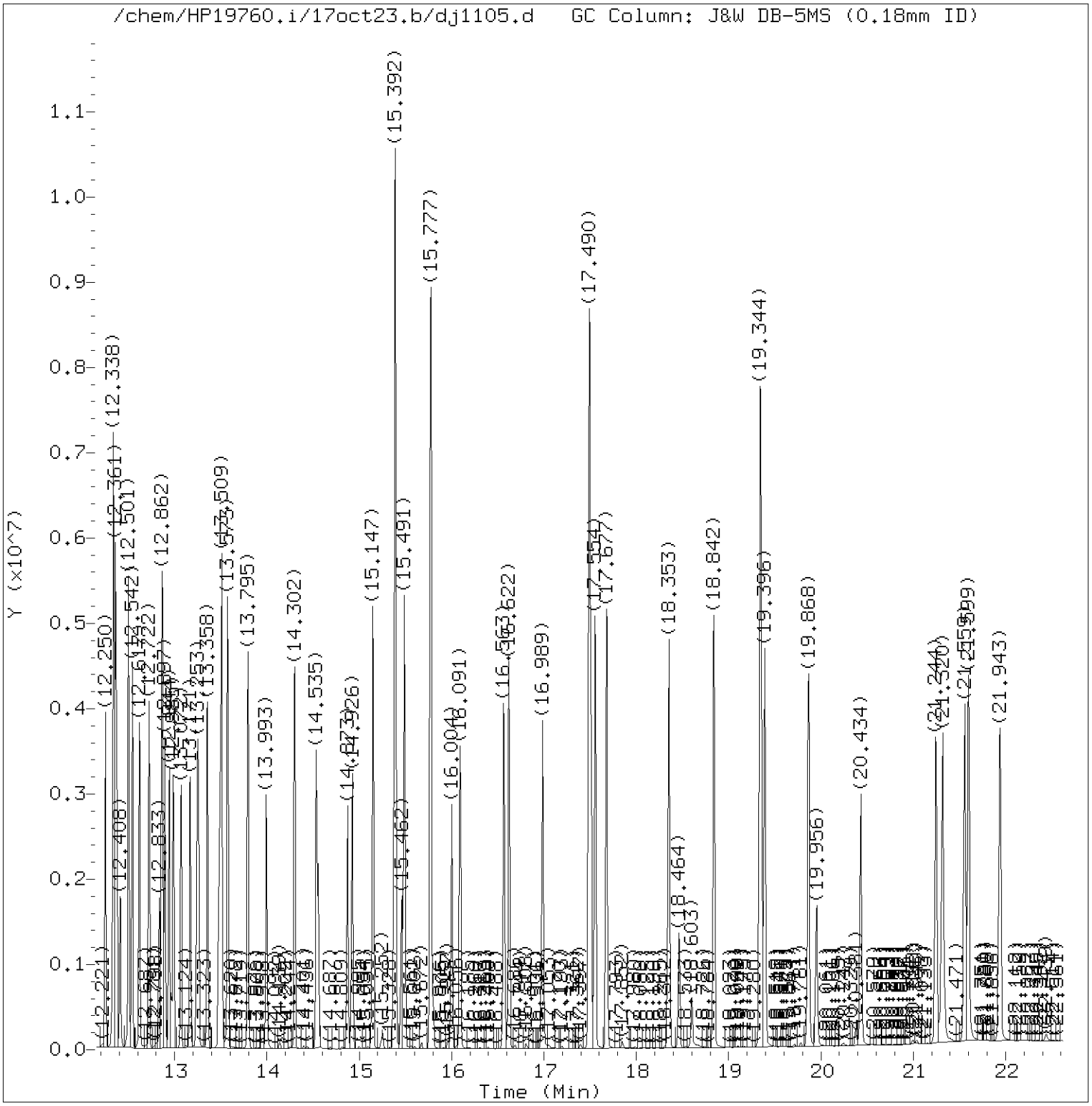
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.376	88	338098	12.588
4) N-Nitrosodimethylamine	(1)	2.948	74	545225	12.879
5) Pyridine	(1)	3.012	79	850371	12.464
7) 2-Picoline	(1)	4.166	93	931699	12.836
8) N-Nitrosomethylethylamine	(1)	4.341	88	393453	12.750
9) Methyl methanesulfonate	(1)	4.790	80	417053	12.676
11)$2-Fluorophenol	(1)	4.994	112	1544399	25.614
13) N-Nitrosodiethylamine	(1)	5.343	102	377455	12.928
42) Total Cresols	(1)			1555232	25.996
15) Ethyl methanesulfonate	(1)	5.798	109	385374	12.683
16) Benzaldehyde	(1)	6.247	77	685017	12.261
17)$Phenol-d6	(1)	6.363	99	2018248	25.590
18) Phenol	(1)	6.381	94	1152337	12.948
19) Aniline	(1)	6.410	93	1325168	12.771
20) a-methylstyrene	(1)	6.474	118	790741	12.417
22) bis(2-Chloroethyl)ether	(1)	6.521	93	833127	12.466
23) 2-Chlorophenol	(1)	6.561	128	762407	12.771
24) 1,3-Dichlorobenzene	(1)	6.789	146	815823	12.555
25)*1,4-Dichlorobenzene-d4	(1)	6.882	152	198947	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	835258	12.641
27) Benzyl alcohol	(1)	7.104	108	501373	12.522
28) 1,2-Dichlorobenzene	(1)	7.121	146	786259	12.567
30) Indene	(1)	7.255	115	1439213	12.371
31) 2-Methylphenol	(1)	7.273	108	720713	12.755
34) bis(2-Chloroisopropyl)ether	(1)	7.325	45	1083482	12.501
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.325	45	1083482	12.501
97) Isosafrole	(3)			519549	12.588
35) N-Nitrosopyrrolidine	(1)	7.471	100	405410	13.063
36) Acetophenone	(1)	7.500	105	1131375	12.098
37) 4-Methylphenol	(1)	7.517	108	834519	13.215
38) N-Nitroso-di-n-propylamine	(1)	7.517	70	649188	12.714
39) N-Nitrosomorpholine	(1)	7.541	56	486359	12.722
40) o-Toluidine	(1)	7.546	106	1299387	12.742
43) Hexachloroethane	(1)	7.628	117	338748	12.727
44)$Nitrobenzene-d5	(2)	7.716	82	1865950	25.548
45) Nitrobenzene	(2)	7.745	77	930922	12.678
48) N-Nitrosopiperidine	(2)	7.984	114	384935	12.970
120) 2,4_2,6-Dinitrotoluenes	(3)			781672	27.140
50) Isophorone	(2)	8.124	82	1640210	12.842
51) 2-Nitrophenol	(2)	8.234	139	365981	13.426

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

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.328	107	821953	12.956
57) O,O,O-Triethylphosphorothioate	(2)	8.450	198	362059	12.728
56) Benzoic acid	(2)	8.479	105	630807M	14.562
55) bis(2-Chloroethoxy)methane	(2)	8.485	93	1026548	12.922
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	1141457	12.337
60) 2,4-Dichlorophenol	(2)	8.601	162	612393	13.058
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	691508	12.687
146) Diallate trans/cis	(4)			746394	12.610
65)*Naphthalene-d8	(2)	8.811	136	756272	5.000
66) Naphthalene	(2)	8.846	128	2157140	12.618
67) 4-Chloroaniline	(2)	8.957	127	900215	12.793
68) 2,6-Dichlorophenol	(2)	8.957	162	597039	12.944
69) Hexachloropropene	(2)	8.986	213	342607	12.937
71) Hexachlorobutadiene	(2)	9.056	225	387704	12.704
75) Quinoline	(2)	9.383	129	1302057	12.523
77) N-Nitrosodi-n-butylamine	(2)	9.517	84	739482	13.279
76) Caprolactam	(2)	9.517	113	191371	12.438
80) 4-Chloro-3-methylphenol	(2)	9.744	107	689682	13.101
82) Safrole	(2)	9.837	162	555667	12.713
83) 2-Methylnaphthalene	(2)	9.948	142	1440942	12.704
84) 1-Methylnaphthalene	(2)	10.099	142	1294576	12.606
85) Hexachlorocyclopentadiene	(3)	10.204	237	337541	13.092
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.216	216	695342	12.672
88) cis-Isosafrole	(3)	10.303	162	95874	2.134
90) 2,4,6-Trichlorophenol	(3)	10.408	196	432400	13.076
92) 2,4,5-Trichlorophenol	(3)	10.455	196	461123	13.229
93)$2-Fluorobiphenyl	(3)	10.560	172	3101251	25.253
94) trans-Isosafrole	(3)	10.665	162	423675	10.455
95) 1,1'-Biphenyl	(3)	10.711	154	1627695	12.066
96) 2-Chloronaphthalene	(3)	10.723	162	1416809	12.942
98) 1-Chloronaphthalene	(3)	10.752	162	1169349	12.160
99) Diphenyl ether	(3)	10.886	170	915807	12.673
100) 2-Nitroaniline	(3)	10.904	138	413358	13.500
104) 1,4-Naphthoquinone	(3)	11.020	158	555445	13.001
105) 1,4-Dinitrobenzene	(3)	11.143	168	210476	13.371
106) Dimethylphthalate	(3)	11.236	163	1479036	12.682
107) 1,3-Dinitrobenzene	(3)	11.259	168	233319	13.343
108) 2,6-Dinitrotoluene	(3)	11.318	165	329140	13.590
109) Acenaphthylene	(3)	11.376	152	1875014	12.850
112) 3-Nitroaniline	(3)	11.562	138	372329	13.515

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

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.597	164	405495	5.000
114) Acenaphthene	(3)	11.644	153	1413780	12.789
115) 2,4-Dinitrophenol	(3)	11.714	184	191380	13.799
116) 4-Nitrophenol	(3)	11.825	109	268378	12.713
117) Pentachlorobenzene	(3)	11.831	250	581098	12.868
119) Dibenzofuran	(3)	11.895	168	1822392	12.640
118) 2,4-Dinitrotoluene	(3)	11.900	165	452532	13.034
121) 1-Naphthylamine	(3)	12.005	143	1414952	12.609
122) 2,3,4,6-Tetrachlorophenol	(3)	12.064	232	363337	13.321
123) 2-Naphthylamine	(3)	12.110	143	1383662	12.661
124) Diethylphthalate	(3)	12.250	149	1454016	12.627
126) Fluorene	(3)	12.332	166	1465876	12.643
125) Thionazin	(3)	12.343	107	299736	13.090
127) 4-Chlorophenyl-phenylether	(3)	12.361	204	694818	12.551
128) 5-Nitro-o-toluidine	(3)	12.367	152	430032	13.451
129) 4-Nitroaniline	(3)	12.378	138	376644	13.450
130) 4,6-Dinitro-2-methylphenol	(4)	12.413	198	258326	12.967
132) NDPA as diphenylamine	(4)	12.501	169	1244638	12.719
131) N-Nitrosodiphenylamine	(4)	12.501	169	1244638	12.719
134) 1,2-Diphenylhydrazine	(4)	12.542	77	1747333	12.502
135)$2,4,6-Tribromophenol	(3)	12.623	330	408799	26.491
137) Tetraethyldithiopyrophosphate	(4)	12.722	97	293301	12.622
139) 1,3,5-Trinitrobenzene	(4)	12.833	213	167920	12.843
140) Diallate (peak 1)	(4)	12.856	86	642980	10.531
141) Phorate	(4)	12.868	75	1152638	13.122
142) Phenacetin	(4)	12.897	108	880449	13.164
143) 4-Bromophenyl-phenylether	(4)	12.944	248	427236	12.461
144) Diallate (peak 2)	(4)	12.961	86	103414	2.064
145) Hexachlorobenzene	(4)	12.985	284	429126	12.209
147) Dimethoate	(4)	13.072	87	726128	12.869
148) Atrazine	(4)	13.171	200	402999	12.036
149) Pentachlorophenol	(4)	13.241	266	294120	13.244
151) Pentachloronitrobenzene	(4)	13.253	237	193974	12.838
150) 4-Aminobiphenyl	(4)	13.259	169	406306	13.137
152) Pronamide	(4)	13.358	173	748205	13.353
153)*Phenanthrene-d10	(4)	13.480	188	788265	5.000
154) Dinoseb	(4)	13.492	211	401328	13.775
155) Phenanthrene	(4)	13.509	178	2267653	12.647
157) Anthracene	(4)	13.573	178	2270479	12.809
163) Carbazole	(4)	13.795	167	2136189	12.857

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$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

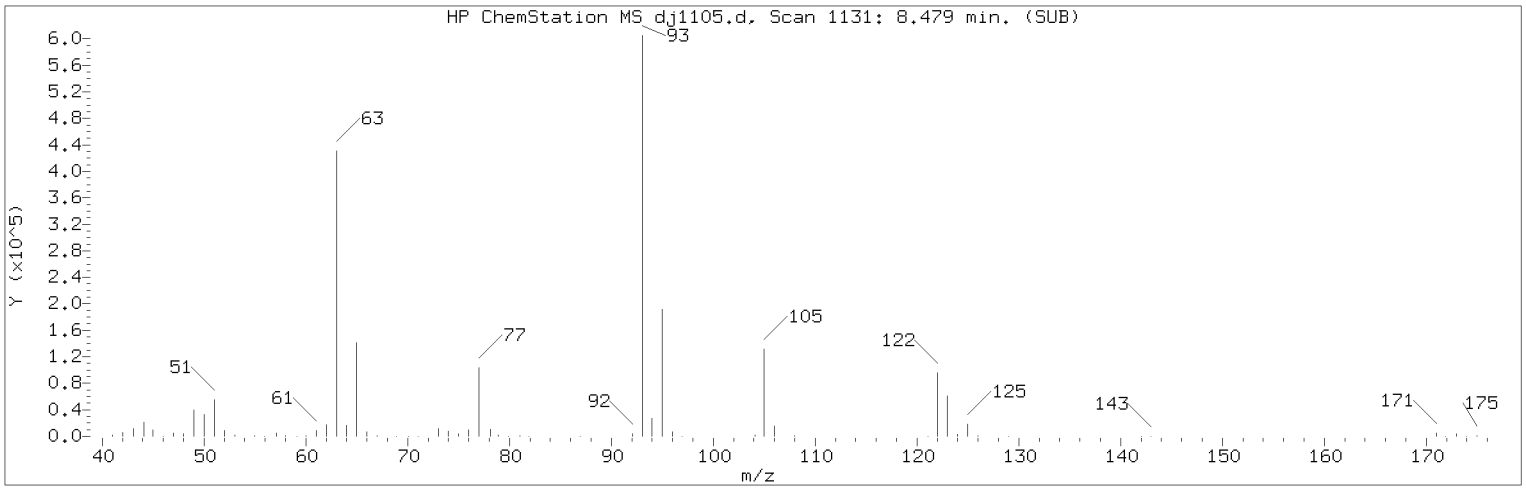
Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.993	109	574764	13.259
165) Di-n-butylphthalate	(4)	14.302	149	2646816	12.699
167) Parathion	(4)	14.535	109	371263	13.240
168) 4-Nitroquinoline-1-oxide	(4)	14.558	190	218618	13.415
169) Octachlorostyrene	(4)	14.873	308	175364	12.377
171) Isodrin	(4)	14.926	193	267447	12.451
222) Total PAHs	(6)			40871391	231.097
173) Fluoranthene	(4)	15.147	202	2663712	13.011
174) Benzidine	(5)	15.392	184	5548900	38.608
175)*Pyrene-d10	(5)	15.462	212	963048	5.000
177) Pyrene	(5)	15.491	202	2793678	12.582
179)$Terphenyl-d14	(5)	15.777	244	3714755	25.648
182) p-Dimethylaminoazobenzene	(5)	16.004	225	413081	14.192
185) Chlorobenzilate	(5)	16.091	139	847741	13.171
187) 3,3'-Dimethylbenzidine	(5)	16.563	212	1801516	13.144
188) Butylbenzylphthalate	(5)	16.622	149	1260604	13.048
191) 2-Acetylaminofluorene	(5)	16.989	181	1183151	13.758
193) 3,3'-Dichlorobenzidine	(5)	17.490	252	1009079	13.148
195) Benzo(a)anthracene	(5)	17.496	228	2796663	13.661
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.513	231	508561	12.790
196) Chrysene	(5)	17.554	228	2555406	13.192
199) bis(2-Ethylhexyl)phthalate	(5)	17.682	149	1897271	13.272
203) 6-Methylchrysene	(5)	18.353	242	1869504	13.095
205) Di-n-octylphthalate	(6)	18.842	149	3355509	13.285
206) Benzo(b)fluoranthene	(6)	19.344	252	2740086	13.364
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.349	256	1180204	13.837
208) Benzo(k)fluoranthene	(6)	19.396	252	2679451	13.396
211) Benzo(a)pyrene	(6)	19.868	252	2560609	13.661
213)*Perylene-d12	(6)	19.956	264	848093	5.000
215) 3-Methylcholanthrene	(6)	20.434	268	948546	13.598
217) Dibenz(a,h)acridine	(6)	21.244	279	2058779	13.008
218) Dibenz(a,j)acridine	(6)	21.320	279	2189284	13.040
219) Indeno(1,2,3-cd)pyrene	(6)	21.559	276	2939046	13.304
220) Dibenz(a,h)anthracene	(6)	21.599	278	2513819	13.618
221) Benzo(g,h,i)perylene	(6)	21.943	276	2443461	13.190

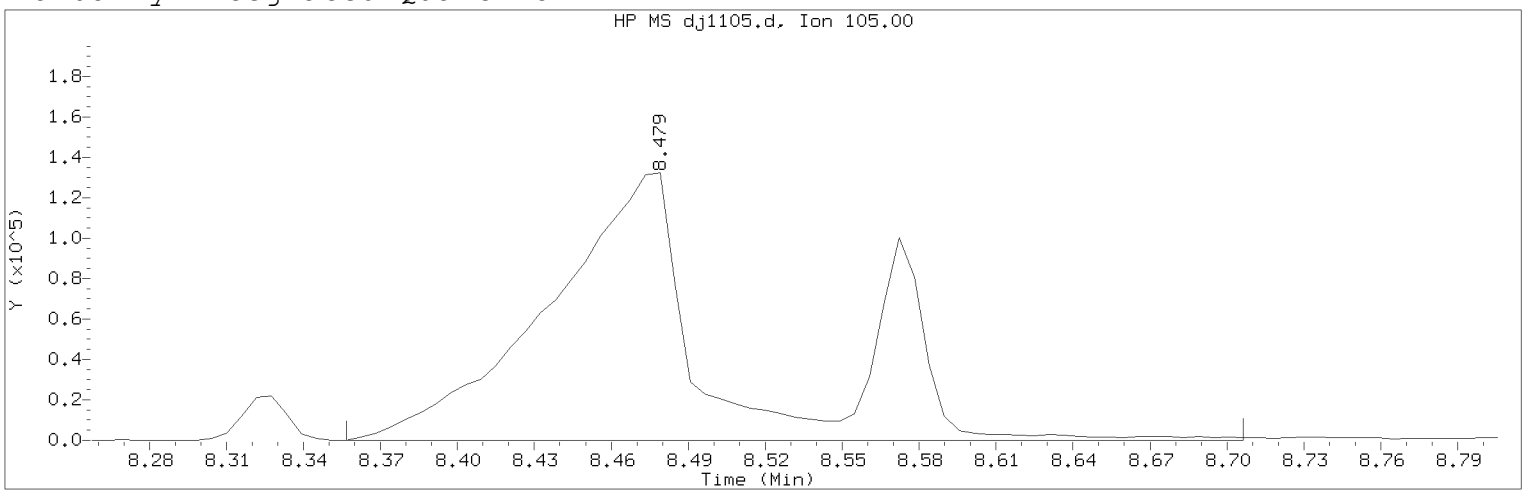
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

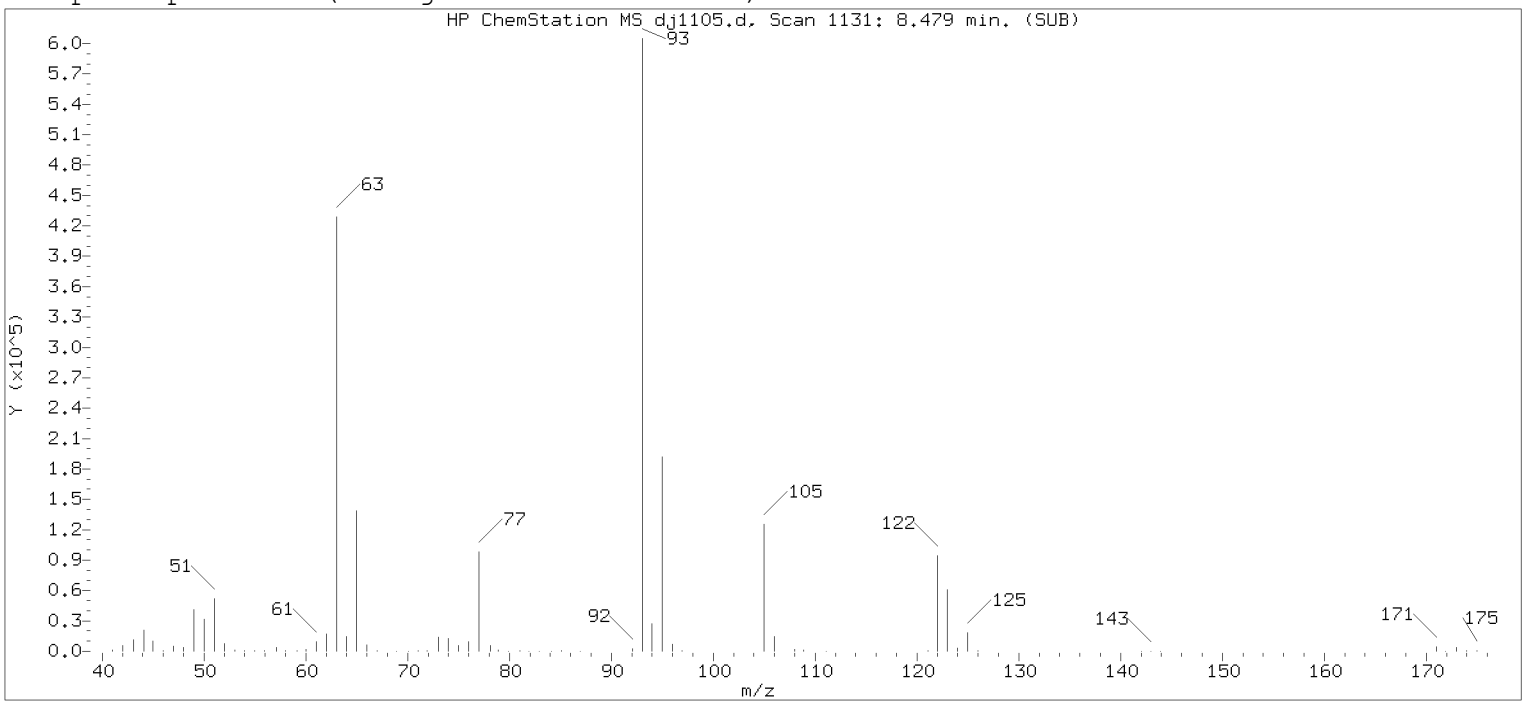
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1131
Retention Time (minutes) : 8.479
Quant Ion : 105.00
Area (flag) : 630807M
On-Column Amount (ng/ul) : 14.5624
Integration start scan : 1109 Integration stop scan: 1169
Y at integration start : 19 Y at integration end: 19

Reason for manual integration: improper integration

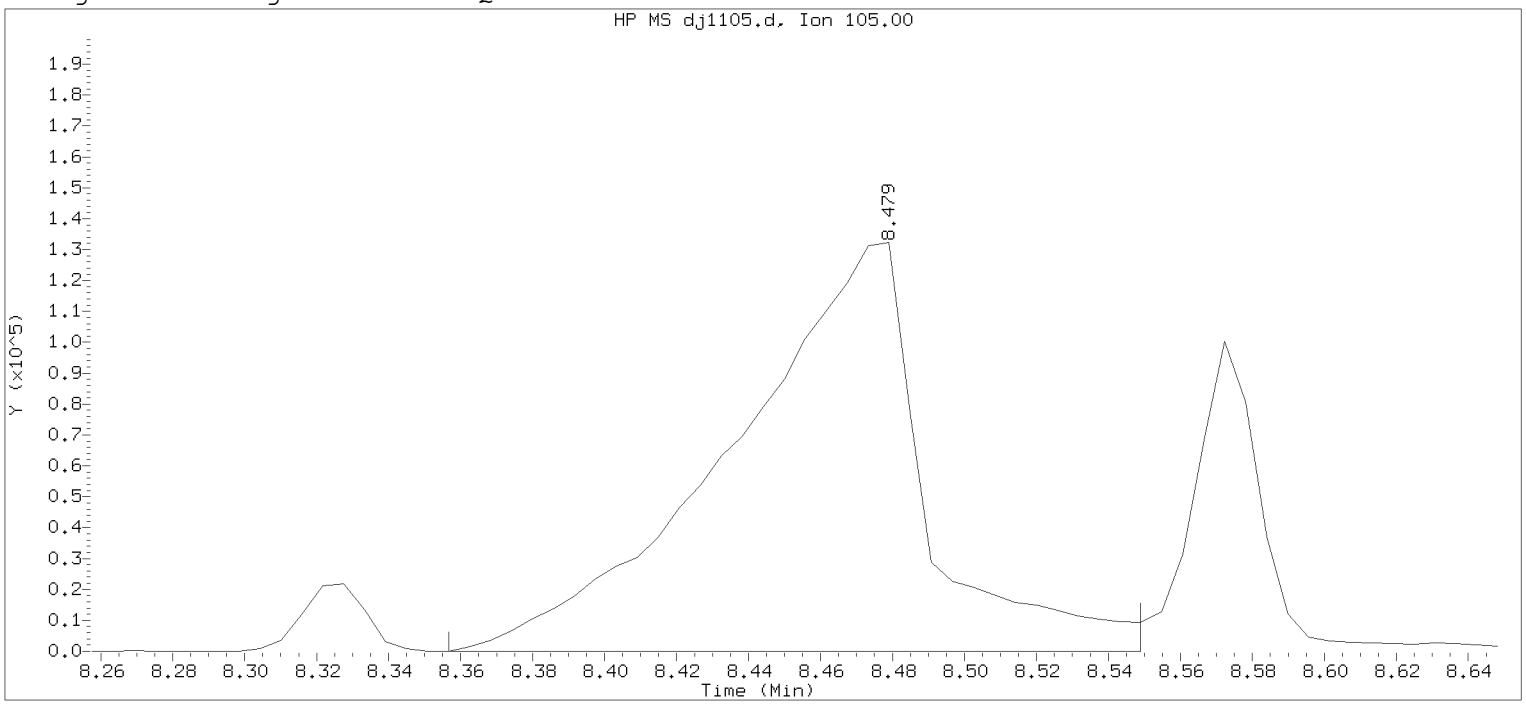
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



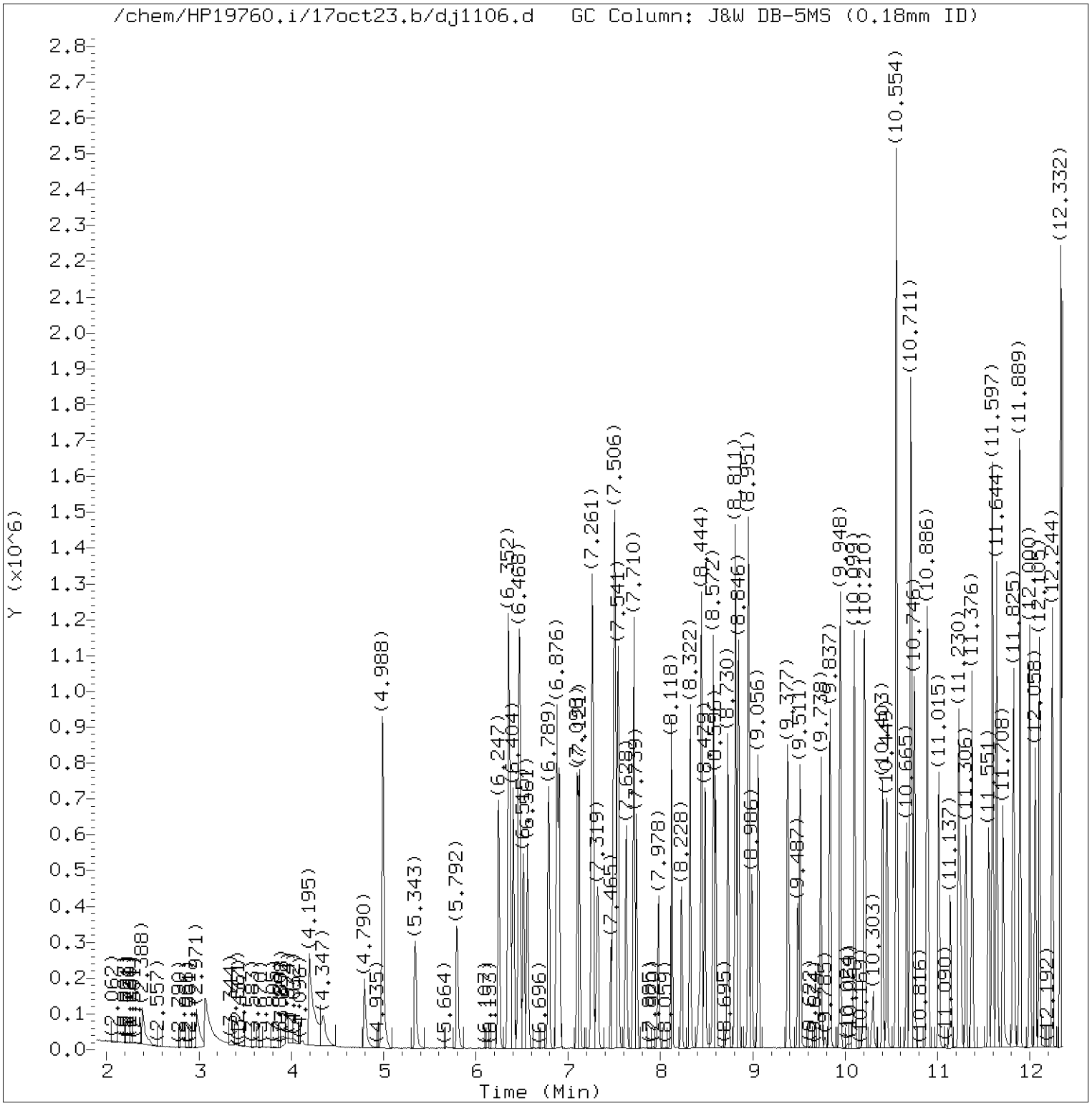
Data File: /chem/HP19760.i/17oct23.b/dj1105.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:17 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:16
Date, time and analyst ID of latest file update: 23-Oct-2017 15:16 em10340

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1131		
Retention Time (minutes)	: 8.479		
Quant Ion	: 105.00		
Area	: 494544		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 1109	Integration stop scan:	1142
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used em10340



Total Ion Chromatogram (TIC)

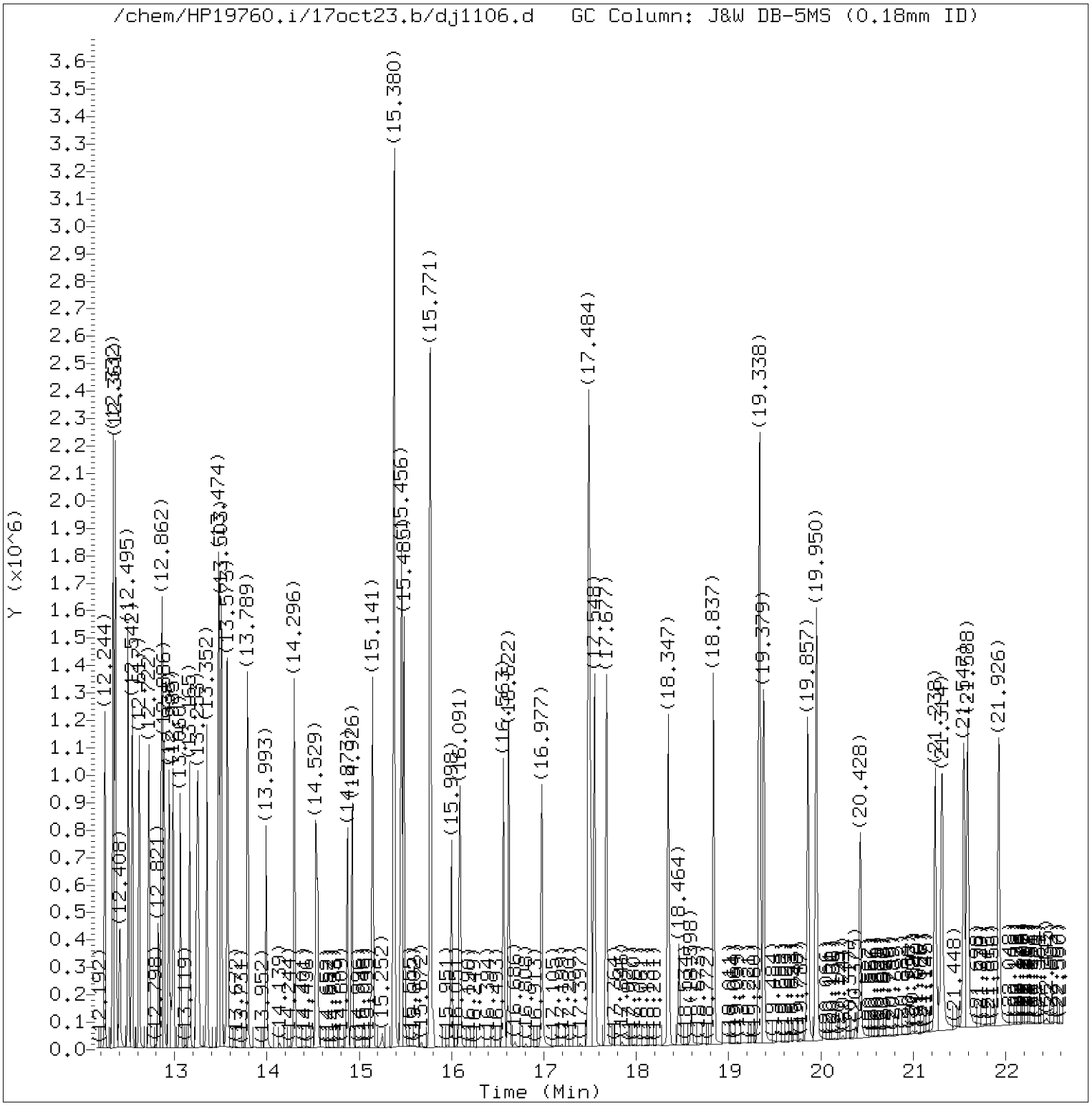
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.388	88	98257	3.752
4) N-Nitrosodimethylamine	(1)	2.971	74	144693	3.506
5) Pyridine	(1)	3.070	79	225073	3.384
7) 2-Picoline	(1)	4.195	93	260794	3.685
8) N-Nitrosomethylethylamine	(1)	4.341	88	109373	3.636
9) Methyl methanesulfonate	(1)	4.790	80	116795	3.641
11)$2-Fluorophenol	(1)	4.988	112	430995	7.332
13) N-Nitrosodiethylamine	(1)	5.343	102	102911	3.615
42) Total Cresols	(1)			420018	7.201
15) Ethyl methanesulfonate	(1)	5.792	109	107538	3.630
16) Benzaldehyde	(1)	6.247	77	217341	3.990
17)$Phenol-d6	(1)	6.352	99	566156	7.363
18) Phenol	(1)	6.369	94	324837	3.744
19) Aniline	(1)	6.404	93	369485	3.653
20) a-methylstyrene	(1)	6.474	118	237347	3.823
22) bis(2-Chloroethyl)ether	(1)	6.515	93	244975	3.760
23) 2-Chlorophenol	(1)	6.561	128	216873	3.726
24) 1,3-Dichlorobenzene	(1)	6.789	146	235098	3.711
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	193957	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	239666	3.721
27) Benzyl alcohol	(1)	7.098	108	145959	3.739
28) 1,2-Dichlorobenzene	(1)	7.121	146	225641	3.699
30) Indene	(1)	7.255	115	432624	3.814
31) 2-Methylphenol	(1)	7.267	108	204706	3.716
34) bis(2-Chloroisopropyl)ether	(1)	7.319	45	312028	3.693
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.319	45	312028	3.693
97) Isosafrole	(3)			146391	3.612
35) N-Nitrosopyrrolidine	(1)	7.465	100	110745	3.660
36) Acetophenone	(1)	7.494	105	347309	3.809
37) 4-Methylphenol	(1)	7.506	108	215312	3.497
38) N-Nitroso-di-n-propylamine	(1)	7.506	70	183689	3.690
39) N-Nitrosomorpholine	(1)	7.535	56	137298	3.684
40) o-Toluidine	(1)	7.541	106	371598	3.738
43) Hexachloroethane	(1)	7.628	117	95491	3.680
44)$Nitrobenzene-d5	(2)	7.710	82	527299	7.356
45) Nitrobenzene	(2)	7.739	77	268989	3.733
48) N-Nitrosopiperidine	(2)	7.978	114	106741	3.664
120) 2,4_2,6-Dinitrotoluenes	(3)			209334	7.402
50) Isophorone	(2)	8.118	82	458394	3.657
51) 2-Nitrophenol	(2)	8.228	139	97905	3.660

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

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.322	107	229345	3.683
56) Benzoic acid	(2)	8.444	105	230979M	5.433
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	101721	3.644
55) bis(2-Chloroethoxy)methane	(2)	8.479	93	291290	3.736
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	342239	3.769
60) 2,4-Dichlorophenol	(2)	8.596	162	173039	3.759
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	196368	3.671
146) Diallate trans/cis	(4)			205918	3.695
65)*Naphthalene-d8	(2)	8.811	136	742243	5.000
66) Naphthalene	(2)	8.846	128	612733	3.652
67) 4-Chloroaniline	(2)	8.951	127	257280	3.725
68) 2,6-Dichlorophenol	(2)	8.951	162	169697	3.749
69) Hexachloropropene	(2)	8.986	213	93878	3.612
71) Hexachlorobutadiene	(2)	9.056	225	110416	3.686
75) Quinoline	(2)	9.377	129	373453	3.660
76) Caprolactam	(2)	9.487	113	57592	3.814
77) N-Nitrosodi-n-butylamine	(2)	9.511	84	181469	3.320
80) 4-Chloro-3-methylphenol	(2)	9.738	107	194186	3.758
82) Safrole	(2)	9.837	162	155703	3.630
83) 2-Methylnaphthalene	(2)	9.948	142	407718	3.663
84) 1-Methylnaphthalene	(2)	10.099	142	366753	3.639
85) Hexachlorocyclopentadiene	(3)	10.204	237	88058	3.478
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	200933	3.729
88) cis-Isosafrole	(3)	10.303	162	26530	0.601
90) 2,4,6-Trichlorophenol	(3)	10.403	196	120224	3.703
92) 2,4,5-Trichlorophenol	(3)	10.455	196	127373	3.721
93)$2-Fluorobiphenyl	(3)	10.554	172	890868	7.388
94) trans-Isosafrole	(3)	10.665	162	119861	3.012
95) 1,1'-Biphenyl	(3)	10.706	154	504682	3.810
96) 2-Chloronaphthalene	(3)	10.717	162	392471	3.651
98) 1-Chloronaphthalene	(3)	10.746	162	355810	3.768
99) Diphenyl ether	(3)	10.886	170	264262	3.724
100) 2-Nitroaniline	(3)	10.898	138	111745	3.717
104) 1,4-Naphthoquinone	(3)	11.015	158	153003	3.647
105) 1,4-Dinitrobenzene	(3)	11.143	168	53400	3.455
106) Dimethylphthalate	(3)	11.230	163	424037	3.703
107) 1,3-Dinitrobenzene	(3)	11.248	168	60936	3.549
108) 2,6-Dinitrotoluene	(3)	11.306	165	89055	3.745
109) Acenaphthylene	(3)	11.376	152	529612	3.697
112) 3-Nitroaniline	(3)	11.551	138	99630	3.683

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

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.597	164	398155	5.000
114) Acenaphthene	(3)	11.644	153	401338	3.697
115) 2,4-Dinitrophenol	(3)	11.708	184	85521M	6.280
116) 4-Nitrophenol	(3)	11.813	109	71352	3.442
117) Pentachlorobenzene	(3)	11.831	250	165193	3.725
119) Dibenzofuran	(3)	11.889	168	527597	3.727
118) 2,4-Dinitrotoluene	(3)	11.895	165	120279	3.528
121) 1-Naphthylamine	(3)	12.000	143	387644	3.518
122) 2,3,4,6-Tetrachlorophenol	(3)	12.058	232	96883	3.617
123) 2-Naphthylamine	(3)	12.105	143	378805	3.530
124) Diethylphthalate	(3)	12.244	149	408693	3.615
126) Fluorene	(3)	12.332	166	418082	3.672
125) Thionazin	(3)	12.338	107	82880	3.686
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	198395	3.650
128) 5-Nitro-o-toluidine	(3)	12.361	152	112661	3.589
129) 4-Nitroaniline	(3)	12.367	138	103540	3.766
130) 4,6-Dinitro-2-methylphenol	(4)	12.408	198	60175	3.208
132) NDPA as diphenylamine	(4)	12.495	169	344436	3.738
131) N-Nitrosodiphenylamine	(4)	12.495	169	344436	3.738
134) 1,2-Diphenylhydrazine	(4)	12.542	77	495029	3.762
135)$2,4,6-Tribromophenol	(3)	12.617	330	110093	7.266
137) Tetraethyldithiopyrophosphate	(4)	12.722	97	81218	3.712
139) 1,3,5-Trinitrobenzene	(4)	12.827	213	38705	3.144
140) Diallate (peak 1)	(4)	12.856	86	176297	3.067
141) Phorate	(4)	12.868	75	312472	3.778
142) Phenacetin	(4)	12.886	108	240464	3.818
143) 4-Bromophenyl-phenylether	(4)	12.938	248	119958	3.716
144) Diallate (peak 2)	(4)	12.961	86	29621	0.628
145) Hexachlorobenzene	(4)	12.985	284	122181	3.692
147) Dimethoate	(4)	13.060	87	196168	3.692
148) Atrazine	(4)	13.165	200	124212	3.940
149) Pentachlorophenol	(4)	13.235	266	74367	3.556
151) Pentachloronitrobenzene	(4)	13.253	237	51057	3.589
150) 4-Aminobiphenyl	(4)	13.259	169	102280	3.512
152) Pronamide	(4)	13.352	173	197979	3.752
153)*Phenanthrene-d10	(4)	13.474	188	742213	5.000
154) Dinoseb	(4)	13.492	211	90250M	3.290
155) Phenanthrene	(4)	13.503	178	623348	3.692
157) Anthracene	(4)	13.573	178	629559	3.772
163) Carbazole	(4)	13.789	167	582284	3.722

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

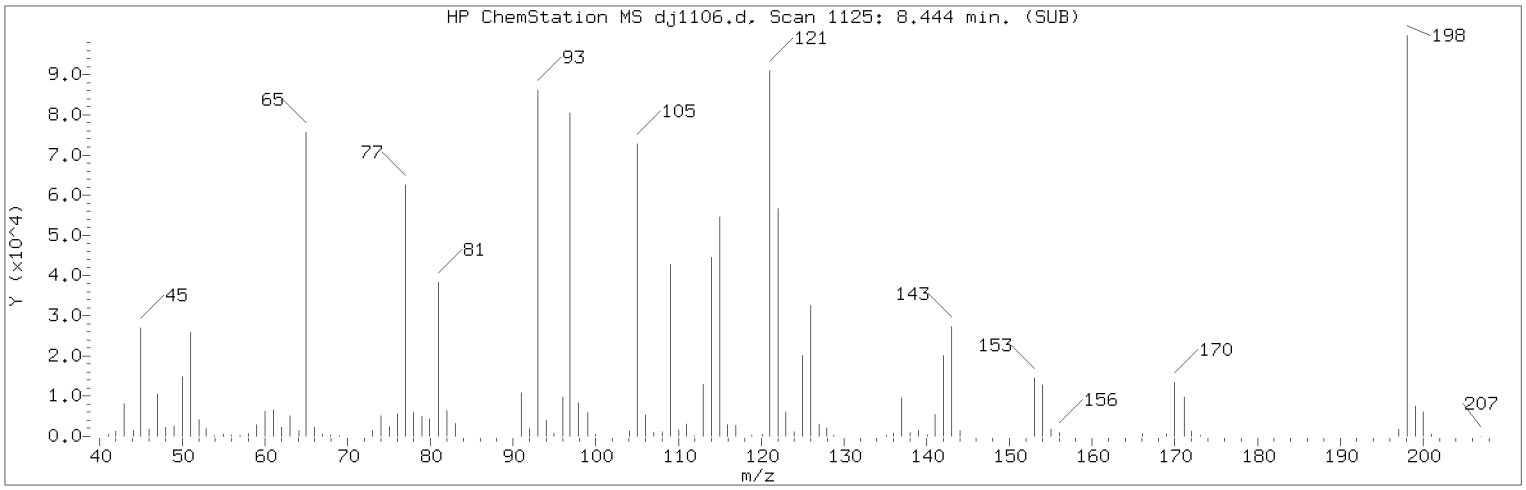
Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.993	109	142191	3.484
165) Di-n-butylphthalate	(4)	14.296	149	716797	3.652
167) Parathion	(4)	14.529	109	91836	3.478
168) 4-Nitroquinoline-1-oxide	(4)	14.553	190	37523	2.445
169) Octachlorostyrene	(4)	14.873	308	51952	3.894
171) Isodrin	(4)	14.926	193	72527	3.586
222) Total PAHs	(6)			11027459	68.186
173) Fluoranthene	(4)	15.147	202	707111	3.668
174) Benzidine	(5)	15.380	184	1487575	10.992
175)*Pyrene-d10	(5)	15.456	212	906855	5.000
177) Pyrene	(5)	15.485	202	765167	3.660
179)$Terphenyl-d14	(5)	15.771	244	1012178	7.421
182) p-Dimethylaminoazobenzene	(5)	15.998	225	101858	3.716
185) Chlorobenzilate	(5)	16.091	139	220248	3.634
187) 3,3'-Dimethylbenzidine	(5)	16.563	212	460770	3.570
188) Butylbenzylphthalate	(5)	16.622	149	328644	3.612
191) 2-Acetylaminofluorene	(5)	16.977	181	277717	3.430
193) 3,3'-Dichlorobenzidine	(5)	17.484	252	256709	3.552
195) Benzo(a)anthracene	(5)	17.484	228	735192	3.814
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.508	231	131865	3.522
196) Chrysene	(5)	17.548	228	693607	3.802
199) bis(2-Ethylhexyl)phthalate	(5)	17.677	149	481786	3.579
203) 6-Methylchrysene	(5)	18.347	242	474285	3.528
205) Di-n-octylphthalate	(6)	18.837	149	830472	3.596
206) Benzo(b)fluoranthene	(6)	19.332	252	692962	3.696
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.338	256	297209	3.811
208) Benzo(k)fluoranthene	(6)	19.379	252	703936	3.849
211) Benzo(a)pyrene	(6)	19.857	252	648652	3.784
213)*Perylene-d12	(6)	19.950	264	775528	5.000
215) 3-Methylcholanthrene	(6)	20.428	268	235108	3.686
217) Dibenz(a,h)acridine	(6)	21.238	279	516016	3.565
218) Dibenz(a,j)acridine	(6)	21.314	279	561380	3.657
219) Indeno(1,2,3-cd)pyrene	(6)	21.547	276	771455	3.819
220) Dibenz(a,h)anthracene	(6)	21.588	278	668585	3.961
221) Benzo(g,h,i)perylene	(6)	21.926	276	651649	3.847

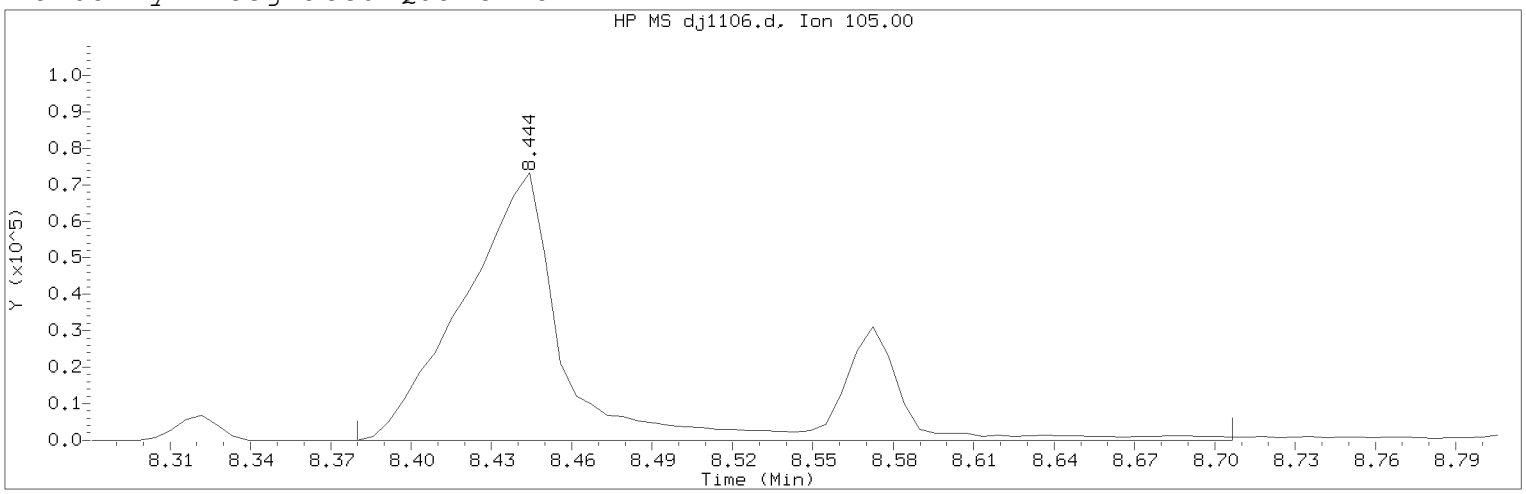
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

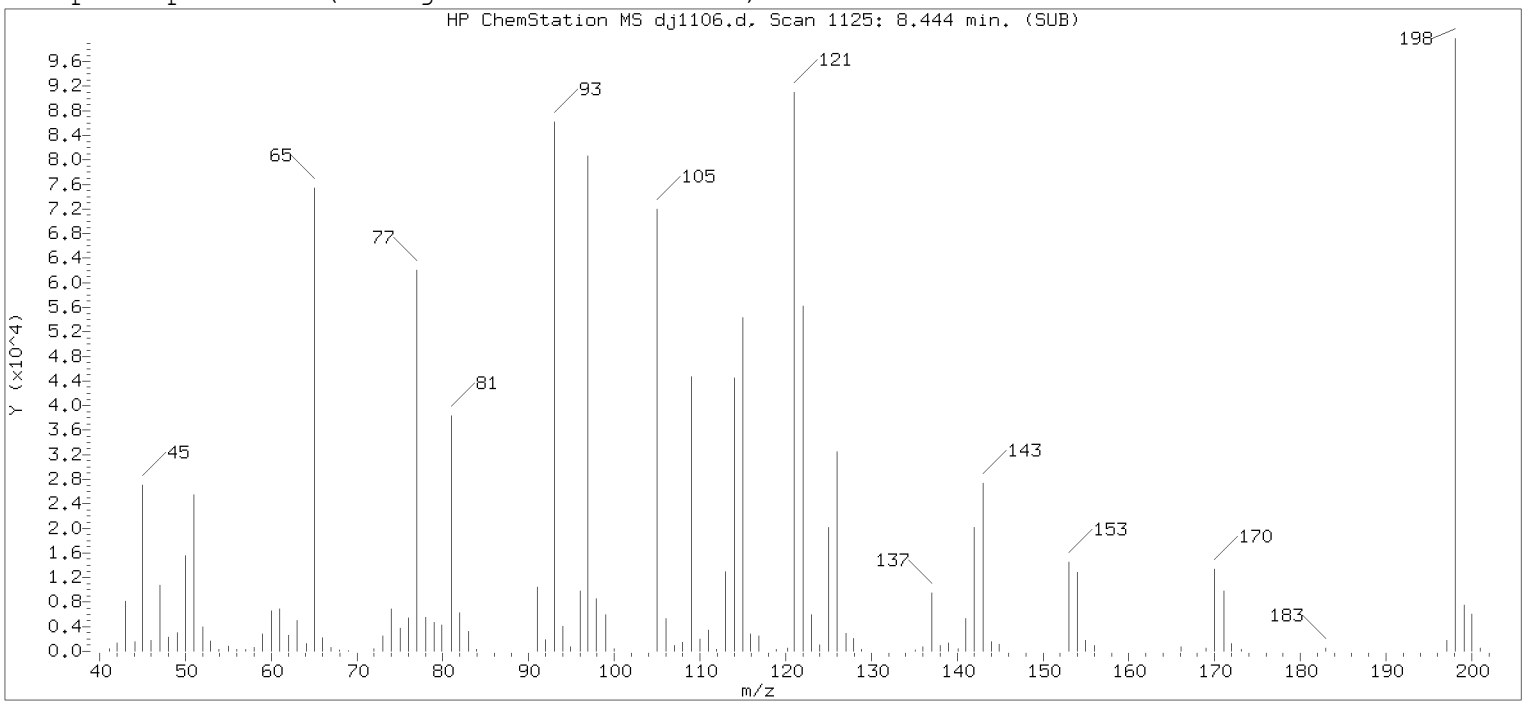
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1125
Retention Time (minutes) : 8.444
Quant Ion : 105.00
Area (flag) : 230979M
On-Column Amount (ng/ul) : 5.4330
Integration start scan : 1113 Integration stop scan: 1169
Y at integration start : -27 Y at integration end: -27

Reason for manual integration: improper integration

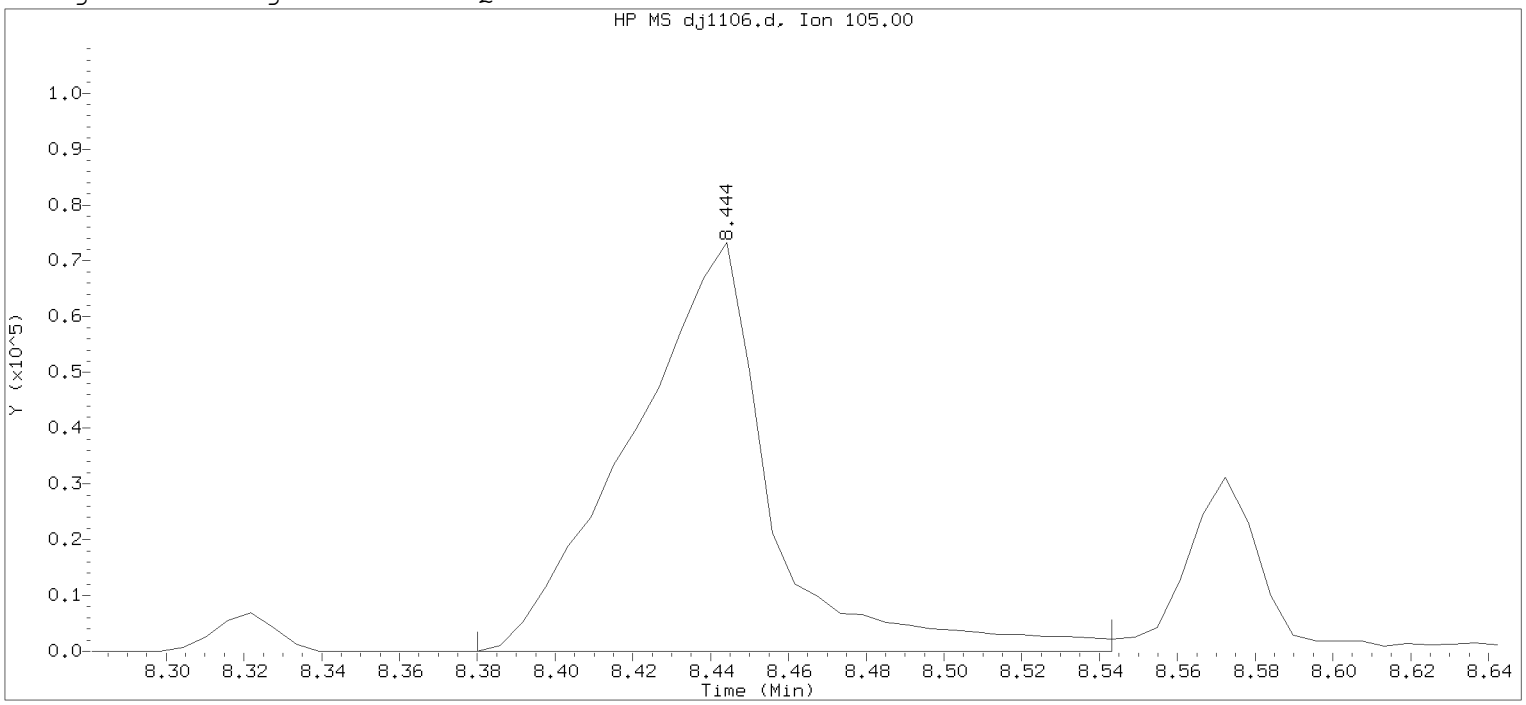
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

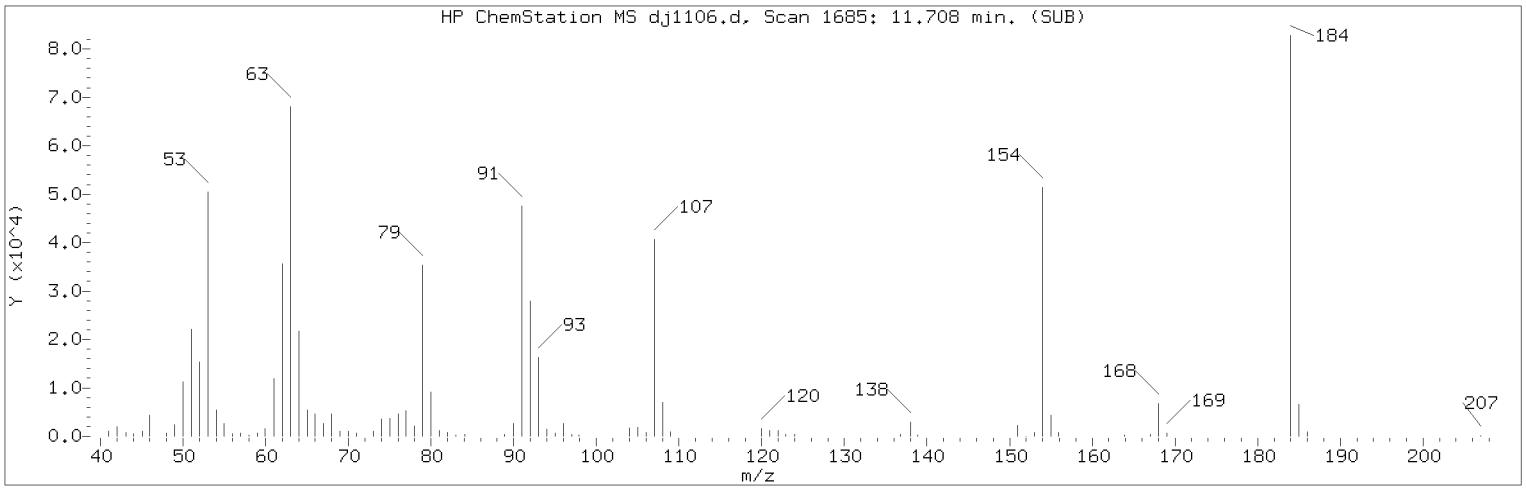
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:17
Date, time and analyst ID of latest file update: 23-Oct-2017 15:17 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

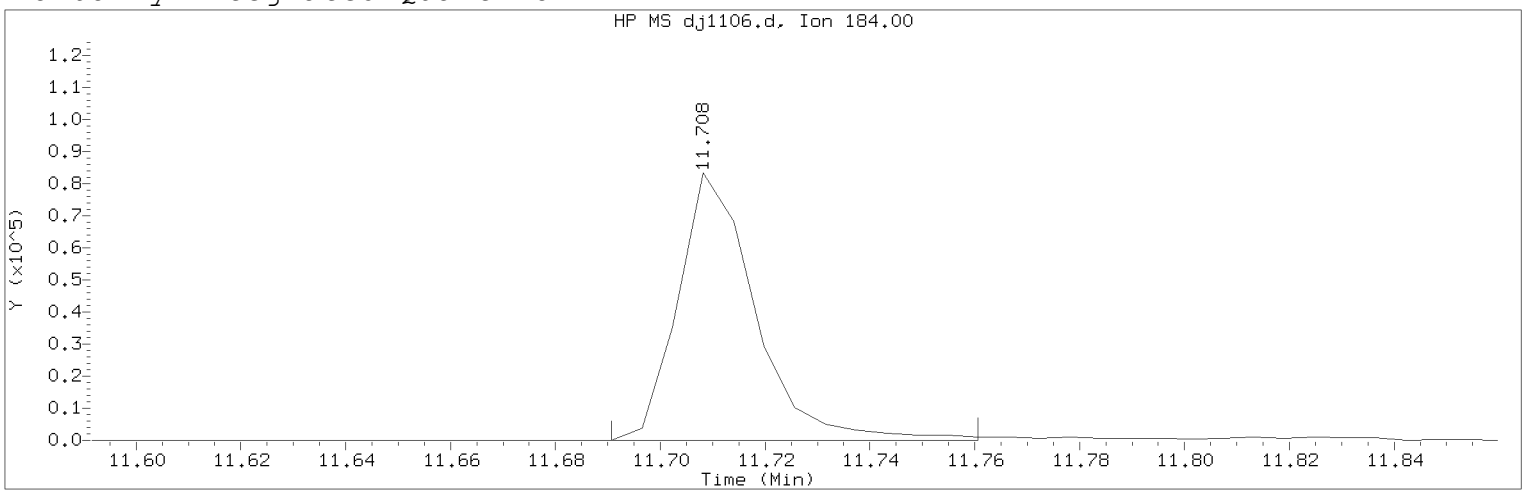
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1125
Retention Time (minutes) : 8.444
Quant Ion : 105.00
Area : 182555
On-column Amount (ng/ul) : 12.7986
Integration start scan : 1113 Integration stop scan: 1141
Y at integration start : 0 Y at integration end: 0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

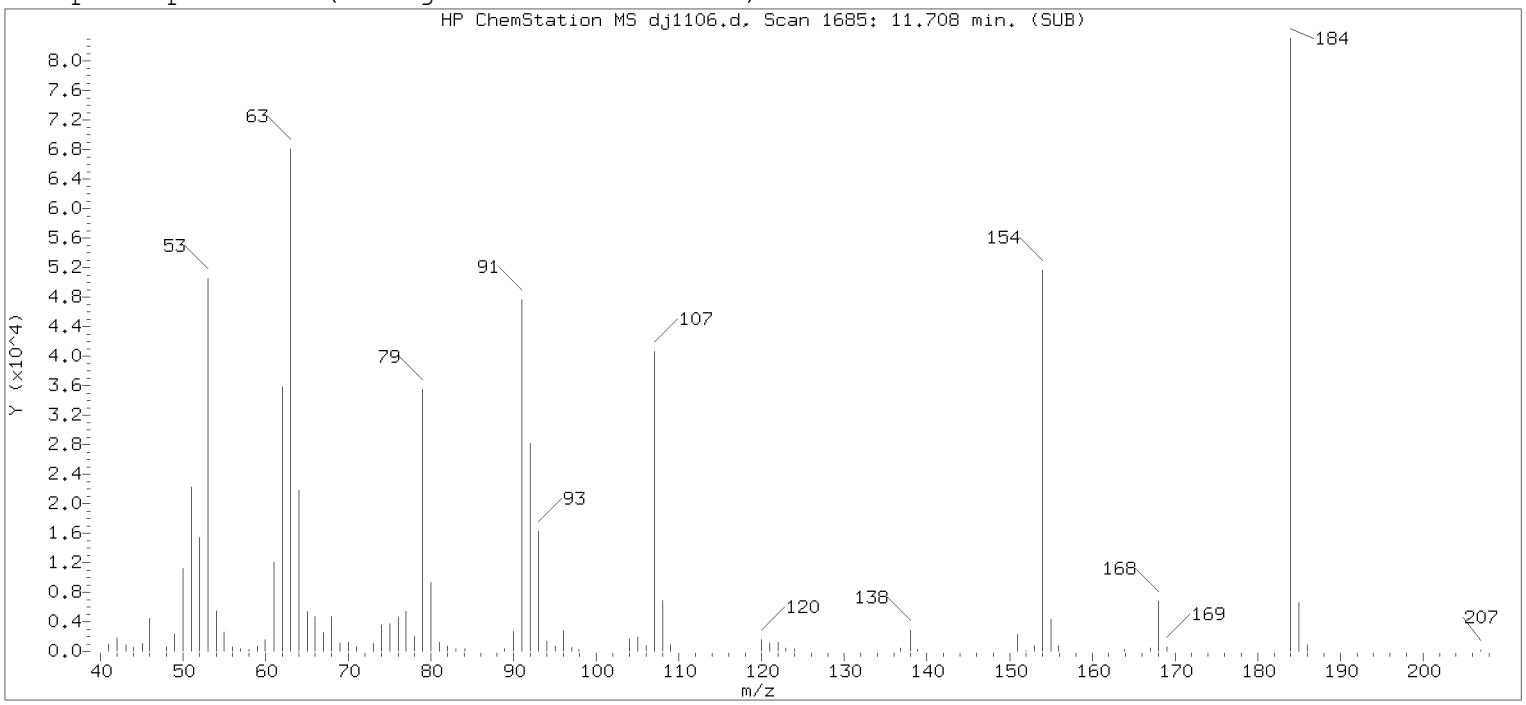
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1685
Retention Time (minutes) : 11.708
Quant Ion : 184.00
Area (flag) : 85521M
On-Column Amount (ng/ul) : 6.2800
Integration start scan : 1681 Integration stop scan: 1693
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

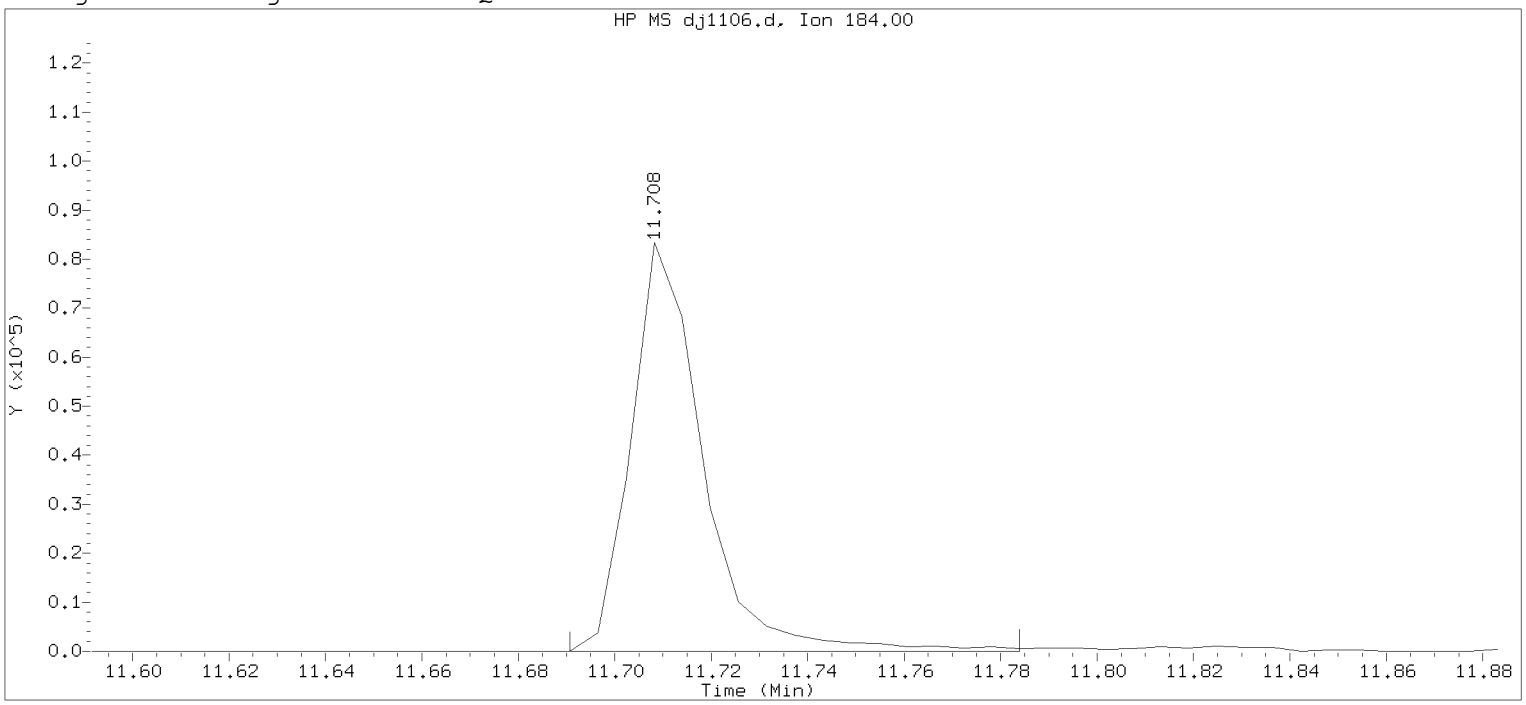
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

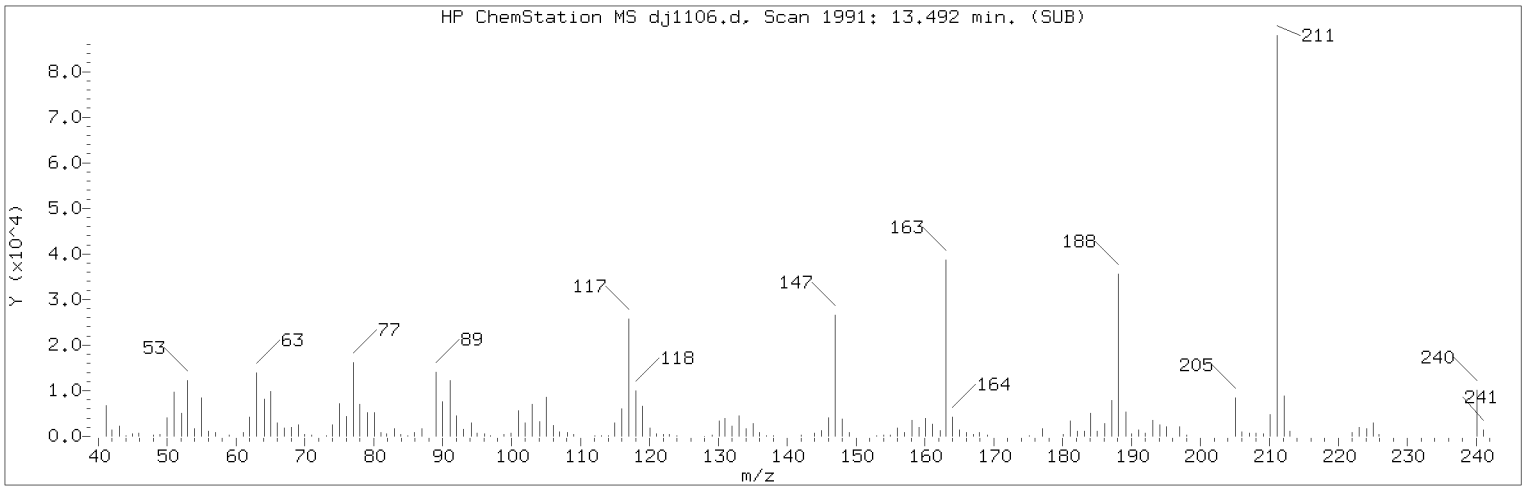
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:17
Date, time and analyst ID of latest file update: 23-Oct-2017 15:17 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

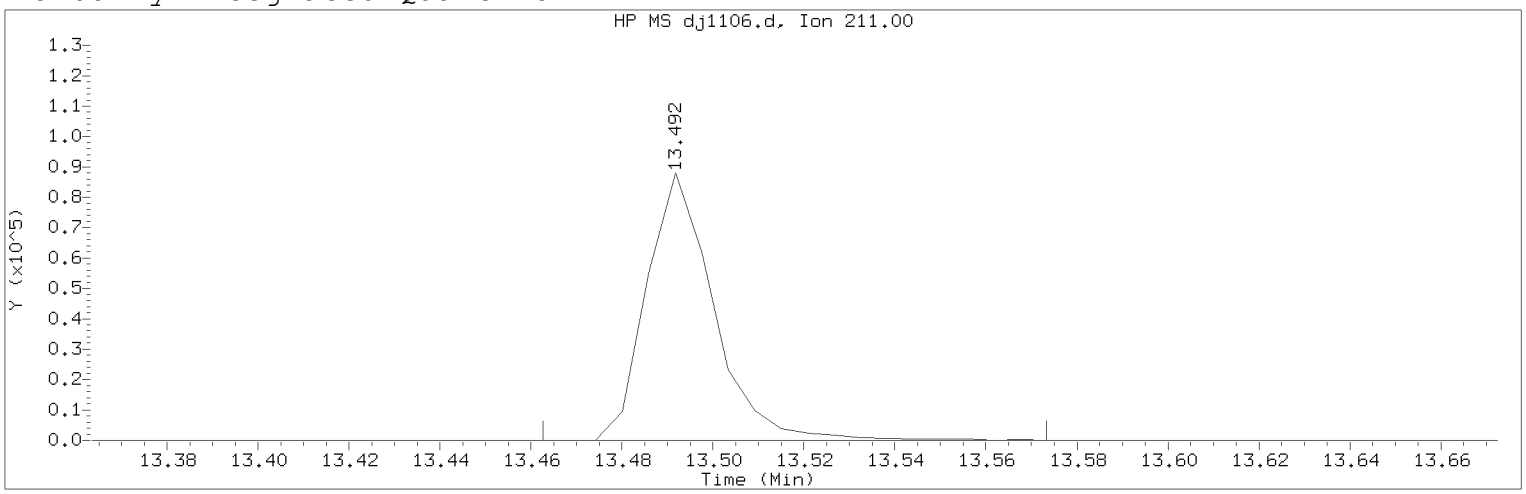
Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1685		
Retention Time (minutes)	: 11.708		
Quant Ion	: 184.00		
Area	: 86559		
On-column Amount (ng/ul)	: 8.0466		
Integration start scan	: 1681	Integration stop scan:	1697
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

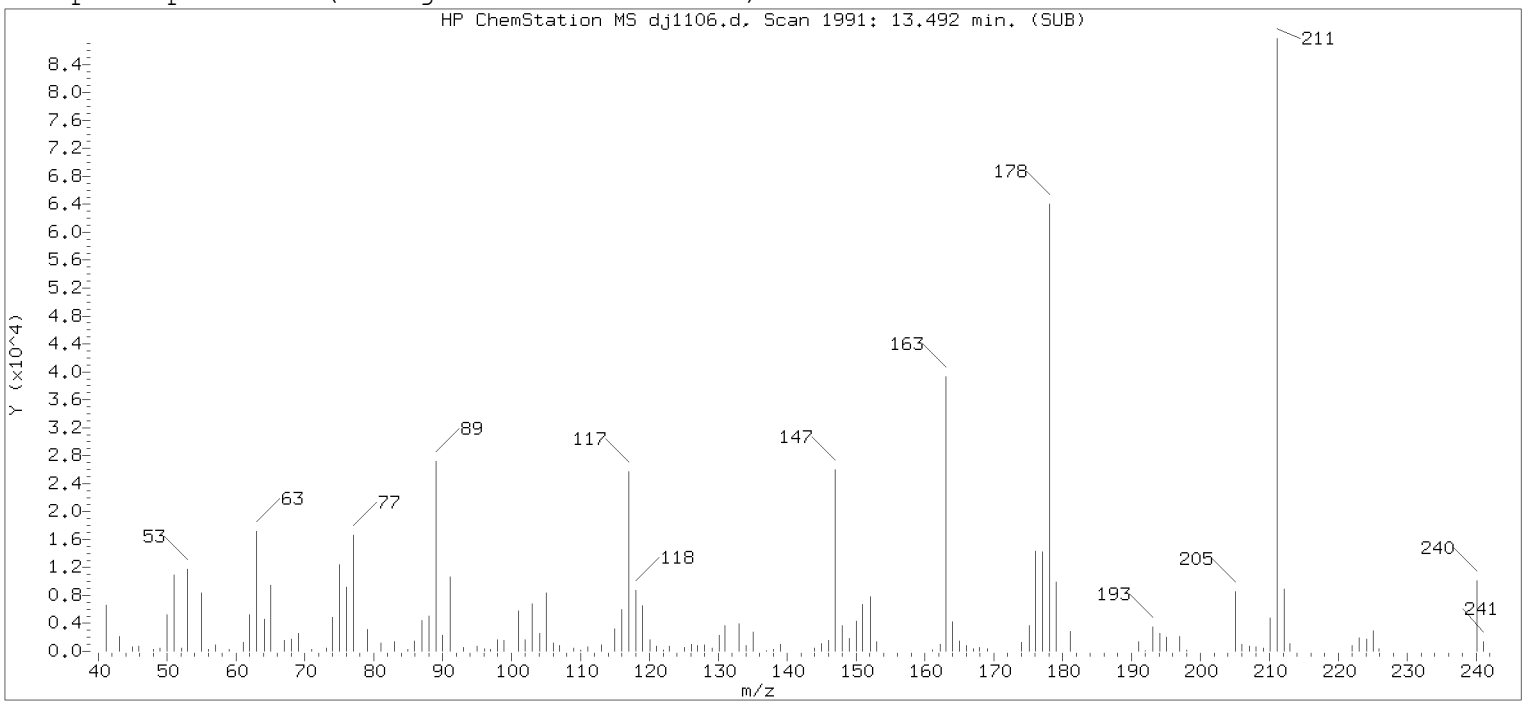
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 1991
Retention Time (minutes) : 13.492
Quant Ion : 211.00
Area (flag) : 90250M
On-Column Amount (ng/ul) : 3.2900
Integration start scan : 1985 Integration stop scan: 2004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

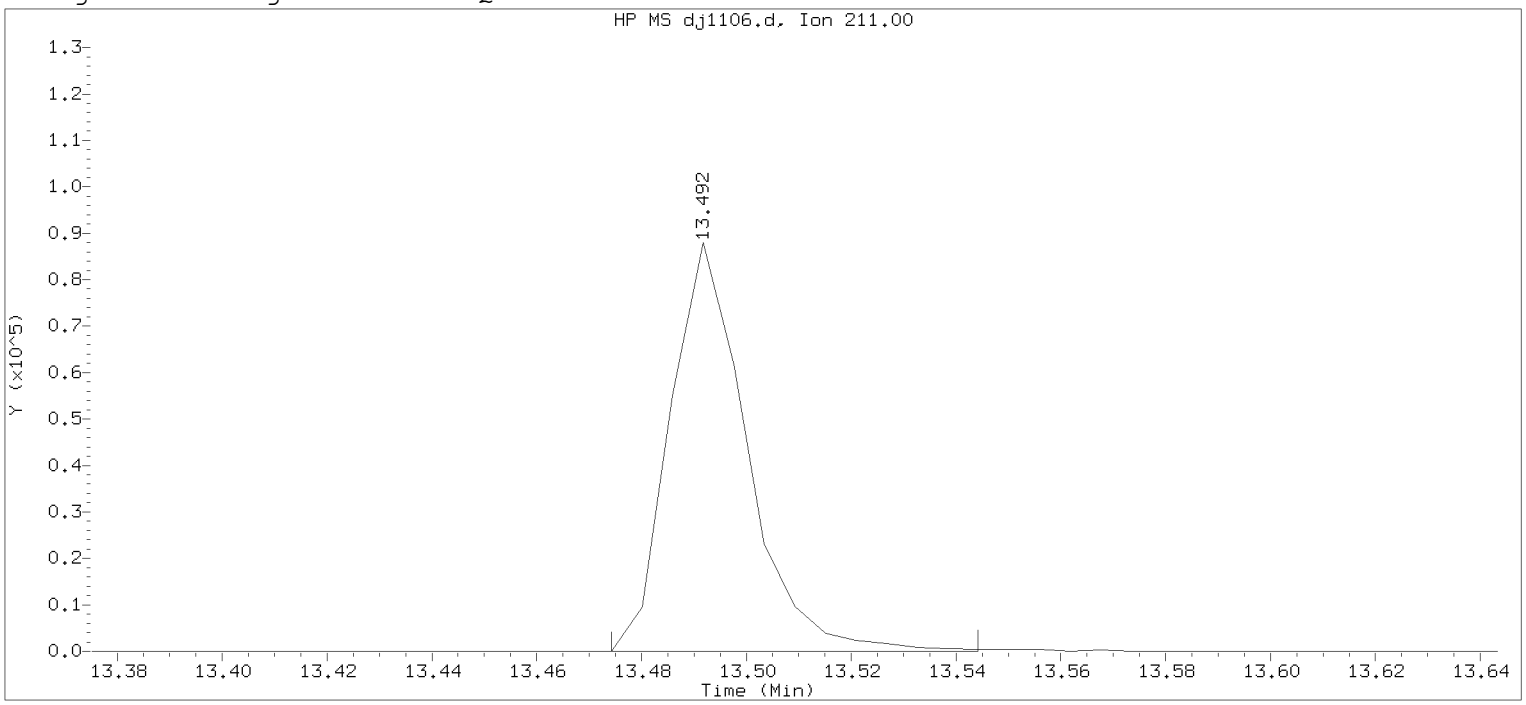
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



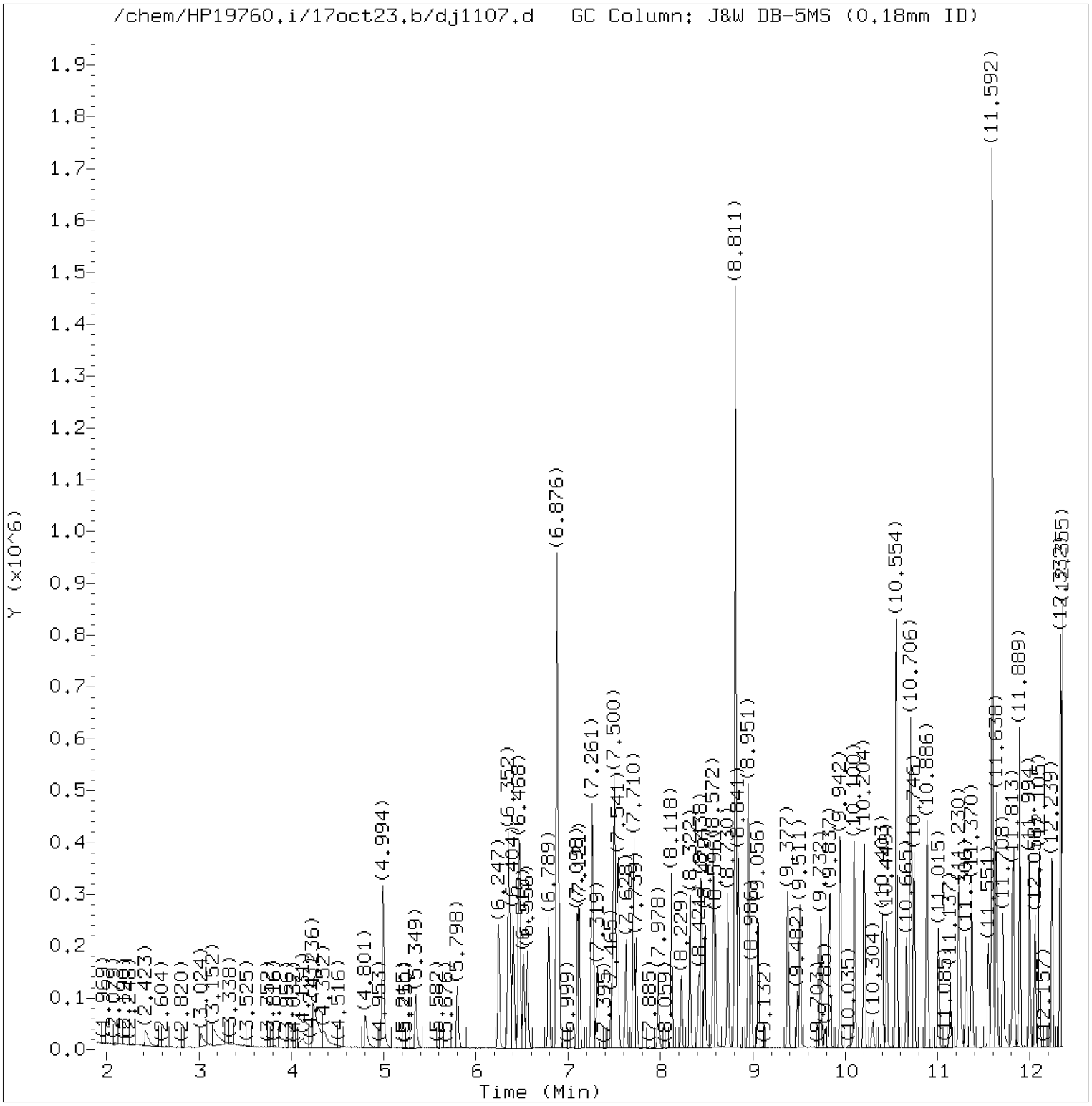
Data File: /chem/HP19760.i/17oct23.b/dj1106.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 14:44 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:17
Date, time and analyst ID of latest file update: 23-Oct-2017 15:17 em10340

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 1991		
Retention Time (minutes)	: 13.492		
Quant Ion	: 211.00		
Area	: 89743		
On-column Amount (ng/ul)	: 4.2124		
Integration start scan	: 1987	Integration stop scan:	1999
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

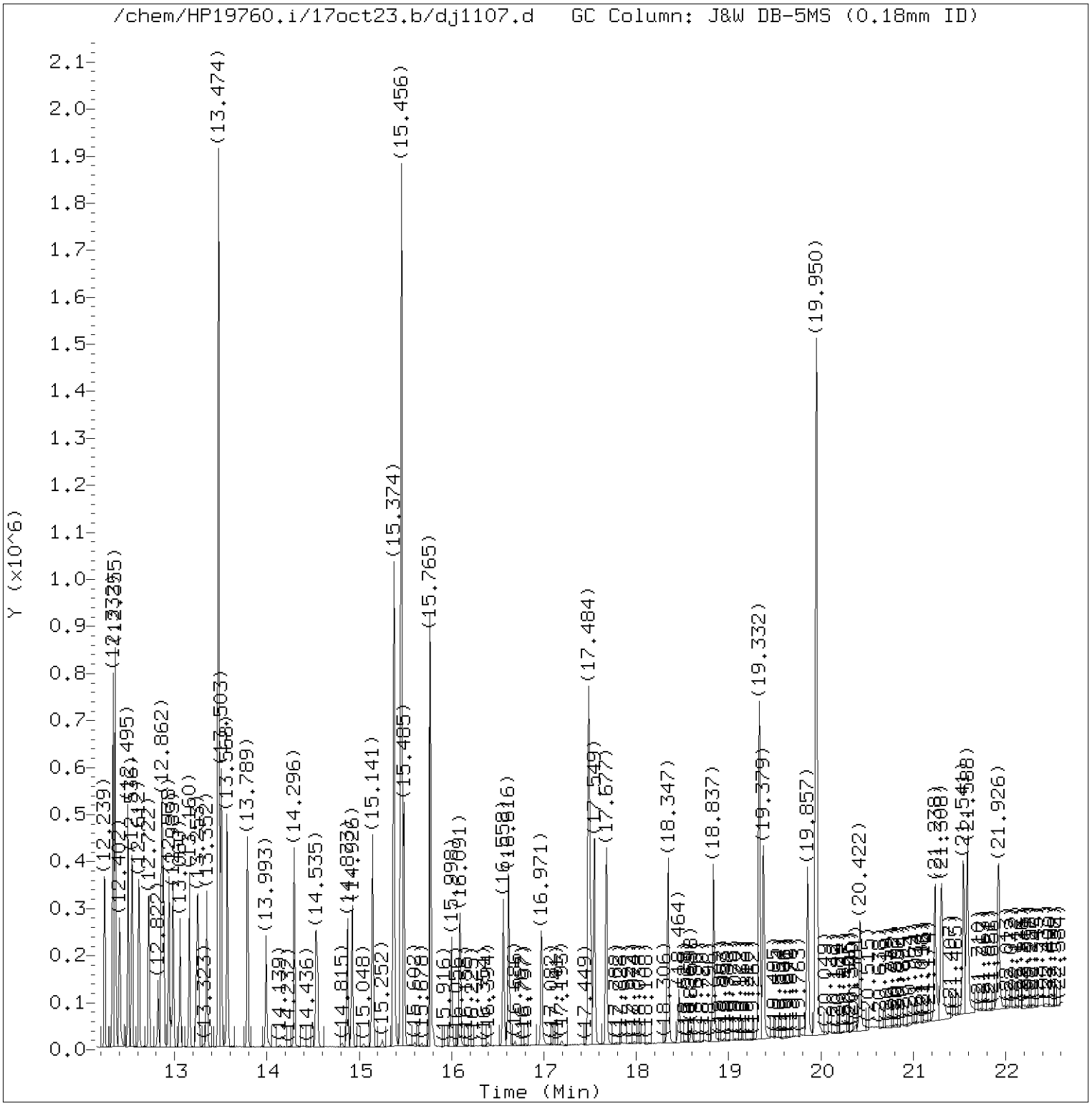
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.423	88	30466	1.135
4) N-Nitrosodimethylamine	(1)	3.024	74	49419M	1.168
5) Pyridine	(1)	3.152	79	83747M	1.228
7) 2-Picoline	(1)	4.242	93	81766	1.127
8) N-Nitrosomethylethylamine	(1)	4.358	88	37078	1.203
9) Methyl methanesulfonate	(1)	4.807	80	39075	1.189
11)$2-Fluorophenol	(1)	4.994	112	142777	2.370
13) N-Nitrosodiethylamine	(1)	5.349	102	34380	1.178
42) Total Cresols	(1)			139424	2.332
15) Ethyl methanesulfonate	(1)	5.798	109	36288	1.195
16) Benzaldehyde	(1)	6.247	77	75337	1.350
17)$Phenol-d6	(1)	6.352	99	187243	2.376
18) Phenol	(1)	6.369	94	100046	1.125
19) Aniline	(1)	6.404	93	126148	1.217
20) a-methylstyrene	(1)	6.474	118	79136	1.244
22) bis(2-Chloroethyl)ether	(1)	6.515	93	81467	1.220
23) 2-Chlorophenol	(1)	6.562	128	72331	1.213
24) 1,3-Dichlorobenzene	(1)	6.789	146	77684	1.197
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	198784	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	79484	1.204
27) Benzyl alcohol	(1)	7.098	108	48984	1.224
28) 1,2-Dichlorobenzene	(1)	7.121	146	76160	1.218
30) Indene	(1)	7.255	115	144736	1.245
31) 2-Methylphenol	(1)	7.267	108	68008	1.205
34) bis(2-Chloroisopropyl)ether	(1)	7.319	45	104778	1.210
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.319	45	104778	1.210
97) Isosafrole	(3)			48384	1.163
35) N-Nitrosopyrrolidine	(1)	7.465	100	36173	1.166
36) Acetophenone	(1)	7.488	105	119456	1.278
37) 4-Methylphenol	(1)	7.506	108	71416	1.132
38) N-Nitroso-di-n-propylamine	(1)	7.506	70	61273	1.201
39) N-Nitrosomorpholine	(1)	7.529	56	43754	1.145
40) o-Toluidine	(1)	7.541	106	122474	1.202
43) Hexachloroethane	(1)	7.628	117	30751	1.156
44)$Nitrobenzene-d5	(2)	7.710	82	177010	2.404
45) Nitrobenzene	(2)	7.739	77	90567	1.224
48) N-Nitrosopiperidine	(2)	7.978	114	35225	1.177
120) 2,4_2,6-Dinitrotoluenes	(3)			65807	2.267
50) Isophorone	(2)	8.118	82	151116	1.174
51) 2-Nitrophenol	(2)	8.229	139	30031	1.093

M = Compound was manually integrated.
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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.322	107	76505	1.196
56) Benzoic acid	(2)	8.421	105	94136M	2.156
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	33999	1.186
55) bis(2-Chloroethoxy)methane	(2)	8.479	93	96538	1.205
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	115699	1.241
60) 2,4-Dichlorophenol	(2)	8.596	162	56116	1.187
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	65791	1.197
146) Diallate trans/cis	(4)			68102	1.182
65)*Naphthalene-d8	(2)	8.811	136	762387	5.000
66) Naphthalene	(2)	8.841	128	211066	1.225
67) 4-Chloroaniline	(2)	8.951	127	85172	1.201
68) 2,6-Dichlorophenol	(2)	8.951	162	54120	1.164
69) Hexachloropropene	(2)	8.986	213	30259	1.133
71) Hexachlorobutadiene	(2)	9.056	225	37729	1.226
75) Quinoline	(2)	9.377	129	127665	1.218
76) Caprolactam	(2)	9.482	113	18378	1.185
77) N-Nitrosodi-n-butylamine	(2)	9.511	84	62995	1.122
80) 4-Chloro-3-methylphenol	(2)	9.732	107	61838	1.165
82) Safrole	(2)	9.837	162	50998	1.157
83) 2-Methylnaphthalene	(2)	9.942	142	136417	1.193
84) 1-Methylnaphthalene	(2)	10.100	142	124739	1.205
85) Hexachlorocyclopentadiene	(3)	10.199	237	27695	1.066
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	66394	1.201
88) cis-Isosafrole	(3)	10.304	162	9361	0.207
90) 2,4,6-Trichlorophenol	(3)	10.403	196	38842	1.166
92) 2,4,5-Trichlorophenol	(3)	10.449	196	41844	1.191
93)$2-Fluorobiphenyl	(3)	10.554	172	301030	2.433
94) trans-Isosafrole	(3)	10.665	162	39023	0.956
95) 1,1'-Biphenyl	(3)	10.706	154	174155	1.281
96) 2-Chloronaphthalene	(3)	10.717	162	126799	1.149
98) 1-Chloronaphthalene	(3)	10.746	162	128077	1.322
99) Diphenyl ether	(3)	10.886	170	87138	1.197
100) 2-Nitroaniline	(3)	10.898	138	34194	1.108
104) 1,4-Naphthoquinone	(3)	11.015	158	47909	1.113
105) 1,4-Dinitrobenzene	(3)	11.137	168	15999	1.009
106) Dimethylphthalate	(3)	11.230	163	145663	1.239
107) 1,3-Dinitrobenzene	(3)	11.248	168	18249	1.036
108) 2,6-Dinitrotoluene	(3)	11.306	165	27683	1.134
109) Acenaphthylene	(3)	11.376	152	174351	1.186
112) 3-Nitroaniline	(3)	11.551	138	30952	1.115

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.592	164	408601	5.000
114) Acenaphthene	(3)	11.638	153	135473	1.216
115) 2,4-Dinitrophenol	(3)	11.708	184	34883M	2.496
116) 4-Nitrophenol	(3)	11.813	109	42874	2.015
117) Pentachlorobenzene	(3)	11.831	250	56110	1.233
119) Dibenzofuran	(3)	11.889	168	182026	1.253
118) 2,4-Dinitrotoluene	(3)	11.895	165	38124	1.090
121) 1-Naphthylamine	(3)	11.994	143	125060	1.106
122) 2,3,4,6-Tetrachlorophenol	(3)	12.058	232	30949	1.126
123) 2-Naphthylamine	(3)	12.105	143	129076	1.172
124) Diethylphthalate	(3)	12.244	149	135641	1.169
126) Fluorene	(3)	12.332	166	140421	1.202
125) Thionazin	(3)	12.338	107	26990	1.170
128) 5-Nitro-o-toluidine	(3)	12.355	152	35394	1.099
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	69494	1.246
129) 4-Nitroaniline	(3)	12.361	138	32413	1.149
130) 4,6-Dinitro-2-methylphenol	(4)	12.402	198	33533	1.729
132) NDPA as diphenylamine	(4)	12.495	169	115230	1.209
131) N-Nitrosodiphenylamine	(4)	12.495	169	115230	1.209
134) 1,2-Diphenylhydrazine	(4)	12.536	77	167050	1.228
135)$2,4,6-Tribromophenol	(3)	12.617	330	36130	2.323
137) Tetraethyldithiopyrophosphate	(4)	12.717	97	26133	1.155
139) 1,3,5-Trinitrobenzene	(4)	12.822	213	10050	0.789
140) Diallate (peak 1)	(4)	12.856	86	58357	0.982
141) Phorate	(4)	12.862	75	101559	1.187
142) Phenacetin	(4)	12.880	108	73549	1.129
143) 4-Bromophenyl-phenylether	(4)	12.938	248	40553	1.215
144) Diallate (peak 2)	(4)	12.961	86	9745	0.200
145) Hexachlorobenzene	(4)	12.985	284	40628	1.187
147) Dimethoate	(4)	13.060	87	58542	1.066
148) Atrazine	(4)	13.160	200	40665	1.247
149) Pentachlorophenol	(4)	13.235	266	21026	0.972
151) Pentachloronitrobenzene	(4)	13.253	237	16063	1.092
150) 4-Aminobiphenyl	(4)	13.259	169	35195	1.169
152) Pronamide	(4)	13.352	173	61774	1.132
153)*Phenanthrene-d10	(4)	13.474	188	767509	5.000
154) Dinoseb	(4)	13.492	211	22790	0.803
155) Phenanthrene	(4)	13.503	178	214012	1.226
157) Anthracene	(4)	13.568	178	207647	1.203
163) Carbazole	(4)	13.789	167	190465	1.177

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

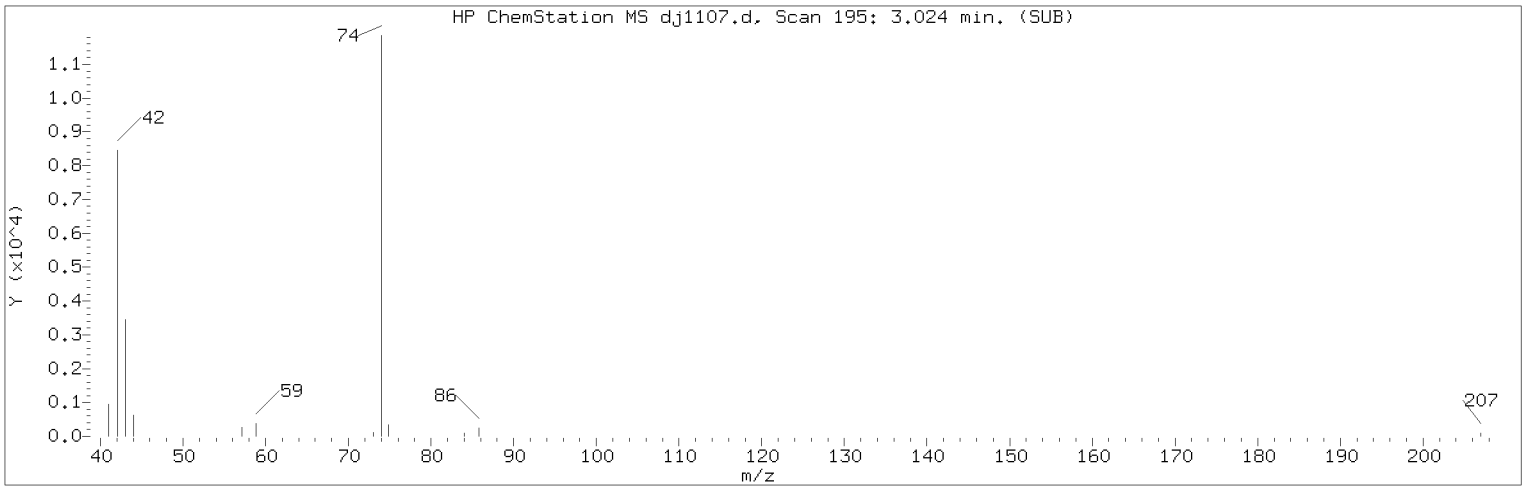
Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.993	109	41282	0.978
165) Di-n-butylphthalate	(4)	14.296	149	224647	1.107
167) Parathion	(4)	14.529	109	25471	0.933
168) 4-Nitroquinoline-1-oxide	(4)	14.547	190	8627	0.544
169) Octachlorostyrene	(4)	14.873	308	17181	1.245
171) Isodrin	(4)	14.926	193	25762	1.232
222) Total PAHs	(6)			3586542	21.895
173) Fluoranthene	(4)	15.141	202	230102	1.154
174) Benzidine	(5)	15.374	184	464122	3.420
175)*Pyrene-d10	(5)	15.456	212	909338	5.000
177) Pyrene	(5)	15.485	202	255815	1.220
179)$Terphenyl-d14	(5)	15.765	244	335868	2.456
182) p-Dimethylaminoazobenzene	(5)	15.998	225	28643	1.042
185) Chlorobenzilate	(5)	16.091	139	65723	1.081
187) 3,3'-Dimethylbenzidine	(5)	16.563	212	136100	1.052
188) Butylbenzylphthalate	(5)	16.616	149	100900	1.106
191) 2-Acetylaminofluorene	(5)	16.971	181	74420	0.917
193) 3,3'-Dichlorobenzidine	(5)	17.484	252	78171	1.079
195) Benzo(a)anthracene	(5)	17.484	228	229535	1.187
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.508	231	40757	1.086
196) Chrysene	(5)	17.549	228	227737	1.245
199) bis(2-Ethylhexyl)phthalate	(5)	17.677	149	146339	1.084
203) 6-Methylchrysene	(5)	18.347	242	148893	1.105
205) Di-n-octylphthalate	(6)	18.837	149	242726	1.038
206) Benzo(b)fluoranthene	(6)	19.332	252	220594	1.162
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.332	256	87312	1.105
208) Benzo(k)fluoranthene	(6)	19.379	252	219496	1.185
211) Benzo(a)pyrene	(6)	19.857	252	201142	1.159
213)*Perylene-d12	(6)	19.950	264	785491	5.000
215) 3-Methylcholanthrene	(6)	20.422	268	73309	1.135
217) Dibenz(a,h)acridine	(6)	21.238	279	160609	1.096
218) Dibenz(a,j)acridine	(6)	21.308	279	170969	1.100
219) Indeno(1,2,3-cd)pyrene	(6)	21.547	276	243857	1.192
220) Dibenz(a,h)anthracene	(6)	21.588	278	206517	1.208
221) Benzo(g,h,i)perylene	(6)	21.926	276	207621	1.210

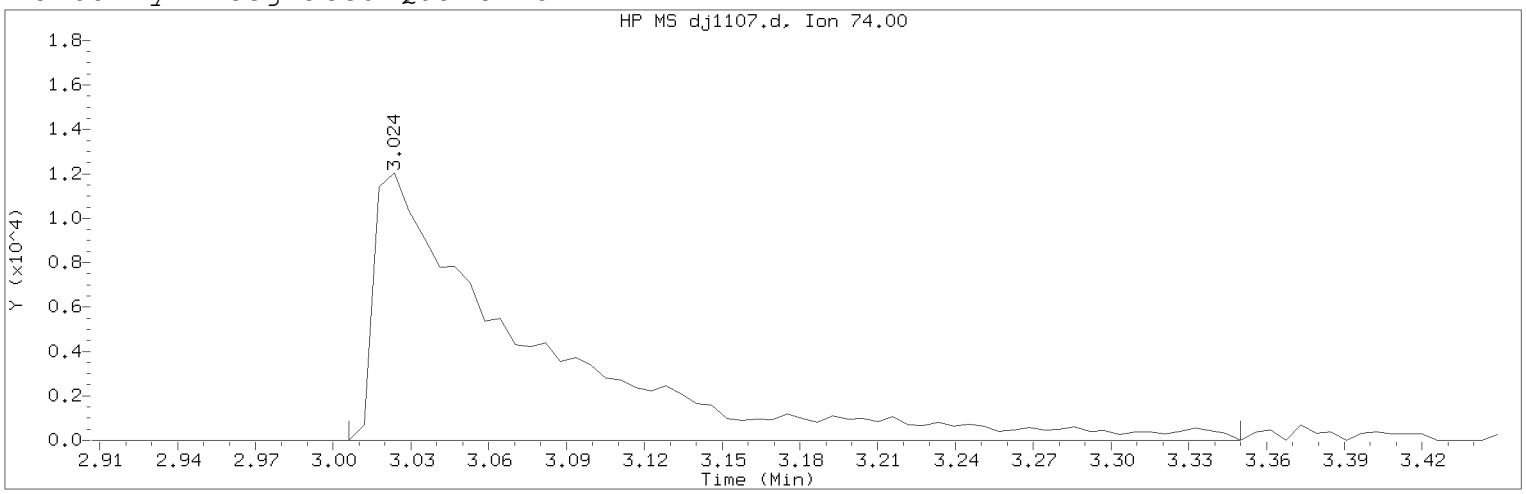
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

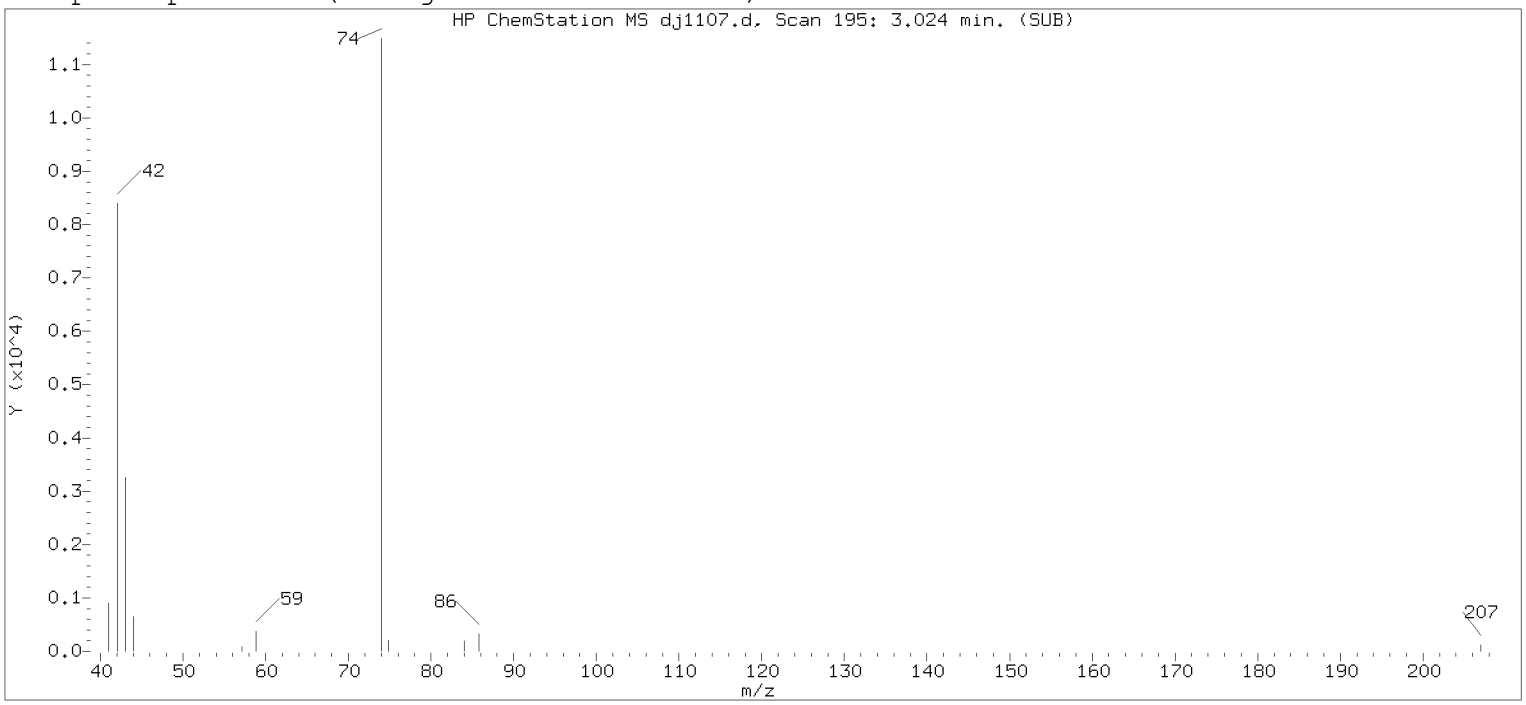
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 195
Retention Time (minutes) : 3.024
Quant Ion : 74.00
Area (flag) : 49419M
On-Column Amount (ng/ul) : 1.1683
Integration start scan : 191 Integration stop scan: 250
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

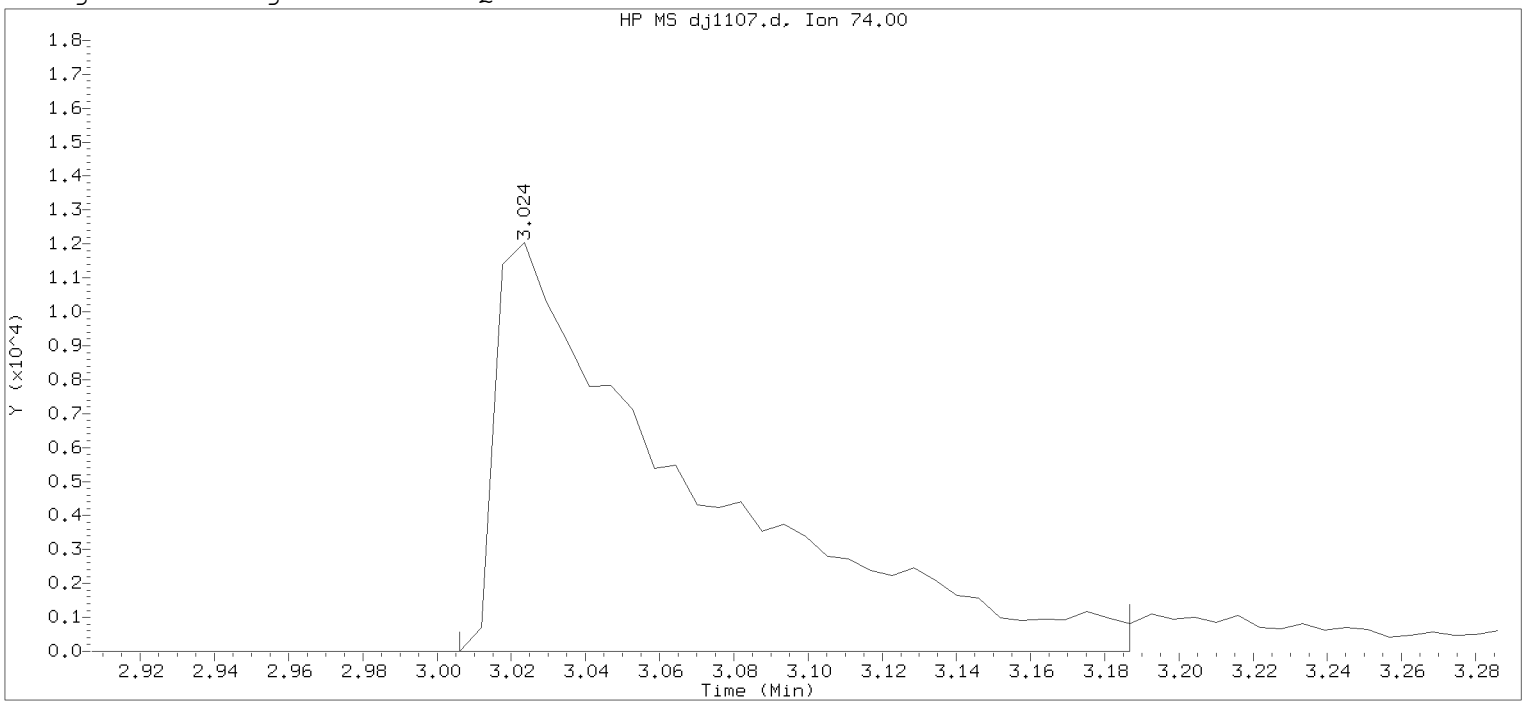
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

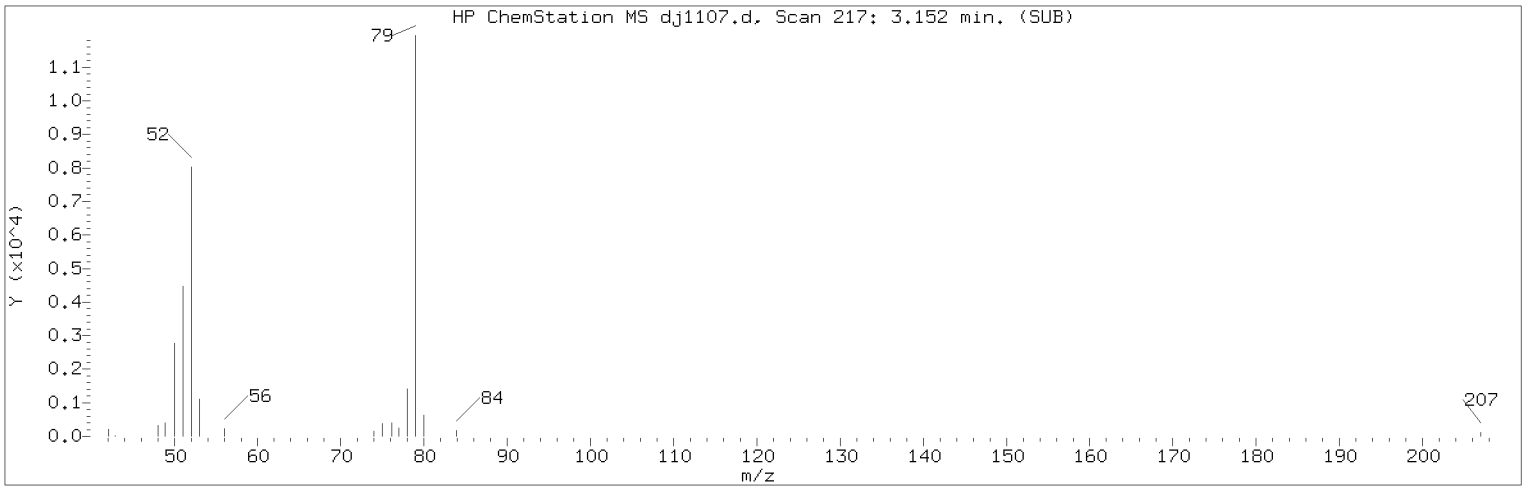
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:38
Date, time and analyst ID of latest file update: 23-Oct-2017 15:38 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

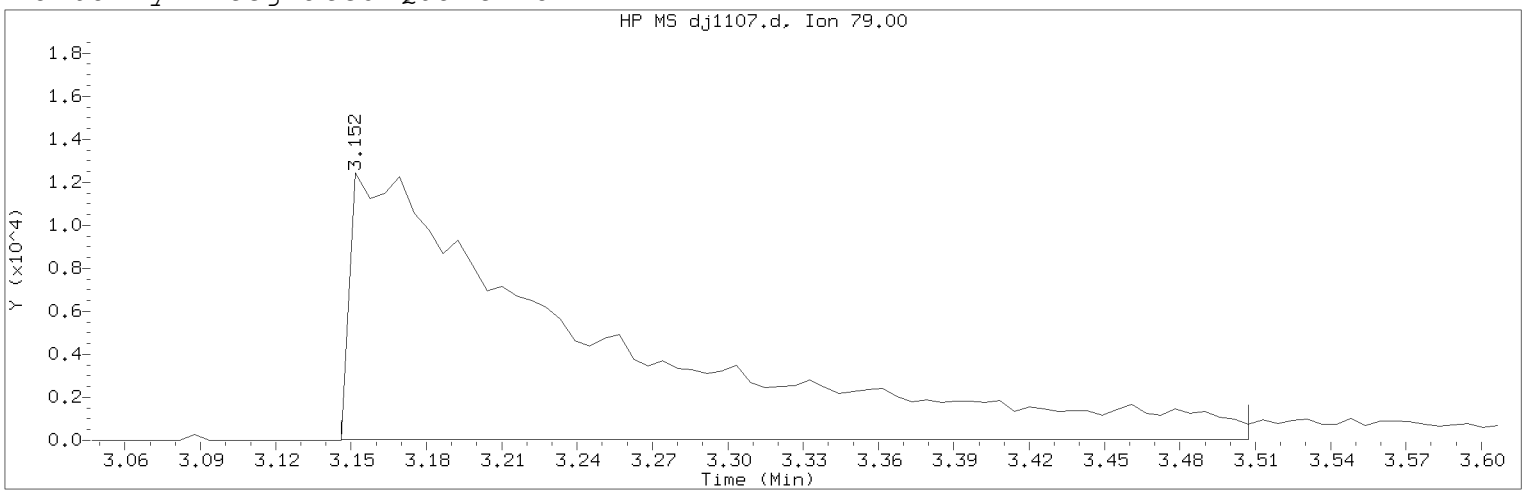
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 195		
Retention Time (minutes)	: 3.024		
Quant Ion	: 74.00		
Area	: 43709		
On-column Amount (ng/ul)	: 1.0351		
Integration start scan	: 191	Integration stop scan:	222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

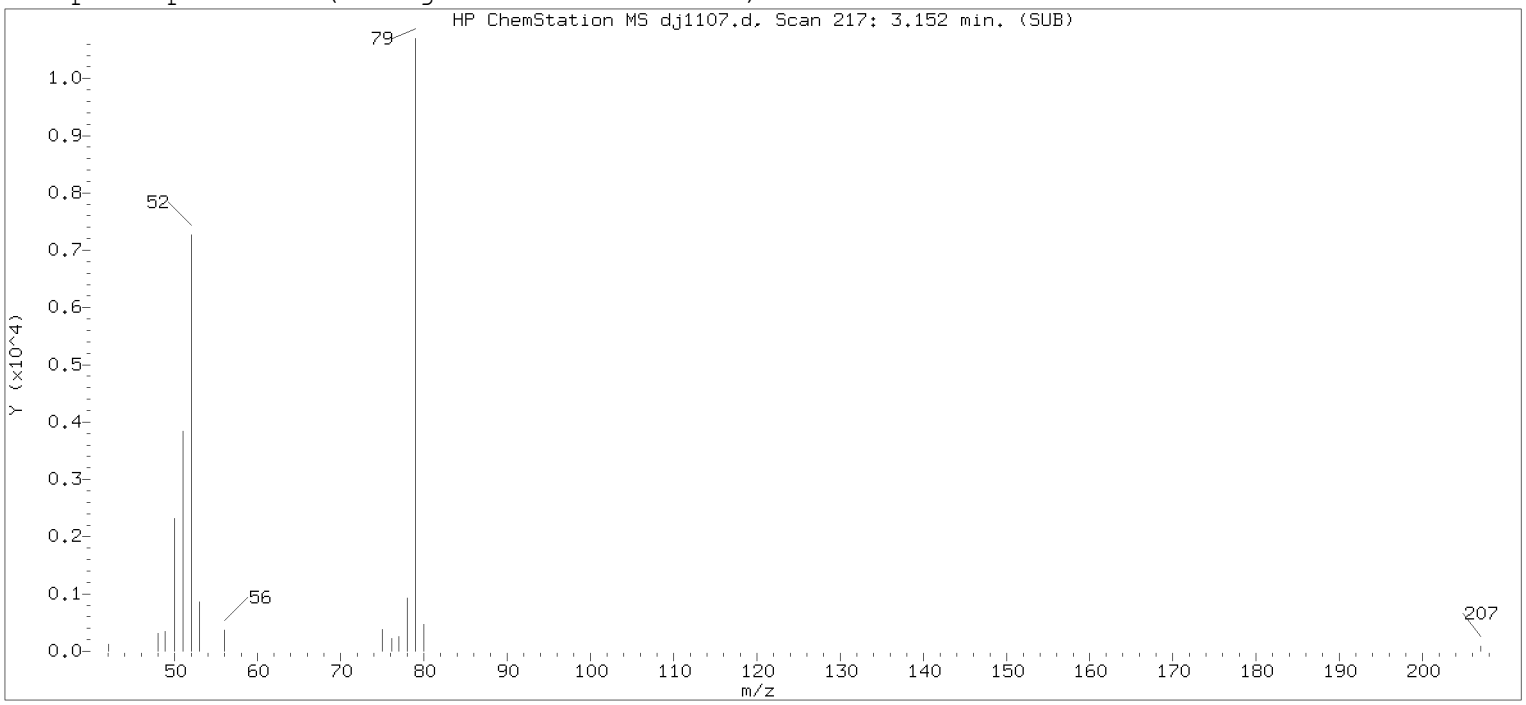
Compound Number : 5
Compound Name : Pyridine
Scan Number : 217
Retention Time (minutes) : 3.152
Quant Ion : 79.00
Area (flag) : 83747M
On-Column Amount (ng/ul) : 1.2285
Integration start scan : 215 Integration stop scan: 277
Y at integration start : 17 Y at integration end: 17

Reason for manual integration: improper integration

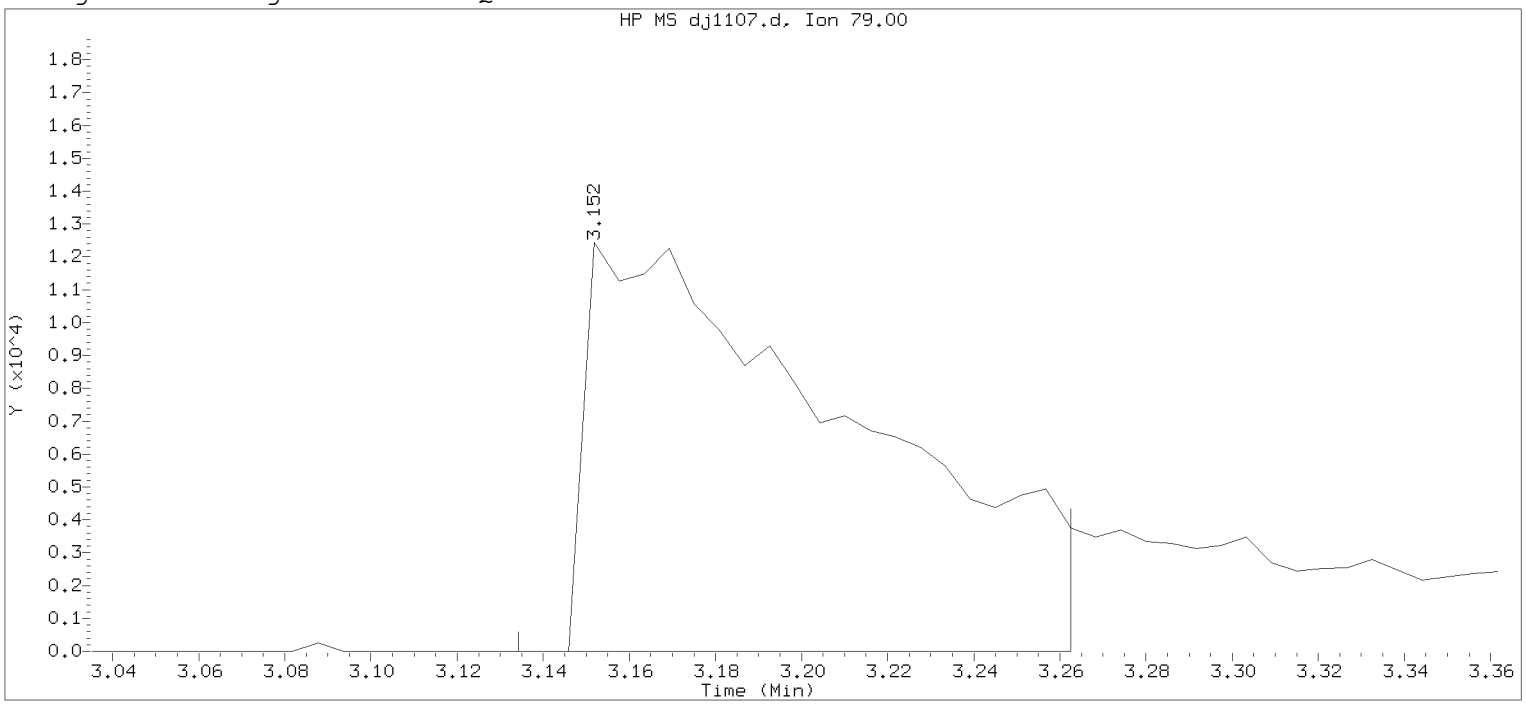
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

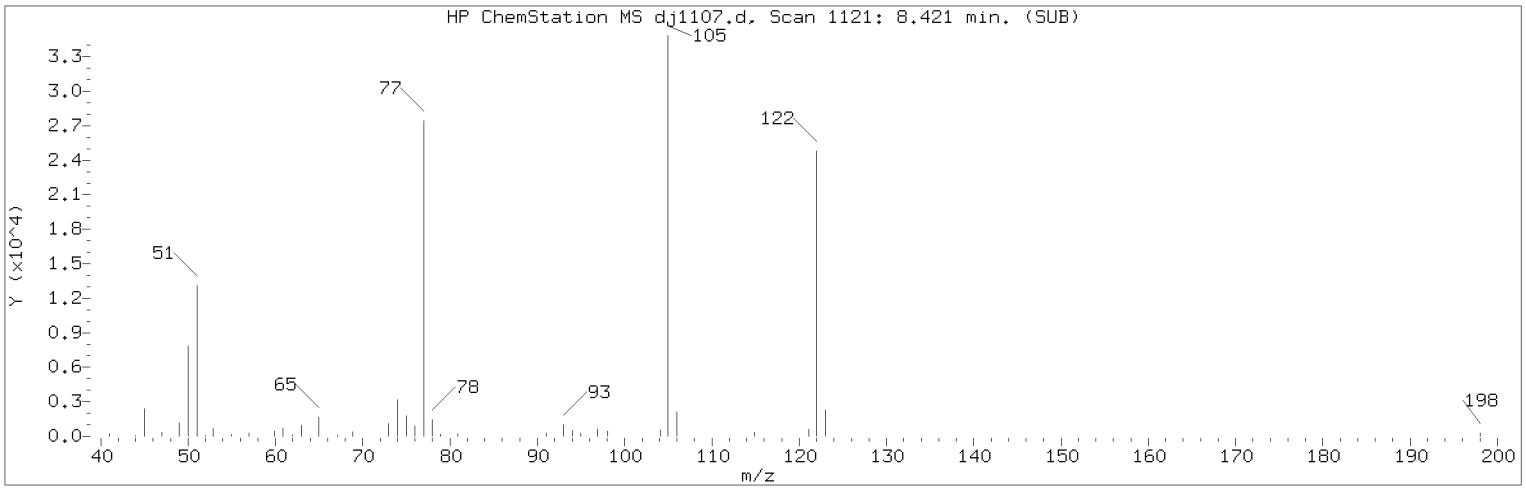
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:38
Date, time and analyst ID of latest file update: 23-Oct-2017 15:38 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

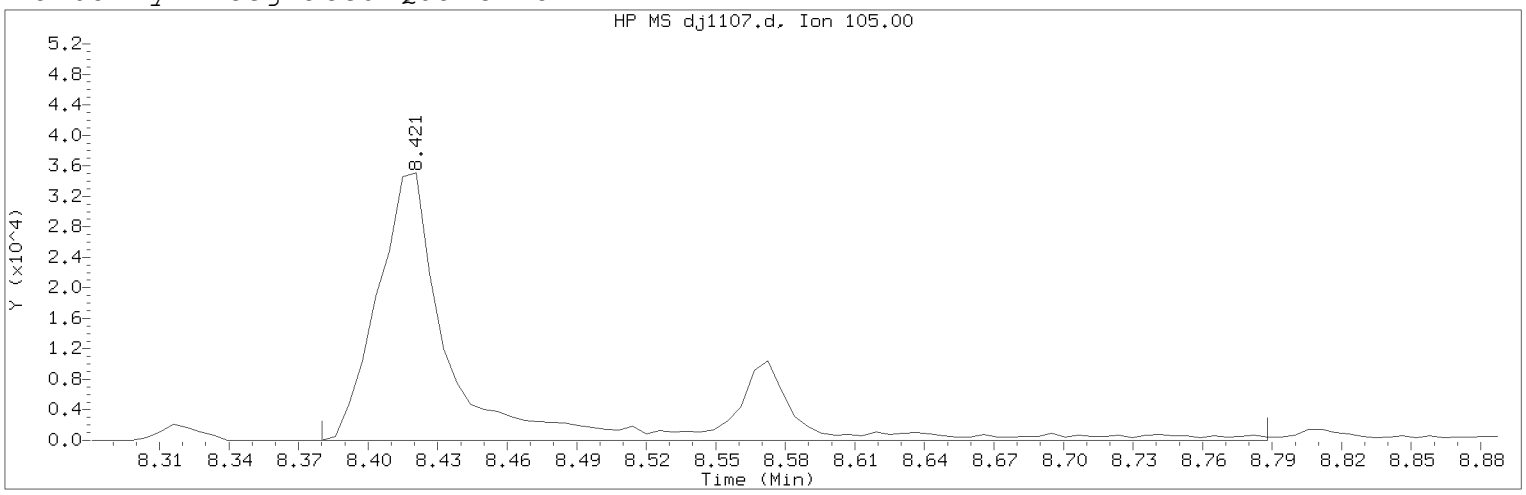
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 217		
Retention Time (minutes)	: 3.152		
Quant Ion	: 79.00		
Area	: 53757		
On-column Amount (ng/ul)	: 0.8302		
Integration start scan	: 213	Integration stop scan:	235
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used emonborne 10/23/17

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

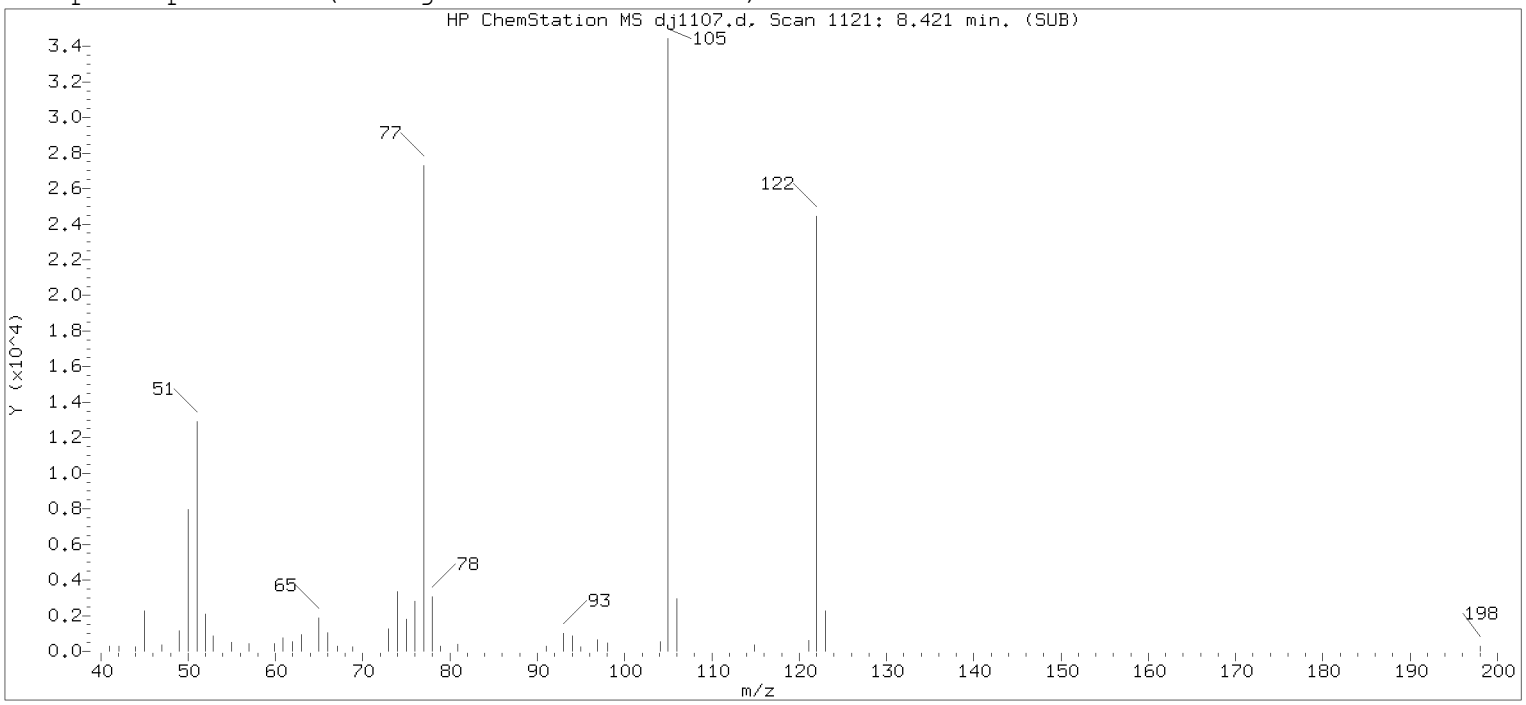
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1121
Retention Time (minutes) : 8.421
Quant Ion : 105.00
Area (flag) : 94136M
On-Column Amount (ng/ul) : 2.1557
Integration start scan : 1113 Integration stop scan: 1183
Y at integration start : 5 Y at integration end: 5

Reason for manual integration: improper integration

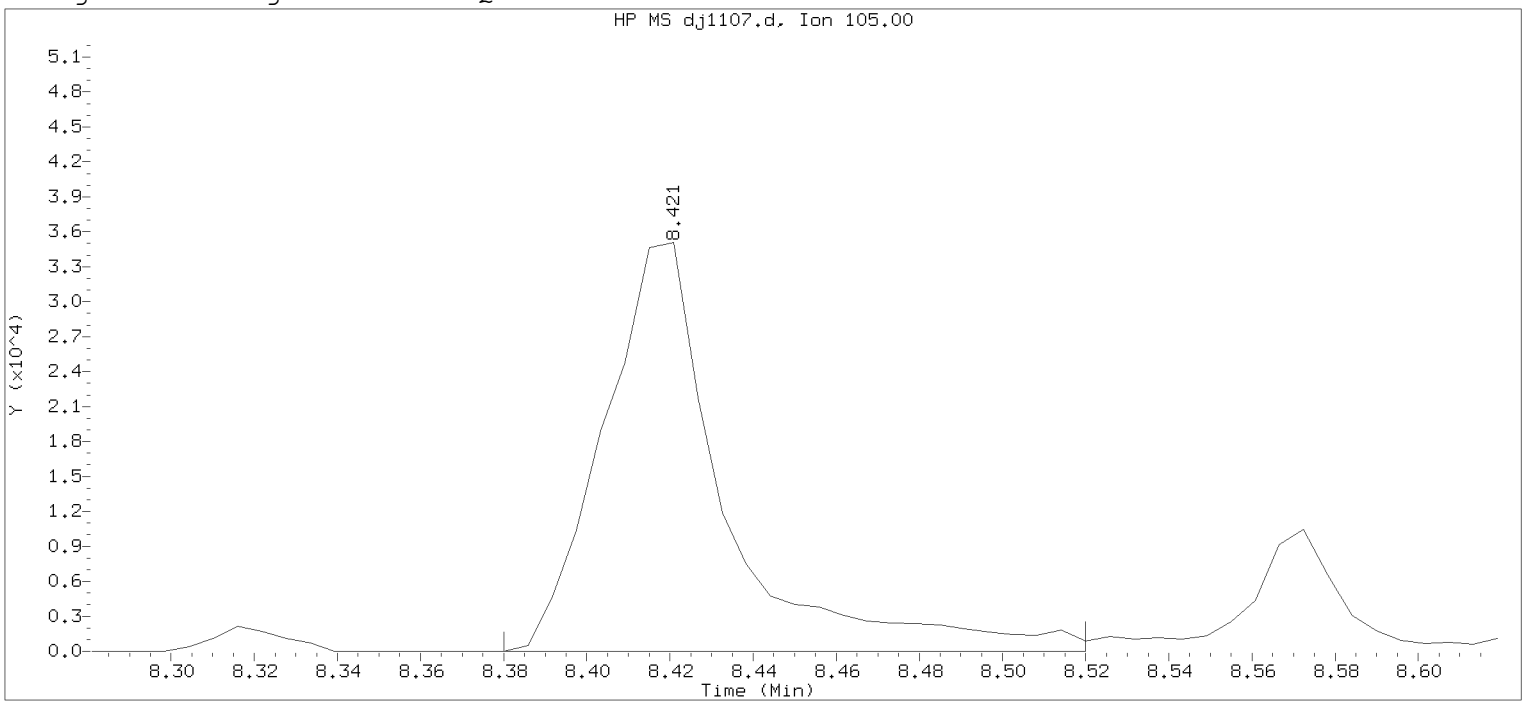
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

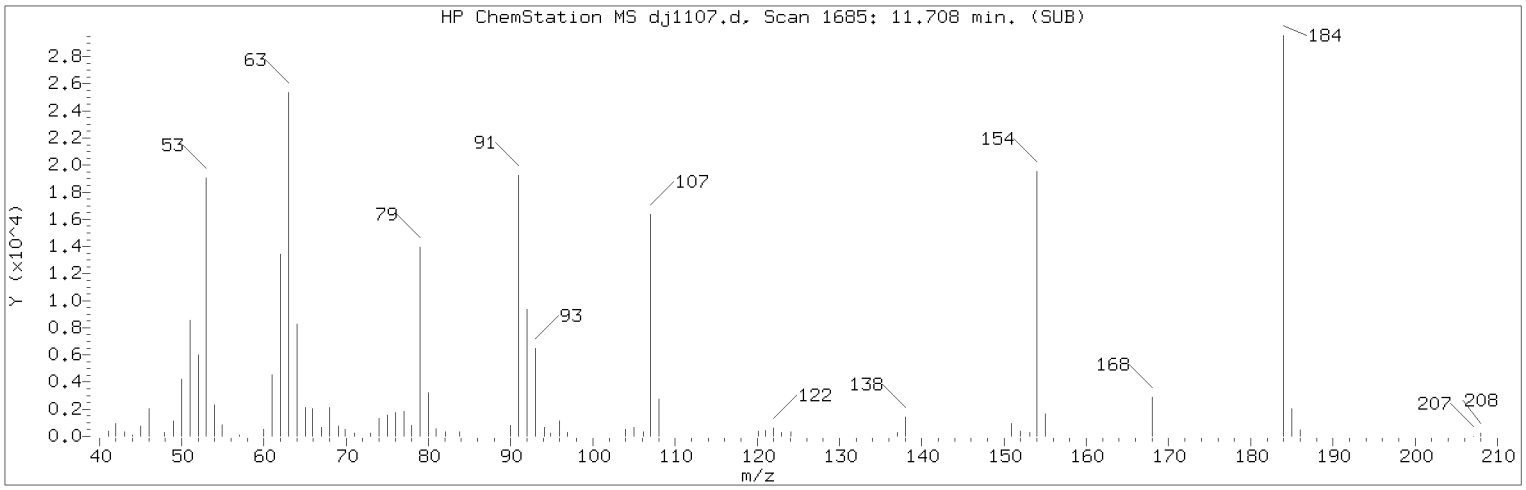
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:38
Date, time and analyst ID of latest file update: 23-Oct-2017 15:38 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

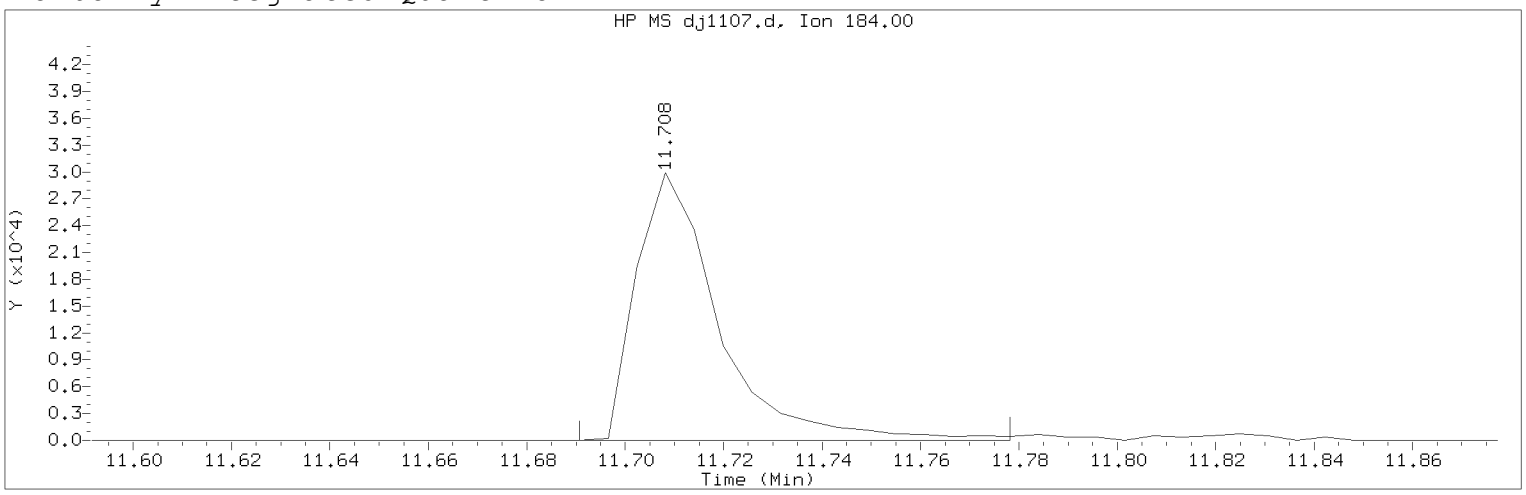
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1121		
Retention Time (minutes)	: 8.421		
Quant Ion	: 105.00		
Area	: 71389		
On-column Amount (ng/ul)	: 11.9452		
Integration start scan	: 1113	Integration stop scan:	1137
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

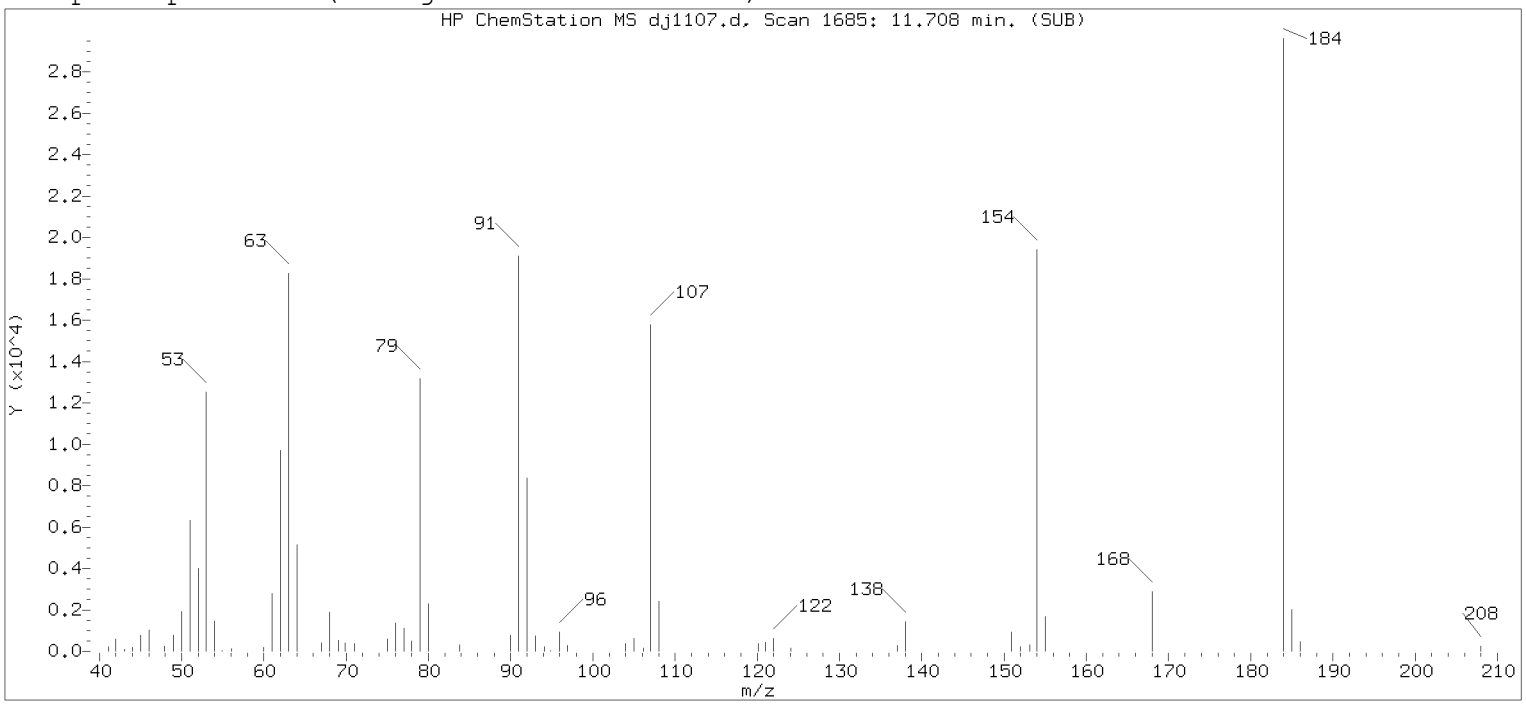
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1685
Retention Time (minutes) : 11.708
Quant Ion : 184.00
Area (flag) : 34883M
On-Column Amount (ng/ul) : 2.4961
Integration start scan : 1681 Integration stop scan: 1696
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

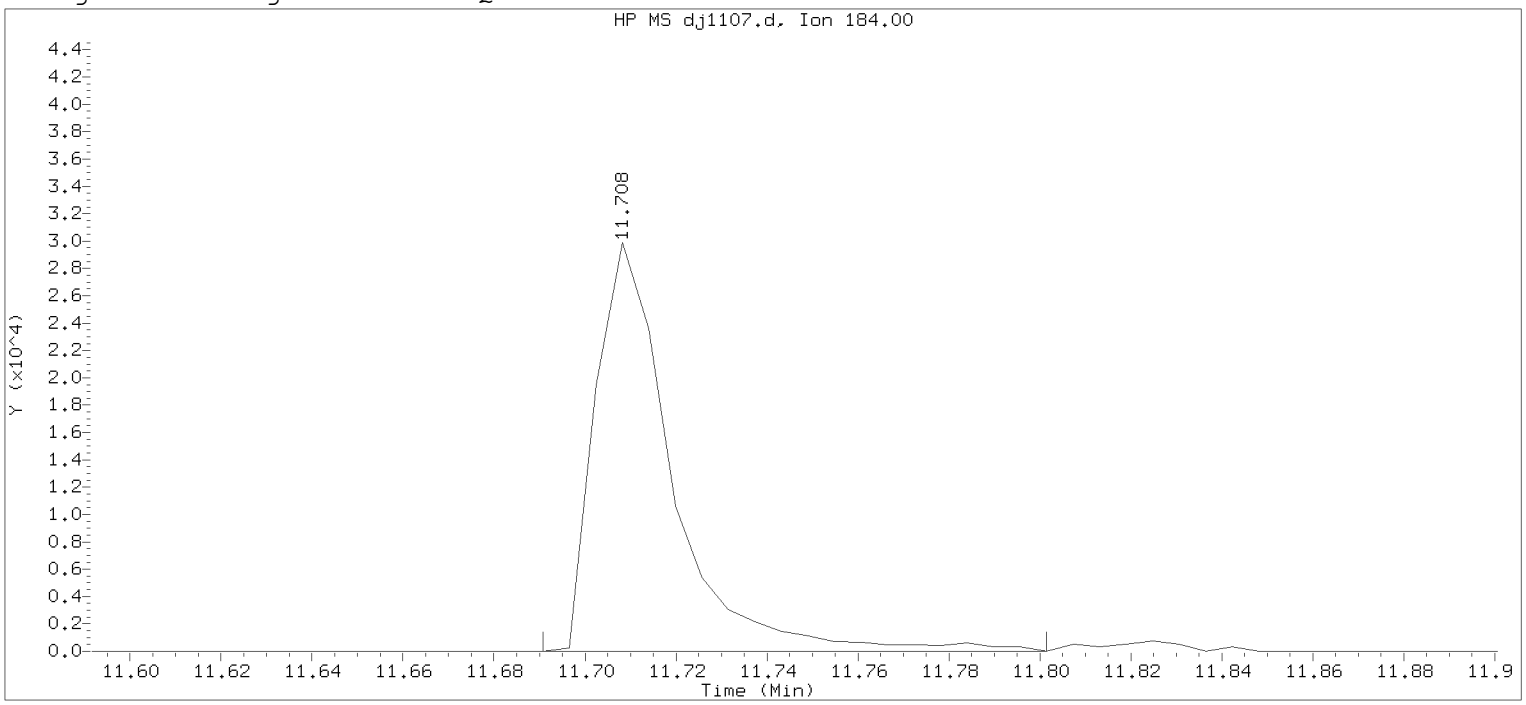
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



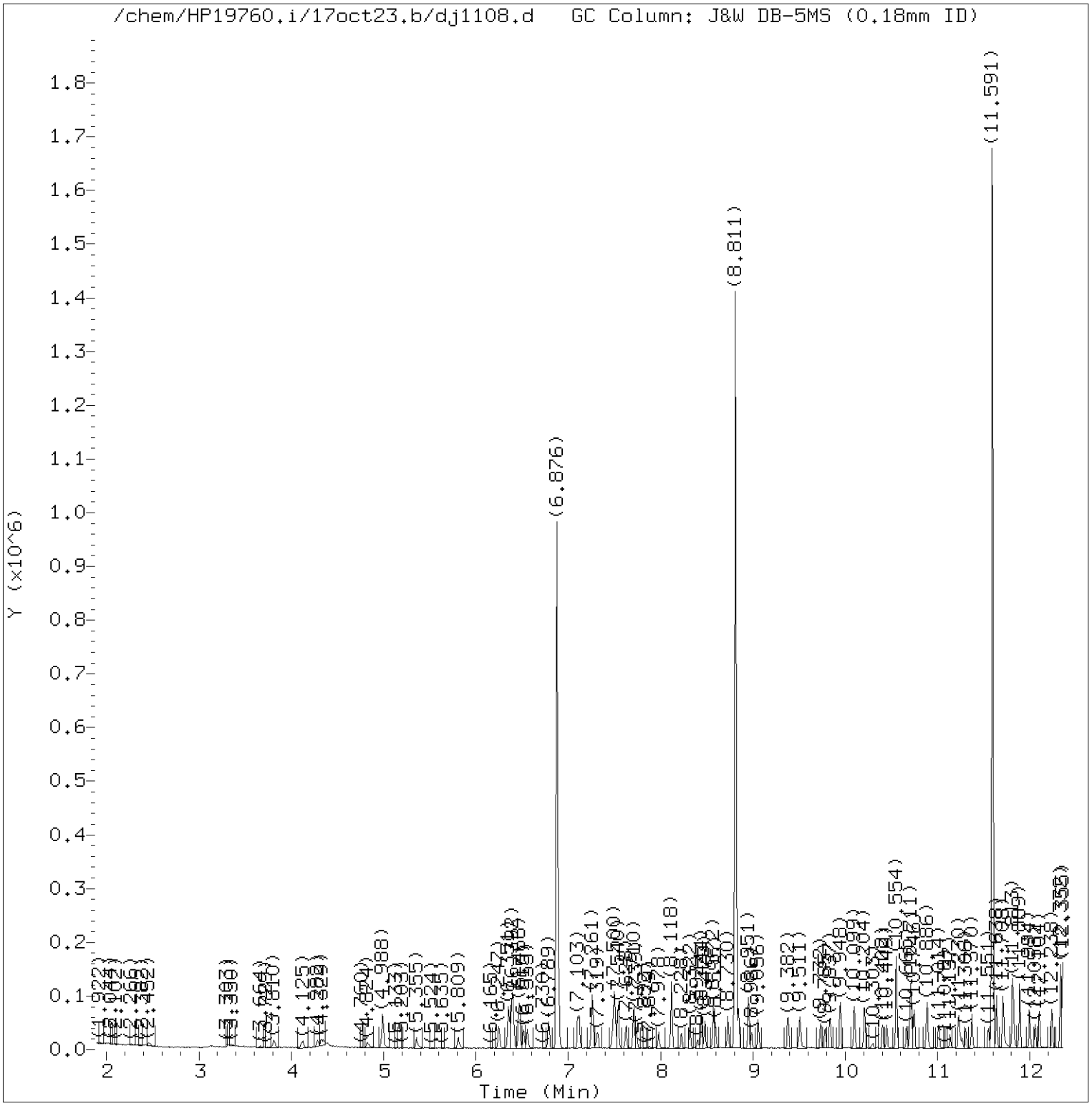
Data File: /chem/HP19760.i/17oct23.b/dj1107.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:12 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 15:38
Date, time and analyst ID of latest file update: 23-Oct-2017 15:38 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1685		
Retention Time (minutes)	: 11.708		
Quant Ion	: 184.00		
Area	: 35325		
On-column Amount (ng/ul)	: 5.1076		
Integration start scan	: 1681	Integration stop scan:	1700
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.



Total Ion Chromatogram (TIC)

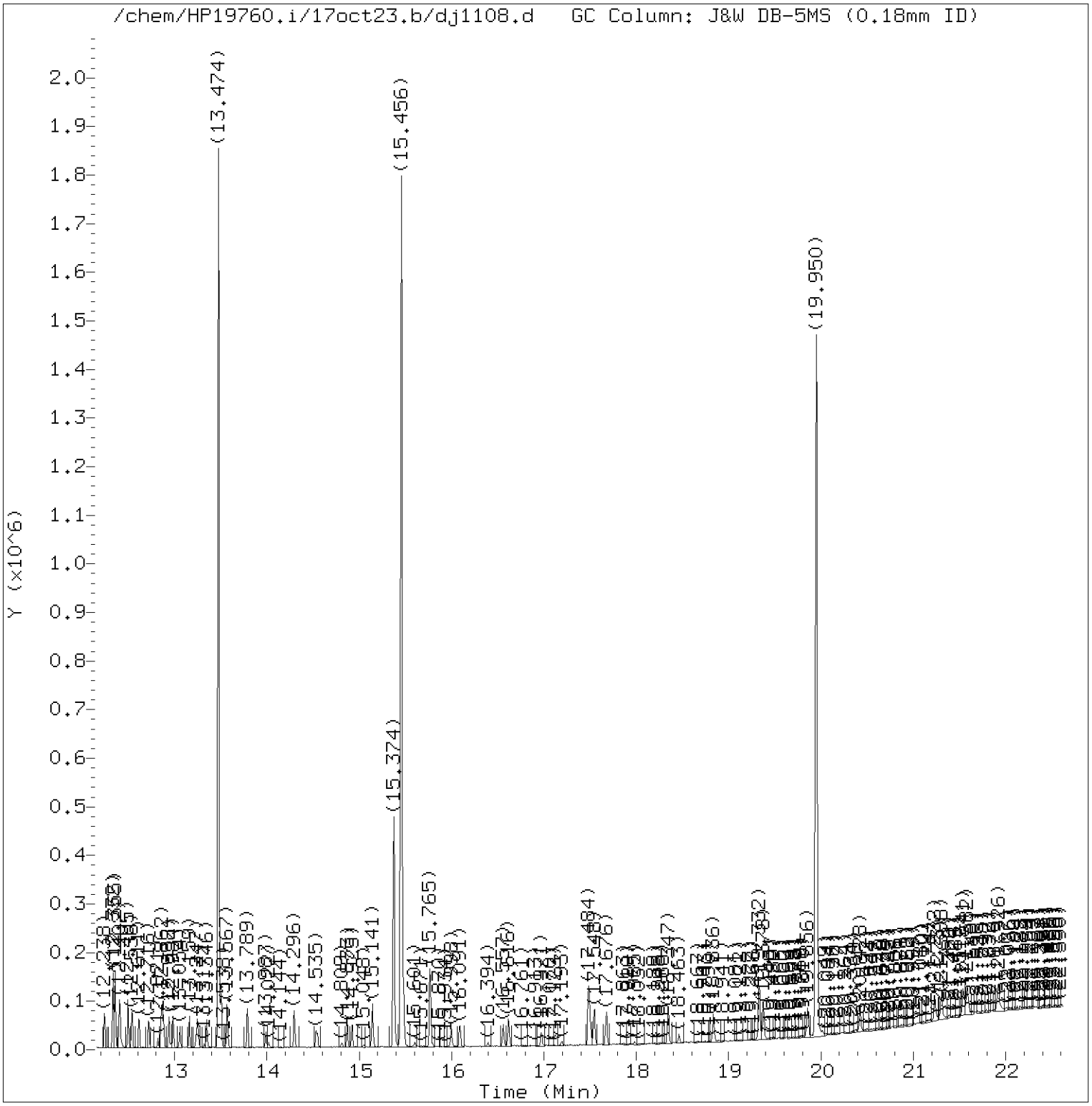
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.452	88	5635M	0.217
4) N-Nitrosodimethylamine	(1)	3.134	74	8832M	0.216
5) Pyridine	(1)	3.309	79	20990M	0.319
7) 2-Picoline	(1)	4.329	93	17978M	0.256
8) N-Nitrosomethylethylamine	(1)	4.381	88	6733M	0.226
9) Methyl methanesulfonate	(1)	4.824	80	7071	0.223
11)$2-Fluorophenol	(1)	4.988	112	27955	0.480
13) N-Nitrosodiethylamine	(1)	5.355	102	6556	0.233
42) Total Cresols	(1)			26893	0.466
15) Ethyl methanesulfonate	(1)	5.809	109	7012	0.239
16) Benzaldehyde	(1)	6.247	77	13019	0.241
17)$Phenol-d6	(1)	6.351	99	36270	0.476
18) Phenol	(1)	6.369	94	20439	0.238
19) Aniline	(1)	6.404	93	23867	0.238
20) a-methylstyrene	(1)	6.474	118	15672	0.255
22) bis(2-Chloroethyl)ether	(1)	6.515	93	16121	0.250
23) 2-Chlorophenol	(1)	6.555	128	13787	0.239
24) 1,3-Dichlorobenzene	(1)	6.789	146	15857	0.253
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	192116	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	16208	0.254
27) Benzyl alcohol	(1)	7.103	108	9470	0.245
28) 1,2-Dichlorobenzene	(1)	7.121	146	15259	0.253
30) Indene	(1)	7.255	115	29583	0.263
31) 2-Methylphenol	(1)	7.267	108	12783	0.234
34) bis(2-Chloroisopropyl)ether	(1)	7.325	45	21149	0.253
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.325	45	21149	0.253
97) Isosafrole	(3)			9162	0.228
35) N-Nitrosopyrrolidine	(1)	7.471	100	6586	0.220
36) Acetophenone	(1)	7.494	105	21506	0.238
37) 4-Methylphenol	(1)	7.506	108	14110	0.231
38) N-Nitroso-di-n-propylamine	(1)	7.506	70	11574	0.235
39) N-Nitrosomorpholine	(1)	7.540	56	9860	0.267
40) o-Toluidine	(1)	7.540	106	23600	0.240
43) Hexachloroethane	(1)	7.628	117	6403	0.249
44)$Nitrobenzene-d5	(2)	7.710	82	33569	0.467
45) Nitrobenzene	(2)	7.739	77	17056	0.236
48) N-Nitrosopiperidine	(2)	7.978	114	6630	0.227
120) 2,4_2,6-Dinitrotoluenes	(3)			10584	0.377
50) Isophorone	(2)	8.118	82	29278	0.233
51) 2-Nitrophenol	(2)	8.228	139	5458	0.204

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

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.322	107	13865	0.222
56) Benzoic acid	(2)	8.397	105	16896M	0.397
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	6608	0.236
55) bis(2-Chloroethoxy)methane	(2)	8.479	93	18437	0.236
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	24129	0.265
60) 2,4-Dichlorophenol	(2)	8.595	162	9632	0.209
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	13562	0.253
146) Diallate trans/cis	(4)			12192	0.227
65)*Naphthalene-d8	(2)	8.811	136	743768	5.000
66) Naphthalene	(2)	8.846	128	40693	0.242
67) 4-Chloroaniline	(2)	8.951	127	16097	0.233
68) 2,6-Dichlorophenol	(2)	8.951	162	10179	0.224
69) Hexachloropropene	(2)	8.986	213	5696	0.219
71) Hexachlorobutadiene	(2)	9.056	225	7001	0.233
75) Quinoline	(2)	9.382	129	24222	0.237
76) Caprolactam	(2)	9.499	113	3123	0.206
77) N-Nitrosodi-n-butylamine	(2)	9.511	84	12696	0.232
80) 4-Chloro-3-methylphenol	(2)	9.732	107	11130	0.215
82) Safrole	(2)	9.837	162	9153	0.213
83) 2-Methylnaphthalene	(2)	9.948	142	27244	0.244
84) 1-Methylnaphthalene	(2)	10.099	142	24562	0.243
85) Hexachlorocyclopentadiene	(3)	10.204	237	5095	0.203
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	13403	0.251
88) cis-Isosafrole	(3)	10.303	162	1682	0.038
90) 2,4,6-Trichlorophenol	(3)	10.402	196	6852	0.213
92) 2,4,5-Trichlorophenol	(3)	10.449	196	7354	0.217
93)$2-Fluorobiphenyl	(3)	10.554	172	58676	0.491
94) trans-Isosafrole	(3)	10.665	162	7480	0.190
95) 1,1'-Biphenyl	(3)	10.705	154	32541	0.248
96) 2-Chloronaphthalene	(3)	10.717	162	26045	0.244
98) 1-Chloronaphthalene	(3)	10.746	162	22406	0.239
99) Diphenyl ether	(3)	10.886	170	17157	0.244
100) 2-Nitroaniline	(3)	10.898	138	5772	0.194
104) 1,4-Naphthoquinone	(3)	11.014	158	8346	0.201
105) 1,4-Dinitrobenzene	(3)	11.137	168	2411	0.157
106) Dimethylphthalate	(3)	11.230	163	27591	0.243
107) 1,3-Dinitrobenzene	(3)	11.248	168	2655	0.156
108) 2,6-Dinitrotoluene	(3)	11.306	165	4410	0.187
109) Acenaphthylene	(3)	11.370	152	32876	0.231
112) 3-Nitroaniline	(3)	11.551	138	5409	0.202

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Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.591	164	394743	5.000
114) Acenaphthene	(3)	11.638	153	26615	0.247
115) 2,4-Dinitrophenol	(3)	11.708	184	13631	1.010
116) 4-Nitrophenol	(3)	11.813	109	17821	0.867
117) Pentachlorobenzene	(3)	11.825	250	10027	0.228
119) Dibenzofuran	(3)	11.889	168	34375	0.245
118) 2,4-Dinitrotoluene	(3)	11.894	165	6174	0.183
121) 1-Naphthylamine	(3)	11.994	143	22764	0.208
122) 2,3,4,6-Tetrachlorophenol	(3)	12.058	232	5277	0.199
123) 2-Naphthylamine	(3)	12.104	143	22109	0.208
124) Diethylphthalate	(3)	12.238	149	24677	0.220
126) Fluorene	(3)	12.332	166	27576	0.244
125) Thionazin	(3)	12.337	107	4536	0.203
128) 5-Nitro-o-toluidine	(3)	12.355	152	6588	0.212
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	13246	0.246
129) 4-Nitroaniline	(3)	12.361	138	5158	0.189
130) 4,6-Dinitro-2-methylphenol	(4)	12.407	198	11762	0.651
132) NDPA as diphenylamine	(4)	12.495	169	20694	0.233
131) N-Nitrosodiphenylamine	(4)	12.495	169	20694	0.233
134) 1,2-Diphenylhydrazine	(4)	12.536	77	31396	0.248
135)$2,4,6-Tribromophenol	(3)	12.617	330	6086	0.405
137) Tetraethyldithiopyrophosphate	(4)	12.716	97	4791	0.227
139) 1,3,5-Trinitrobenzene	(4)	12.821	213	1373	0.116
140) Diallate (peak 1)	(4)	12.856	86	10495	0.190
141) Phorate	(4)	12.862	75	16712	0.210
142) Phenacetin	(4)	12.880	108	12490	0.206
143) 4-Bromophenyl-phenylether	(4)	12.944	248	7998	0.257
144) Diallate (peak 2)	(4)	12.961	86	1697	0.037
145) Hexachlorobenzene	(4)	12.984	284	8131	0.255
147) Dimethoate	(4)	13.054	87	9883	0.193
148) Atrazine	(4)	13.159	200	6778	0.223
149) Pentachlorophenol	(4)	13.241	266	3883	0.193
151) Pentachloronitrobenzene	(4)	13.247	237	2790	0.204
150) 4-Aminobiphenyl	(4)	13.258	169	6086	0.217
152) Pronamide	(4)	13.346	173	10348	0.204
153)*Phenanthrene-d10	(4)	13.474	188	715006	5.000
154) Dinoseb	(4)	13.492	211	3202	0.121
155) Phenanthrene	(4)	13.503	178	39637	0.244
157) Anthracene	(4)	13.567	178	38925	0.242
163) Carbazole	(4)	13.789	167	33452	0.222

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Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

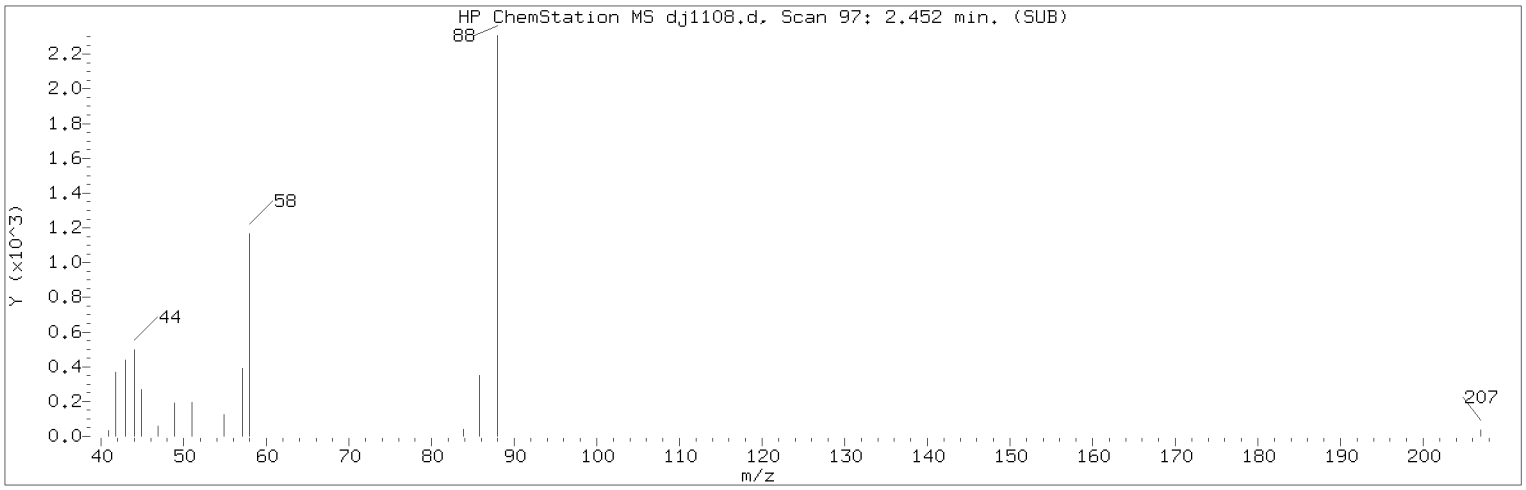
Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.993	109	6157	0.157
165) Di-n-butylphthalate	(4)	14.296	149	40388	0.214
167) Parathion	(4)	14.529	109	3828	0.150
168) 4-Nitroquinoline-1-oxide	(4)	14.547	190	1171	0.079
169) Octachlorostyrene	(4)	14.873	308	3297	0.257
171) Isodrin	(4)	14.925	193	5100	0.262
222) Total PAHs	(6)			652139	4.305
173) Fluoranthene	(4)	15.141	202	41986	0.226
174) Benzidine	(5)	15.374	184	212953	1.654
175)*Pyrene-d10	(5)	15.456	212	862810	5.000
177) Pyrene	(5)	15.485	202	50087	0.252
179)$Terphenyl-d14	(5)	15.765	244	61344	0.473
182) p-Dimethylaminoazobenzene	(5)	15.992	225	4593	0.176
185) Chlorobenzilate	(5)	16.091	139	10175	0.176
187) 3,3'-Dimethylbenzidine	(5)	16.557	212	21803	0.178
188) Butylbenzylphthalate	(5)	16.616	149	15877	0.183
191) 2-Acetylaminofluorene	(5)	16.971	181	9306	0.121
193) 3,3'-Dichlorobenzidine	(5)	17.484	252	12404	0.180
195) Benzo(a)anthracene	(5)	17.484	228	40651	0.222
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.502	231	6593	0.185
196) Chrysene	(5)	17.548	228	39143	0.226
199) bis(2-Ethylhexyl)phthalate	(5)	17.676	149	22321	0.174
203) 6-Methylchrysene	(5)	18.347	242	24471	0.191
205) Di-n-octylphthalate	(6)	18.836	149	34301	0.159
206) Benzo(b)fluoranthene	(6)	19.332	252	38497	0.219
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.338	256	12559	0.172
208) Benzo(k)fluoranthene	(6)	19.378	252	36861	0.215
211) Benzo(a)pyrene	(6)	19.856	252	33484	0.209
213)*Perylene-d12	(6)	19.950	264	726340	5.000
215) 3-Methylcholanthrene	(6)	20.428	268	11632	0.195
217) Dibenz(a,h)acridine	(6)	21.232	279	26765	0.197
218) Dibenz(a,j)acridine	(6)	21.302	279	26272	0.183
219) Indeno(1,2,3-cd)pyrene	(6)	21.541	276	42309	0.224
220) Dibenz(a,h)anthracene	(6)	21.587	278	34361	0.217
221) Benzo(g,h,i)perylene	(6)	21.920	276	36632	0.231

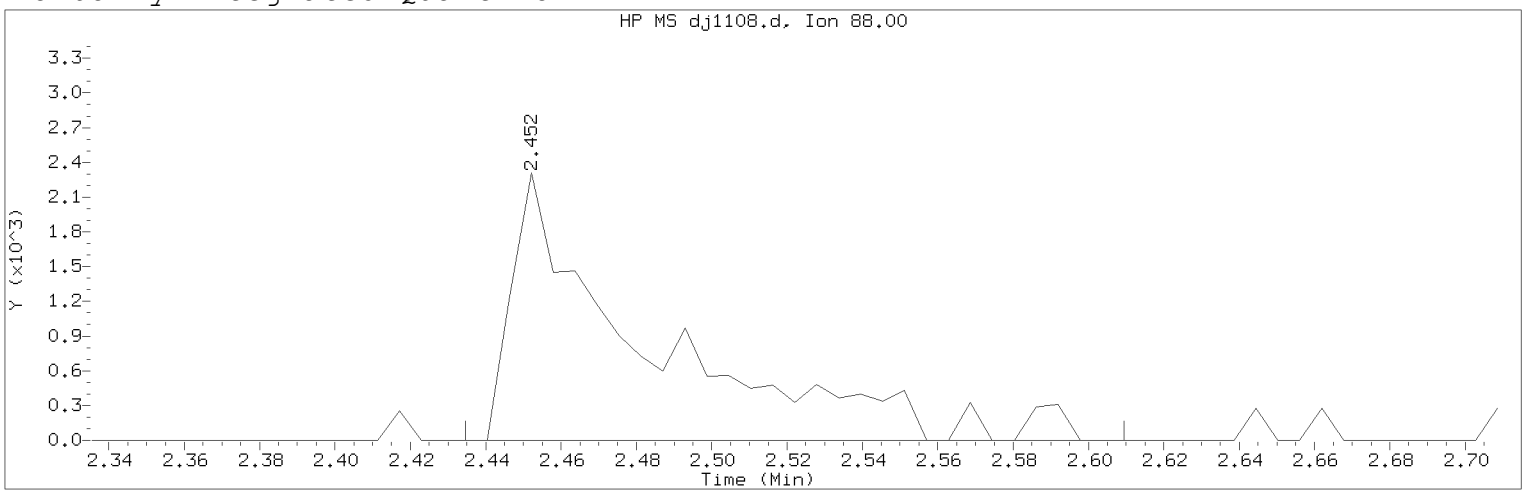
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

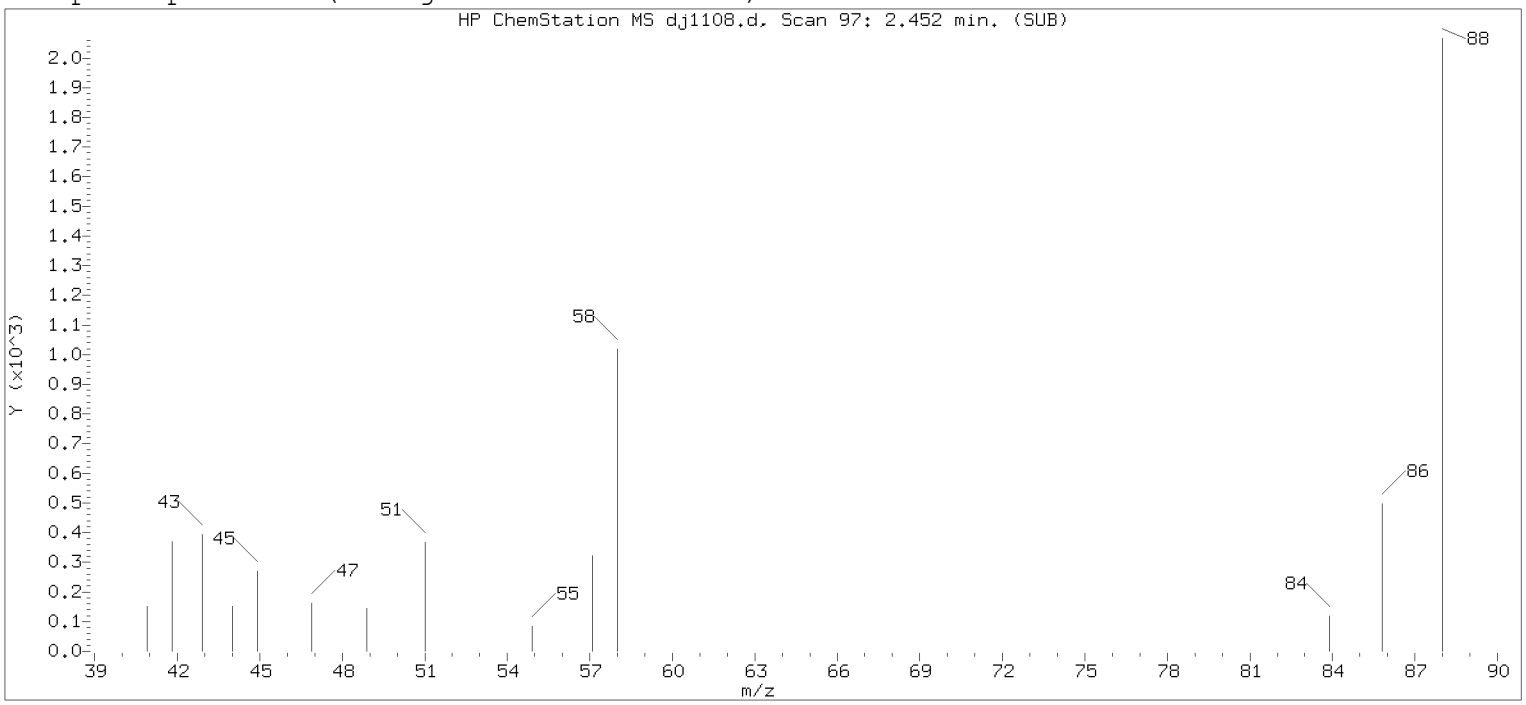
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 97
Retention Time (minutes) : 2.452
Quant Ion : 88.00
Area (flag) : 5635M
On-Column Amount (ng/ul) : 0.2173
Integration start scan : 93 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

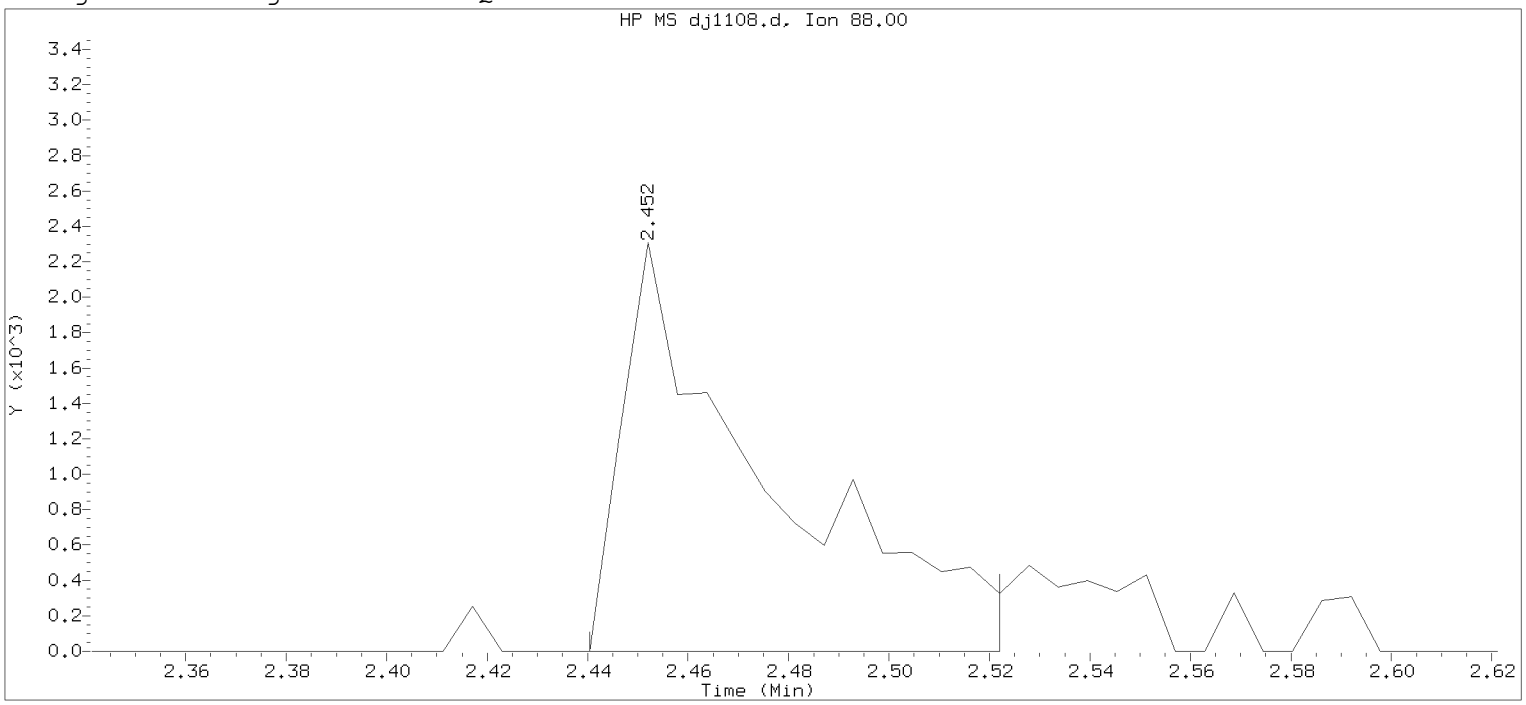
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

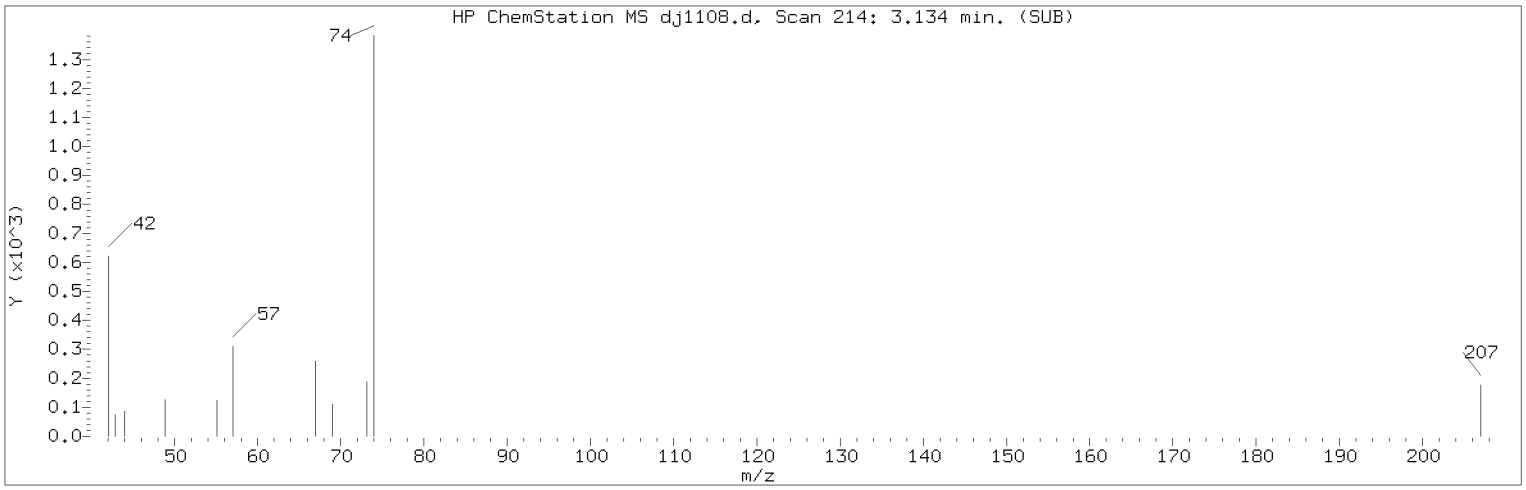
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

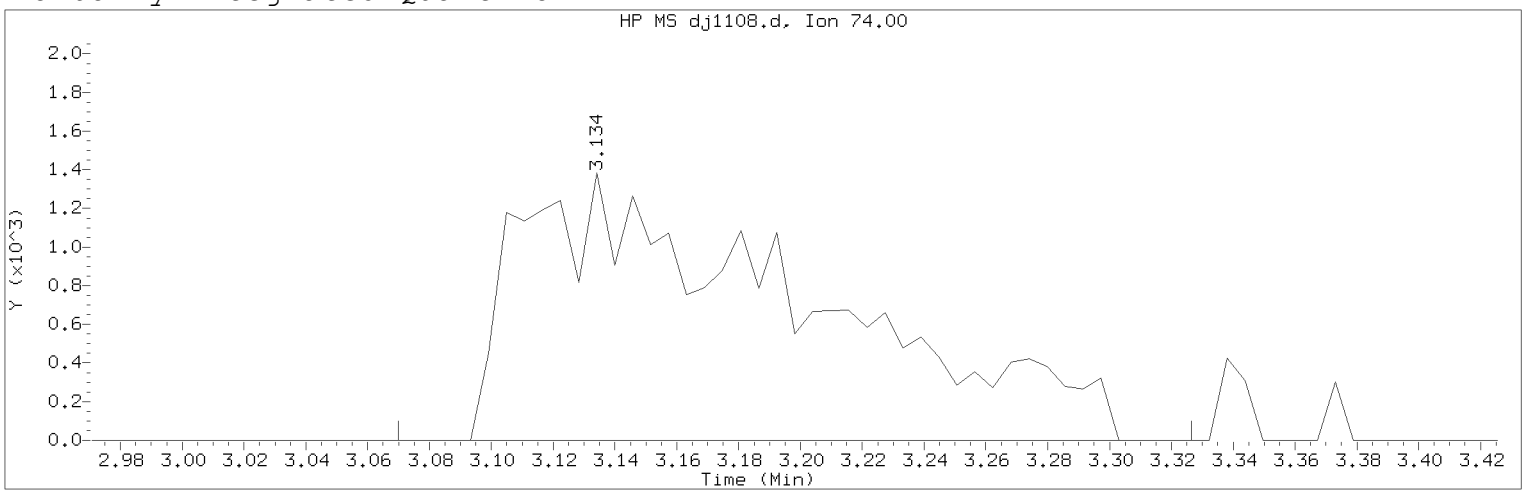
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 97		
Retention Time (minutes)	: 2.452		
Quant Ion	: 88.00		
Area	: 4549		
On-column Amount (ng/ul)	: 0.1751		
Integration start scan	: 94	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

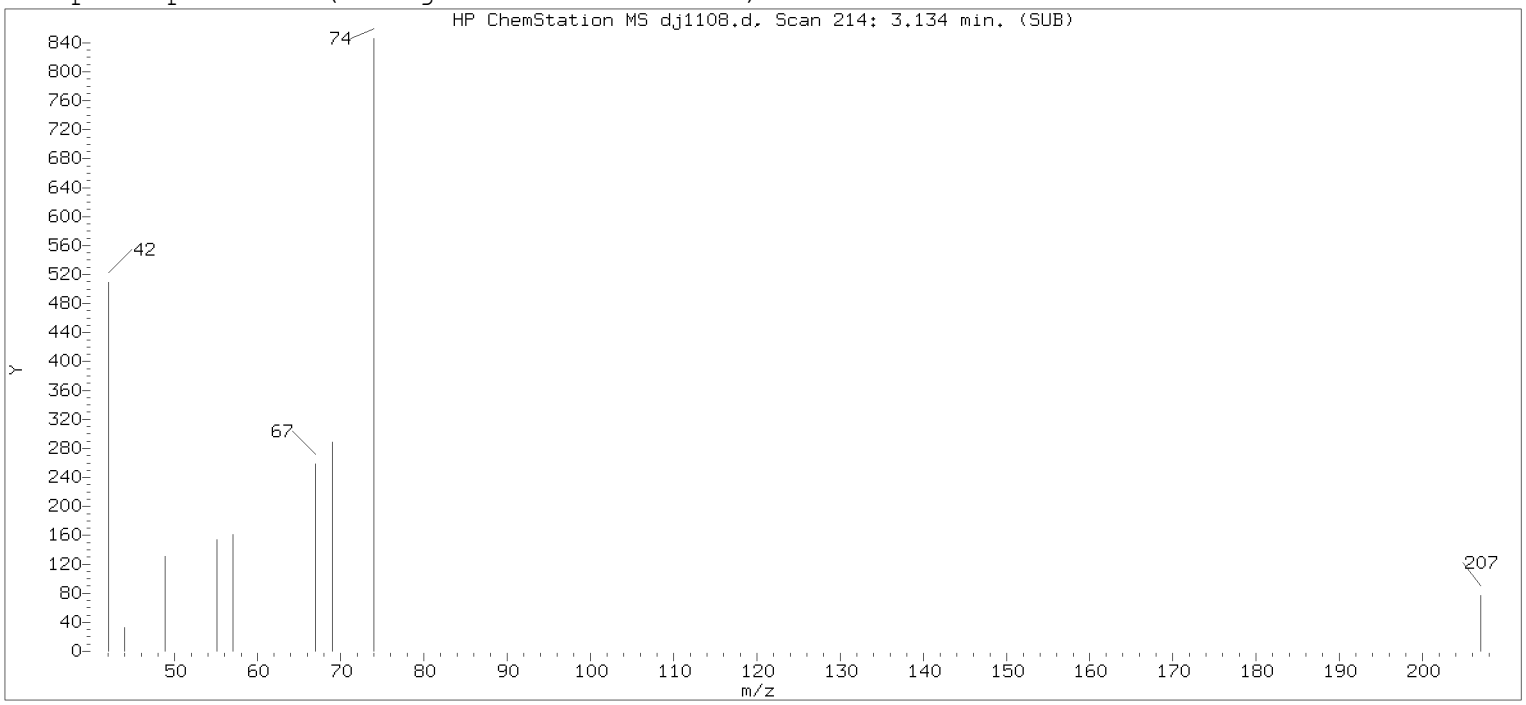
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 214
Retention Time (minutes) : 3.134
Quant Ion : 74.00
Area (flag) : 8832M
On-Column Amount (ng/ul) : 0.2160
Integration start scan : 202 Integration stop scan: 246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

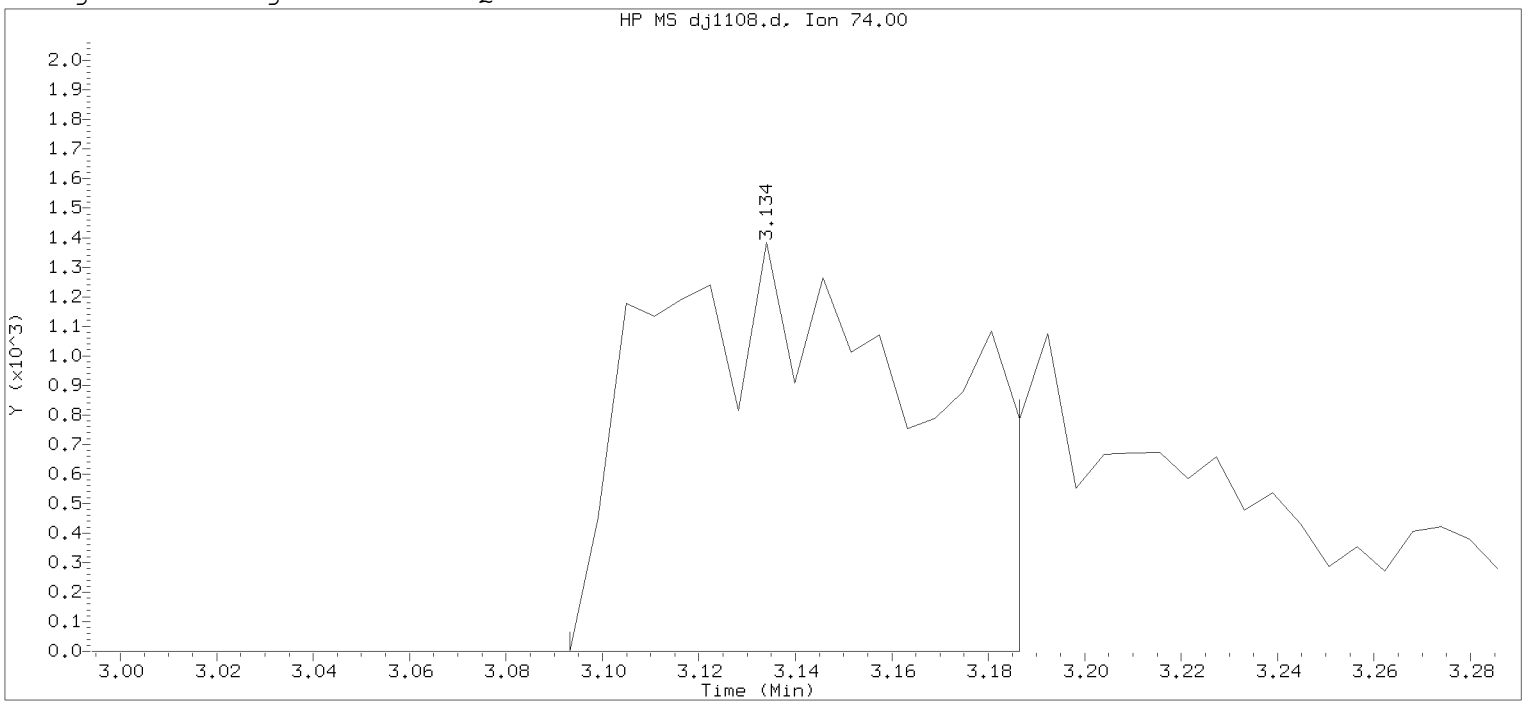
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

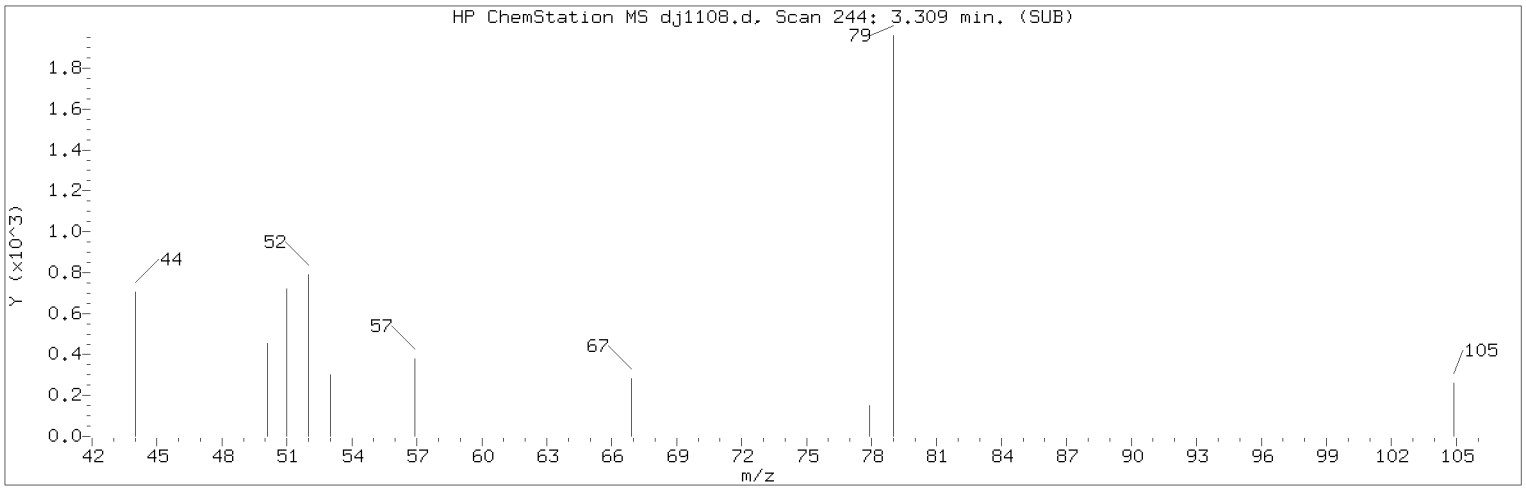
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

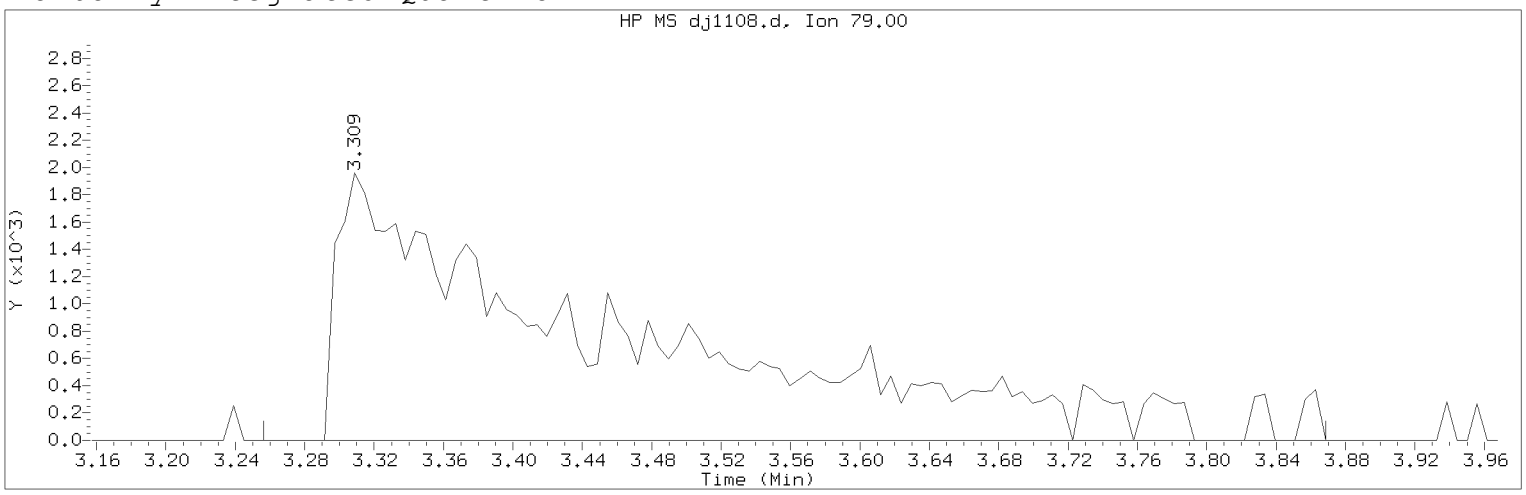
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 214		
Retention Time (minutes)	: 3.134		
Quant Ion	: 74.00		
Area	: 5437		
On-column Amount (ng/ul)	: 0.1332		
Integration start scan	: 206	Integration stop scan:	222
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

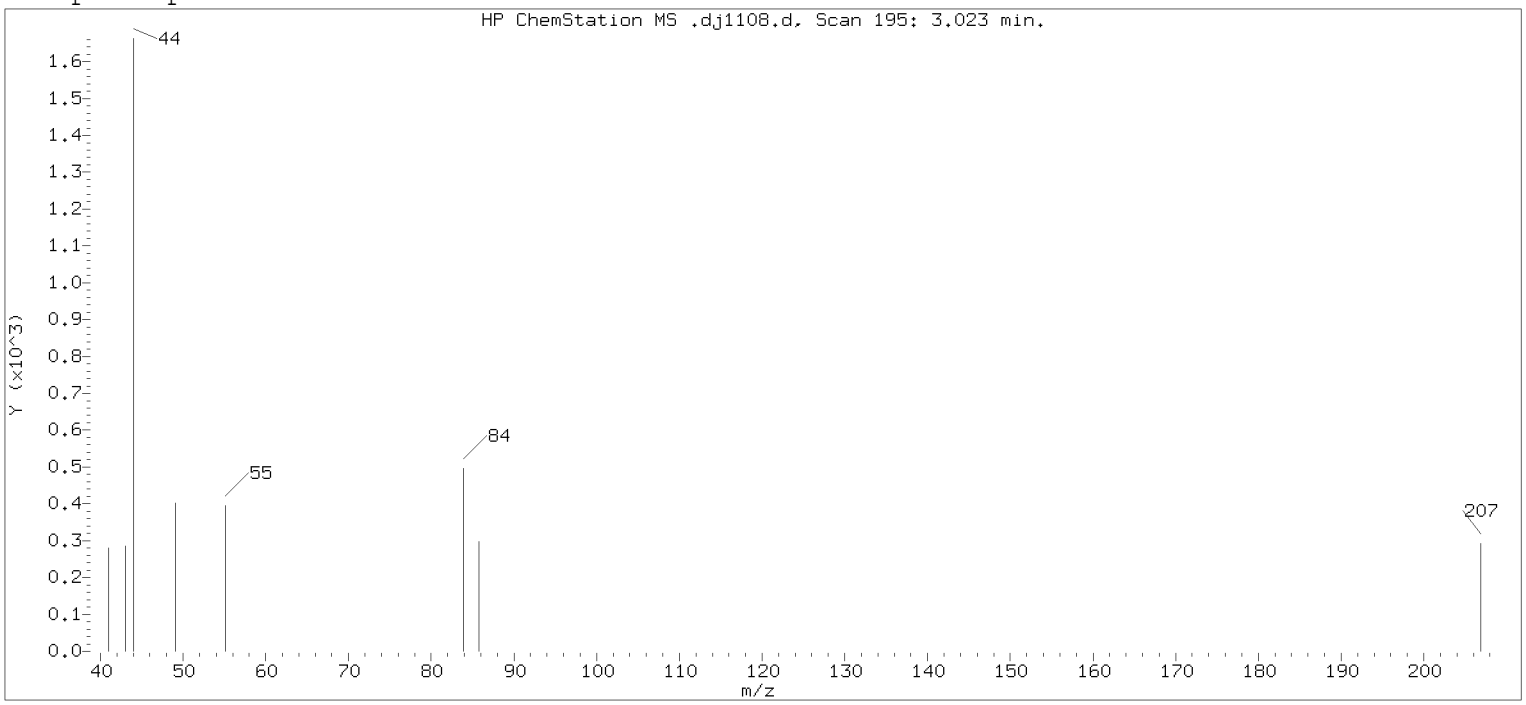
Compound Number : 5
Compound Name : Pyridine
Scan Number : 244
Retention Time (minutes) : 3.309
Quant Ion : 79.00
Area (flag) : 20990M
On-Column Amount (ng/ul) : 0.3186
Integration start scan : 234 Integration stop scan: 339
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

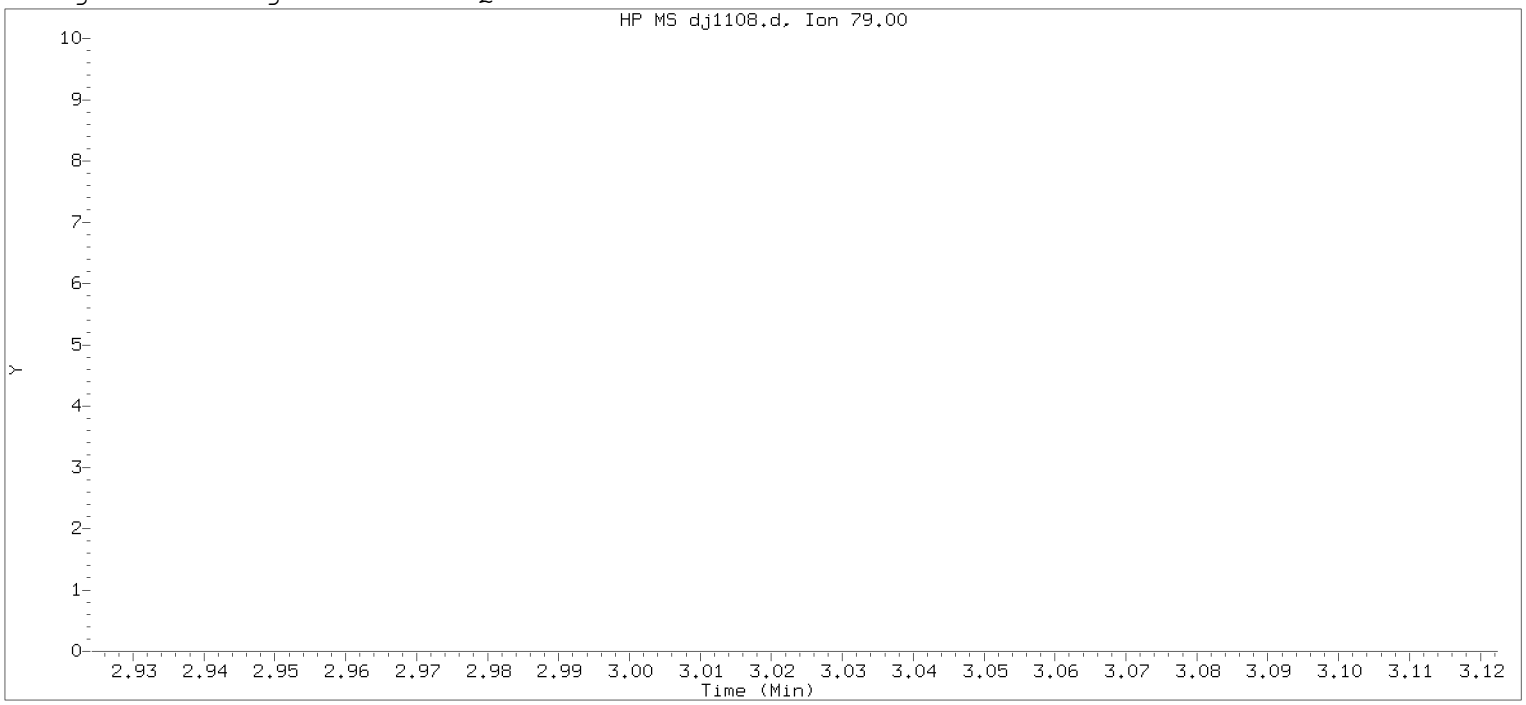
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

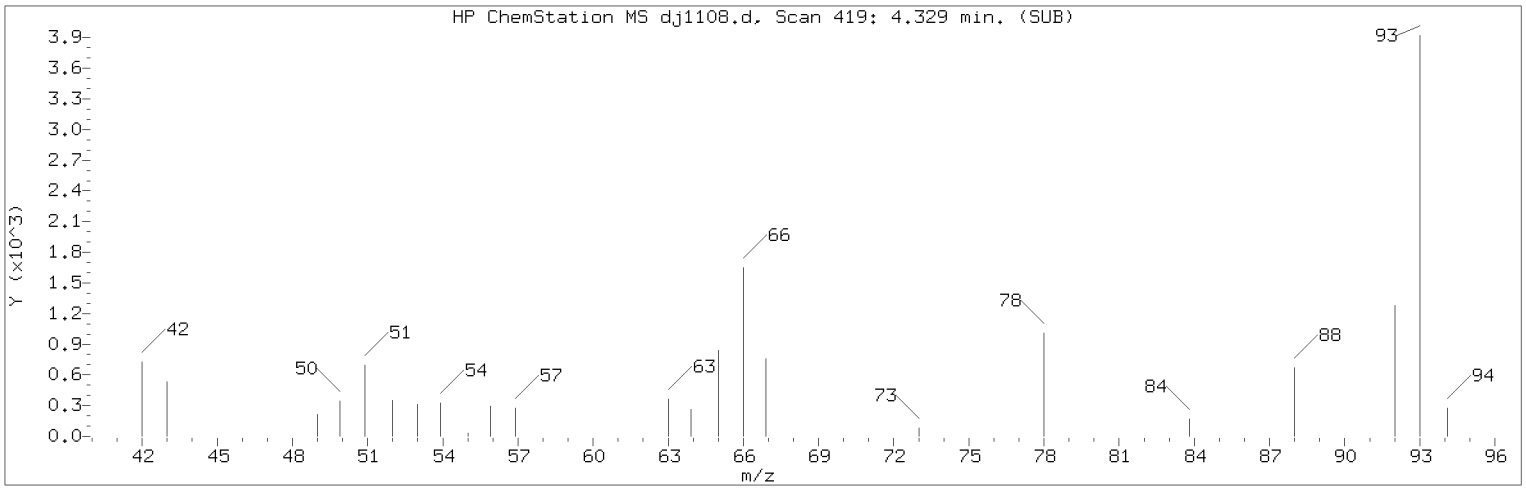
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

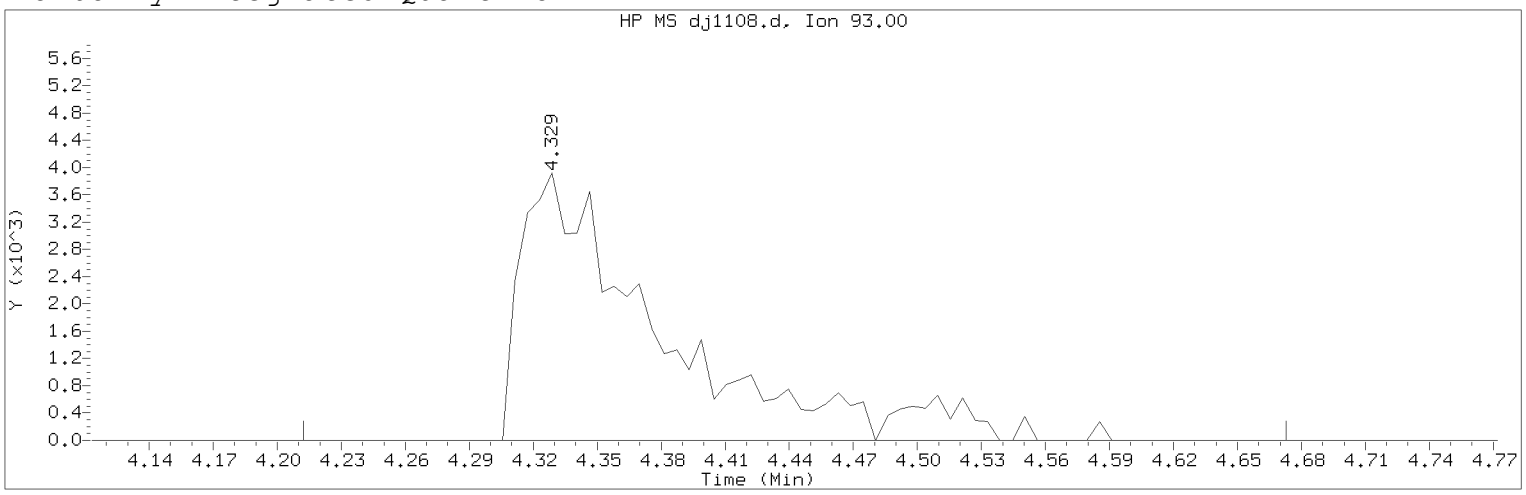
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.023
Quant Ion : 79.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

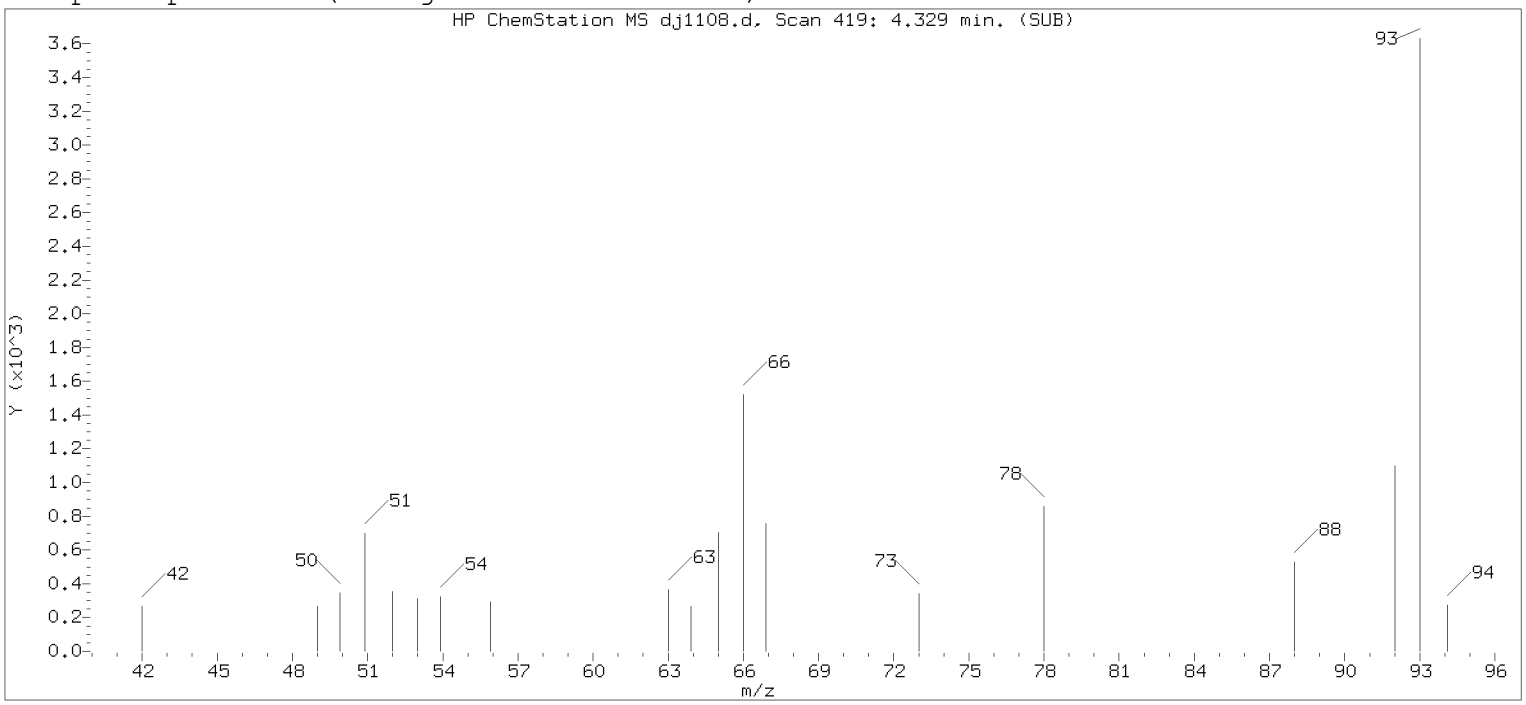
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 419
Retention Time (minutes) : 4.329
Quant Ion : 93.00
Area (flag) : 17978M
On-Column Amount (ng/ul) : 0.2565
Integration start scan : 398 Integration stop scan: 477
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

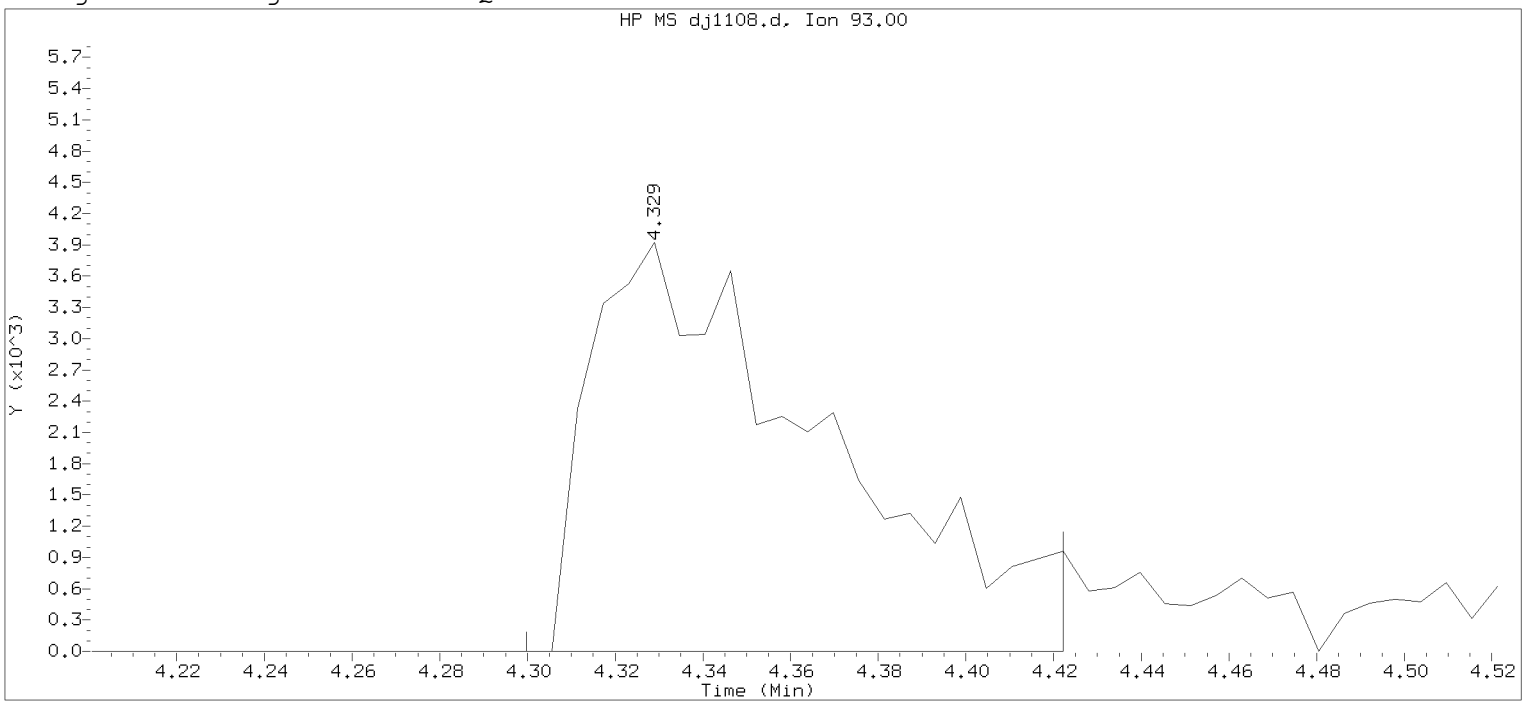
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

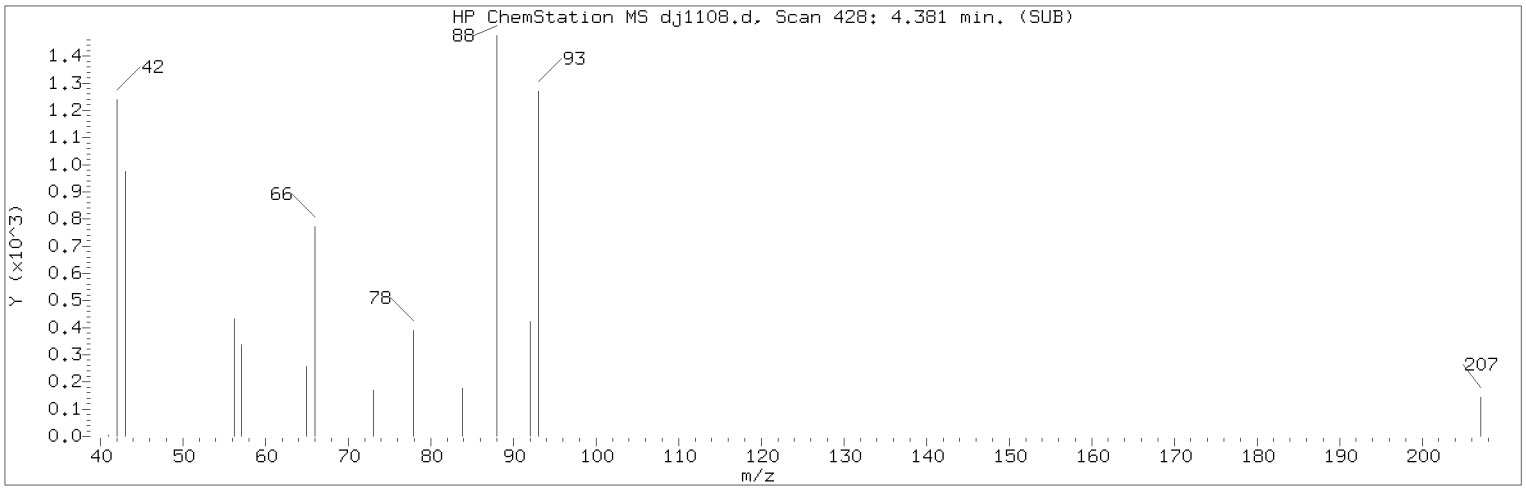
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

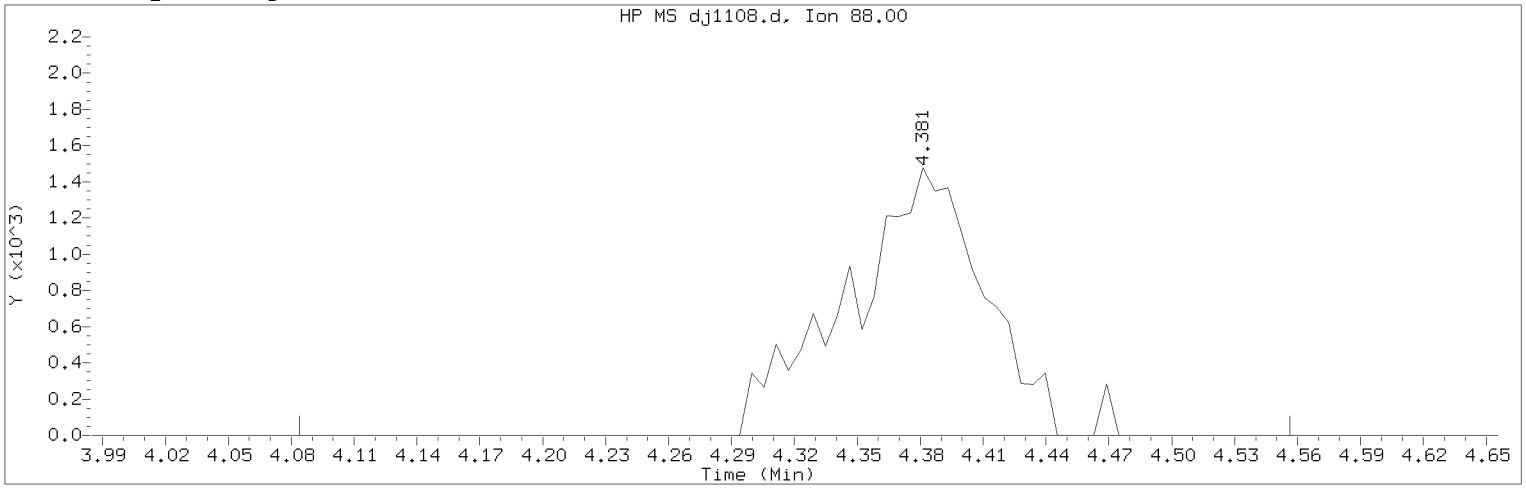
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 419		
Retention Time (minutes)	: 4.329		
Quant Ion	: 93.00		
Area	: 14408		
On-column Amount (ng/ul)	: 0.2026		
Integration start scan	: 413	Integration stop scan:	434
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

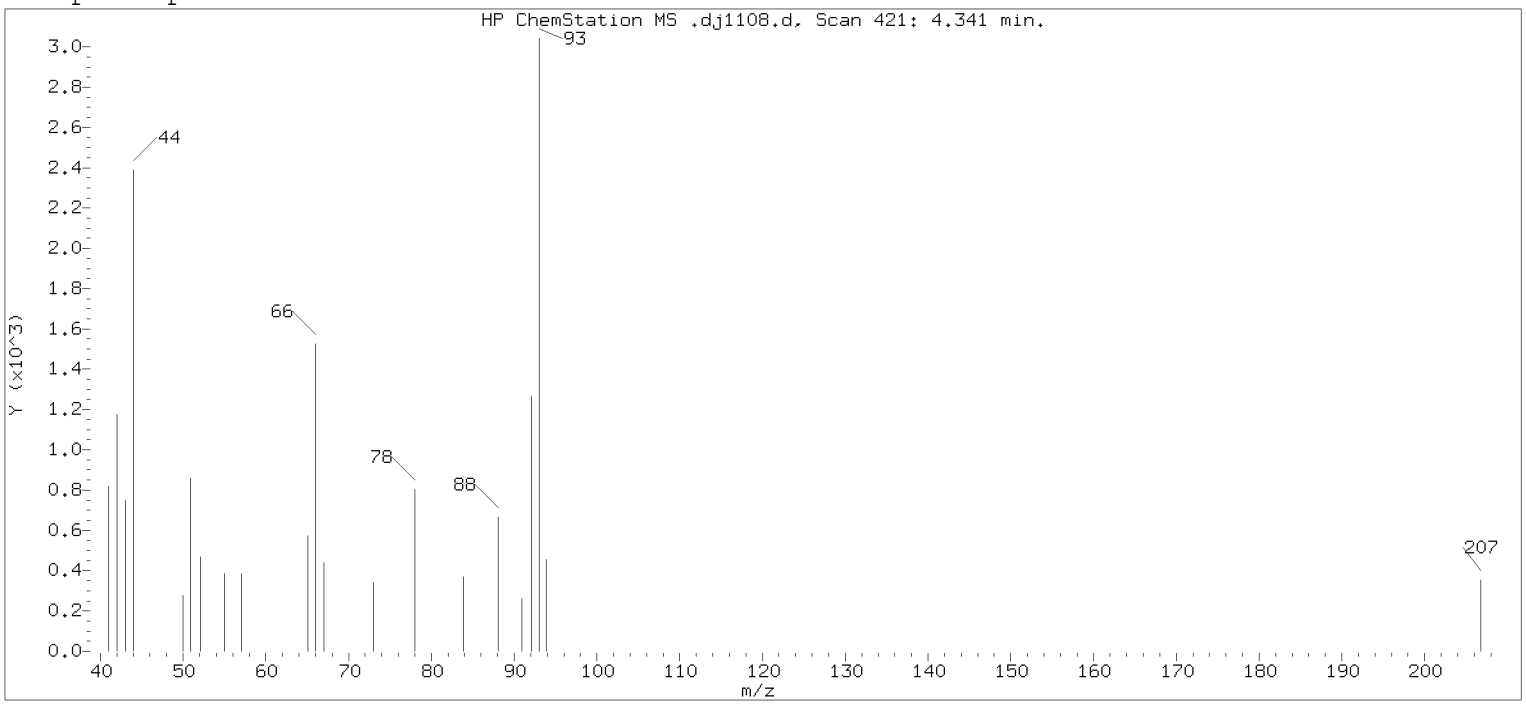
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 428
Retention Time (minutes) : 4.381
Quant Ion : 88.00
Area (flag) : 6733M
On-Column Amount (ng/ul) : 0.2259
Integration start scan : 376 Integration stop scan: 457
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

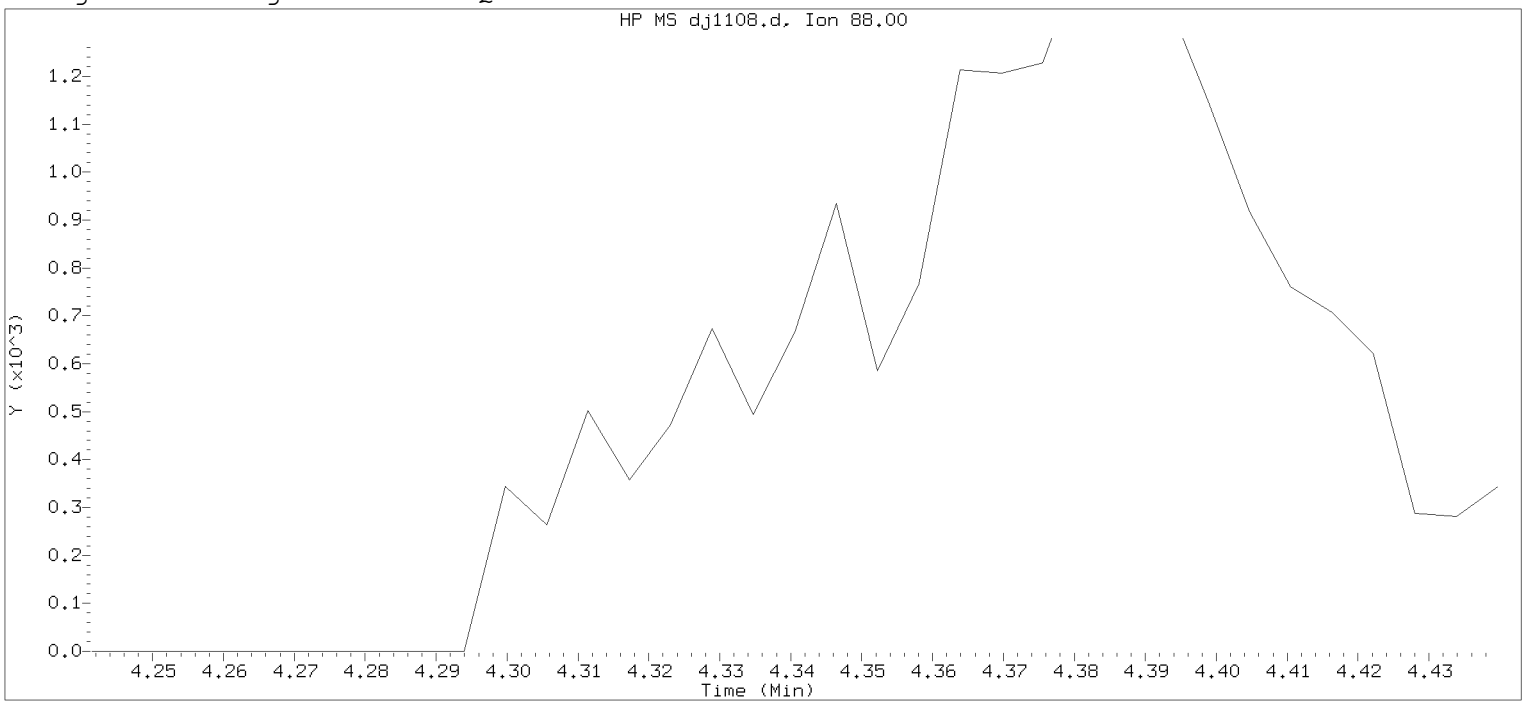
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

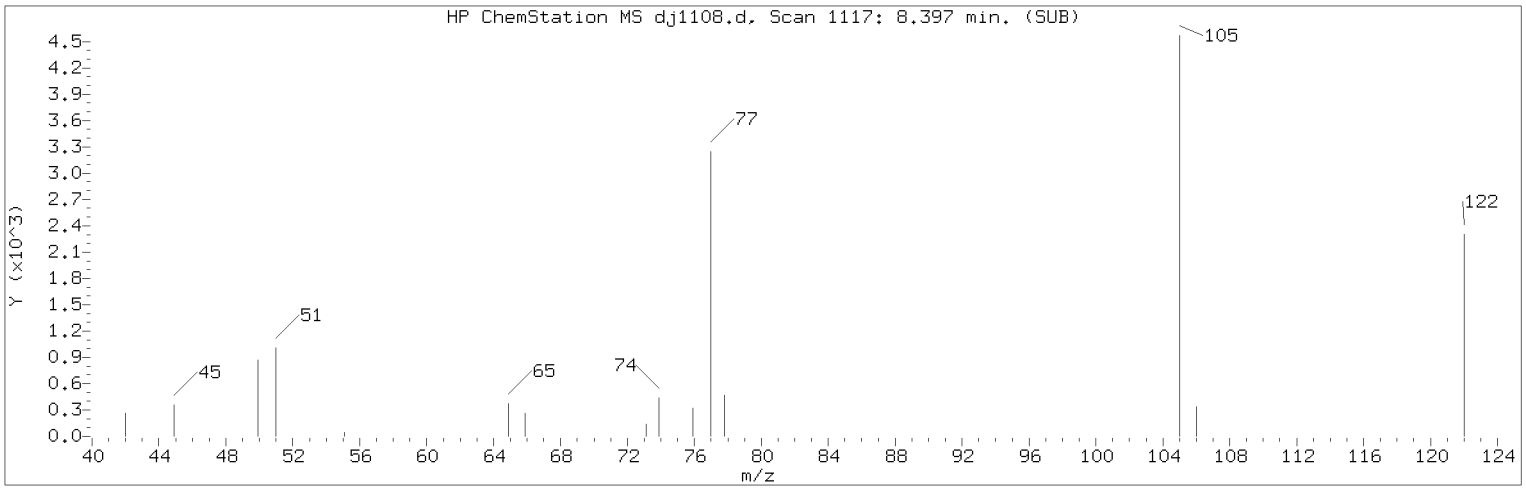
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

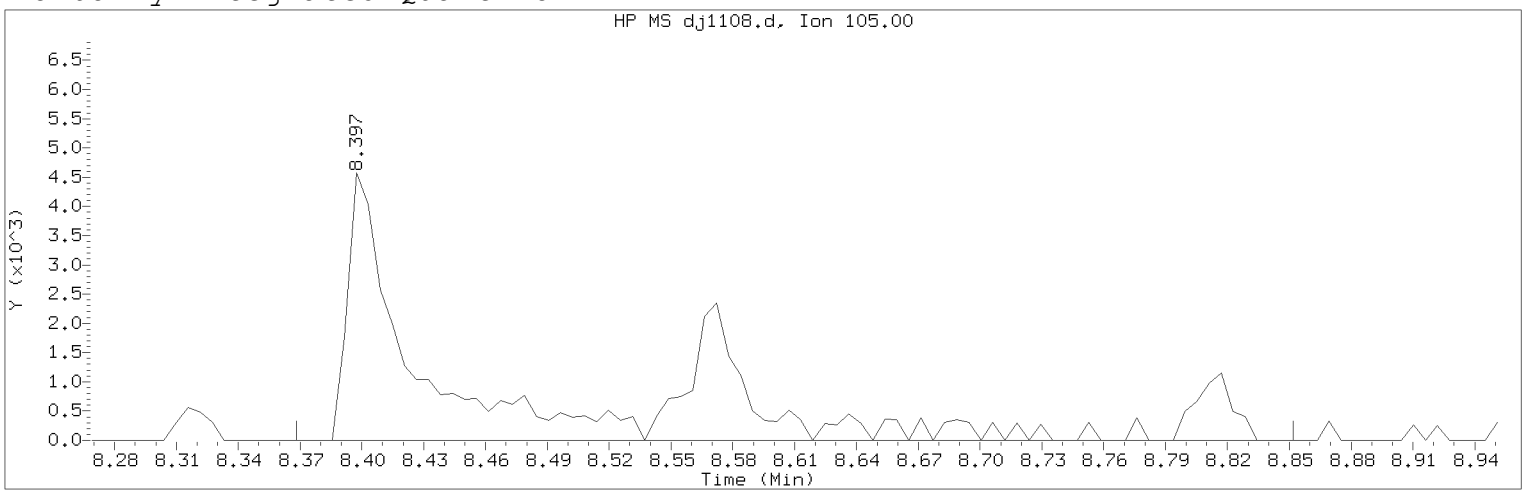
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.341
Quant Ion : 88.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:23
Date, time and analyst ID of latest file update: 23-Oct-2017 16:23 em10340

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

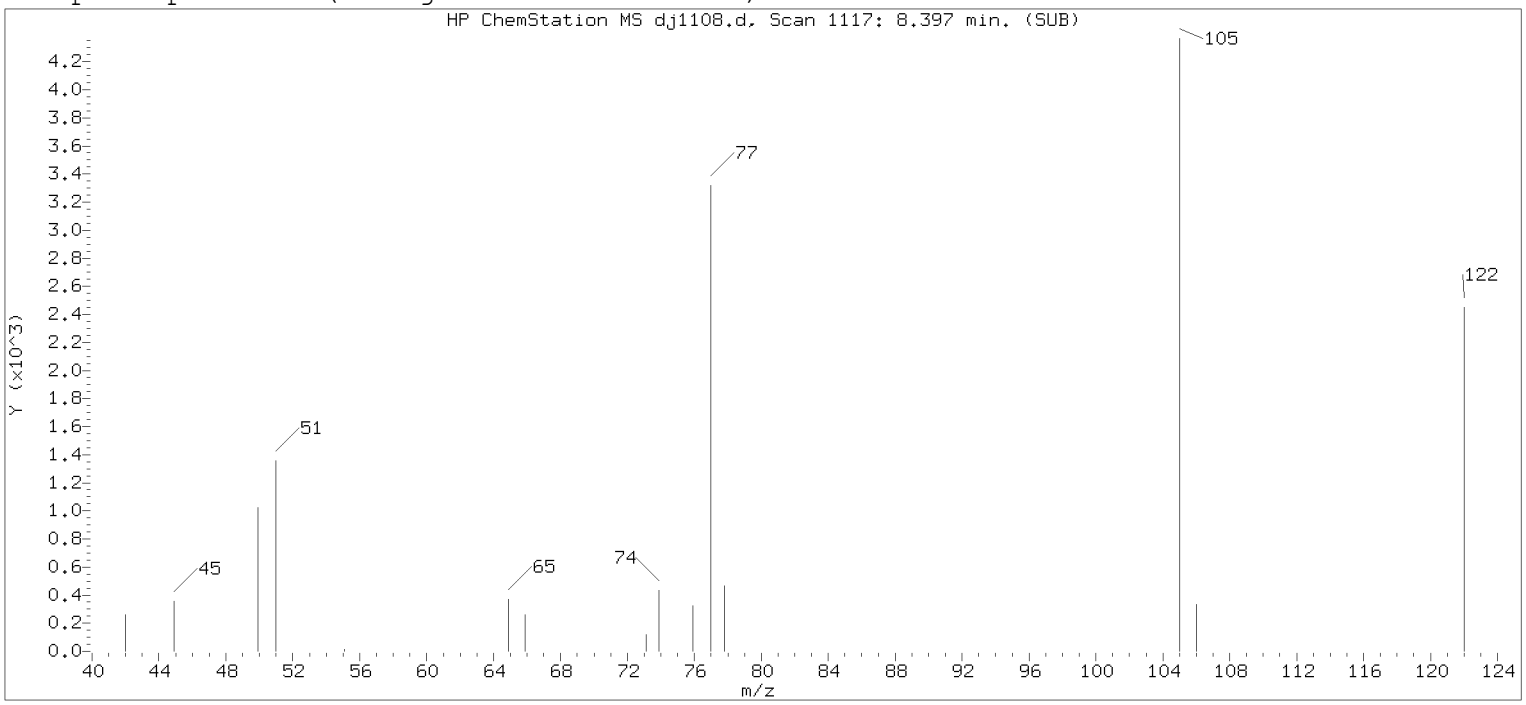
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1117
Retention Time (minutes) : 8.397
Quant Ion : 105.00
Area (flag) : 16896M
On-Column Amount (ng/ul) : 0.3966
Integration start scan : 1111 Integration stop scan: 1194
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

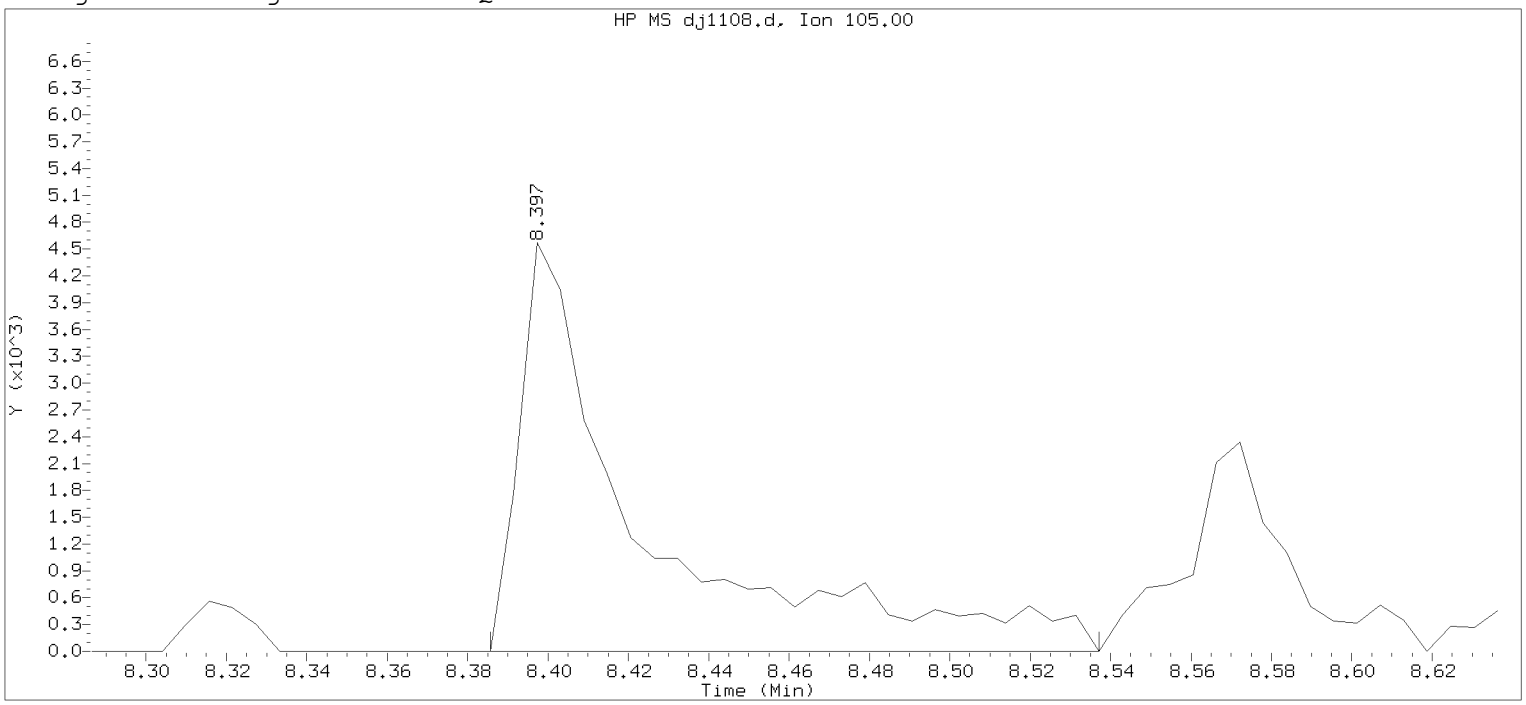
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



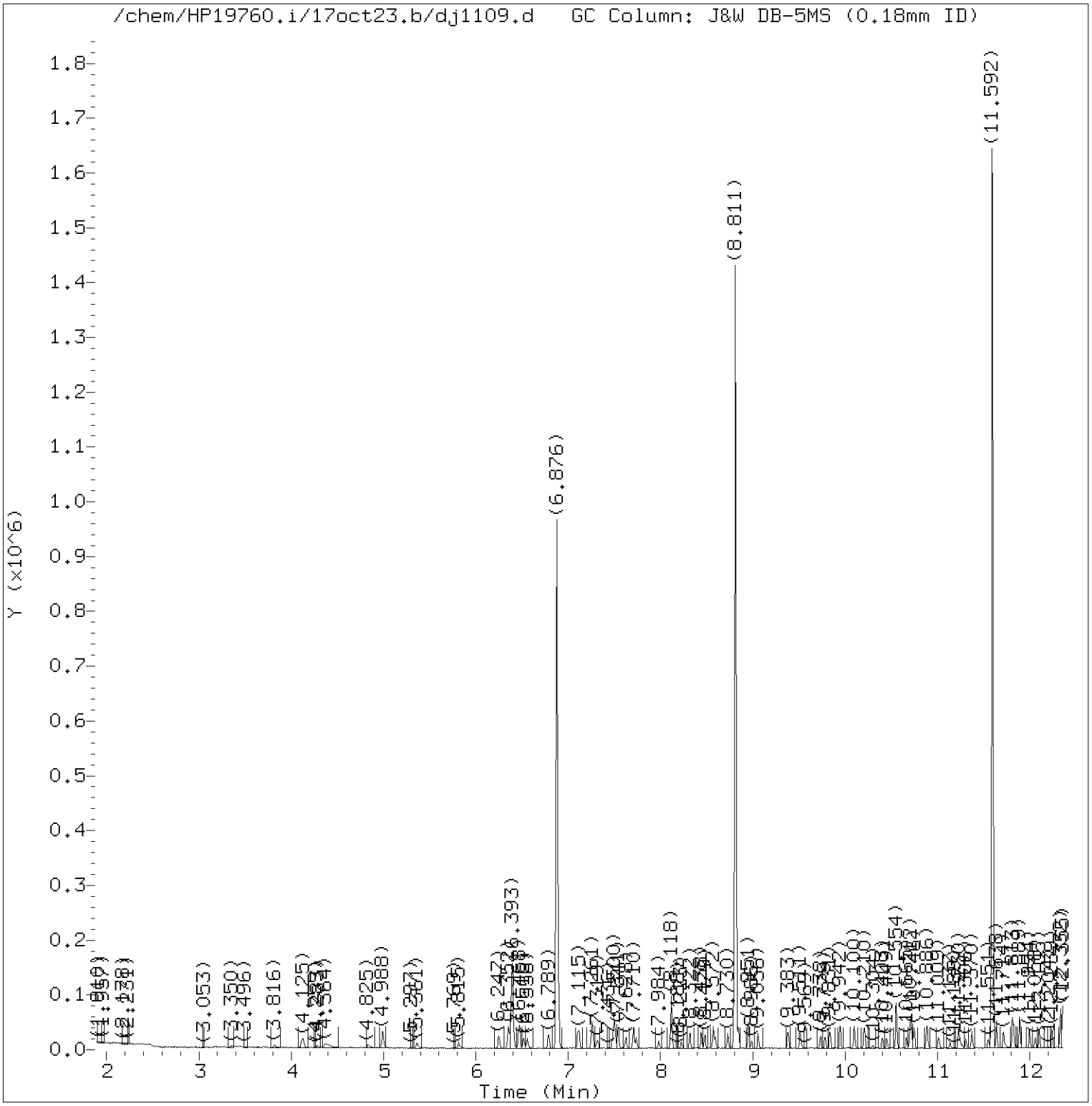
Data File: /chem/HP19760.i/17oct23.b/dj1108.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 15:39 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 16:05
Date, time and analyst ID of latest file update: 23-Oct-2017 16:05 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1117		
Retention Time (minutes)	: 8.397		
Quant Ion	: 105.00		
Area	: 9604		
On-column Amount (ng/ul)	: 3.8100		
Integration start scan	: 1114	Integration stop scan:	1140
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.



Total Ion Chromatogram (TIC)

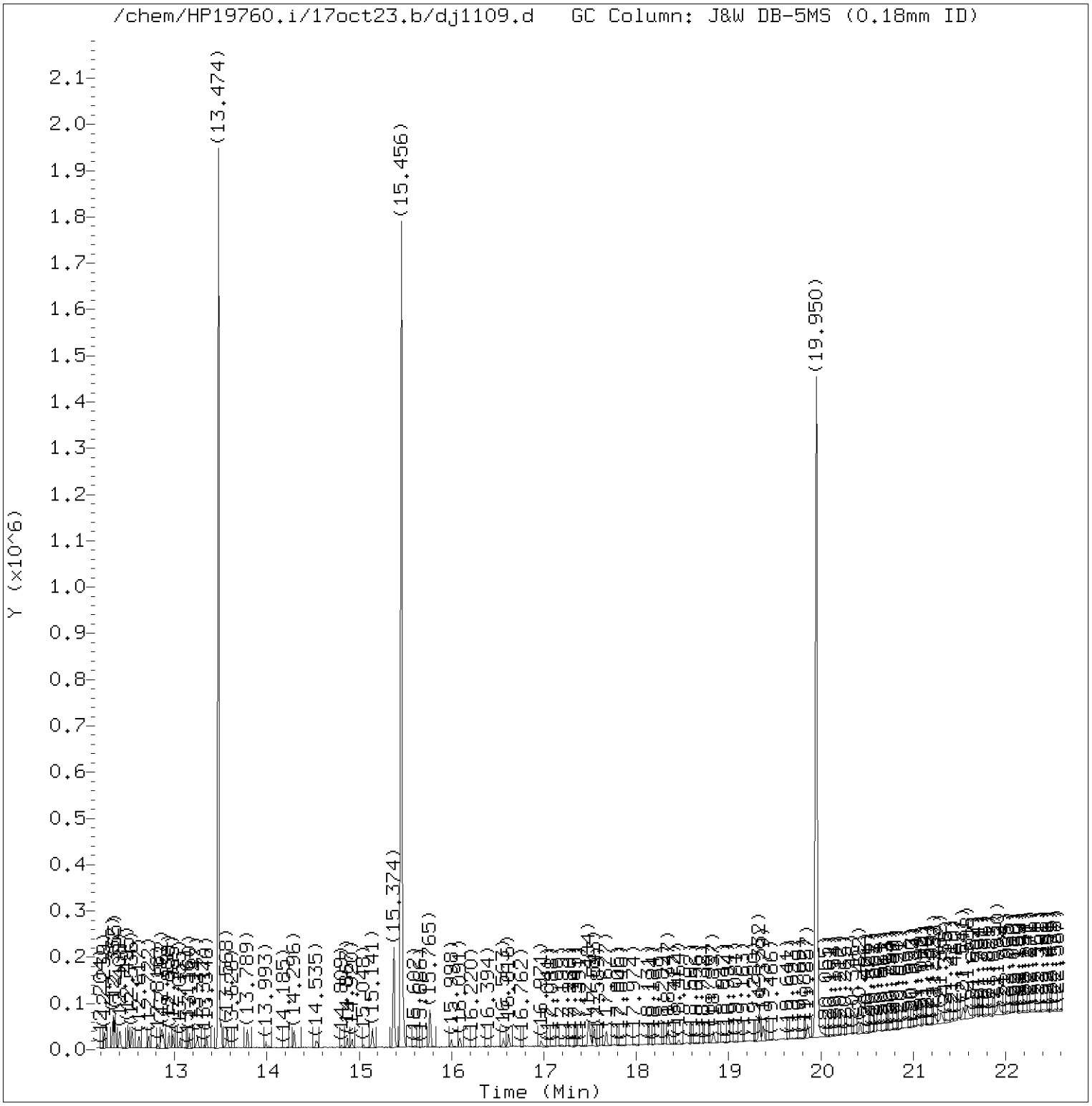
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.487	88	2553M	0.100
4) N-Nitrosodimethylamine	(1)	3.198	74	3850M	0.096
5) Pyridine	(1)	3.426	79	8245M	0.127
7) 2-Picoline	(1)	4.364	93	9306M	0.135
8) N-Nitrosomethylethylamine	(1)	4.411	88	2937M	0.100
9) Methyl methanesulfonate	(1)	4.825	80	3961M	0.126
11)$2-Fluorophenol	(1)	4.988	112	13819	0.241
13) N-Nitrosodiethylamine	(1)	5.361	102	3145	0.113
42) Total Cresols	(1)			14468	0.254
15) Ethyl methanesulfonate	(1)	5.815	109	3345	0.116
16) Benzaldehyde	(1)	6.247	77	6802	0.128
17)$Phenol-d6	(1)	6.352	99	17904	0.238
18) Phenol	(1)	6.369	94	10661	0.126
19) Aniline	(1)	6.410	93	12069	0.122
20) a-methylstyrene	(1)	6.474	118	7985	0.132
22) bis(2-Chloroethyl)ether	(1)	6.515	93	8027	0.126
23) 2-Chlorophenol	(1)	6.556	128	6743	0.119
24) 1,3-Dichlorobenzene	(1)	6.789	146	7609	0.123
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	189448	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	8339	0.133
27) Benzyl alcohol	(1)	7.104	108	4793	0.126
28) 1,2-Dichlorobenzene	(1)	7.115	146	7356	0.123
30) Indene	(1)	7.255	115	15014	0.136
31) 2-Methylphenol	(1)	7.267	108	6655	0.124
34) bis(2-Chloroisopropyl)ether	(1)	7.319	45	10727	0.130
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.319	45	10727	0.130
97) Isosafrole	(3)			4453	0.113
35) N-Nitrosopyrrolidine	(1)	7.477	100	2964	0.100
36) Acetophenone	(1)	7.488	105	10783	0.121
37) 4-Methylphenol	(1)	7.500	108	7813	0.130
38) N-Nitroso-di-n-propylamine	(1)	7.506	70	5811	0.120
39) N-Nitrosomorpholine	(1)	7.541	56	4458	0.122
40) o-Toluidine	(1)	7.541	106	11669	0.120
43) Hexachloroethane	(1)	7.622	117	3114	0.123
44)$Nitrobenzene-d5	(2)	7.710	82	16806	0.234
45) Nitrobenzene	(2)	7.733	77	8842	0.122
48) N-Nitrosopiperidine	(2)	7.984	114	3036	0.104
120) 2,4_2,6-Dinitrotoluenes	(3)			4194	0.149
50) Isophorone	(2)	8.118	82	14667	0.117
51) 2-Nitrophenol	(2)	8.223	139	2586	0.096

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

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.322	107	7288	0.117
57) O,O,O-Triethylphosphorothioate	(2)	8.444	198	3363	0.120
55) bis(2-Chloroethoxy)methane	(2)	8.479	93	9701	0.124
56) Benzoic acid	(2)	8.567	105	2035M	2.956
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.572	104	11887	0.130
60) 2,4-Dichlorophenol	(2)	8.596	162	4843	0.105
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	6114	0.114
146) Diallate trans/cis	(4)			6148	0.114
65)*Naphthalene-d8	(2)	8.811	136	744582	5.000
67) 4-Chloroaniline	(2)	8.951	127	7881	0.114
68) 2,6-Dichlorophenol	(2)	8.951	162	4722	0.104
69) Hexachloropropene	(2)	8.986	213	2616	0.100
71) Hexachlorobutadiene	(2)	9.056	225	3655	0.122
75) Quinoline	(2)	9.383	129	12805	0.125
76) Caprolactam	(2)	9.511	113	1370M	0.090
77) N-Nitrosodi-n-butylamine	(2)	9.511	84	6342	0.116
80) 4-Chloro-3-methylphenol	(2)	9.732	107	5669	0.109
82) Safrole	(2)	9.837	162	5051	0.117
85) Hexachlorocyclopentadiene	(3)	10.204	237	2463	0.100
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.210	216	7116	0.136
88) cis-Isosafrole	(3)	10.304	162	900	0.021
90) 2,4,6-Trichlorophenol	(3)	10.403	196	3507	0.111
92) 2,4,5-Trichlorophenol	(3)	10.449	196	3651	0.110
93)$2-Fluorobiphenyl	(3)	10.554	172	29099	0.249
94) trans-Isosafrole	(3)	10.665	162	3553	0.092
95) 1,1'-Biphenyl	(3)	10.706	154	15811	0.123
96) 2-Chloronaphthalene	(3)	10.717	162	12628	0.121
98) 1-Chloronaphthalene	(3)	10.746	162	12265	0.134
99) Diphenyl ether	(3)	10.886	170	9299	0.135
100) 2-Nitroaniline	(3)	10.892	138	2609	0.089
104) 1,4-Naphthoquinone	(3)	11.009	158	3995	0.098
105) 1,4-Dinitrobenzene	(3)	11.137	168	1113M	0.074
106) Dimethylphthalate	(3)	11.230	163	13782	0.124
107) 1,3-Dinitrobenzene	(3)	11.248	168	1274M	0.076
108) 2,6-Dinitrotoluene	(3)	11.306	165	1667	0.072
112) 3-Nitroaniline	(3)	11.551	138	2207	0.084
113)*Acenaphthene-d10	(3)	11.592	164	386543	5.000
115) 2,4-Dinitrophenol	(3)	11.714	184	4682	2.766
116) 4-Nitrophenol	(3)	11.813	109	7409	0.368
117) Pentachlorobenzene	(3)	11.825	250	5701	0.132

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Dibenzofuran	(3)	11.889	168	17479	0.127
118) 2,4-Dinitrotoluene	(3)	11.895	165	2527	0.076
121) 1-Naphthylamine	(3)	11.994	143	11944	0.112
122) 2,3,4,6-Tetrachlorophenol	(3)	12.064	232	2793	0.107
123) 2-Naphthylamine	(3)	12.105	143	11102	0.107
124) Diethylphthalate	(3)	12.239	149	12489	0.114
125) Thionazin	(3)	12.338	107	2245	0.103
127) 4-Chlorophenyl-phenylether	(3)	12.355	204	6884	0.130
128) 5-Nitro-o-toluidine	(3)	12.355	152	3055	0.100
129) 4-Nitroaniline	(3)	12.361	138	2359	0.088
130) 4,6-Dinitro-2-methylphenol	(4)	12.408	198	5142	0.284
131) N-Nitrosodiphenylamine	(4)	12.495	169	10685	0.120
132) NDPA as diphenylamine	(4)	12.495	169	10685	0.120
134) 1,2-Diphenylhydrazine	(4)	12.536	77	15274	0.120
135)$2,4,6-Tribromophenol	(3)	12.617	330	2960	0.201
137) Tetraethyldithiopyrophosphate	(4)	12.717	97	2252	0.106
139) 1,3,5-Trinitrobenzene	(4)	12.822	213	642M	0.054
140) Diallate (peak 1)	(4)	12.856	86	5286	0.095
141) Phorate	(4)	12.862	75	8141	0.102
142) Phenacetin	(4)	12.880	108	5774	0.095
143) 4-Bromophenyl-phenylether	(4)	12.938	248	3822	0.122
144) Diallate (peak 2)	(4)	12.967	86	862	0.019
147) Dimethoate	(4)	13.055	87	4131	0.080
148) Atrazine	(4)	13.160	200	3225	0.106
149) Pentachlorophenol	(4)	13.241	266	1324	0.066
151) Pentachloronitrobenzene	(4)	13.247	237	1212M	0.088
150) 4-Aminobiphenyl	(4)	13.259	169	2905	0.103
152) Pronamide	(4)	13.346	173	4915	0.096
153)*Phenanthrene-d10	(4)	13.474	188	717453	5.000
154) Dinoseb	(4)	13.492	211	1222M	1.095
163) Carbazole	(4)	13.789	167	16365	0.108
164) Methyl parathion	(4)	13.987	109	2538	0.064
165) Di-n-butylphthalate	(4)	14.296	149	19885	0.105
167) Parathion	(4)	14.529	109	1646	0.064
168) 4-Nitroquinoline-1-oxide	(4)	14.547	190	608	2.511
169) Octachlorostyrene	(4)	14.873	308	1532	0.119
171) Isodrin	(4)	14.920	193	2666	0.136
174) Benzidine	(5)	15.374	184	101400	0.796
175)*Pyrene-d10	(5)	15.456	212	853275	5.000
179)$Terphenyl-d14	(5)	15.765	244	30960	0.241

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on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

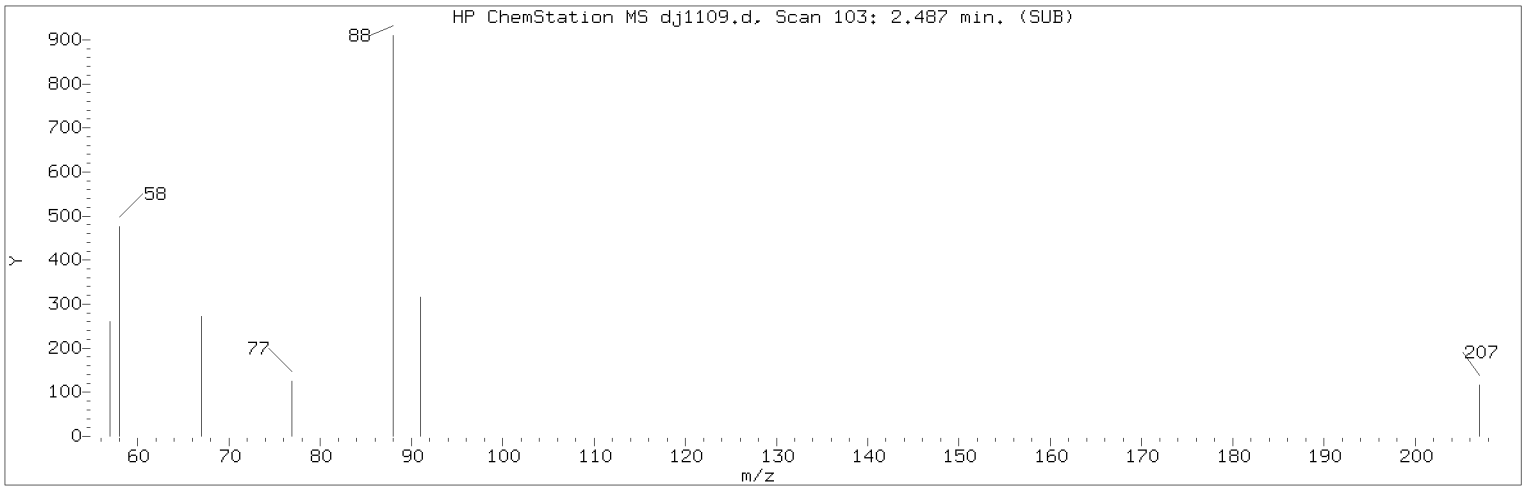
Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.004	225	2093	0.081
185) Chlorobenzilate	(5)	16.091	139	4936	0.087
187) 3,3'-Dimethylbenzidine	(5)	16.563	212	10788	0.089
188) Butylbenzylphthalate	(5)	16.616	149	8023	0.094
191) 2-Acetylaminofluorene	(5)	16.971	181	4252	0.056
193) 3,3'-Dichlorobenzidine	(5)	17.484	252	5910	0.087
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.508	231	2815	0.080
199) bis(2-Ethylhexyl)phthalate	(5)	17.677	149	11001	0.087
203) 6-Methylchrysene	(5)	18.347	242	12918	0.102
205) Di-n-octylphthalate	(6)	18.837	149	15100	0.070
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.332	256	6741	0.093
213)*Perylene-d12	(6)	19.950	264	724627	5.000
215) 3-Methylcholanthrene	(6)	20.428	268	5304	0.089
217) Dibenz(a,h)acridine	(6)	21.238	279	12458	0.092
218) Dibenz(a,j)acridine	(6)	21.302	279	13832	0.096

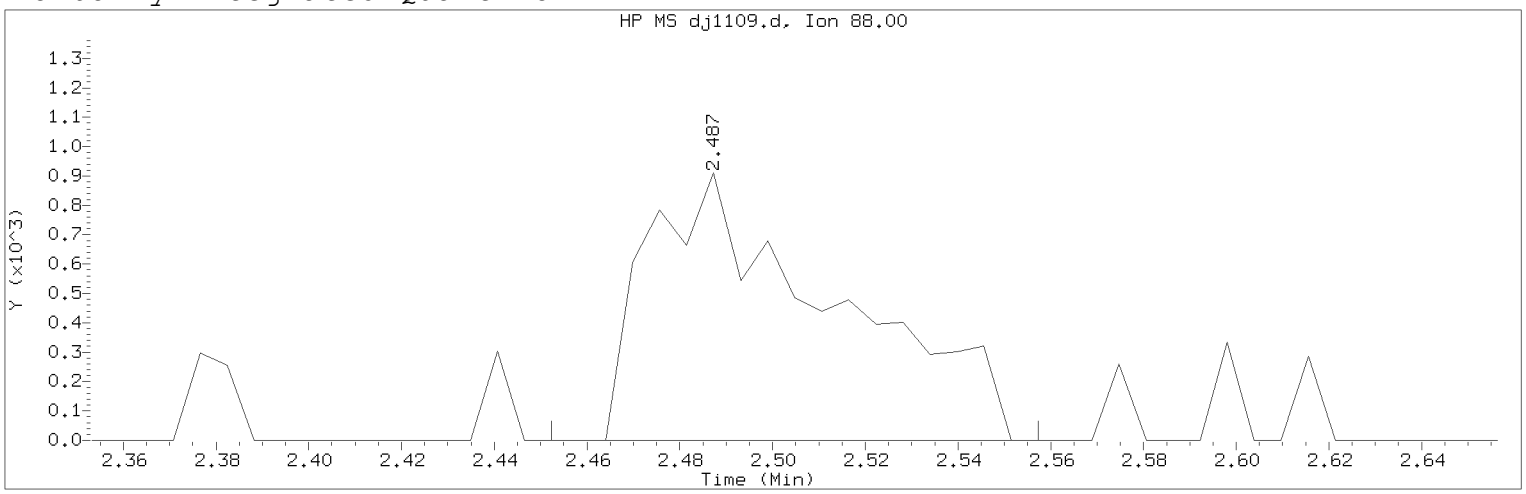
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

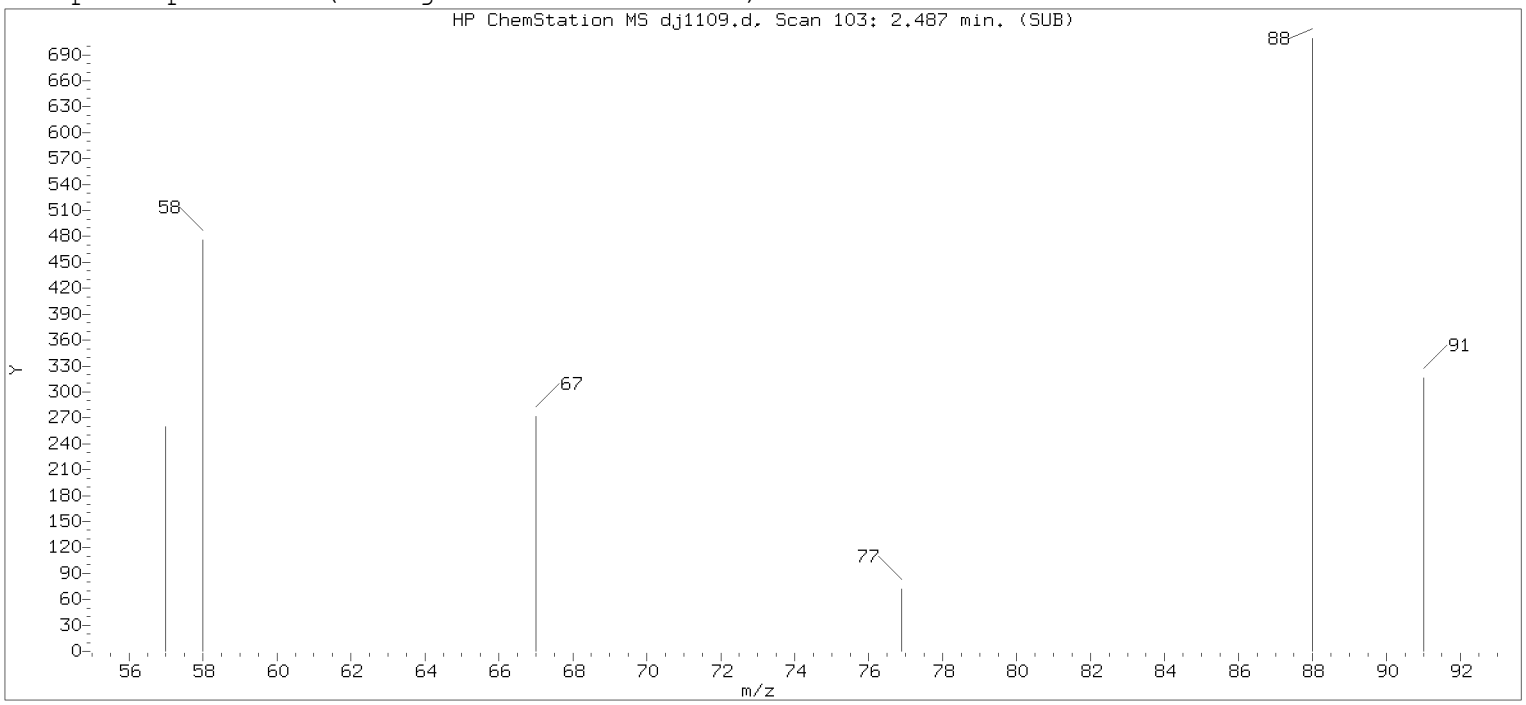
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 103
Retention Time (minutes) : 2.487
Quant Ion : 88.00
Area (flag) : 2553M
On-Column Amount (ng/ul) : 0.0998
Integration start scan : 96 Integration stop scan: 114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

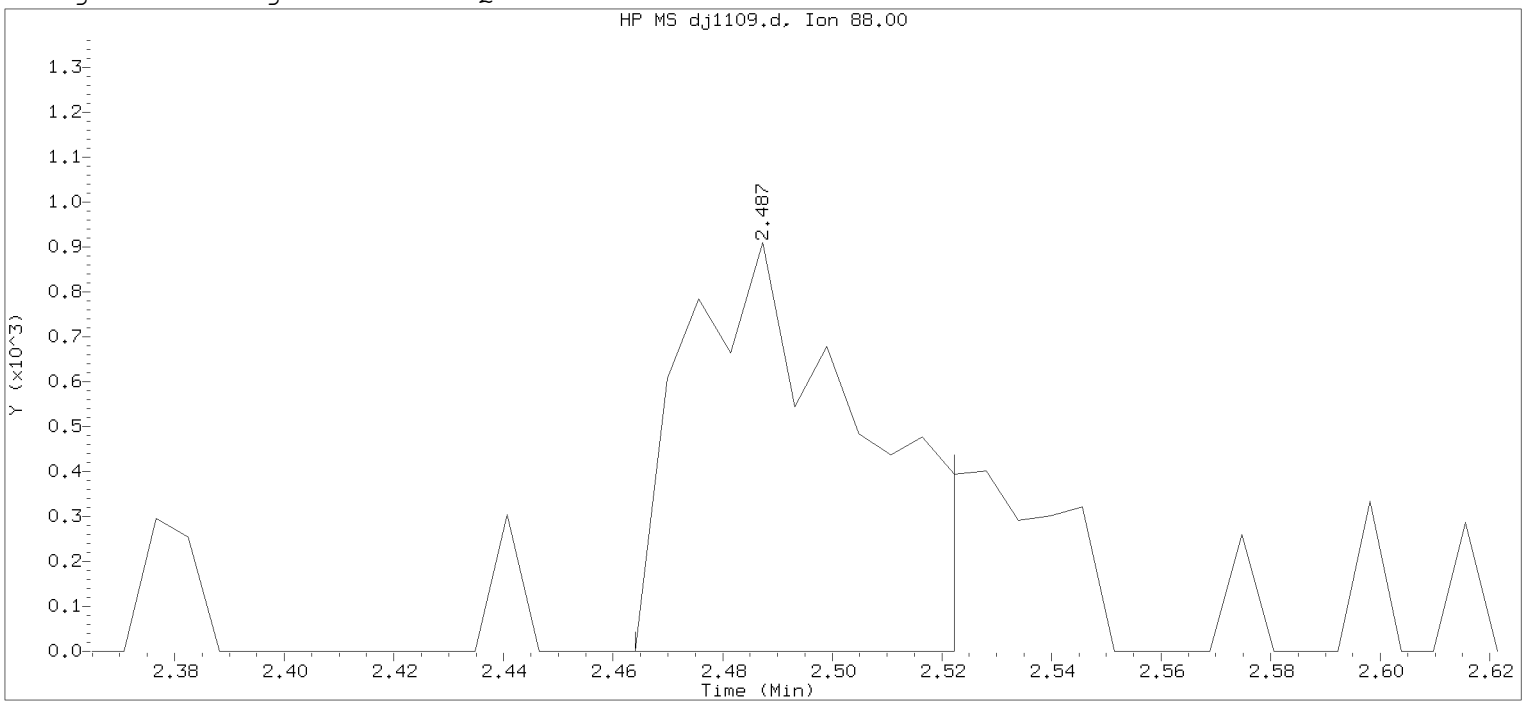
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

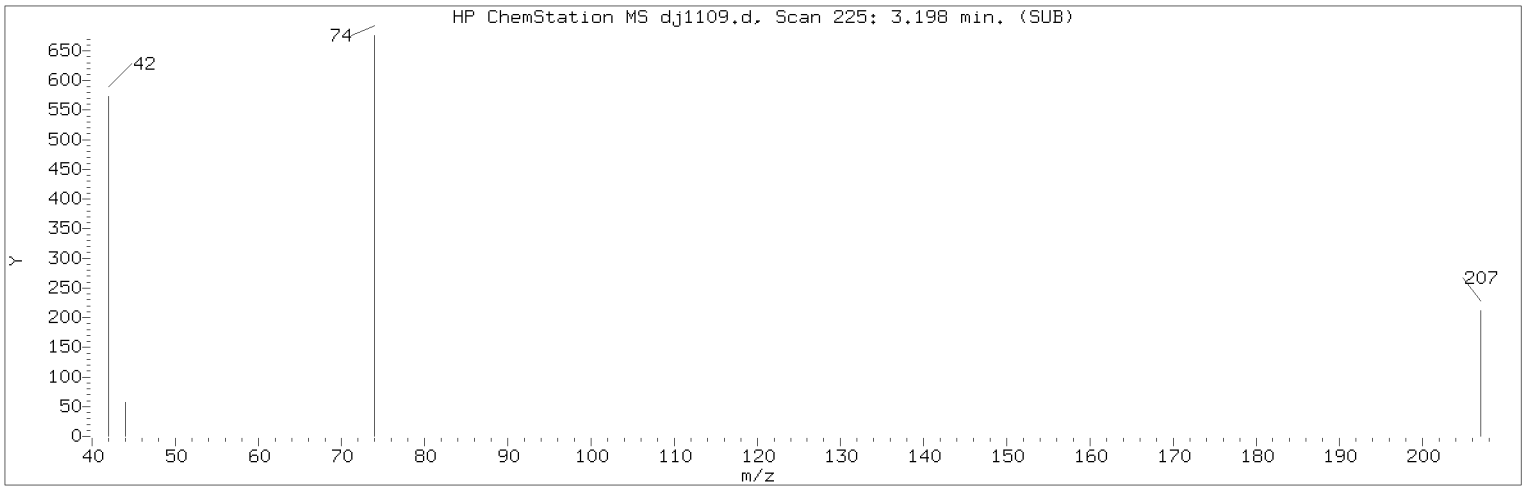
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

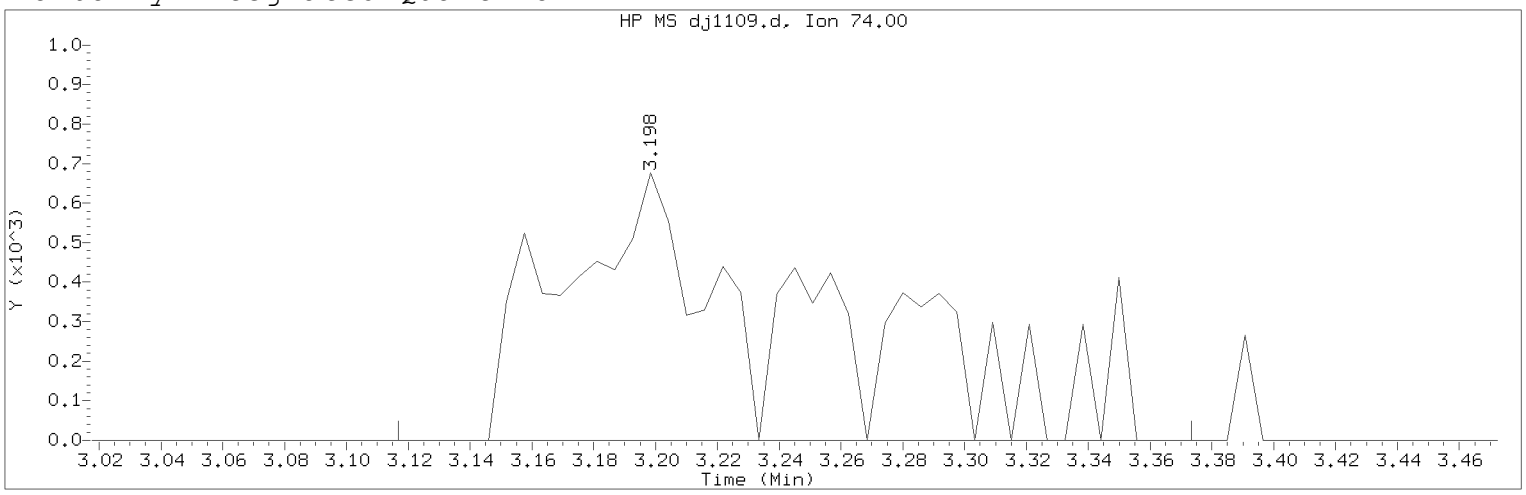
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 103		
Retention Time (minutes)	: 2.487		
Quant Ion	: 88.00		
Area	: 2024		
On-column Amount (ng/ul)	: 0.0791		
Integration start scan	: 98	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

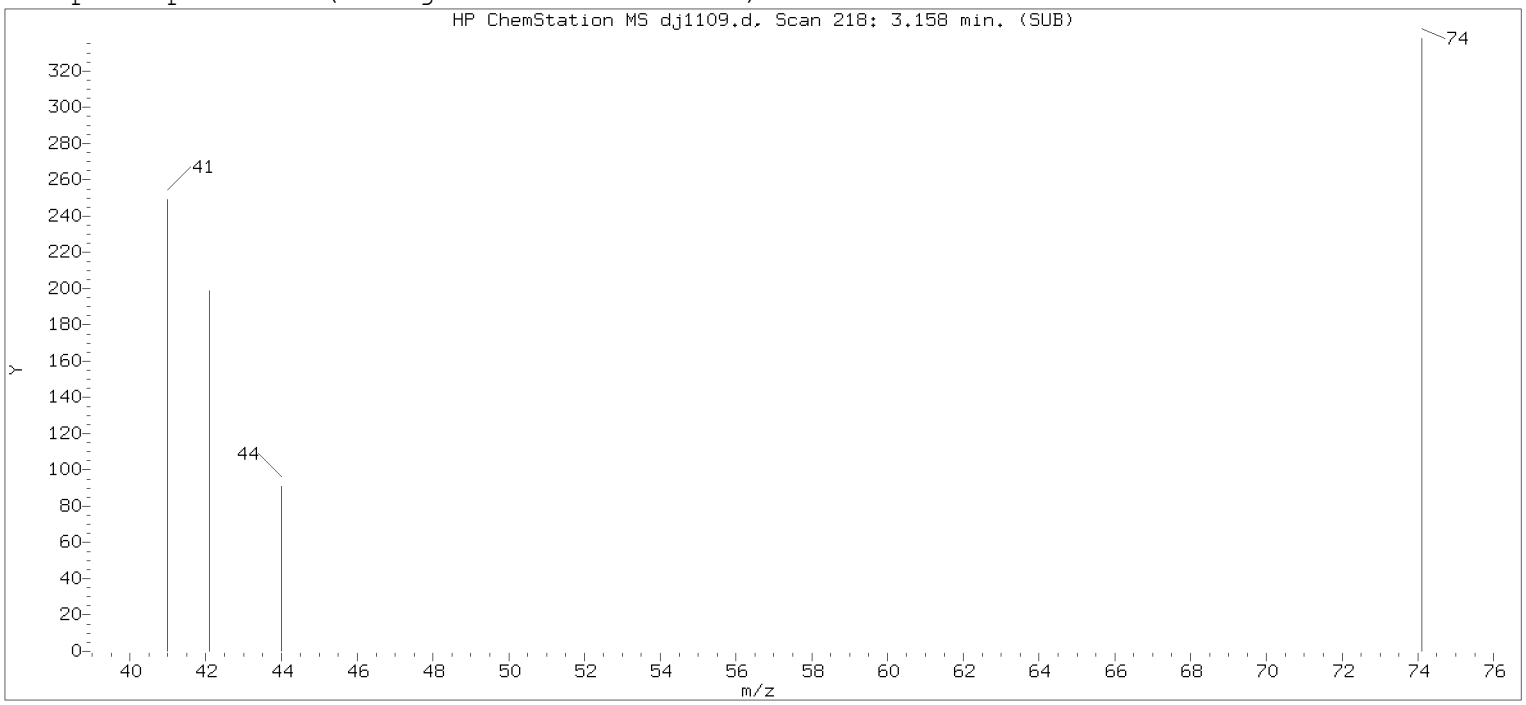
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 225
Retention Time (minutes) : 3.198
Quant Ion : 74.00
Area (flag) : 3850M
On-Column Amount (ng/ul) : 0.0955
Integration start scan : 210 Integration stop scan: 254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

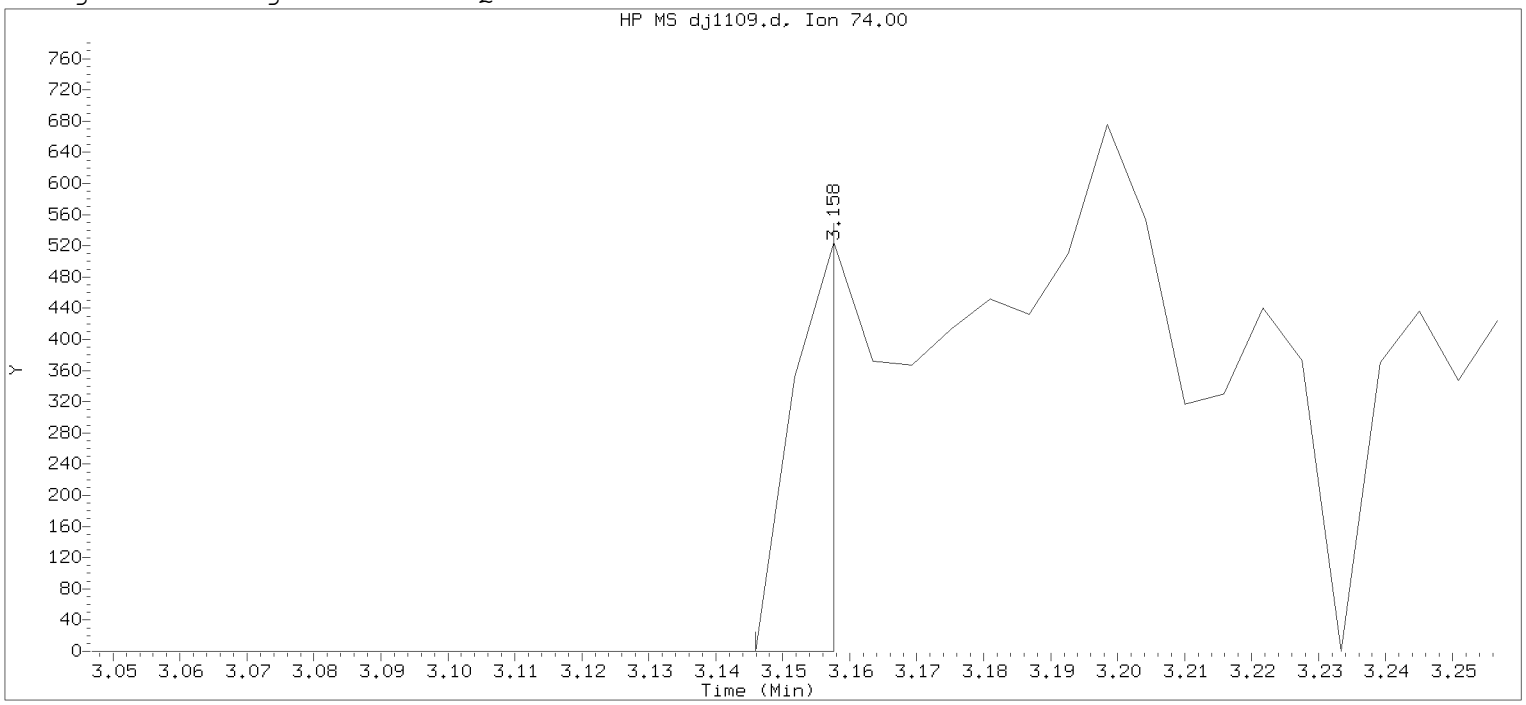
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

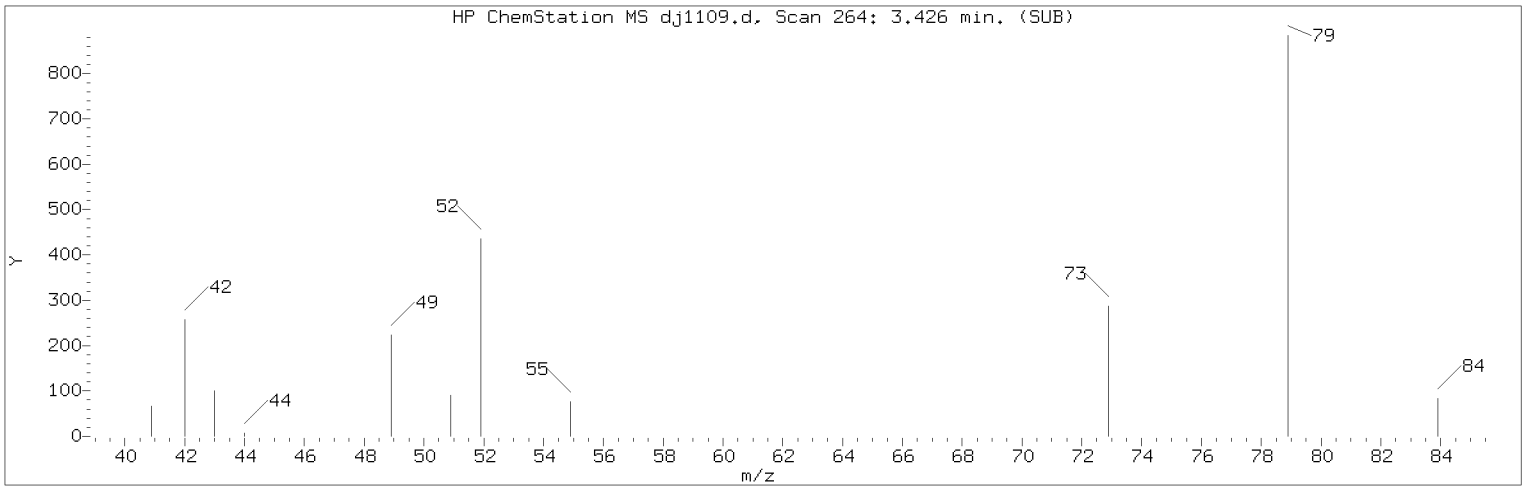
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

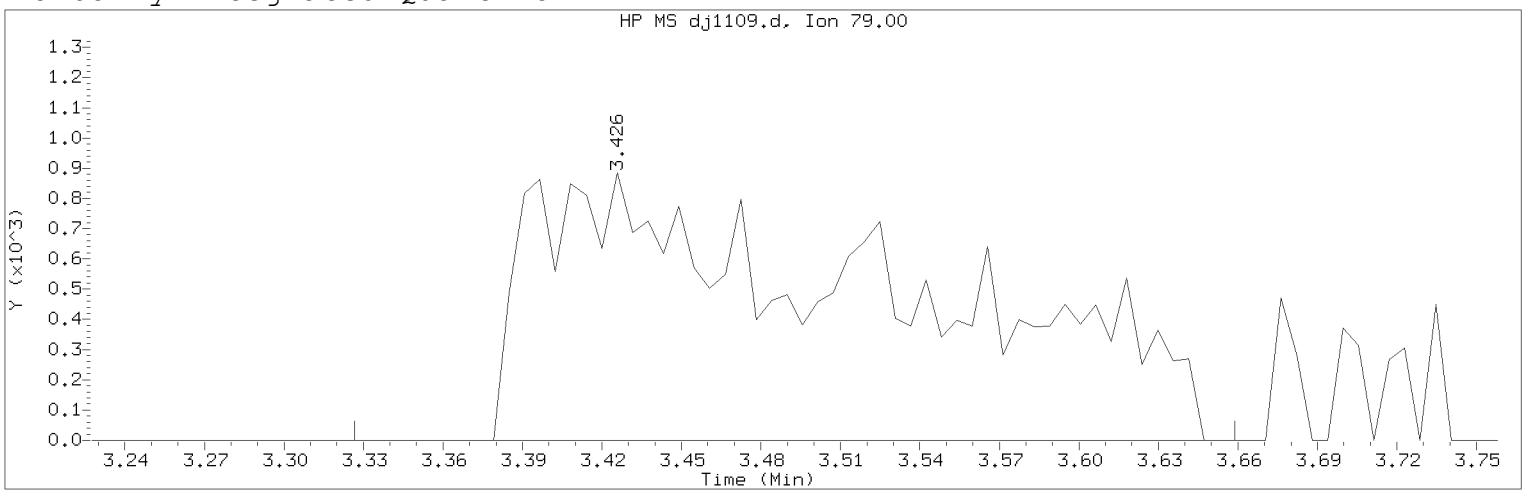
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 218		
Retention Time (minutes)	: 3.158		
Quant Ion	: 74.00		
Area	: 214		
On-column Amount (ng/ul)	: 0.0053		
Integration start scan	: 215	Integration stop scan:	217
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

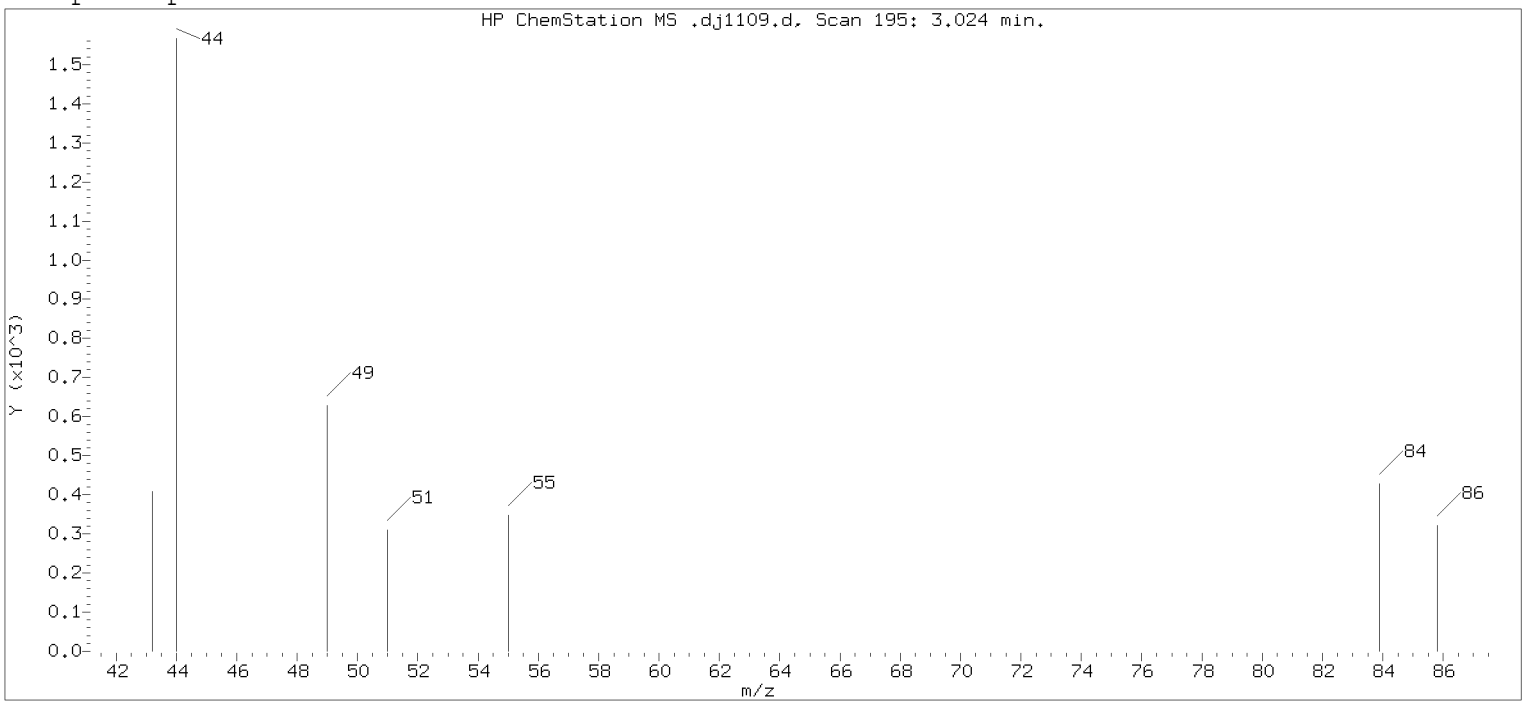
Compound Number : 5
Compound Name : Pyridine
Scan Number : 264
Retention Time (minutes) : 3.426
Quant Ion : 79.00
Area (flag) : 8245M
On-Column Amount (ng/ul) : 0.1269
Integration start scan : 246 Integration stop scan: 303
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

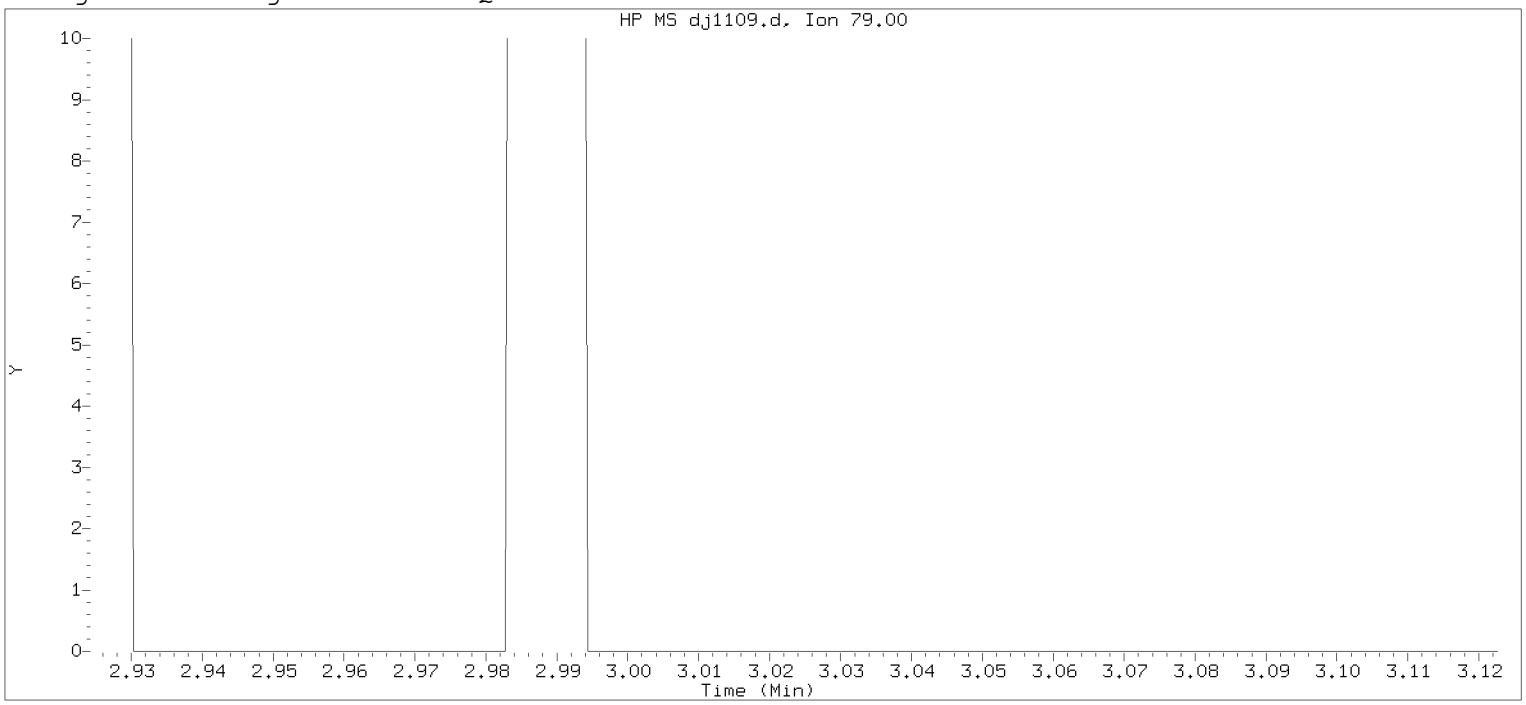
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

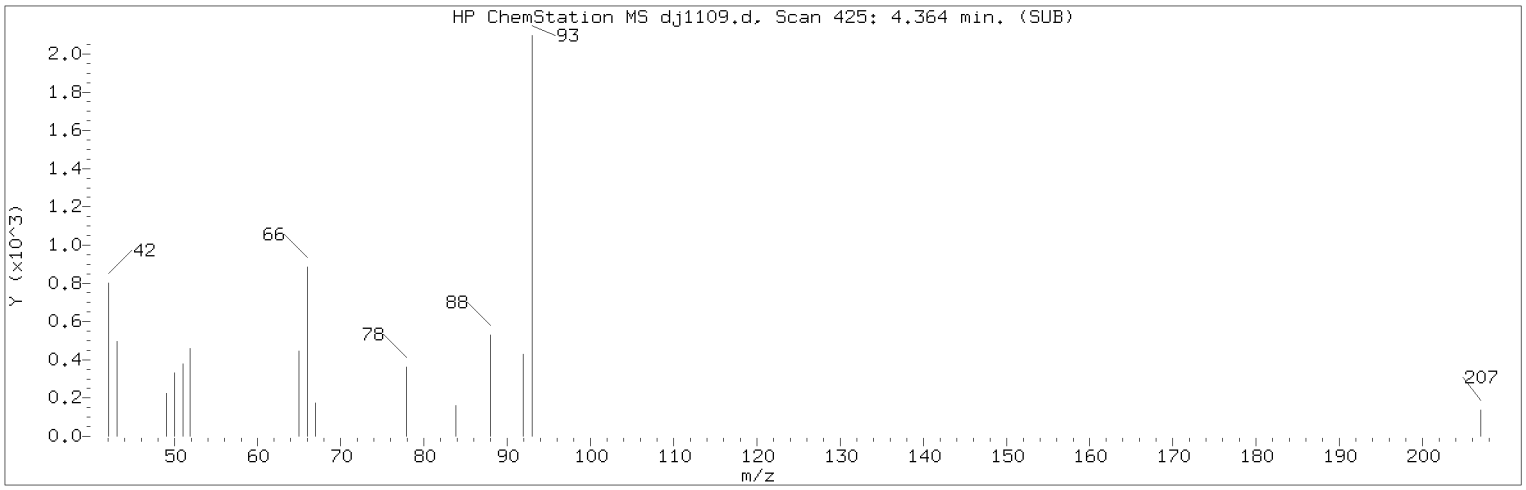
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

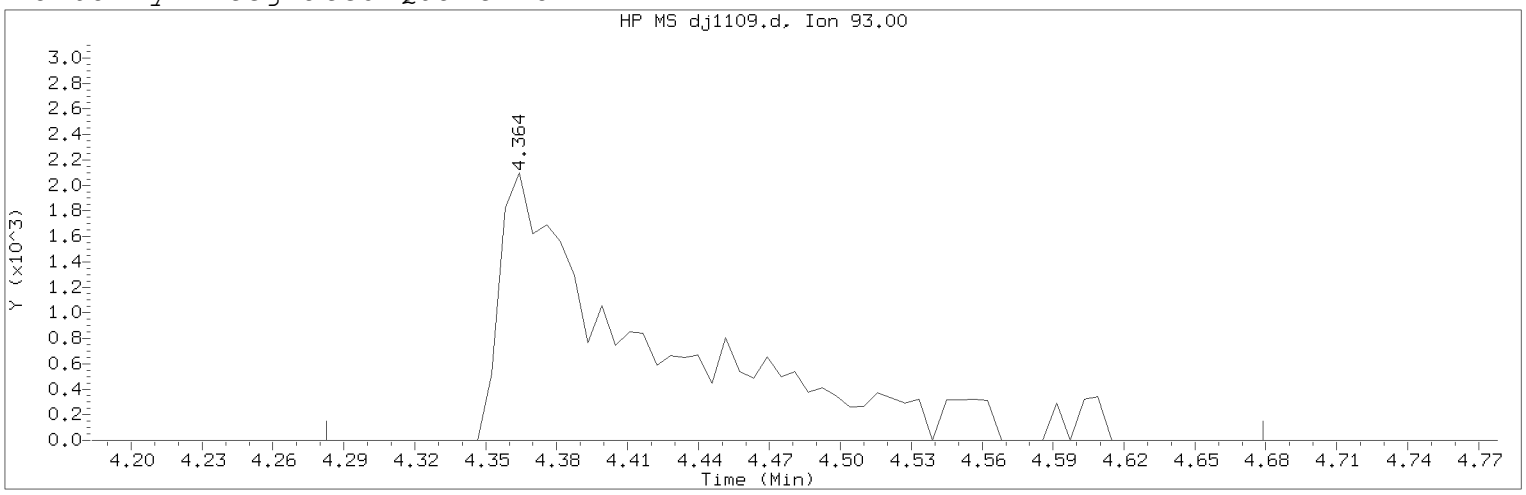
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.023
Quant Ion : 79.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used on 10/23/2017.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

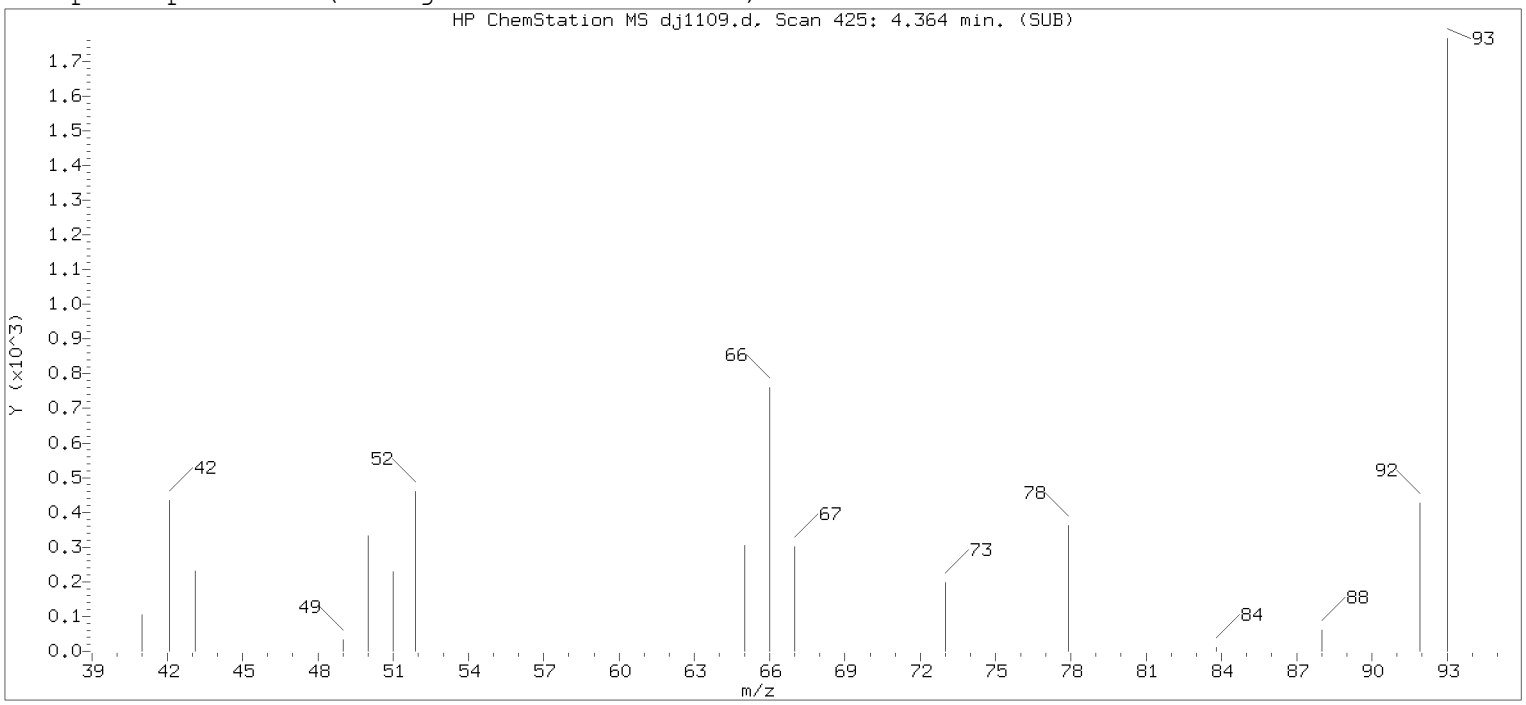
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 425
Retention Time (minutes) : 4.364
Quant Ion : 93.00
Area (flag) : 9306M
On-Column Amount (ng/ul) : 0.1346
Integration start scan : 410 Integration stop scan: 478
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

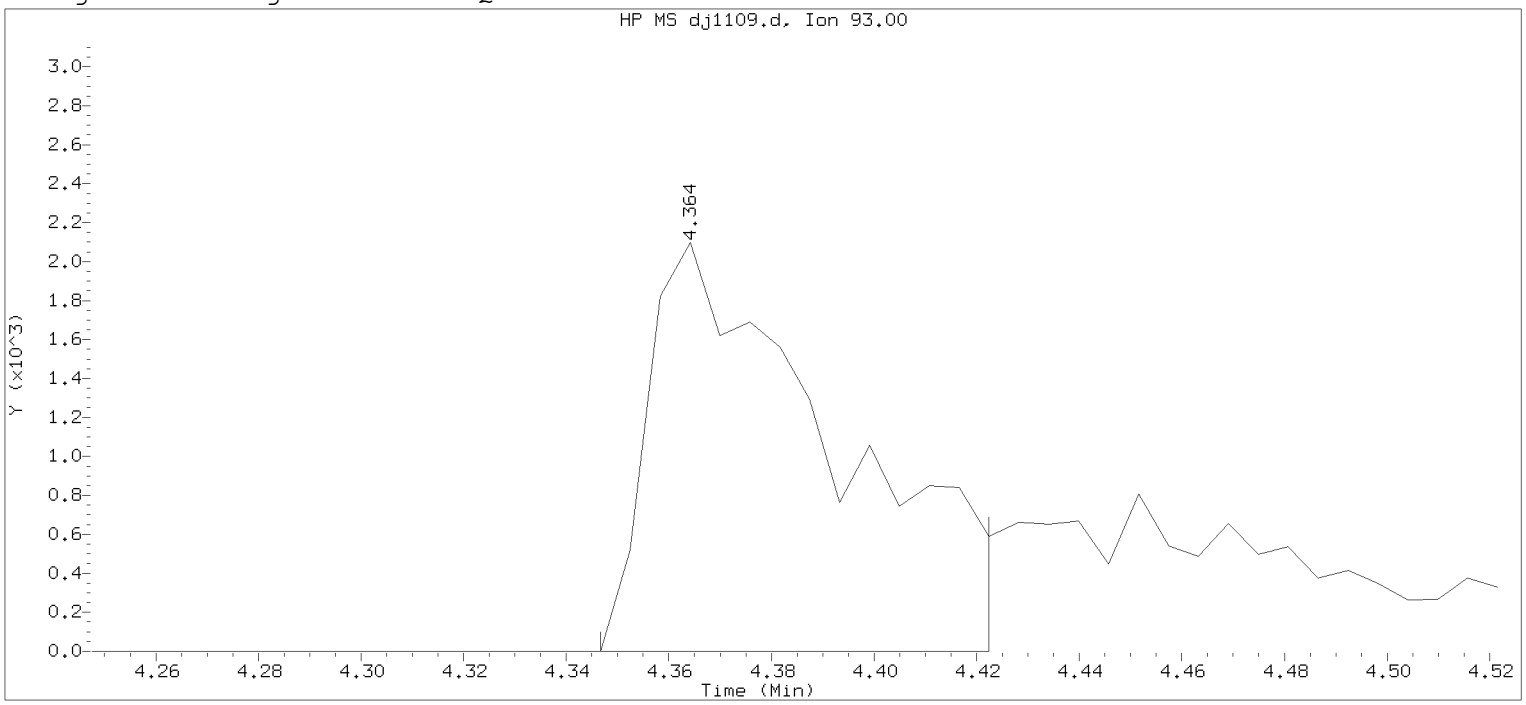
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

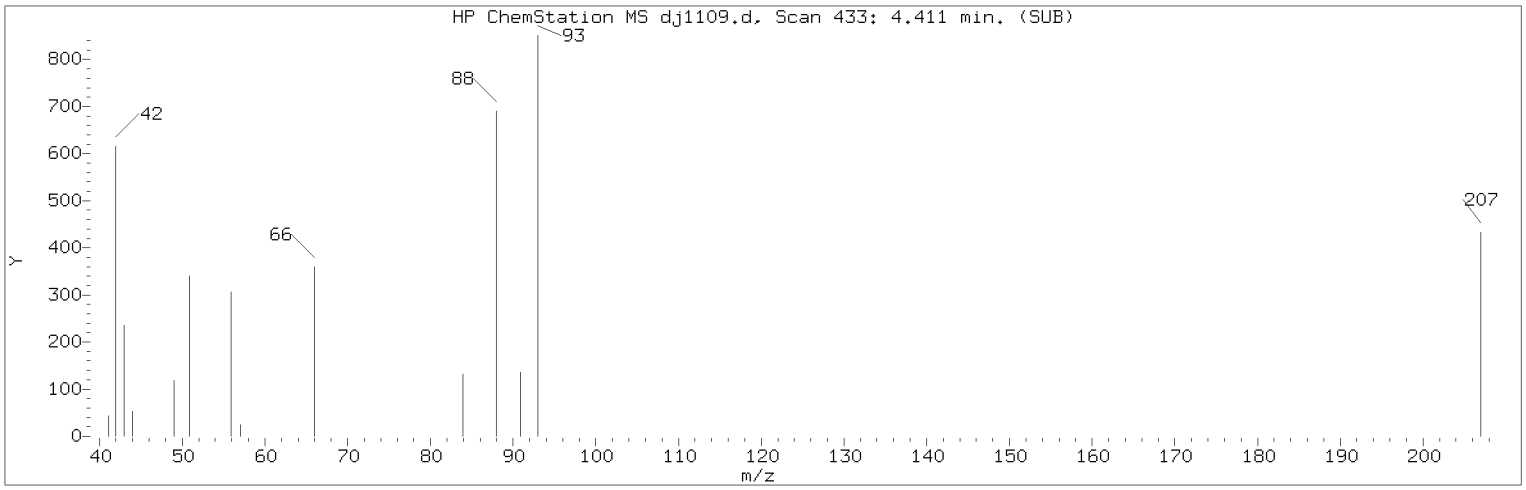
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

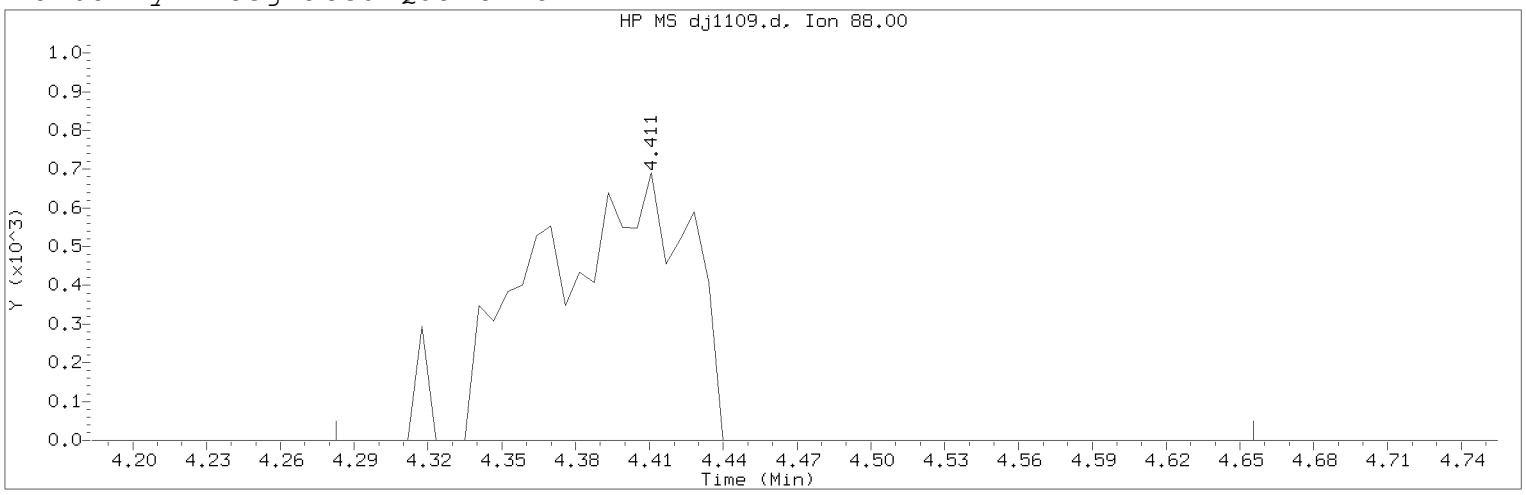
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 425		
Retention Time (minutes)	: 4.364		
Quant Ion	: 93.00		
Area	: 5298		
On-column Amount (ng/ul)	: 0.0767		
Integration start scan	: 421	Integration stop scan:	434
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

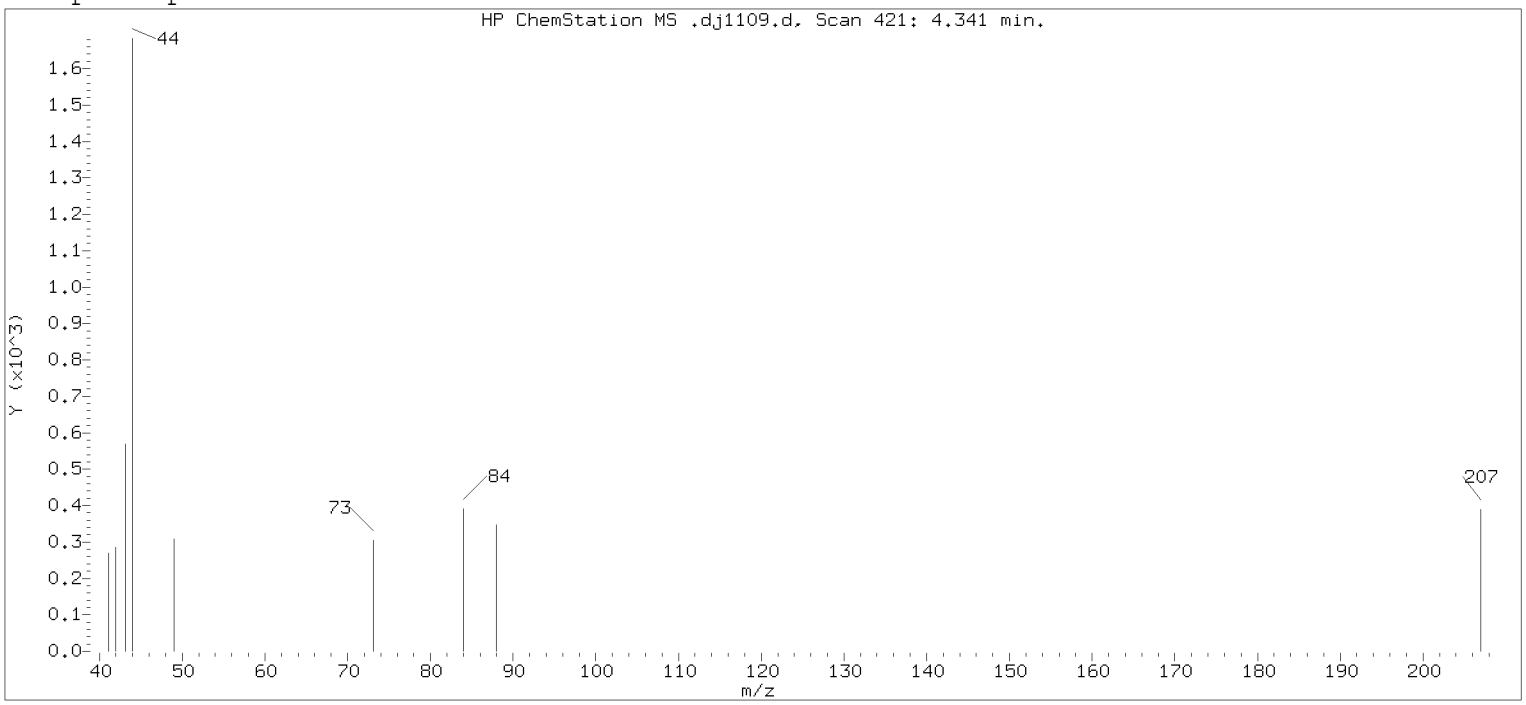
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 433
Retention Time (minutes) : 4.411
Quant Ion : 88.00
Area (flag) : 2937M
On-Column Amount (ng/ul) : 0.1000
Integration start scan : 410 Integration stop scan: 474
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

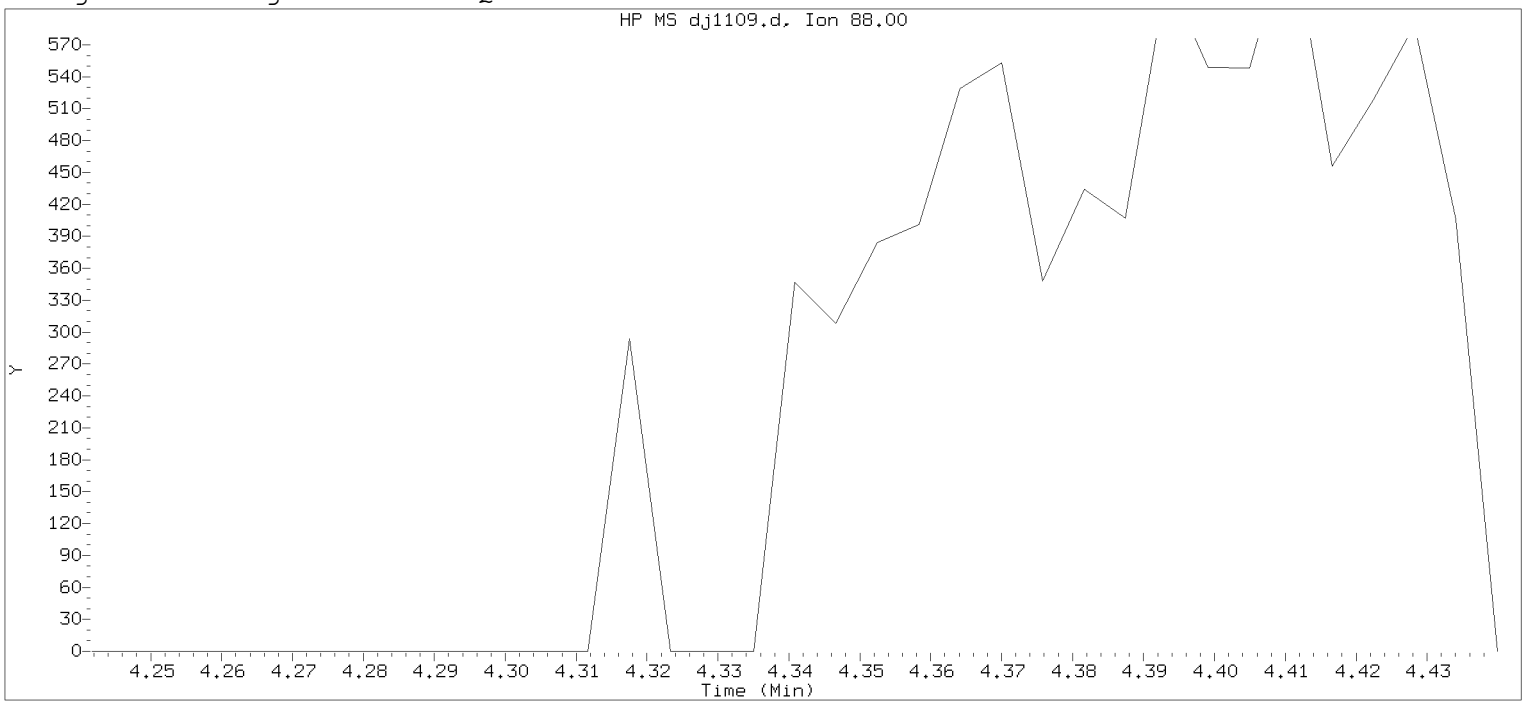
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

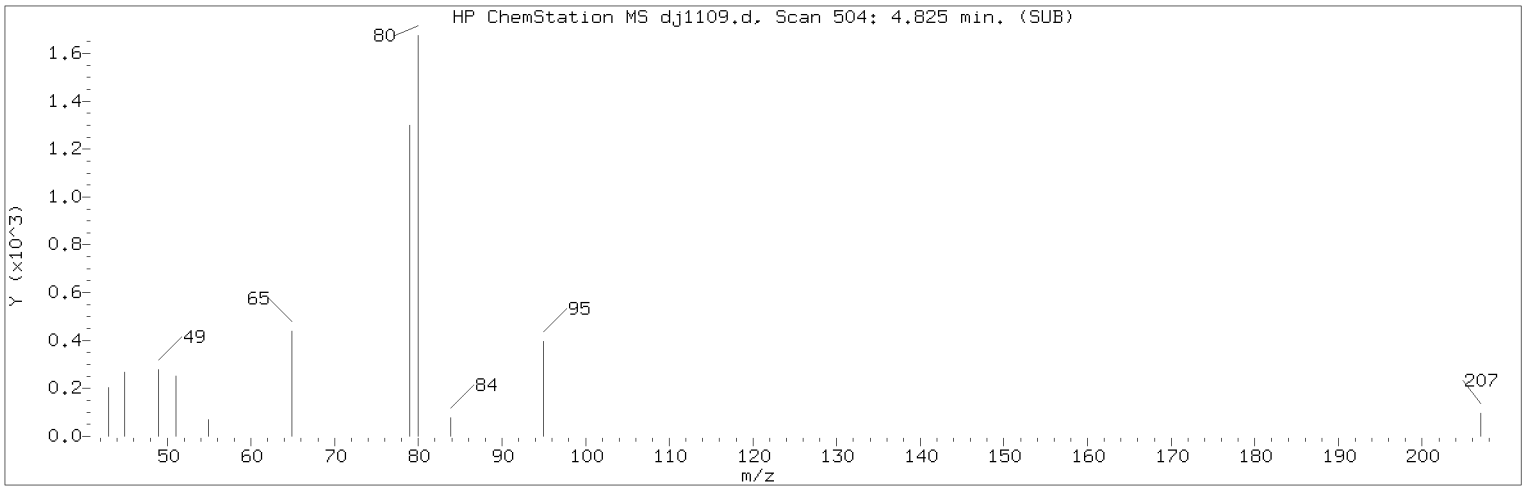
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

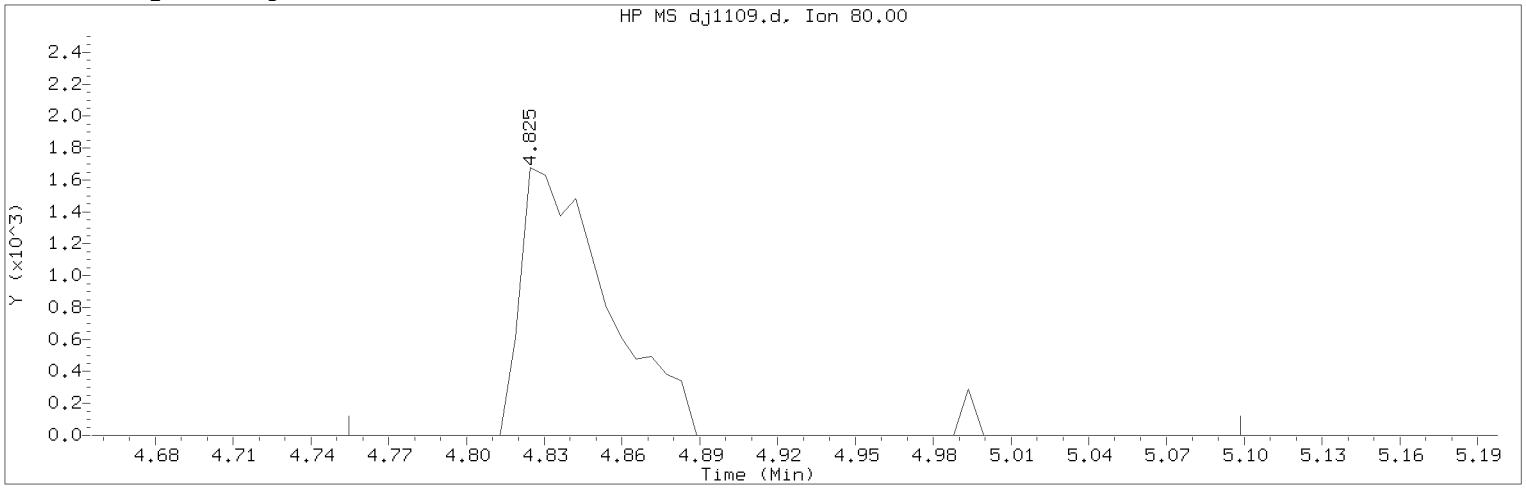
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.341
Quant Ion : 88.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

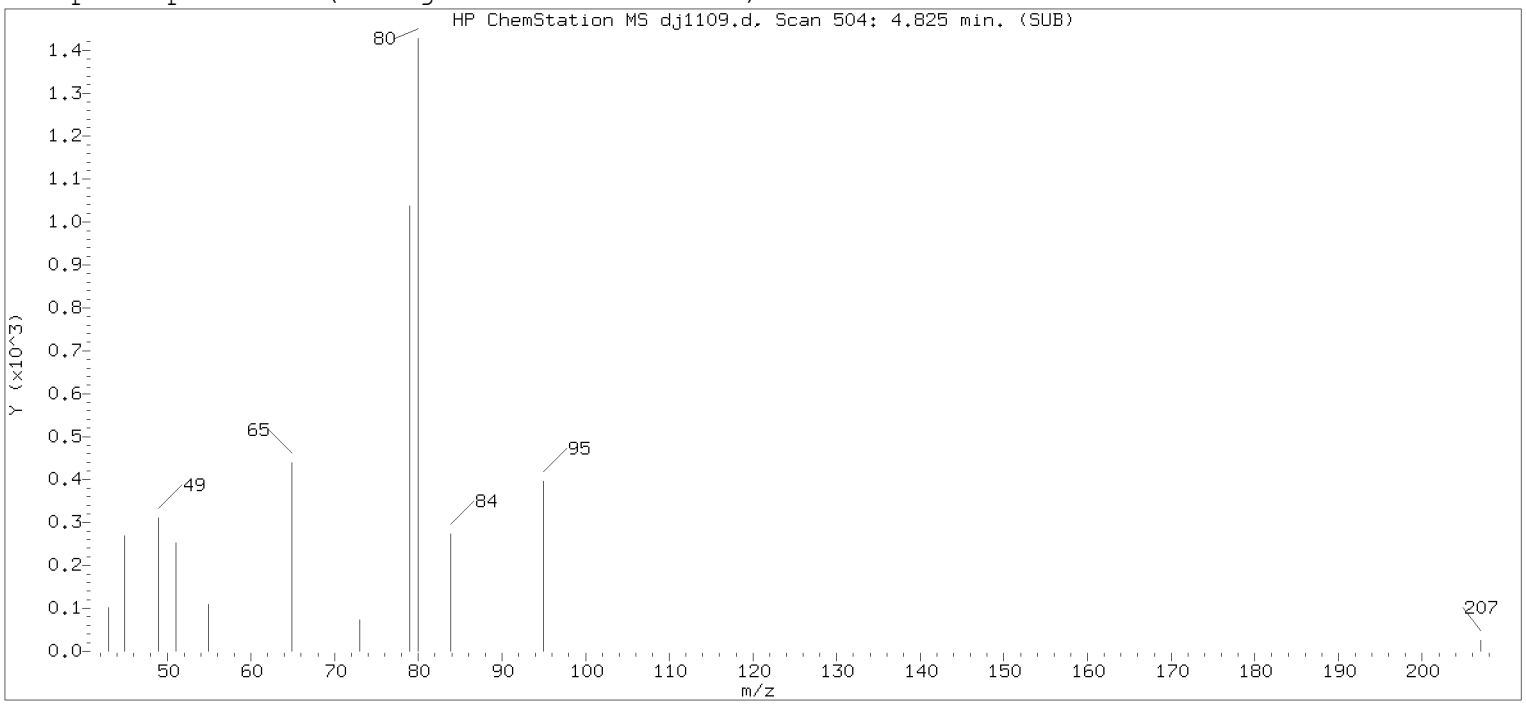
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 504
Retention Time (minutes) : 4.825
Quant Ion : 80.00
Area (flag) : 3961M
On-Column Amount (ng/ul) : 0.1265
Integration start scan : 491 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

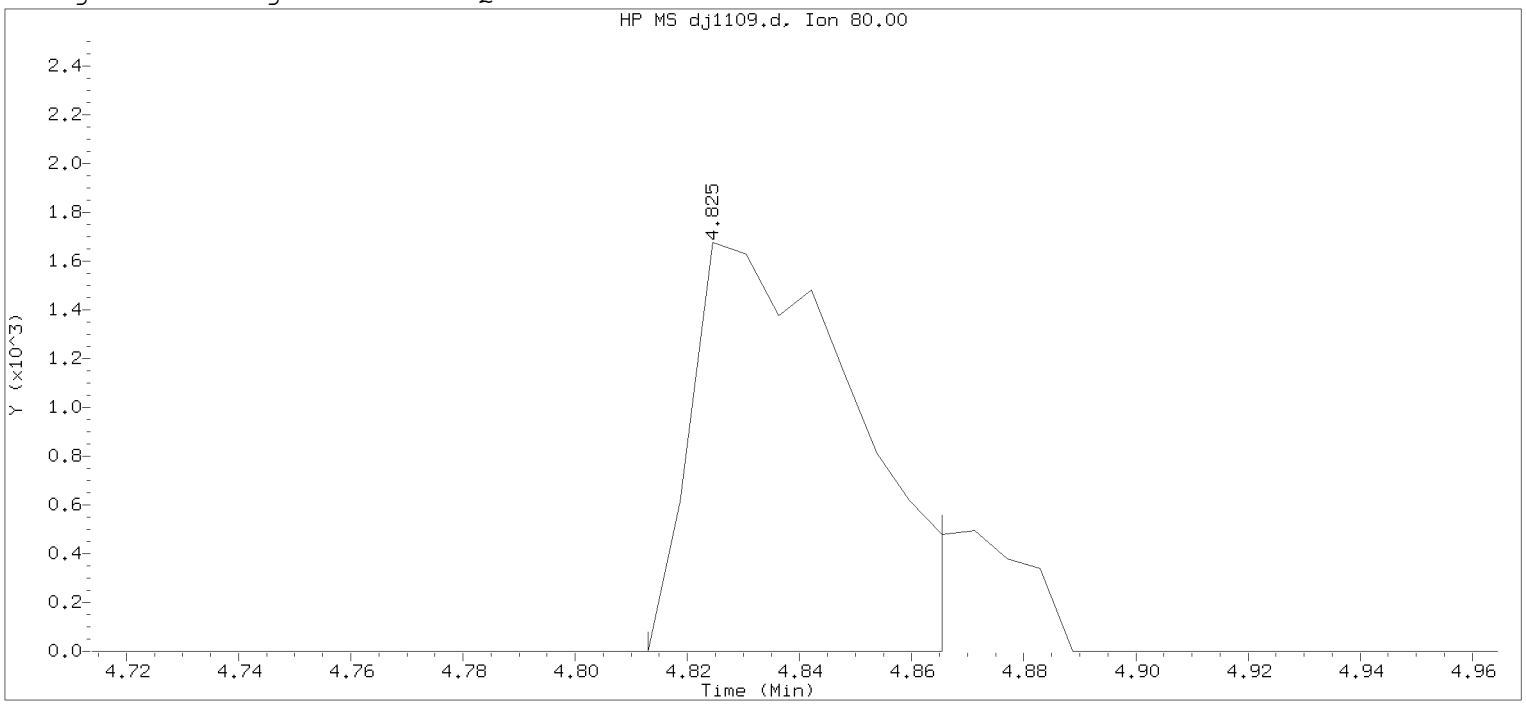
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

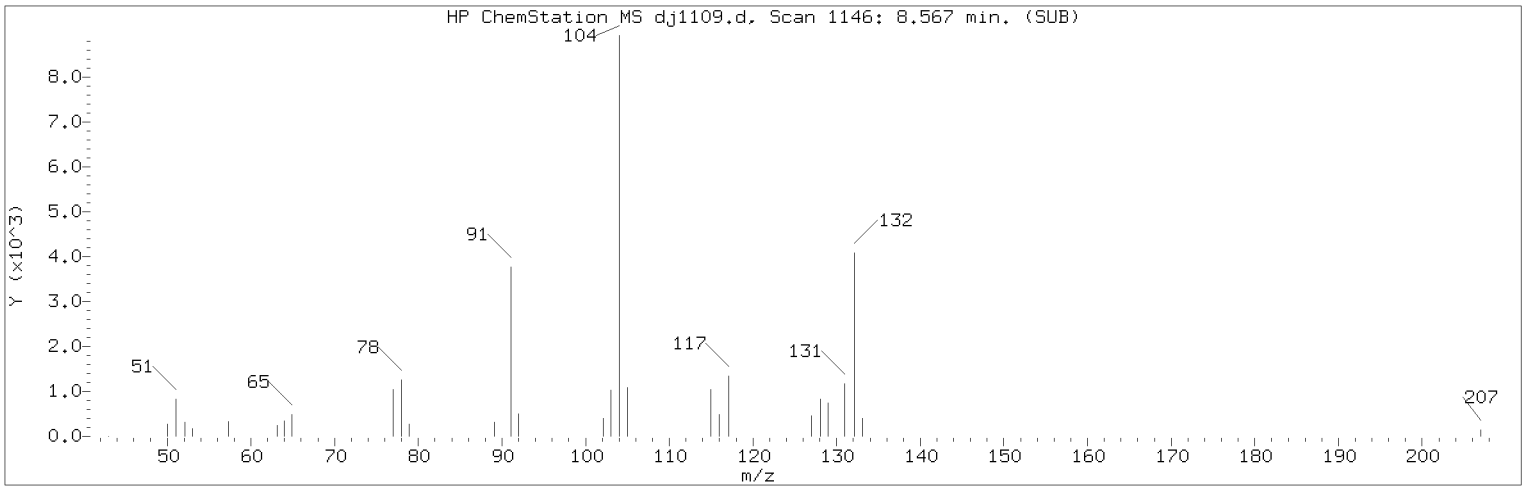
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

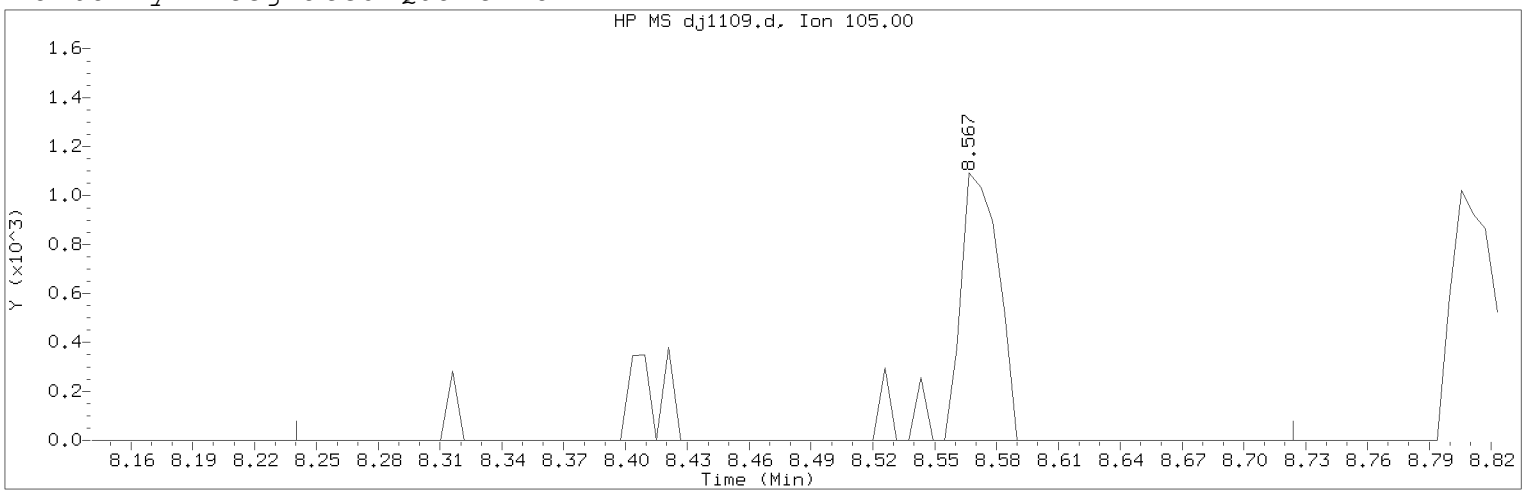
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 504		
Retention Time (minutes)	: 4.825		
Quant Ion	: 80.00		
Area	: 3351		
On-column Amount (ng/ul)	: 0.1070		
Integration start scan	: 501	Integration stop scan:	510
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

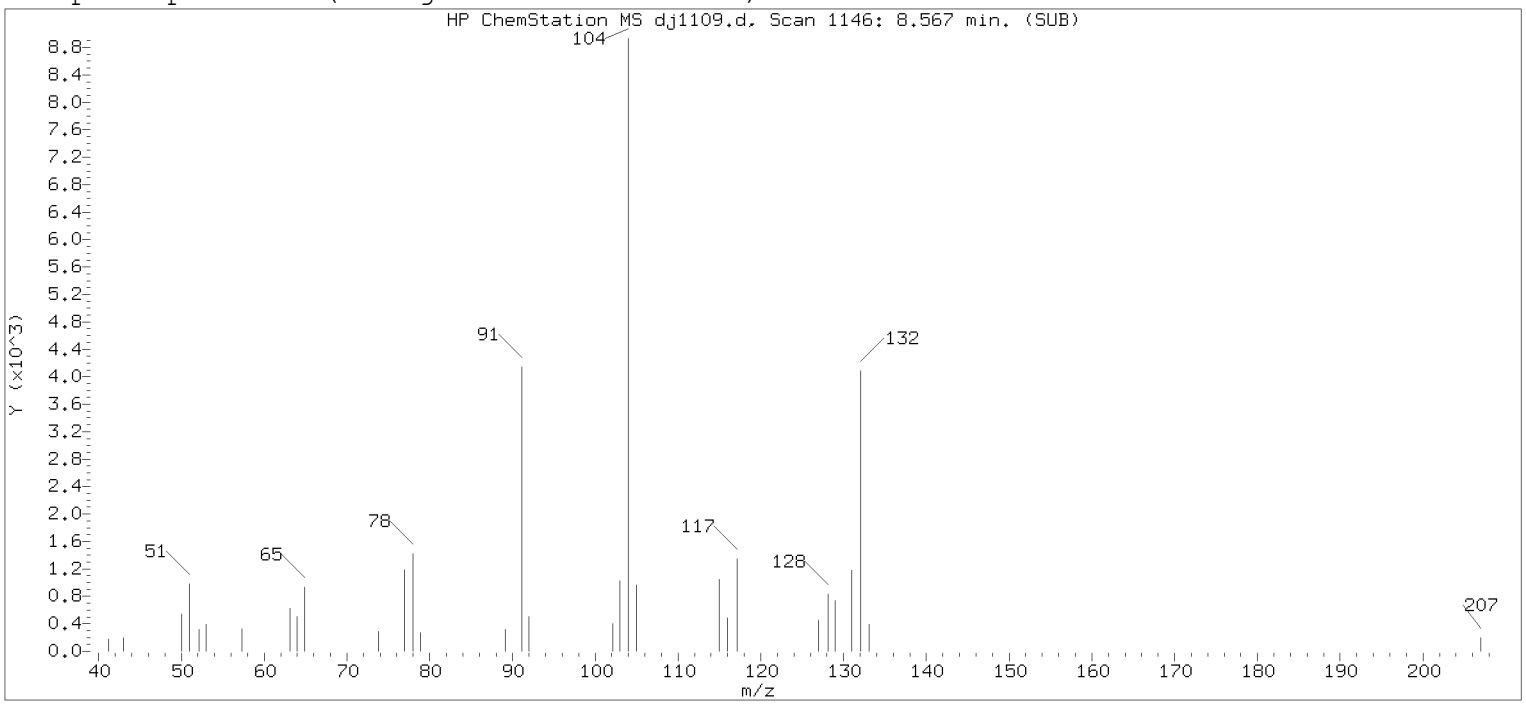
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1146
Retention Time (minutes) : 8.567
Quant Ion : 105.00
Area (flag) : 2035M
On-Column Amount (ng/ul) : 2.9562
Integration start scan : 1089 Integration stop scan: 1172
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

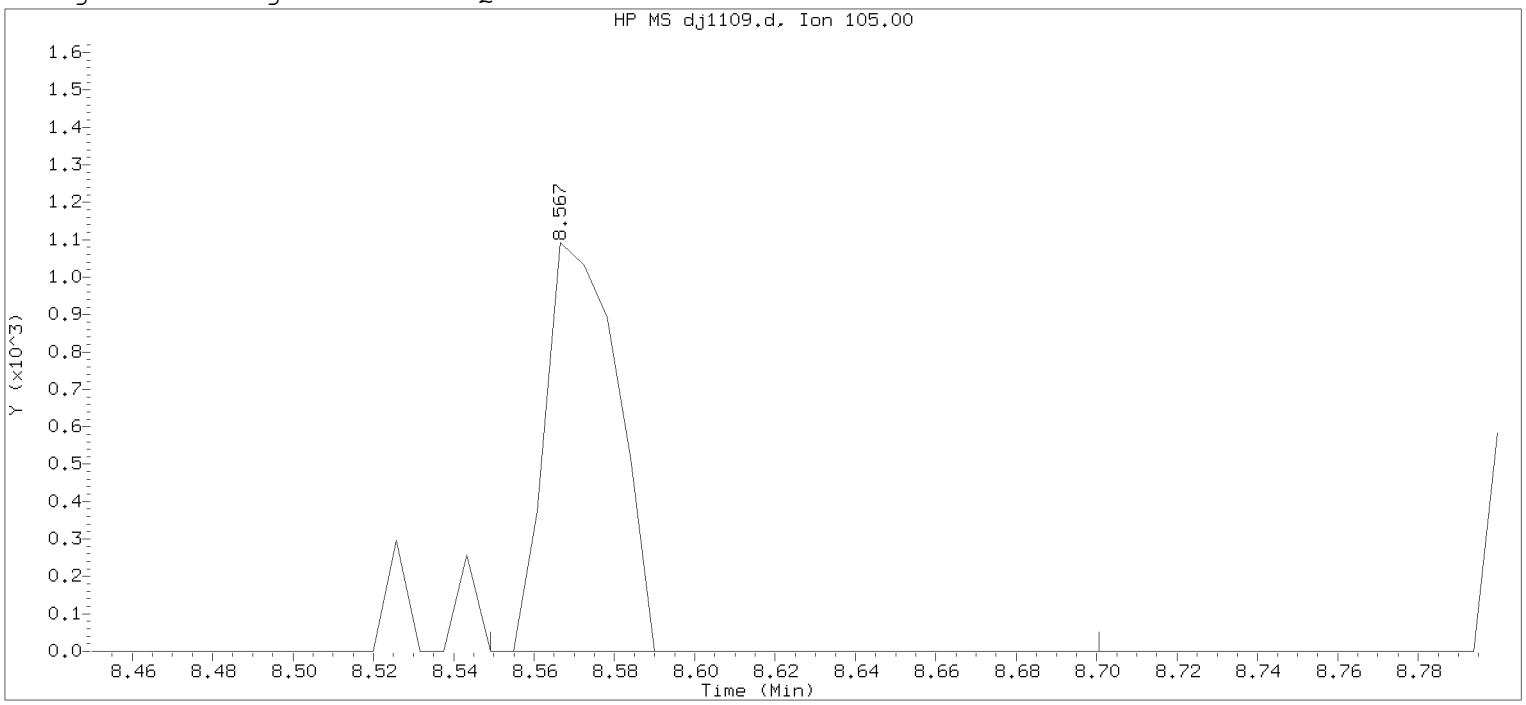
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

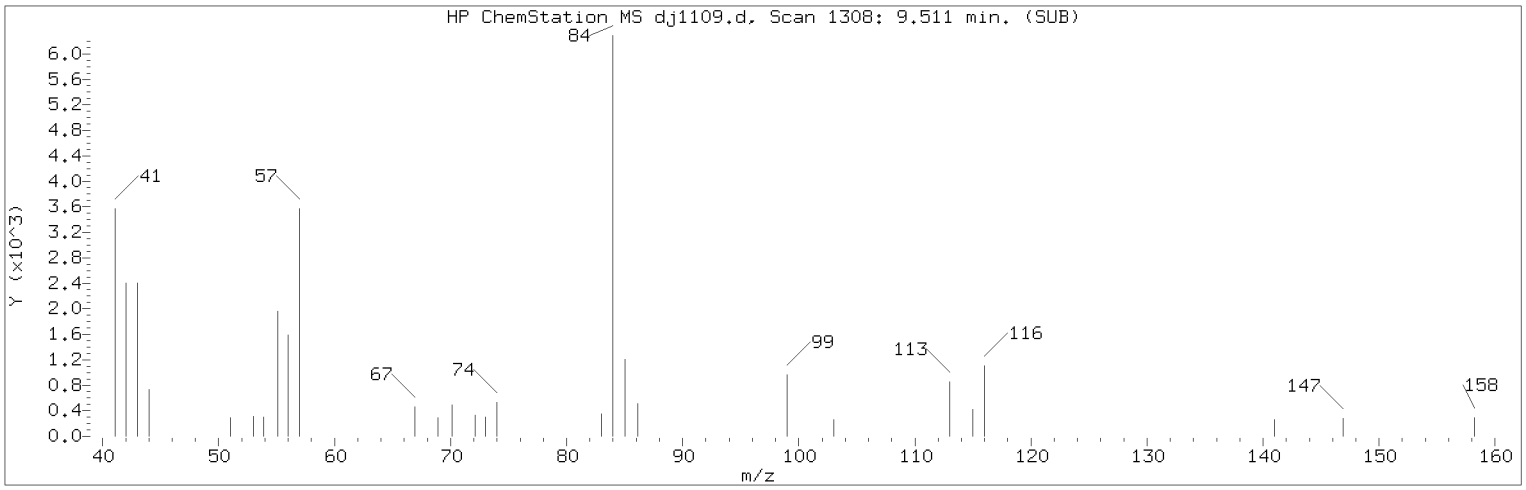
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

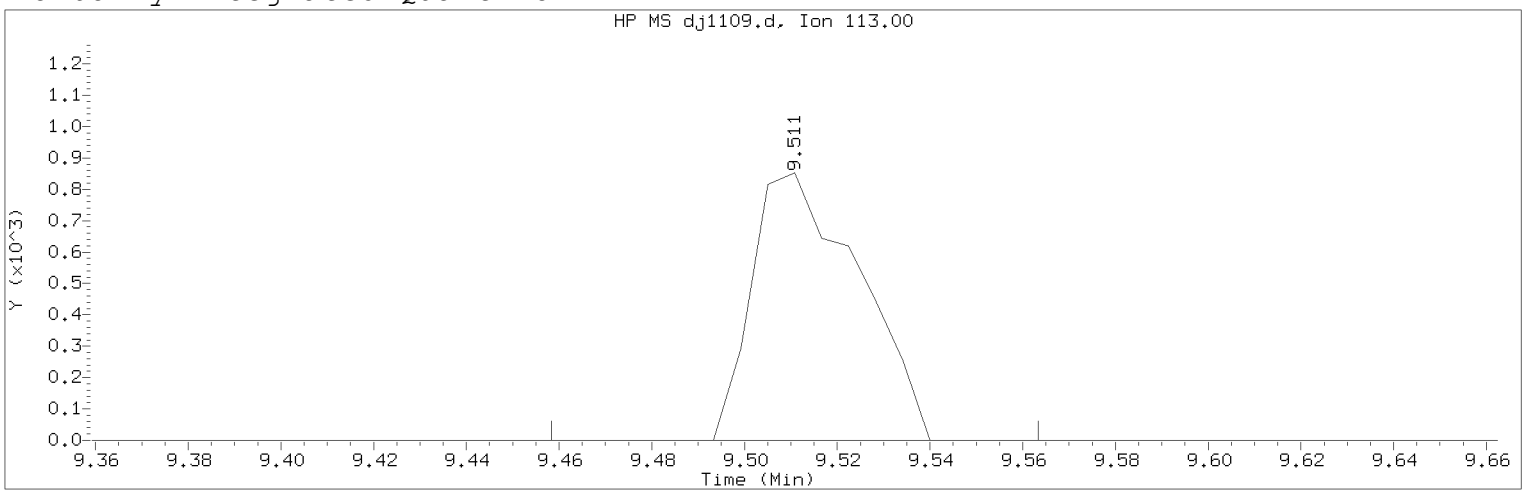
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1146		
Retention Time (minutes)	: 8.567		
Quant Ion	: 105.00		
Area	: 1366		
On-column Amount (ng/ul)	: 2.9454		
Integration start scan	: 1142	Integration stop scan:	1168
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

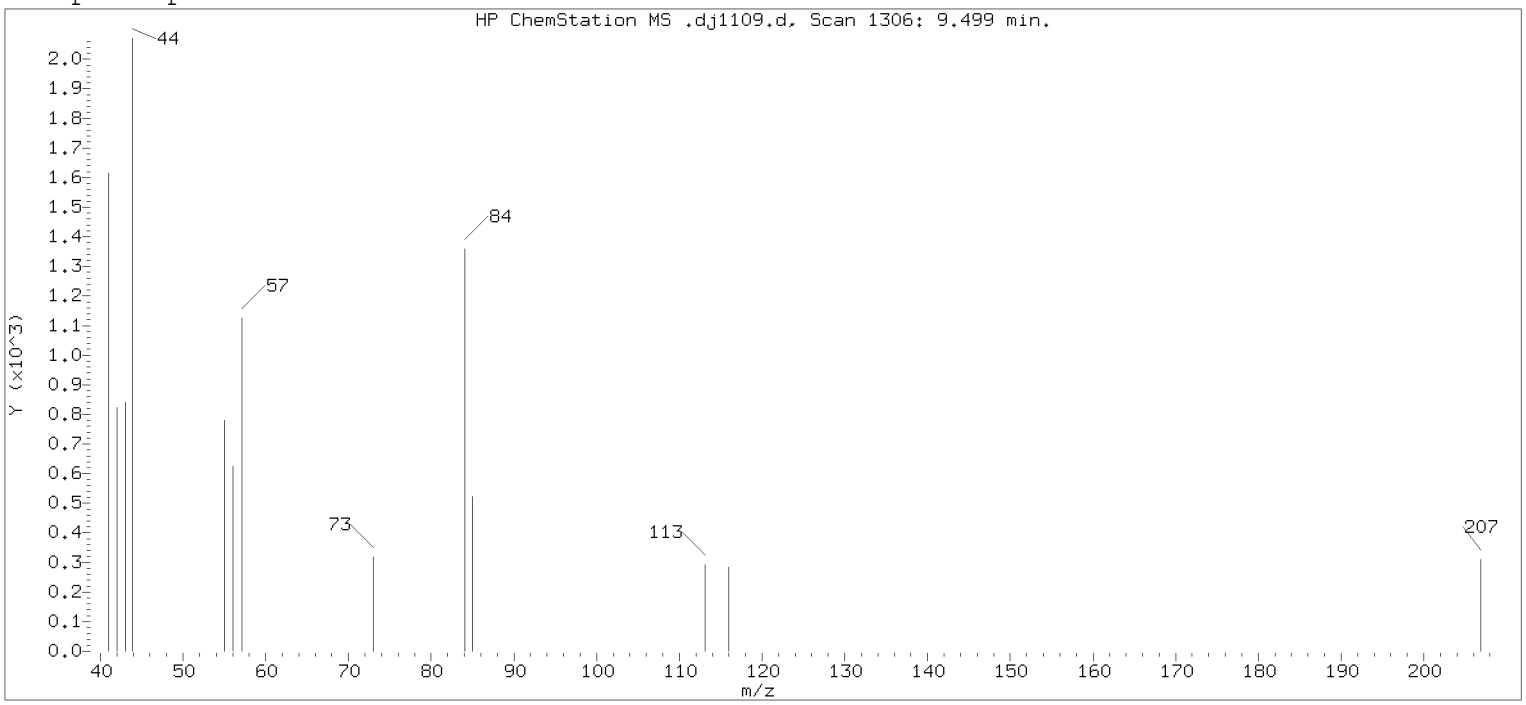
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1308
Retention Time (minutes) : 9.511
Quant Ion : 113.00
Area (flag) : 1370M
On-Column Amount (ng/ul) : 0.0905
Integration start scan : 1298 Integration stop scan: 1316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

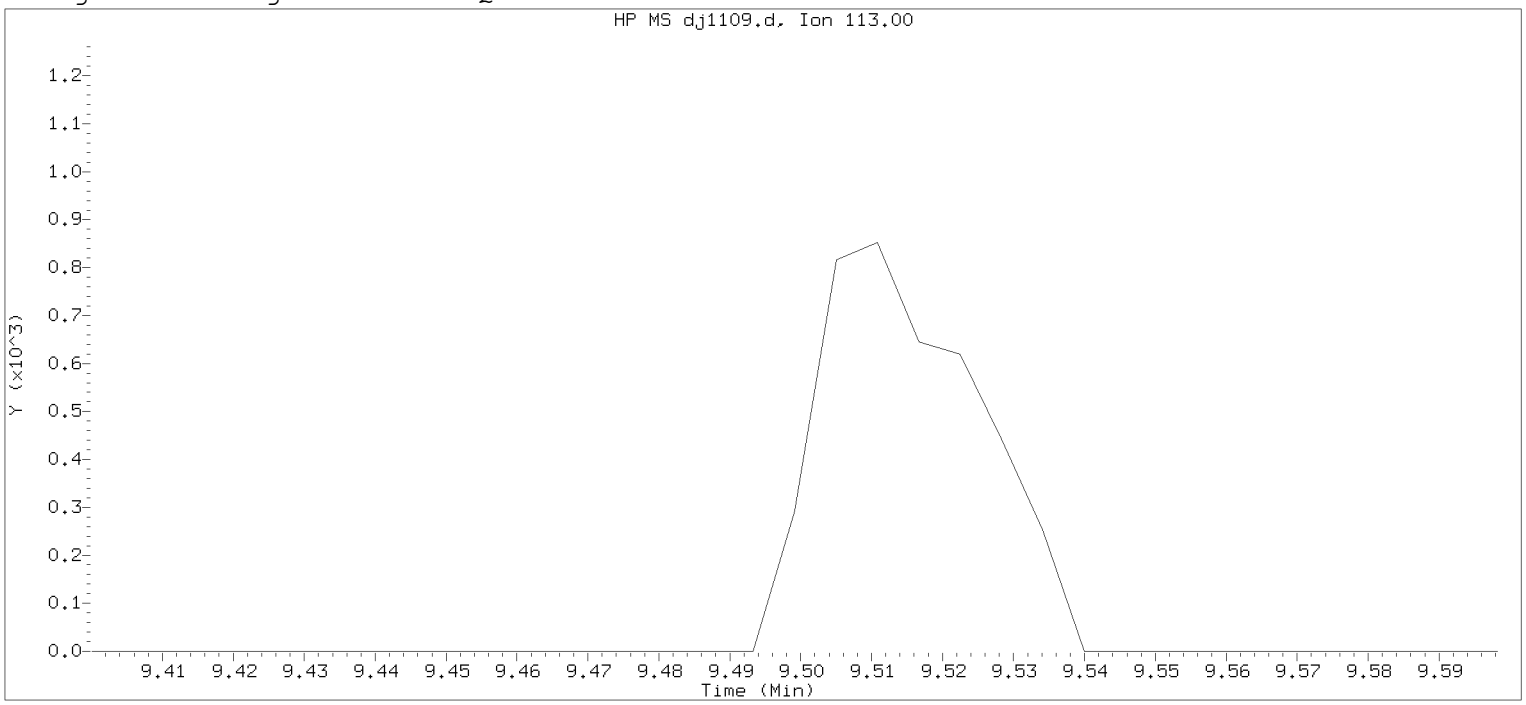
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

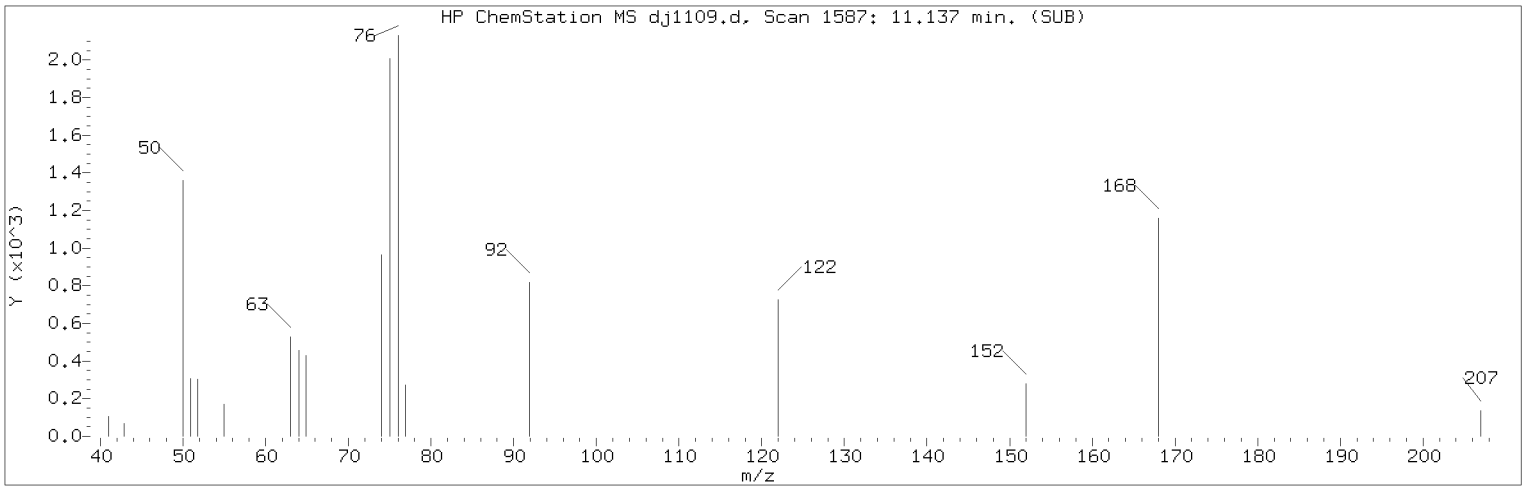
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

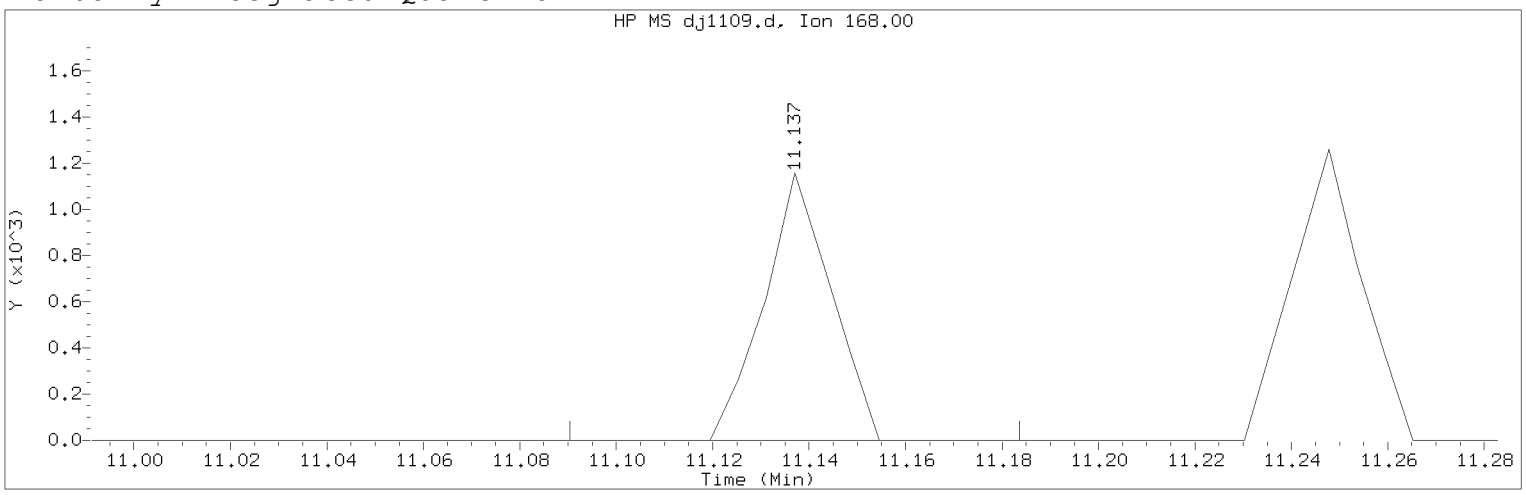
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.499
Quant Ion : 113.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

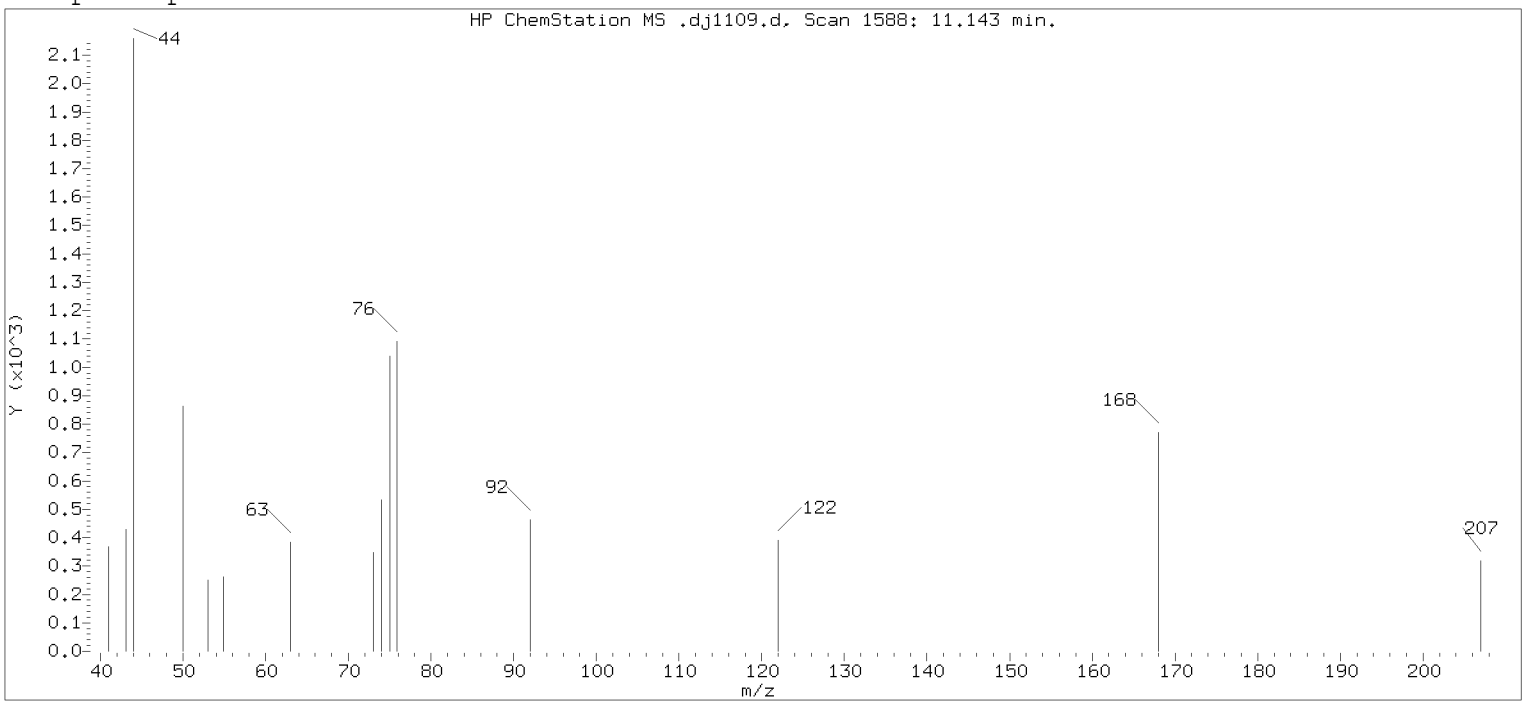
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1587
Retention Time (minutes) : 11.137
Quant Ion : 168.00
Area (flag) : 1113M
On-Column Amount (ng/ul) : 0.0742
Integration start scan : 1578 Integration stop scan: 1594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

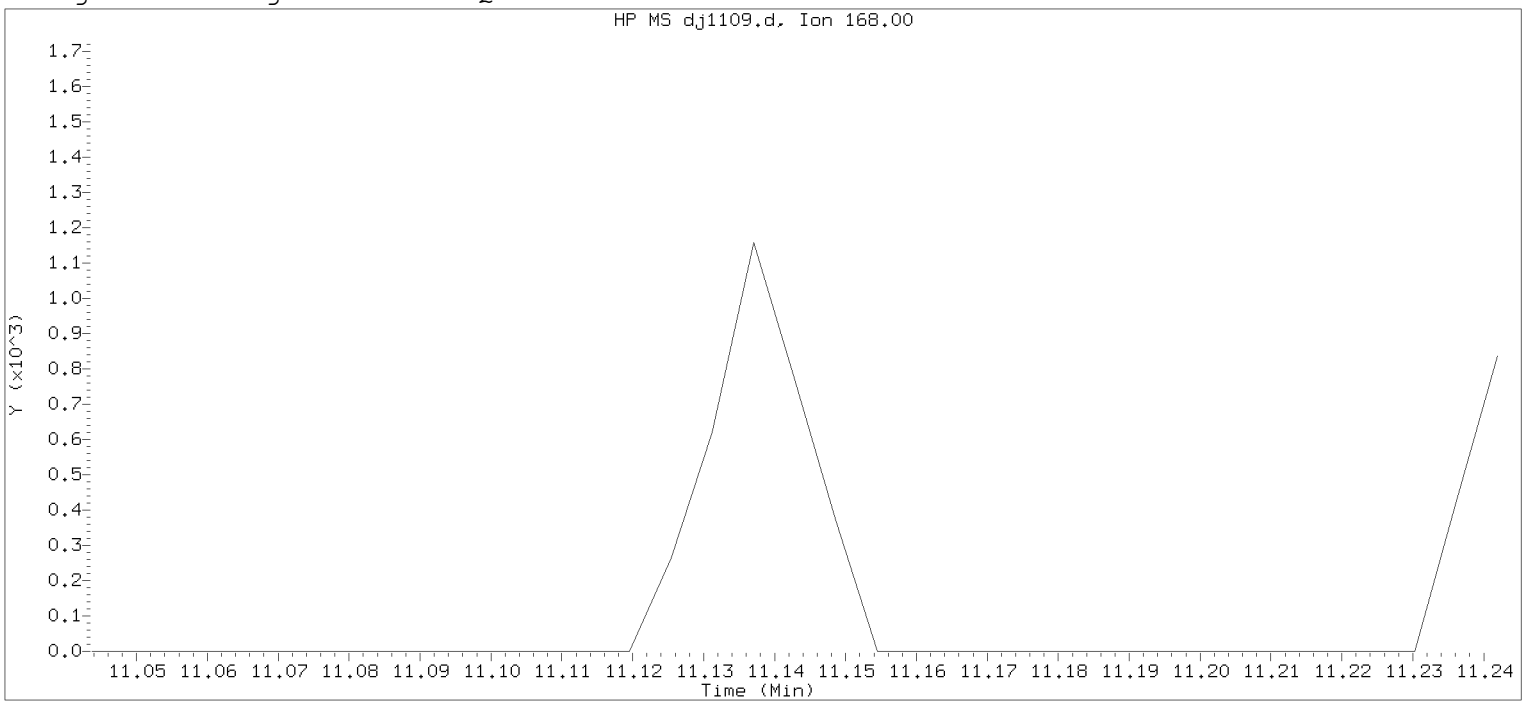
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

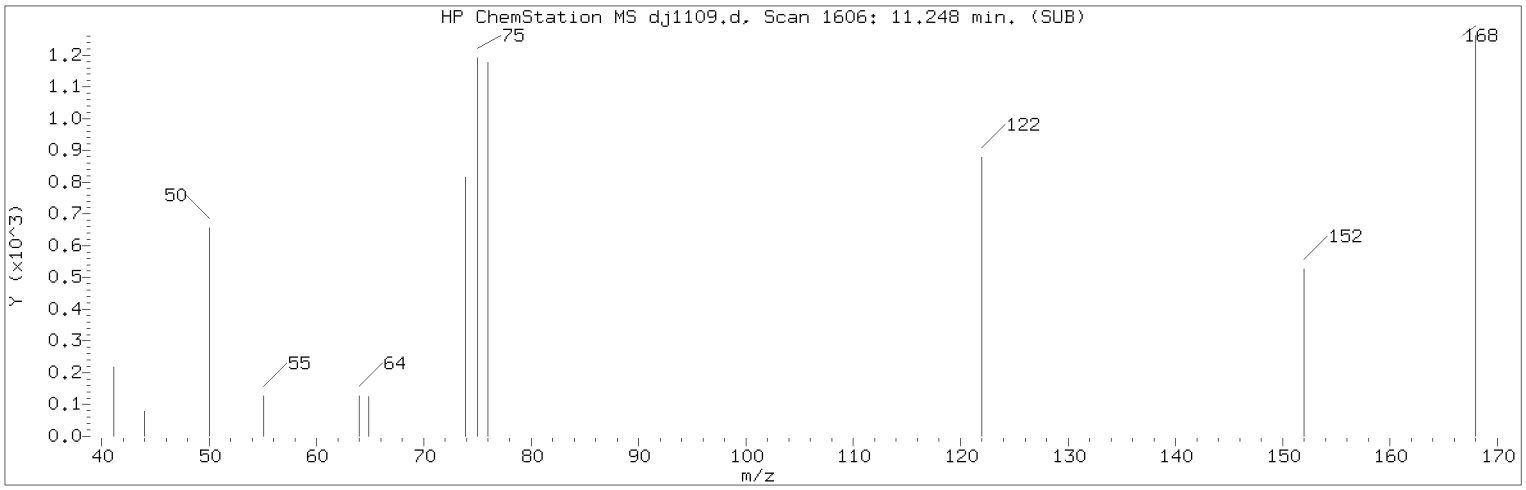
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

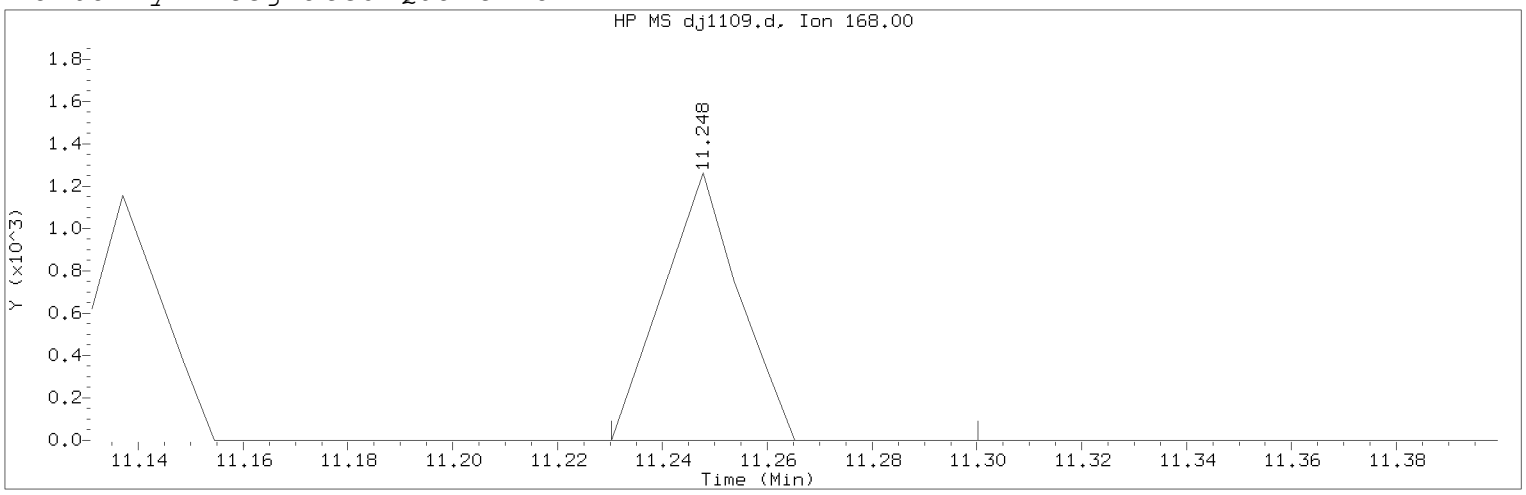
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 11.143
Quant Ion : 168.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

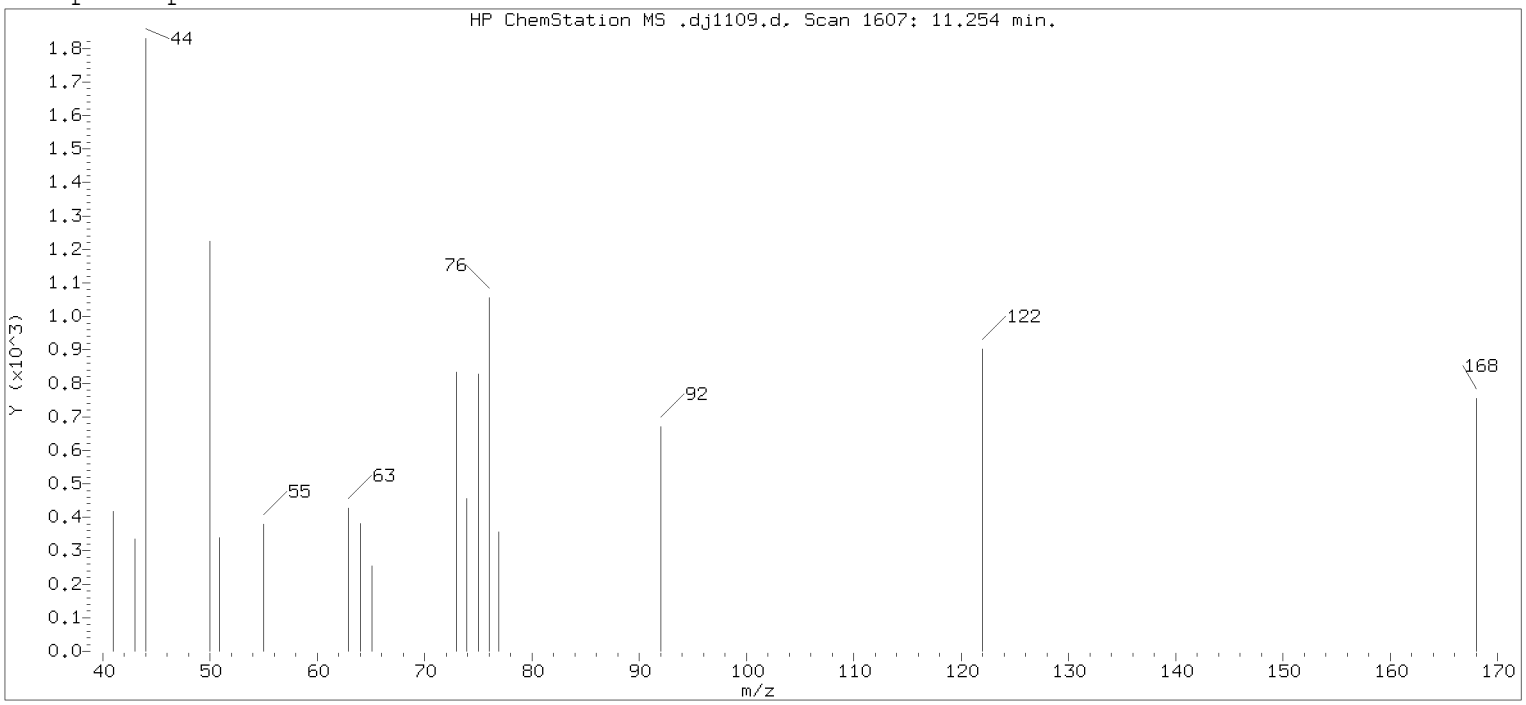
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1606
Retention Time (minutes) : 11.248
Quant Ion : 168.00
Area (flag) : 1274M
On-Column Amount (ng/ul) : 0.0765
Integration start scan : 1602 Integration stop scan: 1614
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

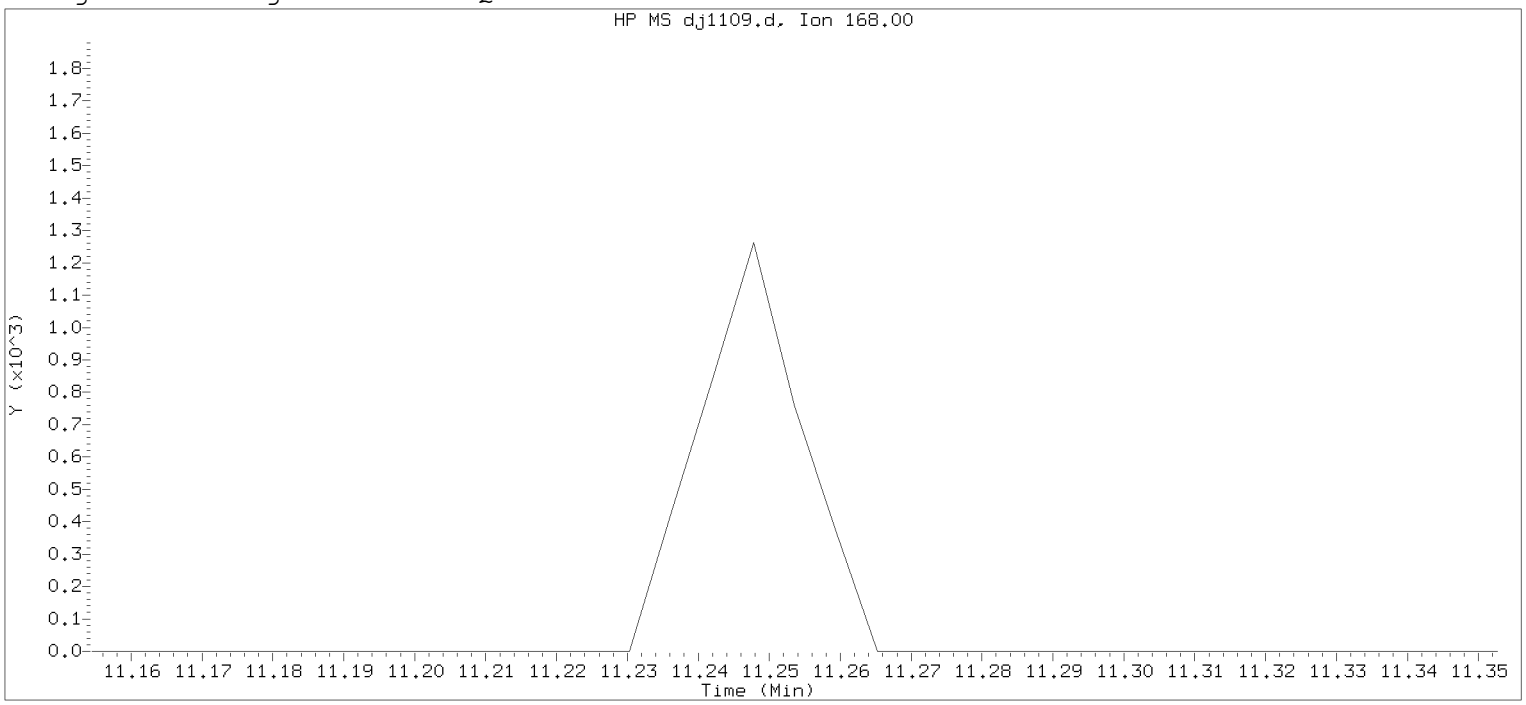
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

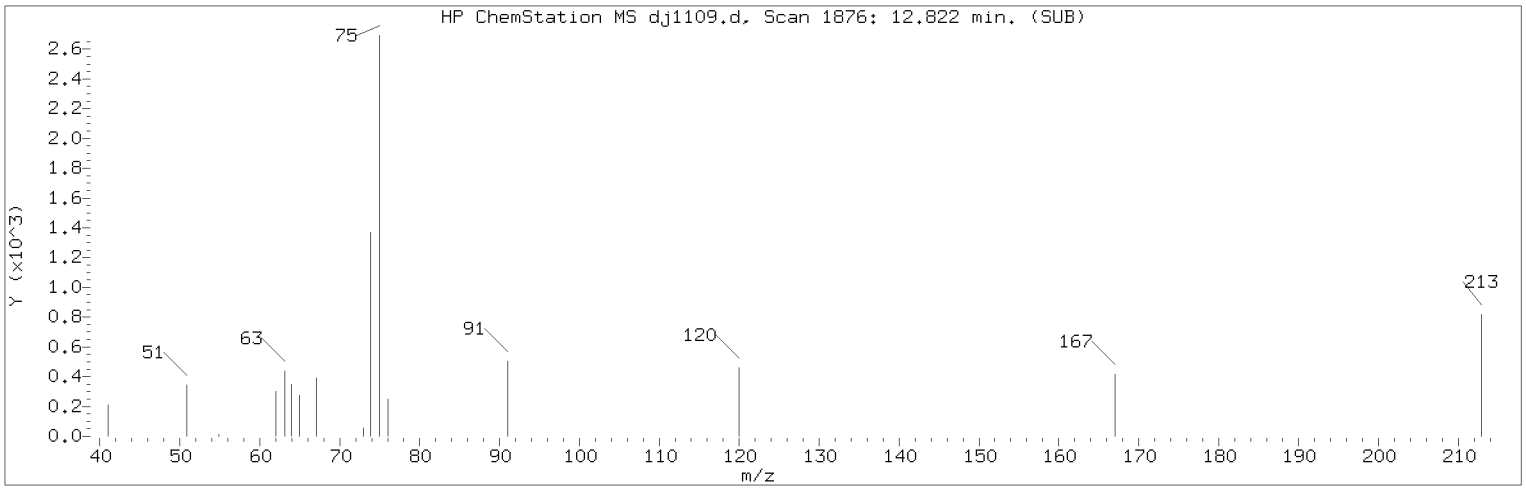
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

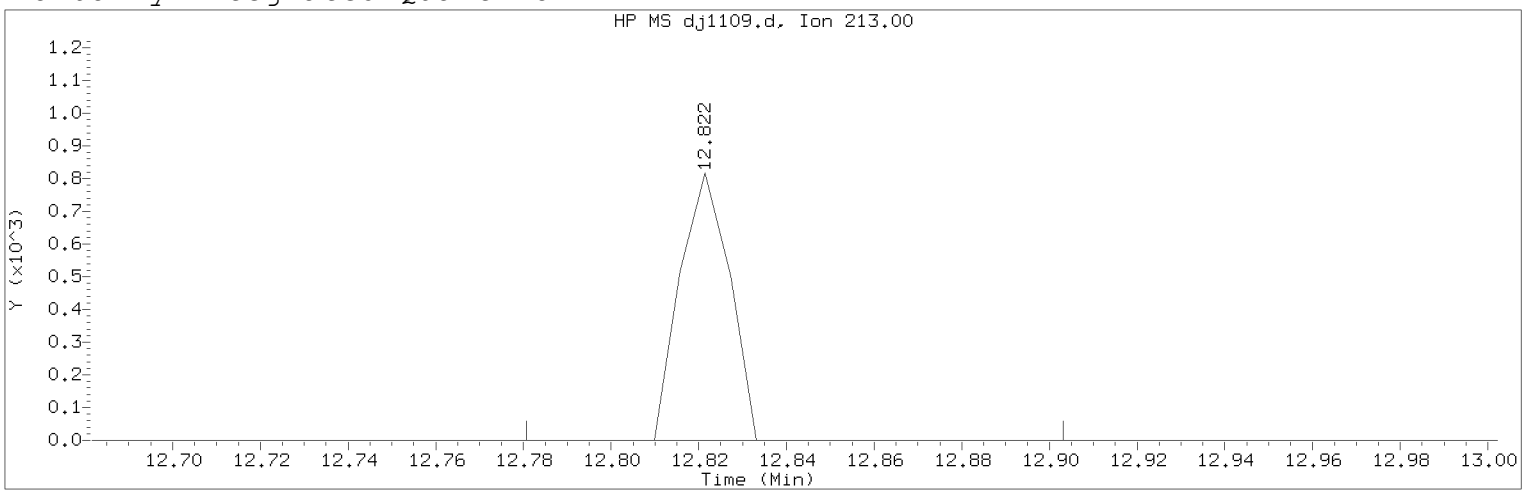
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.253
Quant Ion : 168.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

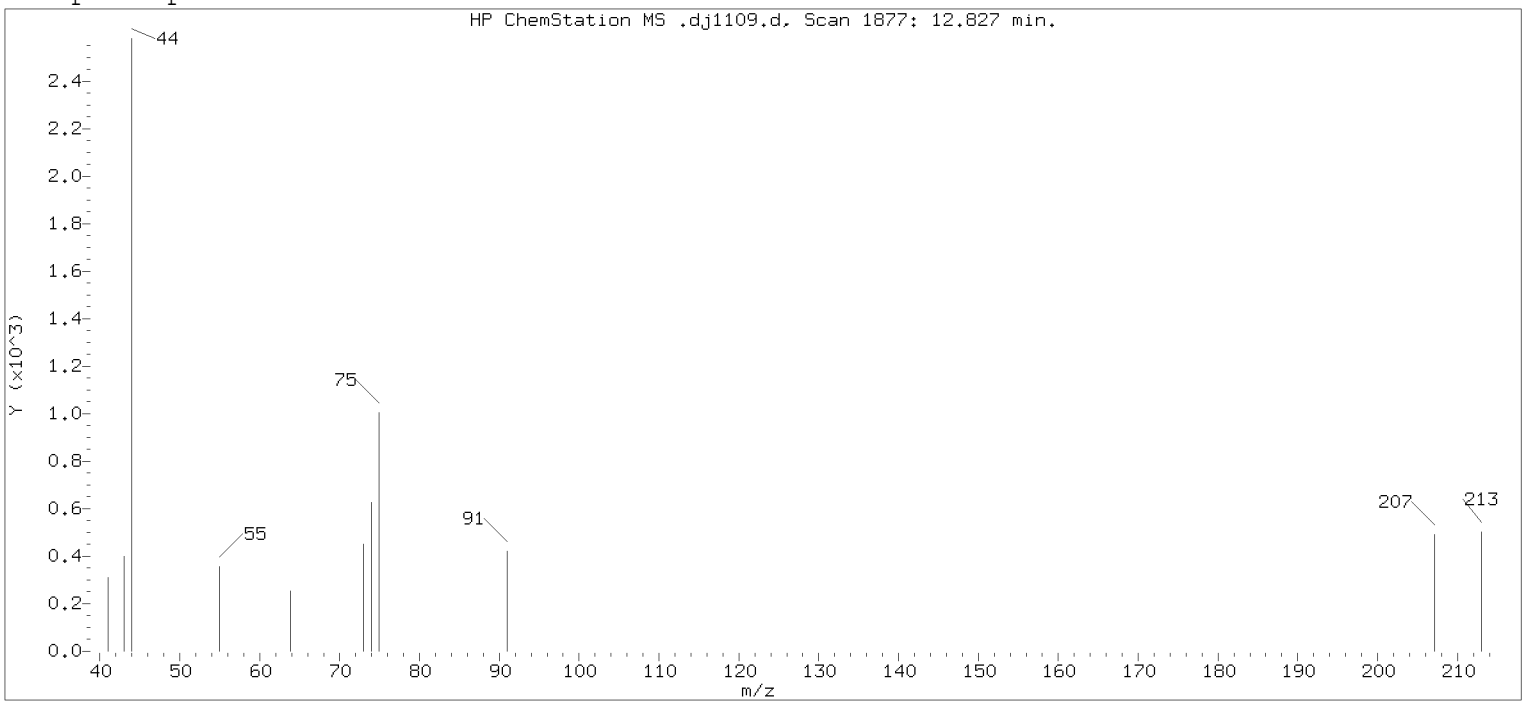
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1876
Retention Time (minutes) : 12.822
Quant Ion : 213.00
Area (flag) : 642M
On-Column Amount (ng/ul) : 0.0540
Integration start scan : 1868 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

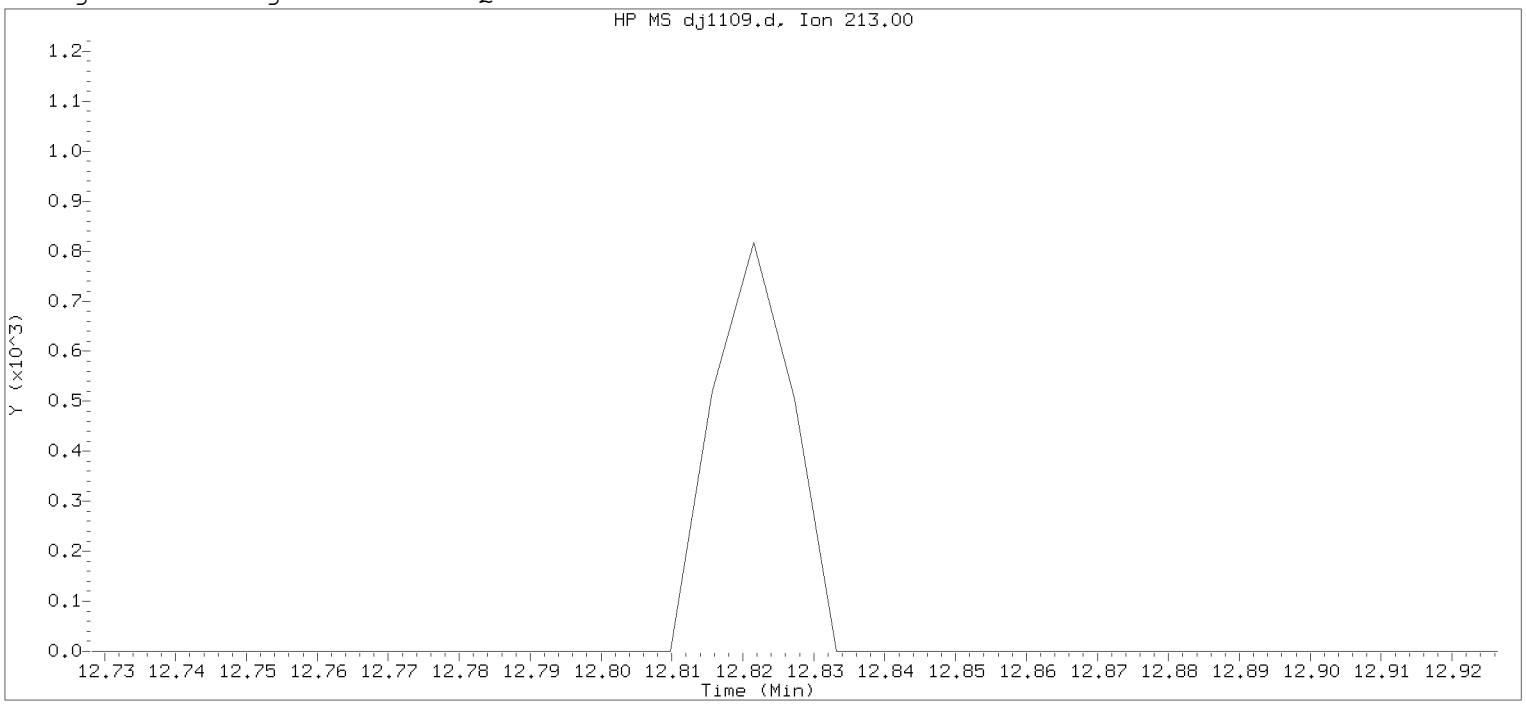
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

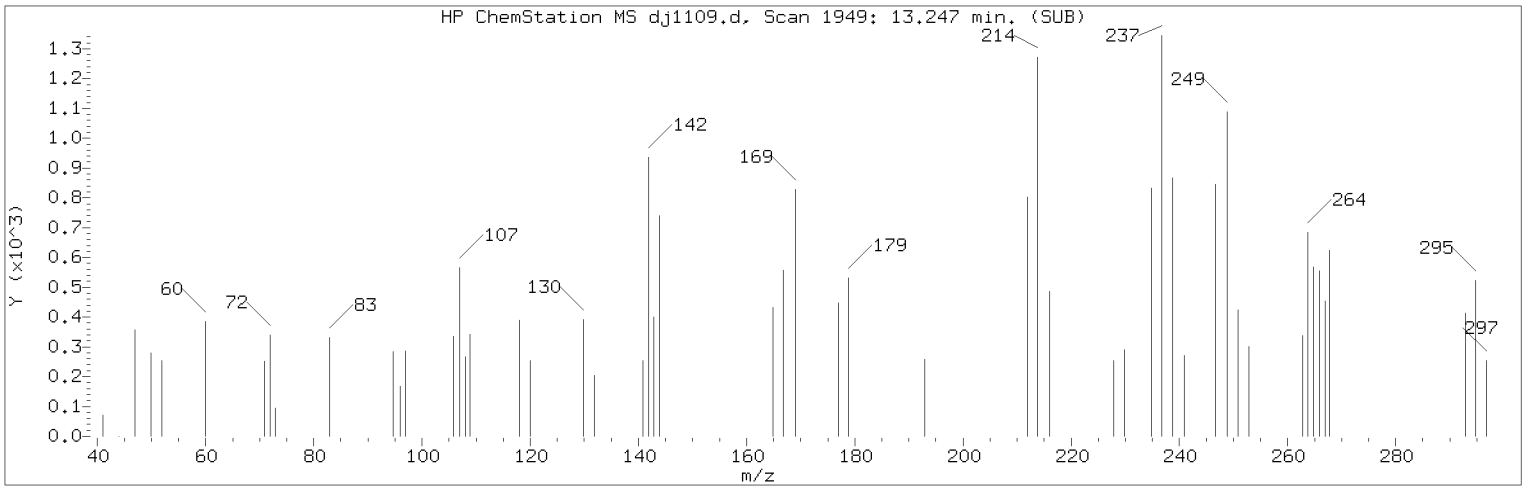
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

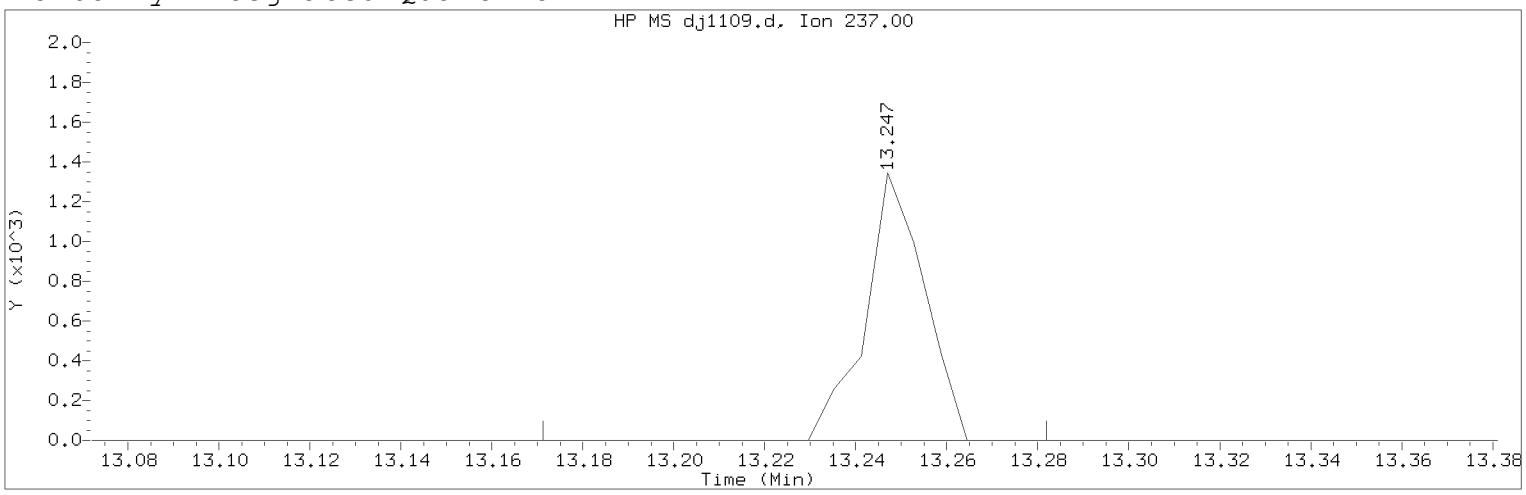
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.827
Quant Ion : 213.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

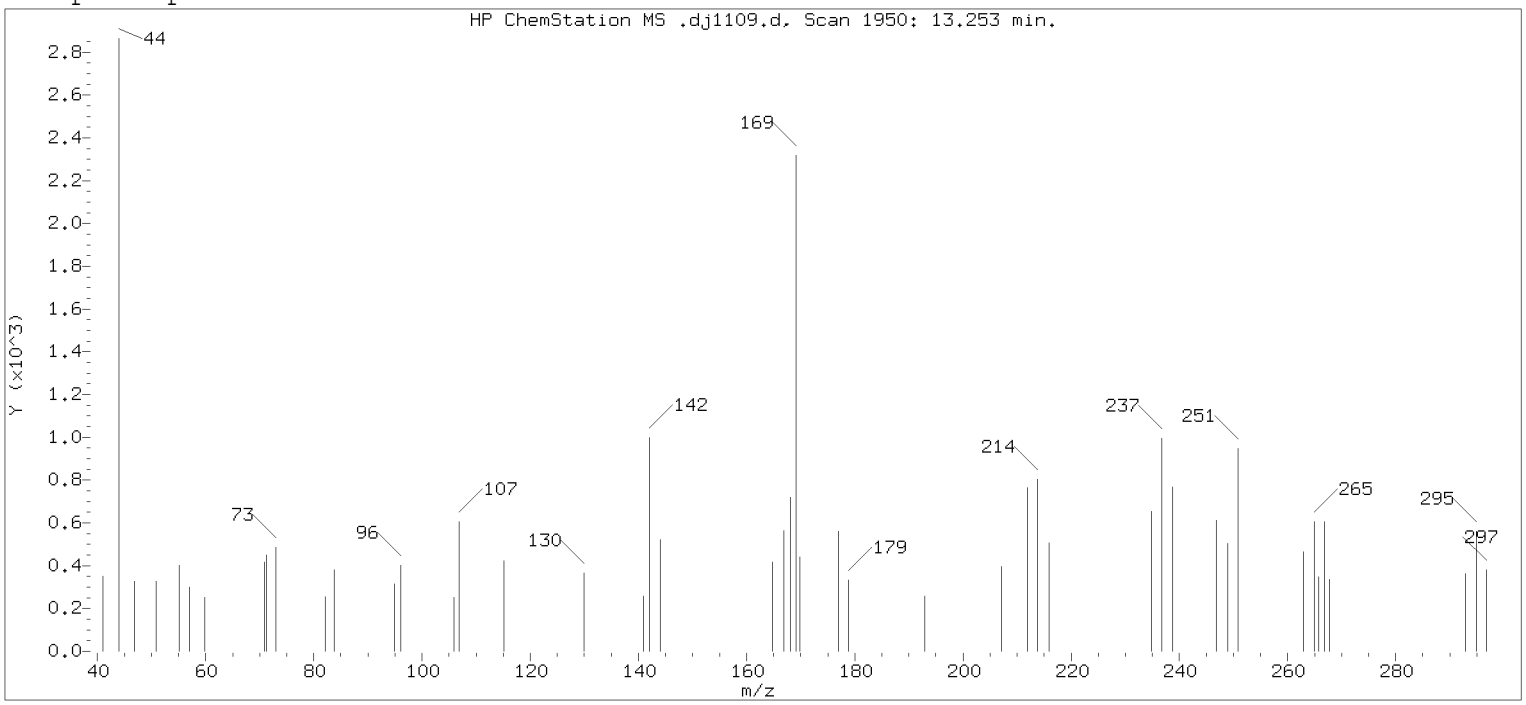
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Scan Number : 1949
Retention Time (minutes) : 13.247
Quant Ion : 237.00
Area (flag) : 1212M
On-Column Amount (ng/ul) : 0.0881
Integration start scan : 1935 Integration stop scan: 1954
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

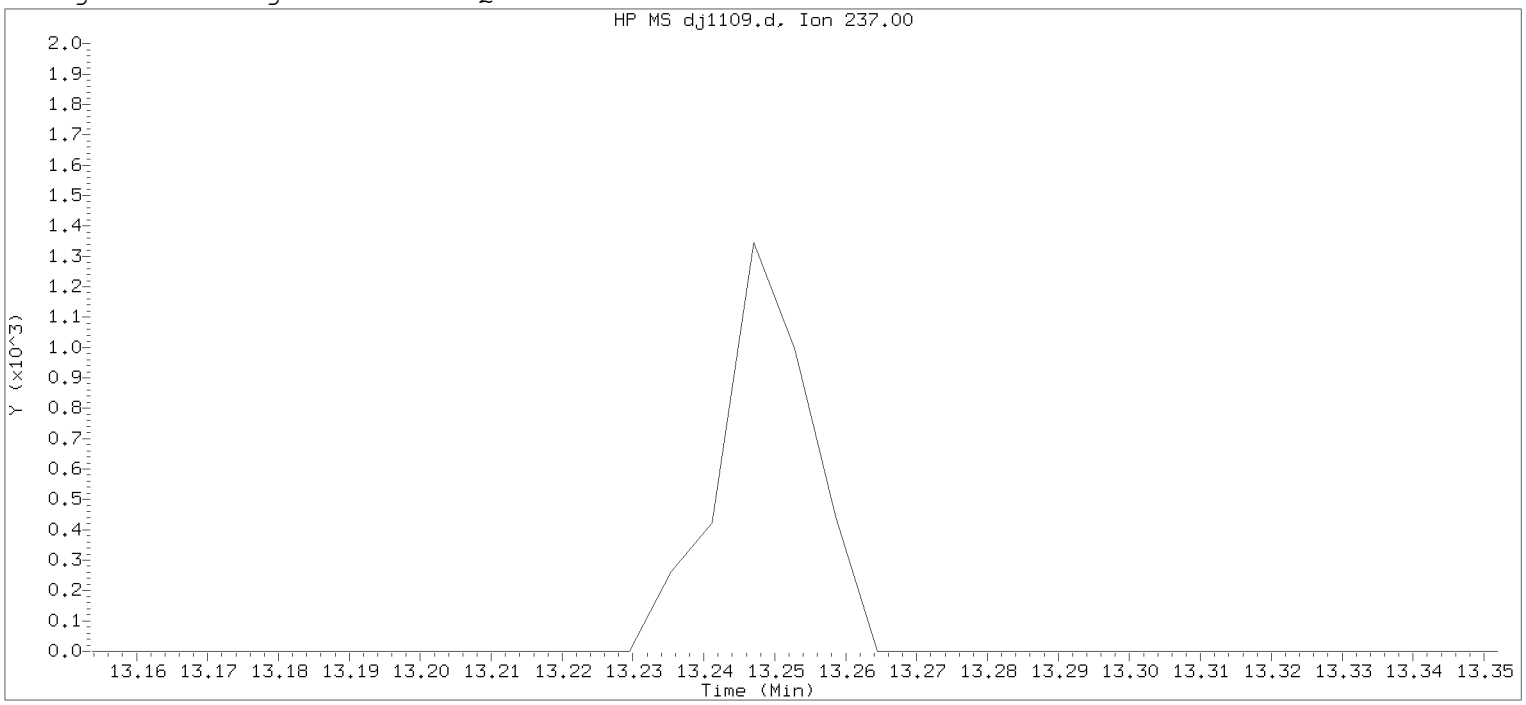
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

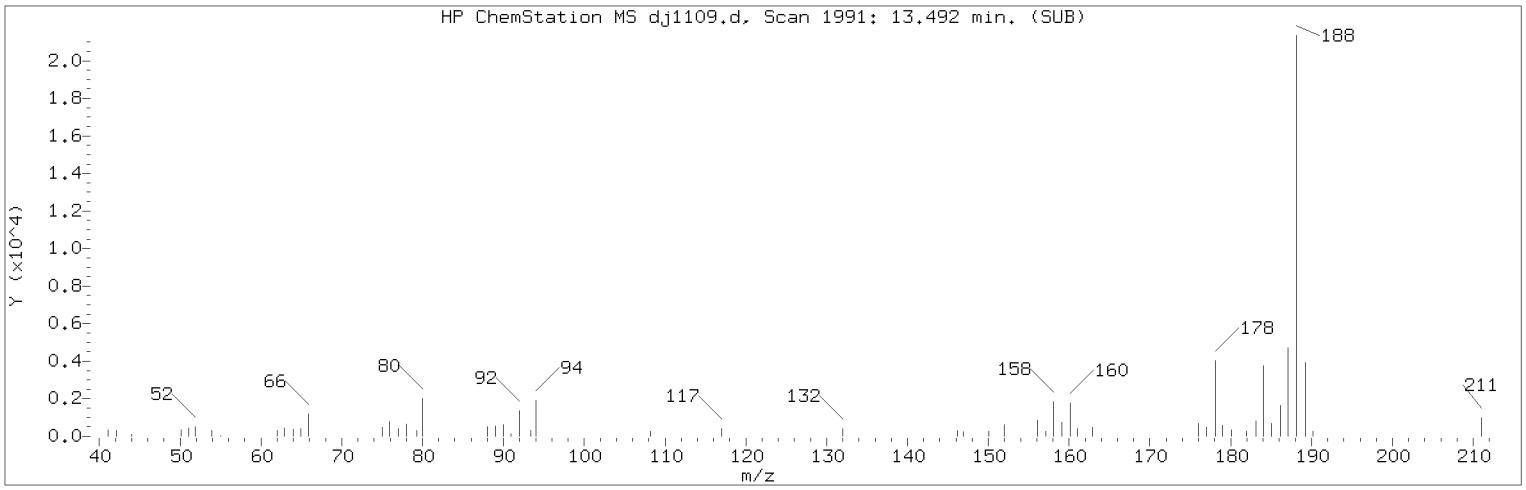
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

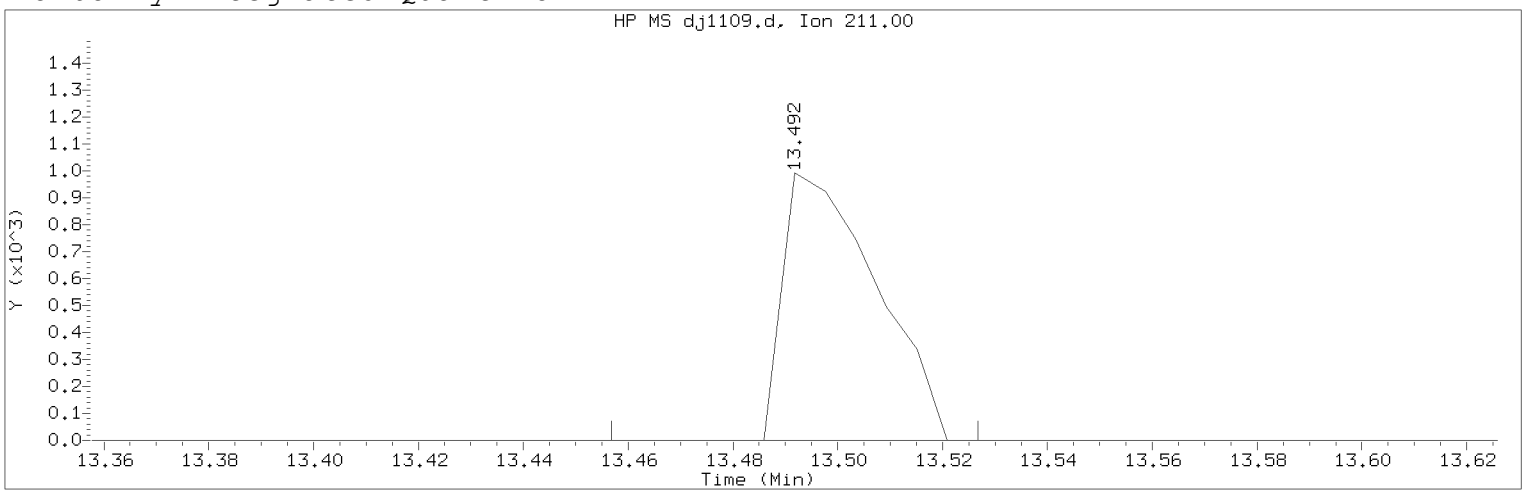
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.253
Quant Ion : 237.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:37 em10340

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

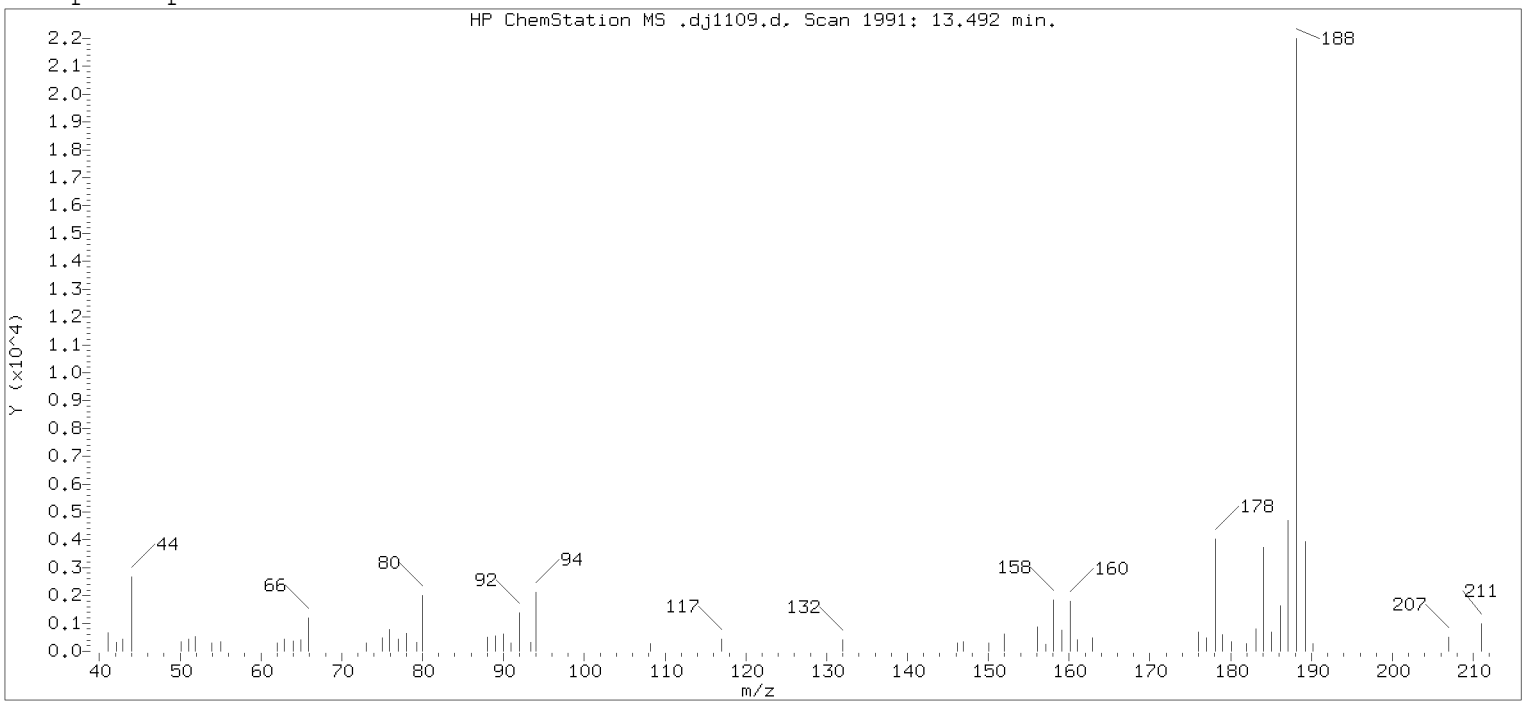
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 1991
Retention Time (minutes) : 13.492
Quant Ion : 211.00
Area (flag) : 1222M
On-Column Amount (ng/ul) : 1.0954
Integration start scan : 1984 Integration stop scan: 1996
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

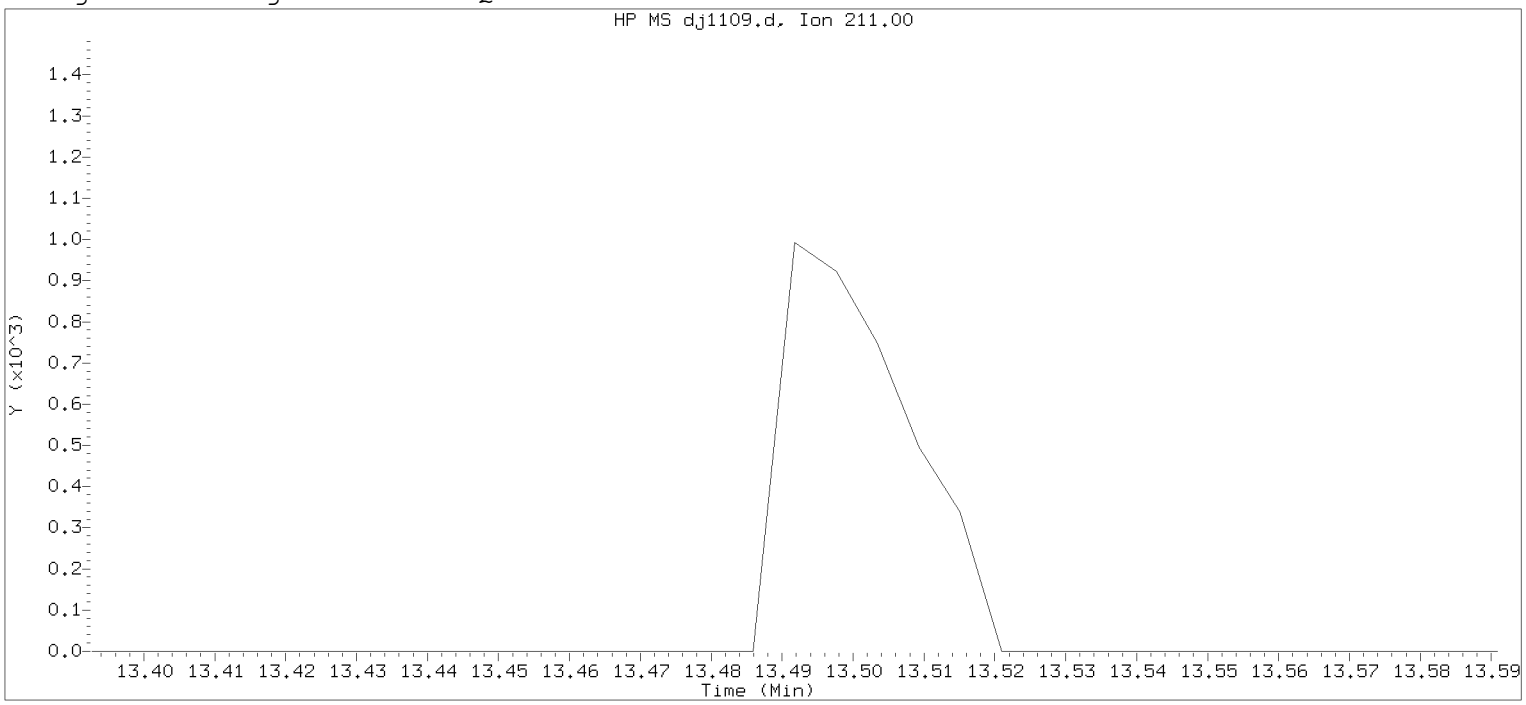
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 16:39.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:46.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



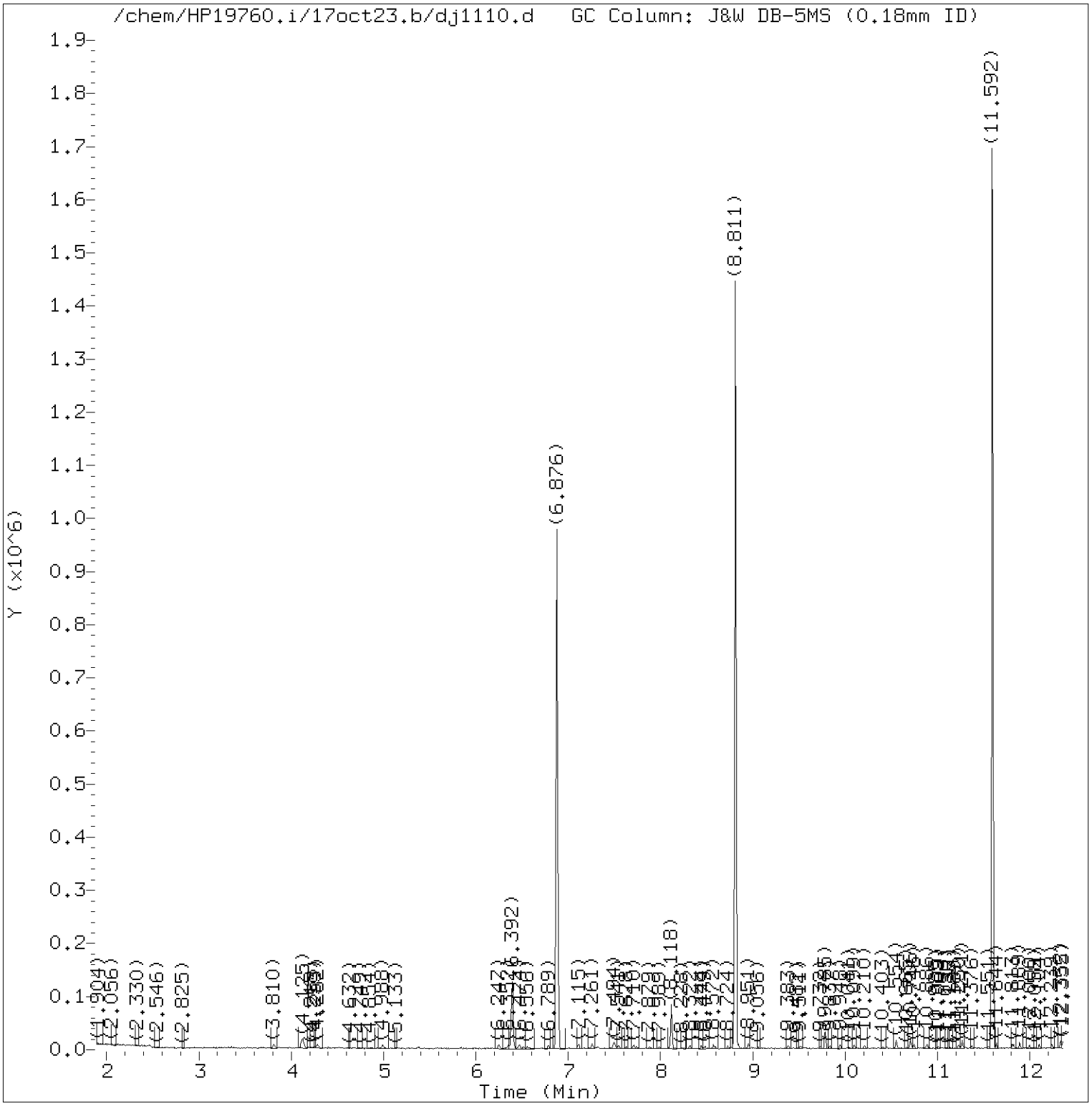
Data File: /chem/HP19760.i/17oct23.b/dj1109.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:07 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 16:33 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.492
Quant Ion : 211.00

Digitally signed by Edward Monborne on 10/23/2017 at 16:39.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

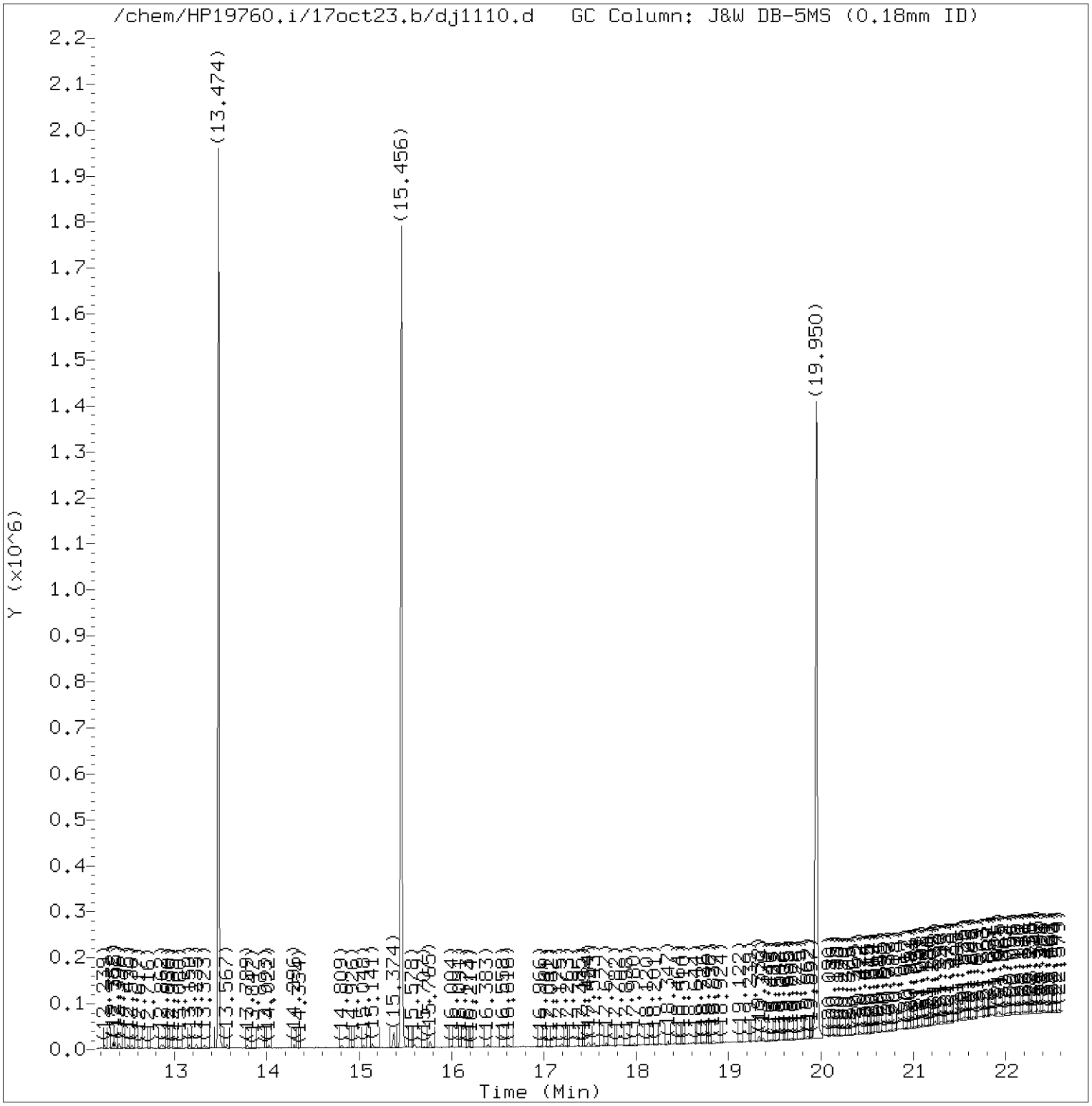
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:05 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:05 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:05 em10340

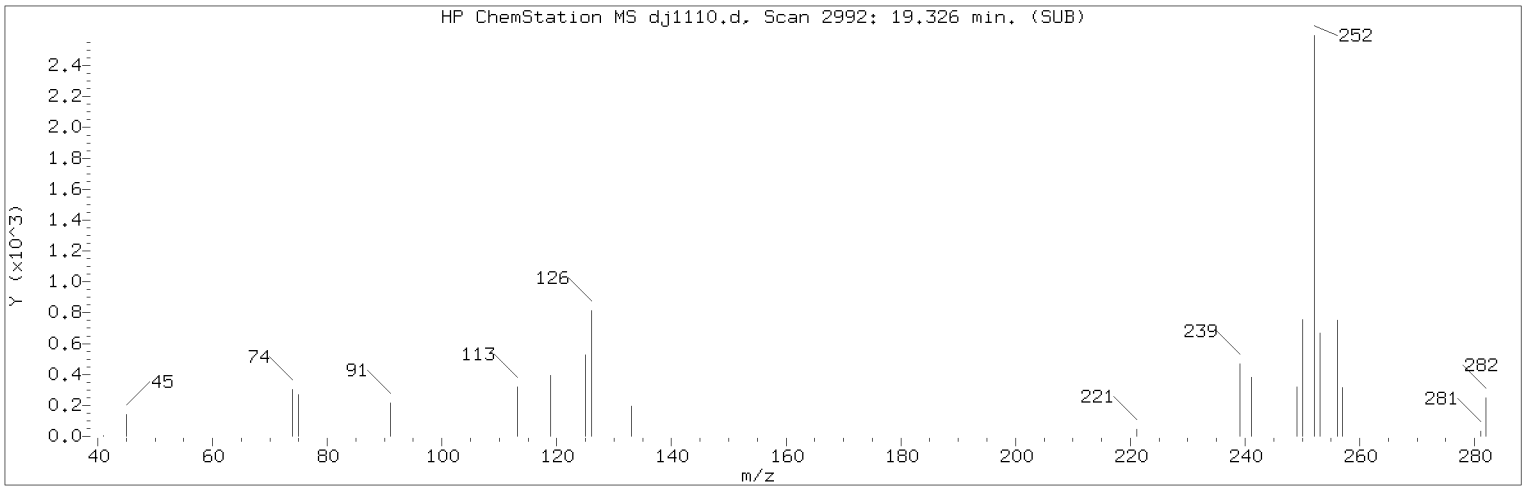
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	194745	5.000
44)$Nitrobenzene-d5	(2)	7.710	82	3355	0.046
65)*Naphthalene-d8	(2)	8.811	136	755118	5.000
66) Naphthalene	(2)	8.846	128	4536	0.027
83) 2-Methylnaphthalene	(2)	9.948	142	2543	0.022
84) 1-Methylnaphthalene	(2)	10.099	142	2245	0.022
93)$2-Fluorobiphenyl	(3)	10.554	172	6165	0.052
109) Acenaphthylene	(3)	11.376	152	3091	0.022
113)*Acenaphthene-d10	(3)	11.592	164	394580	5.000
114) Acenaphthene	(3)	11.638	153	2871	0.027
126) Fluorene	(3)	12.332	166	2737	0.024
145) Hexachlorobenzene	(4)	12.985	284	843	0.026
153)*Phenanthrene-d10	(4)	13.474	188	733805	5.000
155) Phenanthrene	(4)	13.503	178	4264	0.026
157) Anthracene	(4)	13.567	178	3835	0.023
222) Total PAHs	(6)			65368	0.414
173) Fluoranthene	(4)	15.141	202	4651	0.024
175)*Pyrene-d10	(5)	15.456	212	874655	5.000
177) Pyrene	(5)	15.479	202	5686	0.028
179)$Terphenyl-d14	(5)	15.765	244	6217	0.047
195) Benzo(a)anthracene	(5)	17.484	228	4120	0.022
196) Chrysene	(5)	17.543	228	4017	0.023
206) Benzo(b)fluoranthene	(6)	19.326	252	3763M	0.022
208) Benzo(k)fluoranthene	(6)	19.373	252	3947M	0.023
211) Benzo(a)pyrene	(6)	19.857	252	3456	0.022
213)*Perylene-d12	(6)	19.950	264	719424	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.547	276	3576	0.019
220) Dibenz(a,h)anthracene	(6)	21.588	278	2615	0.017
221) Benzo(g,h,i)perylene	(6)	21.926	276	3415	0.022

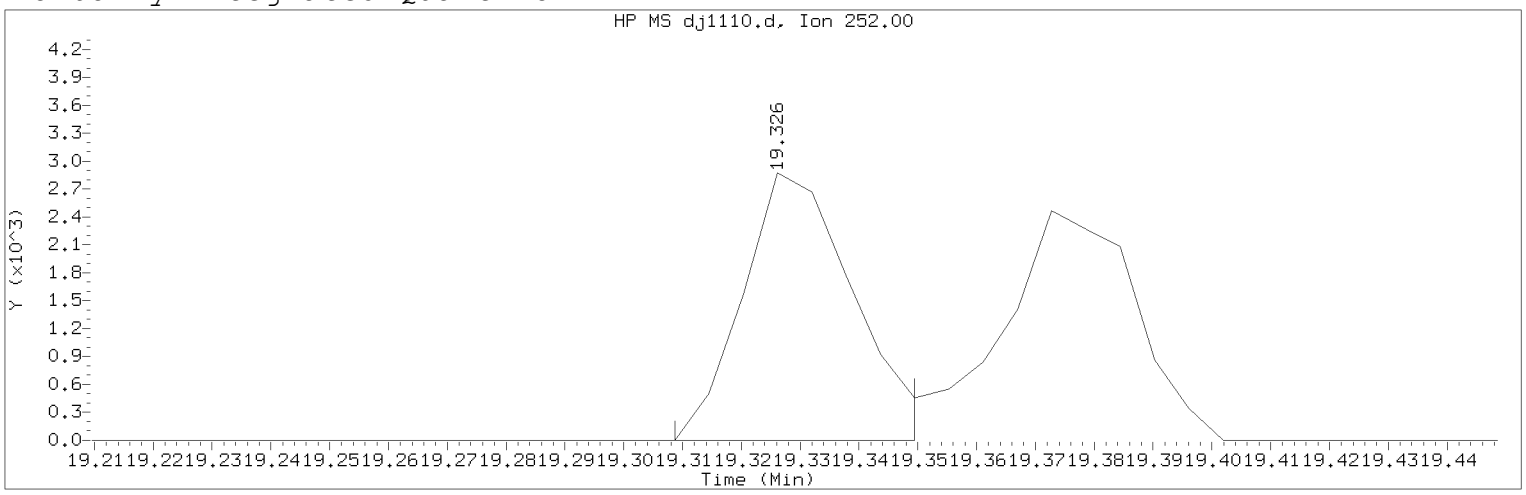
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:05 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

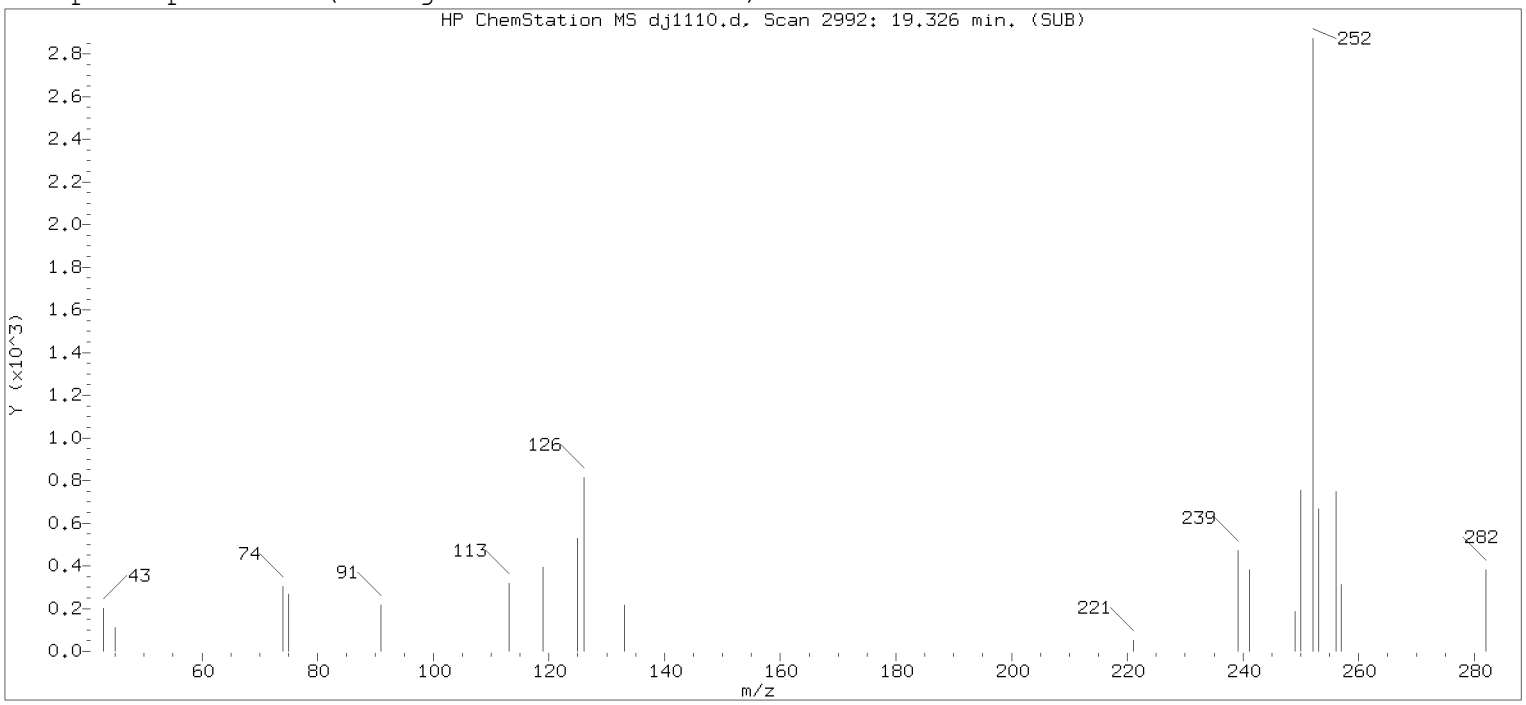
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 2992
Retention Time (minutes) : 19.326
Quant Ion : 252.00
Area (flag) : 3763M
On-Column Amount (ng/ul) : 0.0216
Integration start scan : 2988 Integration stop scan: 2995
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

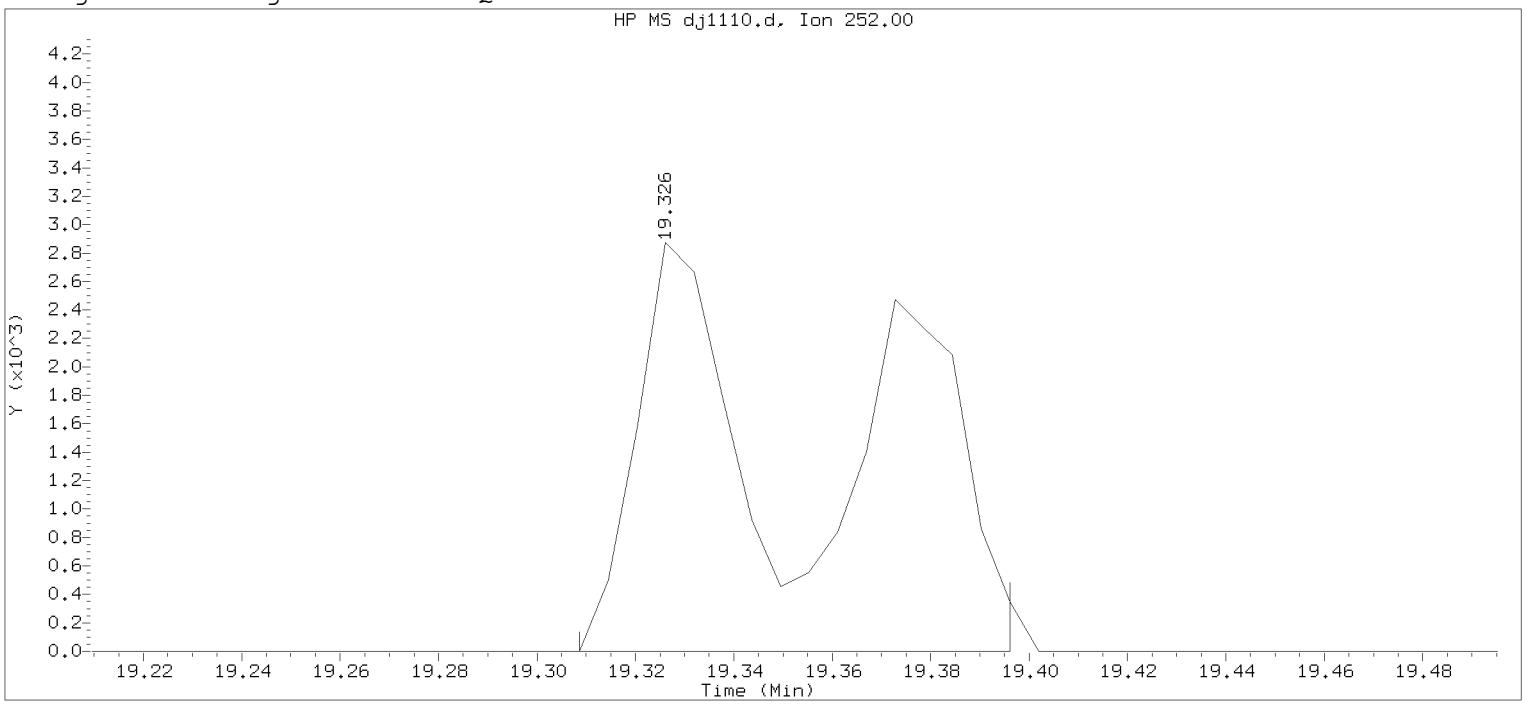
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:47.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

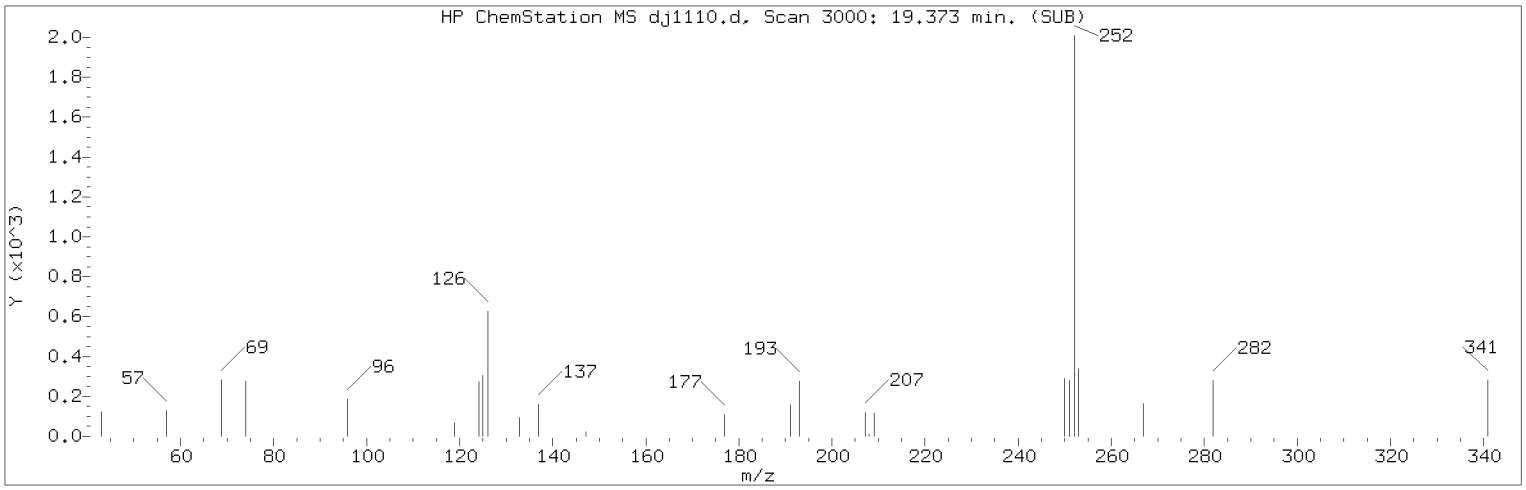
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

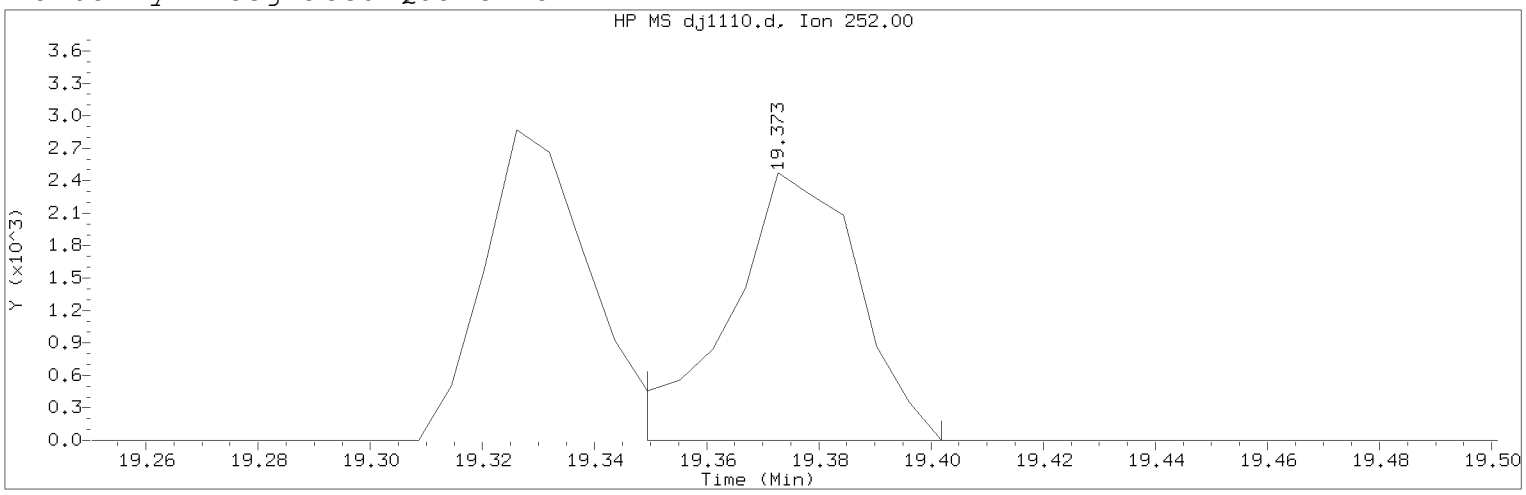
Compound Number	: 206		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2992		
Retention Time (minutes)	: 19.326		
Quant Ion	: 252.00		
Area	: 7491		
On-column Amount (ng/ul)	: 0.0431		
Integration start scan	: 2988	Integration stop scan:	3003
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/23/2017 at 22:13.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:05 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

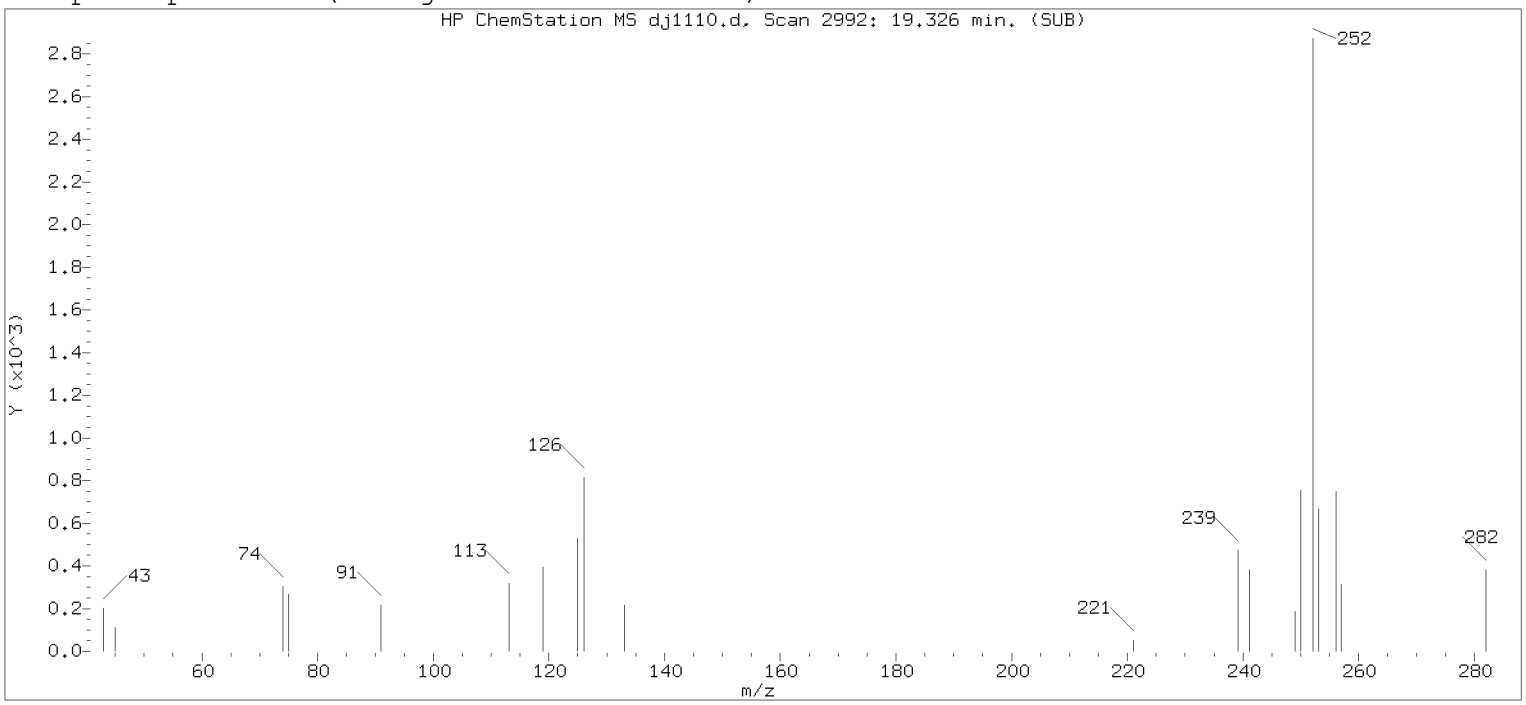
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 3000
Retention Time (minutes) : 19.373
Quant Ion : 252.00
Area (flag) : 3947M
On-Column Amount (ng/ul) : 0.0233
Integration start scan : 2995 Integration stop scan: 3004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

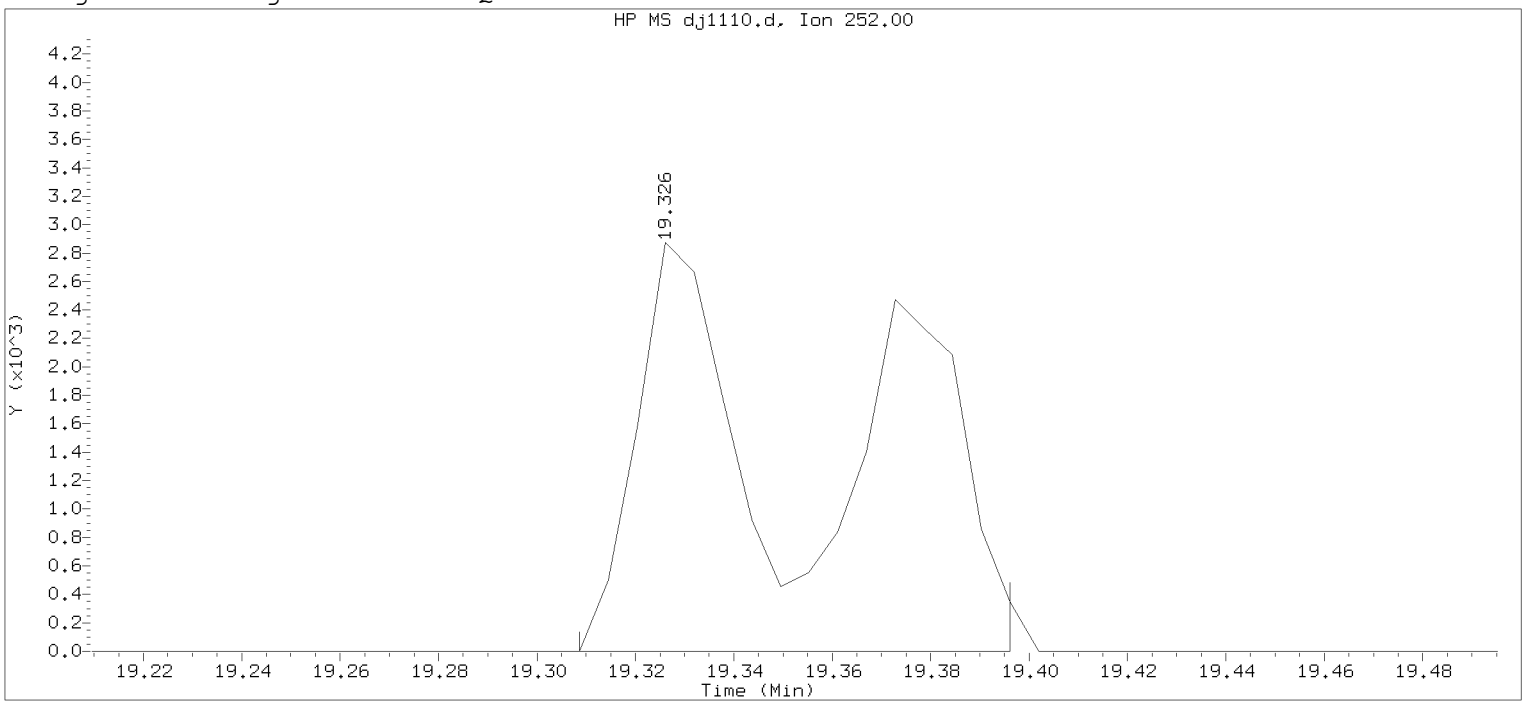
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:47.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



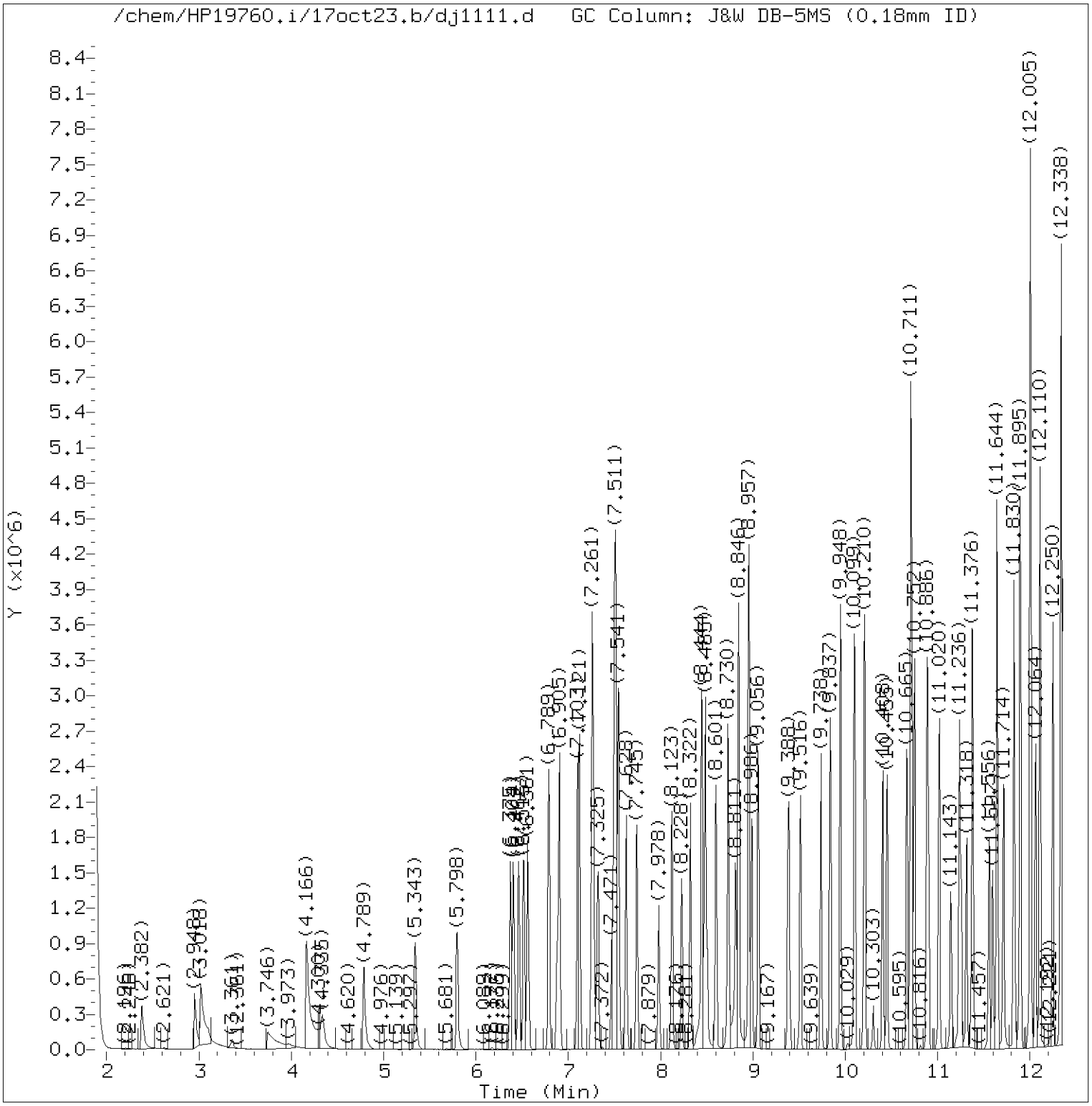
Data File: /chem/HP19760.i/17oct23.b/dj1110.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 16:35 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2992		
Retention Time (minutes)	: 19.326		
Quant Ion	: 252.00		
Area	: 7491		
On-column Amount (ng/ul)	: 0.0442		
Integration start scan	: 2988	Integration stop scan:	3003
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

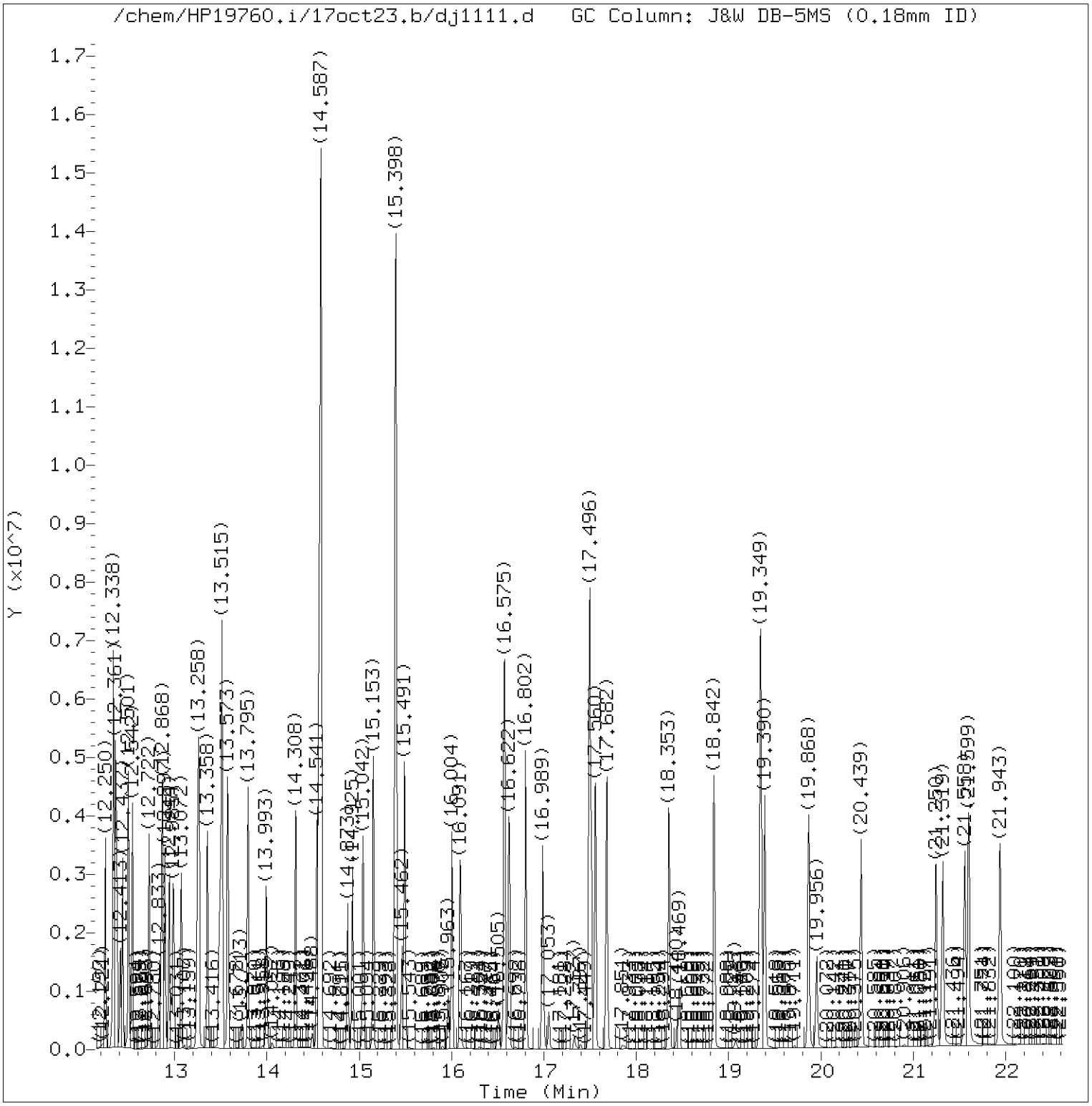
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.382	88	309270	12.506
4) N-Nitrosodimethylamine	(1)	2.948	74	484448	12.428
5) Pyridine	(1)	3.018	79	735280	11.705
7) 2-Picoline	(1)	4.166	93	859648	12.863
8) N-Nitrosomethylethylamine	(1)	4.335	88	345125	12.147
9) Methyl methanesulfonate	(1)	4.789	80	430800	14.221
13) N-Nitrosodiethylamine	(1)	5.343	102	331199	12.320
42) Total Cresols	(1)	5.660	100	1339484	24.317
15) Ethyl methanesulfonate	(1)	5.798	109	349617	12.497
18) Phenol	(1)	6.375	94	1020193	12.450
19) Aniline	(1)	6.404	93	919572	9.625
22) bis(2-Chloroethyl)ether	(1)	6.521	93	752232	12.225
23) 2-Chlorophenol	(1)	6.561	128	693349	12.614
24) 1,3-Dichlorobenzene	(1)	6.789	146	759775	12.699
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	183178	5.000
26) 1,4-Dichlorobenzene	(1)	6.905	146	782139	12.856
27) Benzyl alcohol	(1)	7.103	108	466711	12.660
28) 1,2-Dichlorobenzene	(1)	7.121	146	736073	12.778
30) Indene	(1)	7.255	115	1332004	12.435
31) 2-Methylphenol	(1)	7.272	108	652065	12.533
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.325	45	979322	12.272
34) bis(2-Chloroisopropyl)ether	(1)	7.325	45	979322	12.272
97) Isosafrole	(3)	7.383	162	591572	15.434
35) N-Nitrosopyrrolidine	(1)	7.471	100	353650	12.376
36) Acetophenone	(1)	7.494	105	1067952	12.403
38) N-Nitroso-di-n-propylamine	(1)	7.511	70	595585	12.669
37) 4-Methylphenol	(1)	7.511	108	687419	11.823
39) N-Nitrosomorpholine	(1)	7.535	56	443618	12.603
40) o-Toluidine	(1)	7.546	106	1093733	11.649
43) Hexachloroethane	(1)	7.628	117	307380	12.543
45) Nitrobenzene	(2)	7.745	77	837207	12.046
48) N-Nitrosopiperidine	(2)	7.984	114	329286	11.721
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	700416	26.185
50) Isophorone	(2)	8.123	82	1297793	10.735
51) 2-Nitrophenol	(2)	8.228	139	327923	12.710
53) 2,4-Dimethylphenol	(2)	8.322	107	564844	9.406
57) O,O,O-Triethylphosphorothioate	(2)	8.450	198	322709	11.986
55) bis(2-Chloroethoxy)methane	(2)	8.485	93	941116	12.515
56) Benzoic acid	(2)	8.508	105	946268	18.830
60) 2,4-Dichlorophenol	(2)	8.601	162	547756	12.339

* = Compound is an internal standard.

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 1,2,4-Trichlorobenzene	(2)	8.730	180	620525	12.027
146) Diallate trans/cis	(4)	8.775	86	652454	11.970
65)*Naphthalene-d8	(2)	8.811	136	715837	5.000
66) Naphthalene	(2)	8.846	128	1986236	12.274
68) 2,6-Dichlorophenol	(2)	8.957	162	538997	12.346
67) 4-Chloroaniline	(2)	8.957	127	734948	11.035
69) Hexachloropropene	(2)	8.986	213	400407	15.974
71) Hexachlorobutadiene	(2)	9.056	225	353425	12.235
75) Quinoline	(2)	9.388	129	1211821	12.313
77) N-Nitrosodi-n-butylamine	(2)	9.516	84	536048	10.170
80) 4-Chloro-3-methylphenol	(2)	9.738	107	634730	12.738
82) Safrole	(2)	9.837	162	488607	11.810
83) 2-Methylnaphthalene	(2)	9.948	142	1306106	12.166
84) 1-Methylnaphthalene	(2)	10.099	142	1203867	12.385
85) Hexachlorocyclopentadiene	(3)	10.204	237	296730	12.392
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.216	216	637675	12.513
88) cis-Isosafrole	(3)	10.303	162	65038	1.559
90) 2,4,6-Trichlorophenol	(3)	10.408	196	407607	13.273
92) 2,4,5-Trichlorophenol	(3)	10.455	196	429414	13.265
94) trans-Isosafrole	(3)	10.671	162	526534	13.991
95) 1,1'-Biphenyl	(3)	10.711	154	1570039	12.532
96) 2-Chloronaphthalene	(3)	10.723	162	1217554	11.976
98) 1-Chloronaphthalene	(3)	10.752	162	1138679	12.749
99) Diphenyl ether	(3)	10.886	170	825651	12.302
100) 2-Nitroaniline	(3)	10.904	138	367287	12.916
104) 1,4-Naphthoquinone	(3)	11.020	158	616951	15.549
105) 1,4-Dinitrobenzene	(3)	11.143	168	181536	12.418
106) Dimethylphthalate	(3)	11.236	163	1347513	12.441
107) 1,3-Dinitrobenzene	(3)	11.259	168	207475	12.776
108) 2,6-Dinitrotoluene	(3)	11.318	165	290650	12.922
109) Acenaphthylene	(3)	11.376	152	1524501	11.250
112) 3-Nitroaniline	(3)	11.562	138	330167	12.905
113)*Acenaphthene-d10	(3)	11.597	164	376590	5.000
114) Acenaphthene	(3)	11.644	153	1337523	13.028
115) 2,4-Dinitrophenol	(3)	11.720	184	358612	22.990
117) Pentachlorobenzene	(3)	11.830	250	516990	12.327
116) 4-Nitrophenol	(3)	11.830	109	244511	12.471
119) Dibenzofuran	(3)	11.895	168	1667407	12.453
118) 2,4-Dinitrotoluene	(3)	11.906	165	409766	12.708
121) 1-Naphthylamine	(3)	12.005	143	1833852	17.596

* = Compound is an internal standard.

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
122) 2,3,4,6-Tetrachlorophenol	(3)	12.064	232	345110	13.624
123) 2-Naphthylamine	(3)	12.110	143	1689758	16.648
124) Diethylphthalate	(3)	12.250	149	1381844	12.922
126) Fluorene	(3)	12.332	166	1362972	12.658
125) Thionazin	(3)	12.343	107	235094	11.055
127) 4-Chlorophenyl-phenylether	(3)	12.361	204	640441	12.456
128) 5-Nitro-o-toluidine	(3)	12.367	152	394569	13.289
129) 4-Nitroaniline	(3)	12.378	138	334604	12.866
130) 4,6-Dinitro-2-methylphenol	(4)	12.413	198	234555	12.785
131) N-Nitrosodiphenylamine	(4)	12.501	169	1150758	12.770
132) NDPA as diphenylamine	(4)	12.501	169	1150758	12.770
134) 1,2-Diphenylhydrazine	(4)	12.542	77	1665169	12.939
137) Tetraethyldithiopyrophosphate	(4)	12.722	97	253204	11.833
139) 1,3,5-Trinitrobenzene	(4)	12.839	213	156820	13.024
140) Diallate (peak 1)	(4)	12.862	86	490987	8.733
141) Phorate	(4)	12.868	75	996866	12.324
142) Phenacetin	(4)	12.897	108	790707	12.839
143) 4-Bromophenyl-phenylether	(4)	12.944	248	394566	12.497
144) Diallate (peak 2)	(4)	12.961	86	161467	3.500
145) Hexachlorobenzene	(4)	12.990	284	397430	12.279
147) Dimethoate	(4)	13.072	87	666819	12.833
149) Pentachlorophenol	(4)	13.241	266	281630	13.771
151) Pentachloronitrobenzene	(4)	13.253	237	178087	12.800
150) 4-Aminobiphenyl	(4)	13.264	169	1472357	51.697
152) Pronamide	(4)	13.358	173	662687	12.843
153)*Phenanthrene-d10	(4)	13.480	188	725876	5.000
154) Dinoseb	(4)	13.497	211	353805	11.724
155) Phenanthrene	(4)	13.509	178	2056050	12.453
157) Anthracene	(4)	13.573	178	2042376	12.512
163) Carbazole	(4)	13.795	167	1958796	12.803
164) Methyl parathion	(4)	13.993	109	540952	13.552
165) Di-n-butylphthalate	(4)	14.308	149	2481175	12.927
167) Parathion	(4)	14.541	109	336998	13.051
168) 4-Nitroquinoline-1-oxide	(4)	14.587	190	3225263	159.934
171) Isodrin	(4)	14.925	193	247731	12.524
222) Total PAHs	(6)	15.000	100	36826092	220.936
173) Fluoranthene	(4)	15.153	202	2417141	12.821
174) Benzidine	(5)	15.398	184	7692929	57.431
175)*Pyrene-d10	(5)	15.462	212	897555	5.000
177) Pyrene	(5)	15.491	202	2510238	12.131

* = Compound is an internal standard.

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1111.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:02 Analyst ID: ceb05247

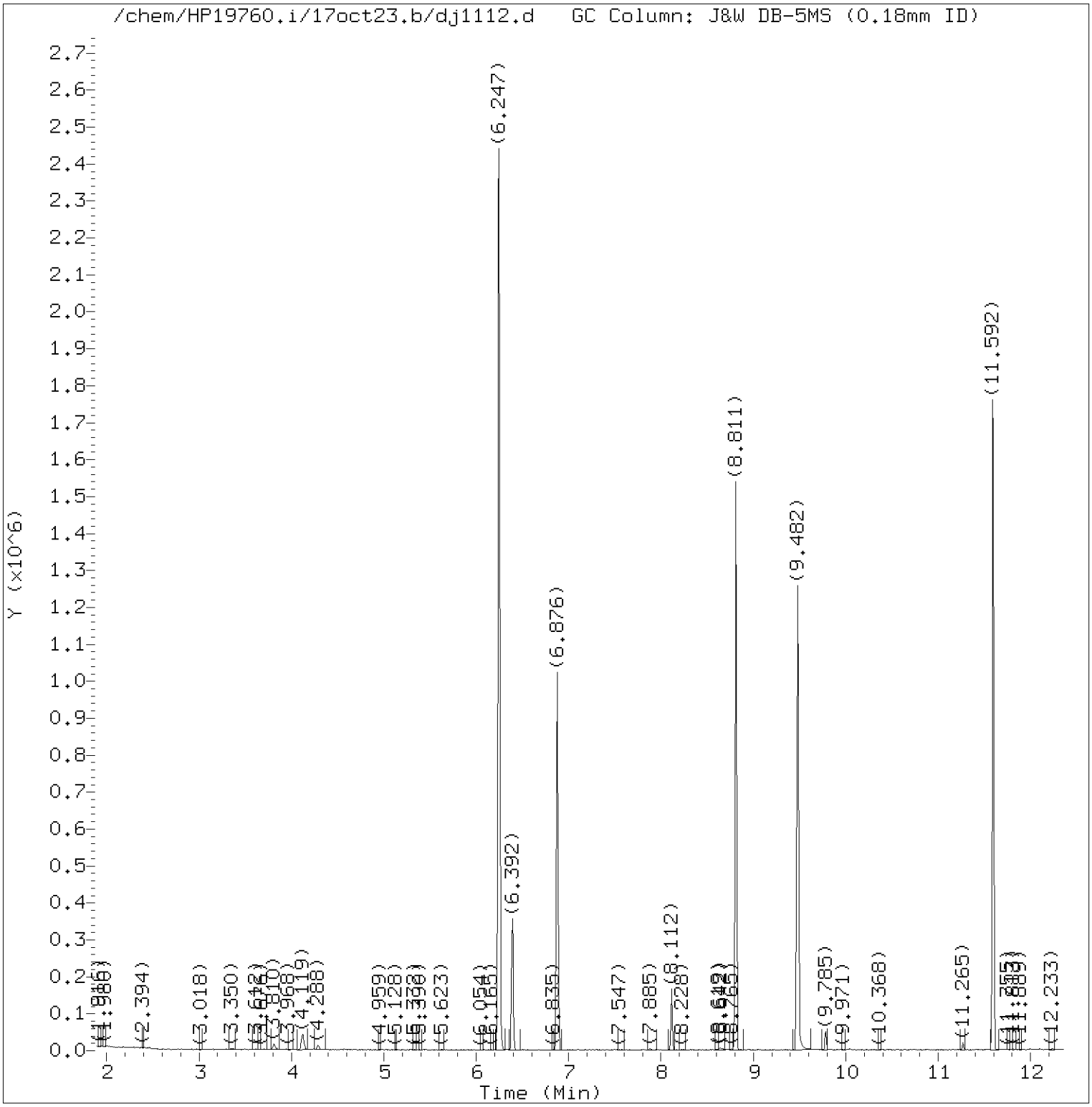
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.004	225	479308	17.669
185) Chlorobenzilate	(5)	16.091	139	807632	13.463
187) 3,3'-Dimethylbenzidine	(5)	16.575	212	3162402	24.757
188) Butylbenzylphthalate	(5)	16.622	149	1178273	13.085
191) 2-Acetylaminofluorene	(5)	16.989	181	1039673	12.972
193) 3,3'-Dichlorobenzidine	(5)	17.490	252	906618	12.675
195) Benzo(a)anthracene	(5)	17.496	228	2537513	13.299
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.513	231	503356	13.583
196) Chrysene	(5)	17.560	228	2388953	13.232
199) bis(2-Ethylhexyl)phthalate	(5)	17.682	149	1740905	13.067
203) 6-Methylchrysene	(5)	18.353	242	1641309	12.335
205) Di-n-octylphthalate	(6)	18.842	149	3030240	12.729
206) Benzo(b)fluoranthene	(6)	19.344	252	2445060	12.653
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.349	256	1075398	13.378
208) Benzo(k)fluoranthene	(6)	19.396	252	2428657	12.883
211) Benzo(a)pyrene	(6)	19.868	252	2133880	12.079
213)*Perylene-d12	(6)	19.956	264	799298	5.000
215) 3-Methylcholanthrene	(6)	20.439	268	1197412	18.214
217) Dibenz(a,h)acridine	(6)	21.250	279	1834432	12.298
218) Dibenz(a,j)acridine	(6)	21.319	279	1918336	12.124
219) Indeno(1,2,3-cd)pyrene	(6)	21.558	276	2670382	12.825
220) Dibenz(a,h)anthracene	(6)	21.599	278	2273616	13.069
221) Benzo(g,h,i)perylene	(6)	21.943	276	2201021	12.606

* = Compound is an internal standard.

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

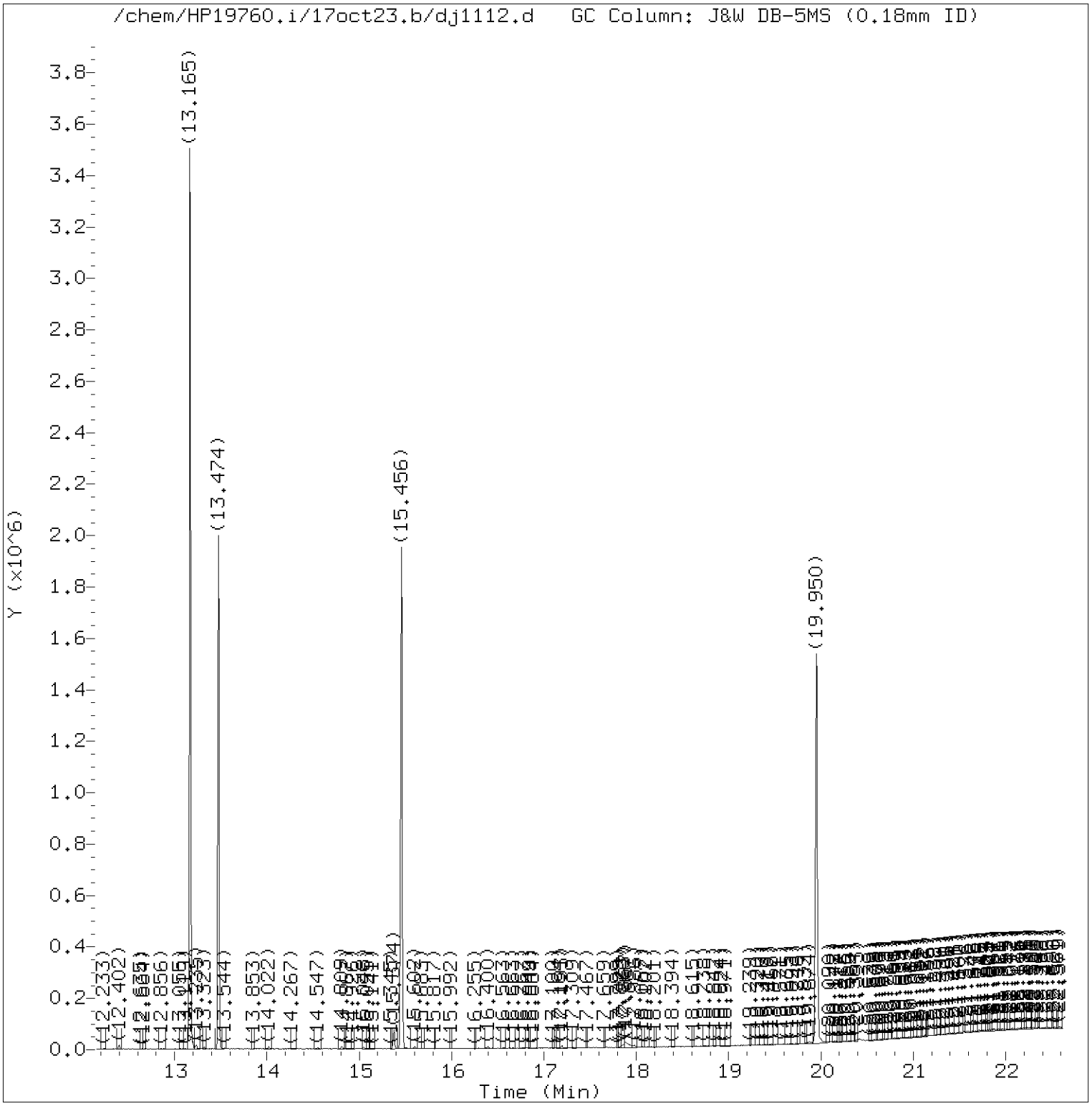
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1112.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:30 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

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Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1112.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:30 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

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on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1112.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:30 Analyst ID: ceb05247

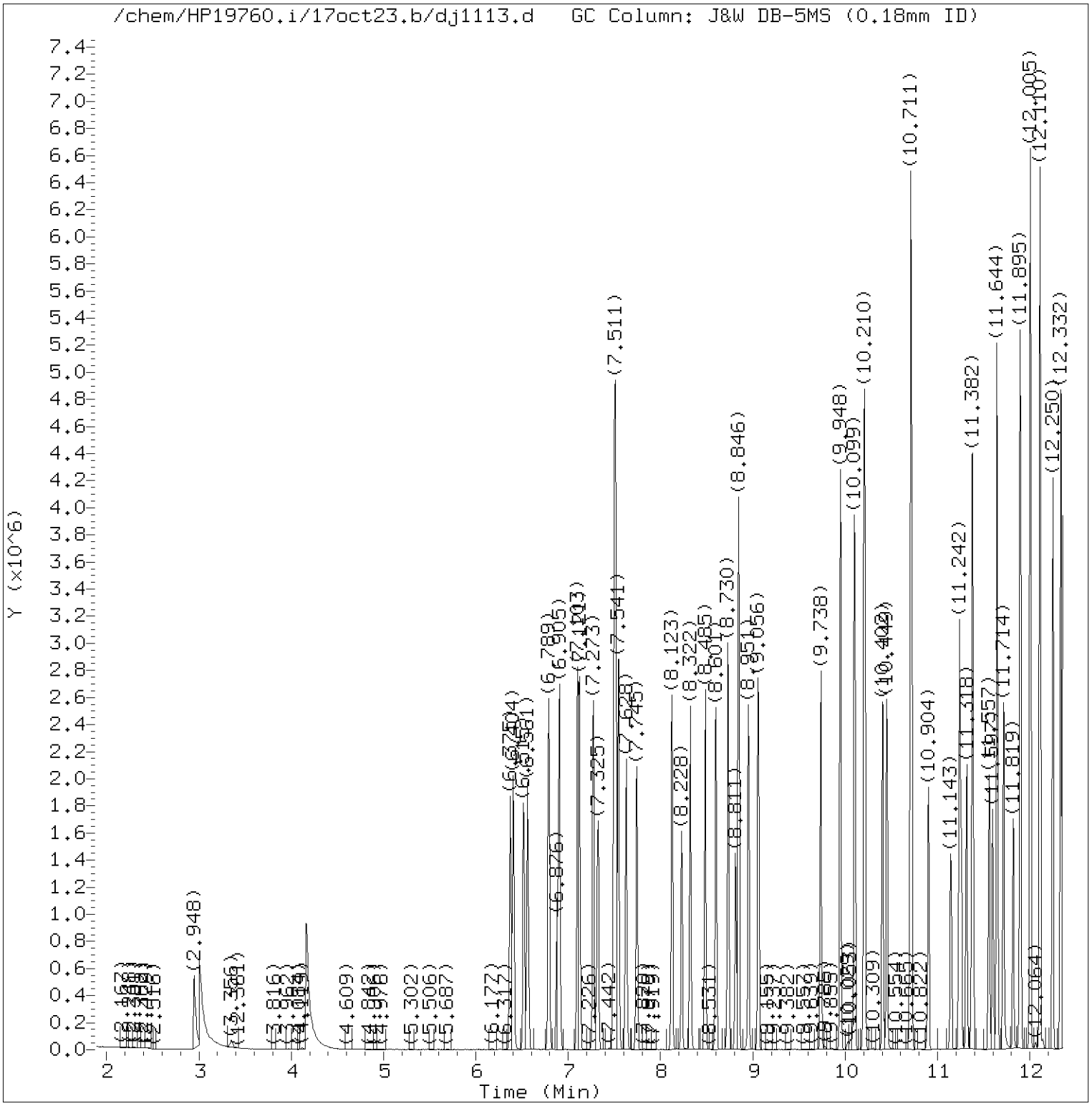
Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:06 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.247	77	770139	13.141
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	208685	5.000
65)*Naphthalene-d8	(2)	8.811	136	801611	5.000
76) Caprolactam	(2)	9.482	113	190957	11.709
113)*Acenaphthene-d10	(3)	11.592	164	424509	5.000
148) Atrazine	(4)	13.171	200	431986	12.942
153)*Phenanthrene-d10	(4)	13.474	188	785864	5.000
175)*Pyrene-d10	(5)	15.456	212	925981	5.000
213)*Perylene-d12	(6)	19.950	264	773809	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 10/23/2017 at 22:13.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

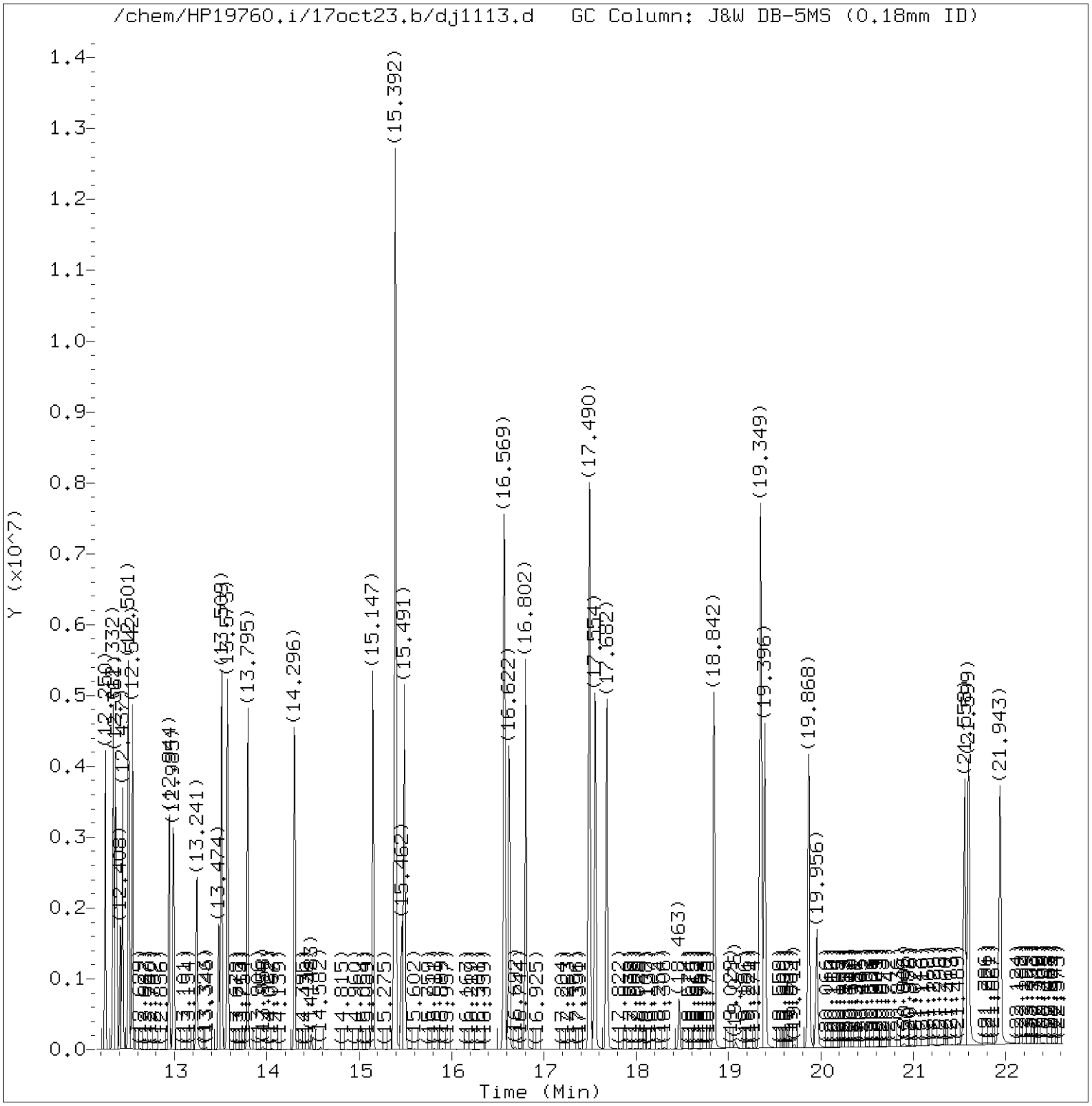
Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1113.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:58 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: hexben
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:38 em10340

Sample Name: SSTD25 Lab Sample ID: rvHBICV2917

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on 10/23/2017 at 22:39.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1113.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:58 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: hexben
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:38 em10340

Sample Name: SSTD25 Lab Sample ID: rvHBICV2917

Digitally signed by Edward Monborne
on 10/23/2017 at 22:39.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct23.b/dj1113.d Instrument ID: HP19760.i
Injection date and time: 23-OCT-2017 17:58 Analyst ID: ceb05247

Method used: /chem/HP19760.i/17oct23.b/rv8270d.m Sublist used: hexben
Calibration date and time: 23-OCT-2017 16:28
Date, time and analyst ID of latest file update: 23-Oct-2017 22:38 em10340

Sample Name: SSTD25 Lab Sample ID: rvHBICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.876	152	196522	5.000
65)*Naphthalene-d8	(2)	8.811	136	760907	5.000
85) Hexachlorocyclopentadiene	(3)	10.204	237	520422	20.075
113)*Acenaphthene-d10	(3)	11.597	164	407710	5.000
121) 1-Naphthylamine	(3)	12.005	143	2273717	20.152
123) 2-Naphthylamine	(3)	12.110	143	2151167	19.577
153)*Phenanthrene-d10	(4)	13.480	188	760678	5.000
174) Benzidine	(5)	15.392	184	6492055	45.275
175)*Pyrene-d10	(5)	15.462	212	960819	5.000
213)*Perylene-d12	(6)	19.956	264	841951	5.000

* = Compound is an internal standard.

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on 10/23/2017 at 22:39.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP19760.i/17oct24a.b/dj1210b.d

Date : 24-OCT-2017 22:17

Client ID: DFTPP12.5

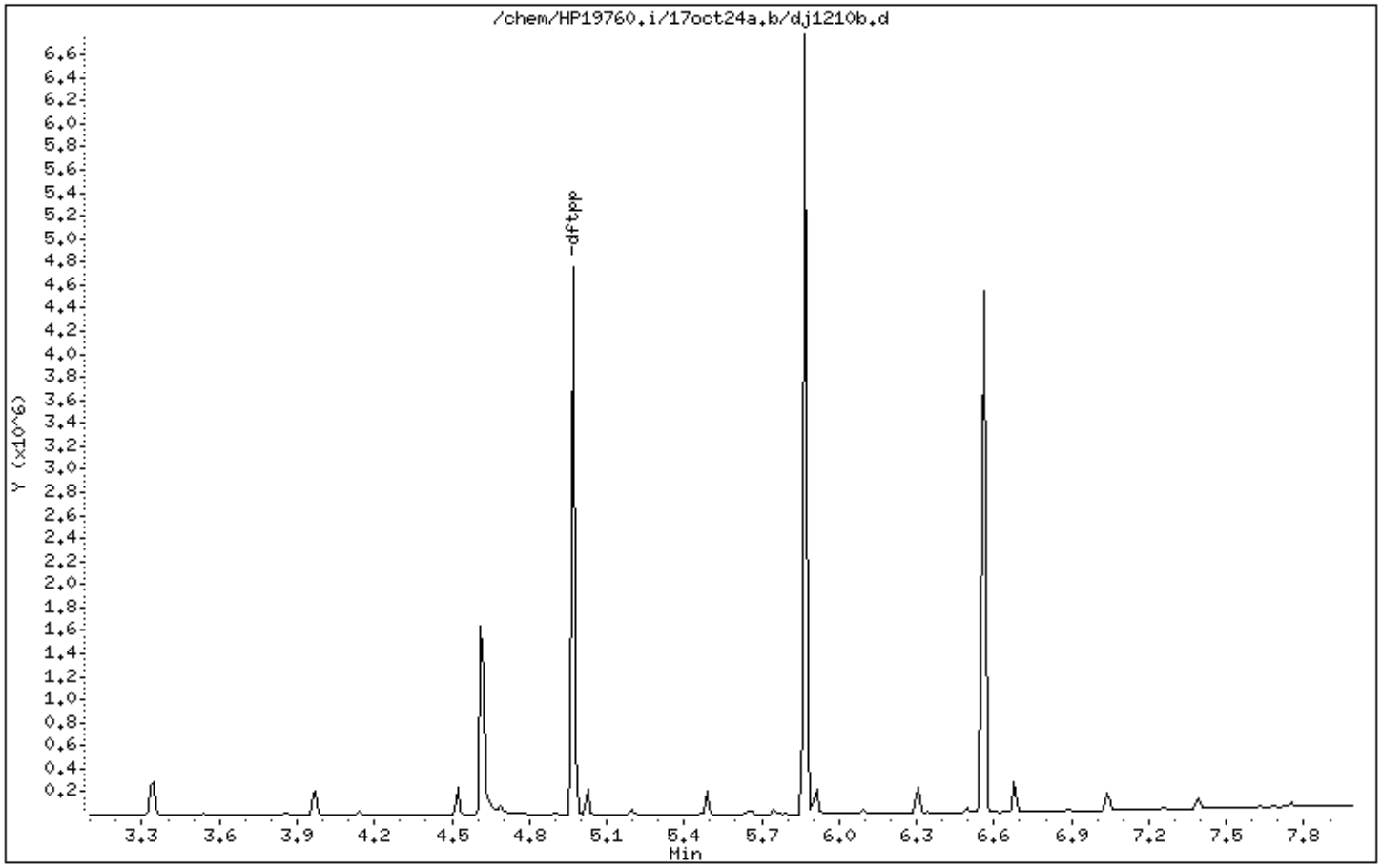
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2617;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Edward Monborne on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP19760.i/17oct24a.b/dj1210b.d

Date : 24-OCT-2017 22:17

Client ID: DFTPP12.5

Instrument: HP19760.i

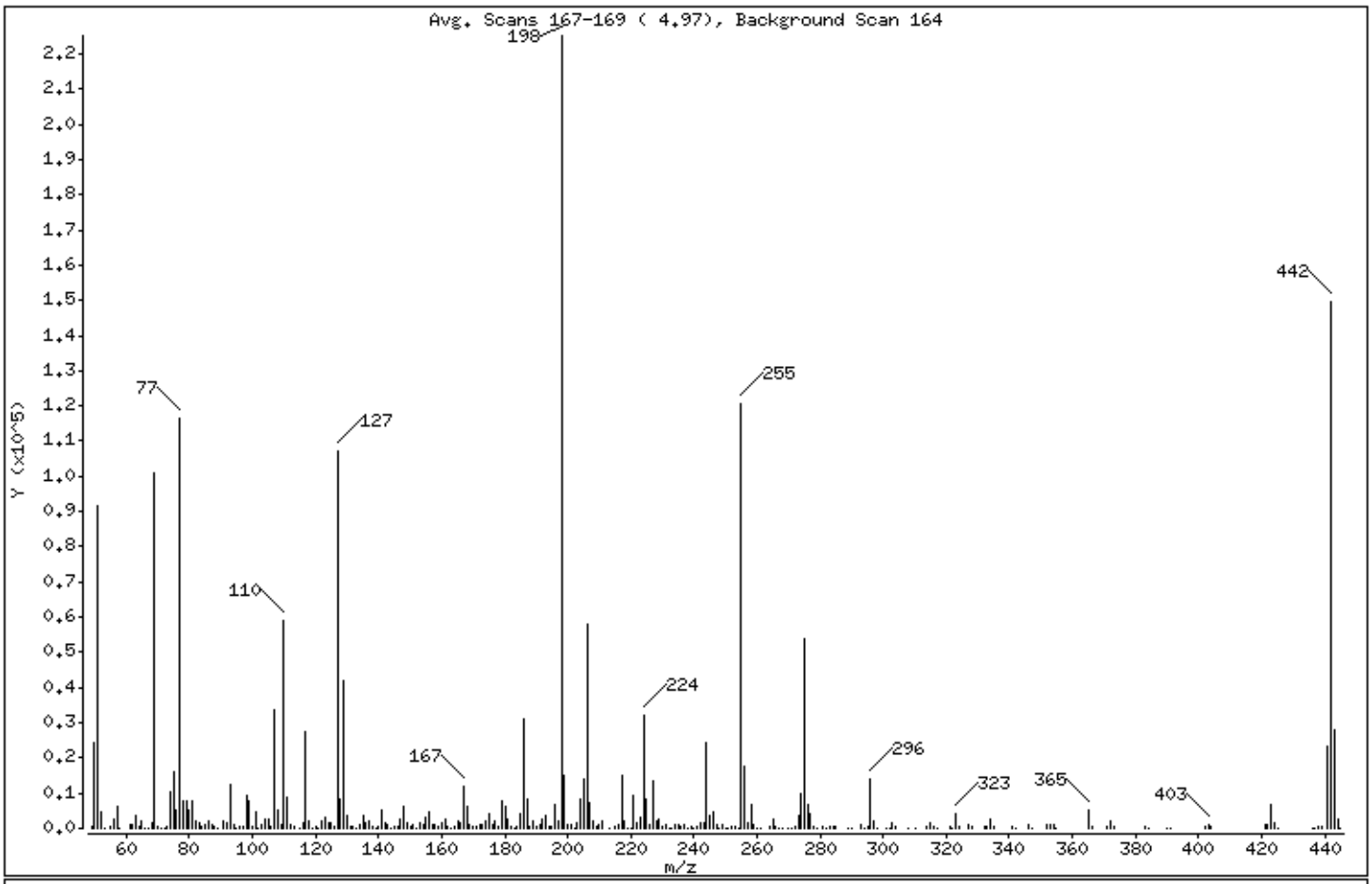
Sample Info: DFTPP12.5;rvDFTPP2617;1;3;DFTPP;

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	40.61
68	Less than 2.00% of mass 69	0.75 (1.68)
69	Mass 69 relative abundance	44.87
70	Less than 2.00% of mass 69	0.27 (0.61)
127	10.00 - 80.00% of mass 198	47.61
197	Less than 2.00% of mass 198	0.87
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	24.02
365	Greater than 1.00% of mass 198	2.24
441	0.01 - 24.00% of mass 442	10.39 (15.62)
442	50.00 - 99.99% of mass 198	66.52
443	15.00 - 24.00% of mass 442	12.44 (18.70)

Digitally signed by Edward Monborne on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Date : 24-OCT-2017 22:17

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2617;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1210b.d
Spectrum: Avg. Scans 167-169 (4.97), Background Scan 164
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	647	127.00	107192	200.00	1168	278.00	763
50.00	24216	128.00	8391	201.00	919	279.00	106
51.00	91424	129.00	41768	202.00	210	281.00	280
52.00	4760	130.00	3636	203.00	1744	282.00	118
53.00	189	131.00	741	204.00	8182	283.00	329
55.00	705	132.00	297	205.00	13862	284.00	327
56.00	2682	133.00	66	206.00	57920	285.00	671
57.00	6297	134.00	1217	207.00	7256	289.00	122
58.00	231	135.00	3498	208.00	2054	290.00	99
61.00	1216	136.00	1366	209.00	505	293.00	940
62.00	1260	137.00	1991	210.00	801	294.00	194
63.00	3553	138.00	350	211.00	2316	295.00	312
64.00	592	139.00	176	213.00	97	296.00	13903
65.00	1975	140.00	544	215.00	620	297.00	1935
66.00	112	141.00	5131	216.00	1050	298.00	91
67.00	125	142.00	1681	217.00	14997	301.00	132
68.00	1693	143.00	1146	218.00	1838	302.00	155
69.00	101016	144.00	128	219.00	141	303.00	1389
70.00	612	145.00	265	220.00	86	304.00	349
71.00	91	146.00	733	221.00	9218	308.00	163
72.00	96	147.00	2790	222.00	1743	310.00	128
73.00	465	148.00	6281	223.00	3208	314.00	488
74.00	10361	149.00	1349	224.00	31840	315.00	1471
75.00	16145	150.00	329	225.00	8091	316.00	772
76.00	5397	151.00	872	226.00	816	317.00	113
77.00	116456	152.00	170	227.00	13401	321.00	435
78.00	7725	153.00	1722	228.00	1874	322.00	128
79.00	7506	154.00	1229	229.00	2740	323.00	4092
80.00	5416	155.00	2941	230.00	345	324.00	721
81.00	8019	156.00	4643	231.00	1087	327.00	782
82.00	2109	157.00	815	232.00	186	328.00	451
83.00	1783	158.00	1074	233.00	234	332.00	316
84.00	294	159.00	590	234.00	785	333.00	367
85.00	1218	160.00	1511	235.00	806	334.00	2583
86.00	2137	161.00	2370	236.00	537	335.00	724

Digitally signed by Edward Monborne on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Date : 24-OCT-2017 22:17

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2617;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1210b.d
Spectrum: Avg. Scans 167-169 (4.97), Background Scan 164
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	1131	162.00	703	237.00	1130	341.00	423
88.00	403	163.00	231	238.00	84	342.00	123
89.00	147	164.00	262	239.00	403	346.00	959
91.00	1921	165.00	2015	240.00	201	347.00	133
92.00	1770	166.00	1751	241.00	709	352.00	973
93.00	12426	167.00	11973	242.00	1613	353.00	793
94.00	873	168.00	6242	243.00	1696	354.00	1152
95.00	126	169.00	1114	244.00	24464	355.00	166
96.00	704	170.00	285	245.00	3459	365.00	5052
97.00	326	171.00	314	246.00	4804	366.00	718
98.00	9341	172.00	869	247.00	950	371.00	345
99.00	7926	173.00	1072	248.00	134	372.00	1830
100.00	654	174.00	2106	249.00	928	373.00	489
101.00	4461	175.00	4158	250.00	122	383.00	442
102.00	203	176.00	1288	251.00	185	384.00	99
103.00	1237	177.00	1930	252.00	275	390.00	231
104.00	2569	178.00	635	253.00	582	391.00	122
105.00	2651	179.00	7661	254.00	192	402.00	628
106.00	774	180.00	6158	255.00	120616	403.00	962
107.00	33848	181.00	2609	256.00	17640	404.00	424
108.00	5004	182.00	337	257.00	1451	421.00	1102
109.00	926	183.00	215	258.00	6634	422.00	1051
110.00	59072	184.00	617	259.00	943	423.00	6679
111.00	8727	185.00	3974	260.00	140	424.00	1595
112.00	1031	186.00	30800	261.00	145	425.00	130
113.00	404	187.00	8524	264.00	435	436.00	93
115.00	136	188.00	708	265.00	2564	437.00	89
116.00	1598	189.00	1942	266.00	275	438.00	437
117.00	27616	190.00	288	267.00	105	439.00	508
118.00	1879	191.00	853	268.00	68	441.00	23400
119.00	131	192.00	2704	270.00	141	442.00	149760
120.00	298	193.00	3412	271.00	241	443.00	28000
121.00	153	194.00	510	272.00	322	444.00	2494
122.00	1818	195.00	434	273.00	3570	445.00	87
123.00	3103	196.00	6664	274.00	9704		

Digitally signed by Edward Monborne on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Date : 24-OCT-2017 22:17

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2617;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

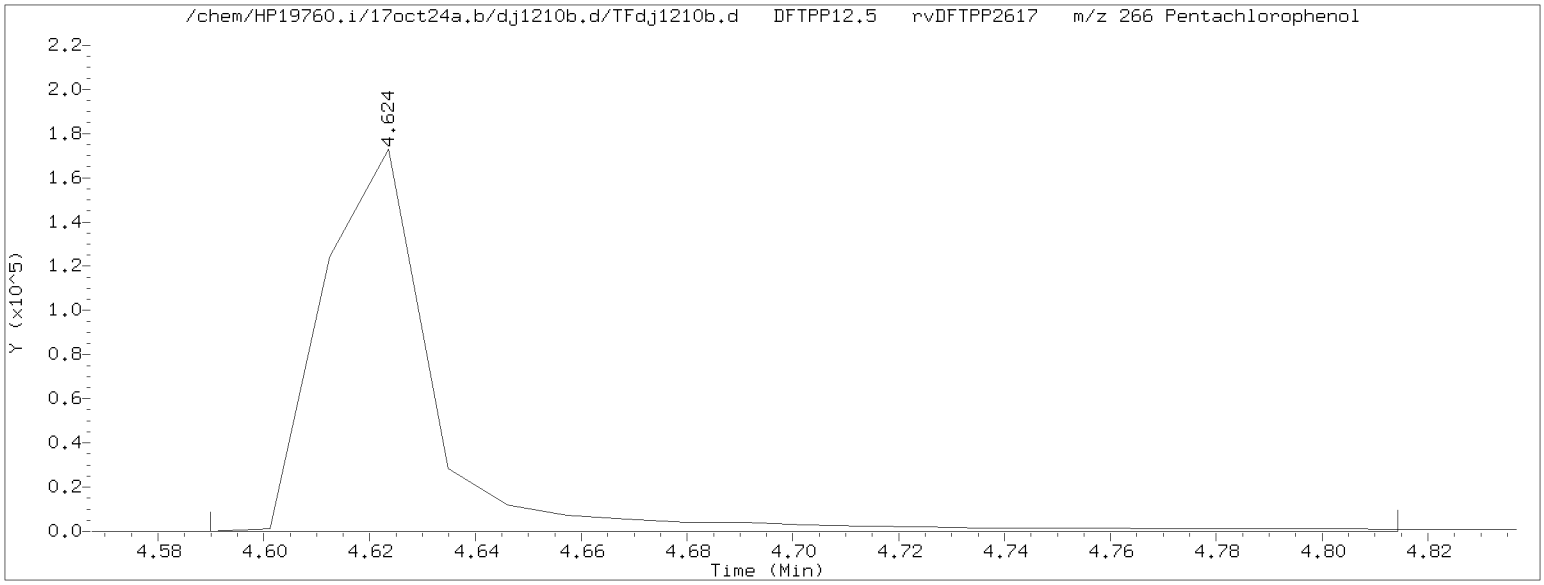
Data File: dj1210b.d
Spectrum: Avg. Scans 167-169 (4.97), Background Scan 164
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1435	197.00	1962	275.00	54088		
125.00	1308	198.00	225152	276.00	6832		
126.00	739	199.00	15187	277.00	4311		

Digitally signed by Edward Monborne on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Assessment of GC Column Performance and Injection Port Inertness for

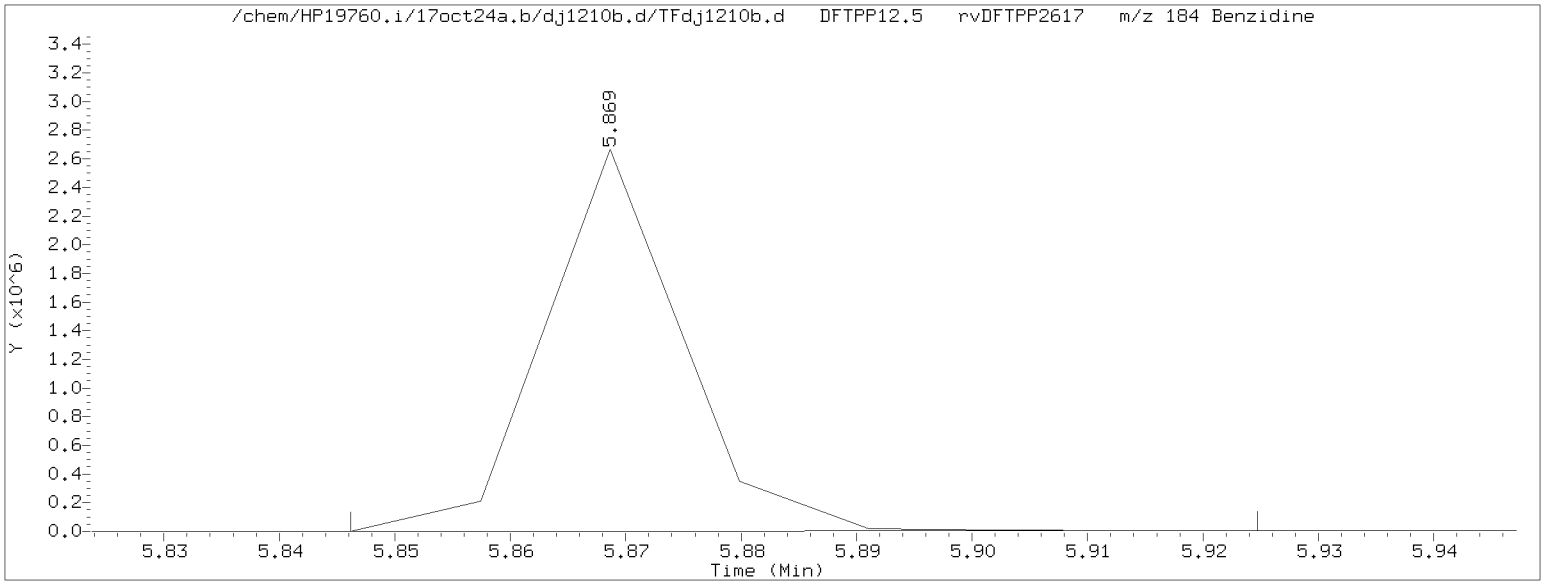
Instrument ID: HP19760.i Injection Date: 24-OCT-2017 22:17 Operator: em10340



Pentachlorophenol EICP peak height = 172992 EICP peak height at 10% = 17299 Pentachlorophenol EICP area = 252662

Pentachlorophenol EICP peak apex (min.) = 4.624
RT at 10% of front half of EICP (min.) = 4.603 'Front' peak width (min.) = 0.0209333333
RT at 10% of back half of EICP (min.) = 4.642 'Tailing' peak width (min.) = 0.0186166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0186166667}{0.0209333333} = 0.889$$



Benzidine EICP peak height = 2668502 EICP peak height at 10% = 266850 Benzidine EICP area = 2191083

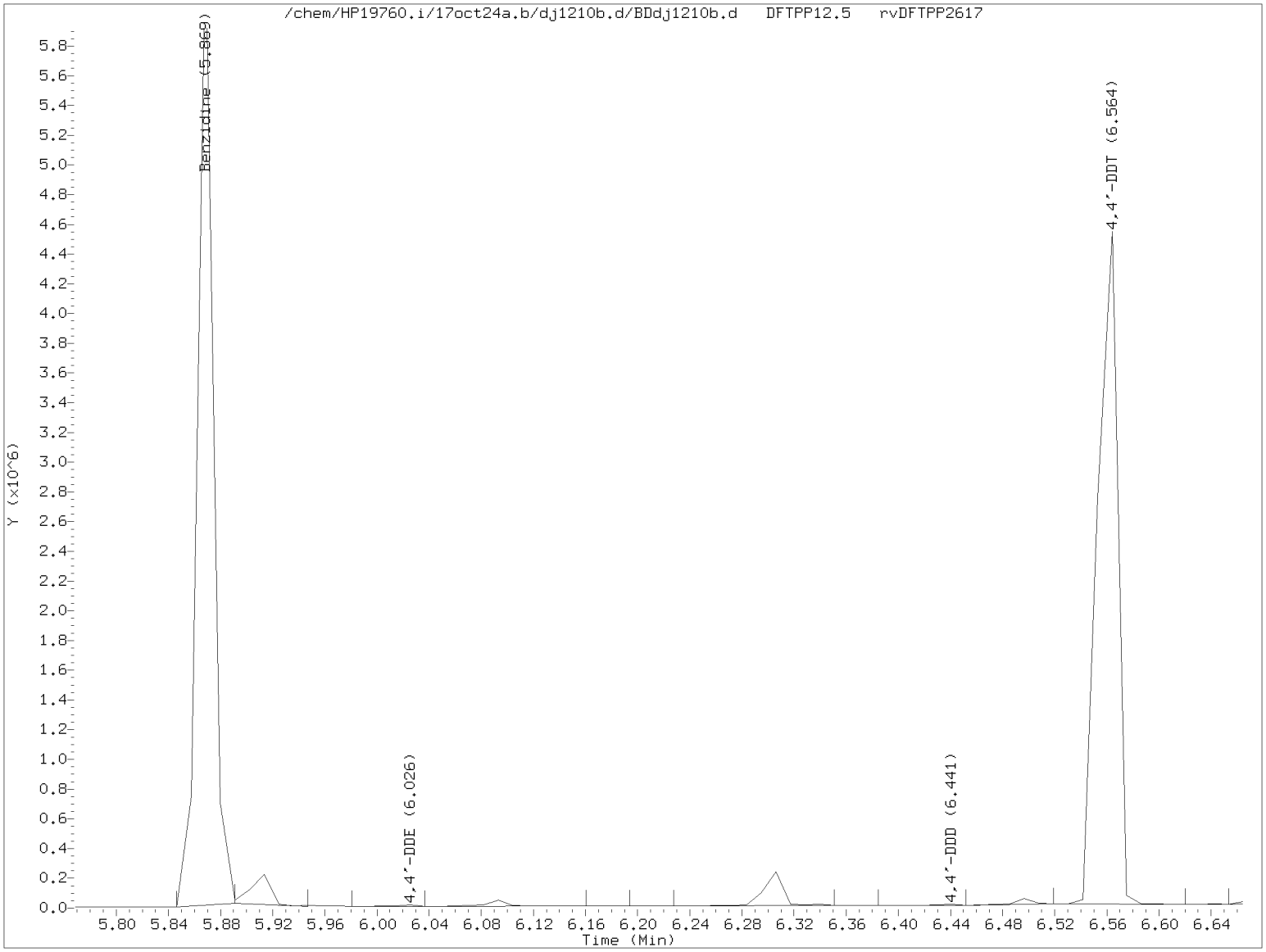
Benzidine EICP peak apex (min.) = 5.869
RT at 10% of front half of EICP (min.) = 5.858 'Front' peak width (min.) = 0.0109500000
RT at 10% of back half of EICP (min.) = 5.883 'Tailing' peak width (min.) = 0.0140000000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0140000000}{0.0109500000} = 1.279$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:48. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

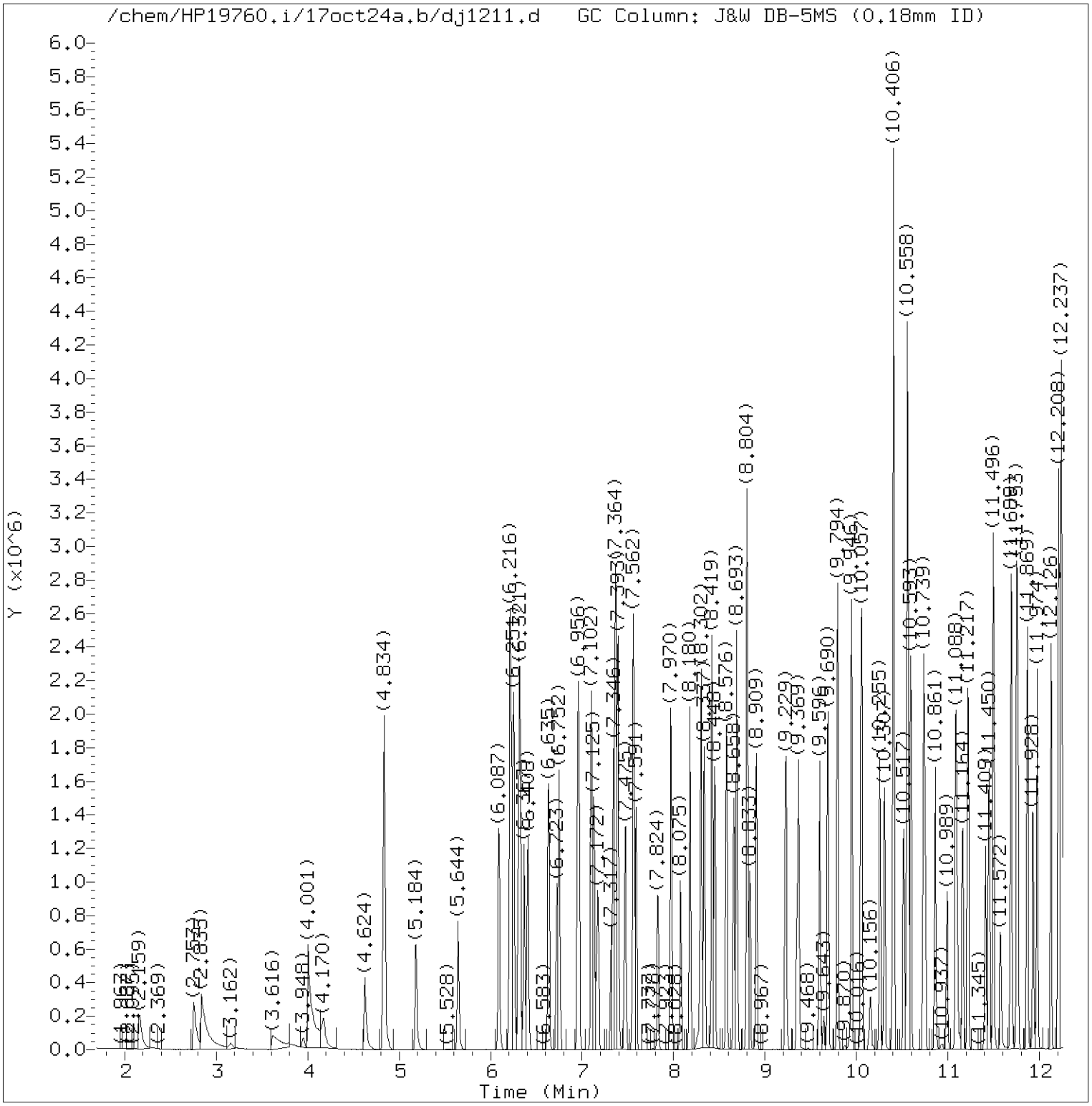
Instrument ID: HP19760.i Injection Date: 24-OCT-2017 22:17 Operator: em10340



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{9121 + 7555}{9121 + 7555 + 4954341} \times 100 = 0.3$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/25/2017 at 10:48. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

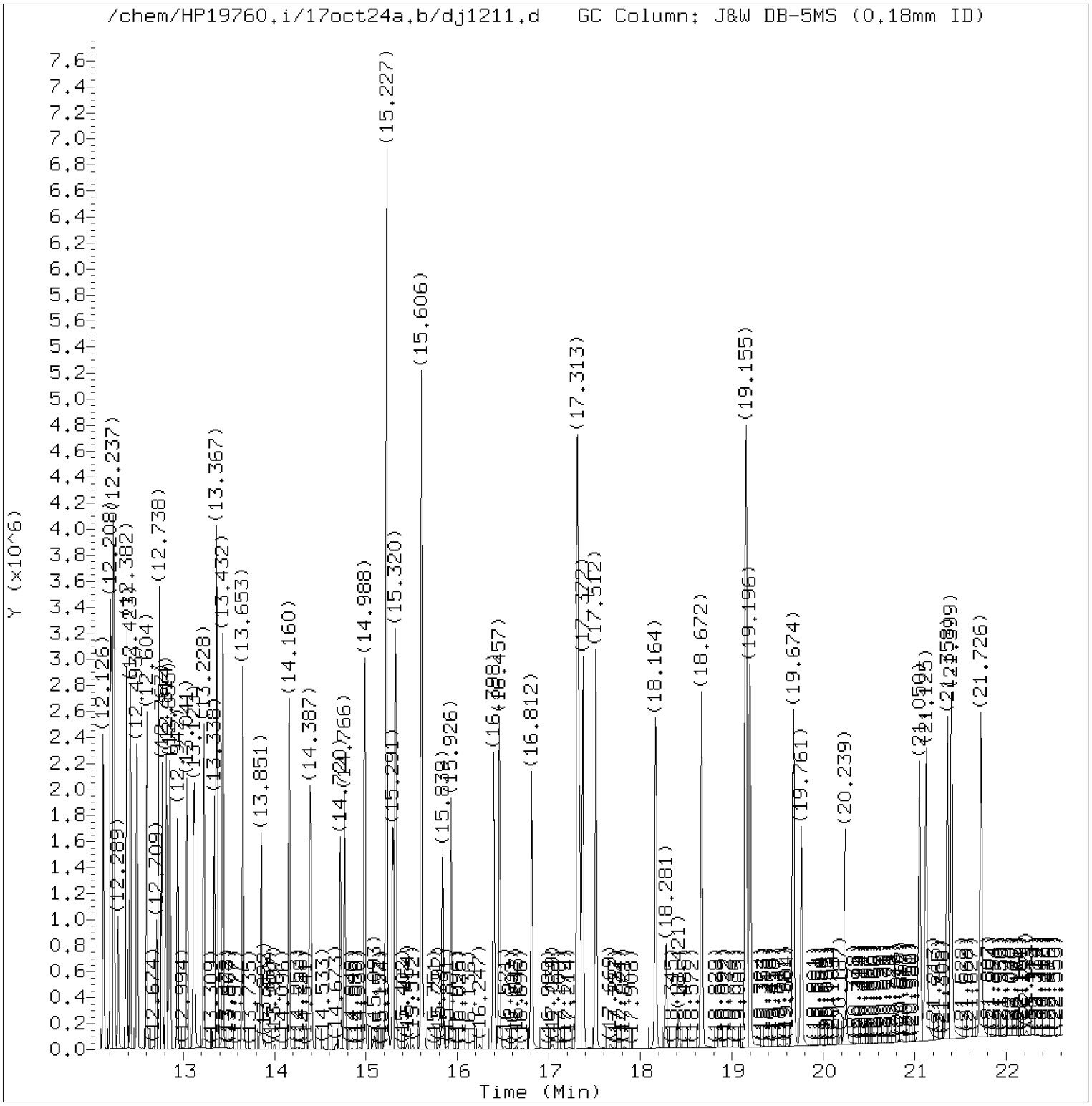
Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.159	88	209459	7.664
4) N-Nitrosodimethylamine	(1)	2.753	74	337046	7.824
5) Pyridine	(1)	2.835	79	494912	7.129
7) 2-Picoline	(1)	4.001	93	563677	7.632
8) N-Nitrosomethylethylamine	(1)	4.170	88	240085	7.646
9) Methyl methanesulfonate	(1)	4.624	80	258184	7.712
11)$2-Fluorophenol	(1)	4.834	112	949910	15.483
13) N-Nitrosodiethylamine	(1)	5.184	102	229701	7.732
15) Ethyl methanesulfonate	(1)	5.644	109	243100	7.863
42) Total Cresols	(1)			965100	15.854
16) Benzaldehyde	(1)	6.087	77	426457	7.502
17)$Phenol-d6	(1)	6.210	99	1247796	15.549
18) Phenol	(1)	6.233	94	711108	7.853
19) Aniline	(1)	6.251	93	818776	7.755
20) a-methylstyrene	(1)	6.321	118	497174	7.672
22) bis(2-Chloroethyl)ether	(1)	6.367	93	515671	7.583
23) 2-Chlorophenol	(1)	6.408	128	472636	7.781
24) 1,3-Dichlorobenzene	(1)	6.635	146	514946	7.789
25)*1,4-Dichlorobenzene-d4	(1)	6.723	152	202430	5.000
26) 1,4-Dichlorobenzene	(1)	6.752	146	524476	7.801
27) Benzyl alcohol	(1)	6.950	108	305771	7.505
28) 1,2-Dichlorobenzene	(1)	6.968	146	498886	7.837
30) Indene	(1)	7.102	115	905890	7.653
31) 2-Methylphenol	(1)	7.125	108	450098	7.829
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.172	45	668772	7.583
34) bis(2-Chloroisopropyl)ether	(1)	7.172	45	668772	7.583
35) N-Nitrosopyrrolidine	(1)	7.317	100	247973	7.852
36) Acetophenone	(1)	7.341	105	696852	7.323
38) N-Nitroso-di-n-propylamine	(1)	7.364	70	396276	7.628
37) 4-Methylphenol	(1)	7.370	108	515002	8.015
97) Isosafrole	(3)			323161	7.712
39) N-Nitrosomorpholine	(1)	7.387	56	305110	7.844
40) o-Toluidine	(1)	7.393	106	815897	7.863
43) Hexachloroethane	(1)	7.469	117	214182	7.909
44)$Nitrobenzene-d5	(2)	7.562	82	1159225	15.436
45) Nitrobenzene	(2)	7.591	77	584075	7.736
48) N-Nitrosopiperidine	(2)	7.830	114	237172	7.772
50) Isophorone	(2)	7.970	82	995918	7.583
120) 2,4_2,6-Dinitrotoluenes	(3)			461221	15.772
51) 2-Nitrophenol	(2)	8.075	139	222954	7.955

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

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.180	107	504114	7.728
57) O,O,O-Triethylphosphorothioate	(2)	8.302	198	221281	7.566
56) Benzoic acid	(2)	8.326	105	400766	9.125
55) bis(2-Chloroethoxy)methane	(2)	8.337	93	631398	7.729
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.419	104	733051	7.706
60) 2,4-Dichlorophenol	(2)	8.448	162	387064	8.026
62) 1,2,4-Trichlorobenzene	(2)	8.576	180	424347	7.571
65)*Naphthalene-d8	(2)	8.658	136	777633	5.000
66) Naphthalene	(2)	8.693	128	1337810	7.610
146) Diallate trans/cis	(4)			431202	7.713
68) 2,6-Dichlorophenol	(2)	8.804	162	374661	7.900
67) 4-Chloroaniline	(2)	8.804	127	560337	7.744
69) Hexachloropropene	(2)	8.833	213	217434	7.985
71) Hexachlorobutadiene	(2)	8.909	225	243872	7.771
75) Quinoline	(2)	9.229	129	824047	7.708
76) Caprolactam	(2)	9.352	113	109443	6.918
77) N-Nitrosodi-n-butylamine	(2)	9.369	84	456001	7.964
80) 4-Chloro-3-methylphenol	(2)	9.596	107	423461	7.823
82) Safrole	(2)	9.690	162	346457	7.709
83) 2-Methylnaphthalene	(2)	9.794	142	897254	7.694
84) 1-Methylnaphthalene	(2)	9.946	142	811413	7.684
85) Hexachlorocyclopentadiene	(3)	10.051	237	208479	7.964
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.057	216	436649	7.837
88) cis-Isosafrole	(3)	10.156	162	60167	1.319
90) 2,4,6-Trichlorophenol	(3)	10.255	196	267090	7.955
92) 2,4,5-Trichlorophenol	(3)	10.307	196	286157	8.085
93)$2-Fluorobiphenyl	(3)	10.406	172	1947959	15.622
94) trans-Isosafrole	(3)	10.517	162	262994	6.392
95) 1,1'-Biphenyl	(3)	10.552	154	1015234	7.412
96) 2-Chloronaphthalene	(3)	10.564	162	867198	7.802
98) 1-Chloronaphthalene	(3)	10.593	162	766213	7.847
99) Diphenyl ether	(3)	10.733	170	568345	7.746
100) 2-Nitroaniline	(3)	10.750	138	247429	7.959
104) 1,4-Naphthoquinone	(3)	10.861	158	321852	7.419
105) 1,4-Dinitrobenzene	(3)	10.995	168	119341	7.467
106) Dimethylphthalate	(3)	11.083	163	894458	7.554
107) 1,3-Dinitrobenzene	(3)	11.100	168	137234	7.729
108) 2,6-Dinitrotoluene	(3)	11.164	165	198984	8.092
109) Acenaphthylene	(3)	11.217	152	1166661	7.875
112) 3-Nitroaniline	(3)	11.415	138	214632	7.673

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

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.450	164	411719	5.000
114) Acenaphthene	(3)	11.496	153	874151	7.788
115) 2,4-Dinitrophenol	(3)	11.578	184	107783	8.137
117) Pentachlorobenzene	(3)	11.689	250	360574	7.864
116) 4-Nitrophenol	(3)	11.695	109	147135	6.864
119) Dibenzofuran	(3)	11.753	168	1141358	7.797
118) 2,4-Dinitrotoluene	(3)	11.765	165	262237	7.439
121) 1-Naphthylamine	(3)	11.869	143	836510	7.342
122) 2,3,4,6-Tetrachlorophenol	(3)	11.934	232	192190	6.940
123) 2-Naphthylamine	(3)	11.980	143	817190	7.364
124) Diethylphthalate	(3)	12.126	149	892543	7.634
126) Fluorene	(3)	12.208	166	905015	7.688
125) Thionazin	(3)	12.219	107	177616	7.640
127) 4-Chlorophenyl-phenylether	(3)	12.237	204	432696	7.698
128) 5-Nitro-o-toluidine	(3)	12.243	152	250112	7.705
129) 4-Nitroaniline	(3)	12.248	138	222996	7.843
130) 4,6-Dinitro-2-methylphenol	(4)	12.289	198	121833	6.475
131) N-Nitrosodiphenylamine	(4)	12.382	169	748976	8.104
132) NDPA as diphenylamine	(4)	12.382	169	748976	8.104
134) 1,2-Diphenylhydrazine	(4)	12.423	77	1062233	8.047
135)$2,4,6-Tribromophenol	(3)	12.499	330	233995	14.934
137) Tetraethyldithiopyrophosphate	(4)	12.604	97	172385	7.854
139) 1,3,5-Trinitrobenzene	(4)	12.709	213	84793	6.866
140) Diallate (peak 1)	(4)	12.738	86	371613	6.444
141) Phorate	(4)	12.744	75	681137	8.210
142) Phenacetin	(4)	12.767	108	491449	7.780
143) 4-Bromophenyl-phenylether	(4)	12.814	248	253825	7.838
144) Diallate (peak 2)	(4)	12.837	86	59589	1.259
145) Hexachlorobenzene	(4)	12.855	284	266243	8.020
147) Dimethoate	(4)	12.942	87	409825	7.690
148) Atrazine	(4)	13.041	200	232363	7.348
149) Pentachlorophenol	(4)	13.111	266	93409	4.453
151) Pentachloronitrobenzene	(4)	13.123	237	112108	7.856
150) 4-Aminobiphenyl	(4)	13.128	169	226931	7.769
152) Pronamide	(4)	13.228	173	417160	7.883
153)*Phenanthrene-d10	(4)	13.338	188	744504	5.000
154) Dinoseb	(4)	13.362	211	188570	6.601
155) Phenanthrene	(4)	13.367	178	1332649	7.869
157) Anthracene	(4)	13.432	178	1331095	7.951
163) Carbazole	(4)	13.653	167	1243423	7.924

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

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1211.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-OCT-2017 23:32
Date, time and analyst ID of latest file update: 24-Oct-2017 23:32 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	13.851	109	314273	7.676
165) Di-n-butylphthalate	(4)	14.160	149	1503063	7.635
167) Parathion	(4)	14.387	109	197437	7.455
168) 4-Nitroquinoline-1-oxide	(4)	14.405	190	97289	7.112
169) Octachlorostyrene	(4)	14.720	308	99356	7.425
171) Isodrin	(4)	14.766	193	152559	7.520
173) Fluoranthene	(4)	14.988	202	1511566	7.817
222) Total PAHs	(6)			24268117	136.575
174) Benzidine	(5)	15.227	184	3131533	23.136
175)*Pyrene-d10	(5)	15.297	212	906937	5.000
177) Pyrene	(5)	15.320	202	1610204	7.701
179)$Terphenyl-d14	(5)	15.606	244	2133082	15.639
182) p-Dimethylaminoazobenzene	(5)	15.839	225	210177	7.668
185) Chlorobenzilate	(5)	15.926	139	475385	7.843
187) 3,3'-Dimethylbenzidine	(5)	16.398	212	1005713	7.792
188) Butylbenzylphthalate	(5)	16.457	149	726215	7.982
191) 2-Acetylaminofluorene	(5)	16.812	181	628137	7.756
195) Benzo(a)anthracene	(5)	17.308	228	1543931	8.008
193) 3,3'-Dichlorobenzidine	(5)	17.313	252	575124	7.957
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.337	231	294837	7.874
196) Chrysene	(5)	17.372	228	1460074	8.004
199) bis(2-Ethylhexyl)phthalate	(5)	17.512	149	1082885	8.044
203) 6-Methylchrysene	(5)	18.164	242	1053708	7.837
205) Di-n-octylphthalate	(6)	18.672	149	1879029	7.404
206) Benzo(b)fluoranthene	(6)	19.149	252	1569089	7.617
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.155	256	679104	7.925
208) Benzo(k)fluoranthene	(6)	19.196	252	1583886	7.882
211) Benzo(a)pyrene	(6)	19.674	252	1497946	7.954
213)*Perylene-d12	(6)	19.761	264	852090	5.000
215) 3-Methylcholanthrene	(6)	20.239	268	534621	7.628
217) Dibenz(a,h)acridine	(6)	21.055	279	1225858	7.709
218) Dibenz(a,j)acridine	(6)	21.125	279	1325134	7.856
219) Indeno(1,2,3-cd)pyrene	(6)	21.358	276	1805073	8.132
220) Dibenz(a,h)anthracene	(6)	21.399	278	1511321	8.149
221) Benzo(g,h,i)perylene	(6)	21.726	276	1518979	8.161

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

Digitally signed by Edward Monborne
on 10/24/2017 at 23:33.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP19760.i/17oct30a.b/dj1610a.d

Date : 30-OCT-2017 20:50

Client ID: DFTPP12.5

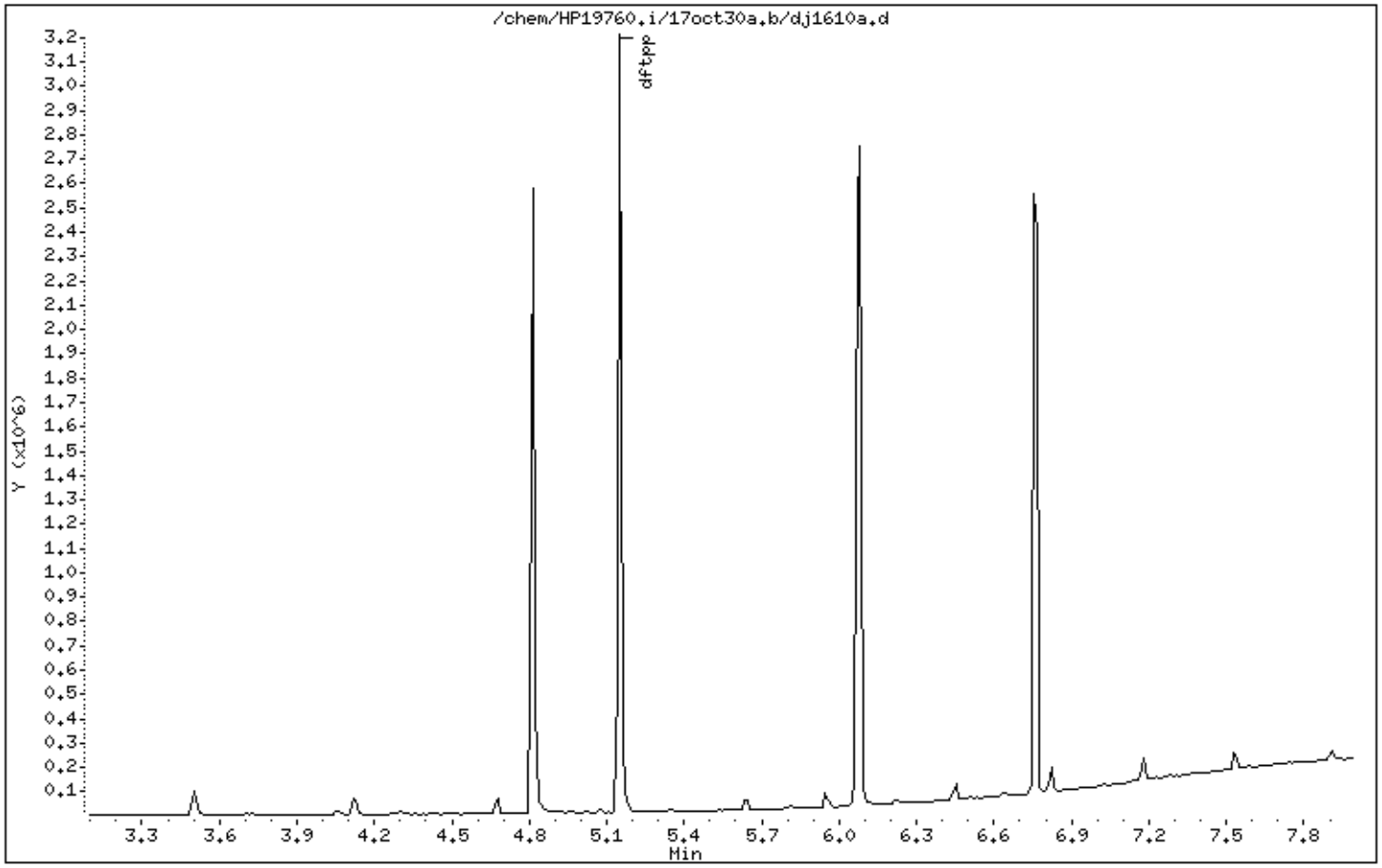
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:56.
Target 3.5 esignature user ID: apb10206

Data File: /chem/HP19760.i/17oct30a.b/dj1610a.d

Date : 30-OCT-2017 20:50

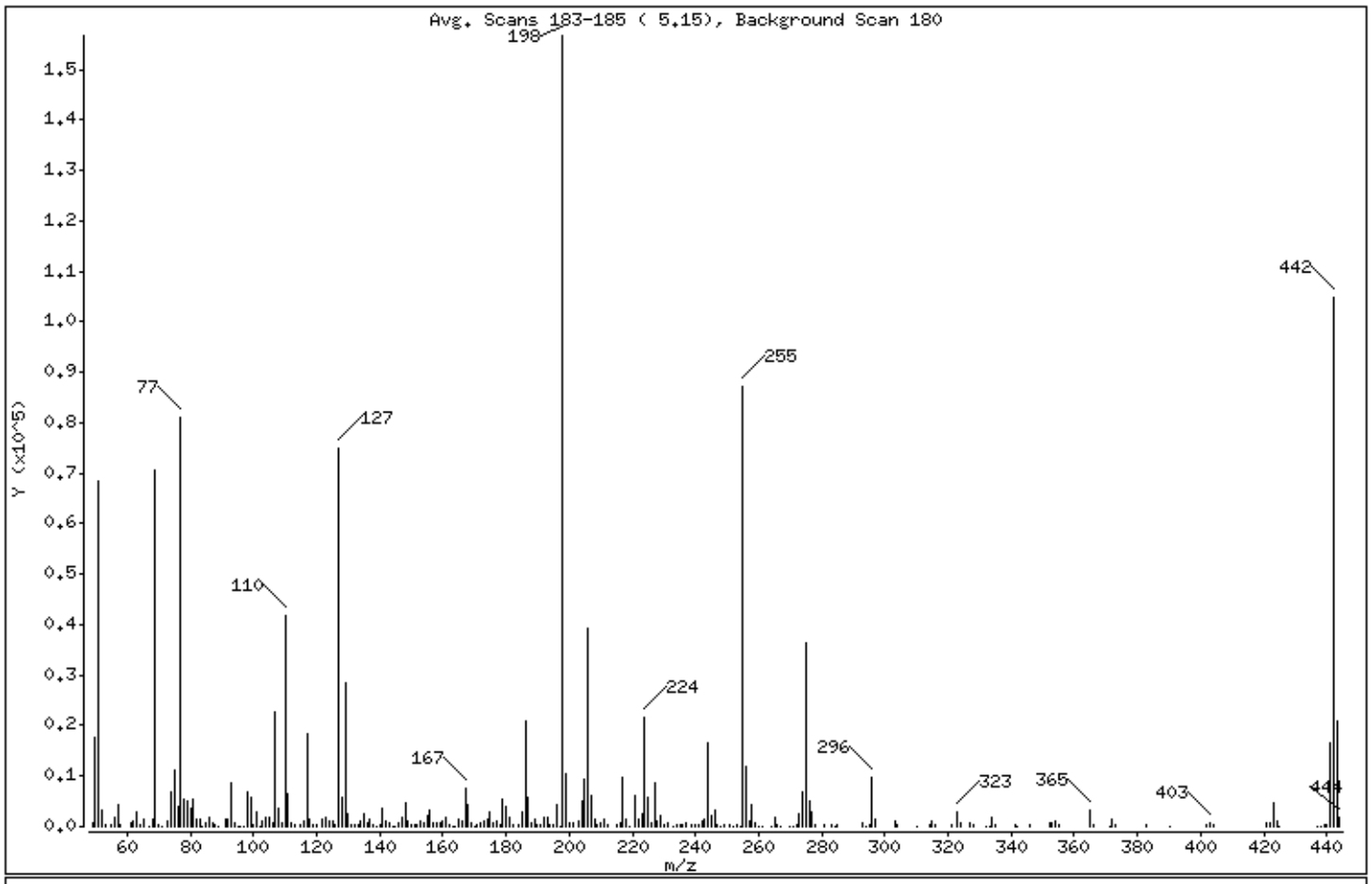
Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: apb10206

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	43.57
68	Less than 2.00% of mass 69	0.81 (1.80)
69	Mass 69 relative abundance	45.02
70	Less than 2.00% of mass 69	0.31 (0.69)
127	10.00 - 80.00% of mass 198	47.75
197	Less than 2.00% of mass 198	0.08
199	5.00 - 9.00% of mass 198	6.60
275	10.00 - 60.00% of mass 198	23.24
365	Greater than 1.00% of mass 198	2.13
441	0.01 - 24.00% of mass 442	10.60 (15.84)
442	50.00 - 99.99% of mass 198	66.93
443	15.00 - 24.00% of mass 442	13.27 (19.83)

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:56.
Target 3.5 esignature user ID: apb10206

Date : 30-OCT-2017 20:50

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1610a.d
Spectrum: Avg. Scans 183-185 (5,15), Background Scan 180
Location of Maximum: 198.00
Number of points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	662	124.00	1071	192.00	1920	270.00	95
50.00	17560	125.00	910	193.00	1875	271.00	109
51.00	68256	126.00	510	194.00	482	272.00	259
52.00	3314	127.00	74808	195.00	421	273.00	2439
53.00	231	128.00	5583	196.00	4424	274.00	6754
55.00	227	129.00	28448	197.00	129	275.00	36416
56.00	1659	130.00	2372	198.00	156672	276.00	4876
57.00	4339	131.00	531	199.00	10337	277.00	2964
58.00	268	132.00	233	200.00	767	278.00	460
61.00	847	133.00	226	201.00	663	281.00	235
62.00	961	134.00	917	203.00	965	283.00	402
63.00	2754	135.00	2392	204.00	5211	284.00	154
64.00	394	136.00	825	205.00	9360	285.00	389
65.00	1347	137.00	1337	206.00	39360	293.00	728
67.00	93	138.00	211	207.00	6078	294.00	114
68.00	1273	139.00	131	208.00	1330	295.00	292
69.00	70544	140.00	266	209.00	522	296.00	9556
70.00	490	141.00	3673	210.00	788	297.00	1323
71.00	99	142.00	1162	211.00	1542	303.00	961
73.00	1153	143.00	843	212.00	194	304.00	273
74.00	7016	144.00	173	215.00	336	310.00	86
75.00	11254	145.00	163	216.00	765	314.00	379
76.00	4085	146.00	559	217.00	9715	315.00	956
77.00	81000	147.00	1833	218.00	1378	316.00	535
78.00	5557	148.00	4657	219.00	160	321.00	256
79.00	5121	149.00	1019	221.00	6121	323.00	2907
80.00	3719	150.00	237	222.00	1576	324.00	565
81.00	5568	151.00	490	223.00	2473	327.00	584
82.00	1408	152.00	195	224.00	21648	328.00	201
83.00	1321	153.00	1096	225.00	5727	332.00	132
84.00	79	154.00	857	226.00	609	333.00	137
85.00	830	155.00	2253	227.00	8781	334.00	1921
86.00	1716	156.00	3155	228.00	1240	335.00	377
87.00	746	157.00	648	229.00	2007	341.00	341
88.00	287	158.00	625	230.00	230	342.00	93

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:56.
Target 3.5 esignature user ID: apb10206

Date : 30-OCT-2017 20:50

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: apb10206

Column phase: DB-5MS Column diameter: 0.18

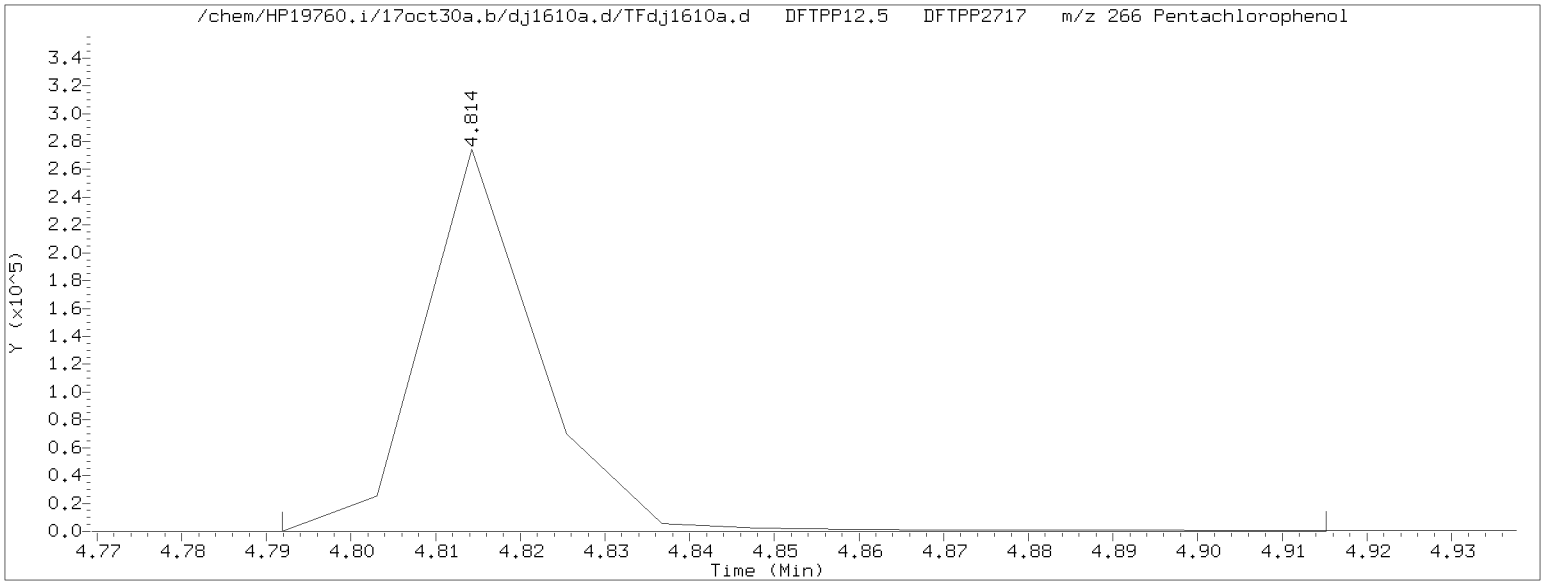
Data File: dj1610a.d
Spectrum: Avg. Scans 183-185 (5,15), Background Scan 180
Location of Maximum: 198.00
Number of points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	157	159.00	563	231.00	739	346.00	540
91.00	1276	160.00	1055	233.00	122	352.00	832
92.00	1308	161.00	1764	234.00	473	353.00	623
93.00	8497	162.00	450	235.00	519	354.00	903
94.00	554	163.00	126	236.00	420	355.00	187
95.00	109	164.00	152	237.00	587	365.00	3345
96.00	92	165.00	1395	239.00	204	366.00	537
97.00	166	166.00	1011	240.00	188	371.00	174
98.00	6852	167.00	7716	241.00	472	372.00	1365
99.00	5602	168.00	4351	242.00	1144	373.00	351
100.00	461	169.00	588	243.00	1356	383.00	237
101.00	2750	170.00	129	244.00	16640	390.00	121
102.00	153	171.00	182	245.00	2286	402.00	532
103.00	1184	172.00	589	246.00	3090	403.00	741
104.00	1701	173.00	966	247.00	514	404.00	181
105.00	1756	174.00	1535	248.00	123	421.00	594
106.00	658	175.00	2841	249.00	435	422.00	684
107.00	22648	176.00	795	251.00	210	423.00	4851
108.00	3521	177.00	1194	252.00	138	424.00	1236
109.00	582	178.00	466	253.00	457	425.00	109
110.00	41944	179.00	5473	254.00	128	437.00	91
111.00	6555	180.00	3973	255.00	87208	438.00	102
112.00	777	181.00	1685	256.00	12052	439.00	187
113.00	229	182.00	205	257.00	907	440.00	375
115.00	208	184.00	414	258.00	4478	441.00	16608
116.00	1141	185.00	2946	259.00	628	442.00	104864
117.00	18544	186.00	20744	260.00	120	443.00	20792
118.00	1366	187.00	5811	261.00	108	444.00	1923
119.00	286	188.00	583	264.00	124		
120.00	238	189.00	1290	265.00	1860		
122.00	1268	190.00	202	266.00	207		
123.00	1895	191.00	535	267.00	93		

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:56.
Target 3.5 esignature user ID: apb10206

Assessment of GC Column Performance and Injection Port Inertness for

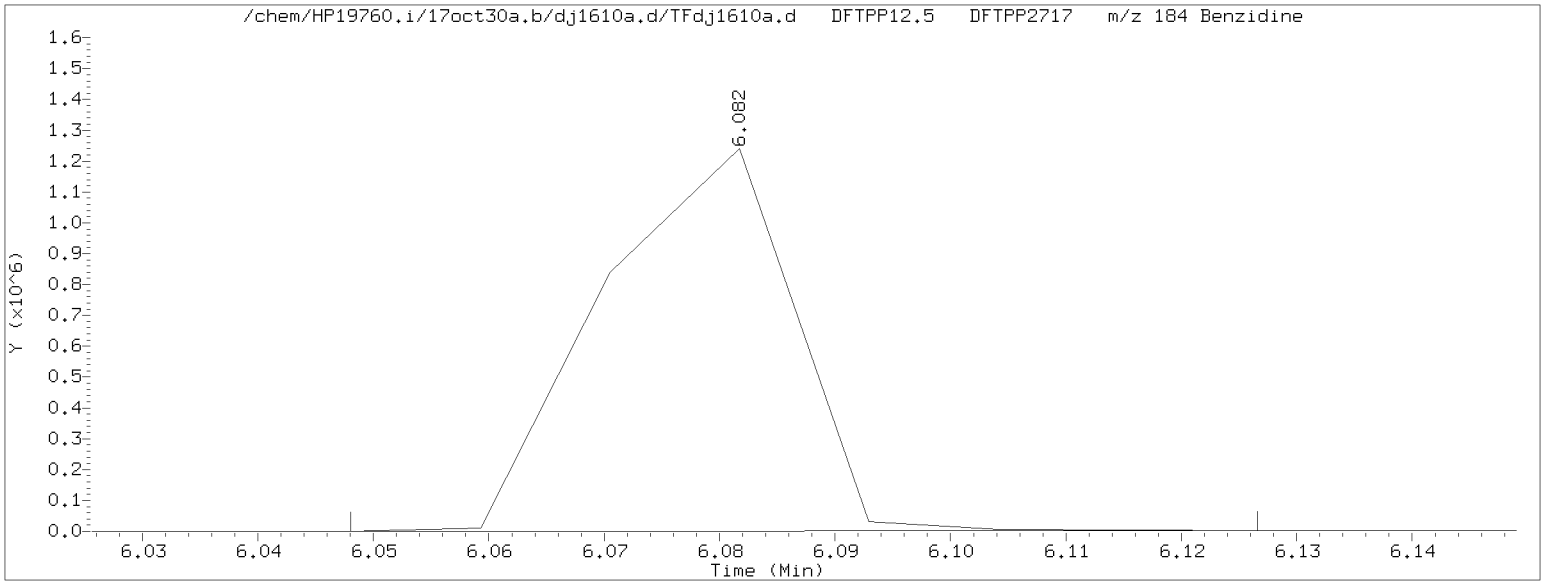
Instrument ID: HP19760.i Injection Date: 30-OCT-2017 20:50 Operator: apb10206



Pentachlorophenol EICP peak height = 274560 EICP peak height at 10% = 27456 Pentachlorophenol EICP area = 257798

Pentachlorophenol EICP peak apex (min.) = 4.814
RT at 10% of front half of EICP (min.) = 4.803 'Front' peak width (min.) = 0.0111000000
RT at 10% of back half of EICP (min.) = 4.833 'Tailing' peak width (min.) = 0.0186166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0186166667}{0.0111000000} = 1.677$



Benzidine EICP peak height = 1239132 EICP peak height at 2.5% = 30978 Benzidine EICP area = 1430286

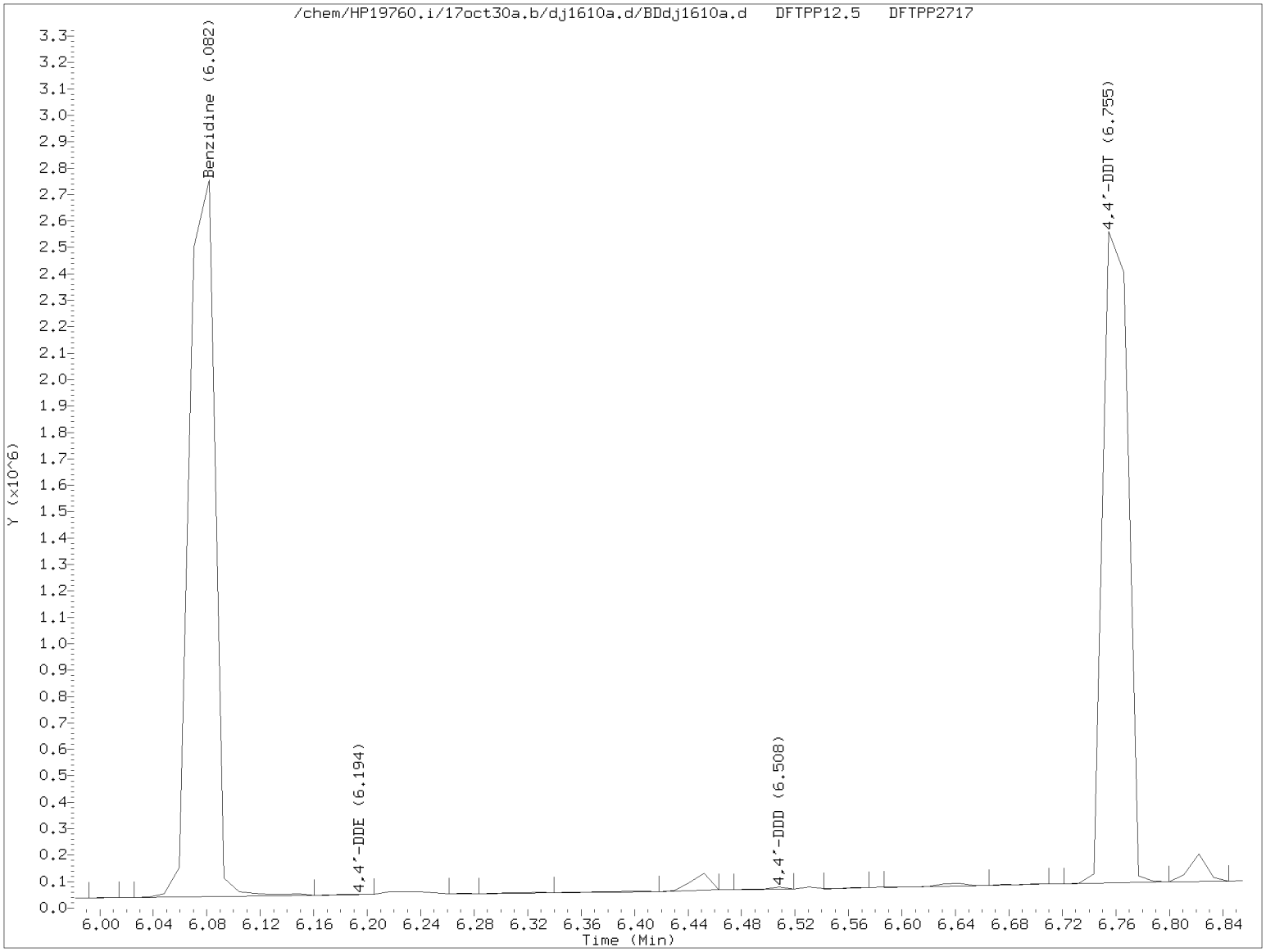
Benzidine EICP peak apex (min.) = 6.082
RT at 2.5% of front half of EICP (min.) = 6.060 'Front' peak width (min.) = 0.0221333333
RT at 2.5% of back half of EICP (min.) = 6.093 'Tailing' peak width (min.) = 0.0112166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0112166667}{0.0221333333} = 0.507$

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 11:55. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

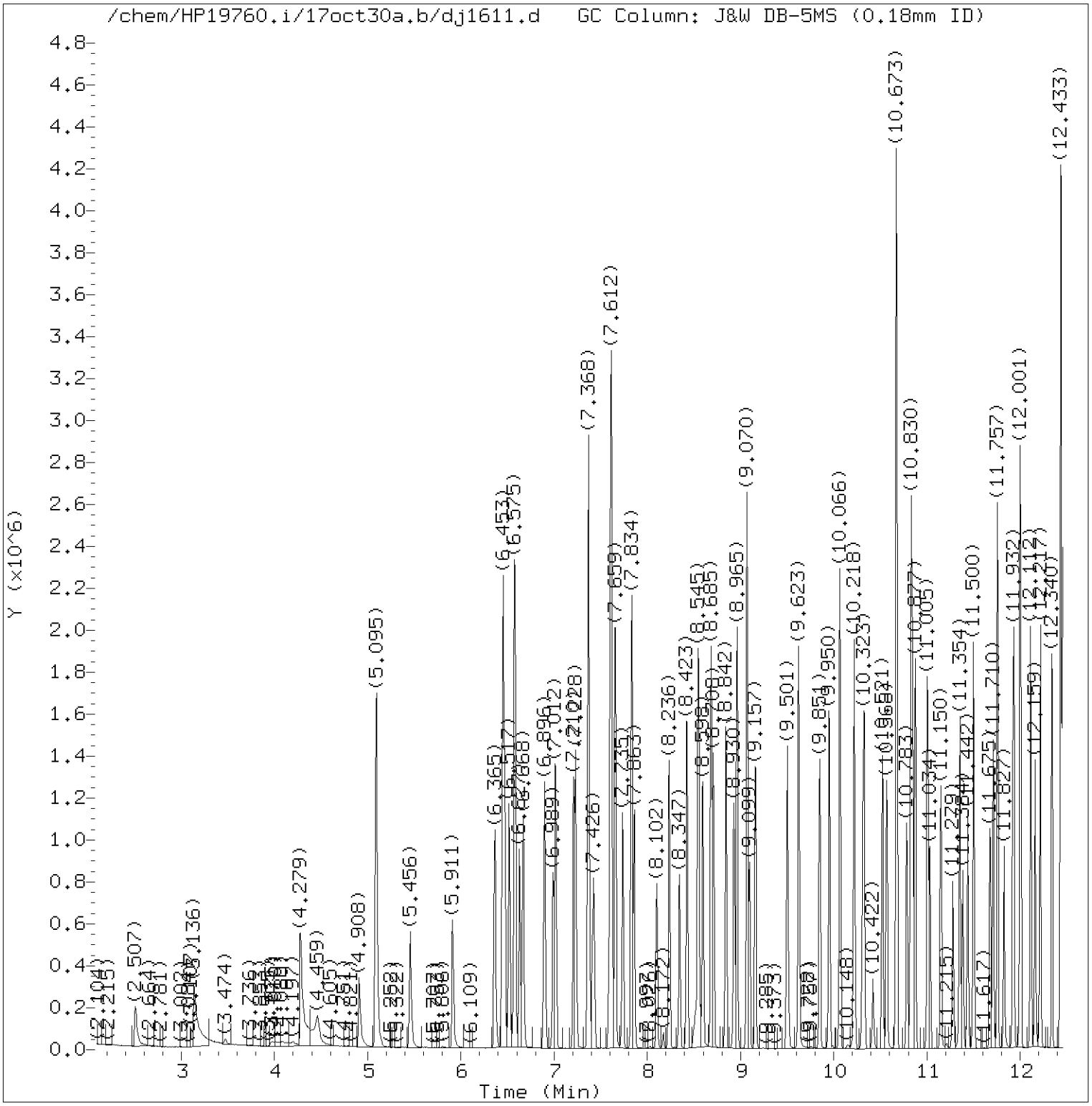
Instrument ID: HP19760.i Injection Date: 30-OCT-2017 20:50 Operator: apb10206



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{3839 + 9136}{3839 + 9136 + 3256456} \times 100 = 0.4$$

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 11:55. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

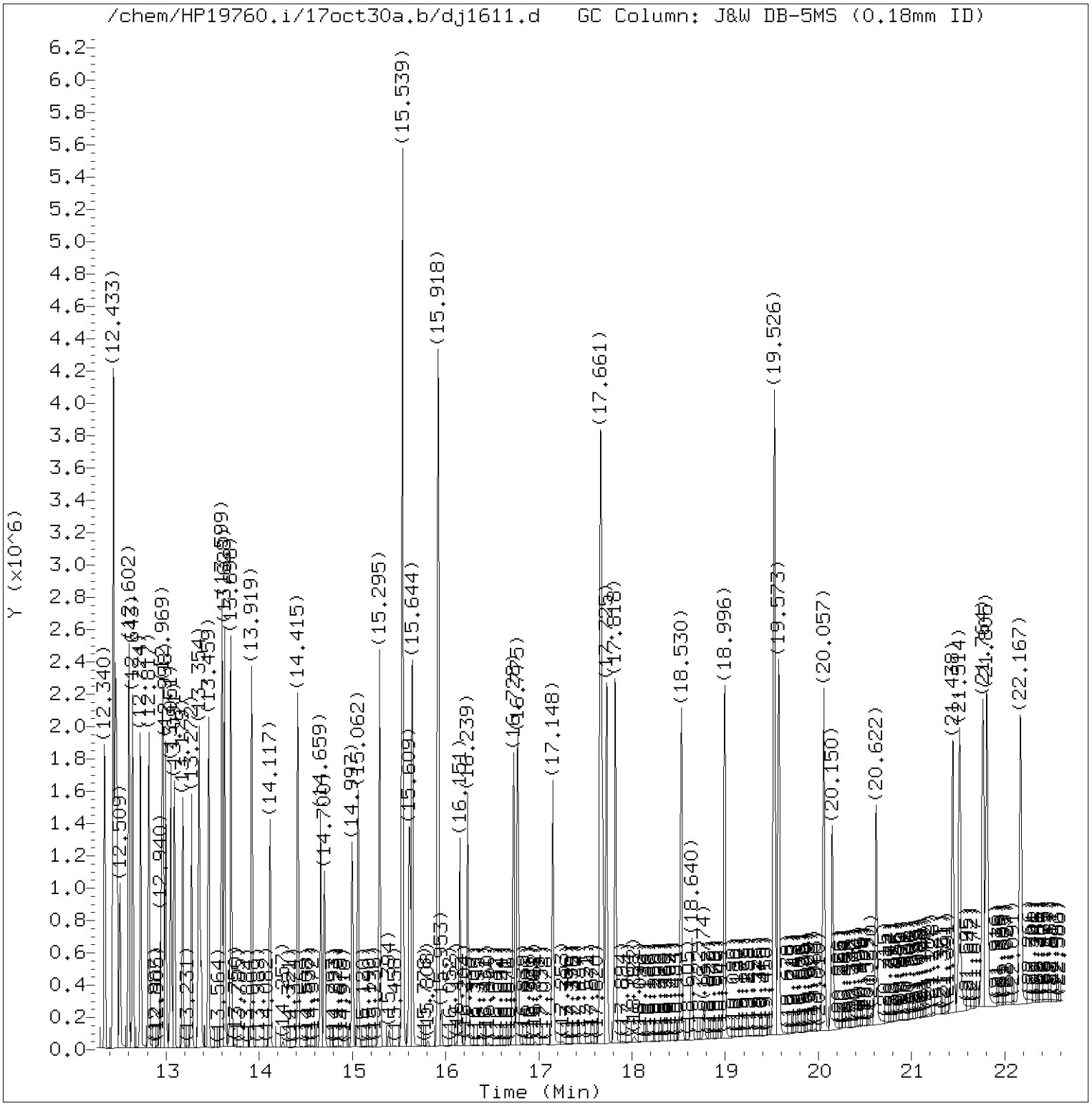
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.507	88	153638M	7.588
4) N-Nitrosodimethylamine	(1)	3.107	74	164343	6.651
5) Pyridine	(1)	3.136	79	368793	6.878
7) 2-Picoline	(1)	4.279	93	450249	7.709
8) N-Nitrosomethylethylamine	(1)	4.465	88	191543	7.595
9) Methyl methanesulfonate	(1)	4.908	80	198764	7.755
11)$2-Fluorophenol	(1)	5.095	112	779699	15.858
13) N-Nitrosodiethylamine	(1)	5.456	102	188842	7.999
42) Total Cresols	(1)			757907	15.551
15) Ethyl methanesulfonate	(1)	5.911	109	194569	8.103
16) Benzaldehyde	(1)	6.365	77	335979	7.667
17)$Phenol-d6	(1)	6.453	99	1017827	15.720
18) Phenol	(1)	6.470	94	537294	7.874
19) Aniline	(1)	6.517	93	651039	7.792
20) a-methylstyrene	(1)	6.581	118	414315	7.683
22) bis(2-Chloroethyl)ether	(1)	6.627	93	429281	7.880
23) 2-Chlorophenol	(1)	6.668	128	395827	7.811
24) 1,3-Dichlorobenzene	(1)	6.896	146	420061	7.625
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	167612	5.000
26) 1,4-Dichlorobenzene	(1)	7.018	146	430279	7.695
27) Benzyl alcohol	(1)	7.210	108	255170	7.625
28) 1,2-Dichlorobenzene	(1)	7.234	146	406079	7.699
31) 2-Methylphenol	(1)	7.368	108	370976	7.769
30) Indene	(1)	7.368	115	723165	7.621
97) Isosafrole	(3)			262202	7.782
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	585335	7.832
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	585335	7.832
35) N-Nitrosopyrrolidine	(1)	7.589	100	196318	8.100
36) Acetophenone	(1)	7.607	105	562471	7.413
37) 4-Methylphenol	(1)	7.612	108	386931	7.782
38) N-Nitroso-di-n-propylamine	(1)	7.618	70	330921	7.992
40) o-Toluidine	(1)	7.653	106	654301	7.823
39) N-Nitrosomorpholine	(1)	7.659	56	239069	7.894
43) Hexachloroethane	(1)	7.735	117	178159	7.820
44)$Nitrobenzene-d5	(2)	7.834	82	936886	15.821
45) Nitrobenzene	(2)	7.863	77	477695	7.933
120) 2,4_2,6-Dinitrotoluenes	(3)			377142	15.781
48) N-Nitrosopiperidine	(2)	8.102	114	189061	7.820
50) Isophorone	(2)	8.236	82	794751	7.904
51) 2-Nitrophenol	(2)	8.347	139	189071	8.114

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.429	107	412240	7.974
57) O,O,O-Triethylphosphorothioate	(2)	8.551	198	181150	7.698
56) Benzoic acid	(2)	8.563	105	389411M	11.693
55) bis(2-Chloroethoxy)methane	(2)	8.598	93	513167	8.011
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	589747	7.714
60) 2,4-Dichlorophenol	(2)	8.708	162	315313	8.053
146) Diallate trans/cis	(4)			357523	8.042
62) 1,2,4-Trichlorobenzene	(2)	8.842	180	352900	7.814
65)*Naphthalene-d8	(2)	8.930	136	633145	5.000
66) Naphthalene	(2)	8.965	128	1110373	7.724
68) 2,6-Dichlorophenol	(2)	9.070	162	304642	7.966
67) 4-Chloroaniline	(2)	9.070	127	456859	7.842
69) Hexachloropropene	(2)	9.099	213	186406	7.818
71) Hexachlorobutadiene	(2)	9.163	225	195473	7.708
75) Quinoline	(2)	9.501	129	662541	7.722
77) N-Nitrosodi-n-butylamine	(2)	9.623	84	359058	8.193
76) Caprolactam	(2)	9.623	113	83495	7.129
80) 4-Chloro-3-methylphenol	(2)	9.851	107	343286	7.962
82) Safrole	(2)	9.956	162	275610	7.760
83) 2-Methylnaphthalene	(2)	10.066	142	742614	7.956
84) 1-Methylnaphthalene	(2)	10.224	142	660810	7.809
85) Hexachlorocyclopentadiene	(3)	10.311	237	178580	7.895
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.329	216	347107	7.583
88) cis-Isosafrole	(3)	10.422	162	49009	1.337
90) 2,4,6-Trichlorophenol	(3)	10.521	196	216181	7.921
92) 2,4,5-Trichlorophenol	(3)	10.568	196	230620	7.990
93)$2-Fluorobiphenyl	(3)	10.673	172	1578414	15.627
94) trans-Isosafrole	(3)	10.783	162	213193	6.444
95) 1,1'-Biphenyl	(3)	10.830	154	819633	7.415
96) 2-Chloronaphthalene	(3)	10.847	162	689278	7.482
98) 1-Chloronaphthalene	(3)	10.877	162	655608	8.207
99) Diphenyl ether	(3)	11.005	170	460579	7.751
100) 2-Nitroaniline	(3)	11.034	138	207477	8.017
104) 1,4-Naphthoquinone	(3)	11.150	158	261722	7.822
105) 1,4-Dinitrobenzene	(3)	11.279	168	103581	7.739
106) Dimethylphthalate	(3)	11.354	163	729815	7.780
107) 1,3-Dinitrobenzene	(3)	11.384	168	113458	7.680
108) 2,6-Dinitrotoluene	(3)	11.442	165	158845	7.802
109) Acenaphthylene	(3)	11.500	152	940821	7.984
112) 3-Nitroaniline	(3)	11.681	138	174376	7.834

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.710	164	334248	5.000
114) Acenaphthene	(3)	11.757	153	707207	7.750
115) 2,4-Dinitrophenol	(3)	11.827	184	122242	9.700
116) 4-Nitrophenol	(3)	11.920	109	131319	7.617
117) Pentachlorobenzene	(3)	11.932	250	280632	7.691
119) Dibenzofuran	(3)	12.001	168	907321	7.683
118) 2,4-Dinitrotoluene	(3)	12.007	165	218297	7.731
121) 1-Naphthylamine	(3)	12.112	143	675147	7.502
122) 2,3,4,6-Tetrachlorophenol	(3)	12.165	232	170076	7.758
123) 2-Naphthylamine	(3)	12.217	143	657835	7.559
124) Diethylphthalate	(3)	12.340	149	714335	7.816
126) Fluorene	(3)	12.433	166	720886	7.646
125) Thionazin	(3)	12.439	107	121412	7.519
127) 4-Chlorophenyl-phenylether	(3)	12.456	204	341486	7.722
128) 5-Nitro-o-toluidine	(3)	12.468	152	203537	7.948
129) 4-Nitroaniline	(3)	12.479	138	186541	8.329
130) 4,6-Dinitro-2-methylphenol	(4)	12.509	198	123825	7.320
132) NDPA as diphenylamine	(4)	12.602	169	600138	7.947
131) N-Nitrosodiphenylamine	(4)	12.602	169	600138	7.947
134) 1,2-Diphenylhydrazine	(4)	12.643	77	850167	8.083
135)$2,4,6-Tribromophenol	(3)	12.730	330	197849	15.680
137) Tetraethyldithiopyrophosphate	(4)	12.817	97	141903	8.094
139) 1,3,5-Trinitrobenzene	(4)	12.940	213	74776	7.337
140) Diallate (peak 1)	(4)	12.957	86	308042	6.711
141) Phorate	(4)	12.969	75	562164	7.849
142) Phenacetin	(4)	12.998	108	412832	8.327
143) 4-Bromophenyl-phenylether	(4)	13.051	248	199272	7.690
144) Diallate (peak 2)	(4)	13.062	86	49481	1.322
145) Hexachlorobenzene	(4)	13.091	284	214140	7.764
147) Dimethoate	(4)	13.179	87	337881	8.092
148) Atrazine	(4)	13.278	200	189401	7.747
149) Pentachlorophenol	(4)	13.348	266	136412	7.740
151) Pentachloronitrobenzene	(4)	13.360	237	93856	8.089
150) 4-Aminobiphenyl	(4)	13.377	169	173630	8.247
152) Pronamide	(4)	13.459	173	339576	8.174
154) Dinoseb	(4)	13.599	211	189637	7.825
153)*Phenanthrene-d10	(4)	13.599	188	603710	5.000
155) Phenanthrene	(4)	13.628	178	1070021	7.673
157) Anthracene	(4)	13.698	178	1085693	7.975
163) Carbazole	(4)	13.919	167	1026372	8.147

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

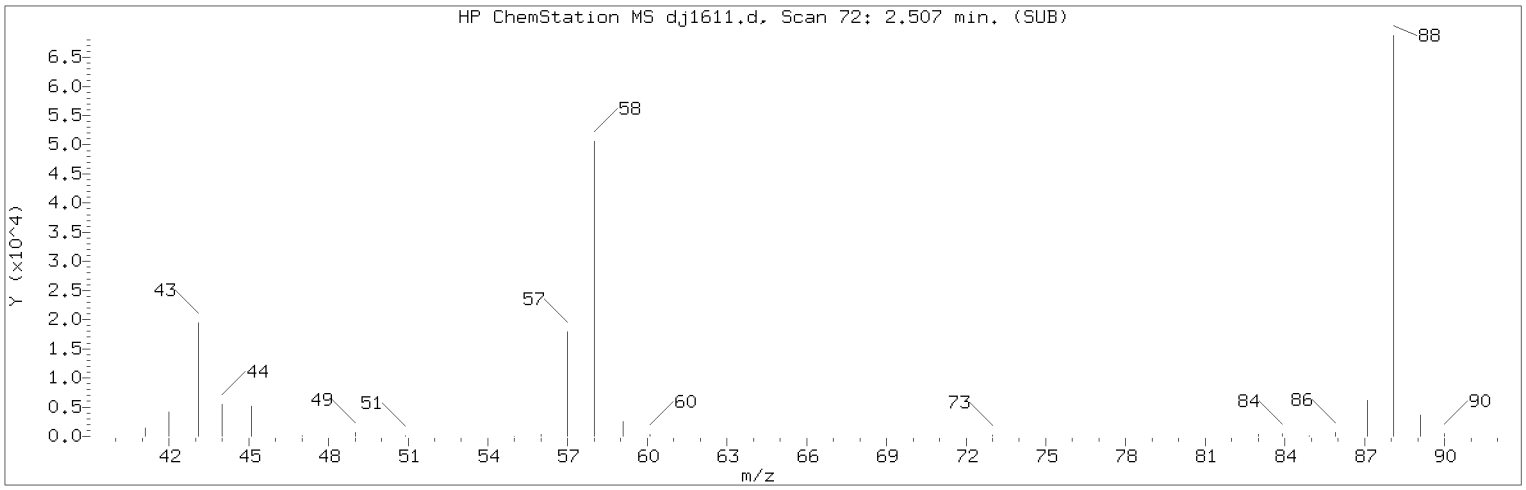
Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.117	109	262261	8.095
165) Di-n-butylphthalate	(4)	14.415	149	1210027	8.002
167) Parathion	(4)	14.659	109	158426	7.724
168) 4-Nitroquinoline-1-oxide	(4)	14.700	190	102773	6.960
169) Octachlorostyrene	(4)	14.997	308	79822	7.682
222) Total PAHs	(6)			19101565	144.428
171) Isodrin	(4)	15.062	193	123333	7.424
173) Fluoranthene	(4)	15.295	202	1236829	8.107
174) Benzidine	(5)	15.539	184	2560572	23.584
175)*Pyrene-d10	(5)	15.615	212	734686	5.000
177) Pyrene	(5)	15.644	202	1305725	7.682
179)$Terphenyl-d14	(5)	15.918	244	1714168	15.836
182) p-Dimethylaminoazobenzene	(5)	16.151	225	167397	7.865
185) Chlorobenzilate	(5)	16.239	139	385498	7.806
187) 3,3'-Dimethylbenzidine	(5)	16.728	212	782631	7.857
188) Butylbenzylphthalate	(5)	16.775	149	565772	7.824
191) 2-Acetylaminofluorene	(5)	17.148	181	477861	7.396
193) 3,3'-Dichlorobenzidine	(5)	17.661	252	460619	7.721
195) Benzo(a)anthracene	(5)	17.667	228	1205484	7.819
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.684	231	216340	7.234
196) Chrysene	(5)	17.731	228	1142874	7.793
199) bis(2-Ethylhexyl)phthalate	(5)	17.824	149	811055	7.735
203) 6-Methylchrysene	(5)	18.530	242	821892	7.606
205) Di-n-octylphthalate	(6)	18.996	149	1411844	7.995
206) Benzo(b)fluoranthene	(6)	19.526	252	1273804	8.111
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.532	256	533655	8.524
208) Benzo(k)fluoranthene	(6)	19.573	252	1251455	8.112
211) Benzo(a)pyrene	(6)	20.057	252	1196377	8.142
213)*Perylene-d12	(6)	20.150	264	622975	5.000
215) 3-Methylcholanthrene	(6)	20.622	268	413309	7.795
217) Dibenz(a,h)acridine	(6)	21.444	279	976210	7.913
218) Dibenz(a,j)acridine	(6)	21.514	279	1029032	8.001
219) Indeno(1,2,3-cd)pyrene	(6)	21.764	276	1107329M	8.028
220) Dibenz(a,h)anthracene	(6)	21.811	278	1179328	8.229
221) Benzo(g,h,i)perylene	(6)	22.172	276	1163935	8.089

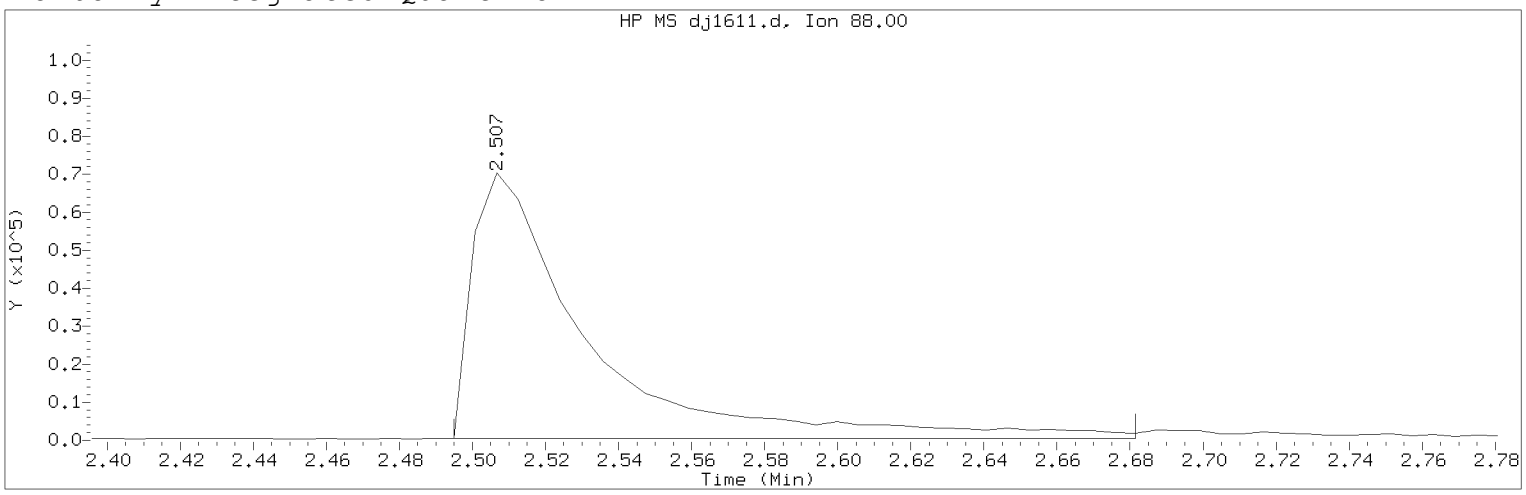
M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

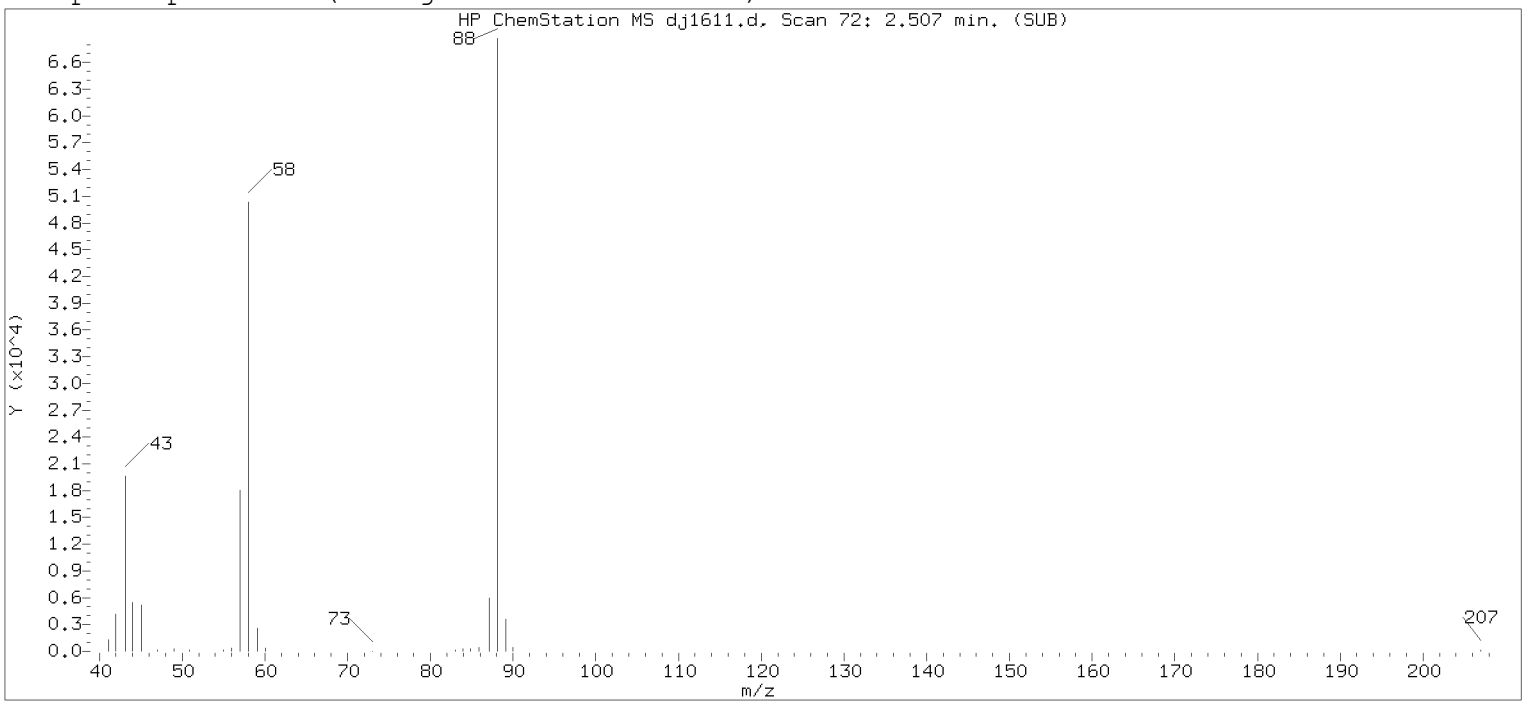
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 72
Retention Time (minutes) : 2.507
Quant Ion : 88.00
Area (flag) : 153638M
On-Column Amount (ng/ul) : 7.5876
Integration start scan : 69 Integration stop scan: 101
Y at integration start : 433 Y at integration end: 433

Reason for manual integration: improper integration

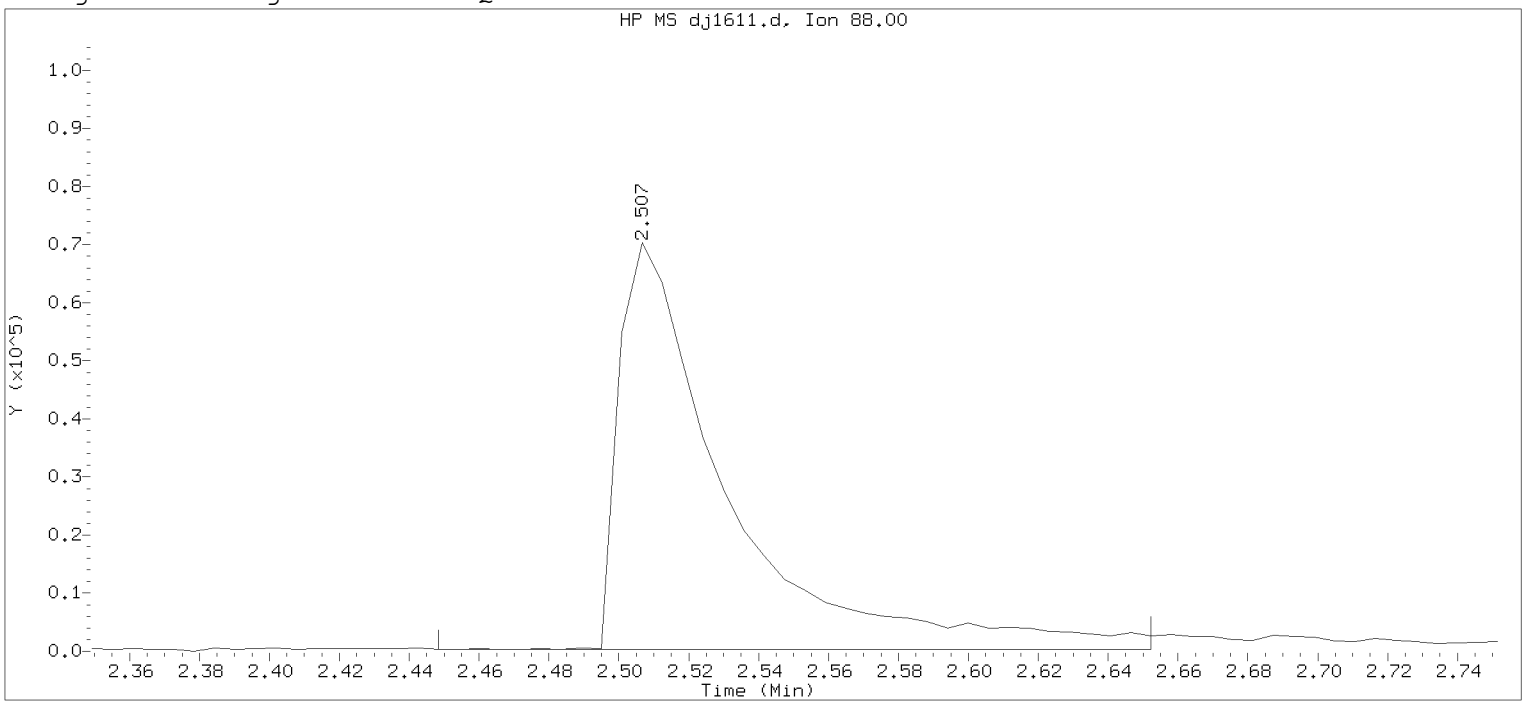
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

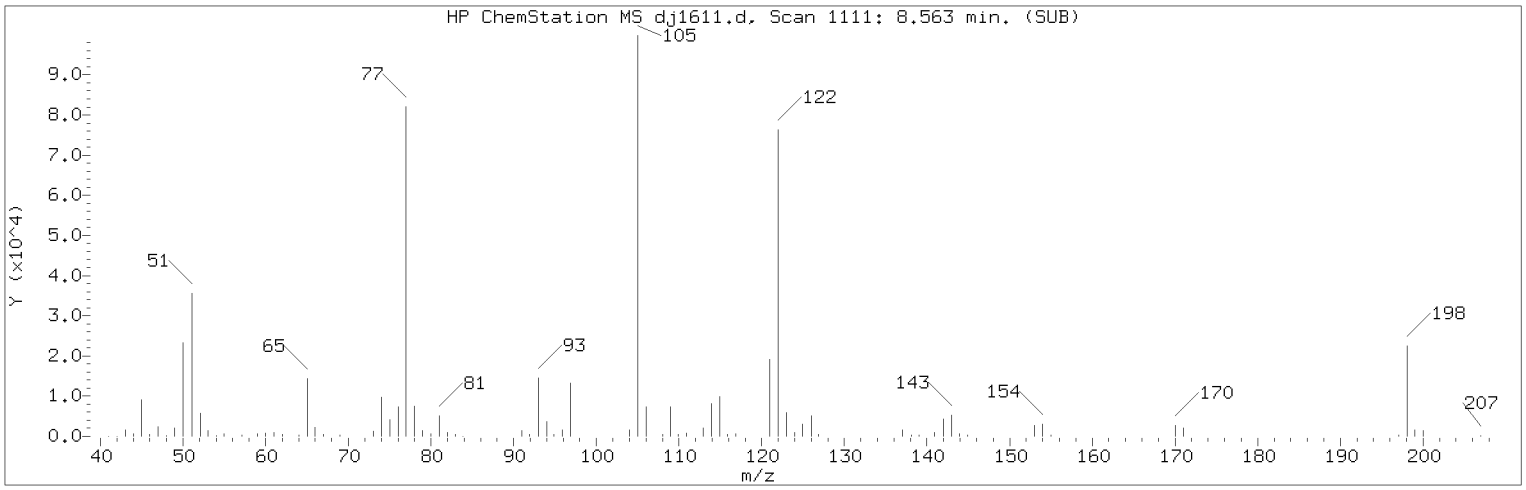
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 21:30
Date, time and analyst ID of latest file update: 30-Oct-2017 21:30 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

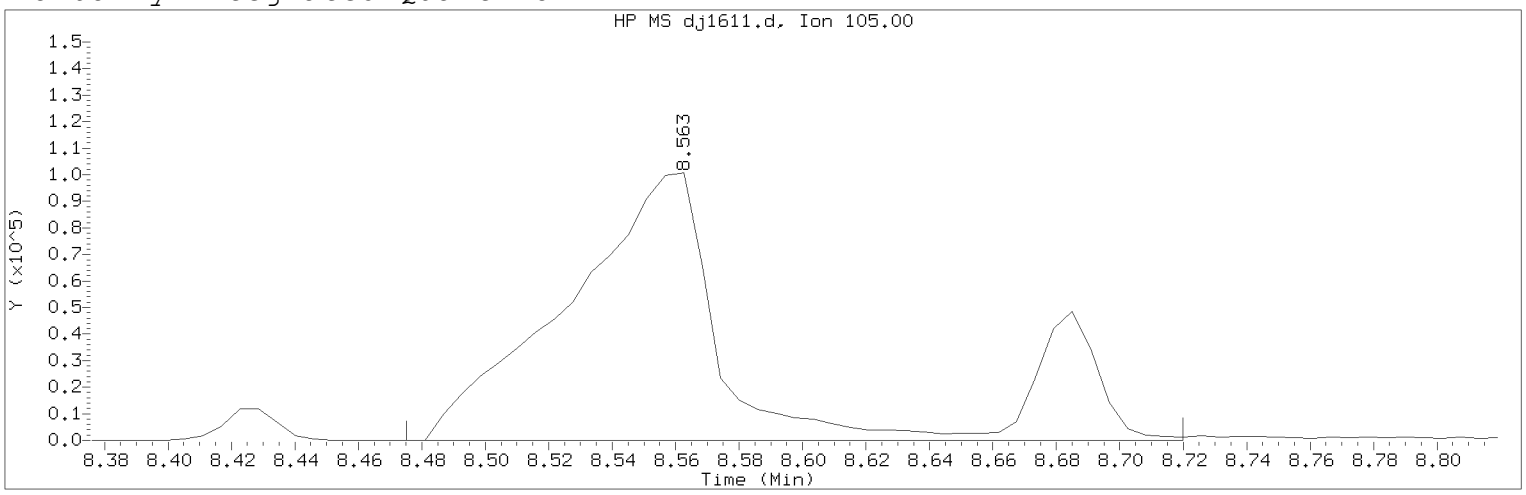
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 72
Retention Time (minutes) : 2.507
Quant Ion : 88.00
Area : 151384
On-column Amount (ng/ul) : 6.6899
Integration start scan : 61 Integration stop scan: 96
Y at integration start : 301 Y at integration end: 301

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

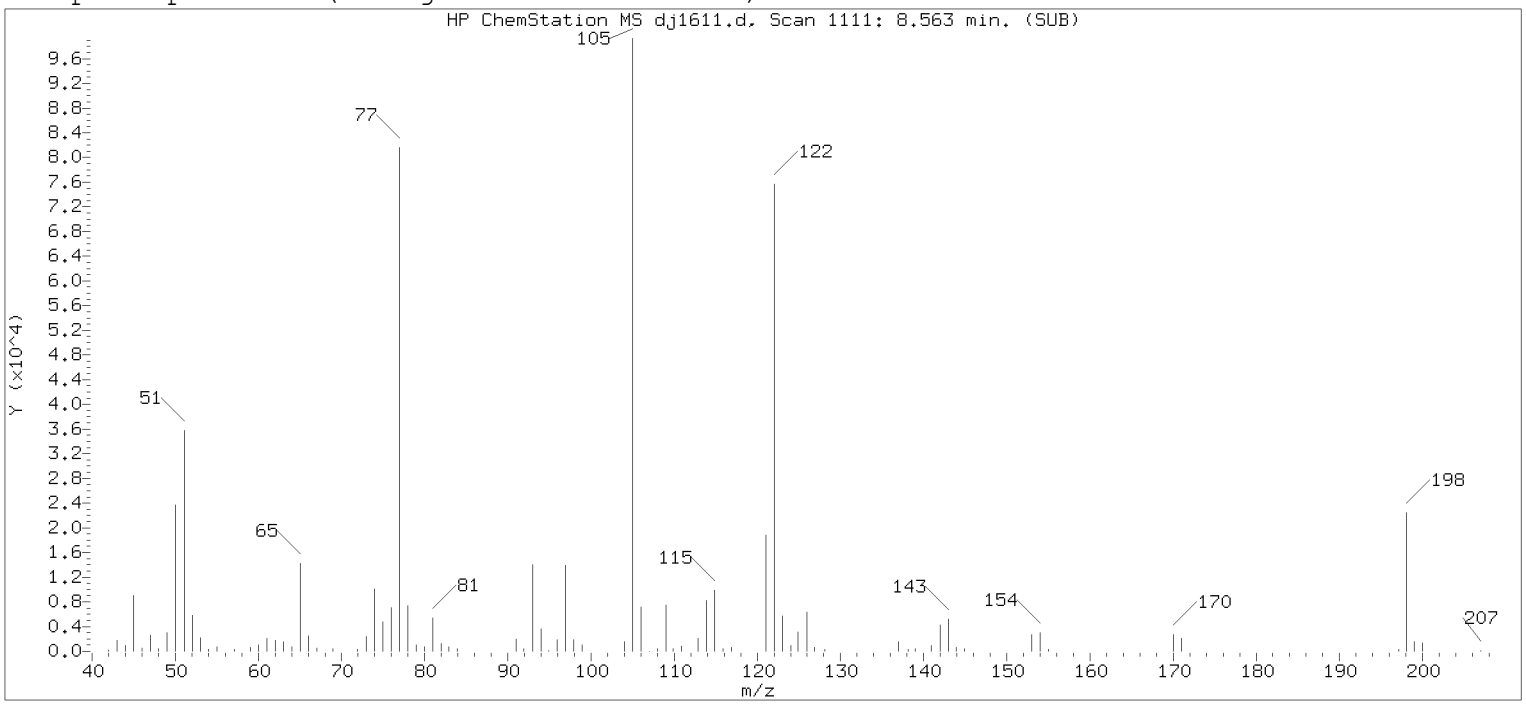
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1111
Retention Time (minutes) : 8.563
Quant Ion : 105.00
Area (flag) : 389411M
On-Column Amount (ng/ul) : 11.6928
Integration start scan : 1095 Integration stop scan: 1137
Y at integration start : -2 Y at integration end: -2

Reason for manual integration: improper integration

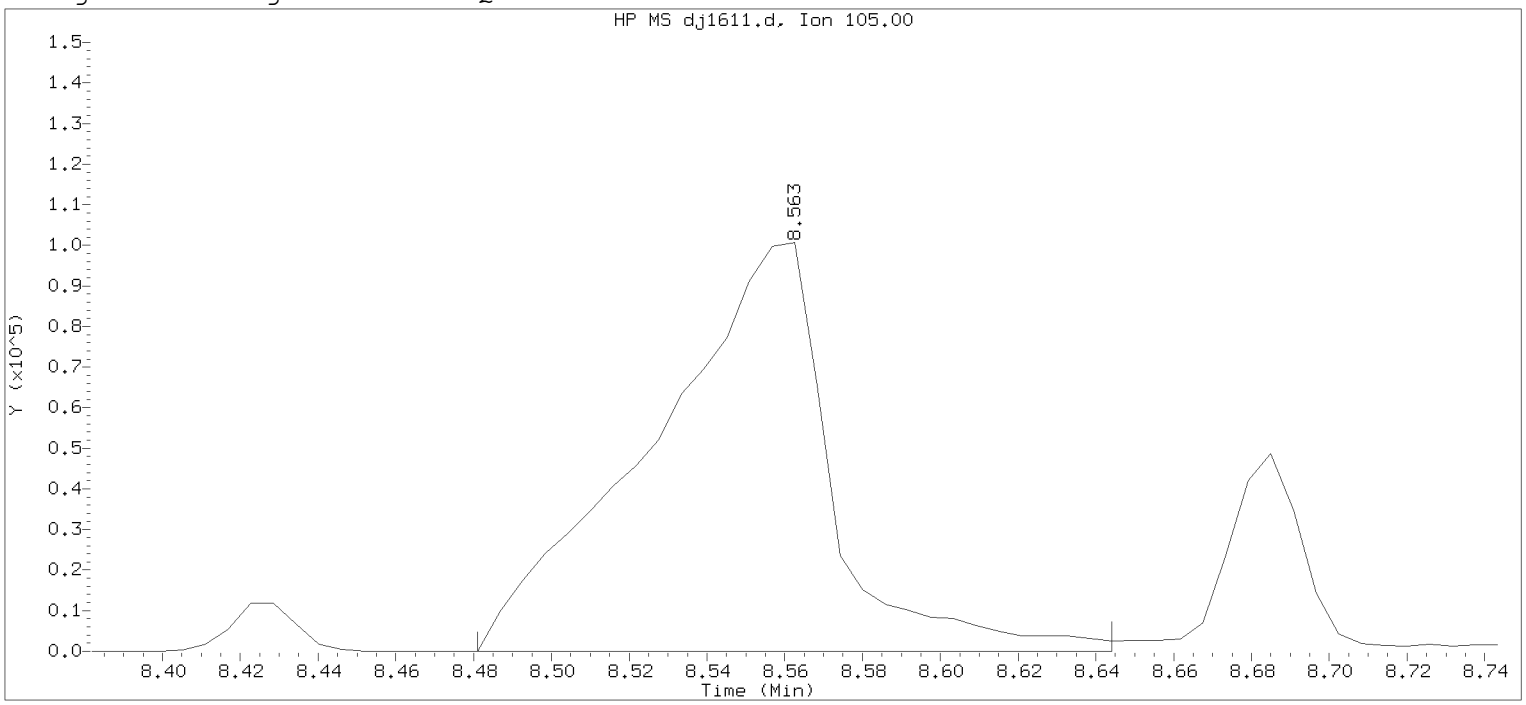
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

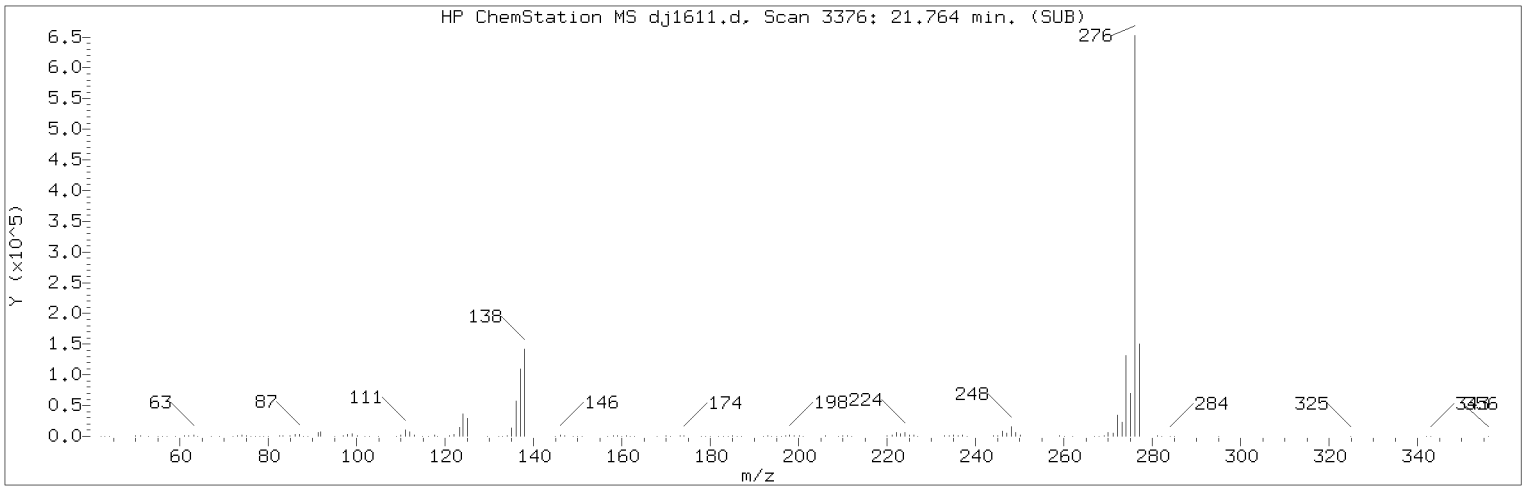
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 21:30
Date, time and analyst ID of latest file update: 30-Oct-2017 21:30 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

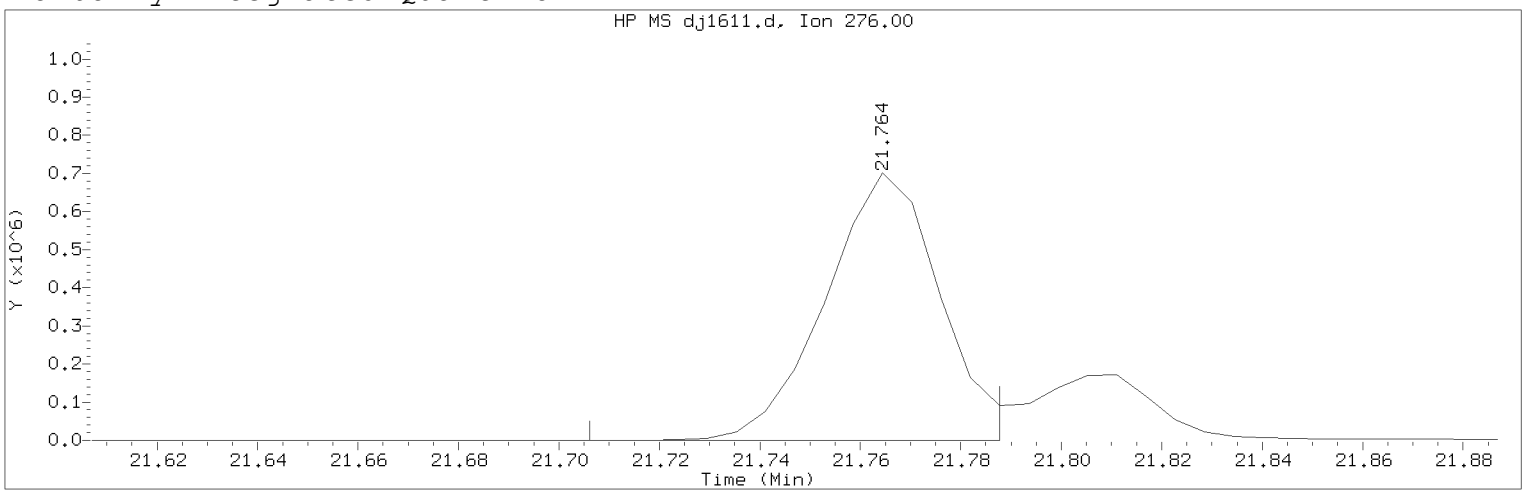
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1111		
Retention Time (minutes)	: 8.563		
Quant Ion	: 105.00		
Area	: 323511		
On-column Amount (ng/ul)	: 9.0717		
Integration start scan	: 1096	Integration stop scan:	1124
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

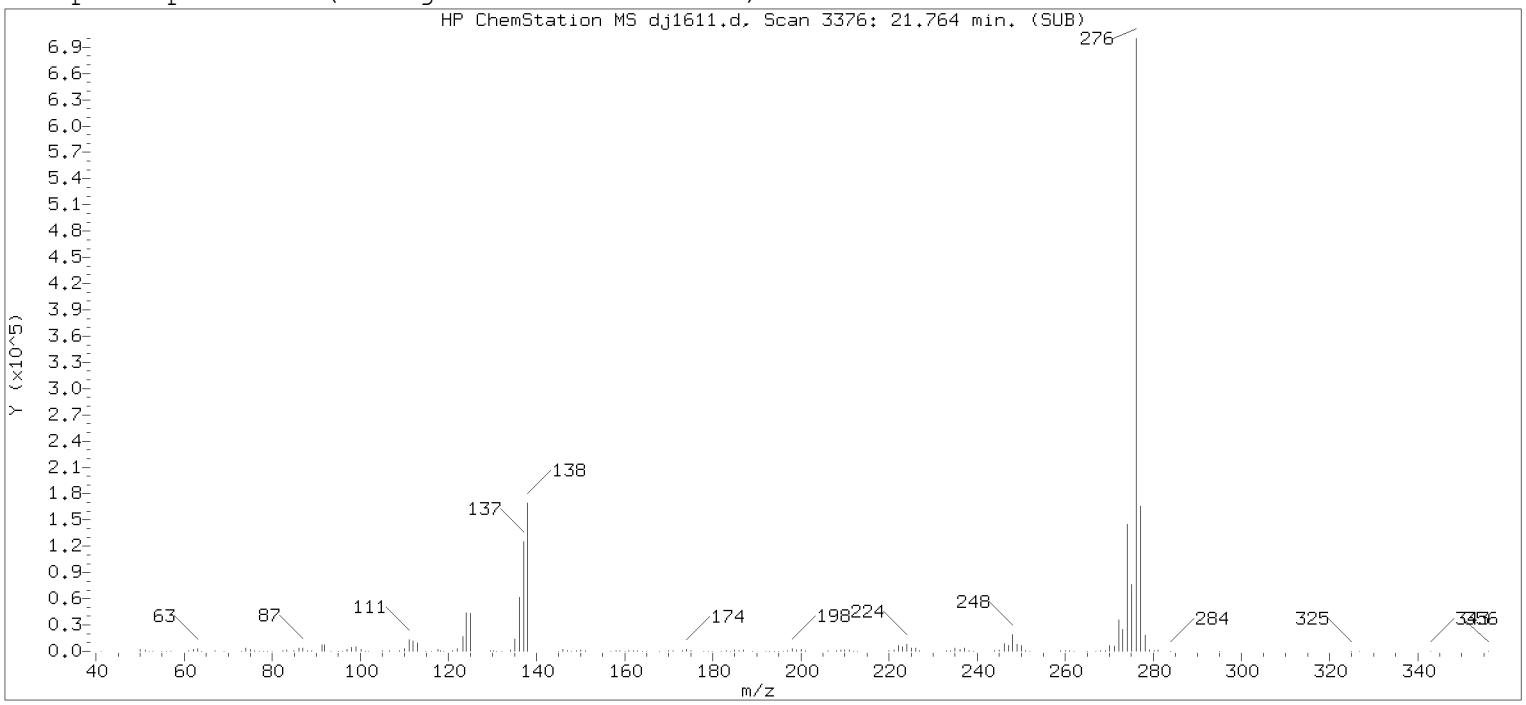
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3376
Retention Time (minutes) : 21.764
Quant Ion : 276.00
Area (flag) : 1107329M
On-Column Amount (ng/ul) : 8.0285
Integration start scan : 3365 Integration stop scan: 3379
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

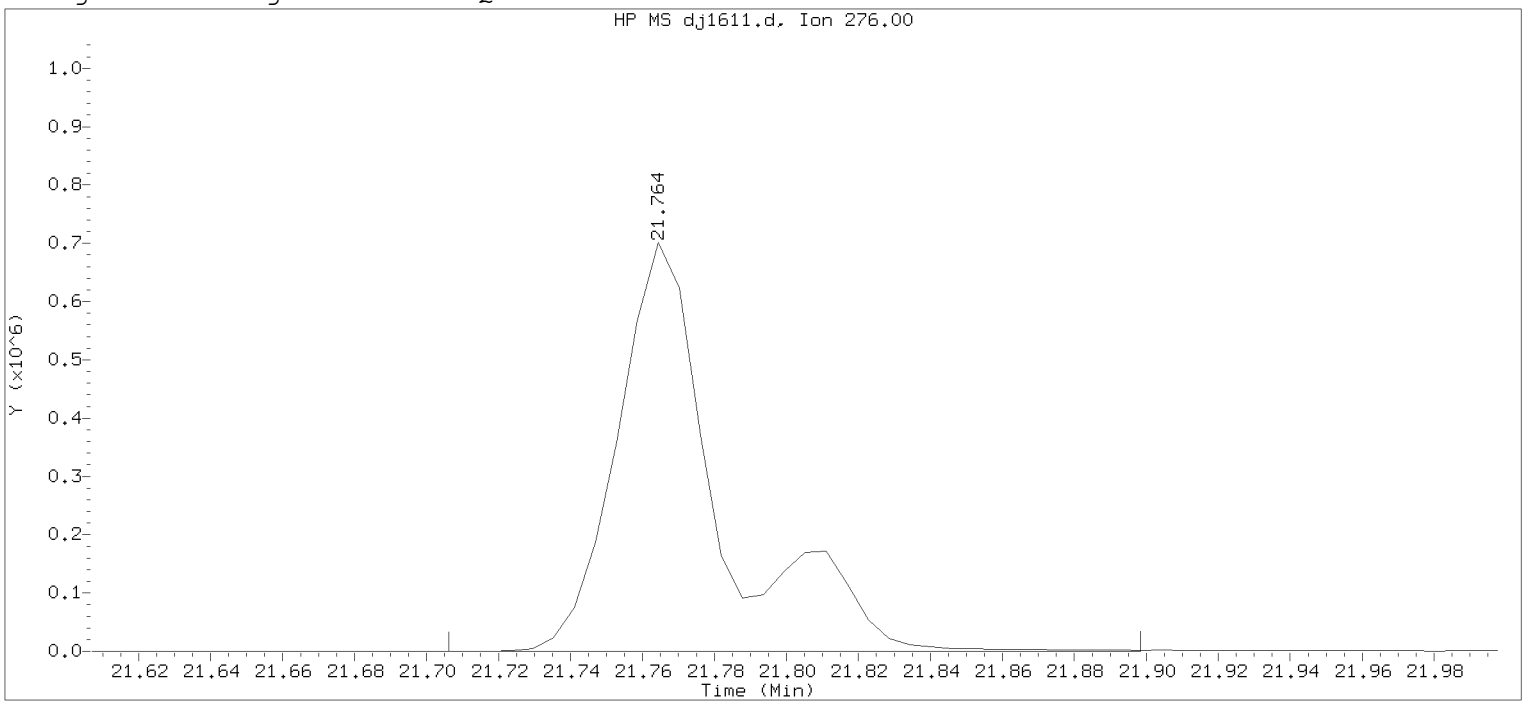
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



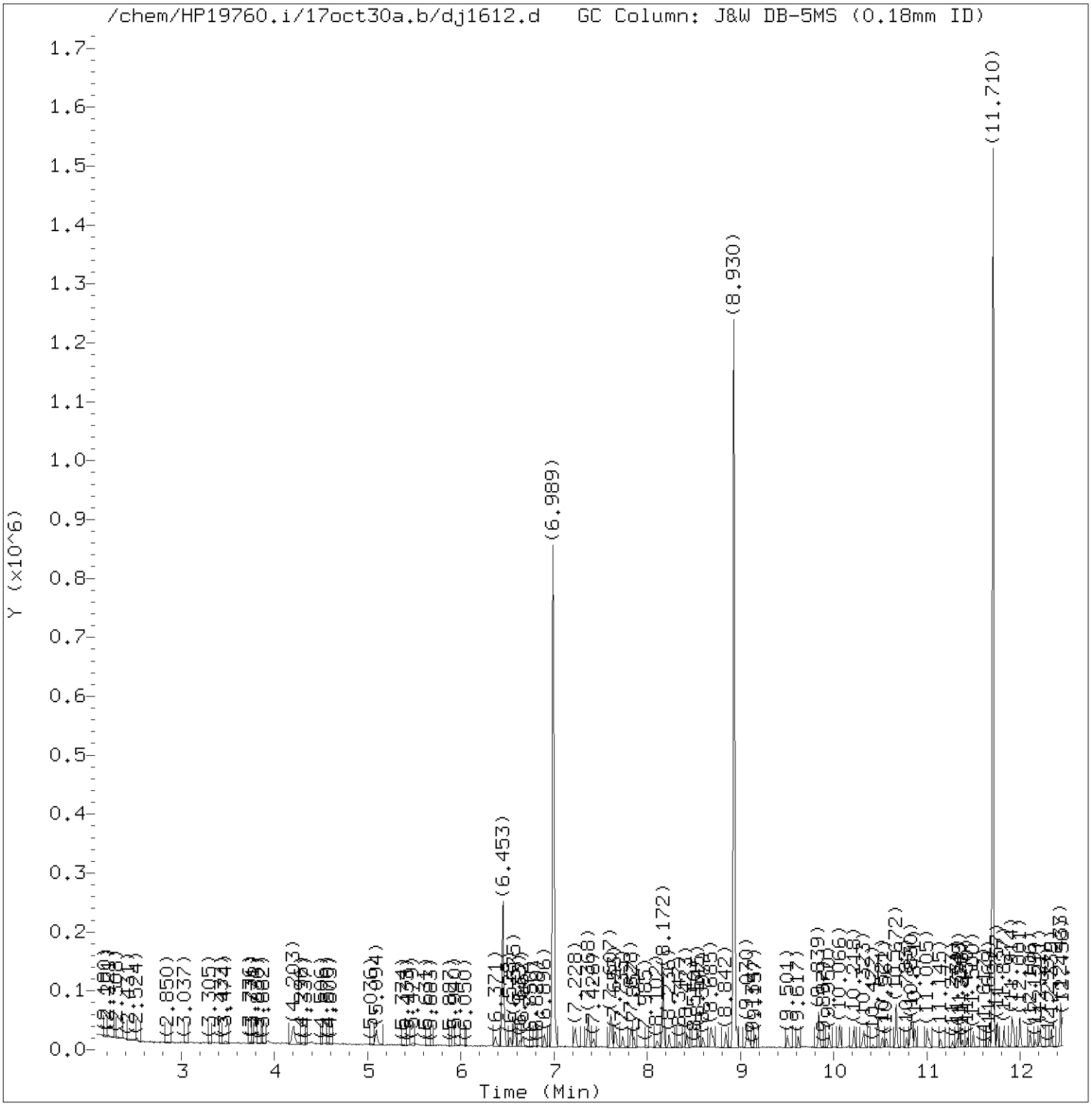
Data File: /chem/HP19760.i/17oct30a.b/dj1611.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:05 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 21:30
Date, time and analyst ID of latest file update: 30-Oct-2017 21:30 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3376		
Retention Time (minutes)	: 21.764		
Quant Ion	: 276.00		
Area	: 1391364		
On-column Amount (ng/ul)	: 8.5739		
Integration start scan	: 3365	Integration stop scan:	3398
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

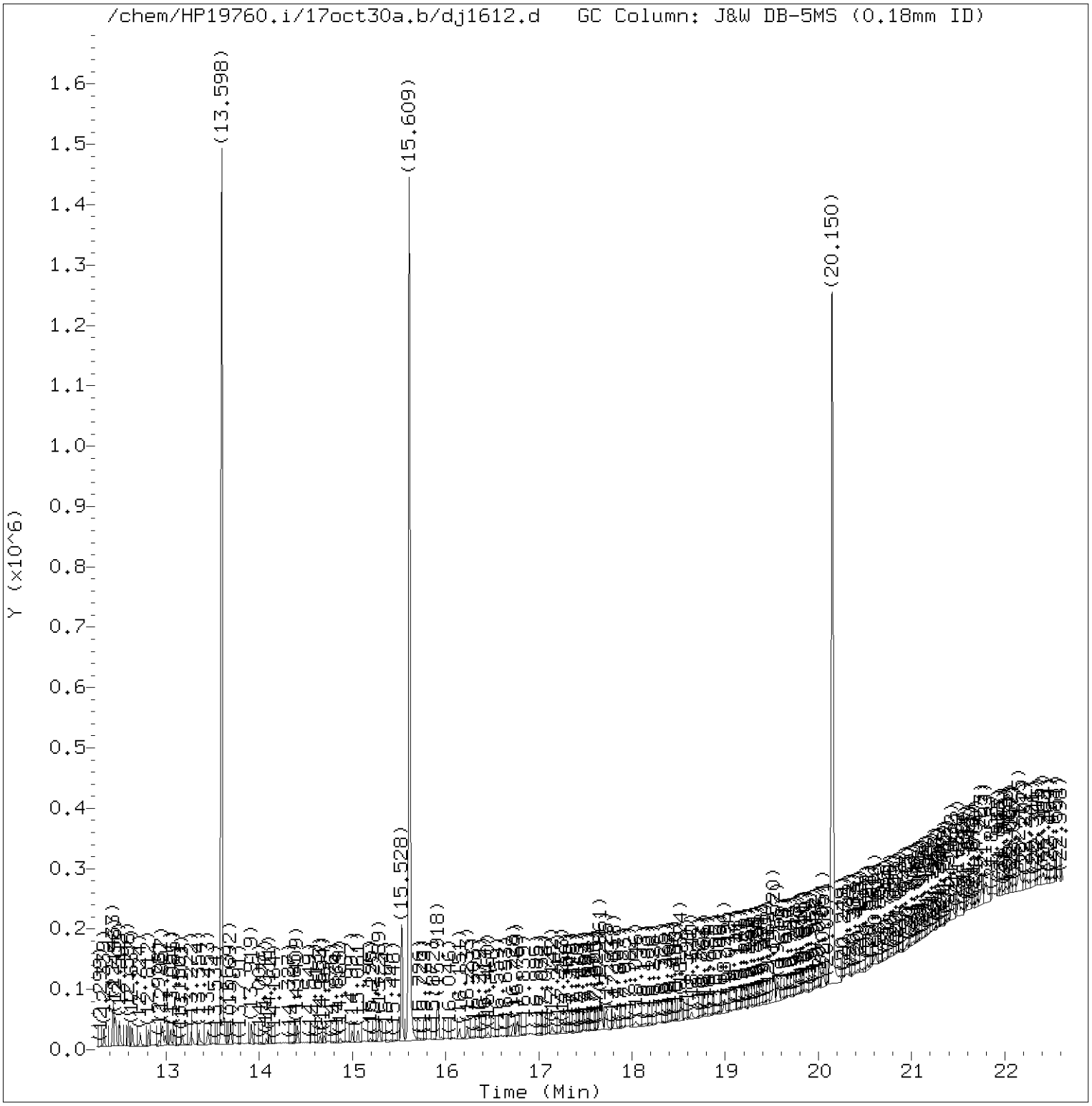
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.094	112	12544	0.238
42) Total Cresols	(1)			11565	0.226
16) Benzaldehyde	(1)	6.371	77	5972	0.131
17)$Phenol-d6	(1)	6.447	99	15878	0.231
18) Phenol	(1)	6.470	94	8736	0.120
19) Aniline	(1)	6.522	93	10723	0.122
20) a-methylstyrene	(1)	6.581	118	7069	0.126
22) bis(2-Chloroethyl)ether	(1)	6.633	93	6614	0.114
23) 2-Chlorophenol	(1)	6.662	128	6230	0.116
24) 1,3-Dichlorobenzene	(1)	6.896	146	6859	0.121
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	169978	5.000
26) 1,4-Dichlorobenzene	(1)	7.018	146	7562	0.130
27) Benzyl alcohol	(1)	7.222	108	3914	0.113
28) 1,2-Dichlorobenzene	(1)	7.234	146	6291	0.115
31) 2-Methylphenol	(1)	7.368	108	5514	0.110
30) Indene	(1)	7.368	115	13045	0.133
97) Isosafrole	(3)			3770	0.106
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	10705	0.135
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	10705	0.135
36) Acetophenone	(1)	7.607	105	9070	0.119
37) 4-Methylphenol	(1)	7.607	108	6051	0.116
38) N-Nitroso-di-n-propylamine	(1)	7.618	70	5341	0.119
40) o-Toluidine	(1)	7.659	106	10085	0.114
39) N-Nitrosomorpholine	(1)	7.665	56	3046	0.094
43) Hexachloroethane	(1)	7.735	117	2911	0.121
44)$Nitrobenzene-d5	(2)	7.828	82	14547	0.227
45) Nitrobenzene	(2)	7.857	77	7157	0.109
120) 2,4_2,6-Dinitrotoluenes	(3)			5010	0.196
48) N-Nitrosopiperidine	(2)	8.108	114	2405	0.093
50) Isophorone	(2)	8.230	82	13178	0.121
51) 2-Nitrophenol	(2)	8.347	139	2304	0.089
53) 2,4-Dimethylphenol	(2)	8.423	107	6342	0.112
56) Benzoic acid	(2)	8.528	105	2581	0.078
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	2508	0.101
55) bis(2-Chloroethoxy)methane	(2)	8.597	93	7054	0.100
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	10643	0.132
60) 2,4-Dichlorophenol	(2)	8.708	162	4688	0.108
146) Diallate trans/cis	(4)			9004	0.186
62) 1,2,4-Trichlorobenzene	(2)	8.842	180	5995	0.124
65)*Naphthalene-d8	(2)	8.930	136	650799	5.000

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

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
66) Naphthalene	(2)	8.959	128	19367	0.126
68) 2,6-Dichlorophenol	(2)	9.070	162	4548	0.109
67) 4-Chloroaniline	(2)	9.075	127	7370	0.118
69) Hexachloropropene	(2)	9.093	213	2971	0.116
71) Hexachlorobutadiene	(2)	9.163	225	3208	0.120
75) Quinoline	(2)	9.501	129	9952	0.110
77) N-Nitrosodi-n-butylamine	(2)	9.617	84	4798	0.098
80) 4-Chloro-3-methylphenol	(2)	9.845	107	5390	0.115
82) Safrole	(2)	9.950	162	4201	0.111
83) 2-Methylnaphthalene	(2)	10.066	142	11628	0.119
84) 1-Methylnaphthalene	(2)	10.218	142	10994	0.123
85) Hexachlorocyclopentadiene	(3)	10.305	237	2758	0.114
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	5770	0.123
88) cis-Isosafrole	(3)	10.422	162	620	0.016
90) 2,4,6-Trichlorophenol	(3)	10.527	196	3277	0.112
92) 2,4,5-Trichlorophenol	(3)	10.568	196	3492	0.112
93)$2-Fluorobiphenyl	(3)	10.672	172	26854	0.251
94) trans-Isosafrole	(3)	10.783	162	3150	0.091
95) 1,1'-Biphenyl	(3)	10.824	154	13340	0.120
96) 2-Chloronaphthalene	(3)	10.841	162	11150	0.119
98) 1-Chloronaphthalene	(3)	10.871	162	11508	0.130
99) Diphenyl ether	(3)	11.005	170	7695	0.123
100) 2-Nitroaniline	(3)	11.028	138	2959	0.105
104) 1,4-Naphthoquinone	(3)	11.145	158	2889	0.082
106) Dimethylphthalate	(3)	11.349	163	12025	0.122
107) 1,3-Dinitrobenzene	(3)	11.378	168	1192	0.078
105) 1,4-Dinitrobenzene	(3)	11.378	168	1192	0.085
108) 2,6-Dinitrotoluene	(3)	11.436	165	2157	0.100
109) Acenaphthylene	(3)	11.500	152	14232	0.118
112) 3-Nitroaniline	(3)	11.675	138	2301	0.097
113)*Acenaphthene-d10	(3)	11.710	164	339506	5.000
114) Acenaphthene	(3)	11.757	153	11569	0.123
115) 2,4-Dinitrophenol	(3)	11.827	184	4421	0.356
116) 4-Nitrophenol	(3)	11.914	109	6467	0.364
117) Pentachlorobenzene	(3)	11.931	250	4287	0.113
119) Dibenzofuran	(3)	11.996	168	15522	0.126
118) 2,4-Dinitrotoluene	(3)	12.001	165	2853	0.097
121) 1-Naphthylamine	(3)	12.106	143	9585	0.105
122) 2,3,4,6-Tetrachlorophenol	(3)	12.165	232	2441	0.106
123) 2-Naphthylamine	(3)	12.211	143	10791	0.121

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

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	12.339	149	11408	0.118
125) Thionazin	(3)	12.433	107	2539	0.154
126) Fluorene	(3)	12.433	166	11835	0.123
127) 4-Chlorophenyl-phenylether	(3)	12.456	204	5882	0.127
128) 5-Nitro-o-toluidine	(3)	12.462	152	2733	0.099
129) 4-Nitroaniline	(3)	12.468	138	2442	0.097
130) 4,6-Dinitro-2-methylphenol	(4)	12.503	198	4375	0.262
132) NDPA as diphenylamine	(4)	12.596	169	9011	0.111
131) N-Nitrosodiphenylamine	(4)	12.596	169	9011	0.111
134) 1,2-Diphenylhydrazine	(4)	12.637	77	13526	0.118
135)$2,4,6-Tribromophenol	(3)	12.724	330	2381	0.178
137) Tetraethyldithiopyrophosphate	(4)	12.812	97	2168	0.113
140) Diallate (peak 1)	(4)	12.957	86	4502	0.090
144) Diallate (peak 2)	(4)	12.957	86	4502	0.115
141) Phorate	(4)	12.969	75	7704	0.101
142) Phenacetin	(4)	12.992	108	4273	0.077
143) 4-Bromophenyl-phenylether	(4)	13.051	248	3093	0.115
145) Hexachlorobenzene	(4)	13.091	284	3740	0.127
147) Dimethoate	(4)	13.173	87	4021	0.088
148) Atrazine	(4)	13.272	200	3162	0.124
151) Pentachloronitrobenzene	(4)	13.354	237	1162	0.092
149) Pentachlorophenol	(4)	13.354	266	1098	0.060
150) 4-Aminobiphenyl	(4)	13.377	169	2350	0.100
152) Pronamide	(4)	13.453	173	4228	0.092
153)*Phenanthrene-d10	(4)	13.598	188	611520	5.000
155) Phenanthrene	(4)	13.628	178	18180	0.125
157) Anthracene	(4)	13.692	178	16878	0.120
163) Carbazole	(4)	13.919	167	15120	0.109
164) Methyl parathion	(4)	14.111	109	3035	0.086
165) Di-n-butylphthalate	(4)	14.414	149	16815	0.103
167) Parathion	(4)	14.659	109	1621	0.076
168) 4-Nitroquinoline-1-oxide	(4)	14.694	190	720	0.052
222) Total PAHs	(6)			288139	2.166
171) Isodrin	(4)	15.061	193	2355	0.141
173) Fluoranthene	(4)	15.289	202	18864	0.119
174) Benzidine	(5)	15.528	184	90368	0.796
175)*Pyrene-d10	(5)	15.609	212	732897	5.000
177) Pyrene	(5)	15.638	202	22936	0.128
179)$Terphenyl-d14	(5)	15.918	244	25849	0.227
185) Chlorobenzilate	(5)	16.239	139	4580	0.089

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

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

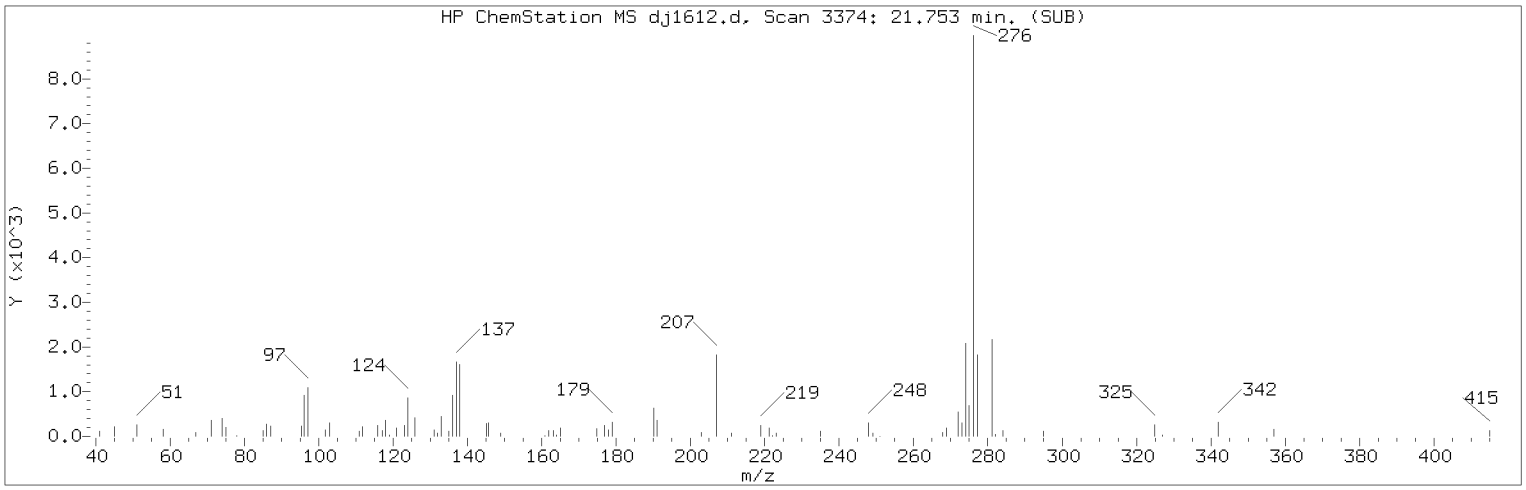
Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) 3,3'-Dimethylbenzidine	(5)	16.723	212	10127	0.097
188) Butylbenzylphthalate	(5)	16.775	149	6643	0.088
191) 2-Acetylaminofluorene	(5)	17.142	181	3764	0.059
193) 3,3'-Dichlorobenzidine	(5)	17.661	252	6091	0.099
195) Benzo(a)anthracene	(5)	17.661	228	17298	0.116
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.678	231	2553	0.089
196) Chrysene	(5)	17.719	228	16654	0.117
199) bis(2-Ethylhexyl)phthalate	(5)	17.818	149	10052	0.093
203) 6-Methylchrysene	(5)	18.524	242	10884	0.100
205) Di-n-octylphthalate	(6)	18.990	149	15375	0.084
206) Benzo(b)fluoranthene	(6)	19.515	252	16983	0.113
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.520	256	6435	0.093
208) Benzo(k)fluoranthene	(6)	19.561	252	17660	0.116
211) Benzo(a)pyrene	(6)	20.051	252	16767	0.116
213)*Perylene-d12	(6)	20.150	264	607536	5.000
215) 3-Methylcholanthrene	(6)	20.616	268	6621	0.123
217) Dibenz(a,h)acridine	(6)	21.432	279	11896	0.094
218) Dibenz(a,j)acridine	(6)	21.508	279	13741	0.103
219) Indeno(1,2,3-cd)pyrene	(6)	21.753	276	15301M	0.115
220) Dibenz(a,h)anthracene	(6)	21.799	278	14280	0.107
221) Benzo(g,h,i)perylene	(6)	22.155	276	16713	0.117

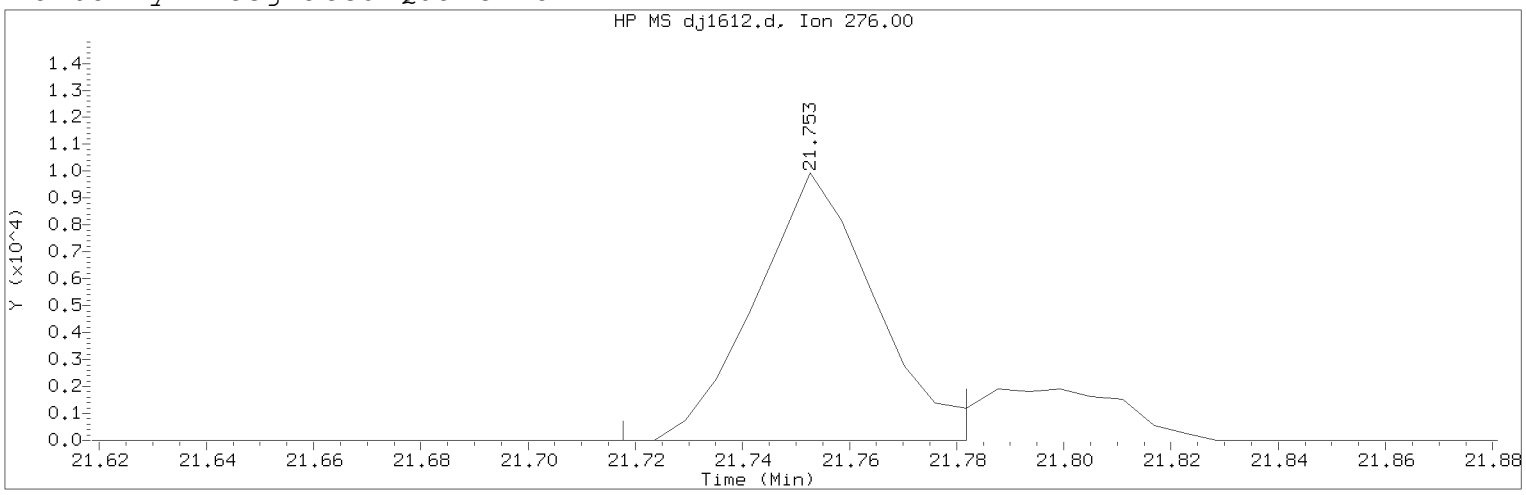
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:50
Date, time and analyst ID of latest file update: 31-Oct-2017 02:50 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

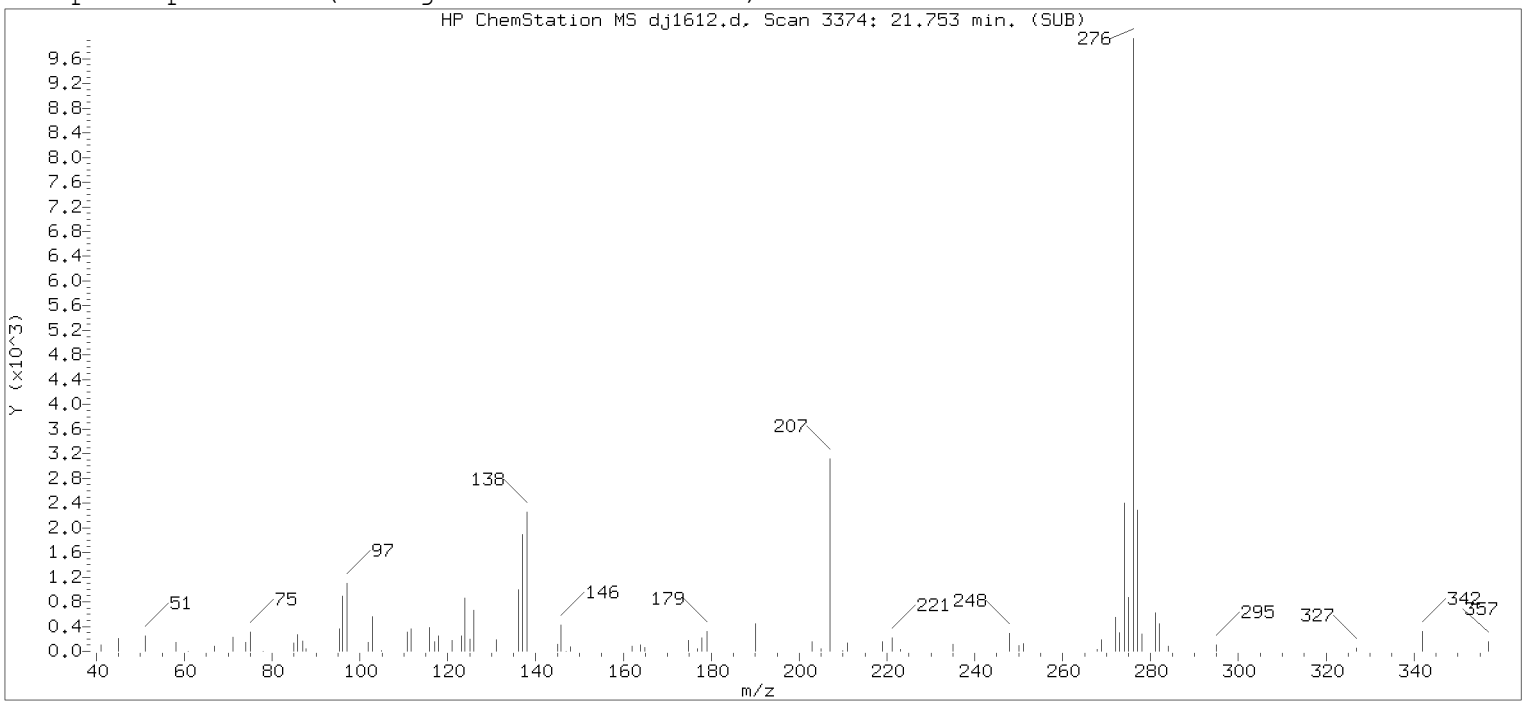
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3374
Retention Time (minutes) : 21.753
Quant Ion : 276.00
Area (flag) : 15301M
On-Column Amount (ng/ul) : 0.1149
Integration start scan : 3367 Integration stop scan: 3378
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

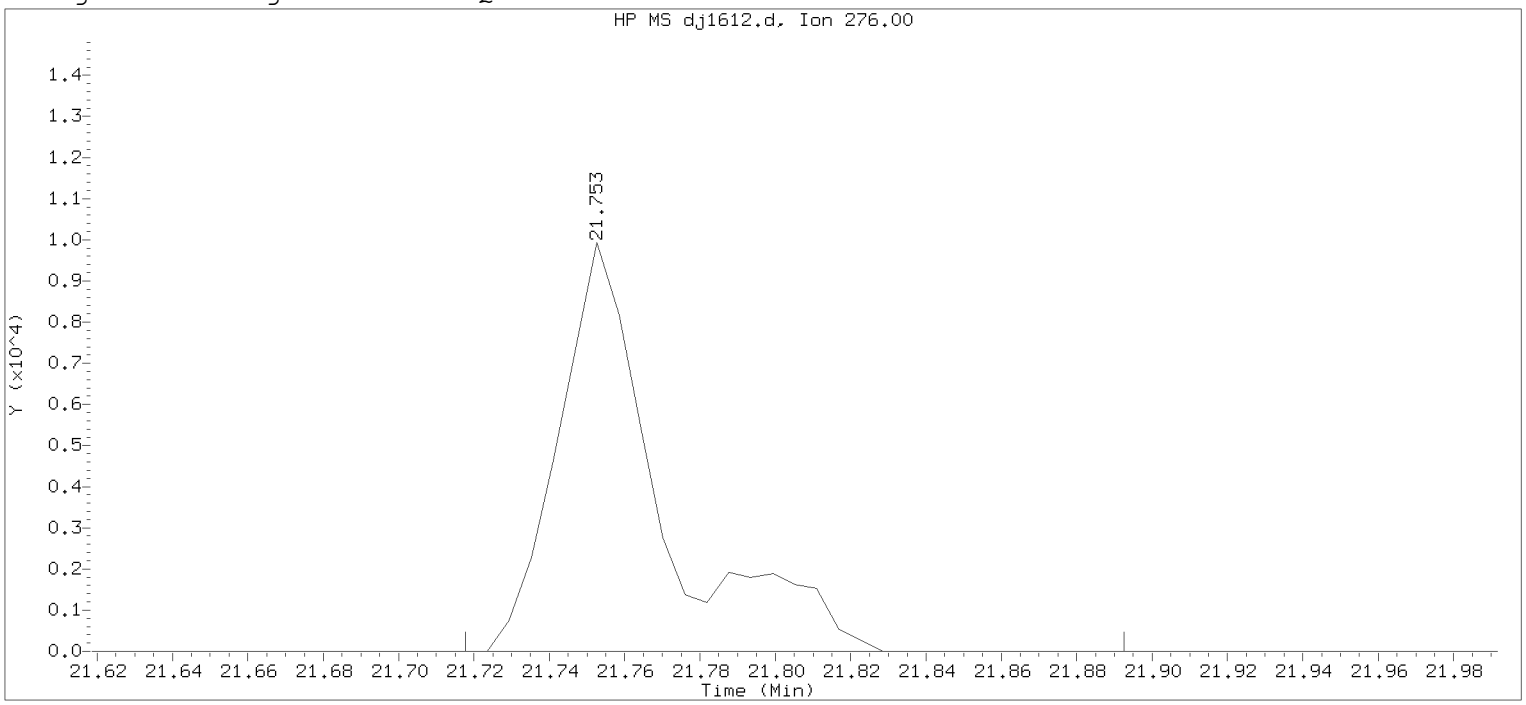
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:05.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



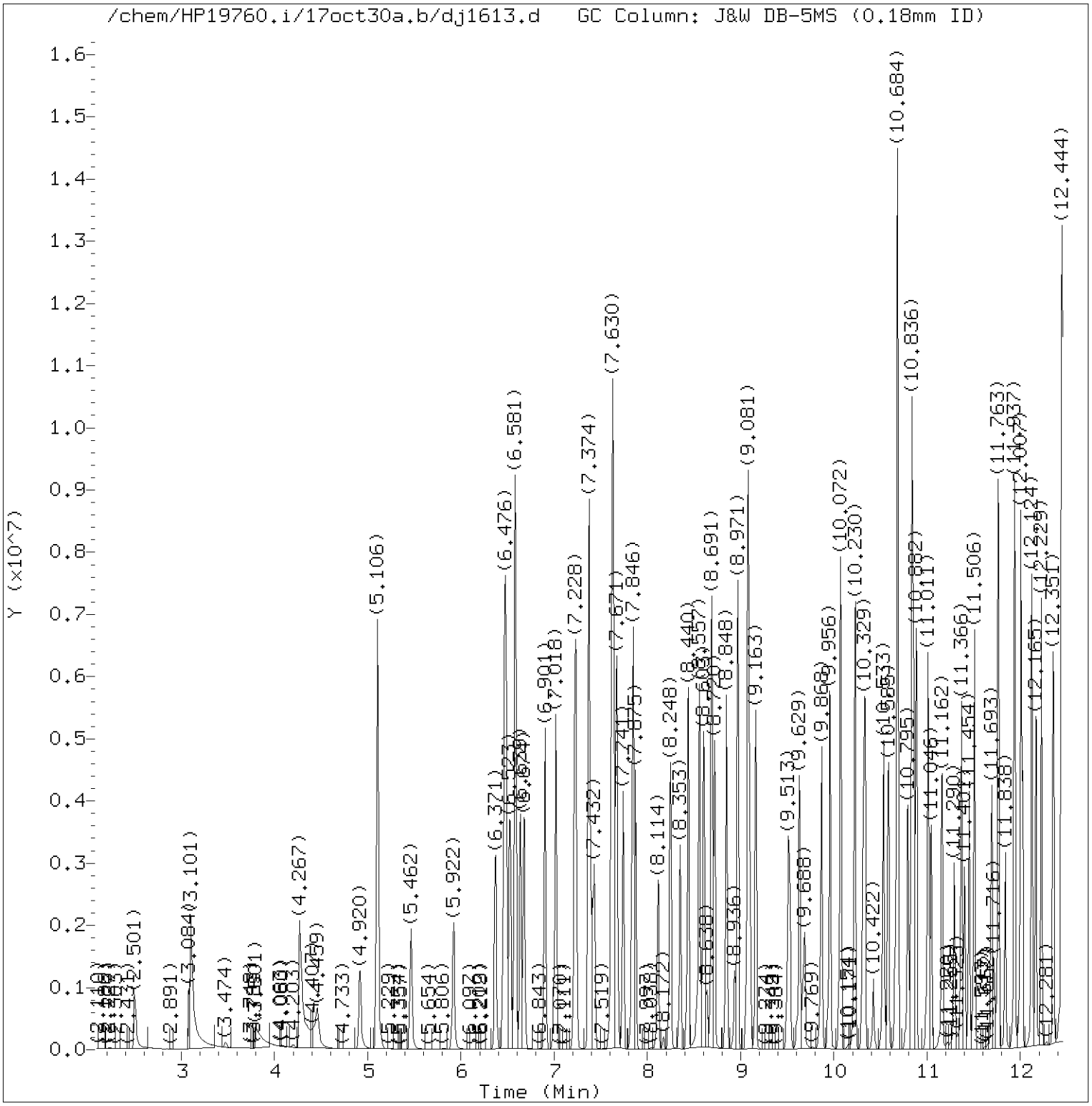
Data File: /chem/HP19760.i/17oct30a.b/dj1612.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 21:35 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:01
Date, time and analyst ID of latest file update: 30-Oct-2017 22:01 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3374		
Retention Time (minutes)	: 21.753		
Quant Ion	: 276.00		
Area	: 18647		
On-column Amount (ng/ul)	: 0.1173		
Integration start scan	: 3367	Integration stop scan:	3397
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:05.
Target 3.5 esignature used and approved.



Total Ion Chromatogram (TIC)

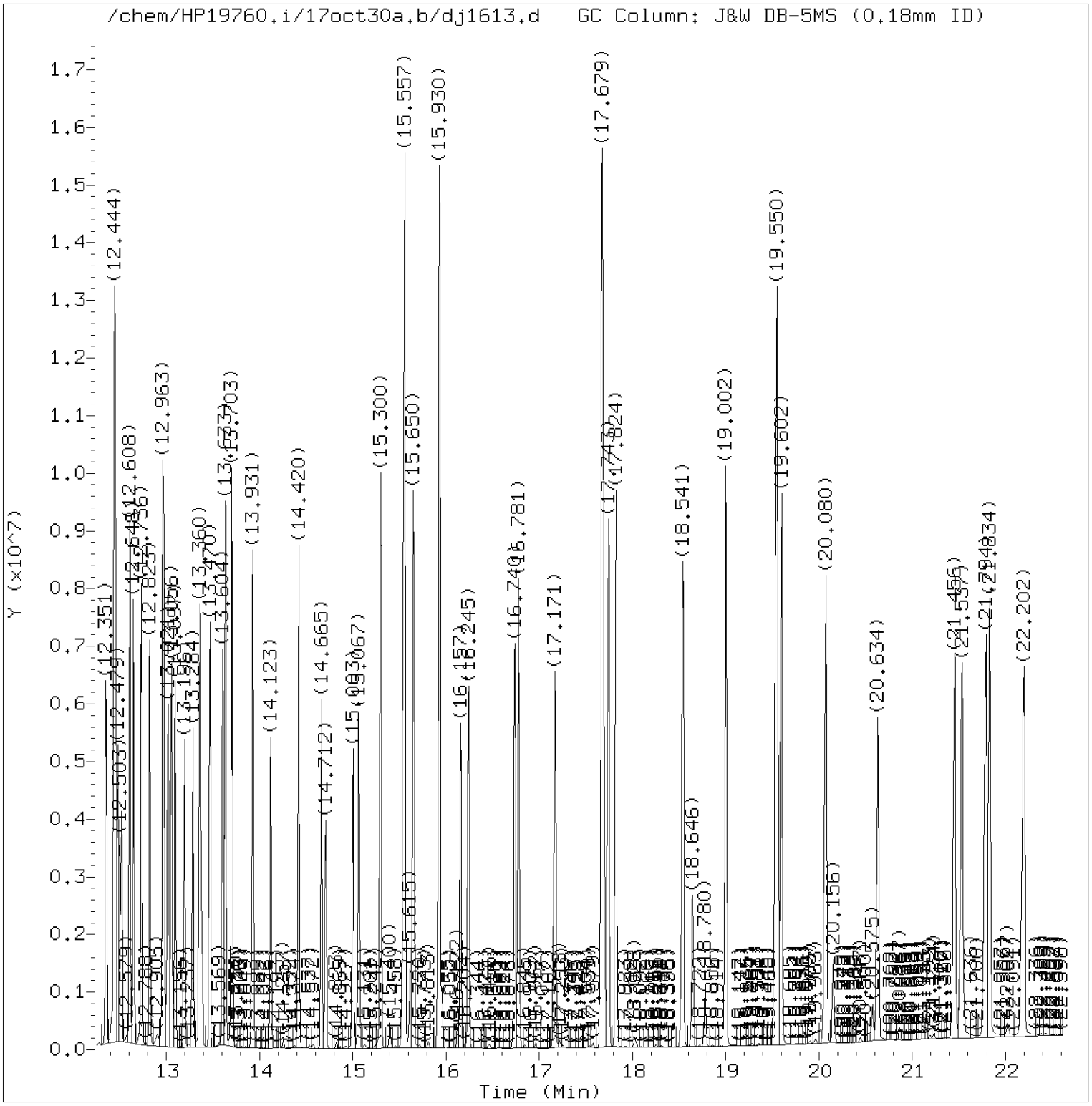
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.501	88	707983	34.024
4) N-Nitrosodimethylamine	(1)	3.084	74	963048	37.926
5) Pyridine	(1)	3.101	79	1803725	32.736
7) 2-Picoline	(1)	4.267	93	1925436	32.081
8) N-Nitrosomethylethylamine	(1)	4.459	88	806018	31.101
9) Methyl methanesulfonate	(1)	4.920	80	834155	31.669
11)$2-Fluorophenol	(1)	5.106	112	3171666	62.771
13) N-Nitrosodiethylamine	(1)	5.468	102	785643	32.384
42) Total Cresols	(1)			3092414	61.745
15) Ethyl methanesulfonate	(1)	5.922	109	817168	33.116
16) Benzaldehyde	(1)	6.371	77	1156853	25.688
17)$Phenol-d6	(1)	6.470	99	4161383	62.540
18) Phenol	(1)	6.488	94	2173214	30.992
19) Aniline	(1)	6.528	93	2703721	31.487
20) a-methylstyrene	(1)	6.581	118	1669323	30.123
22) bis(2-Chloroethyl)ether	(1)	6.639	93	1723207	30.782
23) 2-Chlorophenol	(1)	6.674	128	1595881	30.643
24) 1,3-Dichlorobenzene	(1)	6.901	146	1699630	30.022
25)*1,4-Dichlorobenzene-d4	(1)	6.995	152	172247	5.000
26) 1,4-Dichlorobenzene	(1)	7.018	146	1715567	29.855
27) Benzyl alcohol	(1)	7.222	108	1064753	30.960
28) 1,2-Dichlorobenzene	(1)	7.234	146	1604941	29.610
30) Indene	(1)	7.368	115	2935839	30.108
31) 2-Methylphenol	(1)	7.379	108	1510280	30.778
97) Isosafrole	(3)			1086362	31.309
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.432	45	2299831	29.944
34) bis(2-Chloroisopropyl)ether	(1)	7.432	45	2299831	29.944
36) Acetophenone	(1)	7.618	105	2483735	31.852
35) N-Nitrosopyrrolidine	(1)	7.618	100	787196A	31.605
37) 4-Methylphenol	(1)	7.630	108	1582134	30.963
38) N-Nitroso-di-n-propylamine	(1)	7.642	70	1300747	30.567
40) o-Toluidine	(1)	7.671	106	2644273	30.766
39) N-Nitrosomorpholine	(1)	7.682	56	904014	29.046
43) Hexachloroethane	(1)	7.741	117	706291	30.167
44)$Nitrobenzene-d5	(2)	7.846	82	3747311	60.566
45) Nitrobenzene	(2)	7.875	77	1896474	30.144
120) 2,4_2,6-Dinitrotoluenes	(3)			1594097	64.771
48) N-Nitrosopiperidine	(2)	8.114	114	787870	31.192
50) Isophorone	(2)	8.248	82	3288467	31.304
51) 2-Nitrophenol	(2)	8.353	139	800897	32.896

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.440	107	1665223	30.830
57) O,O,O-Triethylphosphorothioate	(2)	8.557	198	731413	29.748
55) bis(2-Chloroethoxy)methane	(2)	8.603	93	2032931	30.376
56) Benzoic acid	(2)	8.638	105	1470142M	40.003
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.691	104	2371698	29.691
60) 2,4-Dichlorophenol	(2)	8.720	162	1268469	31.009
146) Diallate trans/cis	(4)			1418029	29.923
62) 1,2,4-Trichlorobenzene	(2)	8.848	180	1404600	29.768
65)*Naphthalene-d8	(2)	8.936	136	661496	5.000
66) Naphthalene	(2)	8.971	128	4440164	29.563
68) 2,6-Dichlorophenol	(2)	9.076	162	1239877	31.031
67) 4-Chloroaniline	(2)	9.081	127	1863980	30.623
69) Hexachloropropene	(2)	9.099	213	754095	30.272
71) Hexachlorobutadiene	(2)	9.163	225	788423	29.756
75) Quinoline	(2)	9.513	129	2697744	30.094
77) N-Nitrosodi-n-butylamine	(2)	9.629	84	1225669	26.769
76) Caprolactam	(2)	9.688	113	402763A	32.917
80) 4-Chloro-3-methylphenol	(2)	9.868	107	1406422	31.221
82) Safrole	(2)	9.961	162	1145769	30.877
83) 2-Methylnaphthalene	(2)	10.072	142	2966497	30.421
84) 1-Methylnaphthalene	(2)	10.230	142	2681280	30.326
85) Hexachlorocyclopentadiene	(3)	10.311	237	707095	30.356
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.335	216	1402594	29.753
88) cis-Isosafrole	(3)	10.422	162	200999	5.324
90) 2,4,6-Trichlorophenol	(3)	10.533	196	924593	32.896
92) 2,4,5-Trichlorophenol	(3)	10.585	196	894898	30.107
93)$2-Fluorobiphenyl	(3)	10.684	172	6228228	59.876
94) trans-Isosafrole	(3)	10.795	162	885363	25.985
95) 1,1'-Biphenyl	(3)	10.836	154	3549487	31.183
96) 2-Chloronaphthalene	(3)	10.853	162	2994264	31.559
98) 1-Chloronaphthalene	(3)	10.882	162	2291205	27.850
99) Diphenyl ether	(3)	11.011	170	1870655	30.569
100) 2-Nitroaniline	(3)	11.046	138	837271	31.417
104) 1,4-Naphthoquinone	(3)	11.162	158	1088106	31.576
105) 1,4-Dinitrobenzene	(3)	11.290	168	431614	31.314
106) Dimethylphthalate	(3)	11.372	163	2835894	29.357
107) 1,3-Dinitrobenzene	(3)	11.401	168	468395	30.787
108) 2,6-Dinitrotoluene	(3)	11.454	165	684504	32.648
109) Acenaphthylene	(3)	11.506	152	3746593	30.875
112) 3-Nitroaniline	(3)	11.693	138	746735	32.577

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.716	164	344219	5.000
114) Acenaphthene	(3)	11.763	153	2840681	30.227
115) 2,4-Dinitrophenol	(3)	11.838	184	457699	35.266
117) Pentachlorobenzene	(3)	11.937	250	1130893	30.094
116) 4-Nitrophenol	(3)	11.937	109	547904	30.860
119) Dibenzofuran	(3)	12.007	168	3617929	29.748
118) 2,4-Dinitrotoluene	(3)	12.025	165	909593	31.279
121) 1-Naphthylamine	(3)	12.124	143	2881957	31.097
122) 2,3,4,6-Tetrachlorophenol	(3)	12.171	232	756764	33.519
123) 2-Naphthylamine	(3)	12.229	143	2658195	29.660
124) Diethylphthalate	(3)	12.351	149	2858047	30.364
126) Fluorene	(3)	12.439	166	2947756	30.359
125) Thionazin	(3)	12.450	107	504016	30.309
127) 4-Chlorophenyl-phenylether	(3)	12.456	204	1375352	30.201
128) 5-Nitro-o-toluidine	(3)	12.479	152	841731	31.919
129) 4-Nitroaniline	(3)	12.503	138	752905	32.642
130) 4,6-Dinitro-2-methylphenol	(4)	12.520	198	565001	31.335
132) NDPA as diphenylamine	(4)	12.608	169	2400160	29.818
131) N-Nitrosodiphenylamine	(4)	12.608	169	2400160	29.818
134) 1,2-Diphenylhydrazine	(4)	12.648	77	3335220	29.747
135)$2,4,6-Tribromophenol	(3)	12.736	330	859092	66.114
137) Tetraethyldithiopyrophosphate	(4)	12.818	97	553445	29.616
139) 1,3,5-Trinitrobenzene	(4)	12.963	213	348929	32.120
140) Diallate (peak 1)	(4)	12.963	86	1211750	24.767
141) Phorate	(4)	12.975	75	3178888	41.640
142) Phenacetin	(4)	13.021	108	1696622	32.104
143) 4-Bromophenyl-phenylether	(4)	13.056	248	837505	30.319
144) Diallate (peak 2)	(4)	13.068	86	206279	5.171
145) Hexachlorobenzene	(4)	13.097	284	887430	30.185
147) Dimethoate	(4)	13.196	87	1354617	30.435
148) Atrazine	(4)	13.290	200	750457	28.798
149) Pentachlorophenol	(4)	13.360	266	614005	32.682
151) Pentachloronitrobenzene	(4)	13.365	237	381932	30.879
150) 4-Aminobiphenyl	(4)	13.383	169	666318	29.691
152) Pronamide	(4)	13.470	173	1419575	32.058
153)*Phenanthrene-d10	(4)	13.604	188	643521	5.000
154) Dinoseb	(4)	13.604	211	889293	34.423
155) Phenanthrene	(4)	13.639	178	4419458	29.732
157) Anthracene	(4)	13.703	178	4453210	30.689
163) Carbazole	(4)	13.931	167	4156734	30.953

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on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

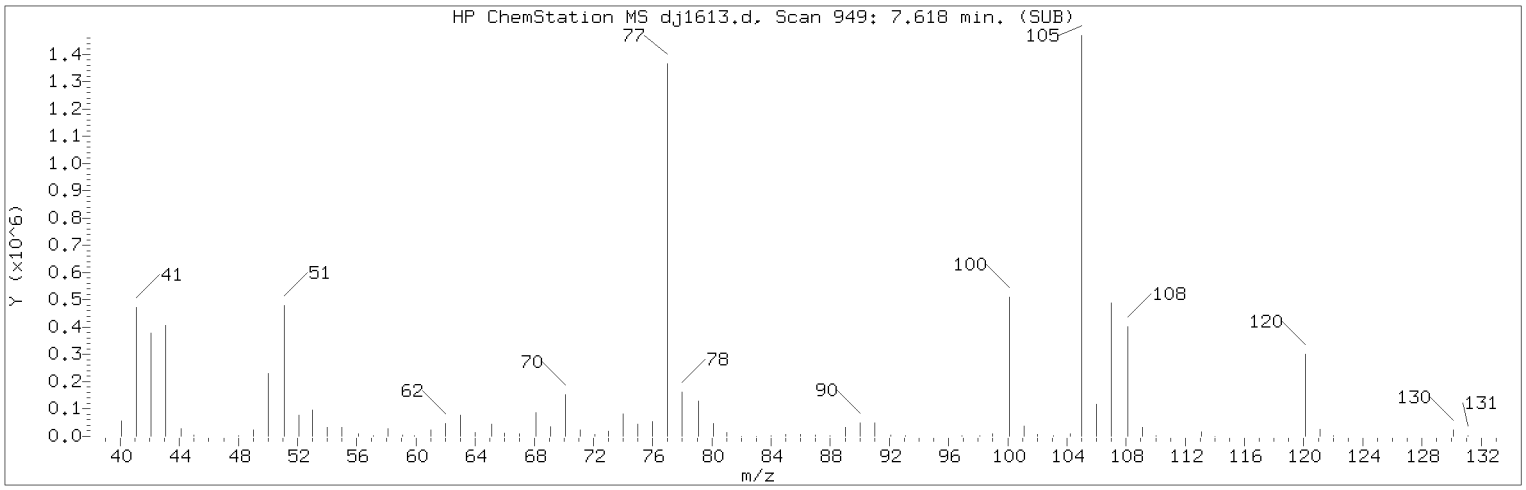
Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.123	109	1092009	31.621
165) Di-n-butylphthalate	(4)	14.420	149	4974160	30.858
167) Parathion	(4)	14.665	109	730661	33.418
168) 4-Nitroquinoline-1-oxide	(4)	14.712	190	540570	34.345
222) Total PAHs	(6)			80753246	530.507
169) Octachlorostyrene	(4)	15.003	308	331378	29.918
171) Isodrin	(4)	15.067	193	509756	28.788
173) Fluoranthene	(4)	15.300	202	5069370	31.173
174) Benzidine	(5)	15.557	184	9719809	84.865
175)*Pyrene-d10	(5)	15.615	212	775003	5.000
177) Pyrene	(5)	15.650	202	5257472	29.322
179)$Terphenyl-d14	(5)	15.930	244	6762434	59.223
182) p-Dimethylaminoazobenzene	(5)	16.157	225	781877	34.823
185) Chlorobenzilate	(5)	16.245	139	1588600	30.495
187) 3,3'-Dimethylbenzidine	(5)	16.740	212	3274003	31.159
188) Butylbenzylphthalate	(5)	16.781	149	2374904	31.134
191) 2-Acetylaminofluorene	(5)	17.171	181	2394292	35.131
193) 3,3'-Dichlorobenzidine	(5)	17.673	252	2017534	32.058
195) Benzo(a)anthracene	(5)	17.679	228	5299292	32.582
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.696	231	977804	30.997
196) Chrysene	(5)	17.743	228	4852063	31.364
199) bis(2-Ethylhexyl)phthalate	(5)	17.824	149	3535339	31.961
203) 6-Methylchrysene	(5)	18.541	242	3724656	32.677
205) Di-n-octylphthalate	(6)	19.002	149	6543021	32.195
206) Benzo(b)fluoranthene	(6)	19.544	252	5819793	32.200
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.550	256	2391858	33.195
208) Benzo(k)fluoranthene	(6)	19.602	252	5400413	30.416
211) Benzo(a)pyrene	(6)	20.080	252	5473715	32.367
213)*Perylene-d12	(6)	20.156	264	717002	5.000
215) 3-Methylcholanthrene	(6)	20.634	268	1963150	32.169
217) Dibenz(a,h)acridine	(6)	21.461	279	4426247	31.172
218) Dibenz(a,j)acridine	(6)	21.537	279	4474243	30.225
219) Indeno(1,2,3-cd)pyrene	(6)	21.794	276	5088221M	32.053
220) Dibenz(a,h)anthracene	(6)	21.834	278	5074816	30.765
221) Benzo(g,h,i)perylene	(6)	22.202	276	4922452	29.724

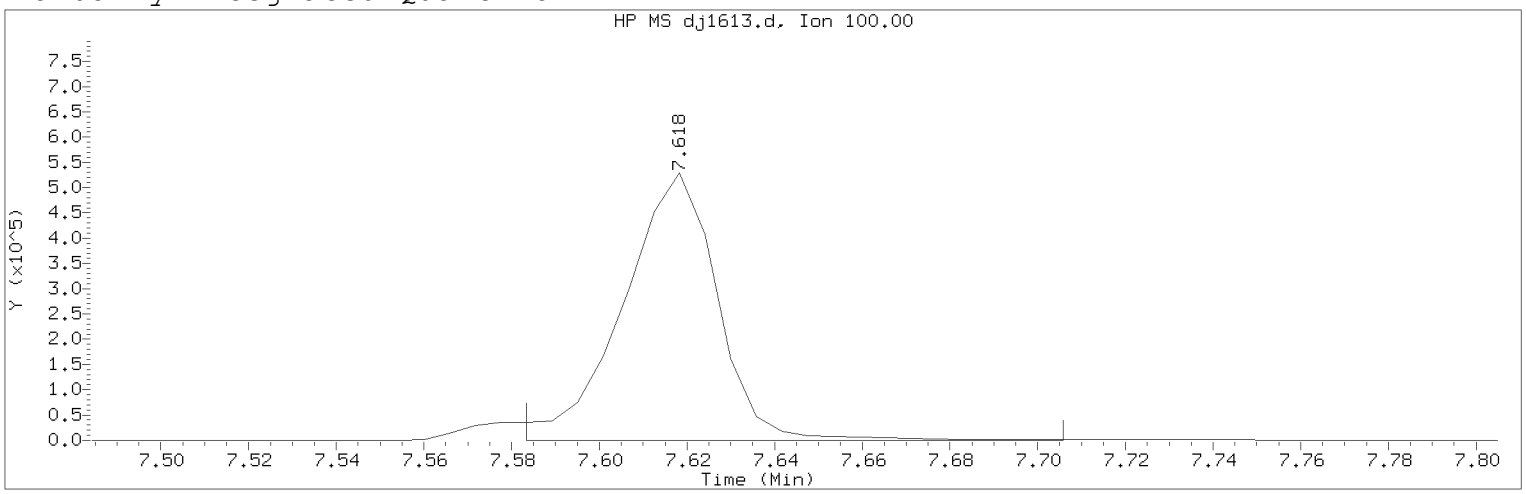
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

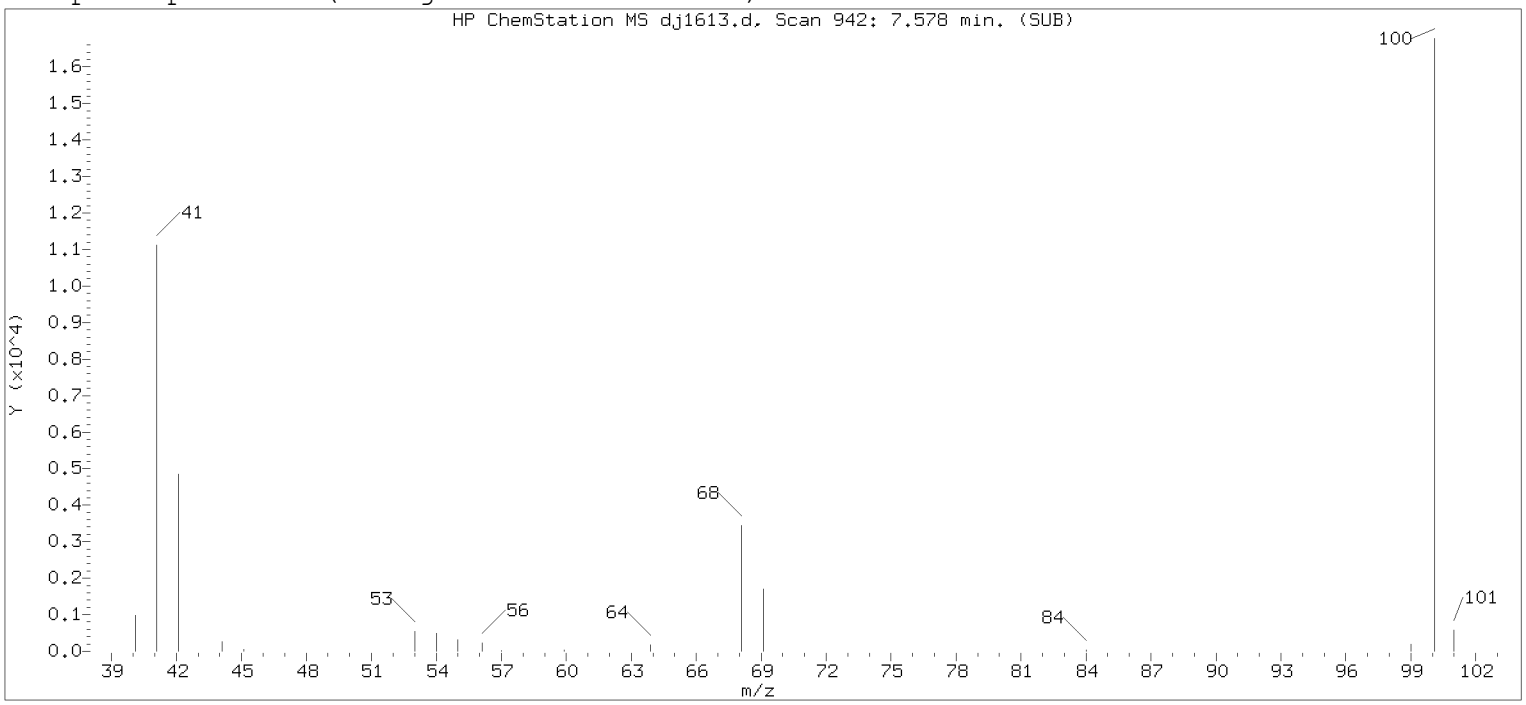
Compound Number : 35
Compound Name : N-Nitrosopyrrolidine
Scan Number : 949
Retention Time (minutes) : 7.618
Quant Ion : 100.00
Area (flag) : 787196A
On-Column Amount (ng/ul) : 31.6050
Integration start scan : 942 Integration stop scan: 963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

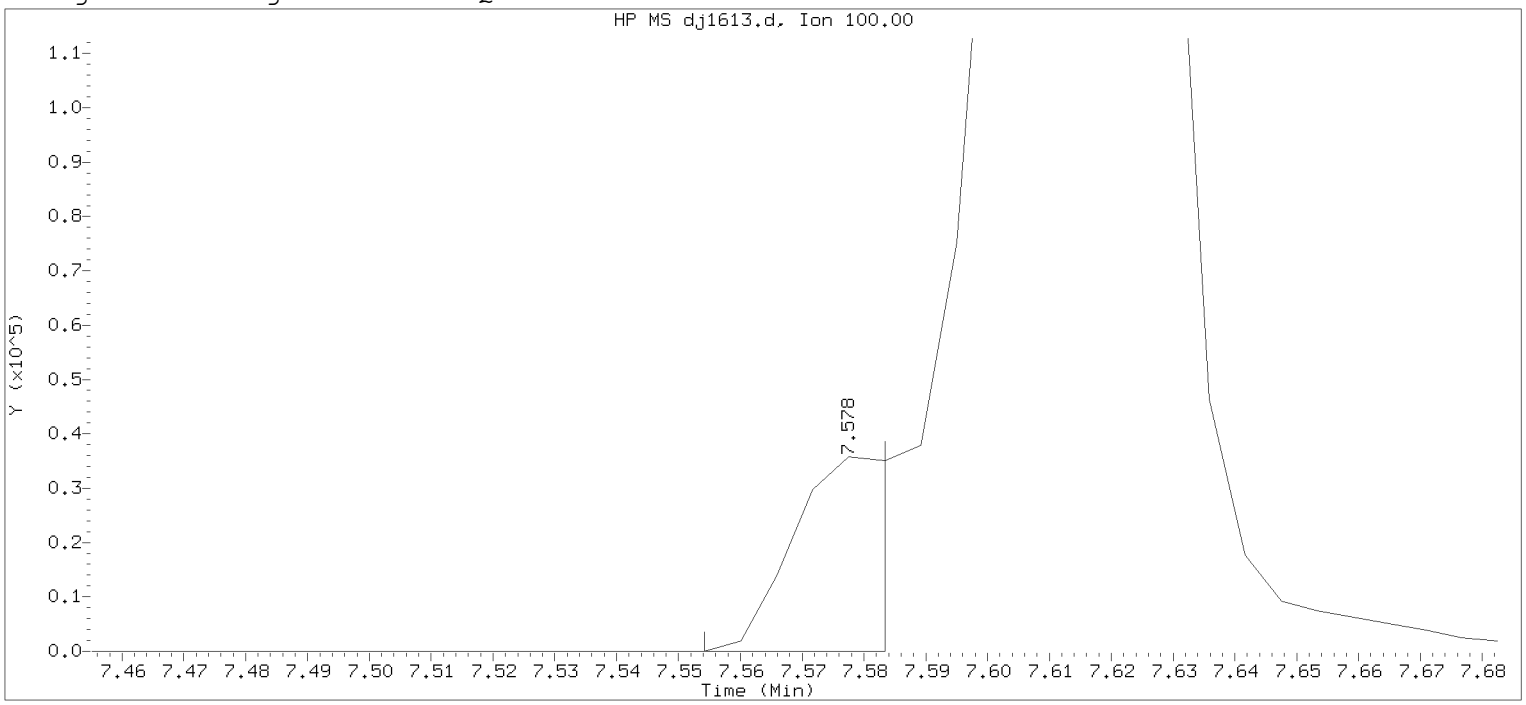
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

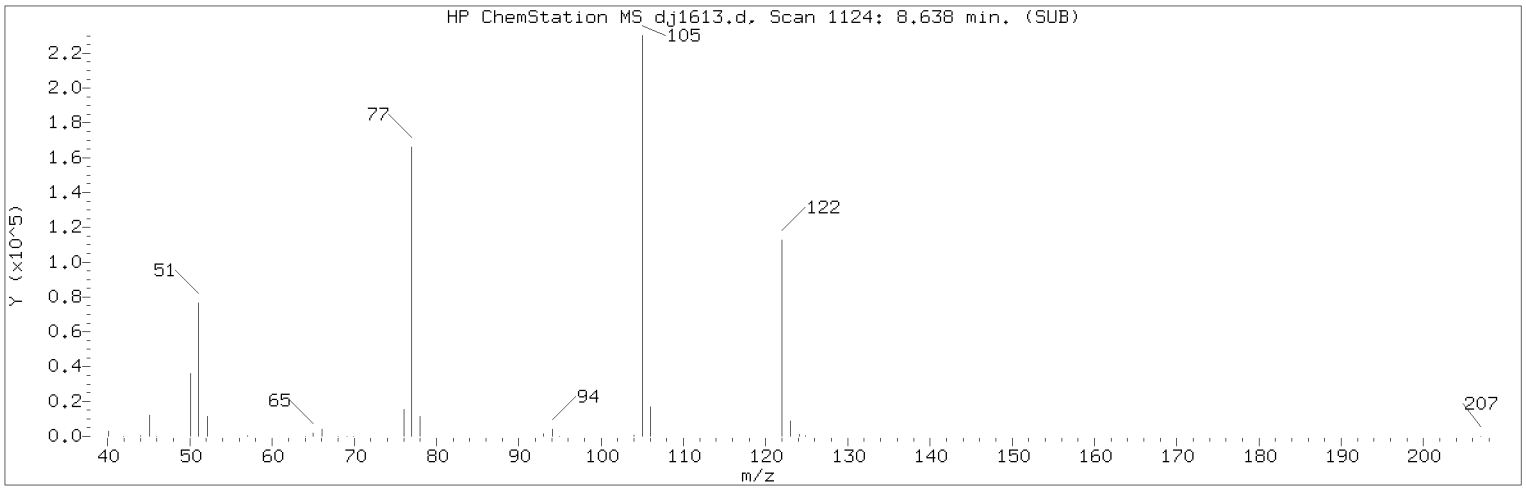
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:28
Date, time and analyst ID of latest file update: 30-Oct-2017 22:28 Automation

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

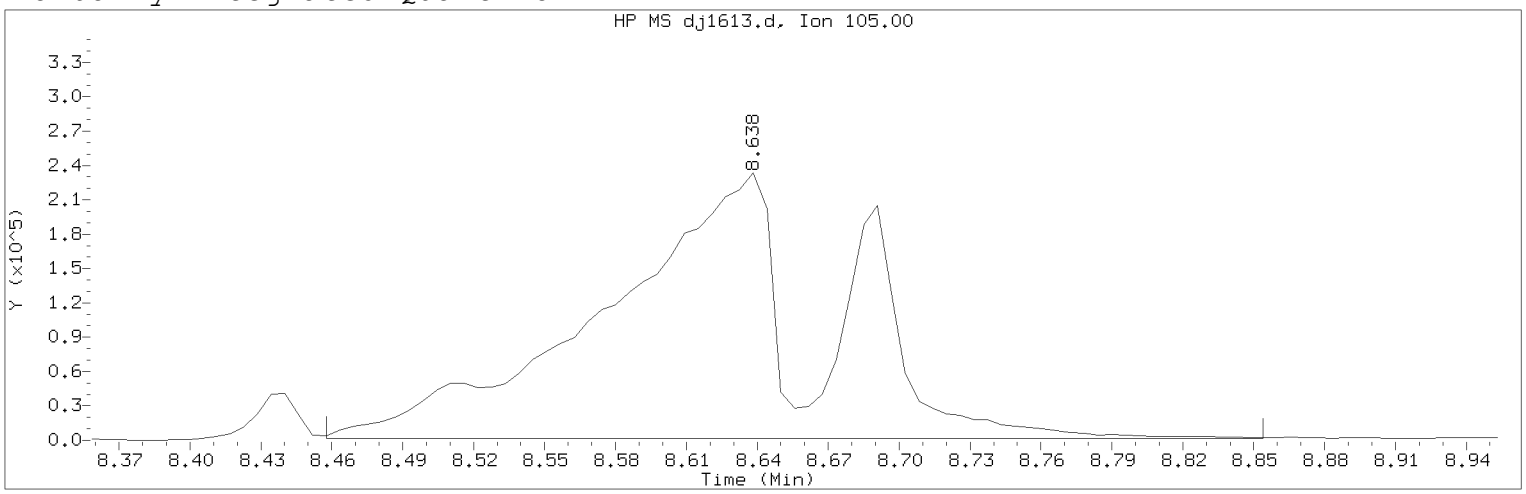
Compound Number	: 35		
Compound Name	: N-Nitrosopyrrolidine		
Scan Number	: 942		
Retention Time (minutes)	: 7.578		
Quant Ion	: 100.00		
Area	: 34563		
On-column Amount (ng/ul)	: 1.5033		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used for data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

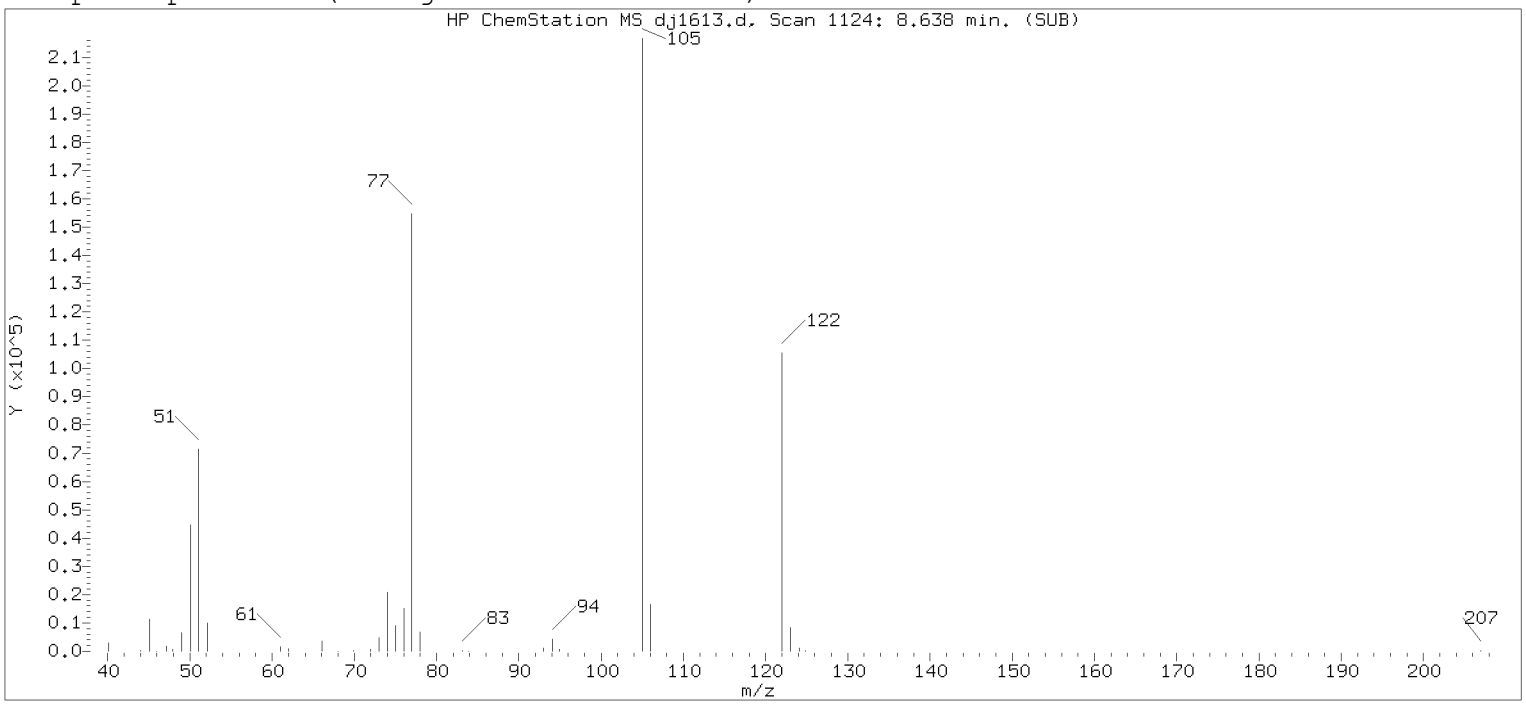
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1124
Retention Time (minutes) : 8.638
Quant Ion : 105.00
Area (flag) : 1470142M
On-Column Amount (ng/ul) : 40.0032
Integration start scan : 1092 Integration stop scan: 1160
Y at integration start : 1619 Y at integration end: 1619

Reason for manual integration: improper integration

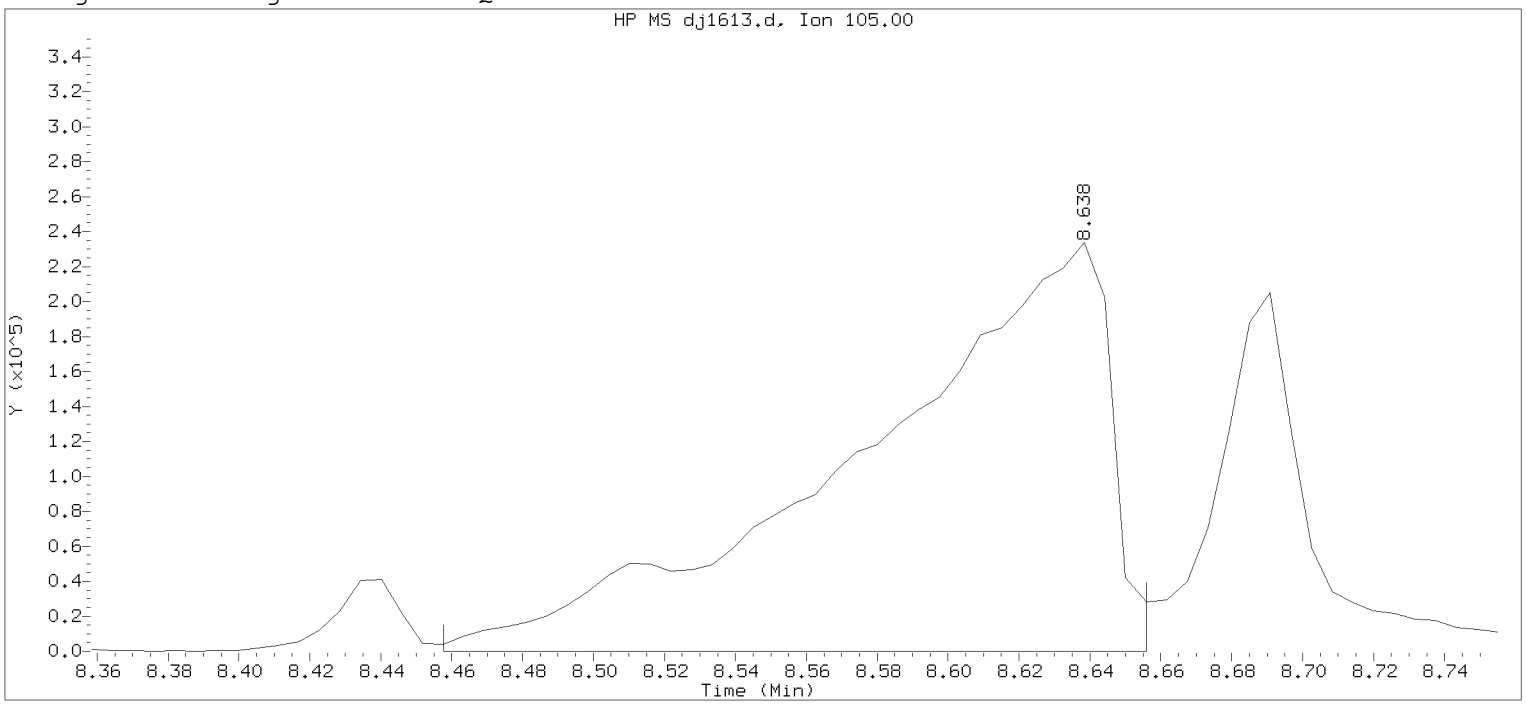
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

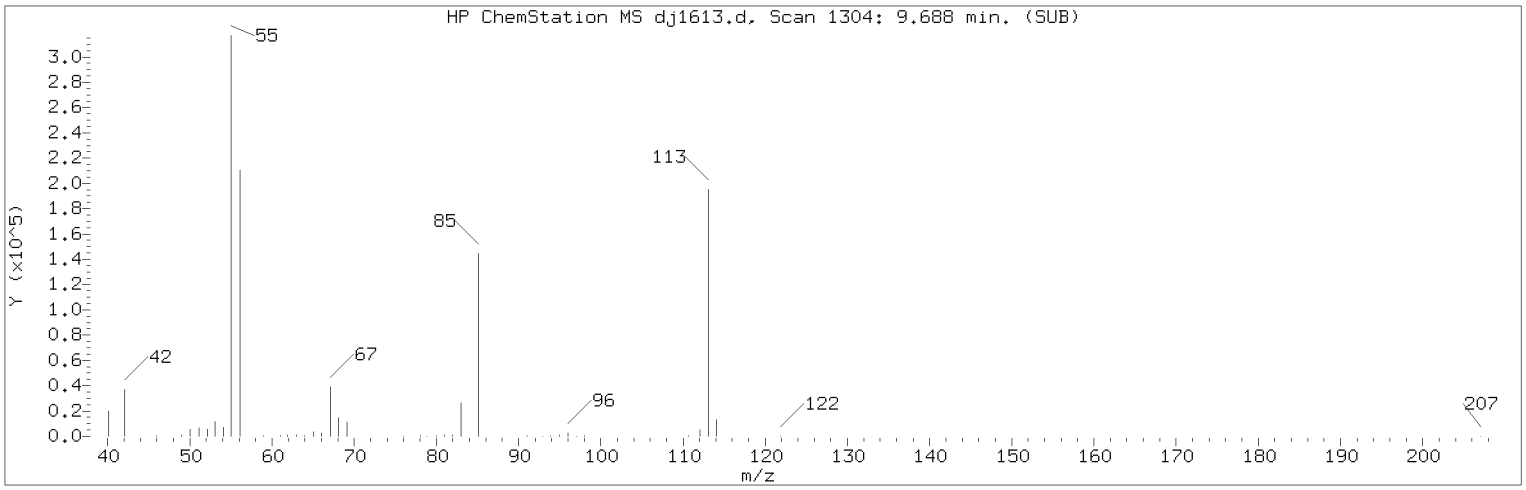
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:28
Date, time and analyst ID of latest file update: 30-Oct-2017 22:28 Automation

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

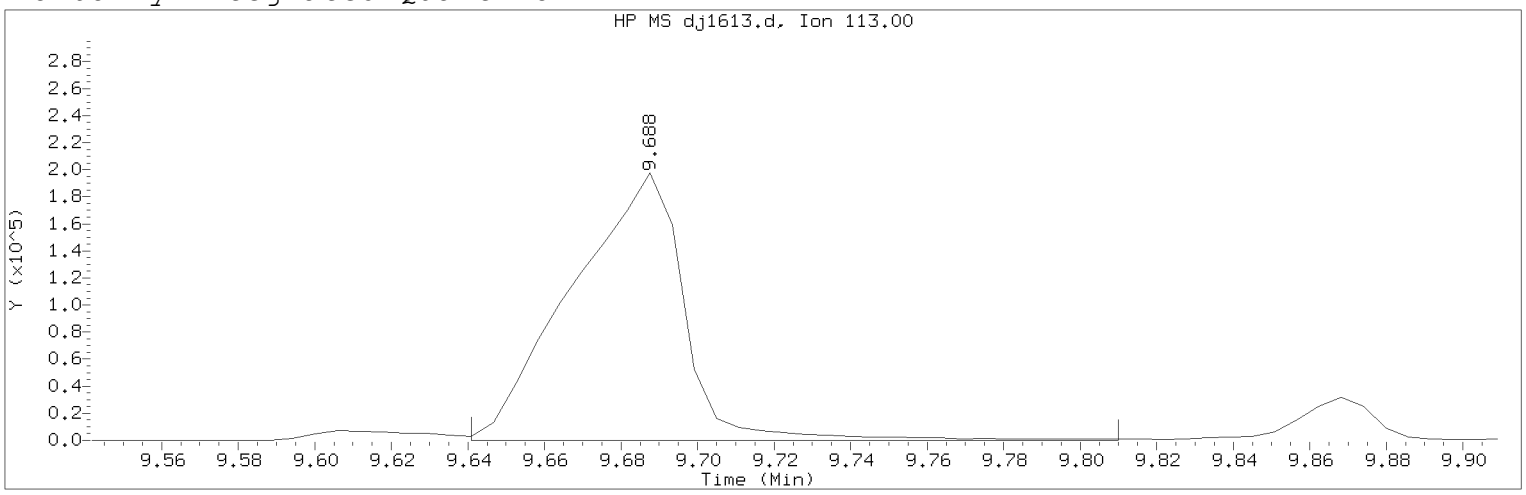
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1124		
Retention Time (minutes)	: 8.638		
Quant Ion	: 105.00		
Area	: 1118074		
On-column Amount (ng/ul)	: 26.9843		
Integration start scan	: 1092	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

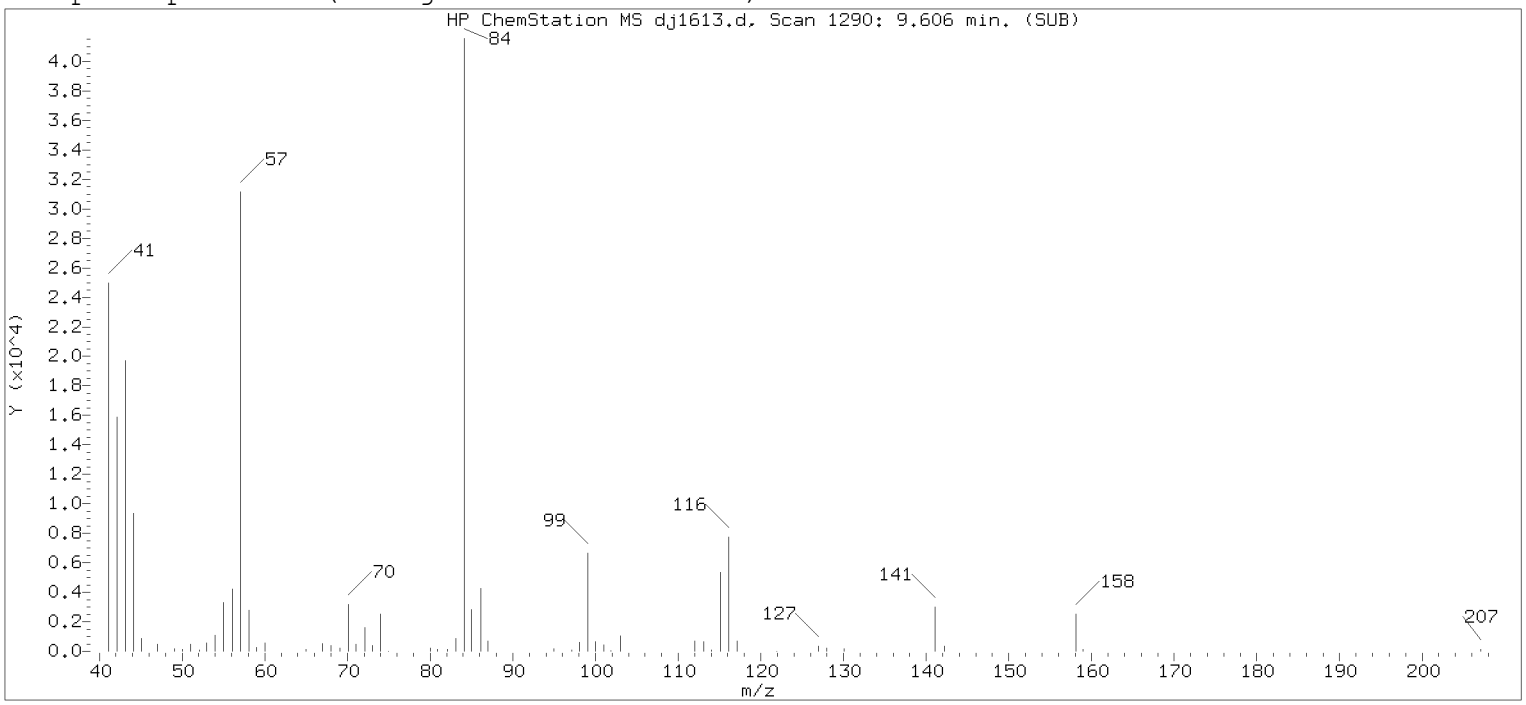
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1304
Retention Time (minutes) : 9.688
Quant Ion : 113.00
Area (flag) : 402763A
On-Column Amount (ng/ul) : 32.9172
Integration start scan : 1295 Integration stop scan: 1324
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

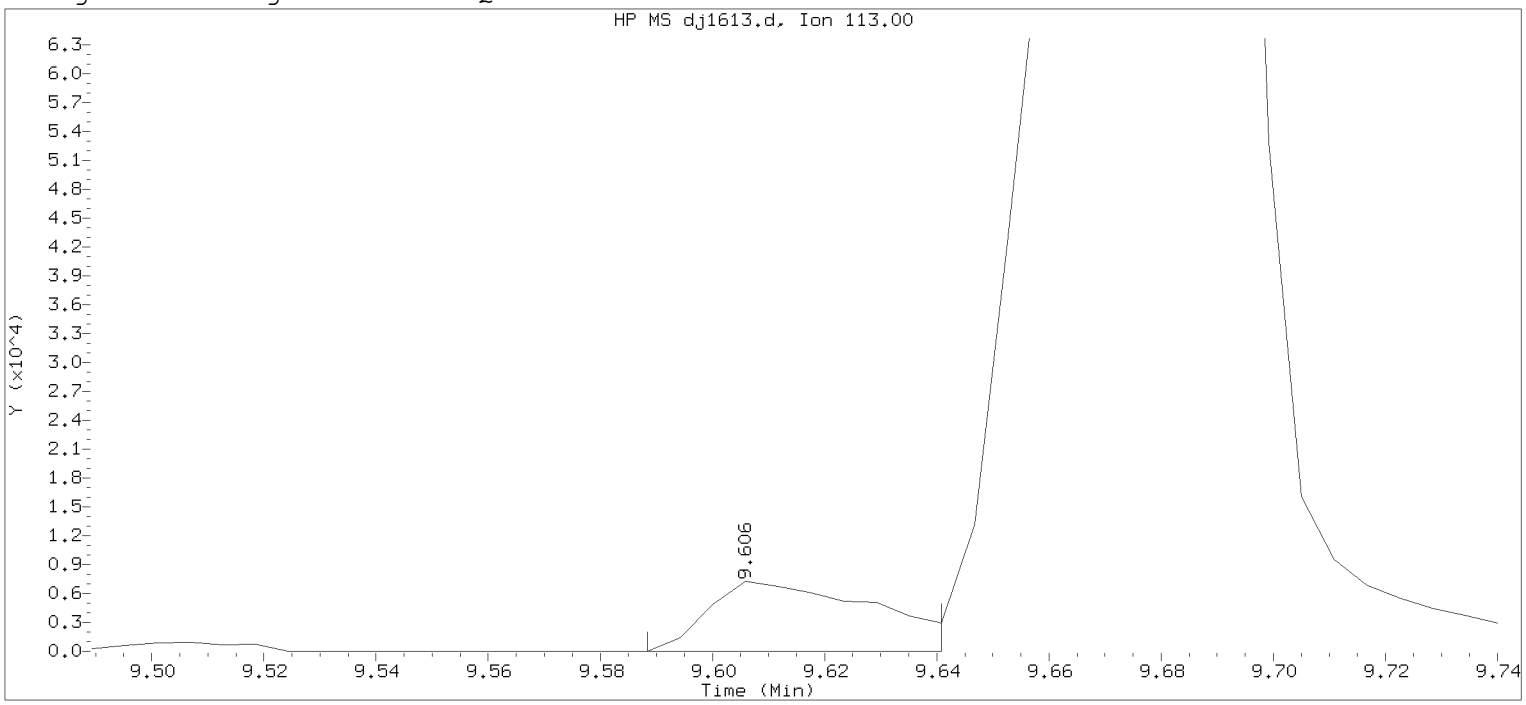
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

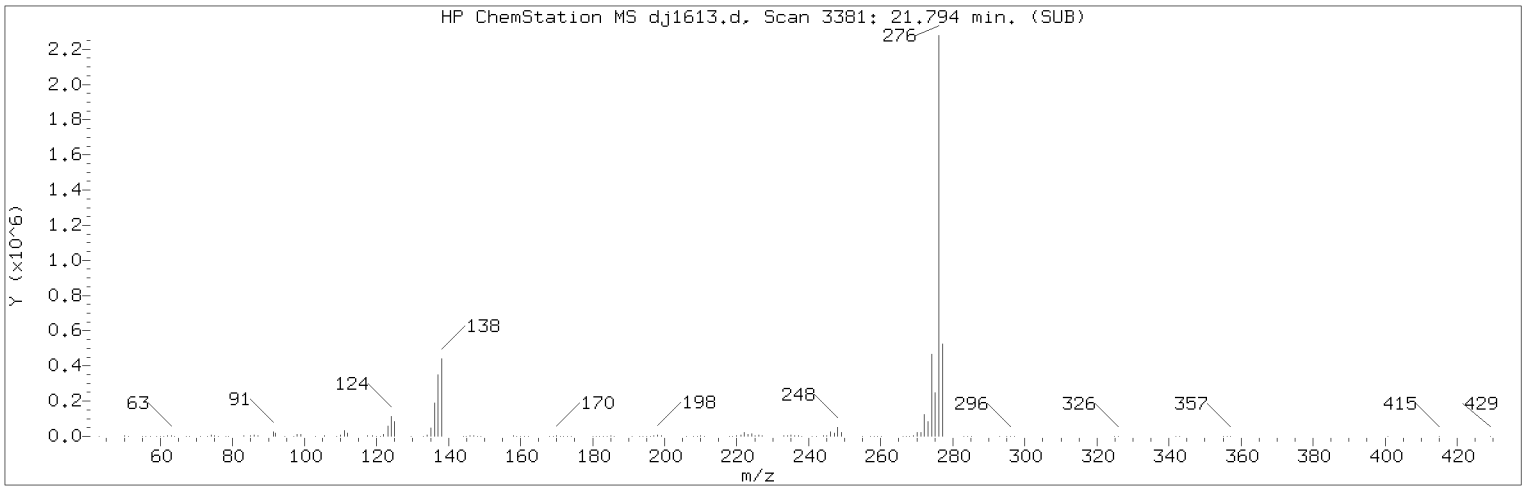
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:28
Date, time and analyst ID of latest file update: 30-Oct-2017 22:28 Automation

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

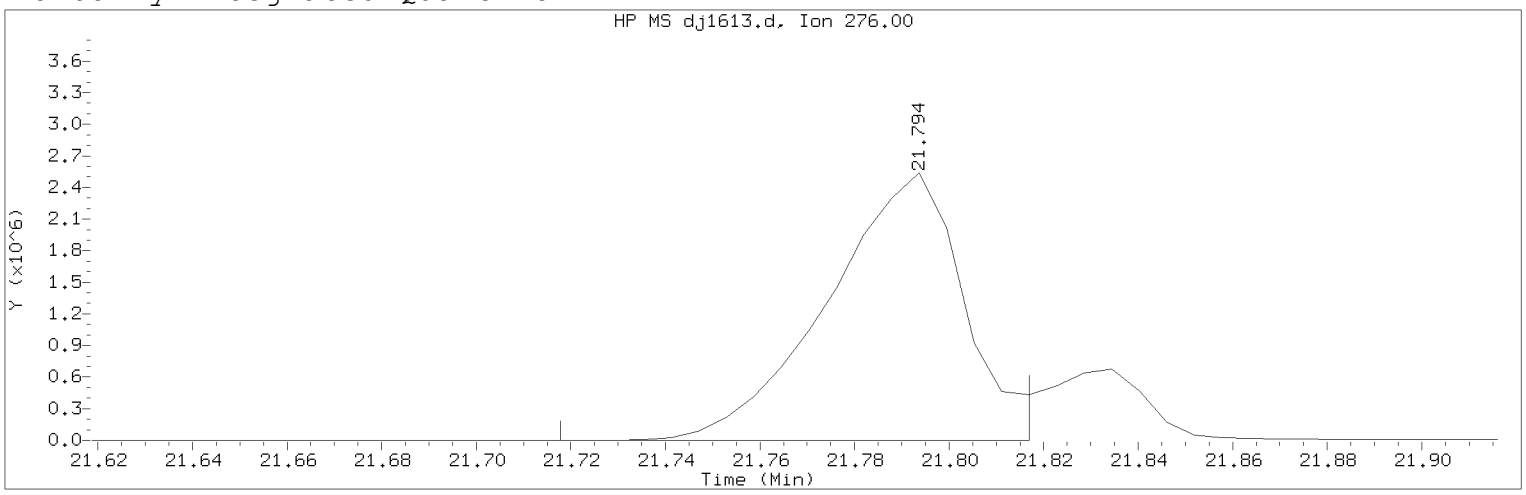
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1290		
Retention Time (minutes)	: 9.606		
Quant Ion	: 113.00		
Area	: 14571		
On-column Amount (ng/ul)	: 1.3093		
Integration start scan	: 1286	Integration stop scan:	1295
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:36 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

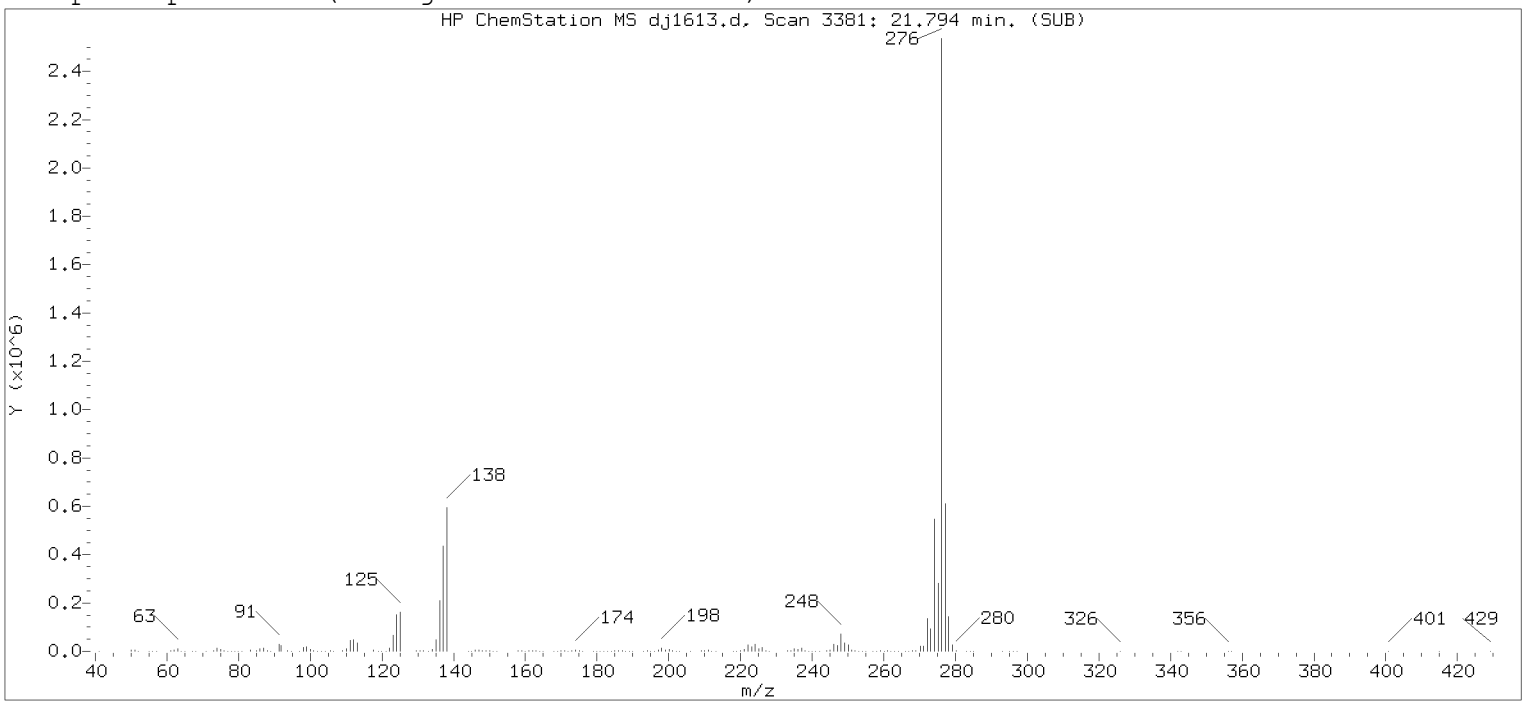
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3381
Retention Time (minutes) : 21.794
Quant Ion : 276.00
Area (flag) : 5088221M
On-Column Amount (ng/ul) : 32.0533
Integration start scan : 3367 Integration stop scan: 3384
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

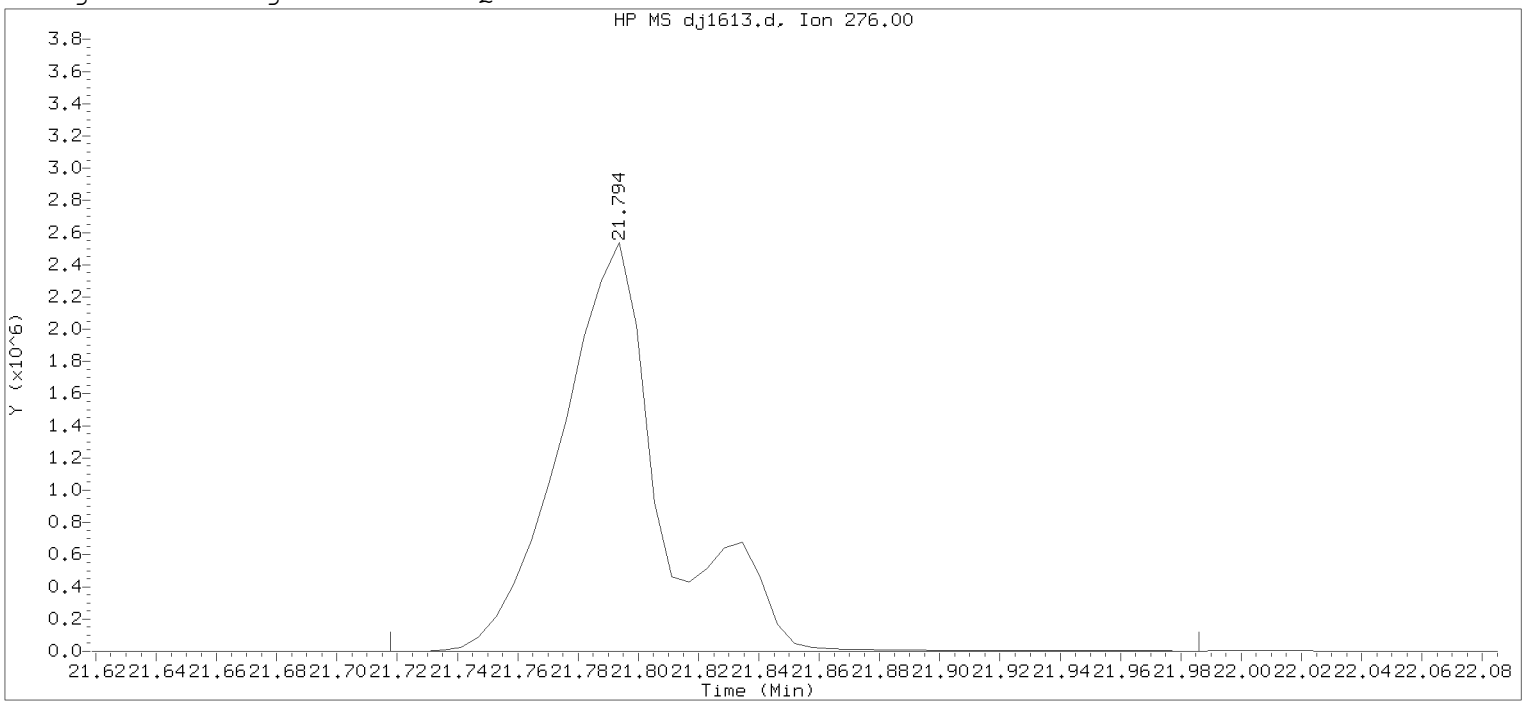
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



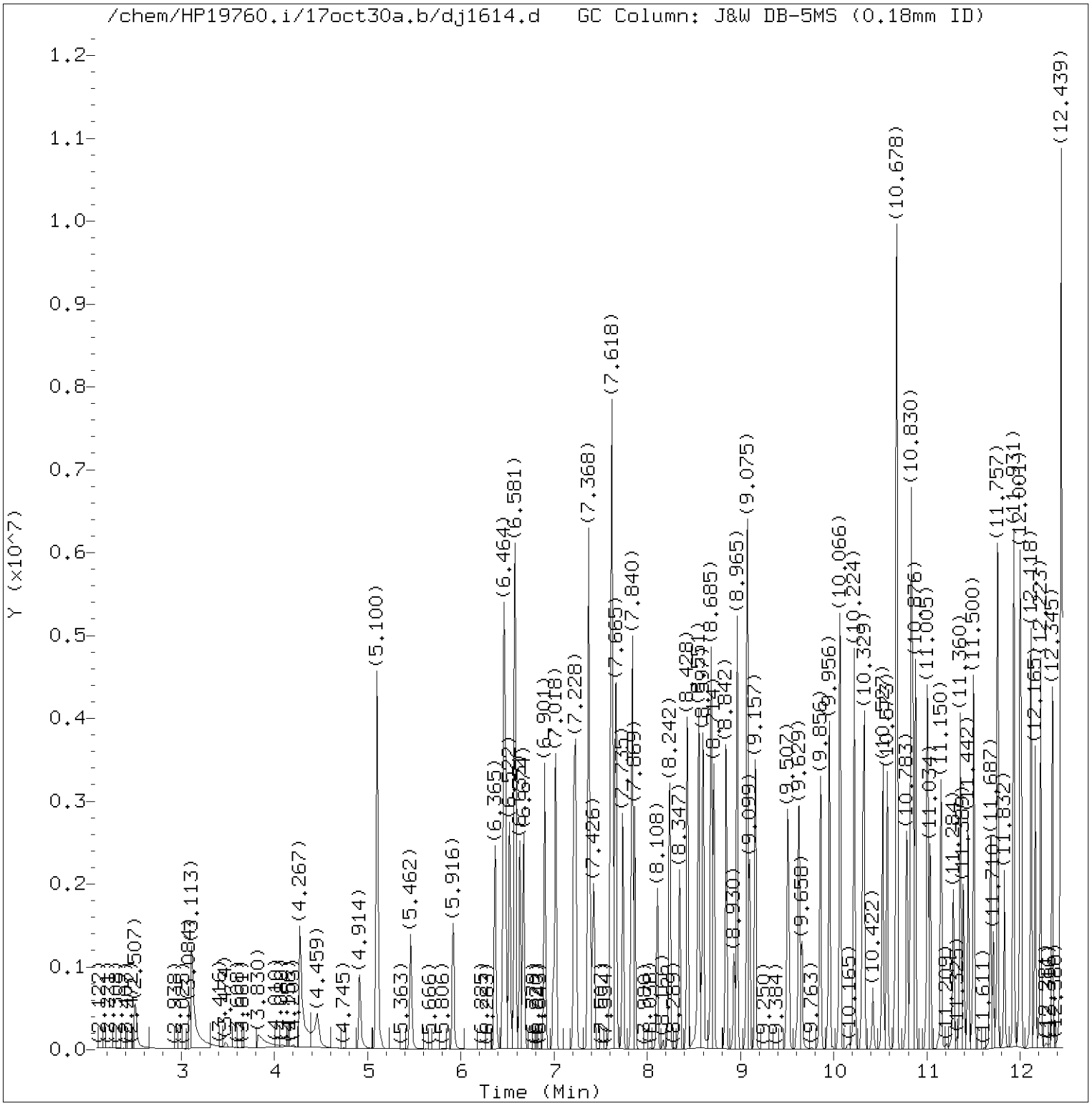
Data File: /chem/HP19760.i/17oct30a.b/dj1613.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:03 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:28
Date, time and analyst ID of latest file update: 30-Oct-2017 22:28 Automation

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3381		
Retention Time (minutes)	: 21.794		
Quant Ion	: 276.00		
Area	: 6016633		
On-column Amount (ng/ul)	: 31.8652		
Integration start scan	: 3367	Integration stop scan:	3413
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review



Total Ion Chromatogram (TIC)

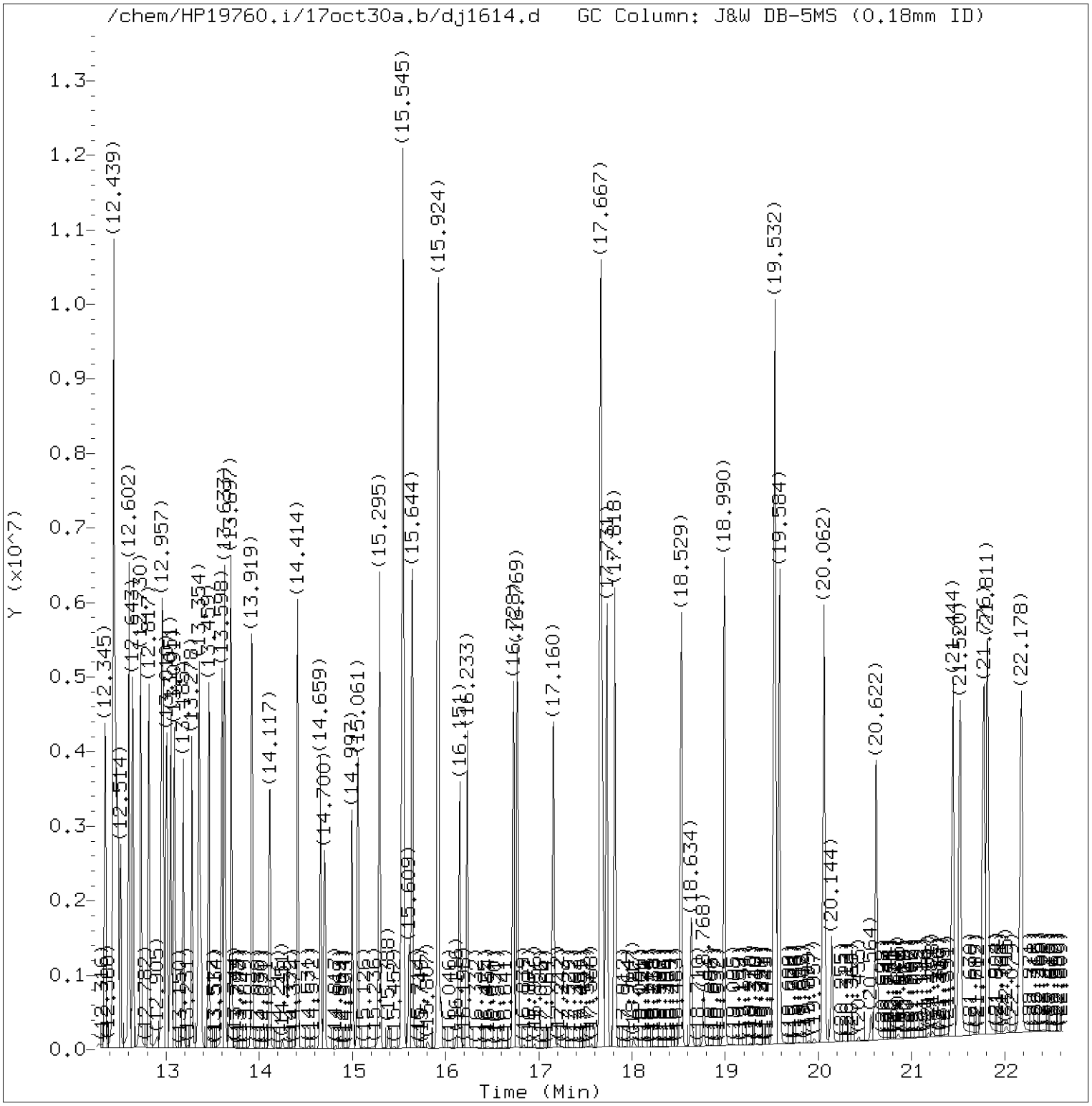
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.507	88	443138	21.604
4) N-Nitrosodimethylamine	(1)	3.084	74	575613	22.996
5) Pyridine	(1)	3.113	79	1141999	21.026
7) 2-Picoline	(1)	4.267	93	1252188	21.165
8) N-Nitrosomethylethylamine	(1)	4.459	88	527568	20.651
9) Methyl methanesulfonate	(1)	4.914	80	541466	20.854
11)$2-Fluorophenol	(1)	5.100	112	2078044	41.722
13) N-Nitrosodiethylamine	(1)	5.462	102	509689	21.313
42) Total Cresols	(1)			2023421	40.985
15) Ethyl methanesulfonate	(1)	5.916	109	531790	21.863
16) Benzaldehyde	(1)	6.365	77	835535	18.821
17)$Phenol-d6	(1)	6.464	99	2719465	41.461
18) Phenol	(1)	6.482	94	1409362	20.390
19) Aniline	(1)	6.522	93	1746541	20.634
20) a-methylstyrene	(1)	6.581	118	1063418	19.467
22) bis(2-Chloroethyl)ether	(1)	6.633	93	1125691	20.399
23) 2-Chlorophenol	(1)	6.674	128	1046507	20.385
24) 1,3-Dichlorobenzene	(1)	6.901	146	1112511	19.935
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	169791	5.000
26) 1,4-Dichlorobenzene	(1)	7.018	146	1132190	19.988
27) Benzyl alcohol	(1)	7.216	108	671490	19.808
28) 1,2-Dichlorobenzene	(1)	7.234	146	1067967	19.988
30) Indene	(1)	7.368	115	1854000	19.289
31) 2-Methylphenol	(1)	7.373	108	994025	20.550
97) Isosafrole	(3)			700216	20.622
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	1499478	19.806
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	1499478	19.806
35) N-Nitrosopyrrolidine	(1)	7.607	100	540139	22.000
36) Acetophenone	(1)	7.612	105	1538397	20.014
37) 4-Methylphenol	(1)	7.618	108	1029396	20.437
38) N-Nitroso-di-n-propylamine	(1)	7.630	70	859200	20.483
40) o-Toluidine	(1)	7.659	106	1724247	20.352
39) N-Nitrosomorpholine	(1)	7.671	56	616344	20.090
43) Hexachloroethane	(1)	7.735	117	462906	20.058
44)$Nitrobenzene-d5	(2)	7.840	82	2464464	41.302
45) Nitrobenzene	(2)	7.869	77	1242611	20.480
120) 2,4_2,6-Dinitrotoluenes	(3)			1030588	42.790
48) N-Nitrosopiperidine	(2)	8.108	114	512790	21.051
50) Isophorone	(2)	8.242	82	2126385	20.989
51) 2-Nitrophenol	(2)	8.347	139	519743	22.136

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.428	107	1088566	20.898
57) O,O,O-Triethylphosphorothioate	(2)	8.551	198	482701	20.357
55) bis(2-Chloroethoxy)methane	(2)	8.597	93	1343582	20.816
56) Benzoic acid	(2)	8.603	105	911338M	24.622
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	1504634	19.532
60) 2,4-Dichlorophenol	(2)	8.714	162	839138	21.270
146) Diallate trans/cis	(4)			945163	20.416
62) 1,2,4-Trichlorobenzene	(2)	8.848	180	924313	20.312
65)*Naphthalene-d8	(2)	8.930	136	637948	5.000
66) Naphthalene	(2)	8.965	128	2906373	20.065
68) 2,6-Dichlorophenol	(2)	9.070	162	803055	20.841
67) 4-Chloroaniline	(2)	9.075	127	1221179	20.803
69) Hexachloropropene	(2)	9.099	213	496235	20.656
71) Hexachlorobutadiene	(2)	9.163	225	514047	20.117
75) Quinoline	(2)	9.507	129	1788802	20.691
77) N-Nitrosodi-n-butylamine	(2)	9.629	84	832564	18.855
76) Caprolactam	(2)	9.658	113	251348A	21.301
80) 4-Chloro-3-methylphenol	(2)	9.856	107	921378	21.208
82) Safrole	(2)	9.956	162	747311	20.883
83) 2-Methylnaphthalene	(2)	10.066	142	1937690	20.604
84) 1-Methylnaphthalene	(2)	10.224	142	1754066	20.571
85) Hexachlorocyclopentadiene	(3)	10.311	237	471638	20.691
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.329	216	923316	20.015
88) cis-Isosafrole	(3)	10.422	162	129728	3.511
90) 2,4,6-Trichlorophenol	(3)	10.527	196	599287	21.788
92) 2,4,5-Trichlorophenol	(3)	10.573	196	606583	20.853
93)$2-Fluorobiphenyl	(3)	10.678	172	4114311	40.419
94) trans-Isosafrole	(3)	10.783	162	570488	17.110
95) 1,1'-Biphenyl	(3)	10.830	154	2215131	19.886
96) 2-Chloronaphthalene	(3)	10.847	162	1956322	21.070
98) 1-Chloronaphthalene	(3)	10.876	162	1521219	18.895
99) Diphenyl ether	(3)	11.005	170	1221714	20.401
100) 2-Nitroaniline	(3)	11.034	138	569396	21.833
104) 1,4-Naphthoquinone	(3)	11.150	158	706489	20.950
105) 1,4-Dinitrobenzene	(3)	11.284	168	288971	21.424
106) Dimethylphthalate	(3)	11.360	163	1879764	19.885
107) 1,3-Dinitrobenzene	(3)	11.395	168	308915	20.749
108) 2,6-Dinitrotoluene	(3)	11.442	165	437182	21.308
109) Acenaphthylene	(3)	11.500	152	2471537	20.813
112) 3-Nitroaniline	(3)	11.687	138	499630	22.274

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.710	164	336852	5.000
114) Acenaphthene	(3)	11.757	153	1857265	20.195
115) 2,4-Dinitrophenol	(3)	11.832	184	298816	23.528
117) Pentachlorobenzene	(3)	11.931	250	741777	20.171
116) 4-Nitrophenol	(3)	11.931	109	361401	20.801
119) Dibenzofuran	(3)	12.001	168	2390626	20.086
118) 2,4-Dinitrotoluene	(3)	12.013	165	593406	20.852
121) 1-Naphthylamine	(3)	12.118	143	1863823	20.551
122) 2,3,4,6-Tetrachlorophenol	(3)	12.165	232	481616	21.799
123) 2-Naphthylamine	(3)	12.223	143	1808069	20.615
124) Diethylphthalate	(3)	12.345	149	1871269	20.315
126) Fluorene	(3)	12.439	166	1913426	20.137
125) Thionazin	(3)	12.444	107	326670	20.074
127) 4-Chlorophenyl-phenylether	(3)	12.456	204	904119	20.288
128) 5-Nitro-o-toluidine	(3)	12.473	152	553950	21.465
129) 4-Nitroaniline	(3)	12.491	138	486761	21.565
130) 4,6-Dinitro-2-methylphenol	(4)	12.514	198	374985	21.288
131) N-Nitrosodiphenylamine	(4)	12.602	169	1641848	20.879
132) NDPA as diphenylamine	(4)	12.602	169	1641848	20.879
134) 1,2-Diphenylhydrazine	(4)	12.643	77	2205089	20.132
135)$2,4,6-Tribromophenol	(3)	12.730	330	574733	45.197
137) Tetraethyldithiopyrophosphate	(4)	12.817	97	361954	19.827
139) 1,3,5-Trinitrobenzene	(4)	12.951	213	224184	21.124
140) Diallate (peak 1)	(4)	12.957	86	807689	16.899
141) Phorate	(4)	12.969	75	1473730	19.761
142) Phenacetin	(4)	13.010	108	1104205	21.388
143) 4-Bromophenyl-phenylether	(4)	13.051	248	552895	20.488
144) Diallate (peak 2)	(4)	13.062	86	137474	3.528
145) Hexachlorobenzene	(4)	13.091	284	578301	20.135
147) Dimethoate	(4)	13.185	87	904487	20.802
148) Atrazine	(4)	13.278	200	497344	19.536
149) Pentachlorophenol	(4)	13.354	266	394236	21.480
151) Pentachloronitrobenzene	(4)	13.359	237	249888	20.681
150) 4-Aminobiphenyl	(4)	13.377	169	452086	20.621
152) Pronamide	(4)	13.459	173	923341	21.344
153)*Phenanthrene-d10	(4)	13.598	188	628663	5.000
154) Dinoseb	(4)	13.598	211	576360	22.837
155) Phenanthrene	(4)	13.633	178	2973319	20.476
157) Anthracene	(4)	13.697	178	2942602	20.758
163) Carbazole	(4)	13.919	167	2706907	20.633

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Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
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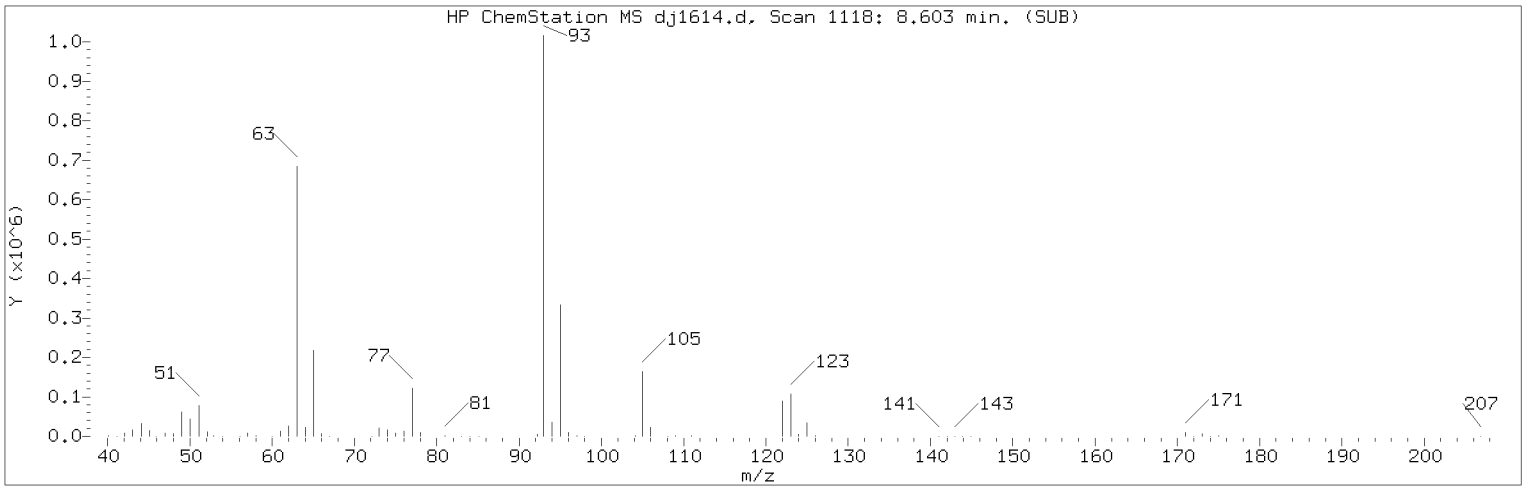
Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.111	109	723739	21.452
165) Di-n-butylphthalate	(4)	14.414	149	3248911	20.631
167) Parathion	(4)	14.659	109	467342	21.880
168) 4-Nitroquinoline-1-oxide	(4)	14.706	190	352655	22.935
169) Octachlorostyrene	(4)	14.997	308	213978	19.775
222) Total PAHs	(6)			52501810	365.684
171) Isodrin	(4)	15.061	193	337303	19.499
173) Fluoranthene	(4)	15.295	202	3306993	20.816
174) Benzidine	(5)	15.545	184	6617880	60.027
175)*Pyrene-d10	(5)	15.609	212	746017	5.000
177) Pyrene	(5)	15.644	202	3417595	19.801
179)$Terphenyl-d14	(5)	15.924	244	4455715	40.538
182) p-Dimethylaminoazobenzene	(5)	16.151	225	504767	23.355
185) Chlorobenzilate	(5)	16.233	139	1036579	20.672
187) 3,3'-Dimethylbenzidine	(5)	16.728	212	2163502	21.390
188) Butylbenzylphthalate	(5)	16.769	149	1527819	20.807
191) 2-Acetylaminofluorene	(5)	17.160	181	1498674	22.844
193) 3,3'-Dichlorobenzidine	(5)	17.661	252	1298228	21.430
195) Benzo(a)anthracene	(5)	17.667	228	3405382	21.751
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.684	231	631174	20.786
196) Chrysene	(5)	17.731	228	3130239	21.020
199) bis(2-Ethylhexyl)phthalate	(5)	17.818	149	2289501	21.503
203) 6-Methylchrysene	(5)	18.529	242	2330711	21.242
205) Di-n-octylphthalate	(6)	18.990	149	4183919	21.827
206) Benzo(b)fluoranthene	(6)	19.532	252	3678128	21.576
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.532	256	1541468	22.682
208) Benzo(k)fluoranthene	(6)	19.584	252	3503168	20.919
211) Benzo(a)pyrene	(6)	20.062	252	3463005	21.710
213)*Perylene-d12	(6)	20.144	264	676269	5.000
215) 3-Methylcholanthrene	(6)	20.622	268	1255106	21.806
217) Dibenz(a,h)acridine	(6)	21.444	279	2840733	21.211
218) Dibenz(a,j)acridine	(6)	21.520	279	2931467	20.996
219) Indeno(1,2,3-cd)pyrene	(6)	21.776	276	3198265M	21.361
220) Dibenz(a,h)anthracene	(6)	21.817	278	3368929	21.654
221) Benzo(g,h,i)perylene	(6)	22.178	276	3273828	20.960

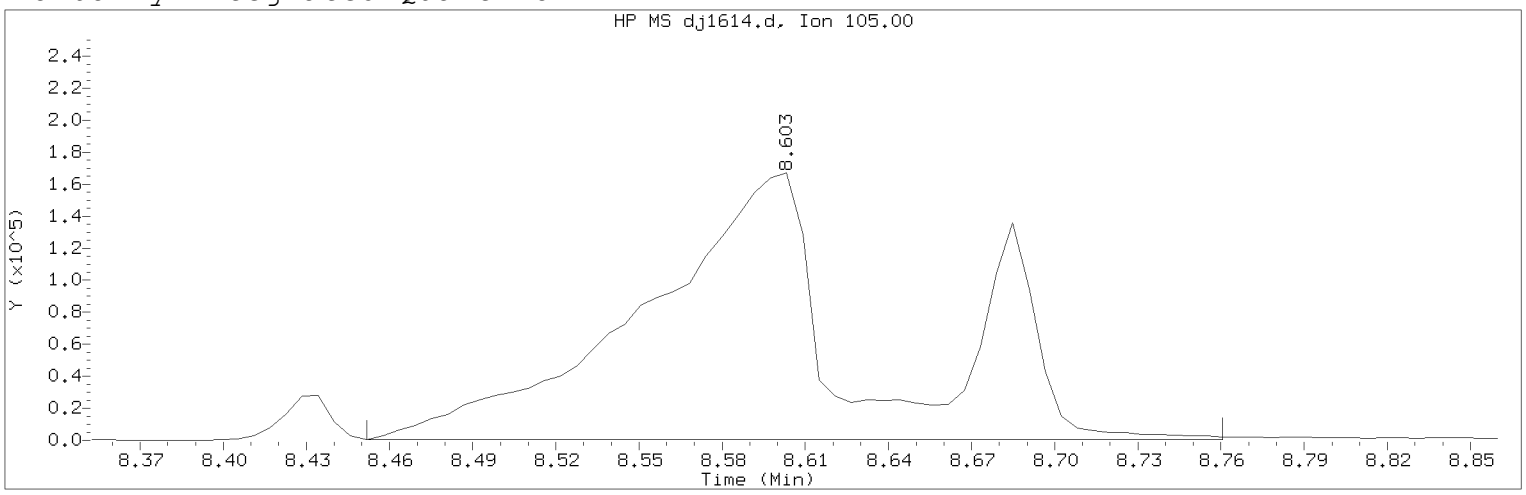
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

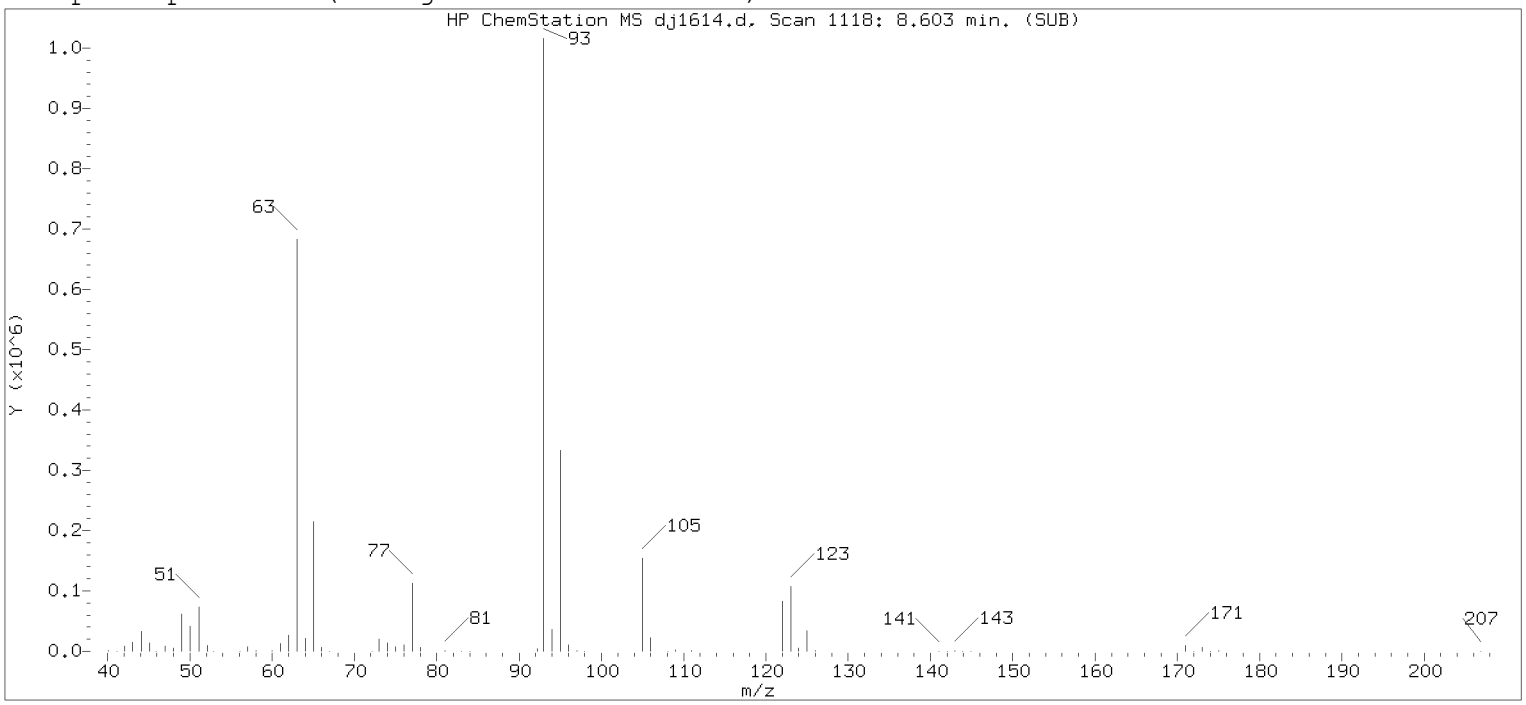
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1118
Retention Time (minutes) : 8.603
Quant Ion : 105.00
Area (flag) : 911338M
On-Column Amount (ng/ul) : 24.6222
Integration start scan : 1091 Integration stop scan: 1144
Y at integration start : 359 Y at integration end: 359

Reason for manual integration: improper integration

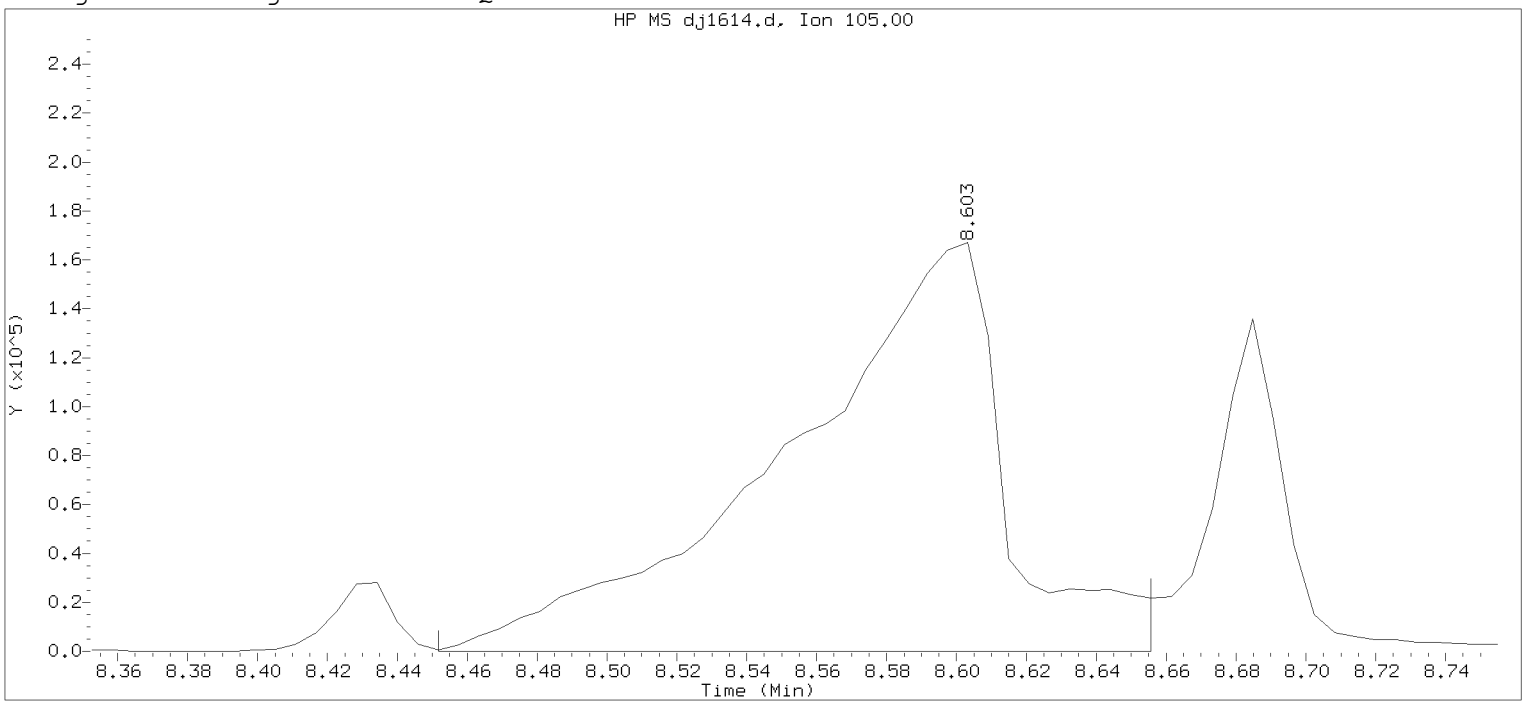
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

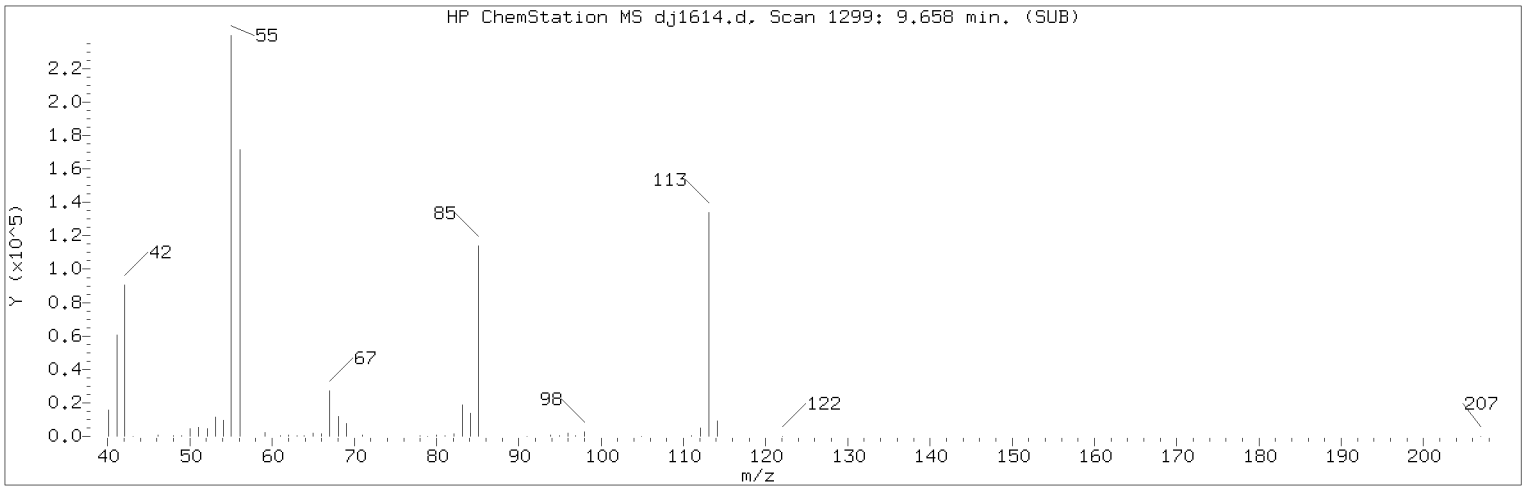
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:56
Date, time and analyst ID of latest file update: 30-Oct-2017 22:56 Automation

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

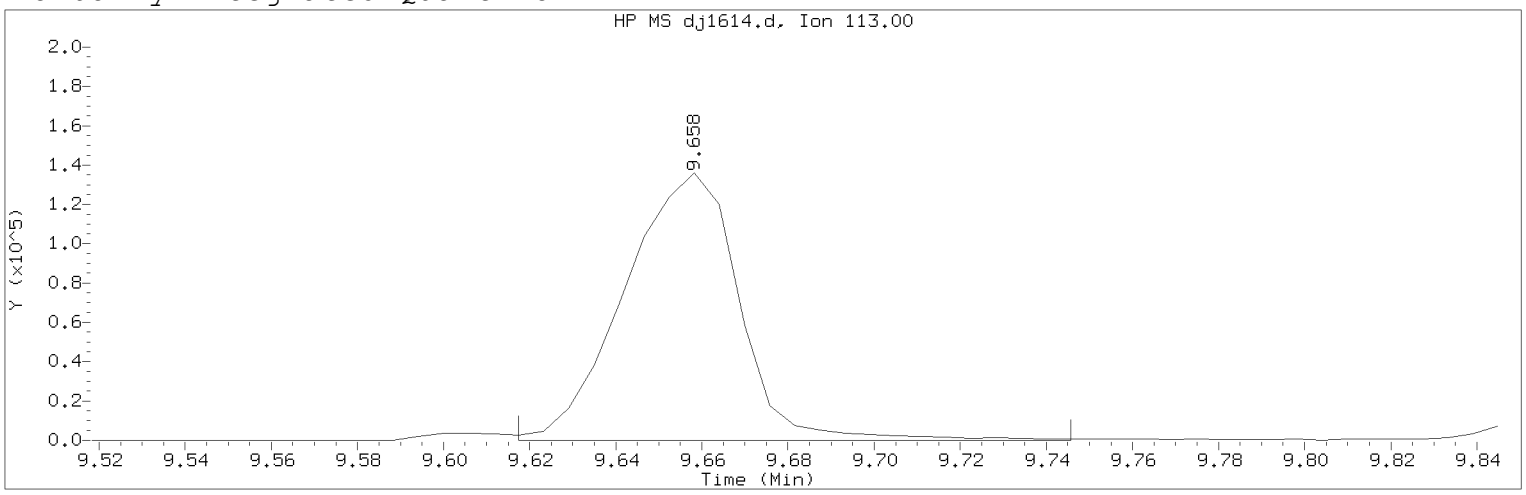
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1118		
Retention Time (minutes)	: 8.603		
Quant Ion	: 105.00		
Area	: 722882		
On-column Amount (ng/ul)	: 19.8375		
Integration start scan	: 1091	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used to create PDF.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

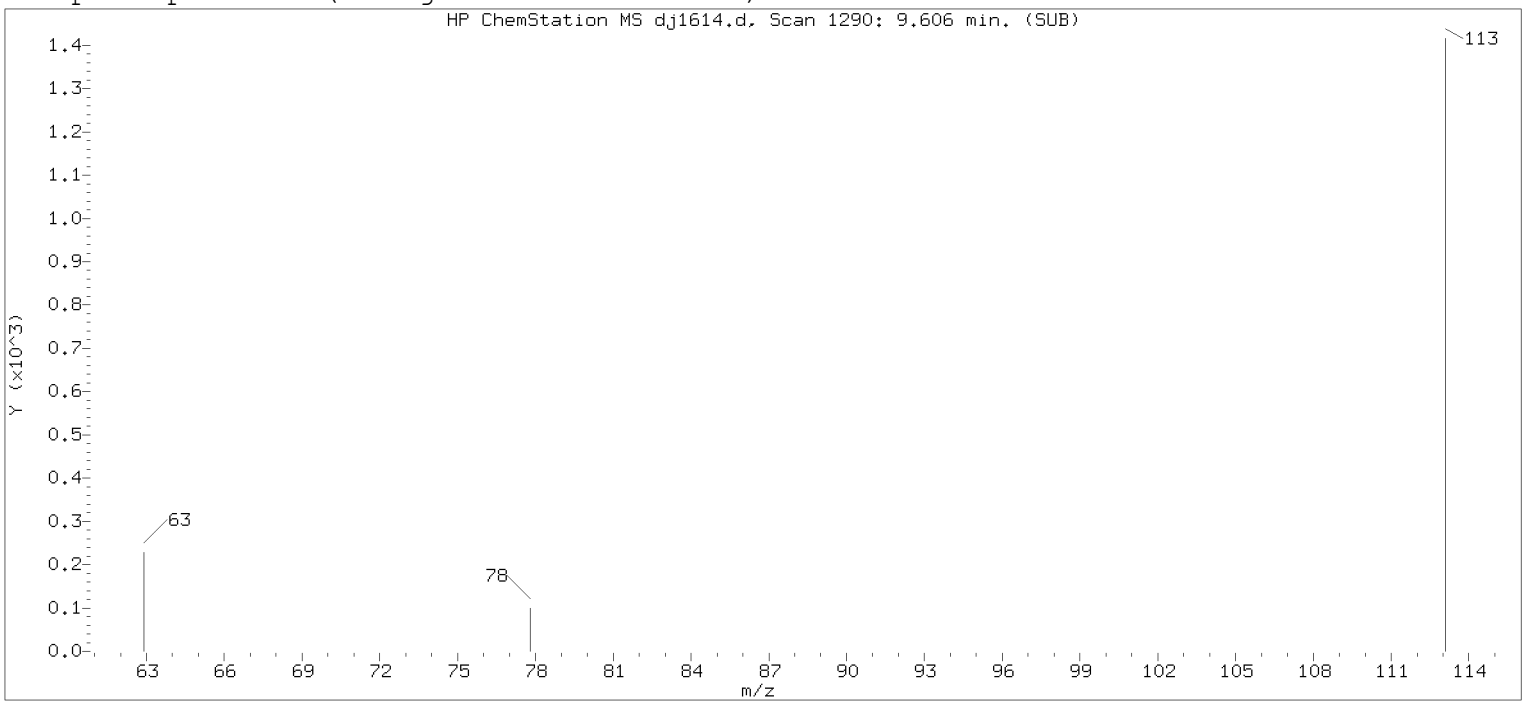
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1299
Retention Time (minutes) : 9.658
Quant Ion : 113.00
Area (flag) : 251348A
On-Column Amount (ng/ul) : 21.3005
Integration start scan : 1291 Integration stop scan: 1313
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

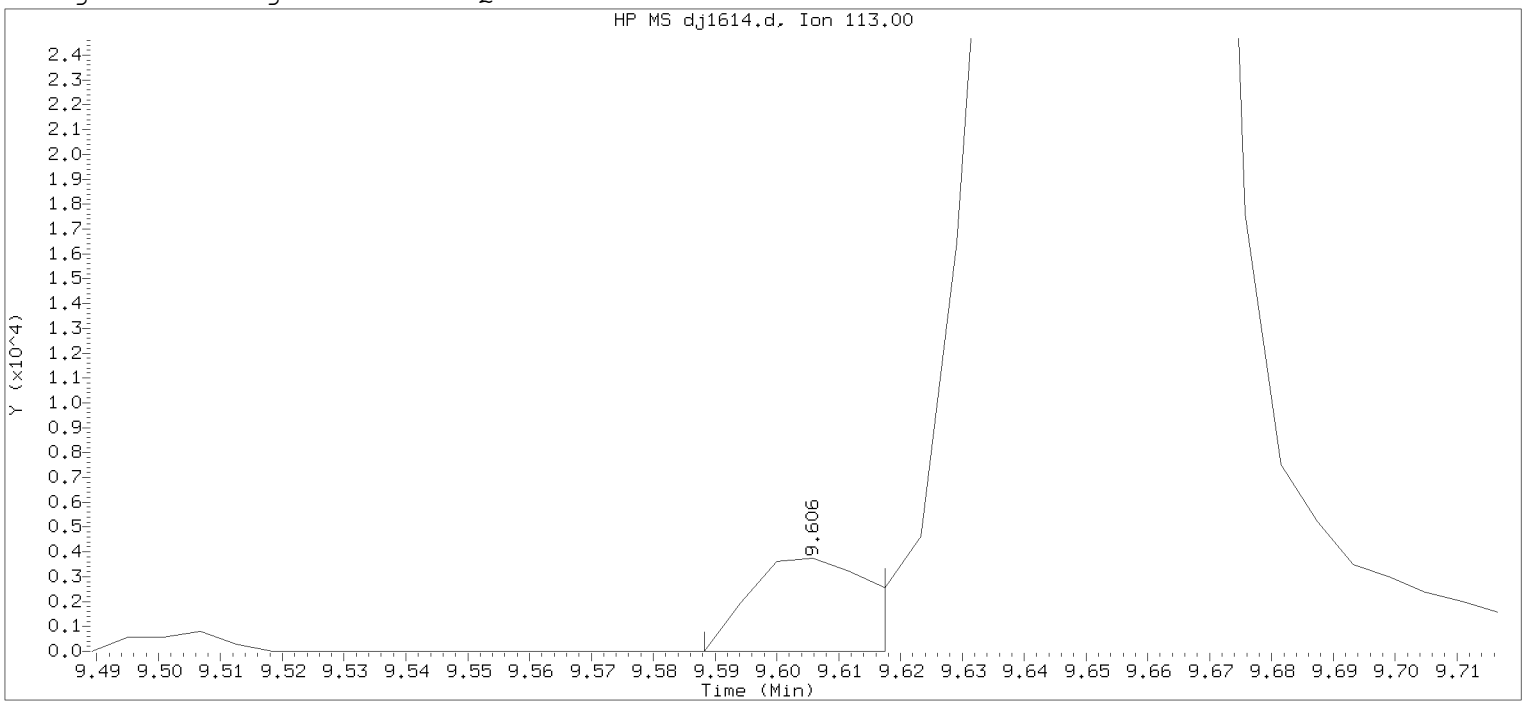
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

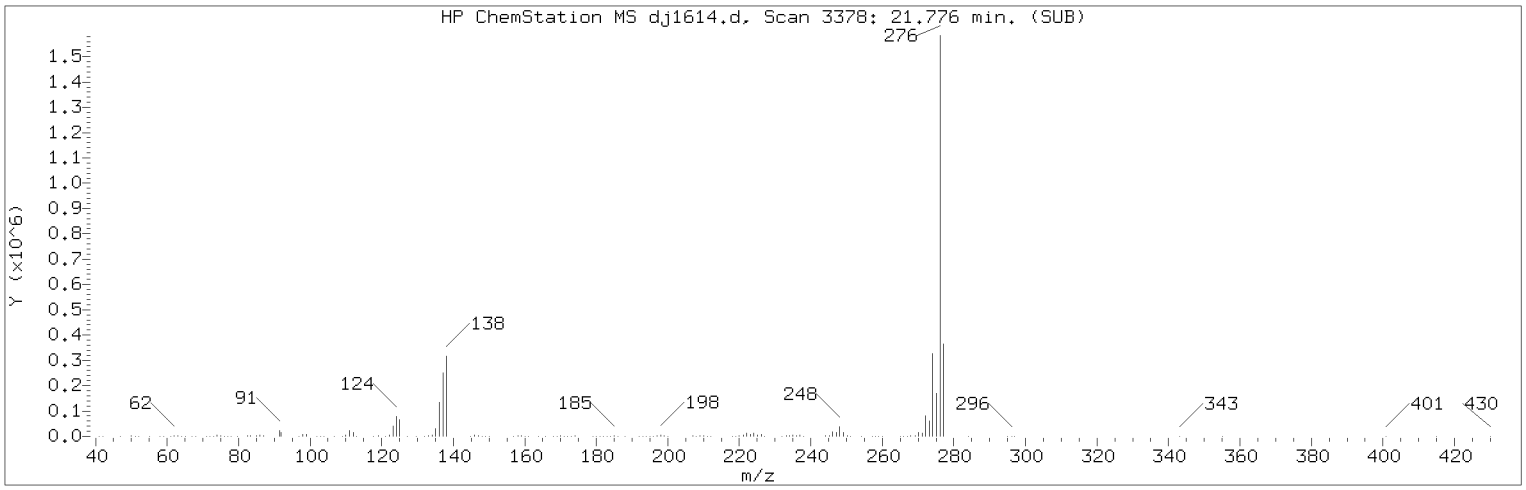
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:56
Date, time and analyst ID of latest file update: 30-Oct-2017 22:56 Automation

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

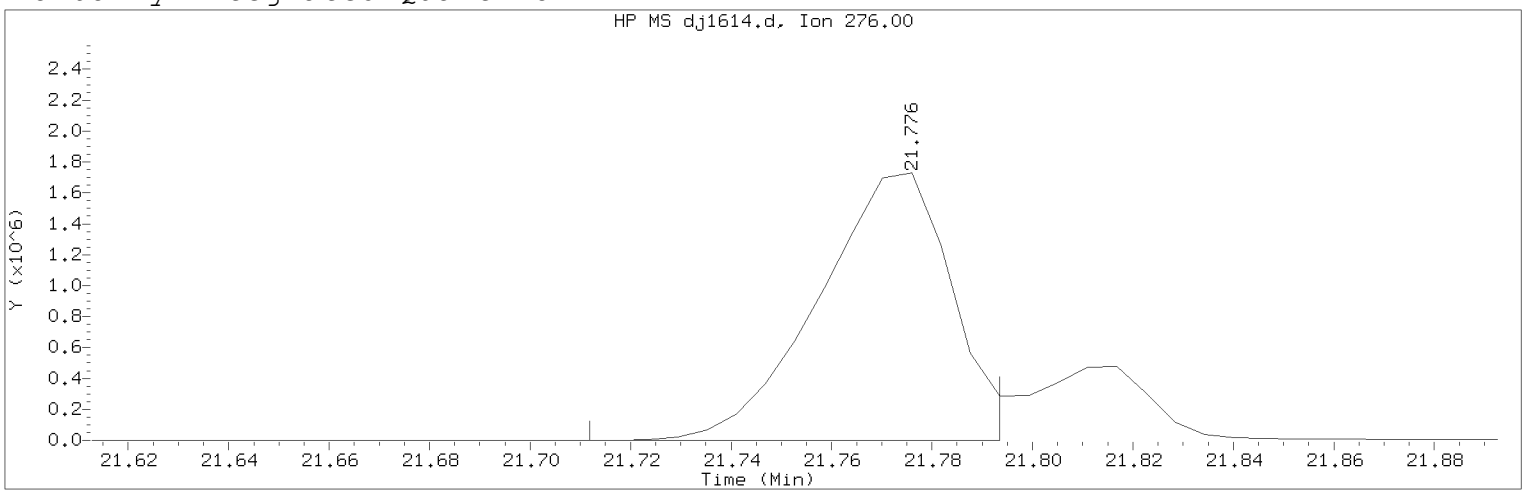
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1290
Retention Time (minutes) : 9.606
Quant Ion : 113.00
Area : 4835
On-column Amount (ng/ul) : 0.5636
Integration start scan : 1286 Integration stop scan: 1291
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

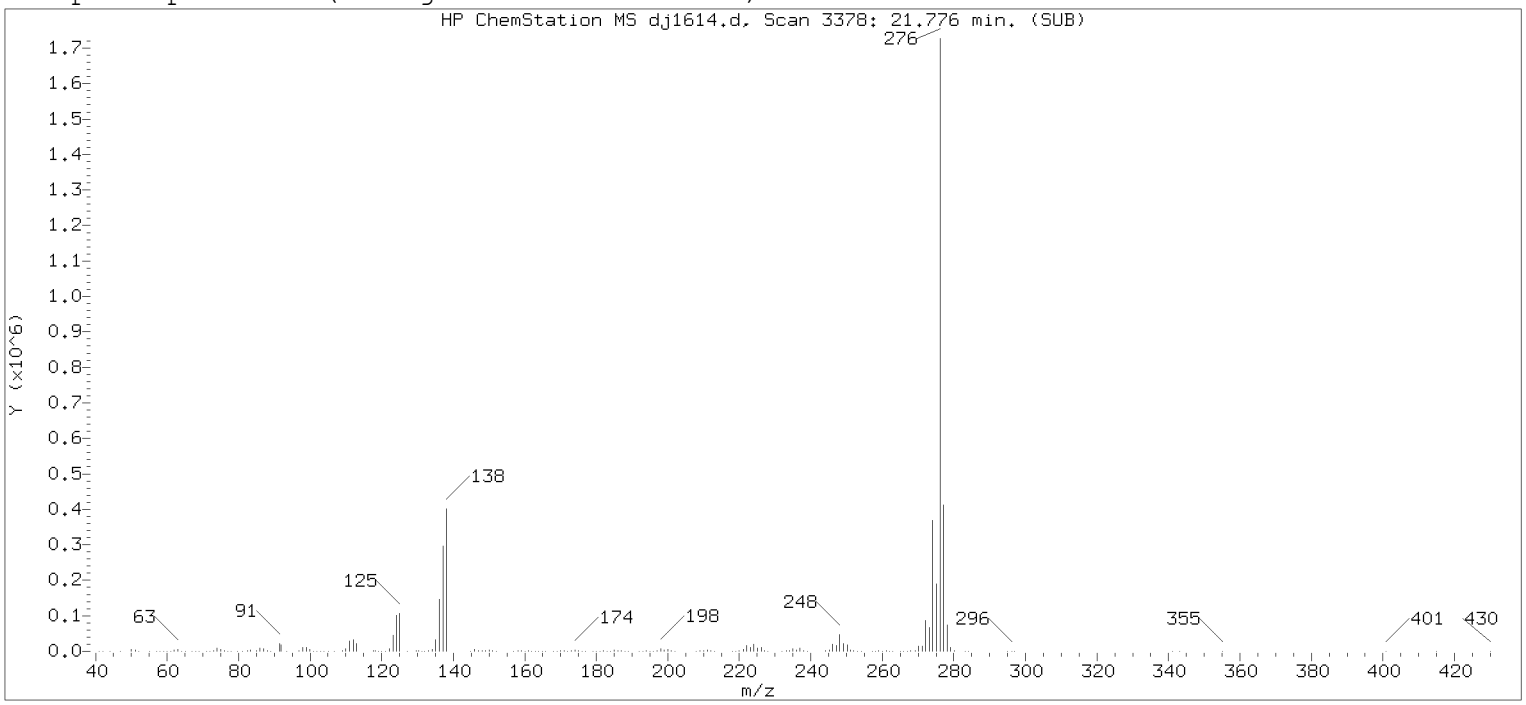
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3378
Retention Time (minutes) : 21.776
Quant Ion : 276.00
Area (flag) : 3198265M
On-Column Amount (ng/ul) : 21.3610
Integration start scan : 3366 Integration stop scan: 3380
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

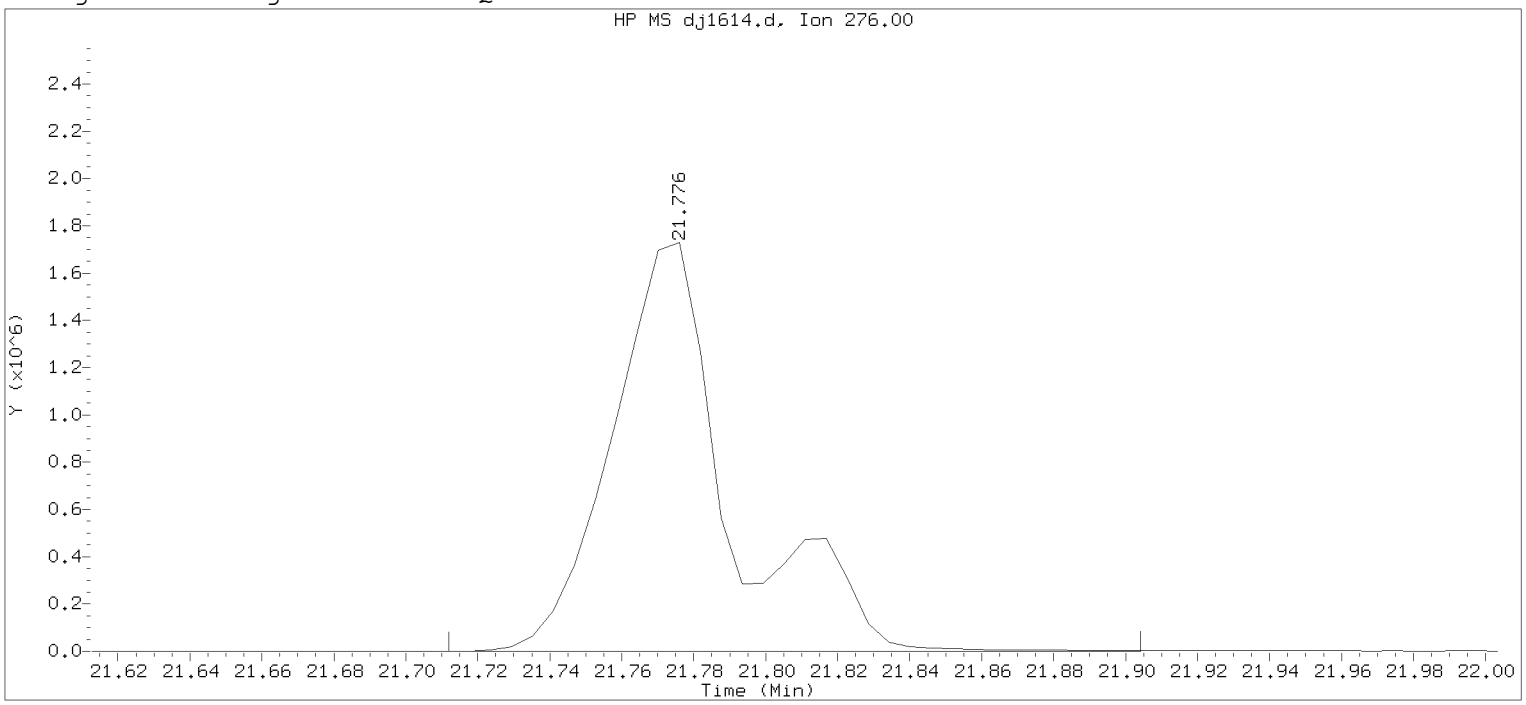
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



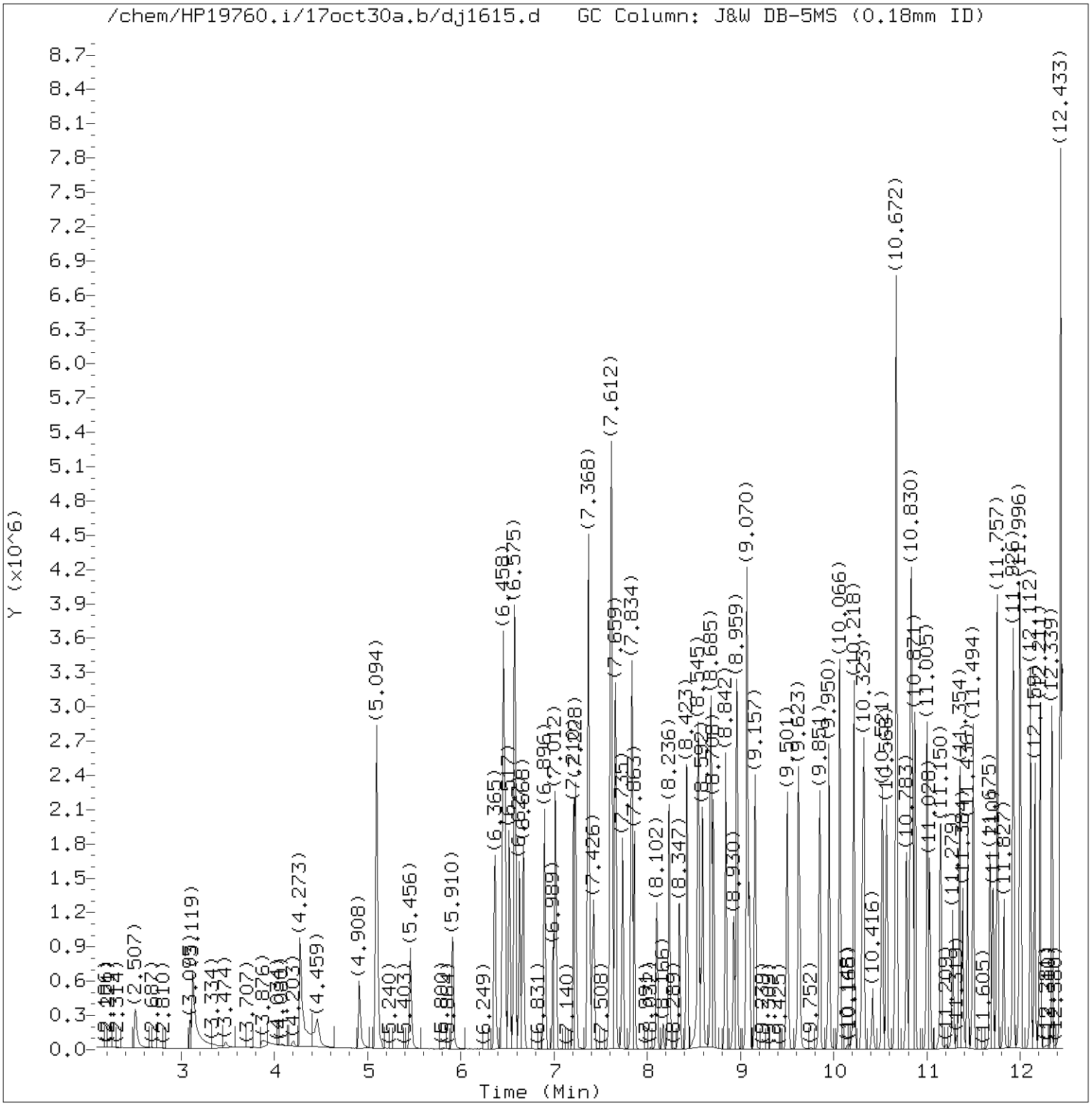
Data File: /chem/HP19760.i/17oct30a.b/dj1614.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:30 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 22:56
Date, time and analyst ID of latest file update: 30-Oct-2017 22:56 Automation

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3378		
Retention Time (minutes)	: 21.776		
Quant Ion	: 276.00		
Area	: 3953740		
On-column Amount (ng/ul)	: 22.0266		
Integration start scan	: 3366	Integration stop scan:	3399
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used to create PDF.



Total Ion Chromatogram (TIC)

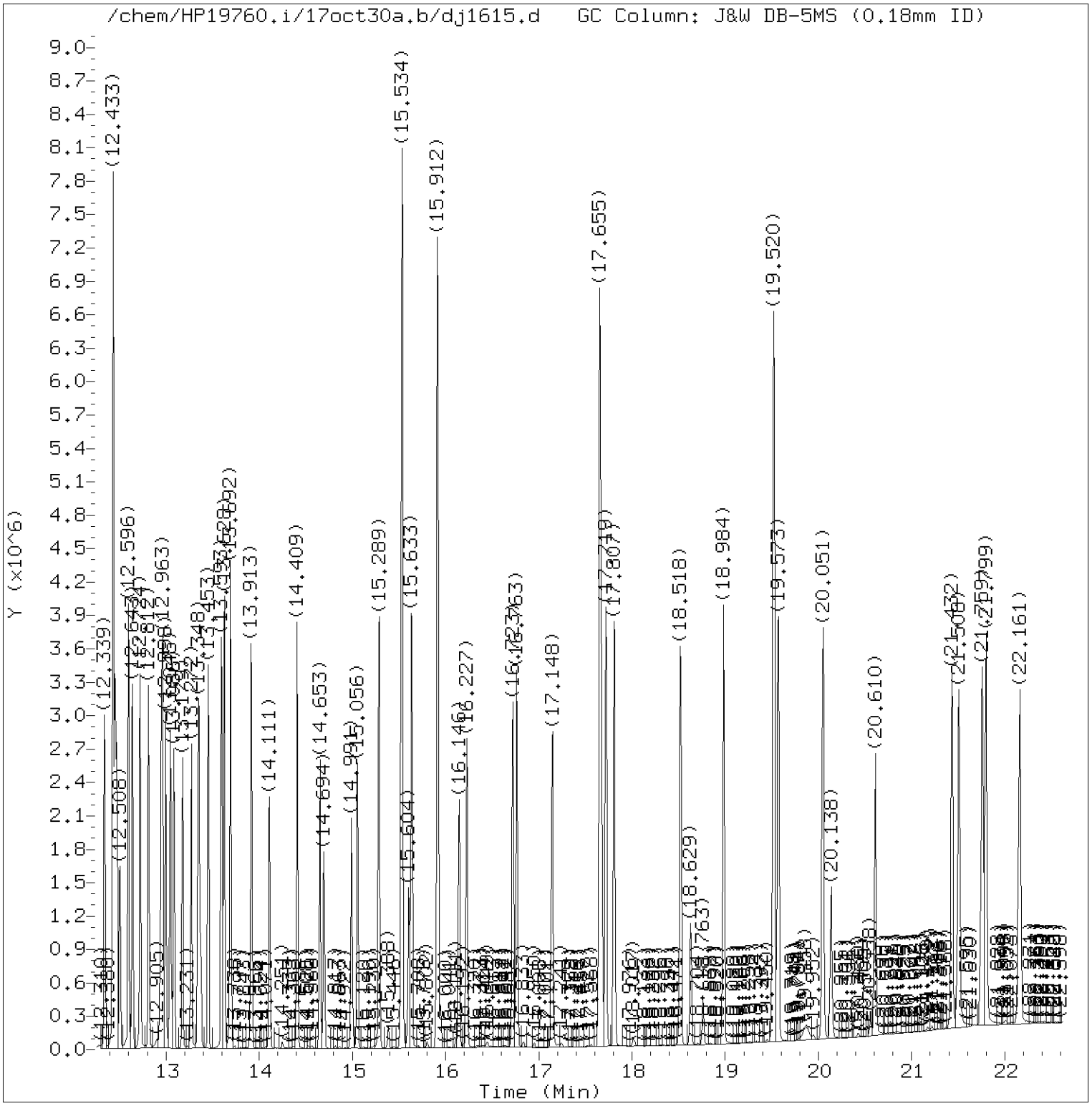
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.507	88	281926	13.496
4) N-Nitrosodimethylamine	(1)	3.095	74	328056	12.869
5) Pyridine	(1)	3.119	79	665871	12.038
7) 2-Picoline	(1)	4.273	93	777371	12.902
8) N-Nitrosomethylethylamine	(1)	4.459	88	328023	12.608
9) Methyl methanesulfonate	(1)	4.908	80	334121	12.636
11)$2-Fluorophenol	(1)	5.094	112	1306375	25.754
13) N-Nitrosodiethylamine	(1)	5.462	102	316556	12.997
42) Total Cresols	(1)			1292372	25.704
15) Ethyl methanesulfonate	(1)	5.910	109	326918	13.197
16) Benzaldehyde	(1)	6.365	77	550349	12.173
17)$Phenol-d6	(1)	6.458	99	1717687	25.714
18) Phenol	(1)	6.476	94	893639	12.694
19) Aniline	(1)	6.517	93	1107474	12.847
20) a-methylstyrene	(1)	6.581	118	688451	12.375
22) bis(2-Chloroethyl)ether	(1)	6.627	93	714725	12.717
23) 2-Chlorophenol	(1)	6.668	128	668321	12.783
24) 1,3-Dichlorobenzene	(1)	6.896	146	704190	12.390
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	172921	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	717568	12.439
27) Benzyl alcohol	(1)	7.210	108	430312	12.464
28) 1,2-Dichlorobenzene	(1)	7.234	146	682092	12.535
30) Indene	(1)	7.368	115	1206521	12.325
31) 2-Methylphenol	(1)	7.373	108	633352	12.857
97) Isosafrole	(3)			435666	12.475
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	950852	12.332
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	950852	12.332
35) N-Nitrosopyrrolidine	(1)	7.595	100	339456	13.576
36) Acetophenone	(1)	7.607	105	944538	12.066
37) 4-Methylphenol	(1)	7.612	108	659020	12.847
38) N-Nitroso-di-n-propylamine	(1)	7.624	70	541107	12.666
39) N-Nitrosomorpholine	(1)	7.659	56	398442	12.752
40) o-Toluidine	(1)	7.659	106	1092065	12.657
43) Hexachloroethane	(1)	7.735	117	294839	12.544
44)$Nitrobenzene-d5	(2)	7.834	82	1555105	25.627
45) Nitrobenzene	(2)	7.863	77	791683	12.830
120) 2,4_2,6-Dinitrotoluenes	(3)			658286	26.575
48) N-Nitrosopiperidine	(2)	8.102	114	321097	12.961
50) Isophorone	(2)	8.236	82	1340297	13.009
51) 2-Nitrophenol	(2)	8.347	139	323409	13.544

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.428	107	689141	13.009
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	311094	12.901
56) Benzoic acid	(2)	8.574	105	560854M	14.350
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	847063	12.905
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	968134	12.358
60) 2,4-Dichlorophenol	(2)	8.708	162	529195	13.190
146) Diallate trans/cis	(4)			593096	12.553
62) 1,2,4-Trichlorobenzene	(2)	8.842	180	587871	12.703
65)*Naphthalene-d8	(2)	8.930	136	648784	5.000
66) Naphthalene	(2)	8.959	128	1858293	12.615
68) 2,6-Dichlorophenol	(2)	9.070	162	515704	13.160
67) 4-Chloroaniline	(2)	9.070	127	772130	12.934
69) Hexachloropropene	(2)	9.093	213	313445	12.829
71) Hexachlorobutadiene	(2)	9.157	225	328966	12.659
75) Quinoline	(2)	9.501	129	1123776	12.782
77) N-Nitrosodi-n-butylamine	(2)	9.623	84	609873	13.581
76) Caprolactam	(2)	9.641	113	151087	12.590
80) 4-Chloro-3-methylphenol	(2)	9.851	107	581910	13.171
82) Safrole	(2)	9.950	162	468534	12.874
83) 2-Methylnaphthalene	(2)	10.066	142	1233675	12.899
84) 1-Methylnaphthalene	(2)	10.218	142	1100123	12.687
85) Hexachlorocyclopentadiene	(3)	10.305	237	298659	12.739
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	586321	12.357
88) cis-Isosafrole	(3)	10.416	162	80096	2.108
90) 2,4,6-Trichlorophenol	(3)	10.521	196	377321	13.338
92) 2,4,5-Trichlorophenol	(3)	10.568	196	390023	13.037
93)$2-Fluorobiphenyl	(3)	10.672	172	2613587	24.964
94) trans-Isosafrole	(3)	10.783	162	355570	10.369
95) 1,1'-Biphenyl	(3)	10.824	154	1379887	12.044
96) 2-Chloronaphthalene	(3)	10.841	162	1212191	12.694
98) 1-Chloronaphthalene	(3)	10.871	162	1020055	12.319
99) Diphenyl ether	(3)	11.005	170	773103	12.552
100) 2-Nitroaniline	(3)	11.028	138	361169	13.465
104) 1,4-Naphthoquinone	(3)	11.150	158	453059	13.063
105) 1,4-Dinitrobenzene	(3)	11.279	168	181211	13.062
106) Dimethylphthalate	(3)	11.354	163	1198443	12.326
107) 1,3-Dinitrobenzene	(3)	11.384	168	201243	13.142
108) 2,6-Dinitrotoluene	(3)	11.436	165	273392	12.955
109) Acenaphthylene	(3)	11.500	152	1572463	12.875
112) 3-Nitroaniline	(3)	11.675	138	308212	13.359

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.710	164	346455	5.000
114) Acenaphthene	(3)	11.757	153	1183598	12.513
115) 2,4-Dinitrophenol	(3)	11.827	184	177701	13.604
116) 4-Nitrophenol	(3)	11.920	109	222890	12.473
117) Pentachlorobenzene	(3)	11.931	250	475530	12.572
119) Dibenzofuran	(3)	11.996	168	1529967	12.499
118) 2,4-Dinitrotoluene	(3)	12.007	165	384894	13.150
121) 1-Naphthylamine	(3)	12.112	143	1165655	12.497
122) 2,3,4,6-Tetrachlorophenol	(3)	12.159	232	302802	13.325
123) 2-Naphthylamine	(3)	12.217	143	1141889	12.659
124) Diethylphthalate	(3)	12.339	149	1193417	12.597
125) Thionazin	(3)	12.433	107	207537	12.400
126) Fluorene	(3)	12.433	166	1227331	12.559
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	569524	12.425
128) 5-Nitro-o-toluidine	(3)	12.468	152	341963	12.884
129) 4-Nitroaniline	(3)	12.479	138	306099	13.185
130) 4,6-Dinitro-2-methylphenol	(4)	12.508	198	229930	12.790
132) NDPA as diphenylamine	(4)	12.596	169	1016481	12.666
131) N-Nitrosodiphenylamine	(4)	12.596	169	1016481	12.666
134) 1,2-Diphenylhydrazine	(4)	12.643	77	1406860	12.586
135)$2,4,6-Tribromophenol	(3)	12.724	330	345884	26.447
137) Tetraethyldithiopyrophosphate	(4)	12.812	97	231733	12.438
139) 1,3,5-Trinitrobenzene	(4)	12.940	213	138074	12.748
140) Diallate (peak 1)	(4)	12.951	86	507283	10.400
141) Phorate	(4)	12.963	75	905070	11.891
142) Phenacetin	(4)	12.998	108	690522	13.106
143) 4-Bromophenyl-phenylether	(4)	13.045	248	347790	12.628
144) Diallate (peak 2)	(4)	13.062	86	85813	2.158
145) Hexachlorobenzene	(4)	13.086	284	359196	12.254
147) Dimethoate	(4)	13.179	87	567867	12.797
148) Atrazine	(4)	13.272	200	312237	12.018
149) Pentachlorophenol	(4)	13.348	266	245061	13.083
151) Pentachloronitrobenzene	(4)	13.354	237	157046	12.735
150) 4-Aminobiphenyl	(4)	13.371	169	293125	13.101
152) Pronamide	(4)	13.453	173	581803	13.178
153)*Phenanthrene-d10	(4)	13.593	188	641592	5.000
154) Dinoseb	(4)	13.598	211	345058	13.397
155) Phenanthrene	(4)	13.628	178	1864737	12.583
157) Anthracene	(4)	13.692	178	1851835	12.800
163) Carbazole	(4)	13.913	167	1715946	12.816

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

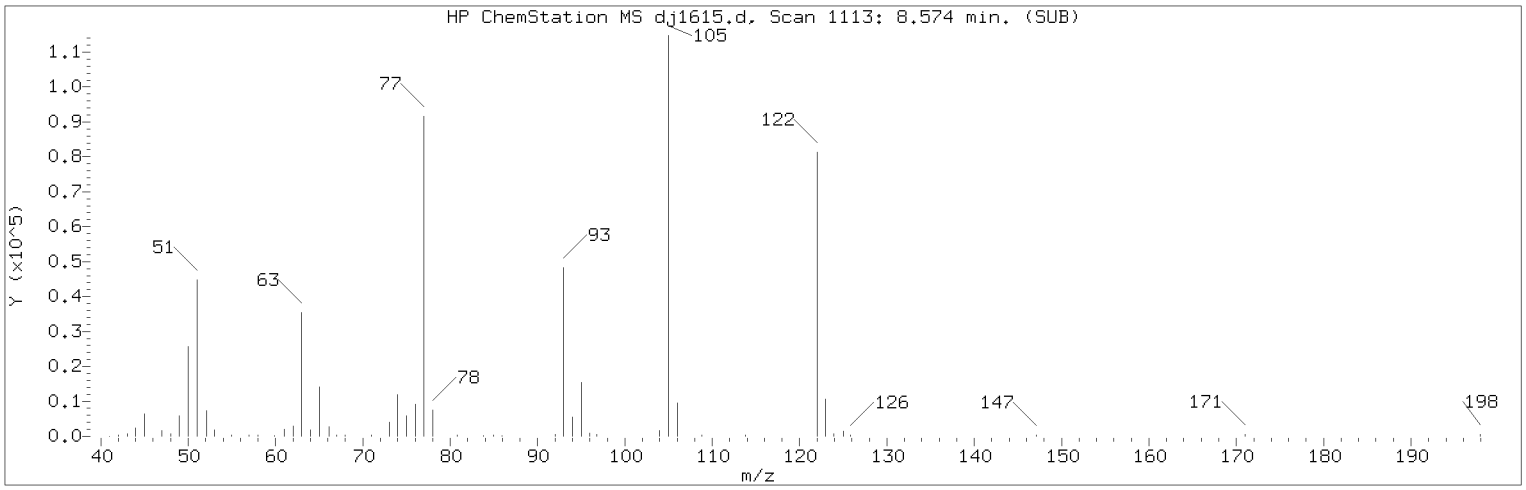
Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.111	109	447393	12.994
165) Di-n-butylphthalate	(4)	14.409	149	2040457	12.696
167) Parathion	(4)	14.653	109	289805	13.295
168) 4-Nitroquinoline-1-oxide	(4)	14.694	190	203061	12.940
169) Octachlorostyrene	(4)	14.991	308	132552	12.003
222) Total PAHs	(6)			32928619	228.157
171) Isodrin	(4)	15.056	193	212913	12.060
173) Fluoranthene	(4)	15.289	202	2060354	12.708
174) Benzidine	(5)	15.534	184	4221999	38.152
175)*Pyrene-d10	(5)	15.604	212	748819	5.000
177) Pyrene	(5)	15.638	202	2146511	12.390
179)$Terphenyl-d14	(5)	15.912	244	2823979	25.596
182) p-Dimethylaminoazobenzene	(5)	16.146	225	308941	14.241
185) Chlorobenzilate	(5)	16.227	139	647582	12.866
187) 3,3'-Dimethylbenzidine	(5)	16.723	212	1347088	13.269
188) Butylbenzylphthalate	(5)	16.763	149	964776	13.090
191) 2-Acetylaminofluorene	(5)	17.148	181	906784	13.770
193) 3,3'-Dichlorobenzidine	(5)	17.655	252	789674	12.986
195) Benzo(a)anthracene	(5)	17.655	228	2113797	13.451
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.678	231	391216	12.835
196) Chrysene	(5)	17.719	228	1972828	13.198
199) bis(2-Ethylhexyl)phthalate	(5)	17.813	149	1417453	13.263
203) 6-Methylchrysene	(5)	18.518	242	1424673	12.936
205) Di-n-octylphthalate	(6)	18.984	149	2562304	13.297
206) Benzo(b)fluoranthene	(6)	19.520	252	2238631	13.064
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.520	256	933470	13.664
208) Benzo(k)fluoranthene	(6)	19.573	252	2148469	12.763
211) Benzo(a)pyrene	(6)	20.051	252	2139069	13.340
213)*Perylene-d12	(6)	20.138	264	679817	5.000
215) 3-Methylcholanthrene	(6)	20.610	268	777662	13.440
217) Dibenz(a,h)acridine	(6)	21.432	279	1733860	12.879
218) Dibenz(a,j)acridine	(6)	21.508	279	1825575	13.007
219) Indeno(1,2,3-cd)pyrene	(6)	21.759	276	2029698M	13.485
220) Dibenz(a,h)anthracene	(6)	21.799	278	2119474	13.552
221) Benzo(g,h,i)perylene	(6)	22.161	276	2067733	13.169

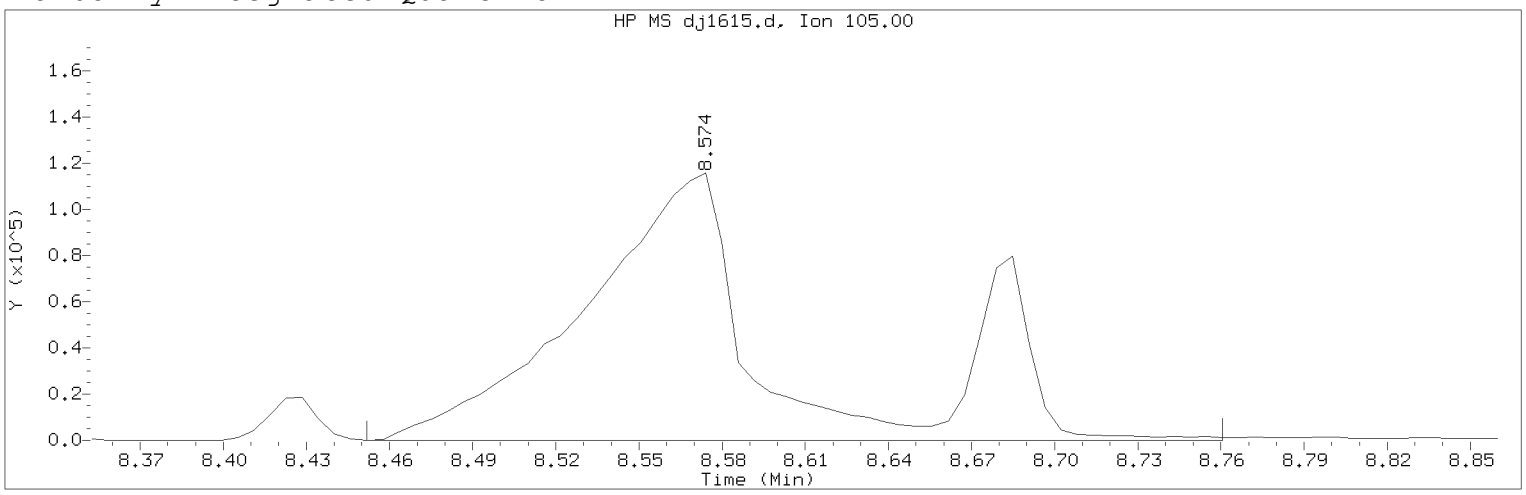
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

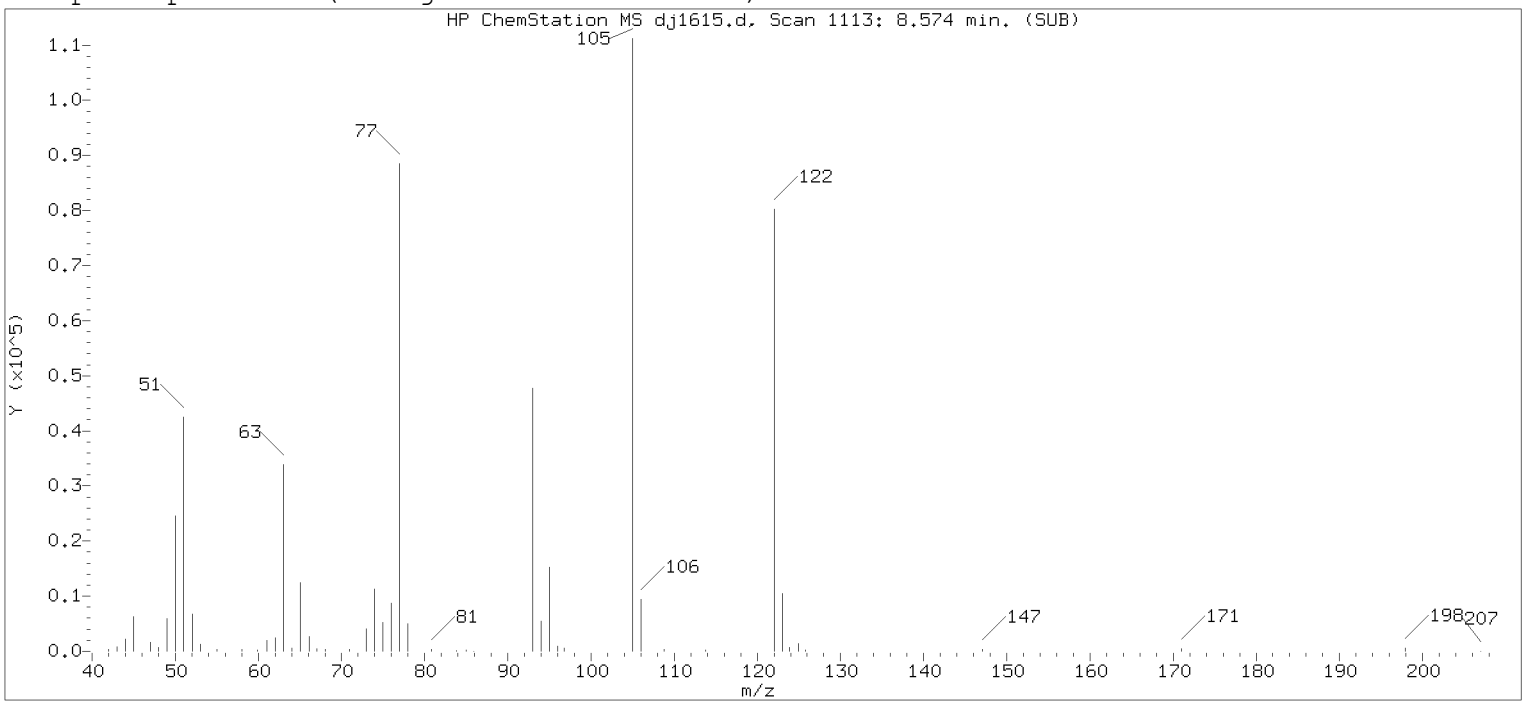
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1113
Retention Time (minutes) : 8.574
Quant Ion : 105.00
Area (flag) : 560854M
On-Column Amount (ng/ul) : 14.3500
Integration start scan : 1091 Integration stop scan: 1144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

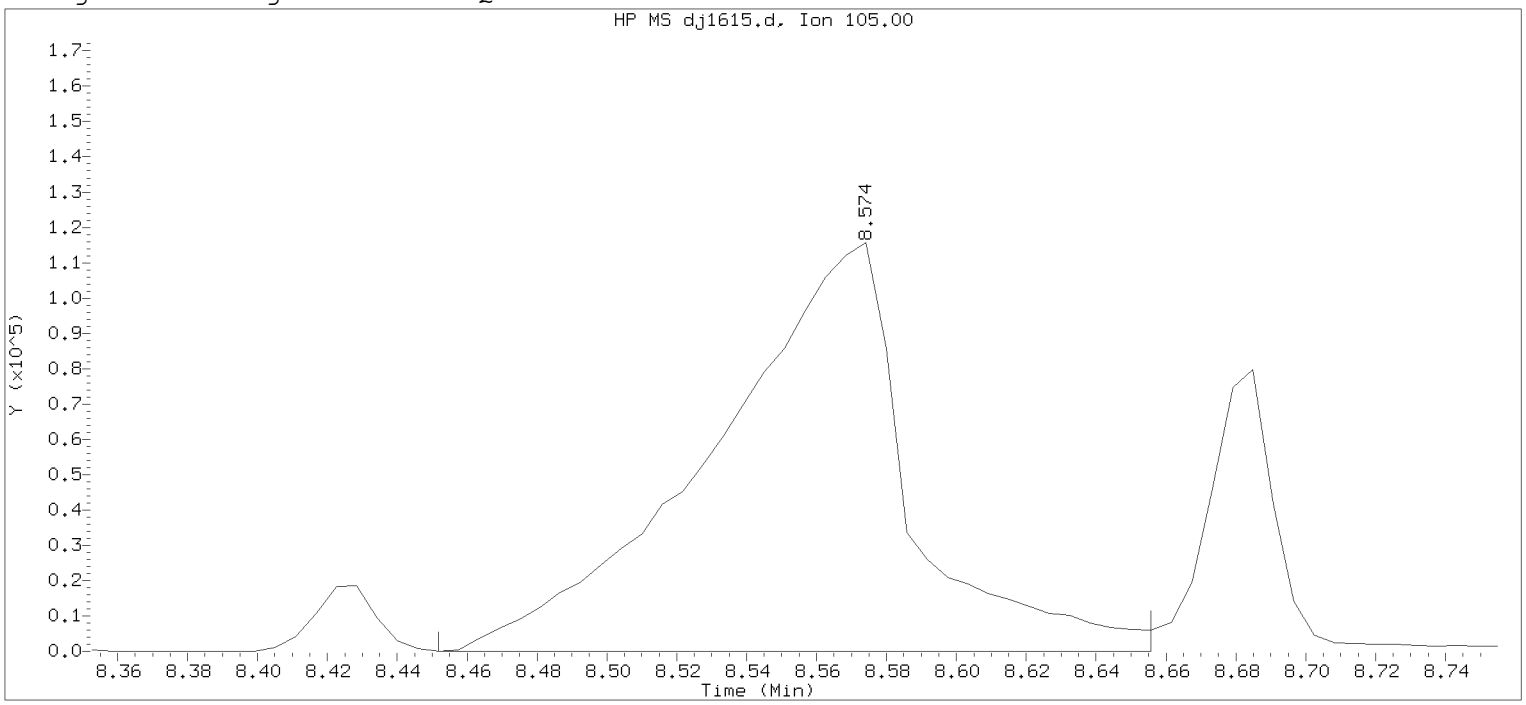
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

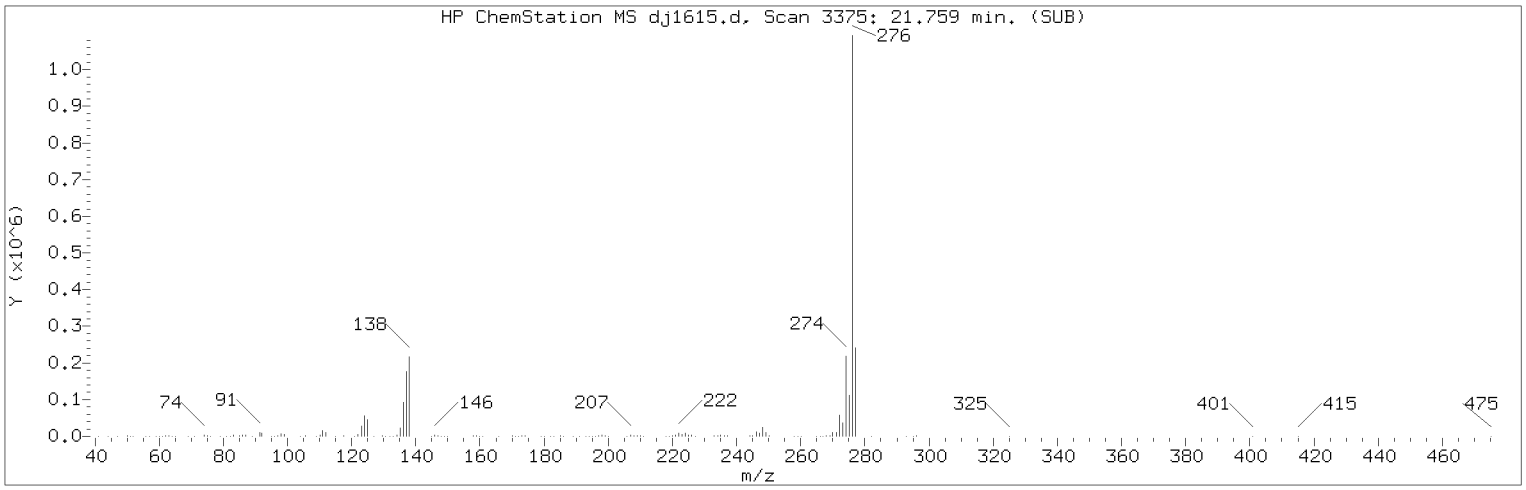
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:23
Date, time and analyst ID of latest file update: 30-Oct-2017 23:23 Automation

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

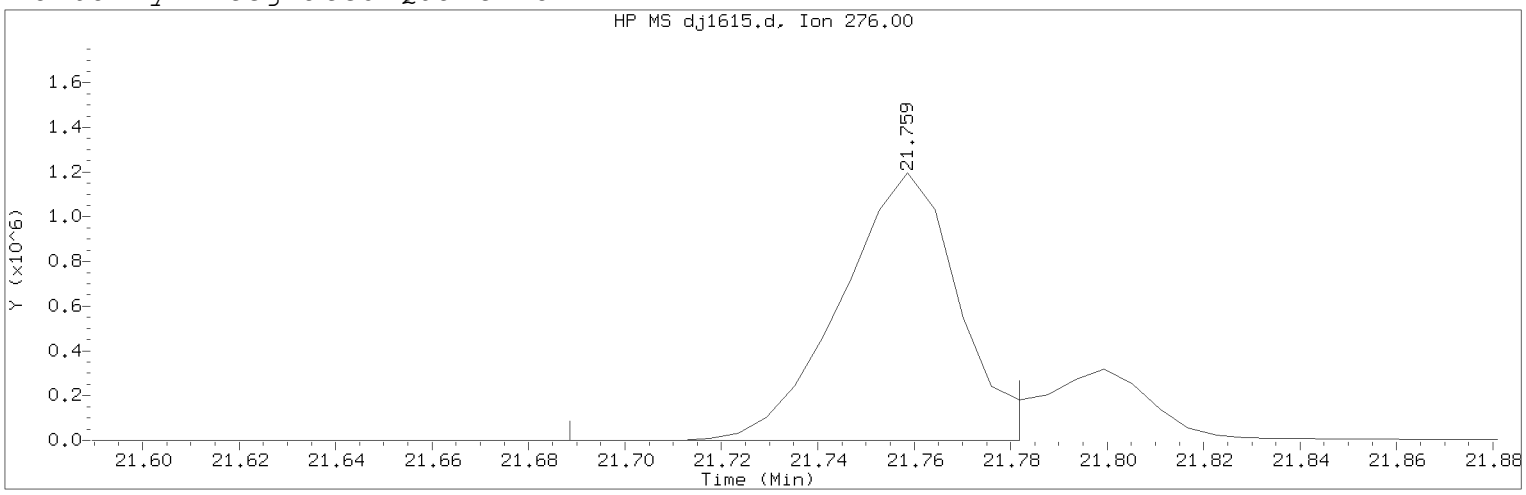
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1113		
Retention Time (minutes)	: 8.574		
Quant Ion	: 105.00		
Area	: 452685		
On-column Amount (ng/ul)	: 13.0306		
Integration start scan	: 1091	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during 2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

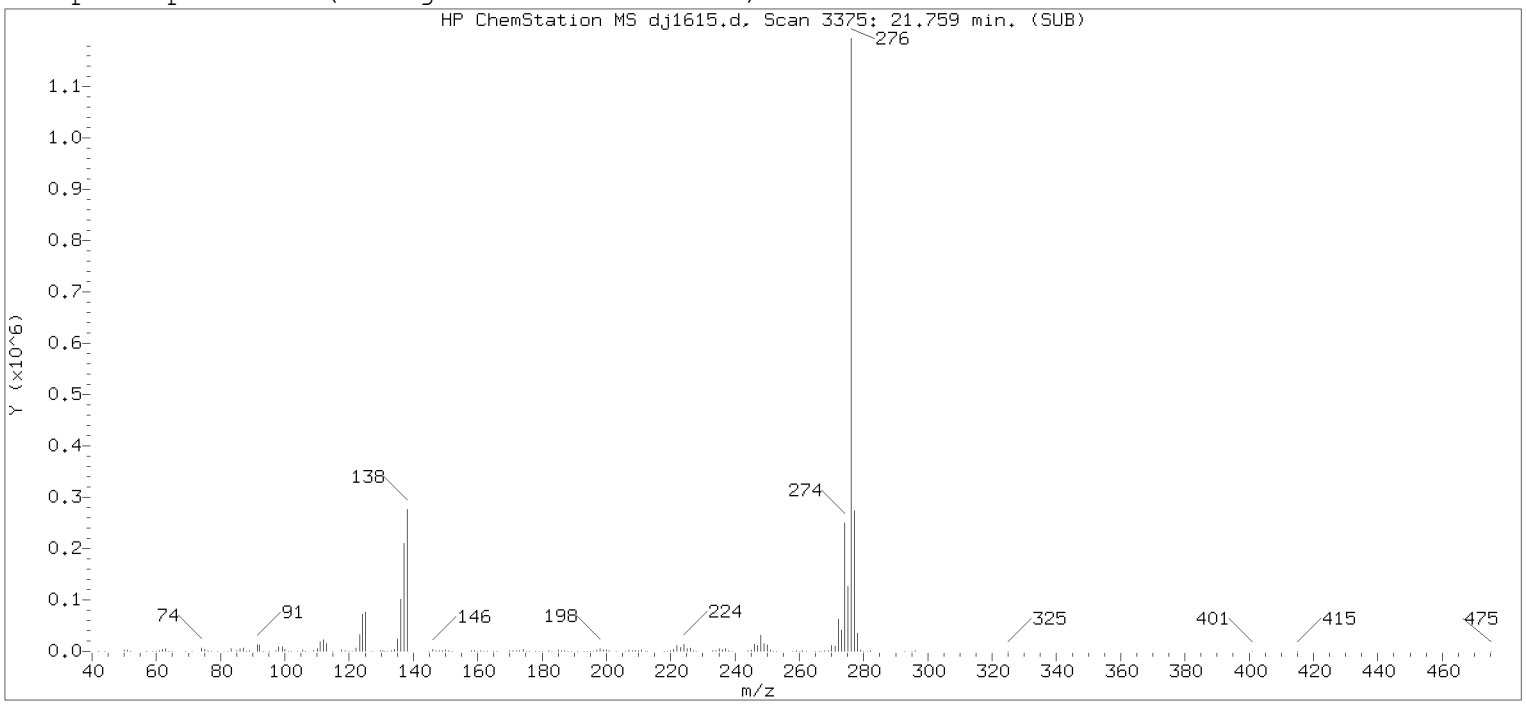
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3375
Retention Time (minutes) : 21.759
Quant Ion : 276.00
Area (flag) : 2029698M
On-Column Amount (ng/ul) : 13.4855
Integration start scan : 3362 Integration stop scan: 3378
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

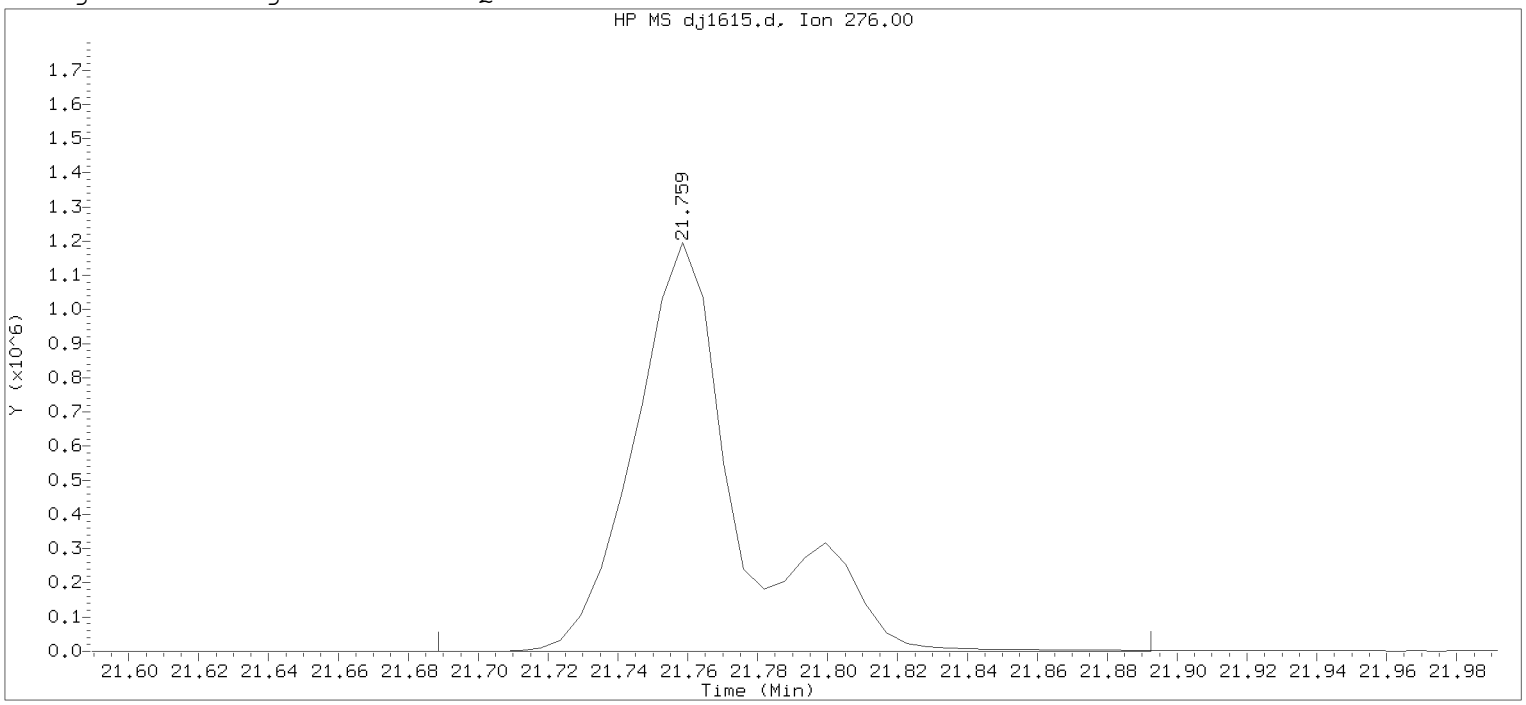
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



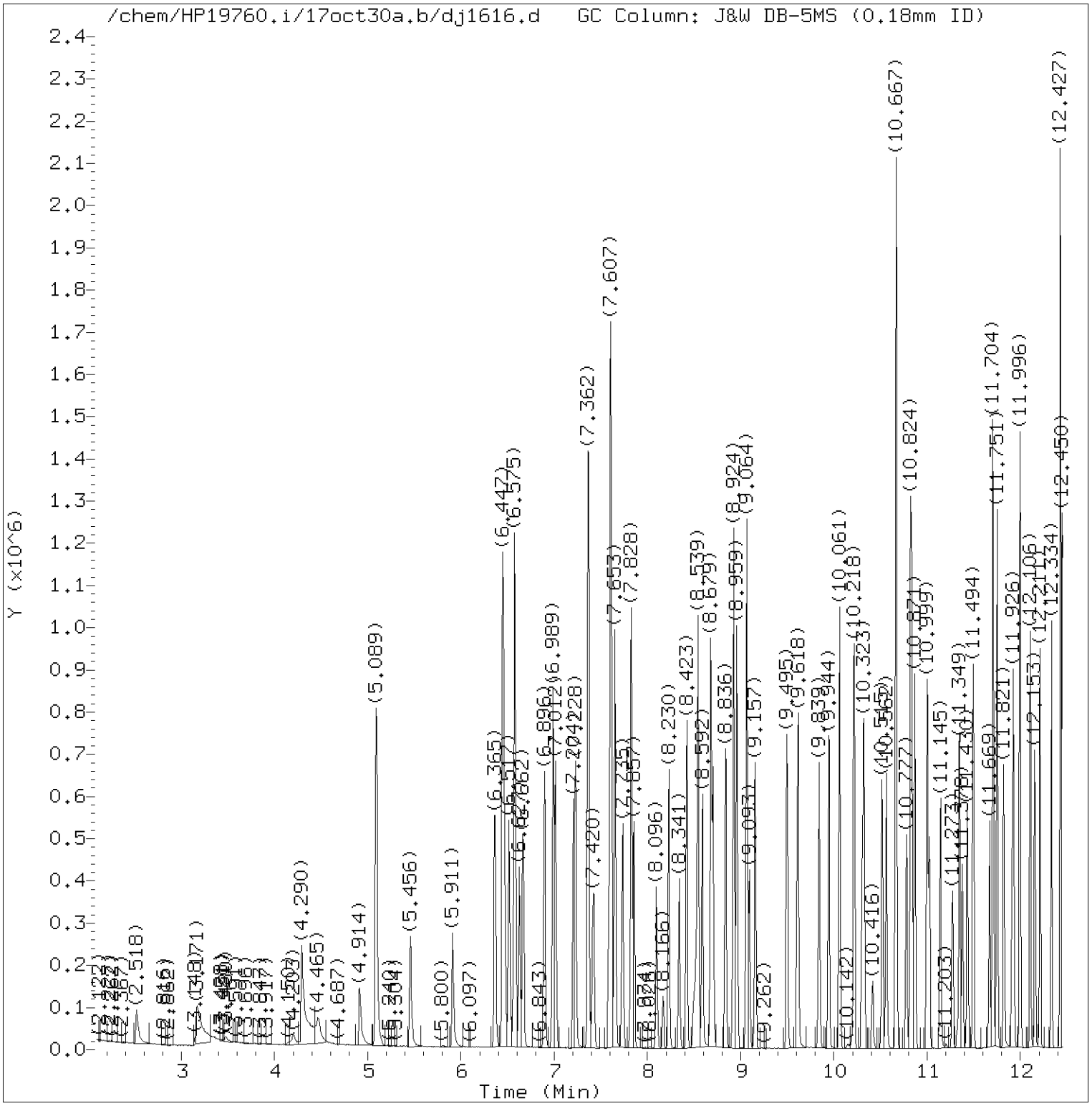
Data File: /chem/HP19760.i/17oct30a.b/dj1615.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 22:58 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:23
Date, time and analyst ID of latest file update: 30-Oct-2017 23:23 Automation

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3375		
Retention Time (minutes)	: 21.759		
Quant Ion	: 276.00		
Area	: 2493832		
On-column Amount (ng/ul)	: 13.7160		
Integration start scan	: 3362	Integration stop scan:	3397
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:40.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

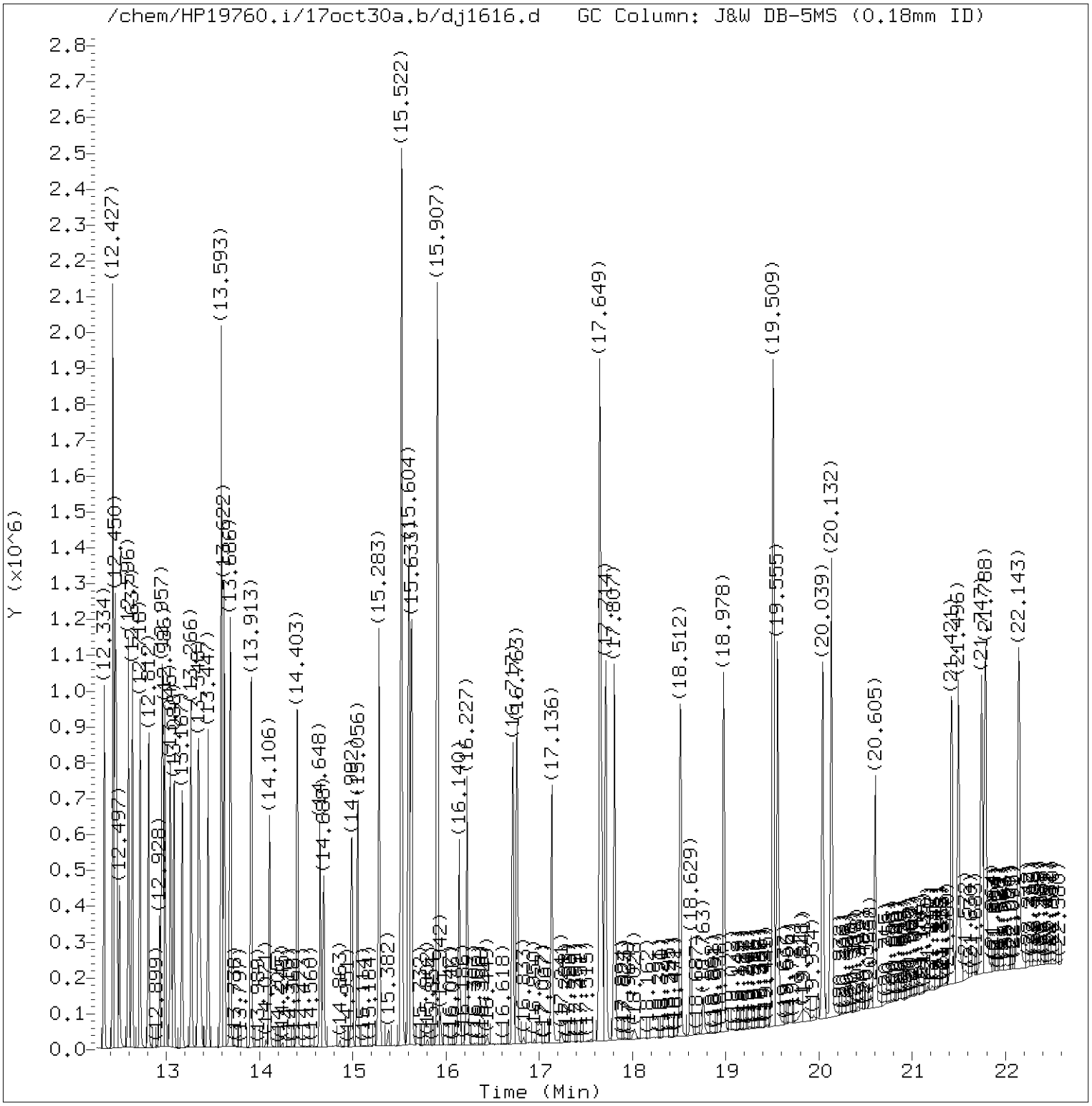
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:40.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.518	88	75514	3.718
4) N-Nitrosodimethylamine	(1)	3.154	74	80121M	3.232
5) Pyridine	(1)	3.171	79	206639M	3.842
7) 2-Picoline	(1)	4.290	93	211110	3.603
8) N-Nitrosomethylethylamine	(1)	4.471	88	91008	3.597
9) Methyl methanesulfonate	(1)	4.914	80	90244	3.510
11)$2-Fluorophenol	(1)	5.089	112	362560	7.351
13) N-Nitrosodiethylamine	(1)	5.456	102	86550	3.655
42) Total Cresols	(1)			368620	7.540
15) Ethyl methanesulfonate	(1)	5.911	109	91420	3.795
16) Benzaldehyde	(1)	6.359	77	183797	4.181
17)$Phenol-d6	(1)	6.447	99	484006	7.452
18) Phenol	(1)	6.464	94	254863	3.723
19) Aniline	(1)	6.517	93	313407	3.739
20) a-methylstyrene	(1)	6.575	118	206047	3.809
22) bis(2-Chloroethyl)ether	(1)	6.627	93	201683	3.691
23) 2-Chlorophenol	(1)	6.668	128	188666	3.711
24) 1,3-Dichlorobenzene	(1)	6.896	146	203278	3.678
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	168143	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	208421	3.716
27) Benzyl alcohol	(1)	7.204	108	126045	3.755
28) 1,2-Dichlorobenzene	(1)	7.228	146	195135	3.688
30) Indene	(1)	7.362	115	363151	3.815
31) 2-Methylphenol	(1)	7.368	108	178736	3.731
97) Isosafrole	(3)			122420	3.627
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.420	45	277106	3.696
34) bis(2-Chloroisopropyl)ether	(1)	7.420	45	277106	3.696
35) N-Nitrosopyrrolidine	(1)	7.583	100	90944	3.740
36) Acetophenone	(1)	7.601	105	291983	3.836
37) 4-Methylphenol	(1)	7.607	108	189884	3.807
38) N-Nitroso-di-n-propylamine	(1)	7.612	70	156340	3.764
39) N-Nitrosomorpholine	(1)	7.653	56	113329	3.730
40) o-Toluidine	(1)	7.653	106	314694	3.751
43) Hexachloroethane	(1)	7.735	117	84937	3.716
44)$Nitrobenzene-d5	(2)	7.828	82	443054	7.349
45) Nitrobenzene	(2)	7.857	77	226769	3.699
120) 2,4_2,6-Dinitrotoluenes	(3)			181395	7.576
48) N-Nitrosopiperidine	(2)	8.096	114	88238	3.585
50) Isophorone	(2)	8.230	82	376485	3.678
51) 2-Nitrophenol	(2)	8.341	139	88673	3.738

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.423	107	194478	3.695
56) Benzoic acid	(2)	8.539	105	248706M	6.287
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	87499	3.652
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	241594	3.705
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.679	104	292069	3.753
60) 2,4-Dichlorophenol	(2)	8.702	162	147483	3.700
146) Diallate trans/cis	(4)			166546	3.701
62) 1,2,4-Trichlorobenzene	(2)	8.836	180	169061	3.677
65)*Naphthalene-d8	(2)	8.924	136	644540	5.000
66) Naphthalene	(2)	8.959	128	531929	3.635
68) 2,6-Dichlorophenol	(2)	9.064	162	141283	3.629
67) 4-Chloroaniline	(2)	9.064	127	218615	3.686
69) Hexachloropropene	(2)	9.093	213	86696	3.572
71) Hexachlorobutadiene	(2)	9.157	225	94367	3.655
75) Quinoline	(2)	9.495	129	315499	3.612
76) Caprolactam	(2)	9.606	113	42394	3.556
77) N-Nitrosodi-n-butylamine	(2)	9.618	84	171255	3.839
80) 4-Chloro-3-methylphenol	(2)	9.845	107	163394	3.723
82) Safrole	(2)	9.950	162	128735	3.561
83) 2-Methylnaphthalene	(2)	10.061	142	348444	3.667
84) 1-Methylnaphthalene	(2)	10.218	142	315807	3.666
85) Hexachlorocyclopentadiene	(3)	10.305	237	81805	3.610
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	169674	3.700
88) cis-Isosafrole	(3)	10.416	162	21893	0.596
90) 2,4,6-Trichlorophenol	(3)	10.515	196	100717	3.683
92) 2,4,5-Trichlorophenol	(3)	10.562	196	110153	3.809
93)$2-Fluorobiphenyl	(3)	10.667	172	752977	7.441
94) trans-Isosafrole	(3)	10.777	162	100527	3.033
95) 1,1'-Biphenyl	(3)	10.824	154	425489	3.842
96) 2-Chloronaphthalene	(3)	10.836	162	329685	3.572
98) 1-Chloronaphthalene	(3)	10.871	162	308583	3.855
99) Diphenyl ether	(3)	10.999	170	219897	3.694
100) 2-Nitroaniline	(3)	11.022	138	97509	3.761
104) 1,4-Naphthoquinone	(3)	11.145	158	119656	3.569
105) 1,4-Dinitrobenzene	(3)	11.273	168	48542	3.620
106) Dimethylphthalate	(3)	11.349	163	352733	3.753
107) 1,3-Dinitrobenzene	(3)	11.378	168	54940	3.712
108) 2,6-Dinitrotoluene	(3)	11.430	165	78238	3.836
109) Acenaphthylene	(3)	11.494	152	440821	3.734
112) 3-Nitroaniline	(3)	11.669	138	85663	3.841

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.704	164	334882	5.000
114) Acenaphthene	(3)	11.751	153	341985	3.740
115) 2,4-Dinitrophenol	(3)	11.821	184	83858	6.642
116) 4-Nitrophenol	(3)	11.914	109	59454	3.442
117) Pentachlorobenzene	(3)	11.926	250	135485	3.706
119) Dibenzofuran	(3)	11.996	168	442886	3.743
118) 2,4-Dinitrotoluene	(3)	12.001	165	103157	3.646
121) 1-Naphthylamine	(3)	12.106	143	316421	3.509
122) 2,3,4,6-Tetrachlorophenol	(3)	12.153	232	80706	3.674
123) 2-Naphthylamine	(3)	12.211	143	313901	3.600
124) Diethylphthalate	(3)	12.334	149	334402	3.652
125) Thionazin	(3)	12.427	107	57099	3.529
126) Fluorene	(3)	12.427	166	349446	3.699
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	163020	3.680
128) 5-Nitro-o-toluidine	(3)	12.462	152	93168	3.631
129) 4-Nitroaniline	(3)	12.468	138	84789	3.778
130) 4,6-Dinitro-2-methylphenol	(4)	12.497	198	57267	3.344
132) NDPA as diphenylamine	(4)	12.596	169	287352	3.759
131) N-Nitrosodiphenylamine	(4)	12.596	169	287352	3.759
134) 1,2-Diphenylhydrazine	(4)	12.637	77	405961	3.813
135)$2,4,6-Tribromophenol	(3)	12.718	330	94053	7.440
137) Tetraethyldithiopyrophosphate	(4)	12.806	97	66345	3.738
139) 1,3,5-Trinitrobenzene	(4)	12.928	213	33852	3.281
140) Diallate (peak 1)	(4)	12.952	86	142967	3.077
141) Phorate	(4)	12.963	75	257133	3.547
142) Phenacetin	(4)	12.986	108	190857	3.803
143) 4-Bromophenyl-phenylether	(4)	13.045	248	99083	3.777
144) Diallate (peak 2)	(4)	13.056	86	23579	0.622
145) Hexachlorobenzene	(4)	13.086	284	102194	3.660
147) Dimethoate	(4)	13.167	87	154986	3.667
148) Atrazine	(4)	13.266	200	99642	4.026
149) Pentachlorophenol	(4)	13.342	266	64115	3.593
151) Pentachloronitrobenzene	(4)	13.354	237	41561	3.538
150) 4-Aminobiphenyl	(4)	13.371	169	81173	3.809
152) Pronamide	(4)	13.447	173	158961	3.780
154) Dinoseb	(4)	13.593	211	82823	3.376
153)*Phenanthrene-d10	(4)	13.593	188	611162	5.000
155) Phenanthrene	(4)	13.622	178	522161	3.699
157) Anthracene	(4)	13.686	178	516748	3.750
163) Carbazole	(4)	13.913	167	476761	3.738

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

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on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

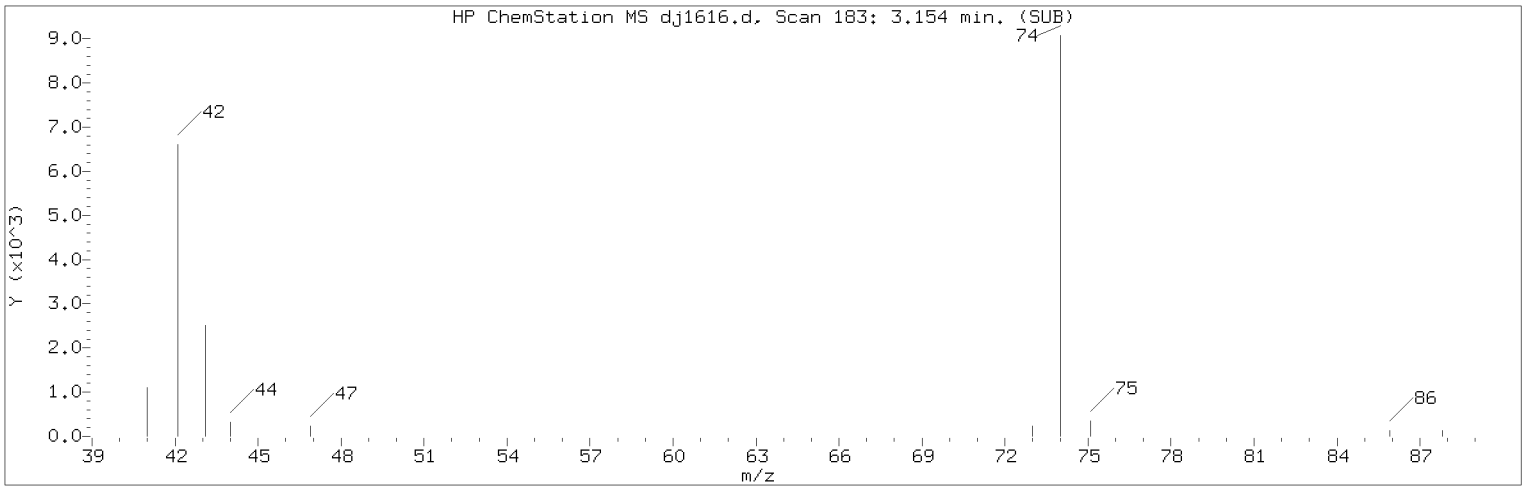
Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.106	109	116747	3.560
165) Di-n-butylphthalate	(4)	14.409	149	556249	3.633
167) Parathion	(4)	14.648	109	71748	3.455
168) 4-Nitroquinoline-1-oxide	(4)	14.688	190	41768	2.794
169) Octachlorostyrene	(4)	14.992	308	40695	3.869
222) Total PAHs	(6)			9021988	67.812
171) Isodrin	(4)	15.056	193	60839	3.618
173) Fluoranthene	(4)	15.283	202	573802	3.715
174) Benzidine	(5)	15.528	184	1194213	11.149
175)*Pyrene-d10	(5)	15.604	212	724783	5.000
177) Pyrene	(5)	15.633	202	615206	3.669
179)$Terphenyl-d14	(5)	15.907	244	796216	7.456
182) p-Dimethylaminoazobenzene	(5)	16.146	225	78467	3.737
185) Chlorobenzilate	(5)	16.227	139	179821	3.691
187) 3,3'-Dimethylbenzidine	(5)	16.717	212	348756	3.549
188) Butylbenzylphthalate	(5)	16.763	149	256376	3.594
191) 2-Acetylaminofluorene	(5)	17.136	181	212484	3.334
193) 3,3'-Dichlorobenzidine	(5)	17.649	252	207768	3.530
195) Benzo(a)anthracene	(5)	17.649	228	576225	3.788
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.673	231	103561	3.510
196) Chrysene	(5)	17.714	228	546820	3.780
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	365175	3.530
203) 6-Methylchrysene	(5)	18.512	242	372484	3.494
205) Di-n-octylphthalate	(6)	18.978	149	622861	3.506
206) Benzo(b)fluoranthene	(6)	19.509	252	590784	3.740
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.509	256	234655	3.726
208) Benzo(k)fluoranthene	(6)	19.555	252	585918	3.776
211) Benzo(a)pyrene	(6)	20.039	252	547359	3.703
213)*Perylene-d12	(6)	20.132	264	626685	5.000
215) 3-Methylcholanthrene	(6)	20.605	268	191468	3.590
217) Dibenz(a,h)acridine	(6)	21.426	279	443089	3.570
218) Dibenz(a,j)acridine	(6)	21.496	279	461892	3.570
219) Indeno(1,2,3-cd)pyrene	(6)	21.747	276	515141M	3.713
220) Dibenz(a,h)anthracene	(6)	21.788	278	552088	3.829
221) Benzo(g,h,i)perylene	(6)	22.143	276	551304	3.809

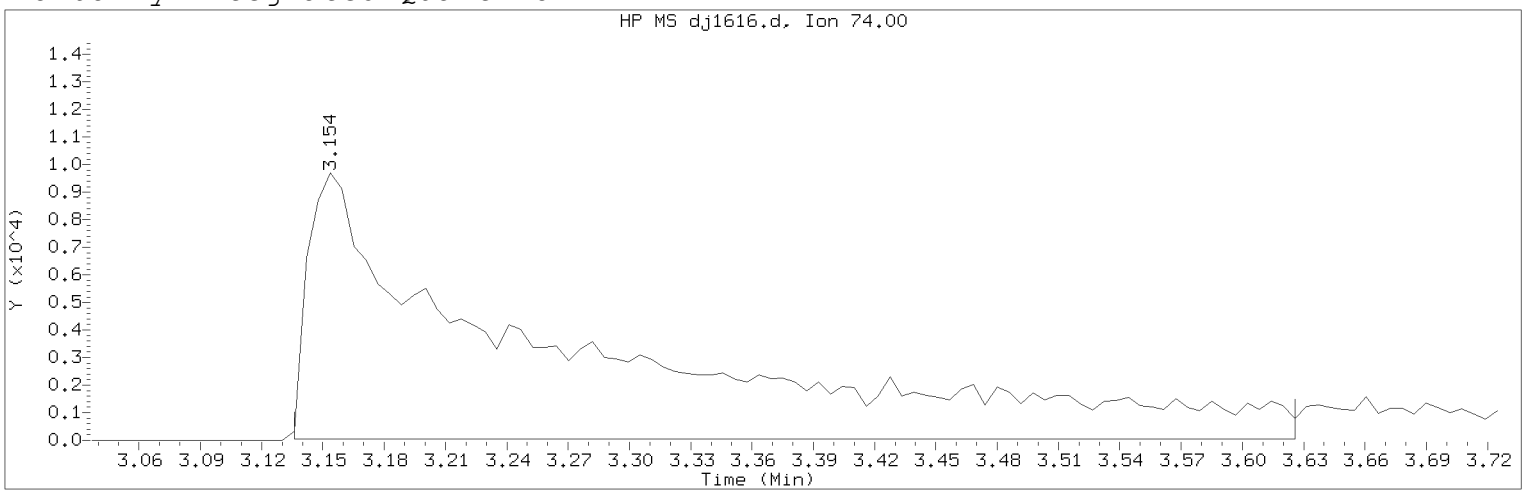
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

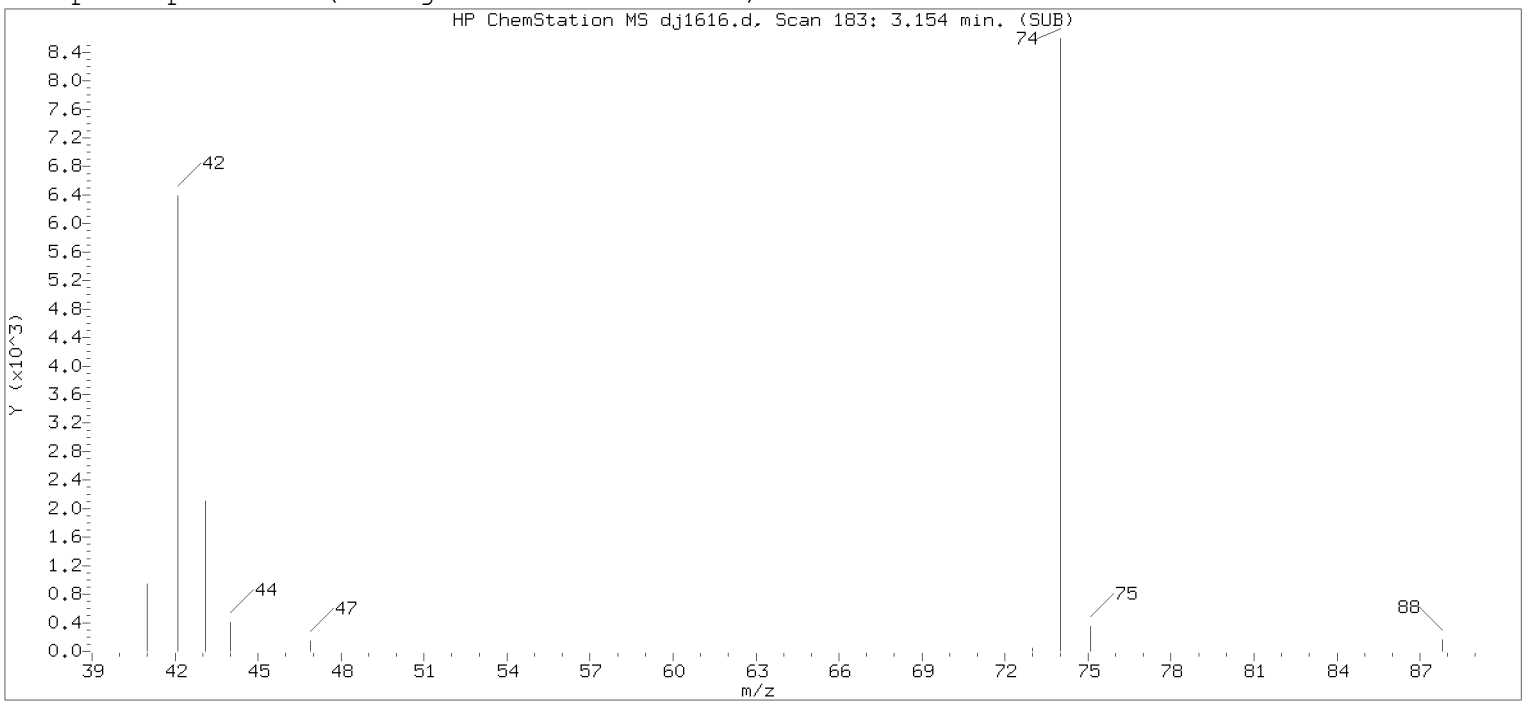
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 183
Retention Time (minutes) : 3.154
Quant Ion : 74.00
Area (flag) : 80121M
On-Column Amount (ng/ul) : 3.2323
Integration start scan : 179 Integration stop scan: 263
Y at integration start : 50 Y at integration end: 50

Reason for manual integration: improper integration

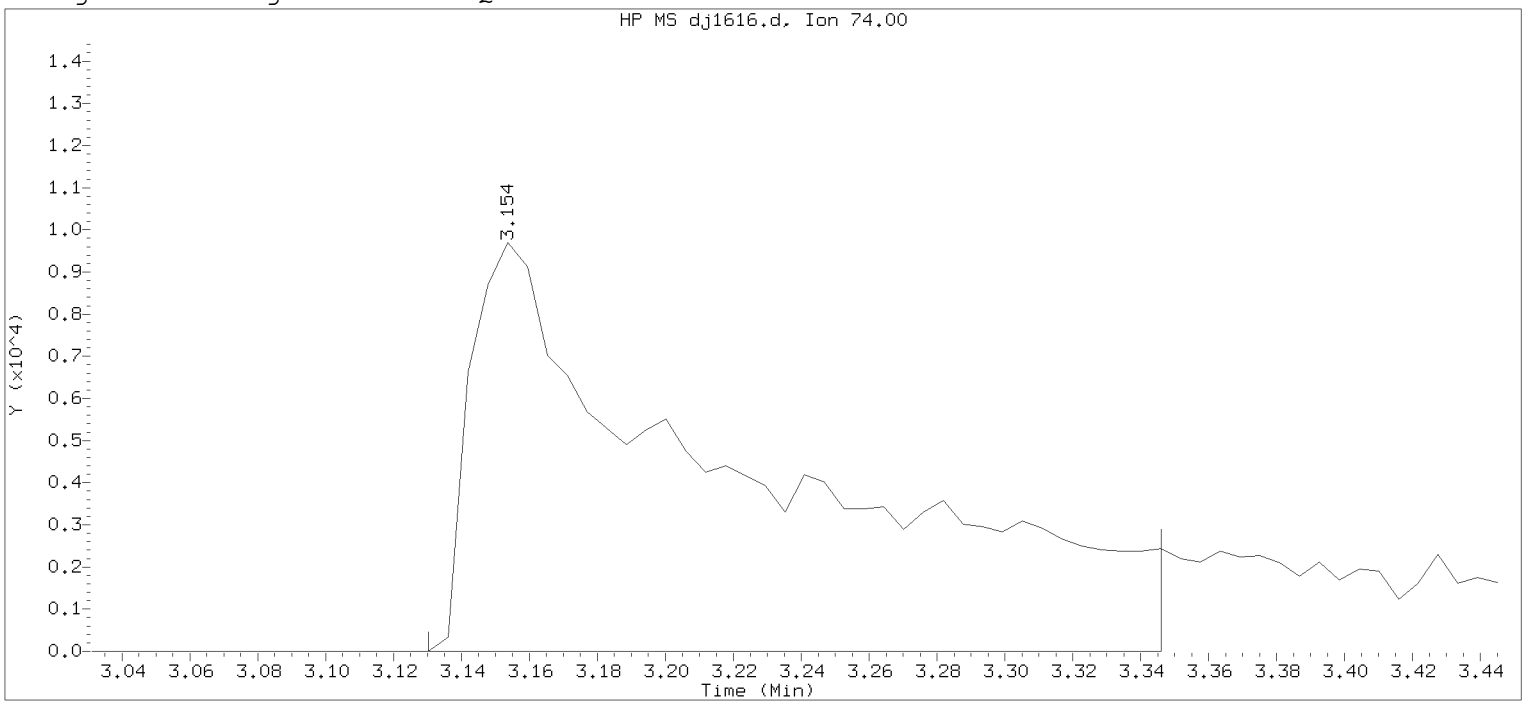
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

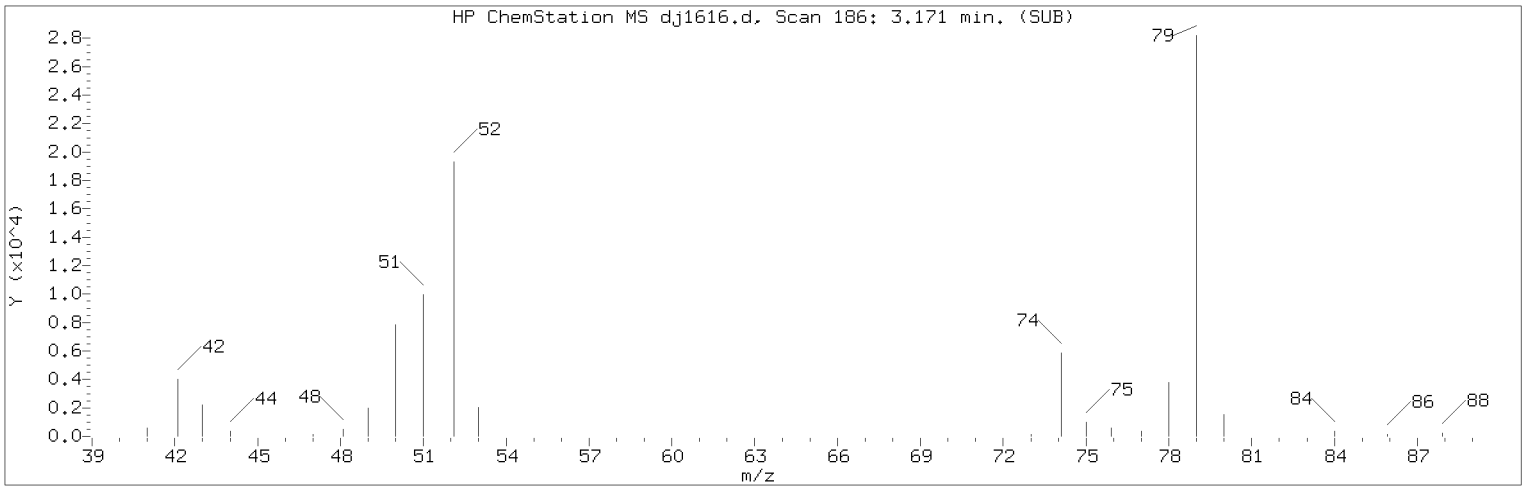
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:50
Date, time and analyst ID of latest file update: 30-Oct-2017 23:51 Automation

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

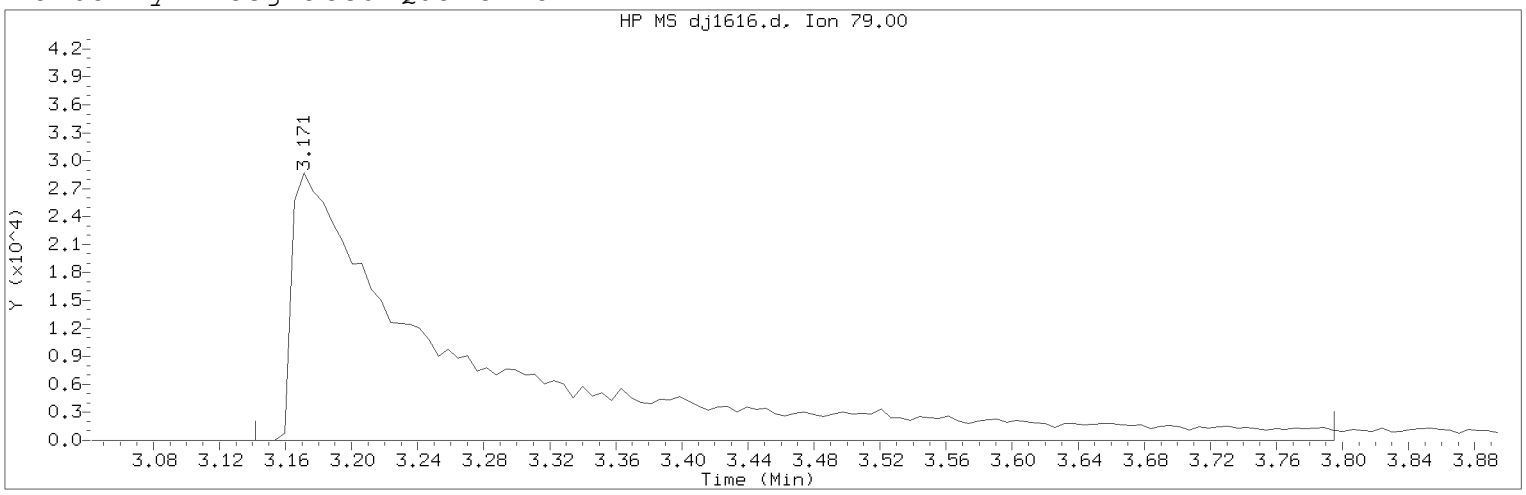
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 183		
Retention Time (minutes)	: 3.154		
Quant Ion	: 74.00		
Area	: 54558		
On-column Amount (ng/ul)	: 1.9337		
Integration start scan	: 178	Integration stop scan:	215
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used during 8270 RAE95 Page 932 of 1321

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

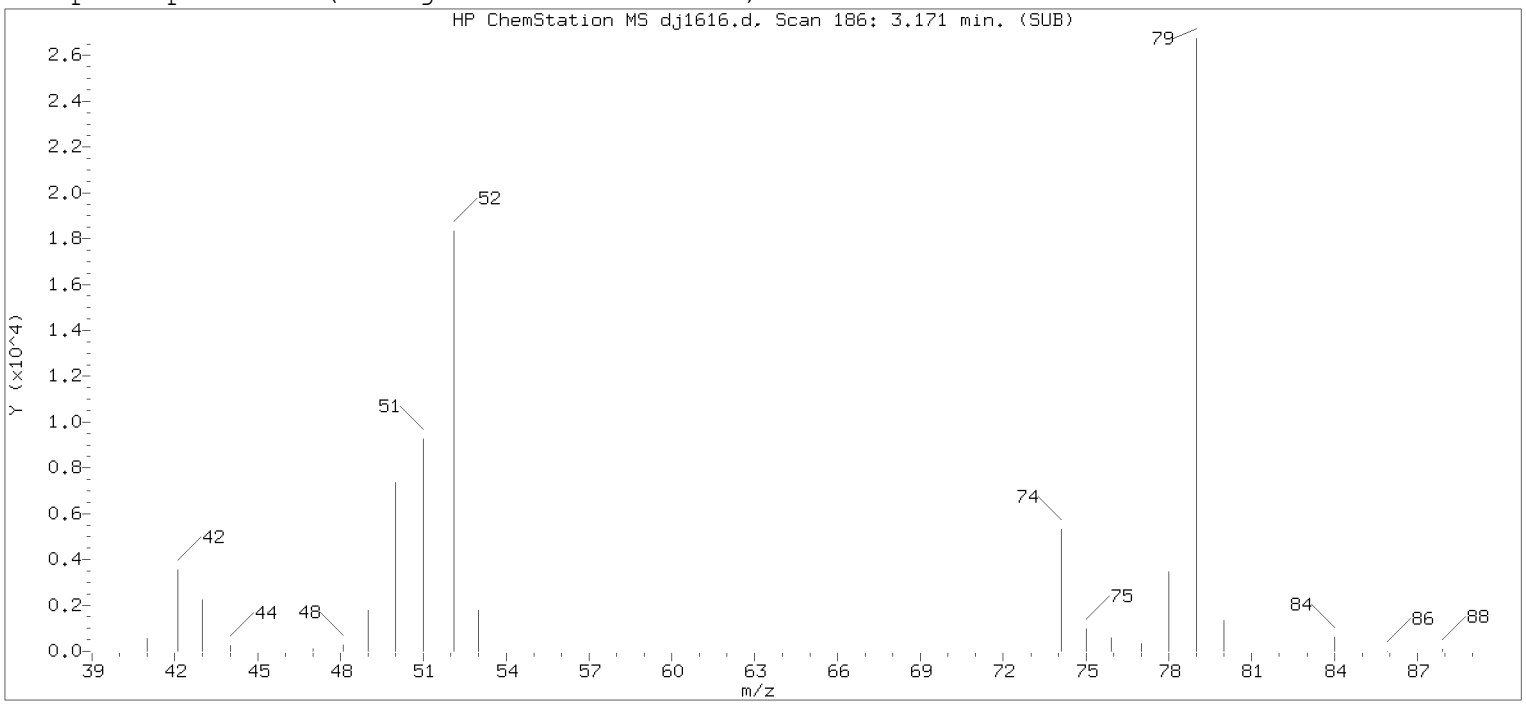
Compound Number : 5
Compound Name : Pyridine
Scan Number : 186
Retention Time (minutes) : 3.171
Quant Ion : 79.00
Area (flag) : 206639M
On-Column Amount (ng/ul) : 3.8419
Integration start scan : 180 Integration stop scan: 292
Y at integration start : -14 Y at integration end: -14

Reason for manual integration: improper integration

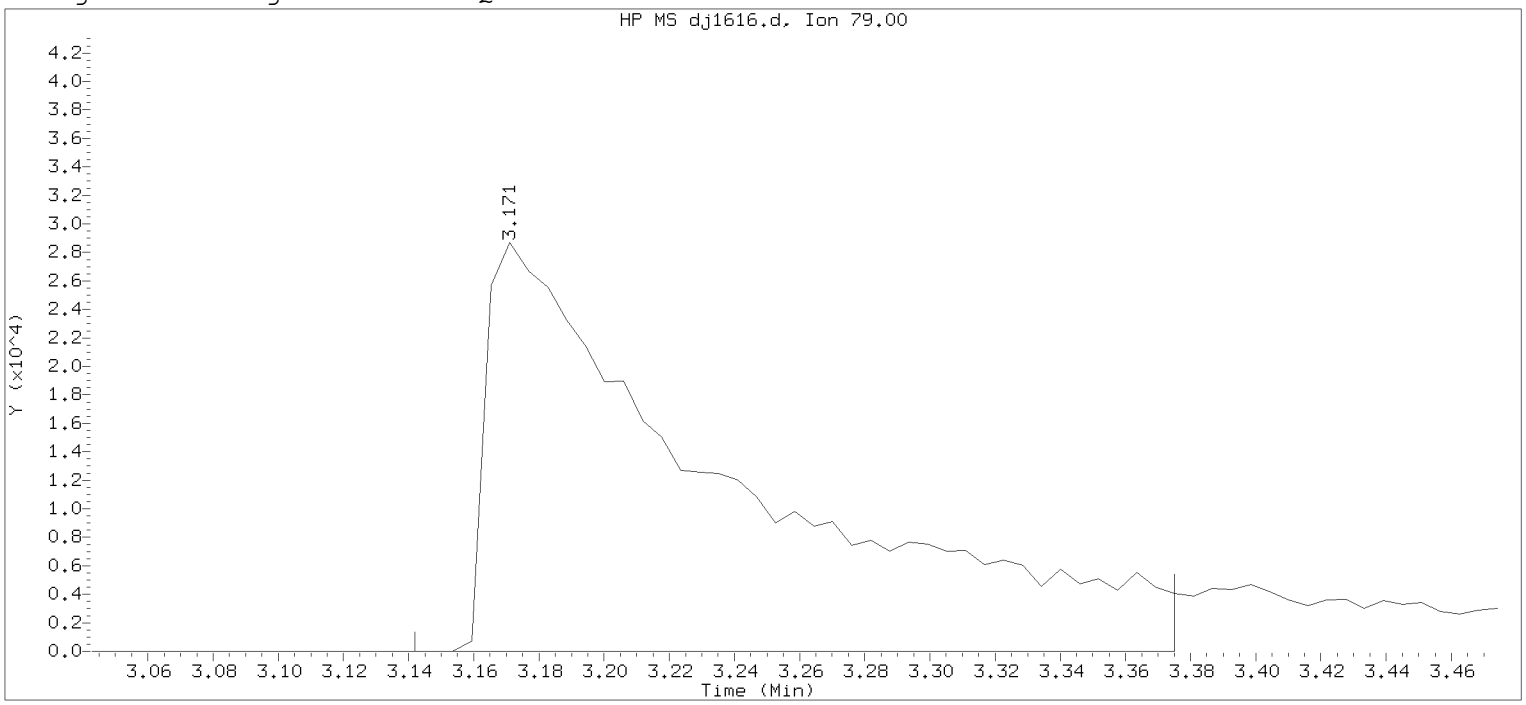
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

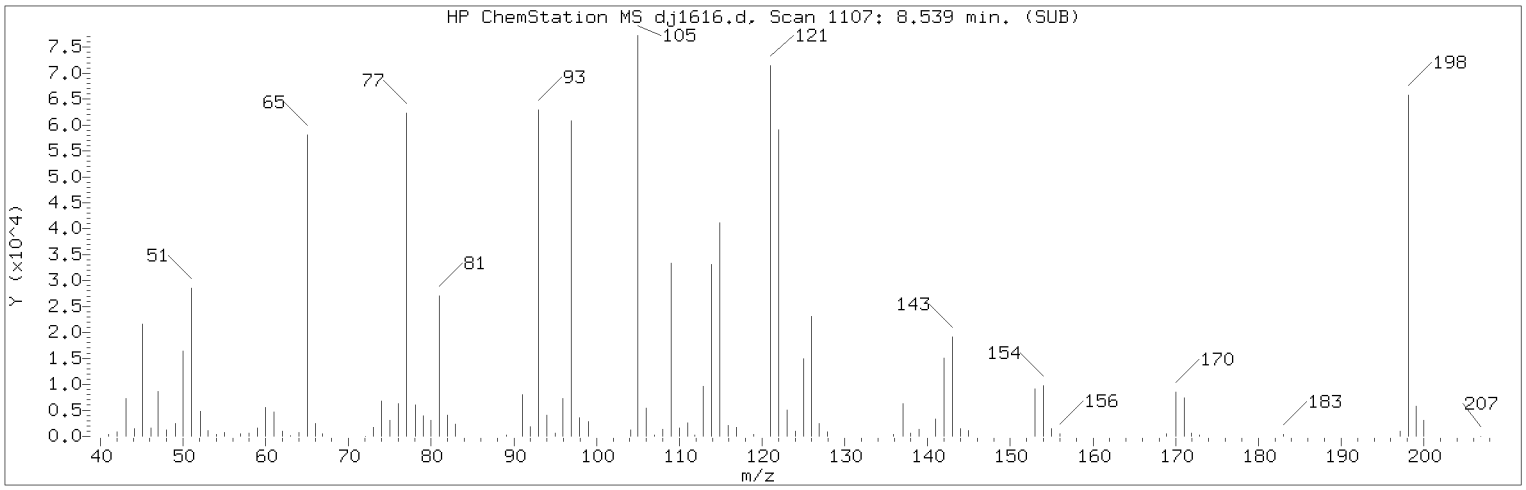
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:50
Date, time and analyst ID of latest file update: 30-Oct-2017 23:51 Automation

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

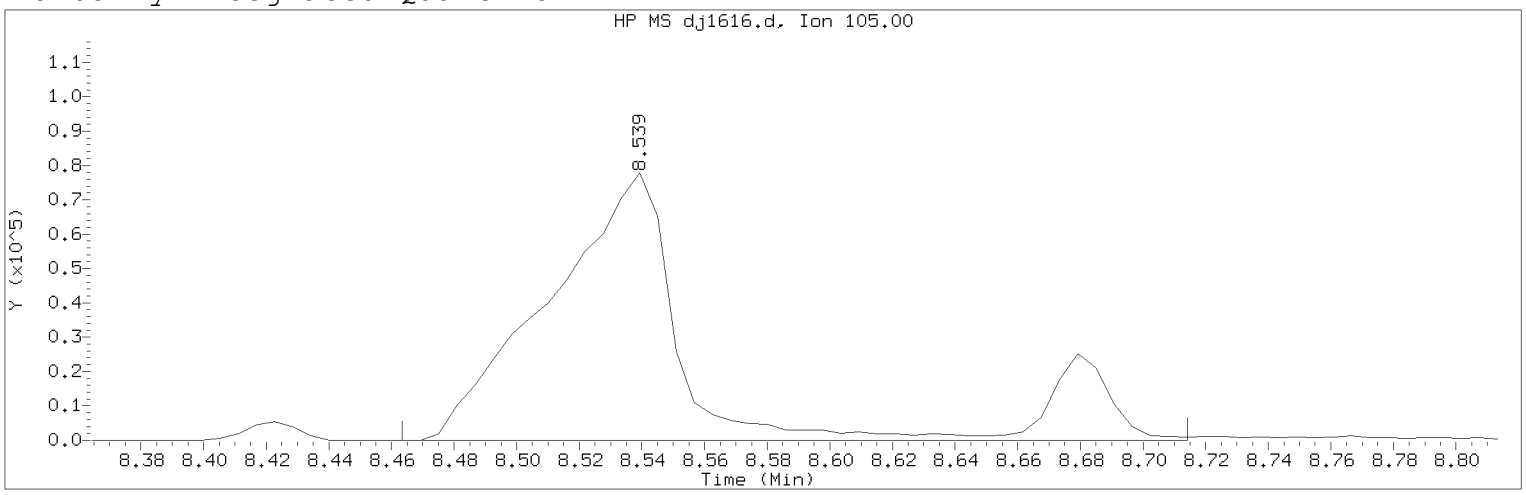
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 186		
Retention Time (minutes)	: 3.171		
Quant Ion	: 79.00		
Area	: 148550		
On-column Amount (ng/ul)	: 2.7844		
Integration start scan	: 180	Integration stop scan:	220
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used during 5547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

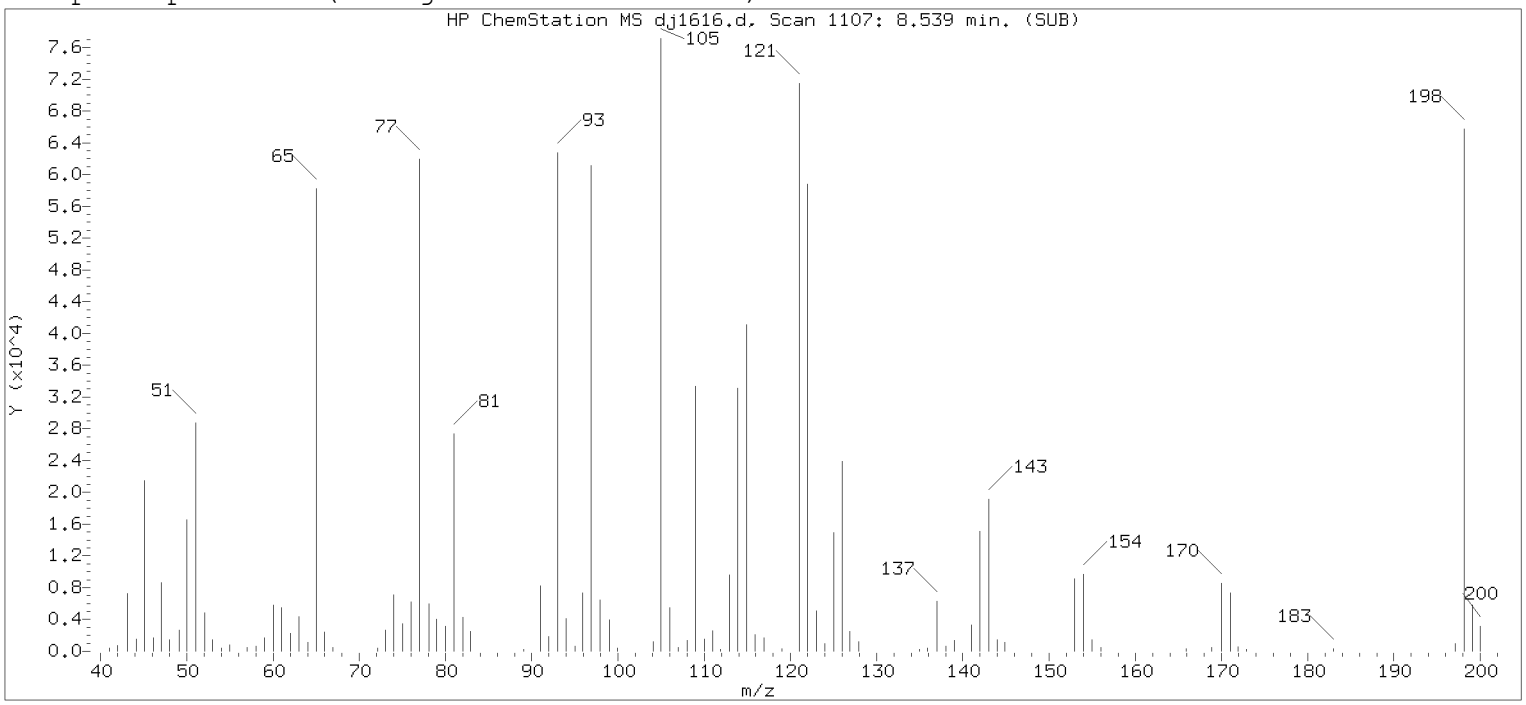
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1107
Retention Time (minutes) : 8.539
Quant Ion : 105.00
Area (flag) : 248706M
On-Column Amount (ng/ul) : 6.2866
Integration start scan : 1093 Integration stop scan: 1136
Y at integration start : -5 Y at integration end: -5

Reason for manual integration: improper integration

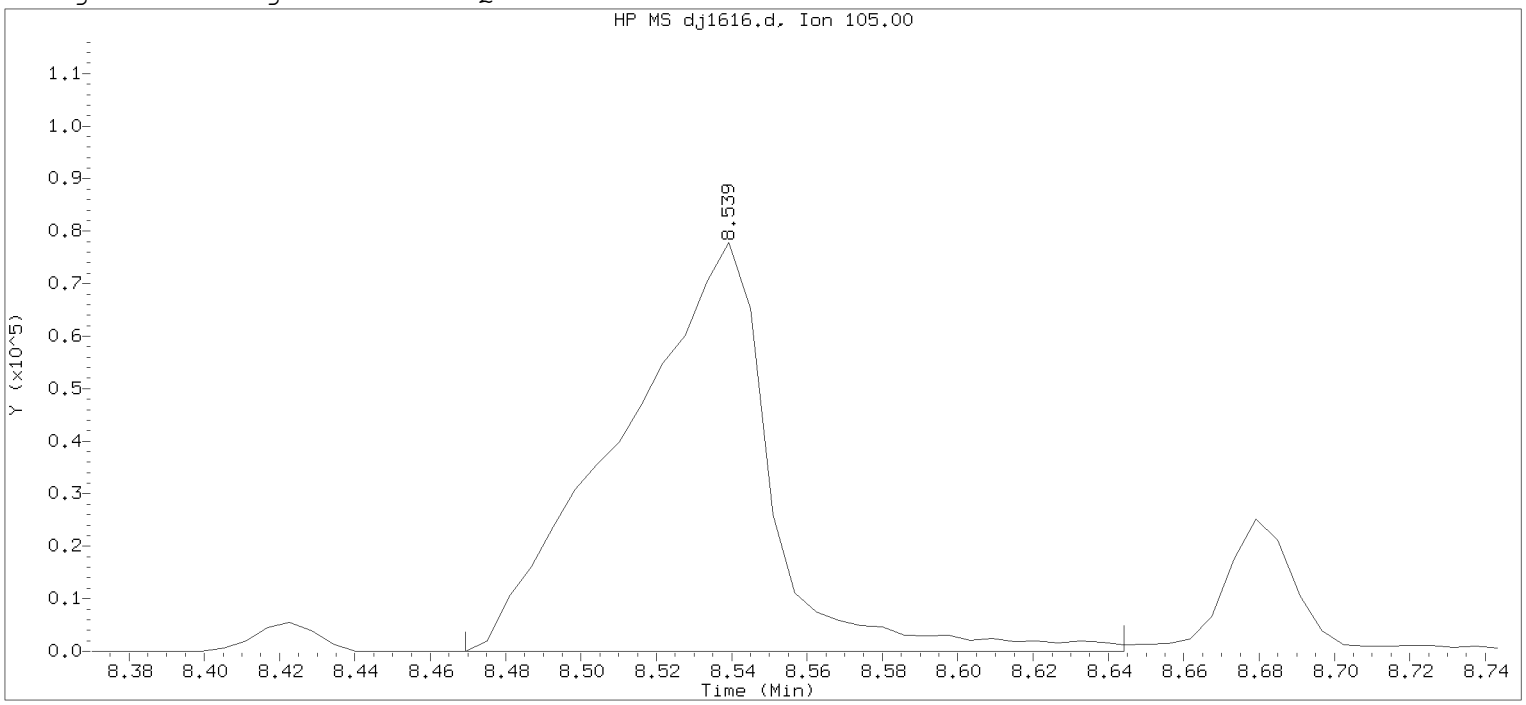
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

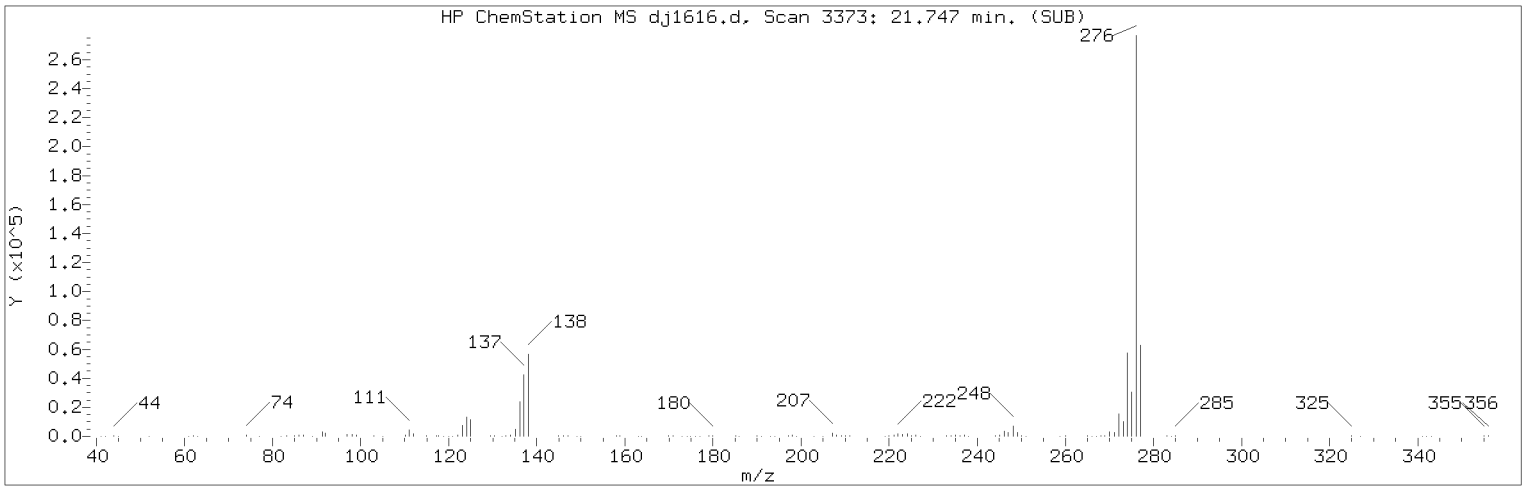
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:50
Date, time and analyst ID of latest file update: 30-Oct-2017 23:51 Automation

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

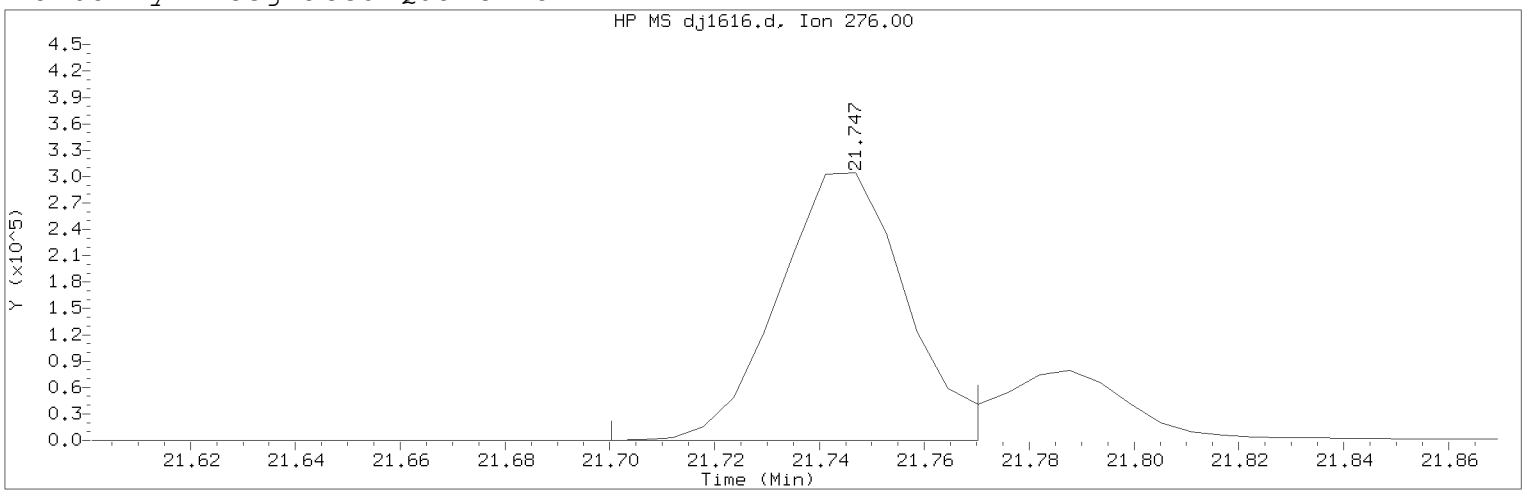
Compound Number	: 56
Compound Name	: Benzoic acid
Scan Number	: 1107
Retention Time (minutes)	: 8.539
Quant Ion	: 105.00
Area	: 215709
On-column Amount (ng/ul)	: 6.8901
Integration start scan	: 1094 Integration stop scan: 1124
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

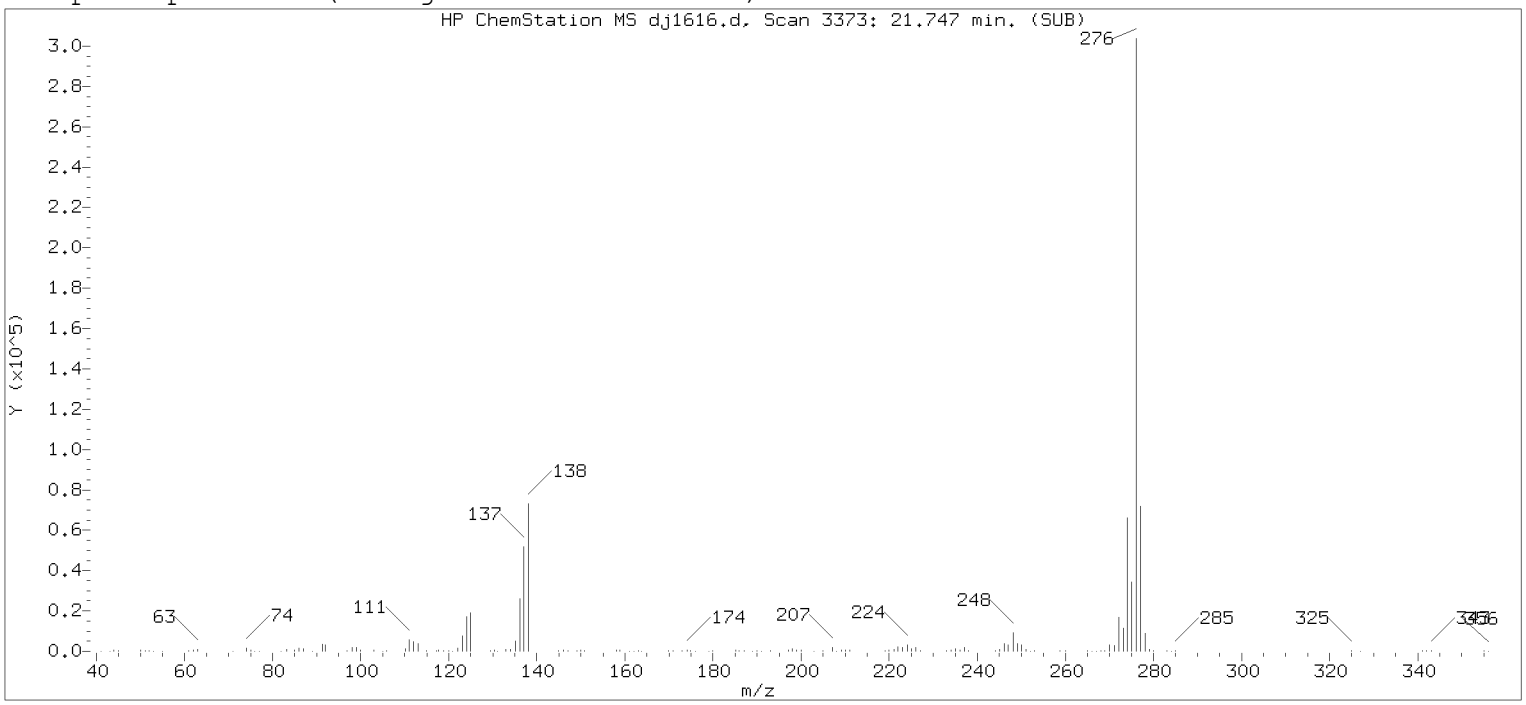
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3373		
Retention Time (minutes)	: 21.747		
Quant Ion	: 276.00		
Area (flag)	: 515141M		
On-Column Amount (ng/ul)	: 3.7128		
Integration start scan	: 3364	Integration stop scan:	3376
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

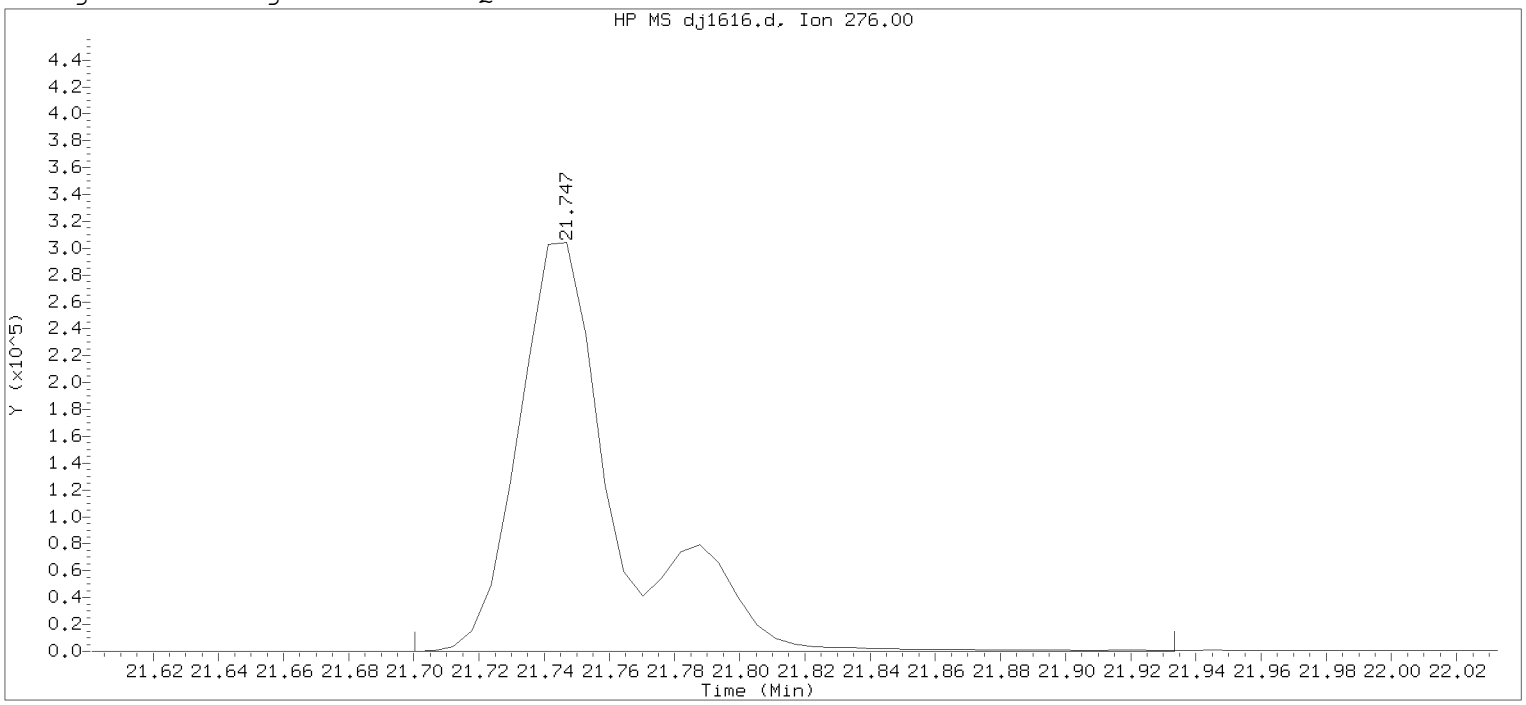
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



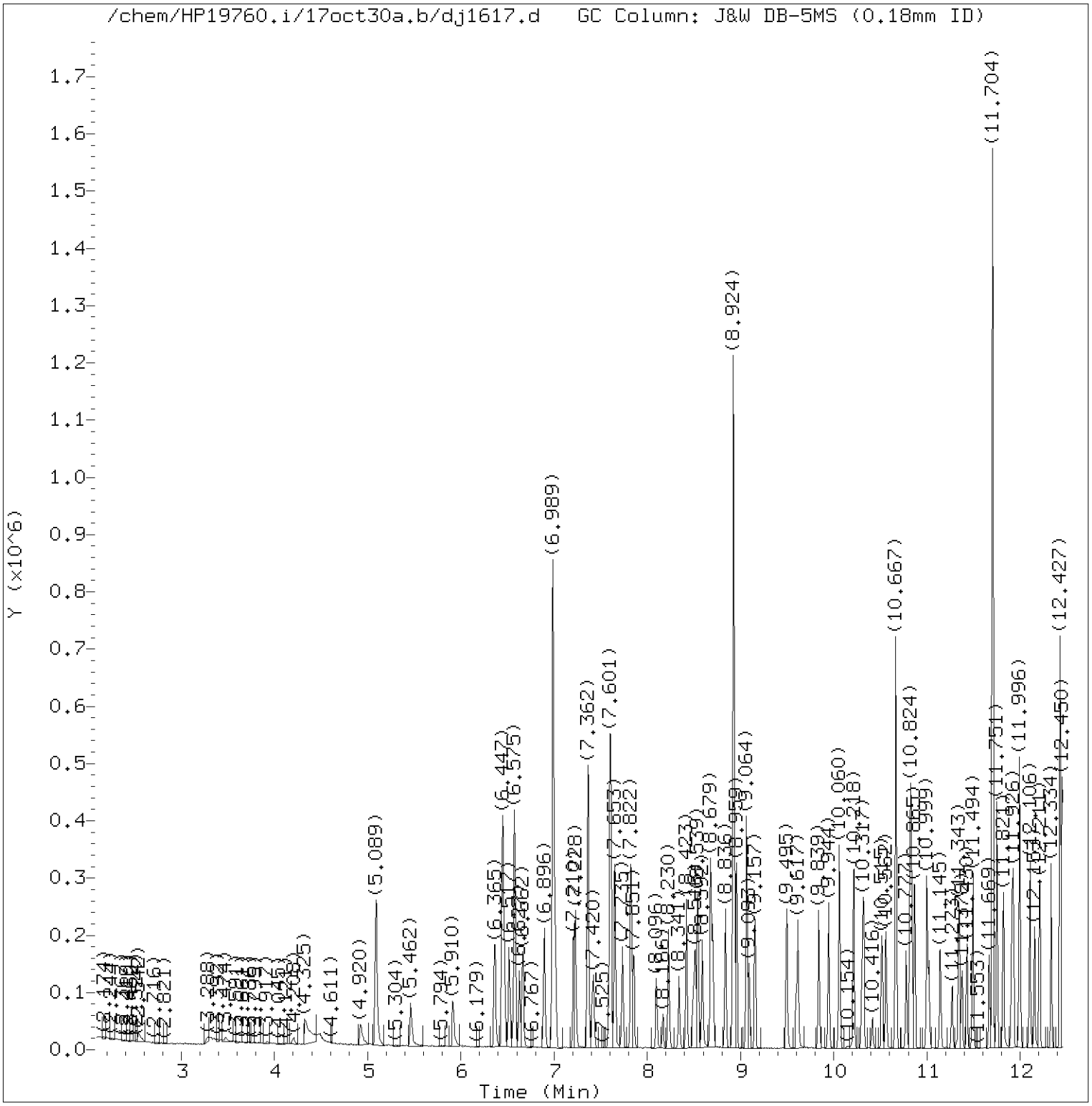
Data File: /chem/HP19760.i/17oct30a.b/dj1616.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:25 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 30-OCT-2017 23:50
Date, time and analyst ID of latest file update: 30-Oct-2017 23:51 Automation

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3373		
Retention Time (minutes)	: 21.747		
Quant Ion	: 276.00		
Area	: 646712		
On-column Amount (ng/ul)	: 3.8407		
Integration start scan	: 3364	Integration stop scan:	3404
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

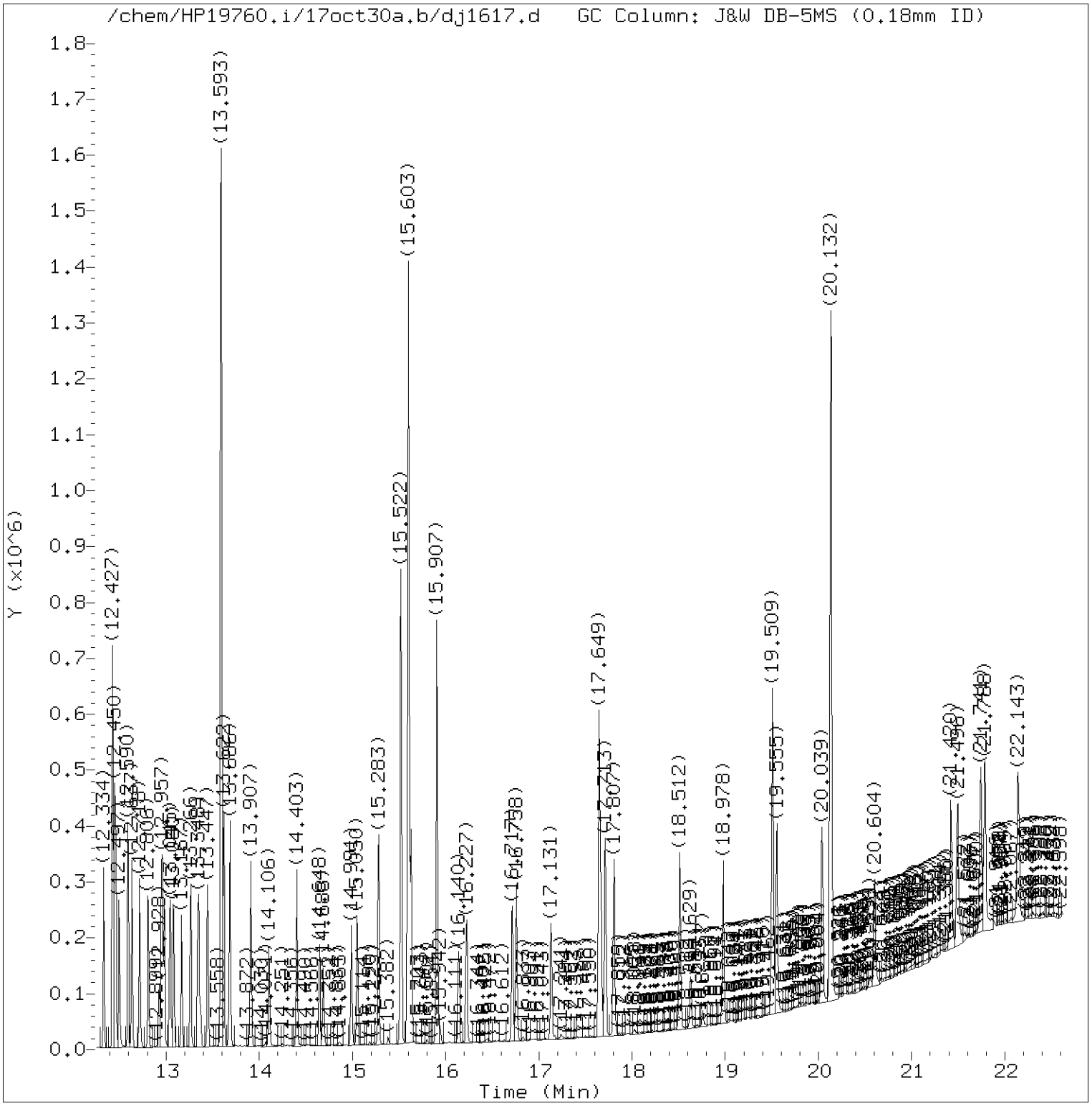
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.542	88	18043	0.879
5) Pyridine	(1)	3.276	79	64758M	1.191
4) N-Nitrosodimethylamine	(1)	3.451	74	25299M	1.010
7) 2-Picoline	(1)	4.325	93	63038	1.064
8) N-Nitrosomethylethylamine	(1)	4.488	88	30375M	1.188
9) Methyl methanesulfonate	(1)	4.920	80	29919M	1.151
11)$2-Fluorophenol	(1)	5.089	112	118348	2.374
13) N-Nitrosodiethylamine	(1)	5.462	102	26431	1.104
42) Total Cresols	(1)			117758	2.383
15) Ethyl methanesulfonate	(1)	5.910	109	27939	1.147
16) Benzaldehyde	(1)	6.359	77	60647	1.365
17)$Phenol-d6	(1)	6.447	99	154648	2.355
18) Phenol	(1)	6.464	94	80849	1.168
19) Aniline	(1)	6.517	93	100749	1.189
20) a-methylstyrene	(1)	6.575	118	67844	1.241
22) bis(2-Chloroethyl)ether	(1)	6.627	93	67861	1.228
23) 2-Chlorophenol	(1)	6.662	128	60791	1.183
24) 1,3-Dichlorobenzene	(1)	6.896	146	68506	1.226
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	169975	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	67910	1.198
27) Benzyl alcohol	(1)	7.204	108	40839	1.203
28) 1,2-Dichlorobenzene	(1)	7.228	146	64800	1.211
30) Indene	(1)	7.362	115	121764	1.265
31) 2-Methylphenol	(1)	7.368	108	57856	1.195
97) Isosafrole	(3)			39607	1.153
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.420	45	92601	1.222
34) bis(2-Chloroisopropyl)ether	(1)	7.420	45	92601	1.222
35) N-Nitrosopyrrolidine	(1)	7.583	100	28745	1.170
36) Acetophenone	(1)	7.601	105	99965	1.299
37) 4-Methylphenol	(1)	7.601	108	59902	1.188
38) N-Nitroso-di-n-propylamine	(1)	7.607	70	51258	1.221
40) o-Toluidine	(1)	7.653	106	102585	1.210
39) N-Nitrosomorpholine	(1)	7.653	56	36853	1.200
43) Hexachloroethane	(1)	7.735	117	27560	1.193
44)$Nitrobenzene-d5	(2)	7.822	82	144842	2.395
45) Nitrobenzene	(2)	7.851	77	74235	1.207
120) 2,4_2,6-Dinitrotoluenes	(3)			55148	2.264
48) N-Nitrosopiperidine	(2)	8.096	114	28011	1.135
50) Isophorone	(2)	8.230	82	121721	1.185
51) 2-Nitrophenol	(2)	8.341	139	26366	1.108

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

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on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.423	107	63785	1.208
56) Benzoic acid	(2)	8.516	105	111029M	2.759
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	28783	1.198
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	78942	1.207
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.679	104	99145	1.270
60) 2,4-Dichlorophenol	(2)	8.702	162	47524	1.189
146) Diallate trans/cis	(4)			52893	1.148
62) 1,2,4-Trichlorobenzene	(2)	8.836	180	56441	1.224
65)*Naphthalene-d8	(2)	8.924	136	646566	5.000
66) Naphthalene	(2)	8.959	128	178790	1.218
68) 2,6-Dichlorophenol	(2)	9.064	162	45656	1.169
67) 4-Chloroaniline	(2)	9.064	127	70648	1.187
69) Hexachloropropene	(2)	9.093	213	28513	1.171
71) Hexachlorobutadiene	(2)	9.157	225	31857	1.230
75) Quinoline	(2)	9.495	129	103712	1.184
76) Caprolactam	(2)	9.594	113	13928	1.165
77) N-Nitrosodi-n-butylamine	(2)	9.617	84	53836	1.203
80) 4-Chloro-3-methylphenol	(2)	9.839	107	51926	1.179
82) Safrole	(2)	9.944	162	41375	1.141
83) 2-Methylnaphthalene	(2)	10.060	142	115089	1.207
84) 1-Methylnaphthalene	(2)	10.218	142	103582	1.199
85) Hexachlorocyclopentadiene	(3)	10.305	237	26489	1.149
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	56848	1.218
88) cis-Isosafrole	(3)	10.416	162	7529	0.201
90) 2,4,6-Trichlorophenol	(3)	10.515	196	30588	1.100
92) 2,4,5-Trichlorophenol	(3)	10.562	196	35491	1.206
93)$2-Fluorobiphenyl	(3)	10.667	172	250861	2.437
94) trans-Isosafrole	(3)	10.777	162	32078	0.951
95) 1,1'-Biphenyl	(3)	10.824	154	143027	1.269
96) 2-Chloronaphthalene	(3)	10.836	162	111117	1.183
98) 1-Chloronaphthalene	(3)	10.871	162	102919	1.264
99) Diphenyl ether	(3)	10.999	170	73216	1.209
100) 2-Nitroaniline	(3)	11.022	138	29952	1.135
104) 1,4-Naphthoquinone	(3)	11.145	158	36676	1.075
105) 1,4-Dinitrobenzene	(3)	11.273	168	14374	1.054
106) Dimethylphthalate	(3)	11.343	163	119859	1.254
107) 1,3-Dinitrobenzene	(3)	11.378	168	16398	1.089
108) 2,6-Dinitrotoluene	(3)	11.430	165	24218	1.167
109) Acenaphthylene	(3)	11.494	152	142826	1.189
112) 3-Nitroaniline	(3)	11.669	138	25933	1.143

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on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.704	164	340706	5.000
114) Acenaphthene	(3)	11.751	153	113027	1.215
115) 2,4-Dinitrophenol	(3)	11.821	184	33924	2.641
116) 4-Nitrophenol	(3)	11.908	109	37972	2.161
117) Pentachlorobenzene	(3)	11.926	250	45992	1.236
119) Dibenzofuran	(3)	11.996	168	148886	1.237
118) 2,4-Dinitrotoluene	(3)	12.001	165	30930	1.075
121) 1-Naphthylamine	(3)	12.106	143	104169	1.136
122) 2,3,4,6-Tetrachlorophenol	(3)	12.153	232	24665	1.104
123) 2-Naphthylamine	(3)	12.211	143	103517	1.167
124) Diethylphthalate	(3)	12.334	149	110449	1.186
125) Thionazin	(3)	12.427	107	21609	1.313
126) Fluorene	(3)	12.427	166	117756	1.225
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	55973	1.242
128) 5-Nitro-o-toluidine	(3)	12.456	152	31471	1.206
129) 4-Nitroaniline	(3)	12.468	138	26646	1.167
130) 4,6-Dinitro-2-methylphenol	(4)	12.497	198	33074	1.887
132) NDPA as diphenylamine	(4)	12.590	169	95003	1.214
131) N-Nitrosodiphenylamine	(4)	12.590	169	95003	1.214
134) 1,2-Diphenylhydrazine	(4)	12.637	77	130621	1.198
135)$2,4,6-Tribromophenol	(3)	12.718	330	29186	2.269
137) Tetraethyldithiopyrophosphate	(4)	12.806	97	21582	1.188
139) 1,3,5-Trinitrobenzene	(4)	12.928	213	9766	0.925
140) Diallate (peak 1)	(4)	12.951	86	45314	0.953
141) Phorate	(4)	12.963	75	81445	1.097
142) Phenacetin	(4)	12.981	108	58410	1.137
143) 4-Bromophenyl-phenylether	(4)	13.045	248	32967	1.228
144) Diallate (peak 2)	(4)	13.056	86	7579	0.195
145) Hexachlorobenzene	(4)	13.086	284	33618	1.176
147) Dimethoate	(4)	13.167	87	46781	1.081
148) Atrazine	(4)	13.266	200	31519	1.244
149) Pentachlorophenol	(4)	13.342	266	18261	1.000
151) Pentachloronitrobenzene	(4)	13.354	237	13466	1.120
150) 4-Aminobiphenyl	(4)	13.371	169	25406	1.164
152) Pronamide	(4)	13.447	173	49536	1.151
154) Dinoseb	(4)	13.593	211	21835	0.869
153)*Phenanthrene-d10	(4)	13.593	188	625629	5.000
155) Phenanthrene	(4)	13.622	178	174394	1.207
157) Anthracene	(4)	13.686	178	170311	1.207
163) Carbazole	(4)	13.913	167	155600	1.192

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on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

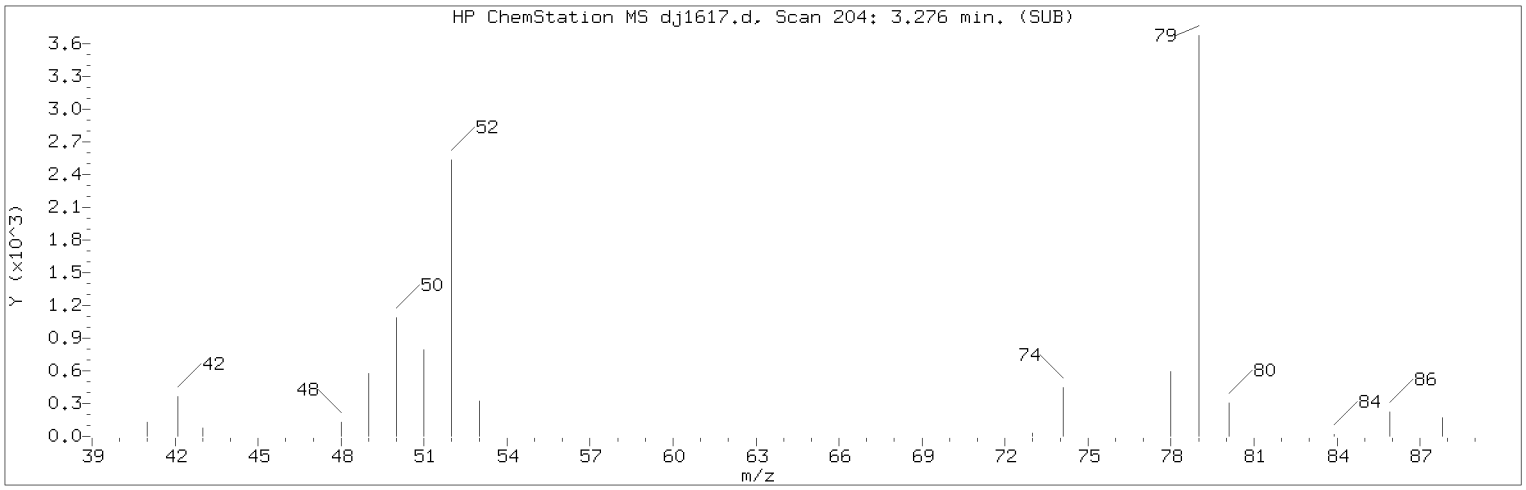
Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.106	109	33797	1.007
165) Di-n-butylphthalate	(4)	14.403	149	174013	1.110
167) Parathion	(4)	14.648	109	20651	0.972
168) 4-Nitroquinoline-1-oxide	(4)	14.688	190	10572	0.691
169) Octachlorostyrene	(4)	14.991	308	13431	1.247
222) Total PAHs	(6)			2926047	21.754
171) Isodrin	(4)	15.050	193	20984	1.219
173) Fluoranthene	(4)	15.283	202	185739	1.175
174) Benzidine	(5)	15.522	184	369378	3.387
175)*Pyrene-d10	(5)	15.603	212	737873	5.000
177) Pyrene	(5)	15.633	202	205917	1.206
179)$Terphenyl-d14	(5)	15.907	244	265032	2.438
182) p-Dimethylaminoazobenzene	(5)	16.140	225	21445	1.003
185) Chlorobenzilate	(5)	16.227	139	55522	1.119
187) 3,3'-Dimethylbenzidine	(5)	16.717	212	104584	1.045
188) Butylbenzylphthalate	(5)	16.758	149	79265	1.091
191) 2-Acetylaminofluorene	(5)	17.131	181	57585	0.887
193) 3,3'-Dichlorobenzidine	(5)	17.649	252	63683	1.063
195) Benzo(a)anthracene	(5)	17.649	228	181860	1.174
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.667	231	30883	1.028
196) Chrysene	(5)	17.713	228	178565	1.212
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	108709	1.032
203) 6-Methylchrysene	(5)	18.512	242	117728	1.085
205) Di-n-octylphthalate	(6)	18.978	149	172983	0.963
206) Benzo(b)fluoranthene	(6)	19.509	252	187998	1.177
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.509	256	68854	1.081
208) Benzo(k)fluoranthene	(6)	19.555	252	186863	1.191
211) Benzo(a)pyrene	(6)	20.039	252	169623	1.135
213)*Perylene-d12	(6)	20.132	264	633563	5.000
215) 3-Methylcholanthrene	(6)	20.604	268	57412	1.065
217) Dibenz(a,h)acridine	(6)	21.420	279	135363	1.079
218) Dibenz(a,j)acridine	(6)	21.490	279	144441	1.104
219) Indeno(1,2,3-cd)pyrene	(6)	21.741	276	164118M	1.170
220) Dibenz(a,h)anthracene	(6)	21.788	278	177228	1.216
221) Benzo(g,h,i)perylene	(6)	22.143	276	172361	1.178

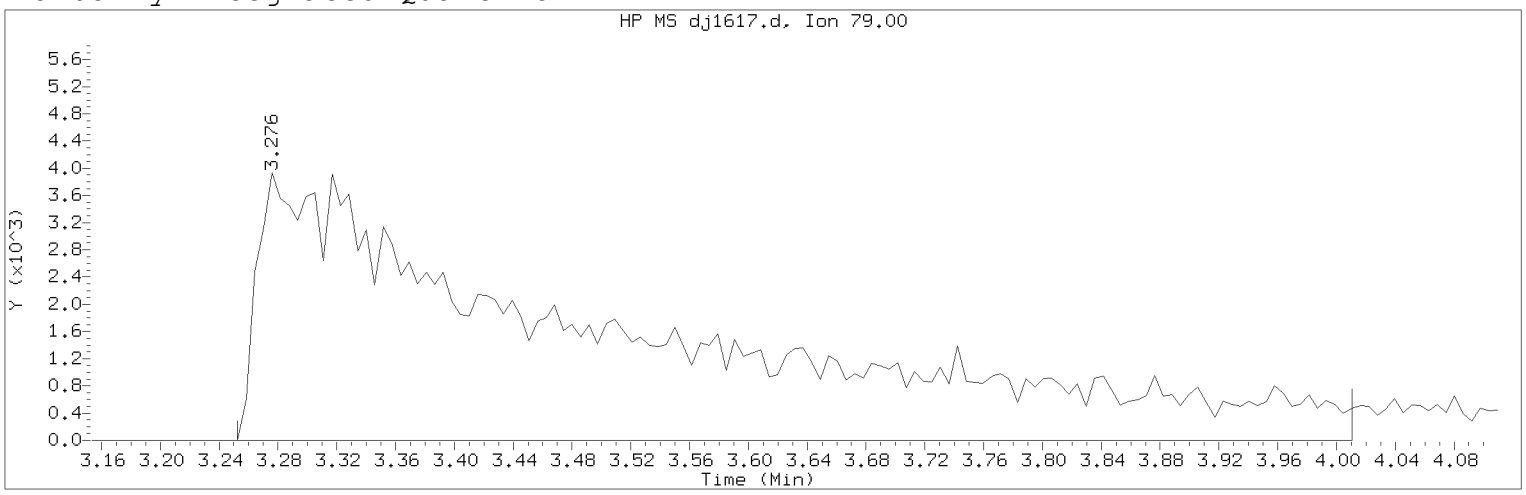
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

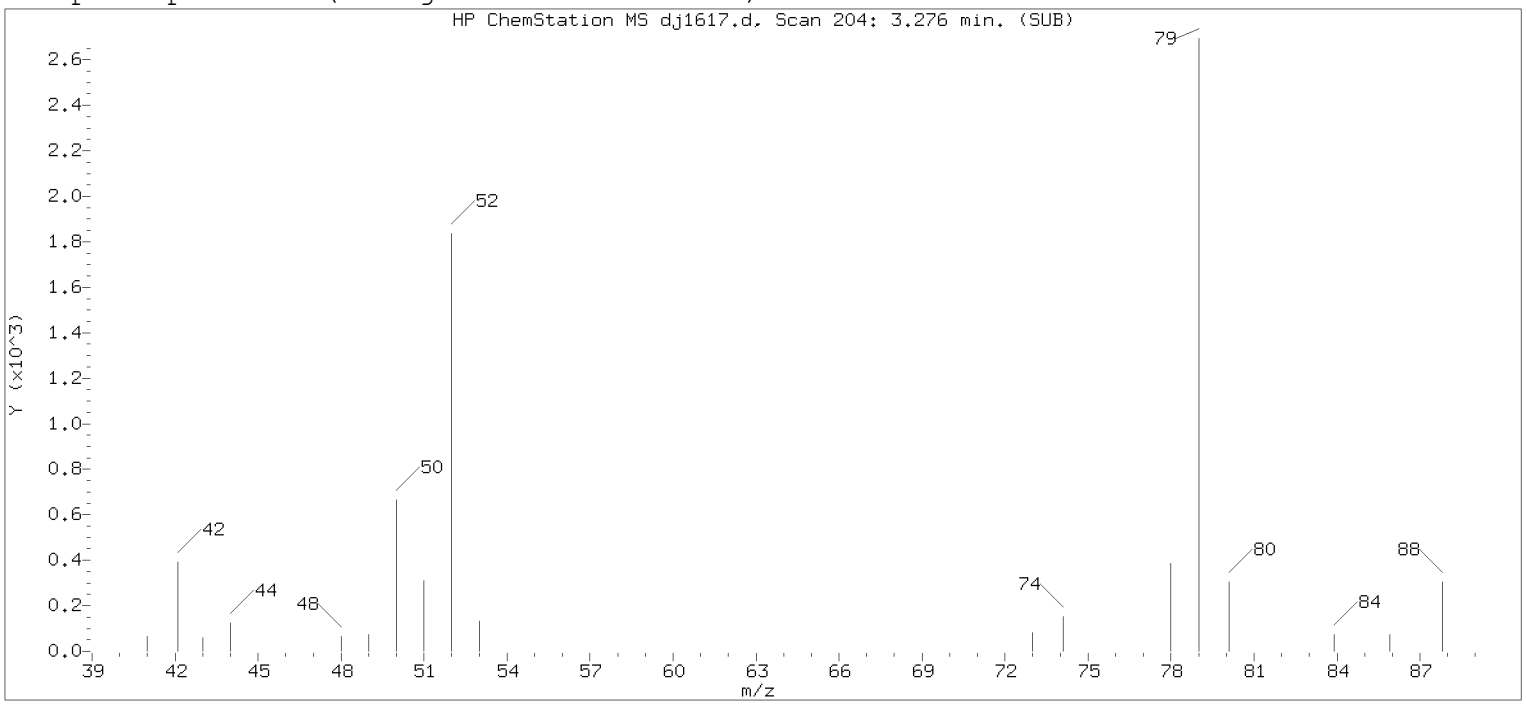
Compound Number : 5
Compound Name : Pyridine
Scan Number : 204
Retention Time (minutes) : 3.276
Quant Ion : 79.00
Area (flag) : 64758M
On-Column Amount (ng/ul) : 1.1910
Integration start scan : 199 Integration stop scan: 329
Y at integration start : 2 Y at integration end: 2

Reason for manual integration: improper integration

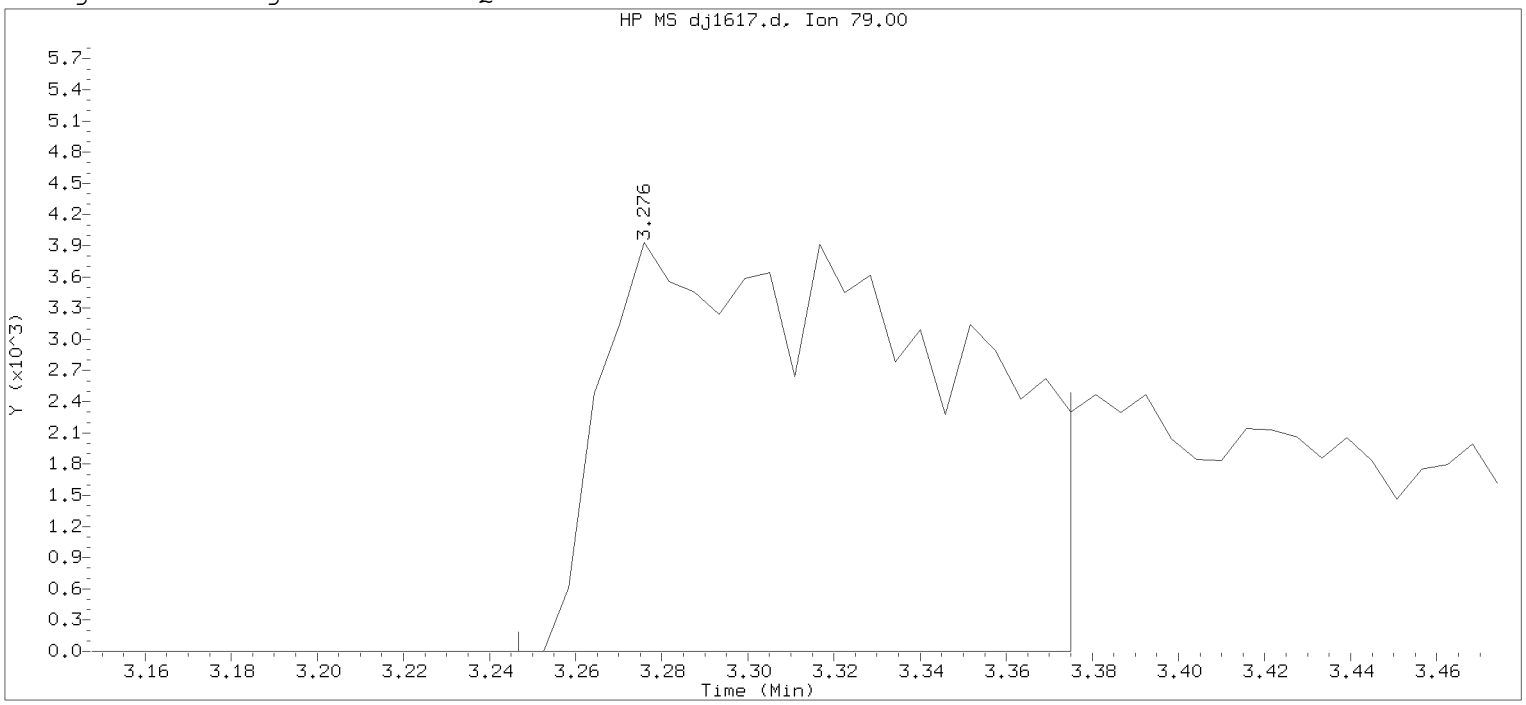
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

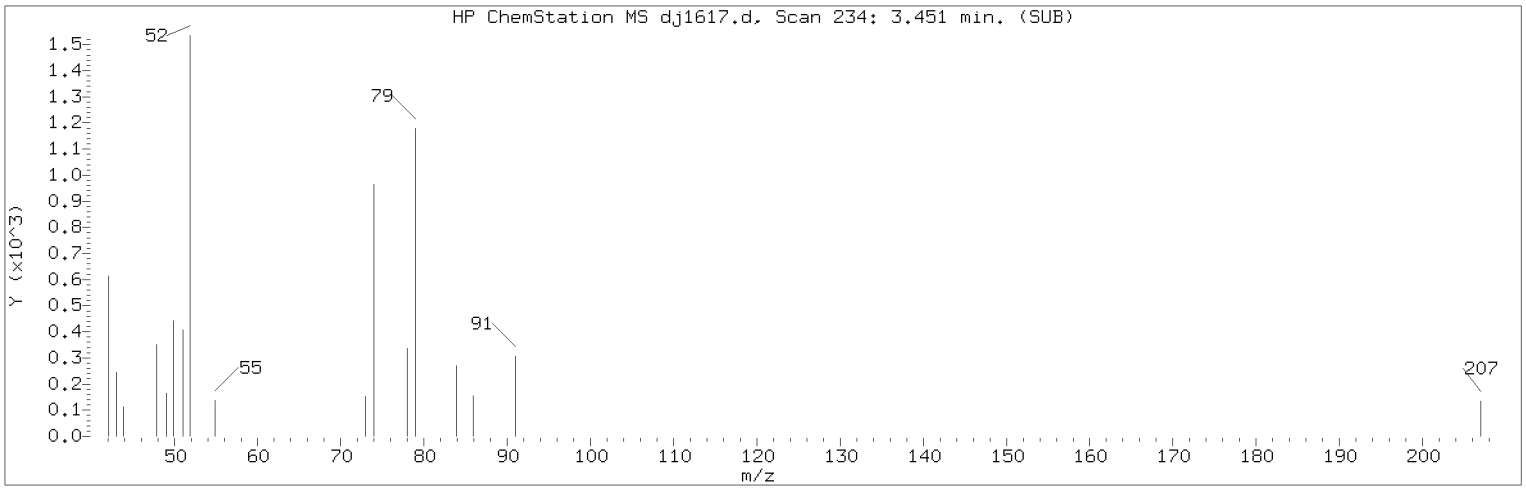
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

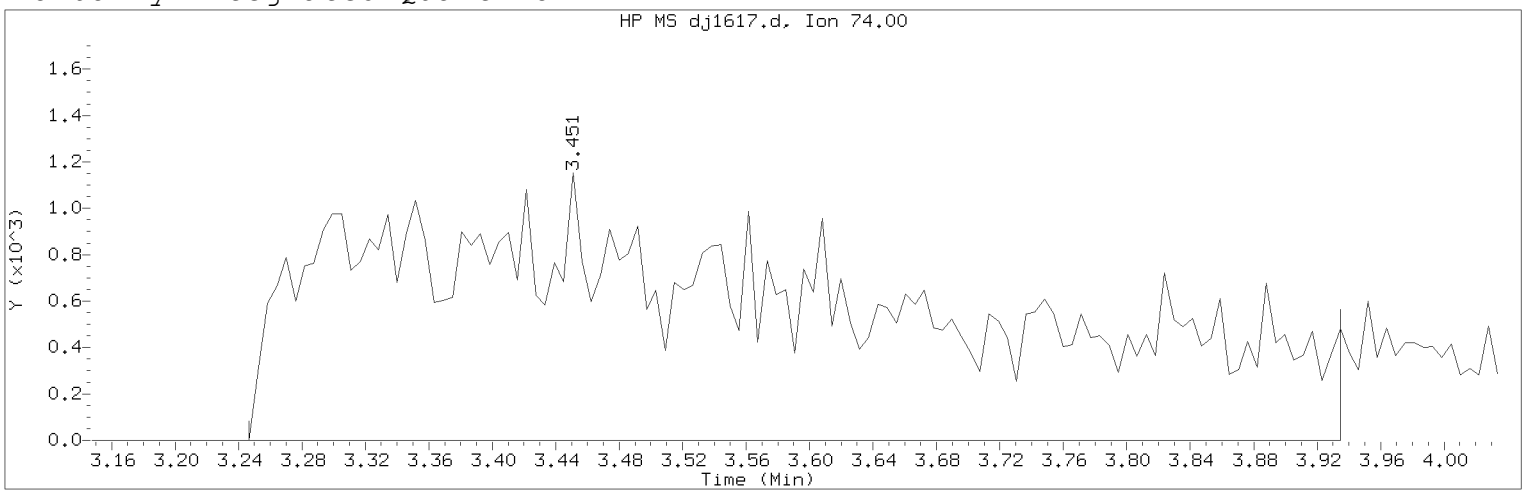
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 204		
Retention Time (minutes)	: 3.276		
Quant Ion	: 79.00		
Area	: 21553		
On-column Amount (ng/ul)	: 0.4561		
Integration start scan	: 198	Integration stop scan:	220
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used for data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

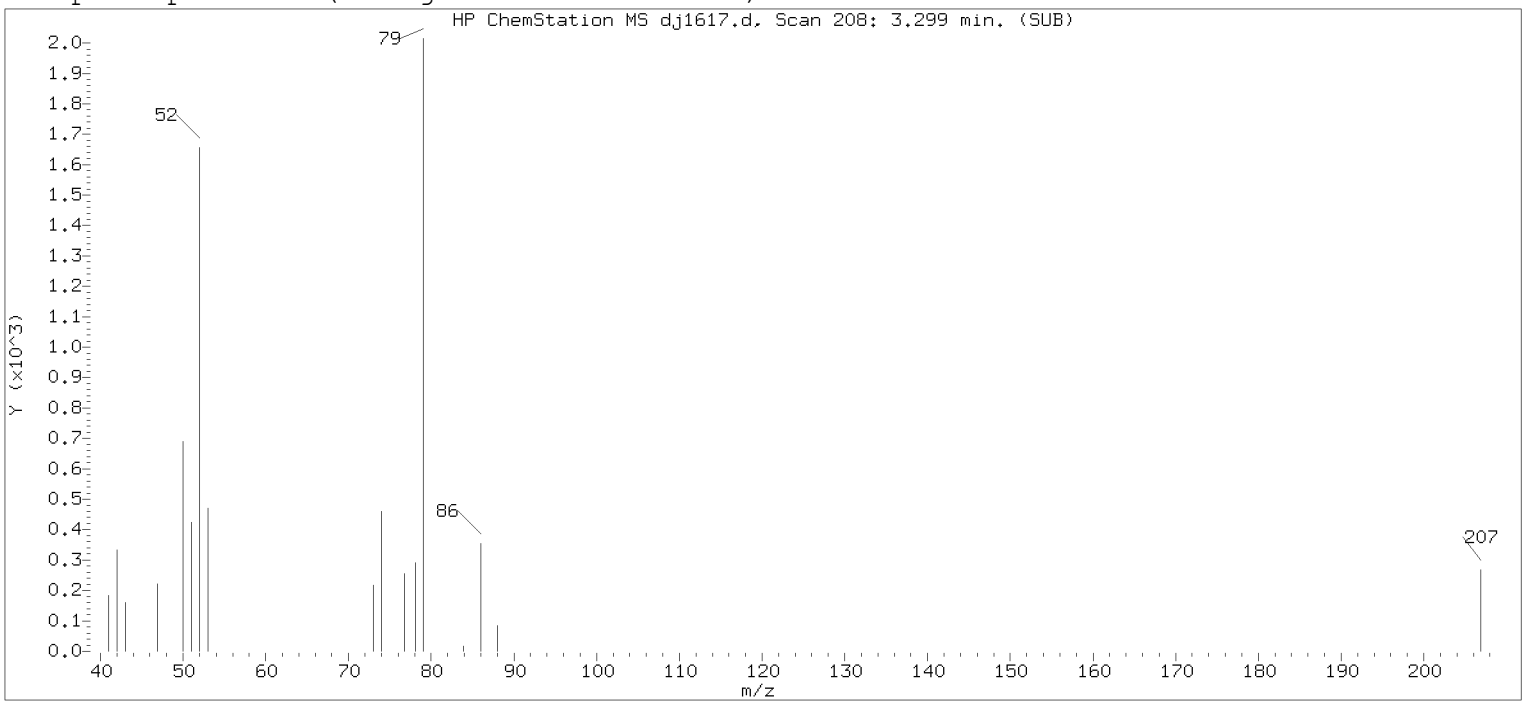
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 234
Retention Time (minutes) : 3.451
Quant Ion : 74.00
Area (flag) : 25299M
On-Column Amount (ng/ul) : 1.0096
Integration start scan : 198 Integration stop scan: 316
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: improper integration

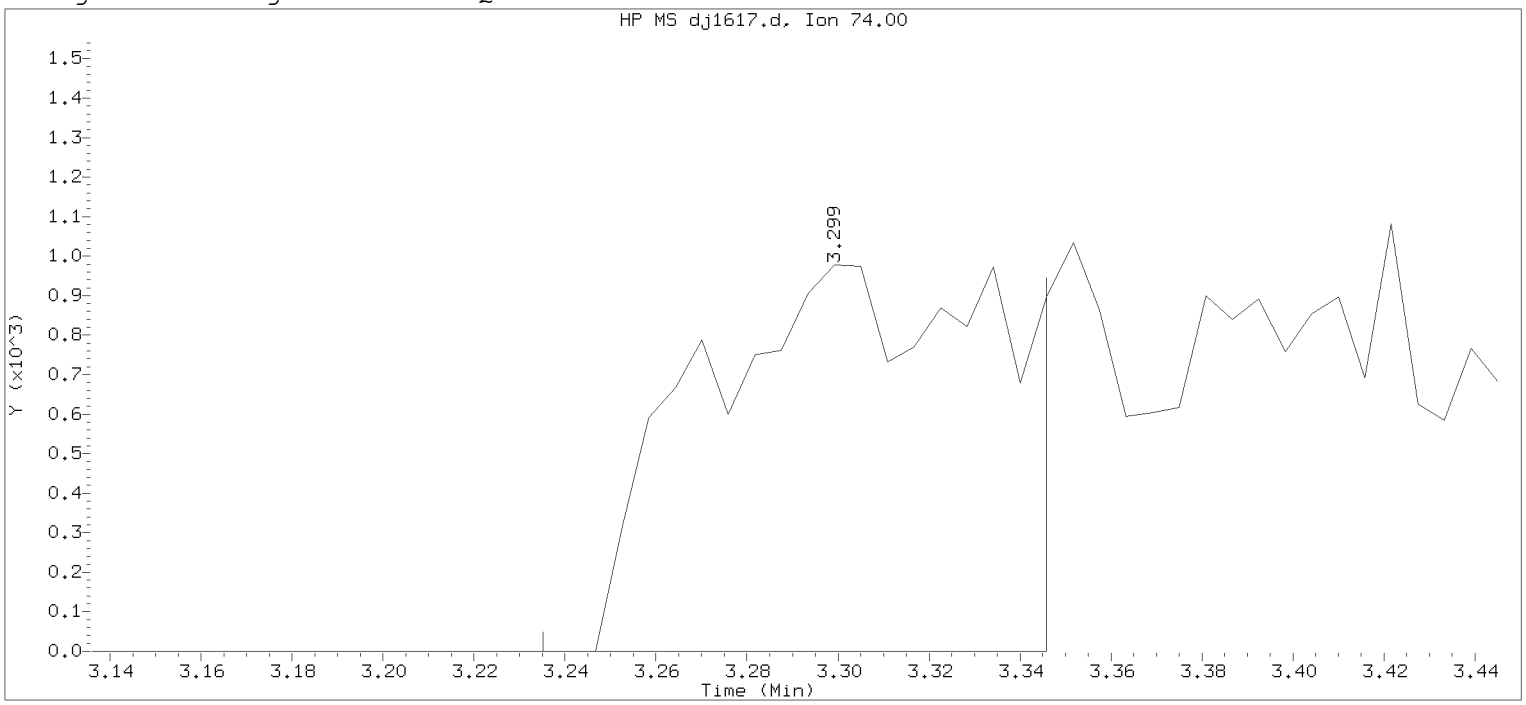
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

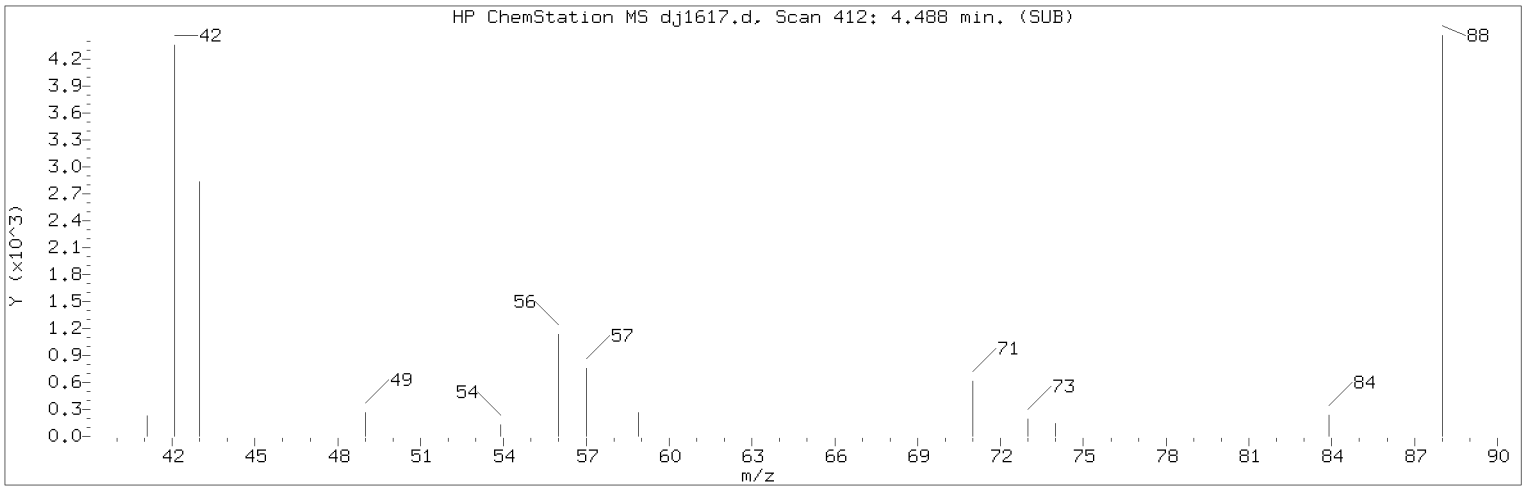
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

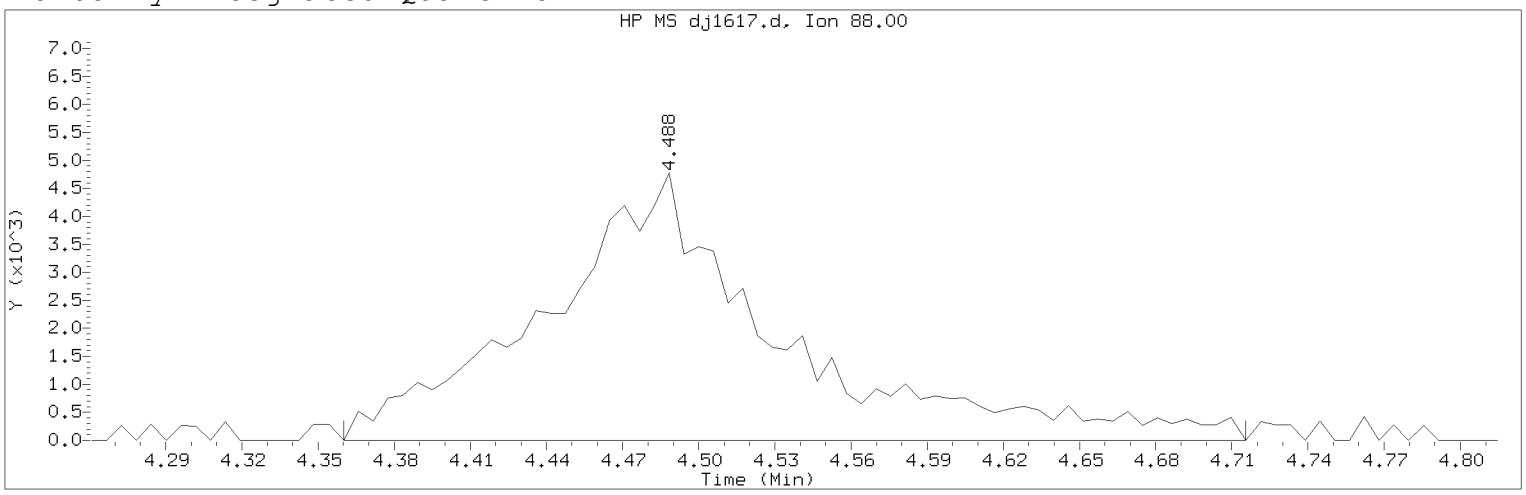
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 208		
Retention Time (minutes)	: 3.299		
Quant Ion	: 74.00		
Area	: 4415		
On-column Amount (ng/ul)	: 0.1881		
Integration start scan	: 196	Integration stop scan:	215
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used for data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

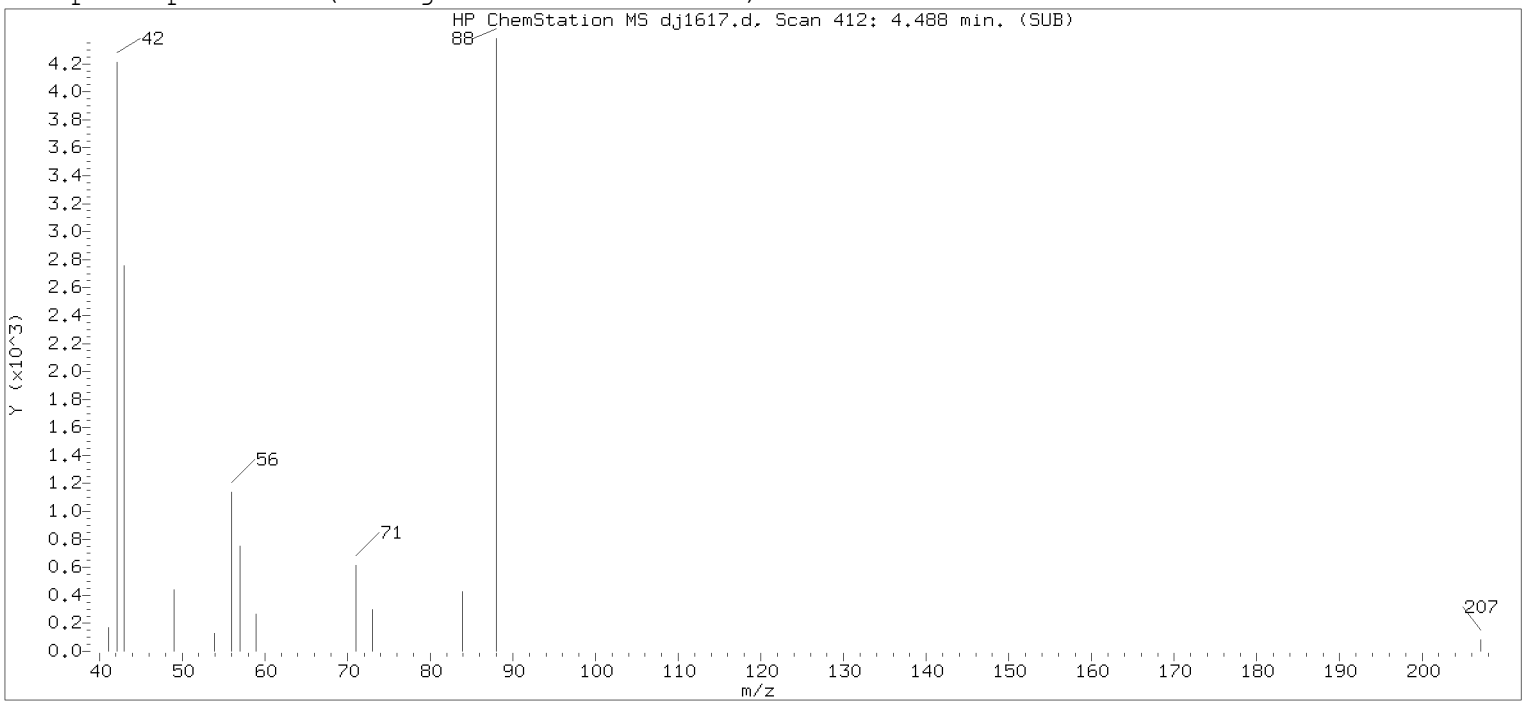
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 412
Retention Time (minutes) : 4.488
Quant Ion : 88.00
Area (flag) : 30375M
On-Column Amount (ng/ul) : 1.1877
Integration start scan : 389 Integration stop scan: 450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

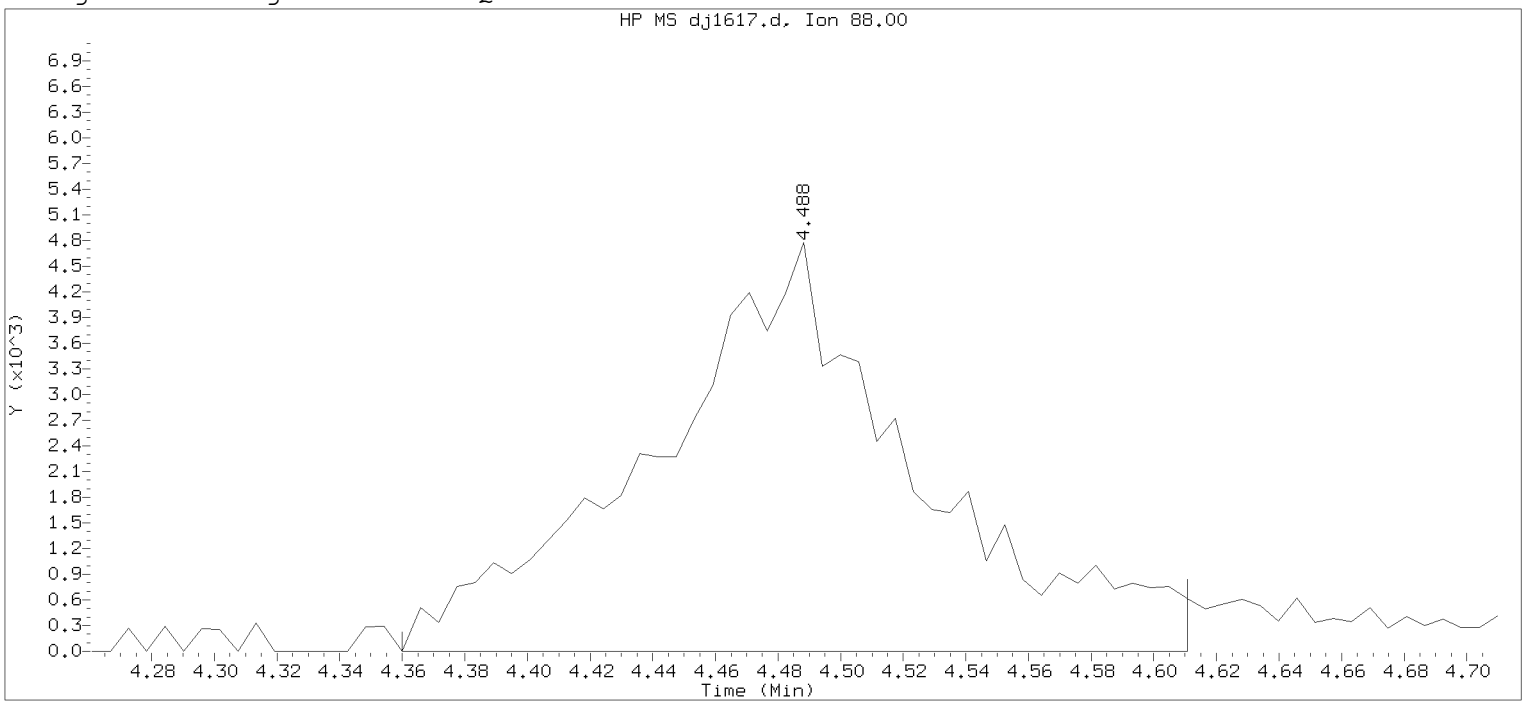
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

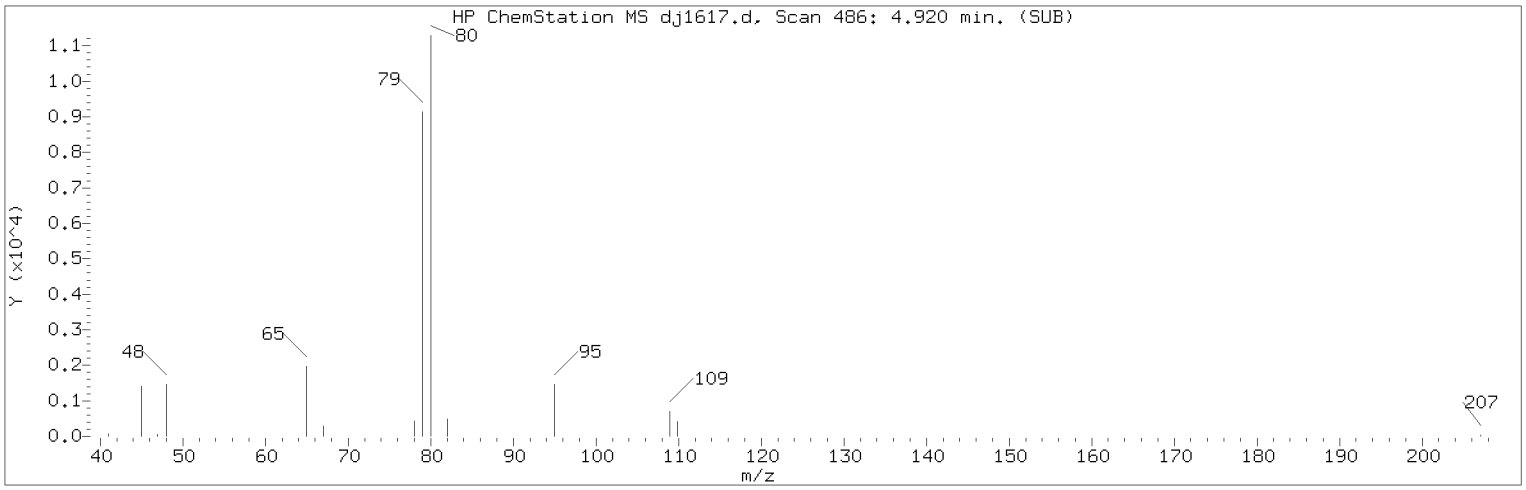
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

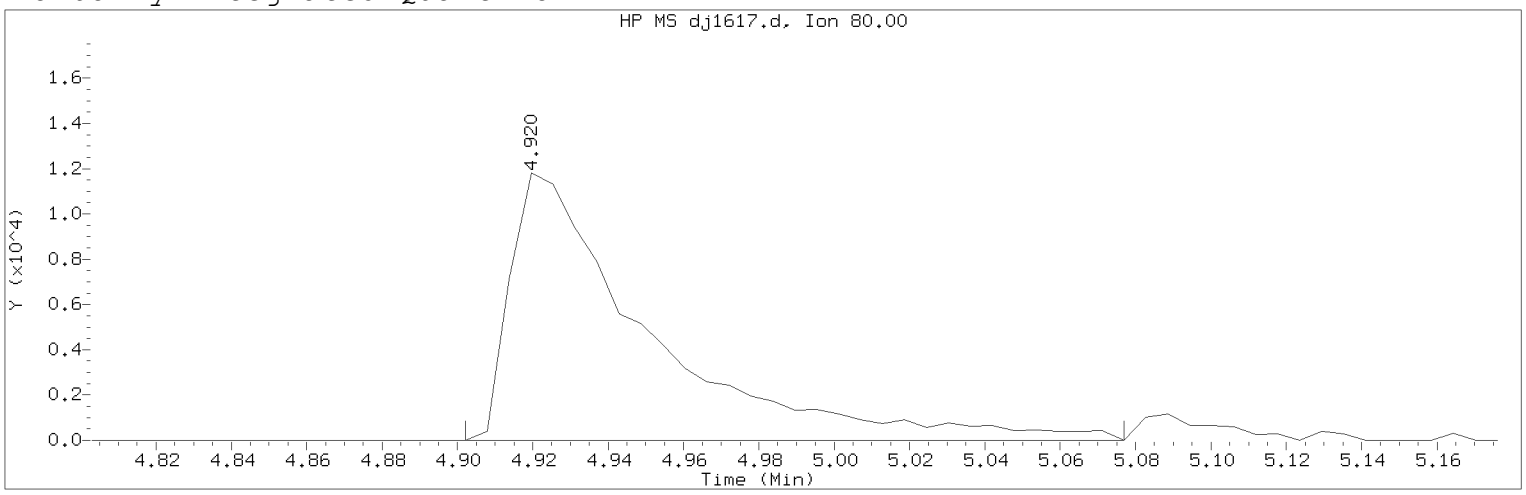
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 412		
Retention Time (minutes)	: 4.488		
Quant Ion	: 88.00		
Area	: 27799		
On-column Amount (ng/ul)	: 1.0960		
Integration start scan	: 389	Integration stop scan:	432
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

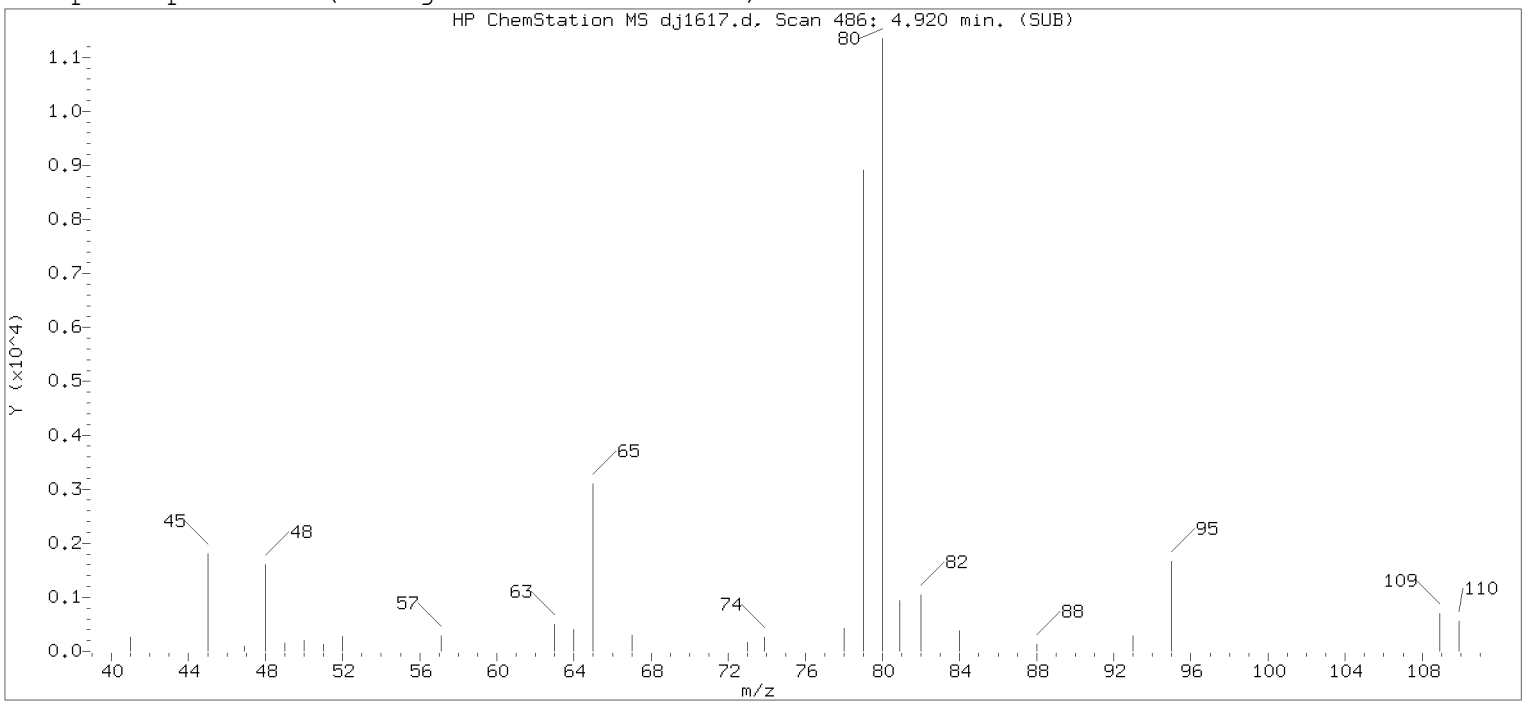
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 486
Retention Time (minutes) : 4.920
Quant Ion : 80.00
Area (flag) : 29919M
On-Column Amount (ng/ul) : 1.1511
Integration start scan : 482 Integration stop scan: 512
Y at integration start : 9 Y at integration end: 9

Reason for manual integration: improper integration

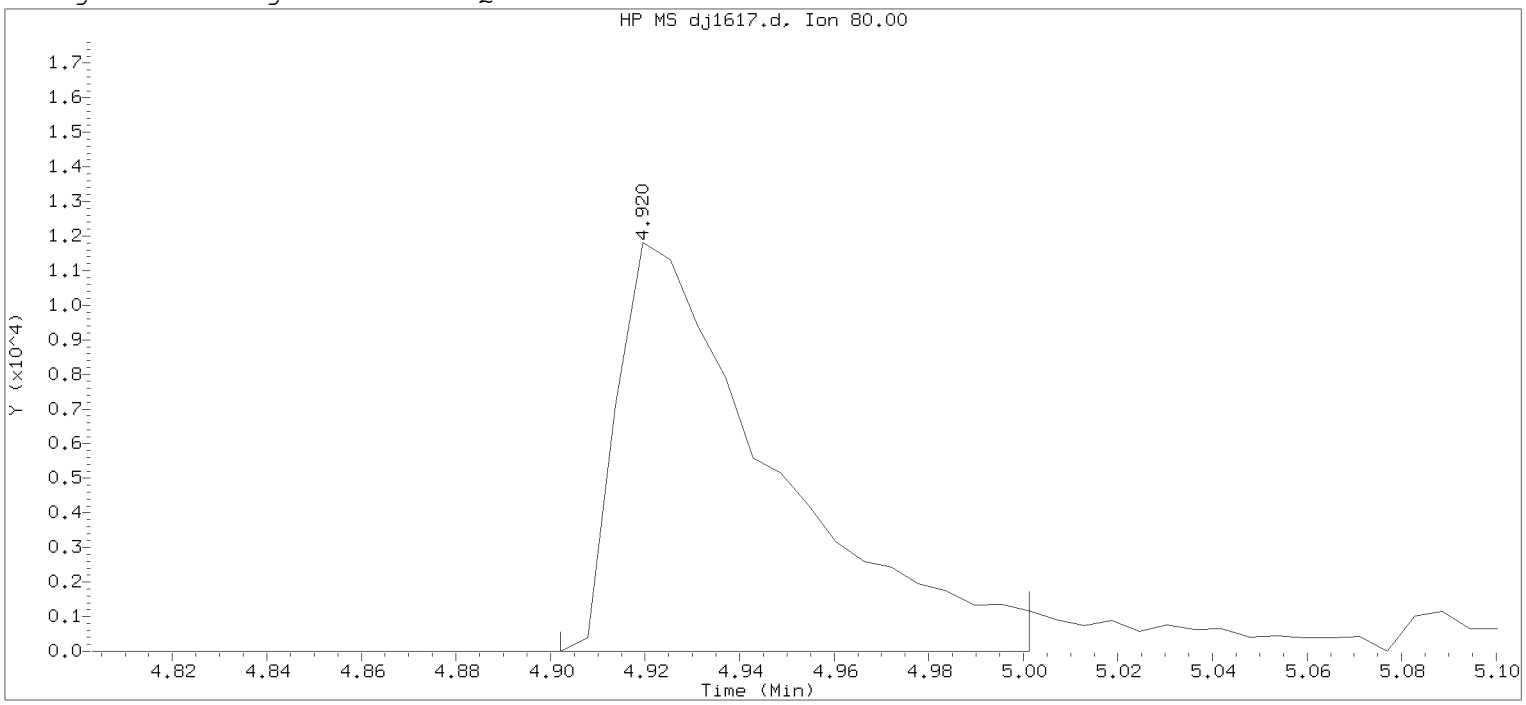
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

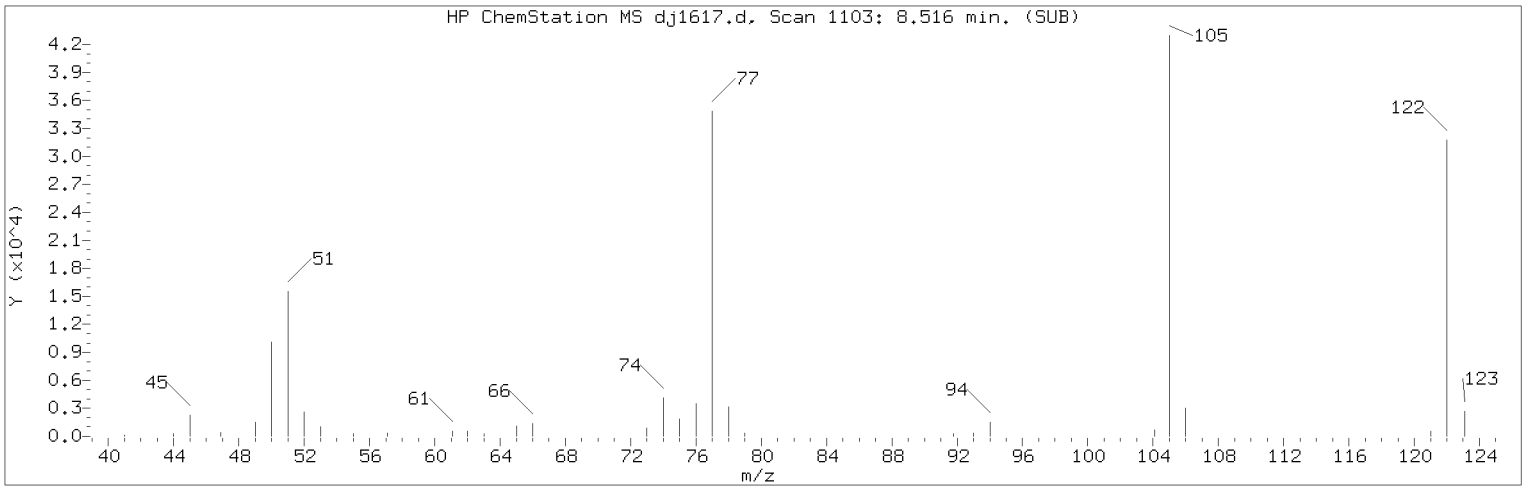
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

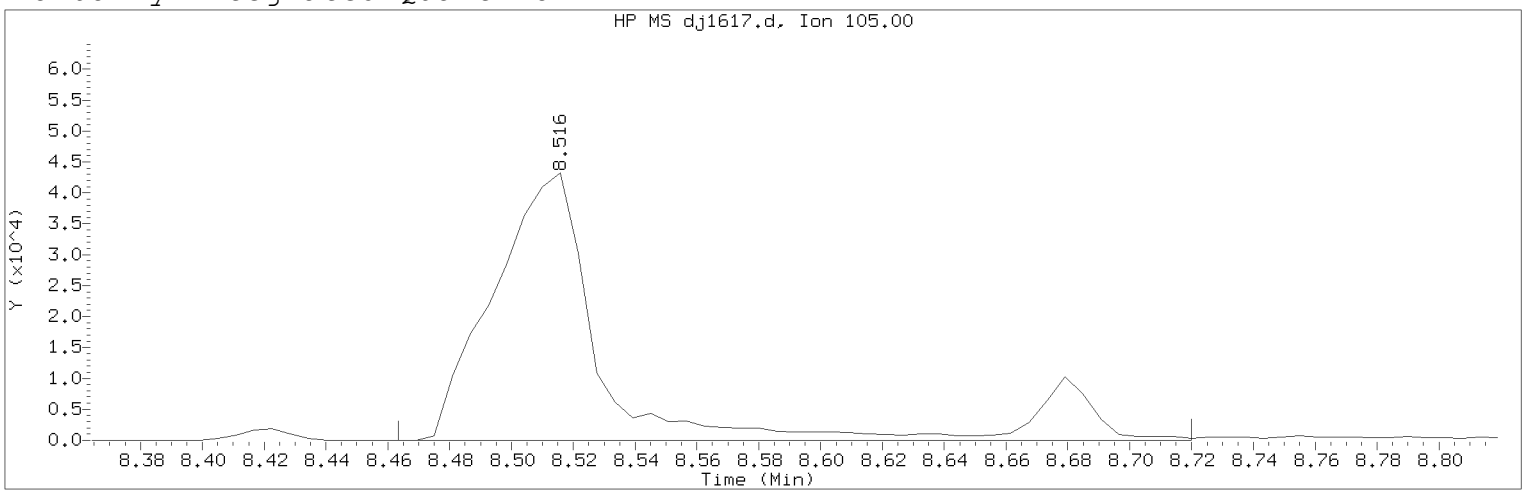
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 486		
Retention Time (minutes)	: 4.920		
Quant Ion	: 80.00		
Area	: 27290		
On-column Amount (ng/ul)	: 1.0500		
Integration start scan	: 482	Integration stop scan:	499
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used to create PDF.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

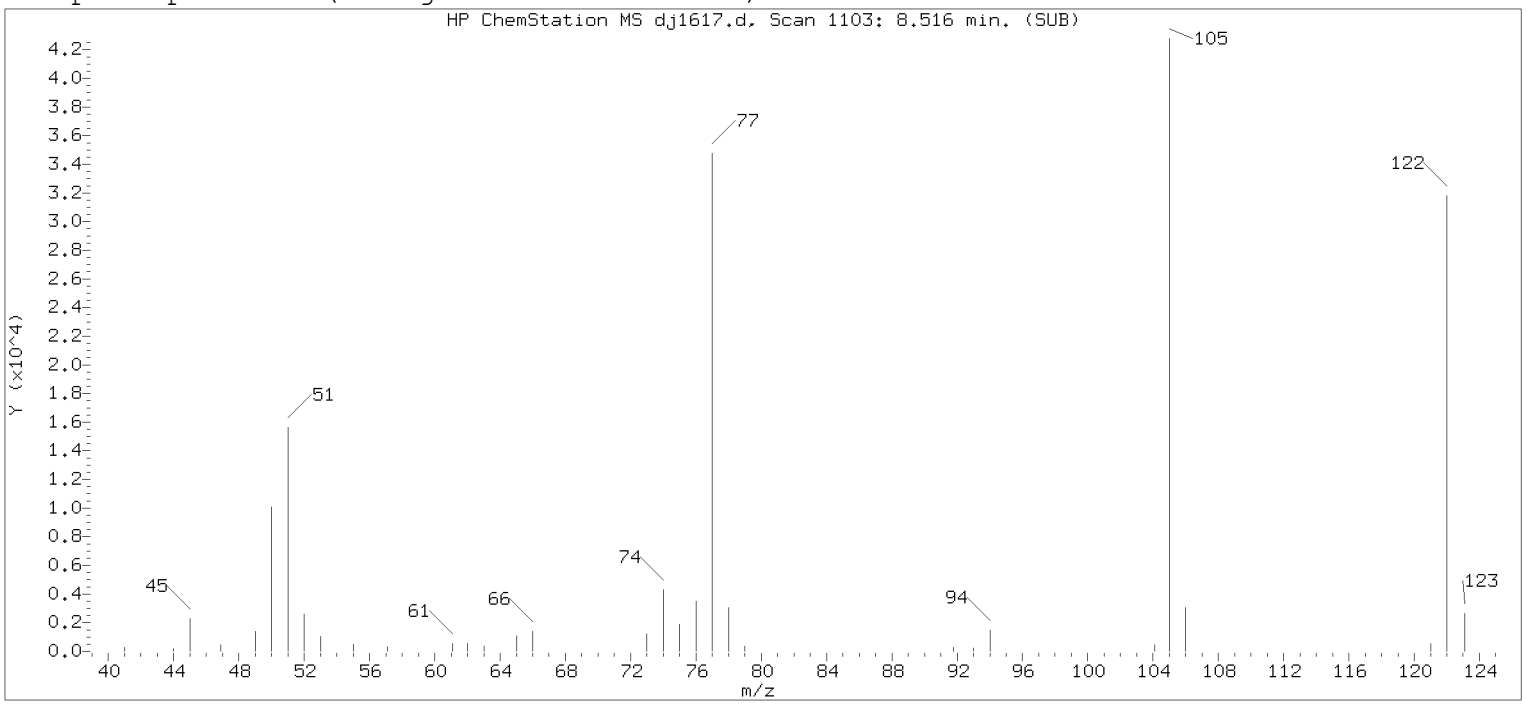
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1103
Retention Time (minutes) : 8.516
Quant Ion : 105.00
Area (flag) : 111029M
On-Column Amount (ng/ul) : 2.7592
Integration start scan : 1093 Integration stop scan: 1137
Y at integration start : 8 Y at integration end: 8

Reason for manual integration: improper integration

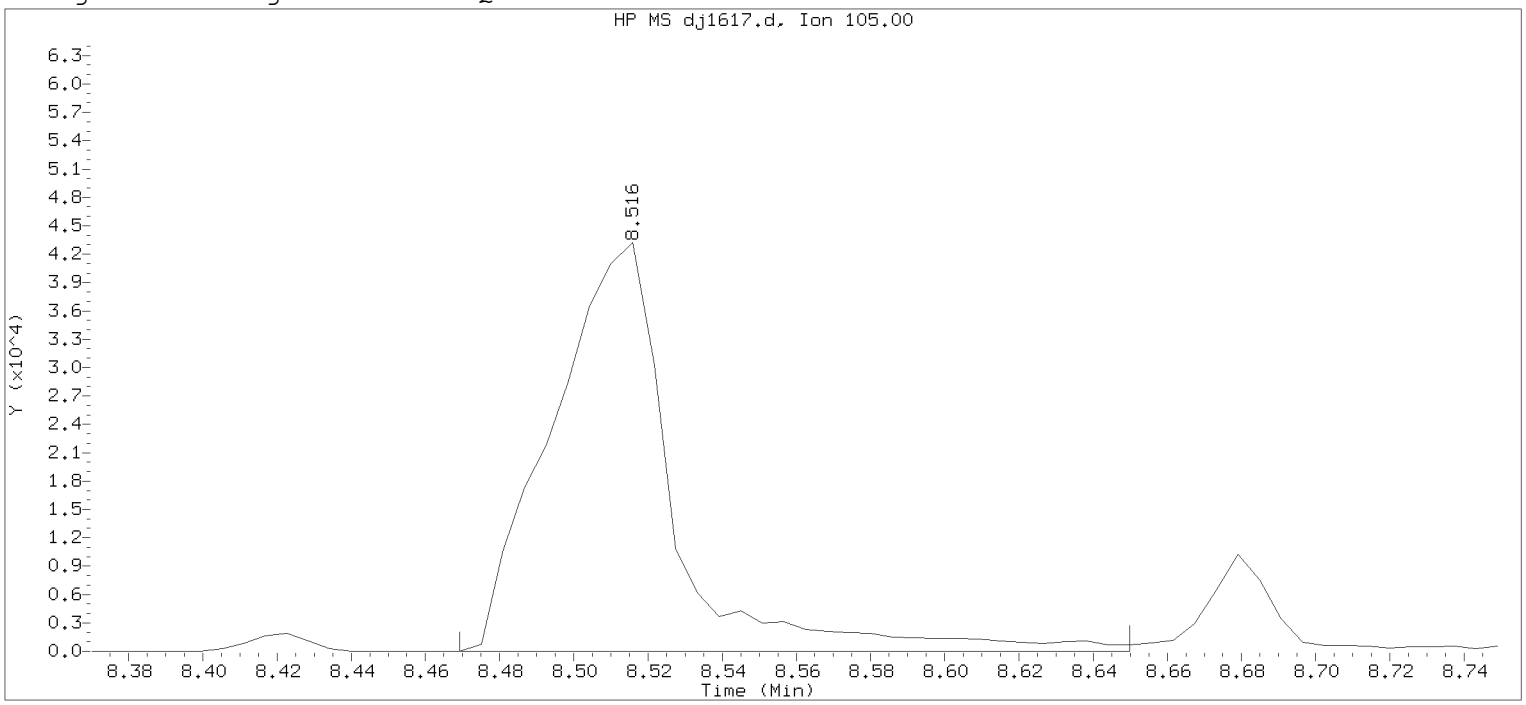
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

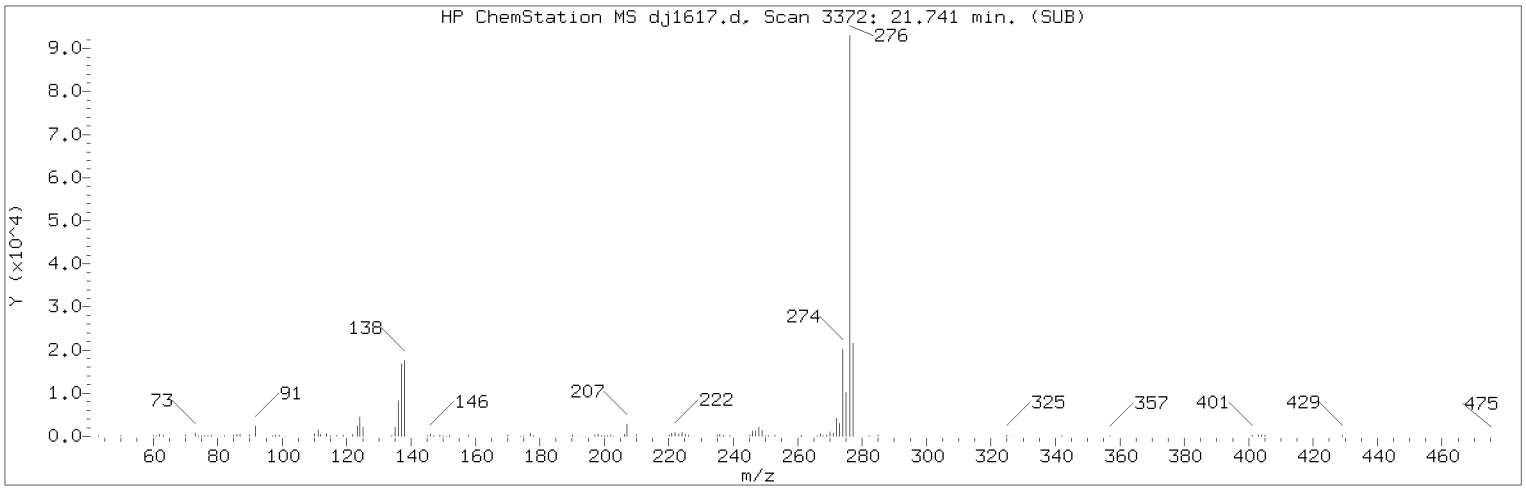
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

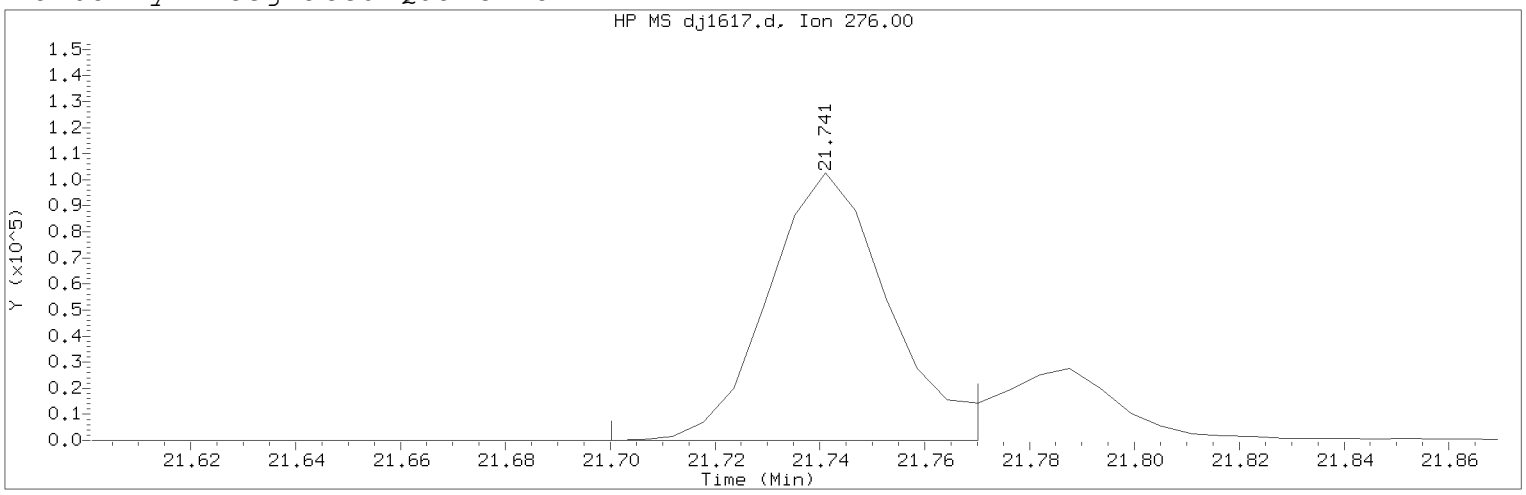
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1103		
Retention Time (minutes)	: 8.516		
Quant Ion	: 105.00		
Area	: 98576		
On-column Amount (ng/ul)	: 3.6464		
Integration start scan	: 1094	Integration stop scan:	1125
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

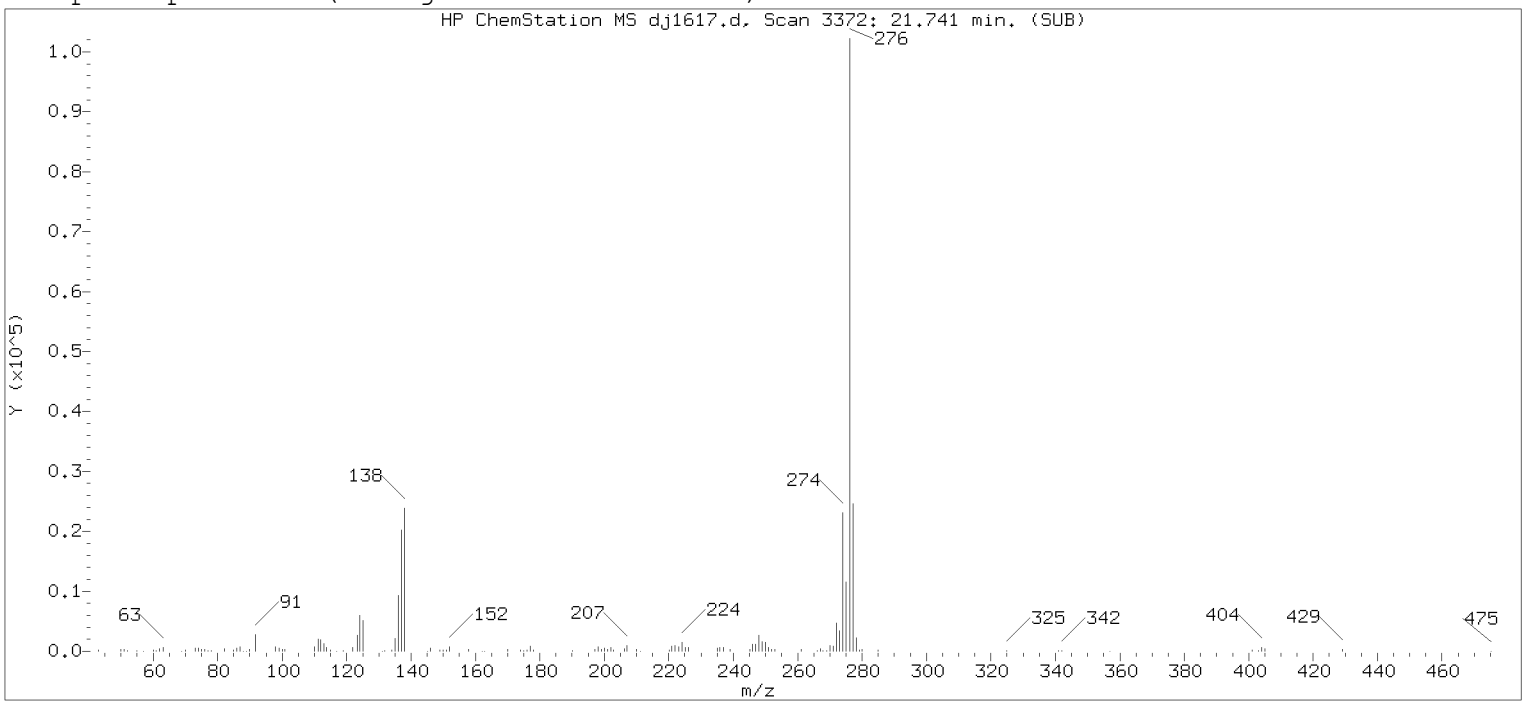
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3372
Retention Time (minutes) : 21.741
Quant Ion : 276.00
Area (flag) : 164118M
On-Column Amount (ng/ul) : 1.1700
Integration start scan : 3364 Integration stop scan: 3376
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

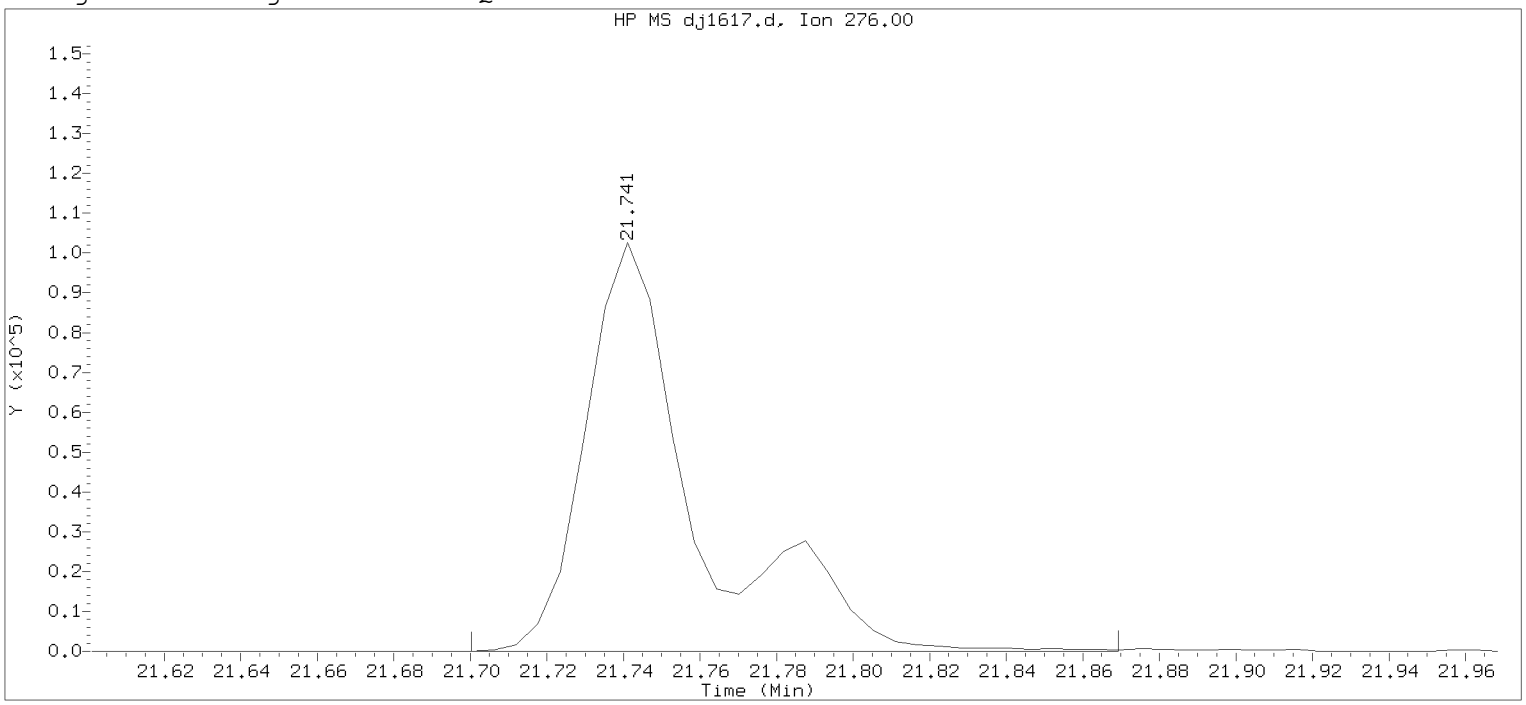
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



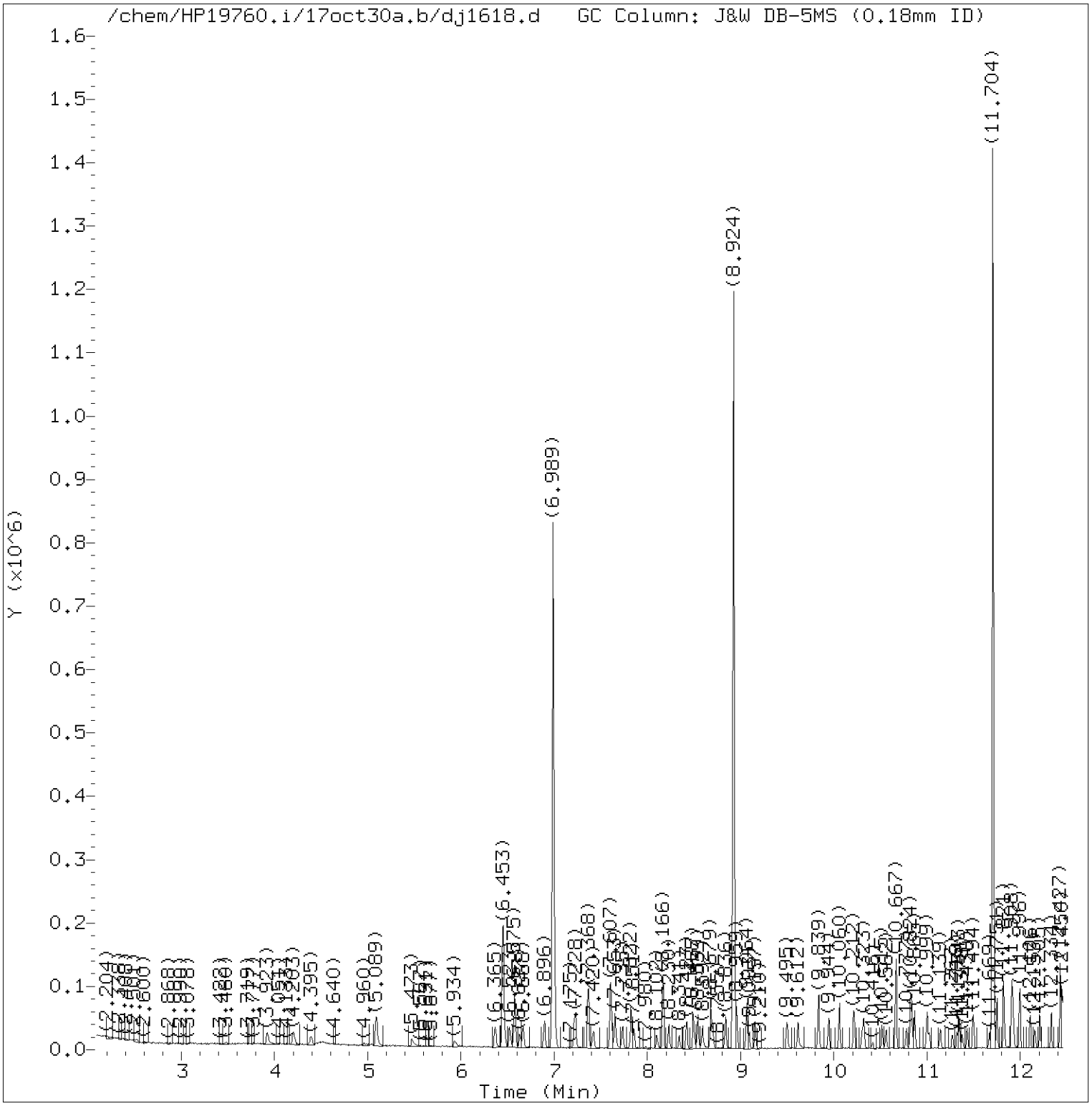
Data File: /chem/HP19760.i/17oct30a.b/dj1617.d Instrument ID: HP19760.i
Injection date and time: 30-OCT-2017 23:52 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:18
Date, time and analyst ID of latest file update: 31-Oct-2017 00:18 Automation

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3372		
Retention Time (minutes)	: 21.741		
Quant Ion	: 276.00		
Area	: 205338		
On-column Amount (ng/ul)	: 1.2001		
Integration start scan	: 3364	Integration stop scan:	3393
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used on 10/25/2017.



Total Ion Chromatogram (TIC)

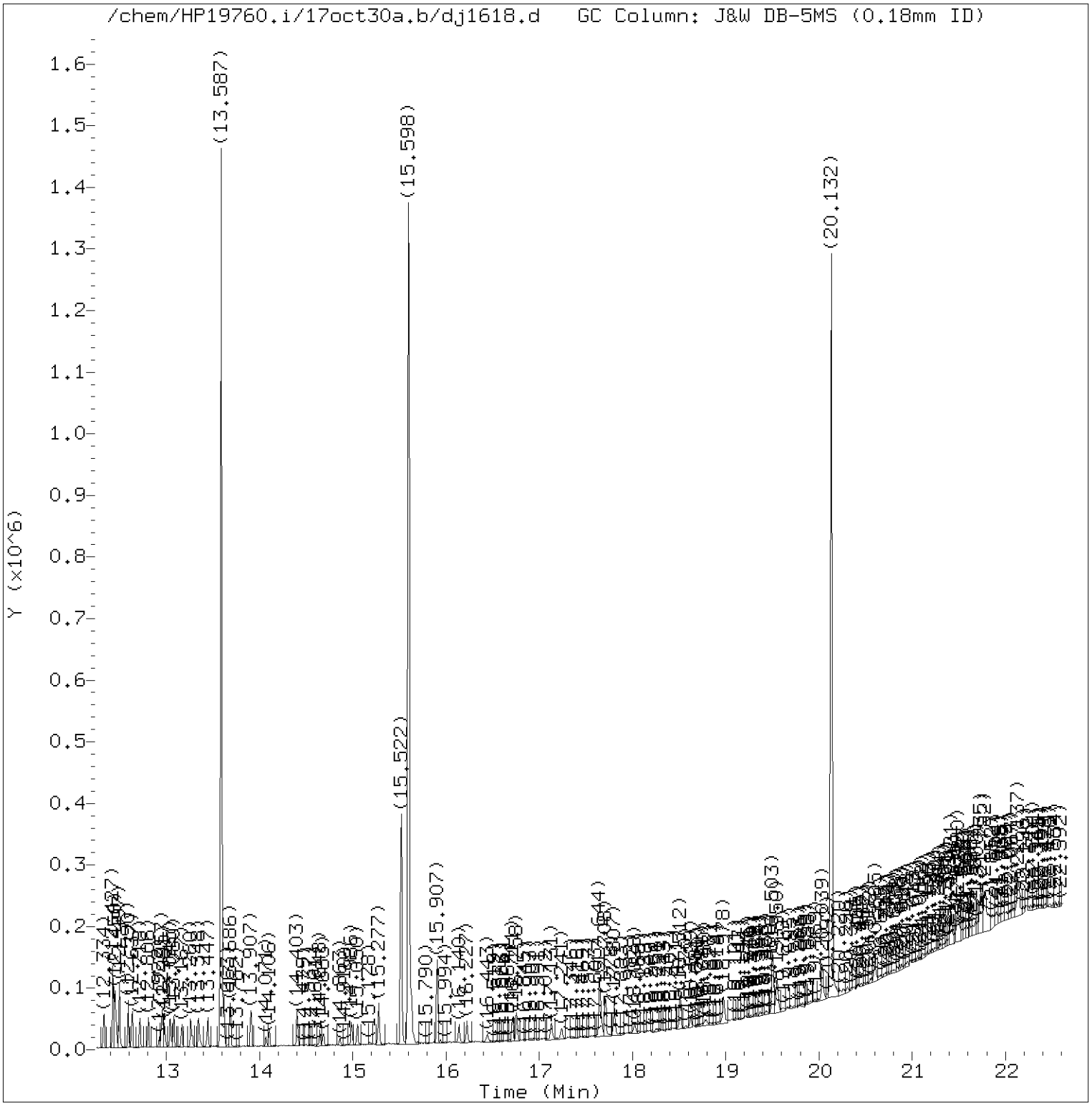
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.641	88	5674M	0.289
5) Pyridine	(1)	3.789	79	5401M	0.104
7) 2-Picoline	(1)	4.477	93	5177	0.091
8) N-Nitrosomethylethylamine	(1)	4.576	88	4613M	0.188
9) Methyl methanesulfonate	(1)	4.960	80	4665M	0.187
11)$2-Fluorophenol	(1)	5.095	112	21336	0.447
13) N-Nitrosodiethylamine	(1)	5.468	102	5104	0.223
42) Total Cresols	(1)			21838	0.462
15) Ethyl methanesulfonate	(1)	5.928	109	4295	0.184
16) Benzaldehyde	(1)	6.365	77	10305	0.242
17)$Phenol-d6	(1)	6.447	99	28570	0.454
18) Phenol	(1)	6.464	94	15807	0.239
19) Aniline	(1)	6.523	93	18329	0.226
20) a-methylstyrene	(1)	6.581	118	13310	0.254
22) bis(2-Chloroethyl)ether	(1)	6.627	93	12151	0.230
23) 2-Chlorophenol	(1)	6.668	128	11801	0.240
24) 1,3-Dichlorobenzene	(1)	6.896	146	13810	0.258
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	162731	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	14053	0.259
27) Benzyl alcohol	(1)	7.210	108	8112	0.250
28) 1,2-Dichlorobenzene	(1)	7.228	146	13207	0.258
31) 2-Methylphenol	(1)	7.368	108	10793	0.233
30) Indene	(1)	7.368	115	24558	0.267
97) Isosafrole	(3)			7770	0.236
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.420	45	18463	0.254
34) bis(2-Chloroisopropyl)ether	(1)	7.420	45	18463	0.254
35) N-Nitrosopyrrolidine	(1)	7.595	100	4397	0.187
36) Acetophenone	(1)	7.601	105	16975	0.230
37) 4-Methylphenol	(1)	7.601	108	11045	0.229
38) N-Nitroso-di-n-propylamine	(1)	7.612	70	9025	0.224
40) o-Toluidine	(1)	7.653	106	18947	0.233
39) N-Nitrosomorpholine	(1)	7.659	56	6009	0.204
43) Hexachloroethane	(1)	7.735	117	5437	0.246
44)$Nitrobenzene-d5	(2)	7.822	82	27898	0.470
45) Nitrobenzene	(2)	7.851	77	14103	0.234
120) 2,4_2,6-Dinitrotoluenes	(3)			9573	0.410
48) N-Nitrosopiperidine	(2)	8.096	114	5841	0.241
50) Isophorone	(2)	8.230	82	22247	0.221
51) 2-Nitrophenol	(2)	8.341	139	4368	0.187
53) 2,4-Dimethylphenol	(2)	8.417	107	11287	0.218

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	8.487	105	27091M	0.686
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	5525	0.234
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	14327	0.223
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.679	104	19590	0.256
60) 2,4-Dichlorophenol	(2)	8.702	162	8203	0.209
146) Diallate trans/cis	(4)			9986	0.228
62) 1,2,4-Trichlorobenzene	(2)	8.836	180	11023	0.244
65)*Naphthalene-d8	(2)	8.924	136	634432	5.000
66) Naphthalene	(2)	8.959	128	35297	0.245
68) 2,6-Dichlorophenol	(2)	9.064	162	8677	0.226
67) 4-Chloroaniline	(2)	9.070	127	13514	0.231
69) Hexachloropropene	(2)	9.093	213	5388	0.226
71) Hexachlorobutadiene	(2)	9.157	225	6373	0.251
75) Quinoline	(2)	9.495	129	19505	0.227
76) Caprolactam	(2)	9.612	113	1604M	0.137
77) N-Nitrosodi-n-butylamine	(2)	9.618	84	9026	0.206
80) 4-Chloro-3-methylphenol	(2)	9.839	107	9154	0.212
82) Safrole	(2)	9.944	162	8285	0.233
83) 2-Methylnaphthalene	(2)	10.060	142	22198	0.237
84) 1-Methylnaphthalene	(2)	10.212	142	20286	0.239
85) Hexachlorocyclopentadiene	(3)	10.305	237	5117	0.232
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	11702	0.262
88) cis-Isosafrole	(3)	10.416	162	1571	0.044
90) 2,4,6-Trichlorophenol	(3)	10.515	196	5527	0.207
92) 2,4,5-Trichlorophenol	(3)	10.562	196	6096	0.216
93)$2-Fluorobiphenyl	(3)	10.667	172	48578	0.492
94) trans-Isosafrole	(3)	10.777	162	6199	0.192
95) 1,1'-Biphenyl	(3)	10.824	154	26291	0.243
96) 2-Chloronaphthalene	(3)	10.836	162	22106	0.246
98) 1-Chloronaphthalene	(3)	10.865	162	19666	0.252
99) Diphenyl ether	(3)	10.999	170	14099	0.243
100) 2-Nitroaniline	(3)	11.022	138	5080	0.201
104) 1,4-Naphthoquinone	(3)	11.145	158	6178	0.189
105) 1,4-Dinitrobenzene	(3)	11.267	168	2371	0.181
106) Dimethylphthalate	(3)	11.343	163	22627	0.247
107) 1,3-Dinitrobenzene	(3)	11.372	168	2599	0.180
108) 2,6-Dinitrotoluene	(3)	11.430	165	4044	0.203
109) Acenaphthylene	(3)	11.494	152	26975	0.234
112) 3-Nitroaniline	(3)	11.669	138	4068	0.187
113)*Acenaphthene-d10	(3)	11.704	164	326564	5.000

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.751	153	21850	0.245
115) 2,4-Dinitrophenol	(3)	11.821	184	12895	1.047
116) 4-Nitrophenol	(3)	11.908	109	14864	0.882
117) Pentachlorobenzene	(3)	11.926	250	8732	0.245
119) Dibenzofuran	(3)	11.996	168	28621	0.248
118) 2,4-Dinitrotoluene	(3)	12.001	165	5529	0.200
121) 1-Naphthylamine	(3)	12.106	143	17521	0.199
122) 2,3,4,6-Tetrachlorophenol	(3)	12.153	232	4442	0.207
123) 2-Naphthylamine	(3)	12.211	143	18298	0.215
124) Diethylphthalate	(3)	12.334	149	20522	0.230
125) Thionazin	(3)	12.427	107	4213	0.267
126) Fluorene	(3)	12.427	166	23070	0.250
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	10591	0.245
128) 5-Nitro-o-toluidine	(3)	12.456	152	5250	0.210
129) 4-Nitroaniline	(3)	12.468	138	3978	0.182
130) 4,6-Dinitro-2-methylphenol	(4)	12.497	198	11634	0.699
132) NDPA as diphenylamine	(4)	12.590	169	17009	0.229
131) N-Nitrosodiphenylamine	(4)	12.590	169	17009	0.229
134) 1,2-Diphenylhydrazine	(4)	12.637	77	24371	0.235
135)$2,4,6-Tribromophenol	(3)	12.718	330	4717	0.383
137) Tetraethyldithiopyrophosphate	(4)	12.806	97	3956	0.229
139) 1,3,5-Trinitrobenzene	(4)	12.928	213	1443	0.144
140) Diallate (peak 1)	(4)	12.952	86	8559	0.190
141) Phorate	(4)	12.963	75	14138	0.201
142) Phenacetin	(4)	12.981	108	9492	0.195
143) 4-Bromophenyl-phenylether	(4)	13.045	248	5994	0.235
144) Diallate (peak 2)	(4)	13.056	86	1427	0.039
145) Hexachlorobenzene	(4)	13.080	284	6674	0.246
147) Dimethoate	(4)	13.167	87	7663	0.187
148) Atrazine	(4)	13.266	200	5324	0.221
149) Pentachlorophenol	(4)	13.342	266	2734	0.158
151) Pentachloronitrobenzene	(4)	13.348	237	2530	0.222
150) 4-Aminobiphenyl	(4)	13.371	169	4581	0.221
152) Pronamide	(4)	13.447	173	8090	0.198
154) Dinoseb	(4)	13.587	211	2817	0.118
153)*Phenanthrene-d10	(4)	13.587	188	594067	5.000
155) Phenanthrene	(4)	13.616	178	33415	0.244
157) Anthracene	(4)	13.686	178	30365	0.227
163) Carbazole	(4)	13.907	167	27111	0.219
164) Methyl parathion	(4)	14.106	109	5326	0.167

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

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

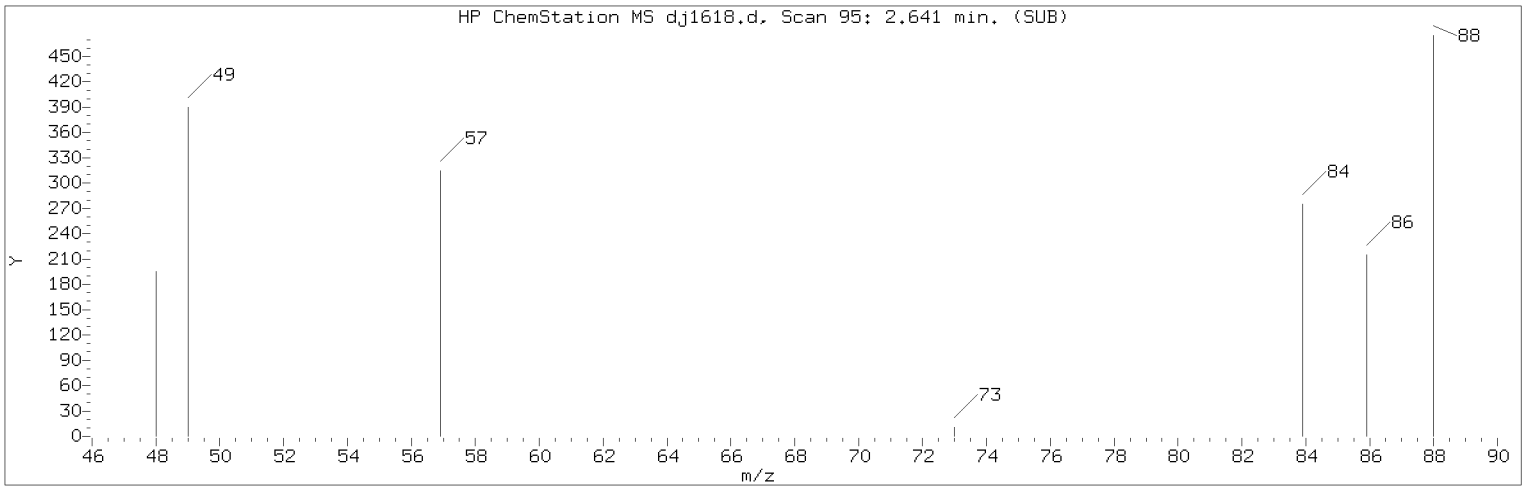
Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.403	149	30938	0.208
167) Parathion	(4)	14.648	109	3332	0.165
168) 4-Nitroquinoline-1-oxide	(4)	14.688	190	1491	0.103
169) Octachlorostyrene	(4)	14.986	308	2674	0.262
222) Total PAHs	(6)			538500	4.291
171) Isodrin	(4)	15.050	193	4785	0.293
173) Fluoranthene	(4)	15.277	202	34356	0.229
174) Benzidine	(5)	15.522	184	174420	1.705
175)*Pyrene-d10	(5)	15.598	212	692396	5.000
177) Pyrene	(5)	15.627	202	39707	0.248
179)$Terphenyl-d14	(5)	15.907	244	48487	0.475
182) p-Dimethylaminoazobenzene	(5)	16.140	225	3433	0.171
185) Chlorobenzilate	(5)	16.221	139	9222	0.198
187) 3,3'-Dimethylbenzidine	(5)	16.711	212	17454	0.186
188) Butylbenzylphthalate	(5)	16.758	149	13019	0.191
191) 2-Acetylaminofluorene	(5)	17.131	181	8248	0.135
193) 3,3'-Dichlorobenzidine	(5)	17.649	252	9558	0.170
195) Benzo(a)anthracene	(5)	17.649	228	31179	0.215
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.667	231	4711	0.167
196) Chrysene	(5)	17.708	228	31796	0.230
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	17150	0.174
203) 6-Methylchrysene	(5)	18.512	242	20283	0.199
205) Di-n-octylphthalate	(6)	18.978	149	26615	0.159
206) Benzo(b)fluoranthene	(6)	19.503	252	33343	0.224
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.509	256	9965	0.168
208) Benzo(k)fluoranthene	(6)	19.555	252	34352	0.235
211) Benzo(a)pyrene	(6)	20.039	252	29668	0.213
213)*Perylene-d12	(6)	20.132	264	591116	5.000
215) 3-Methylcholanthrene	(6)	20.599	268	11494	0.228
217) Dibenz(a,h)acridine	(6)	21.421	279	23724	0.203
218) Dibenz(a,j)acridine	(6)	21.490	279	23843	0.195
219) Indeno(1,2,3-cd)pyrene	(6)	21.735	276	28728M	0.220
220) Dibenz(a,h)anthracene	(6)	21.782	278	30572	0.225
221) Benzo(g,h,i)perylene	(6)	22.137	276	31343	0.230

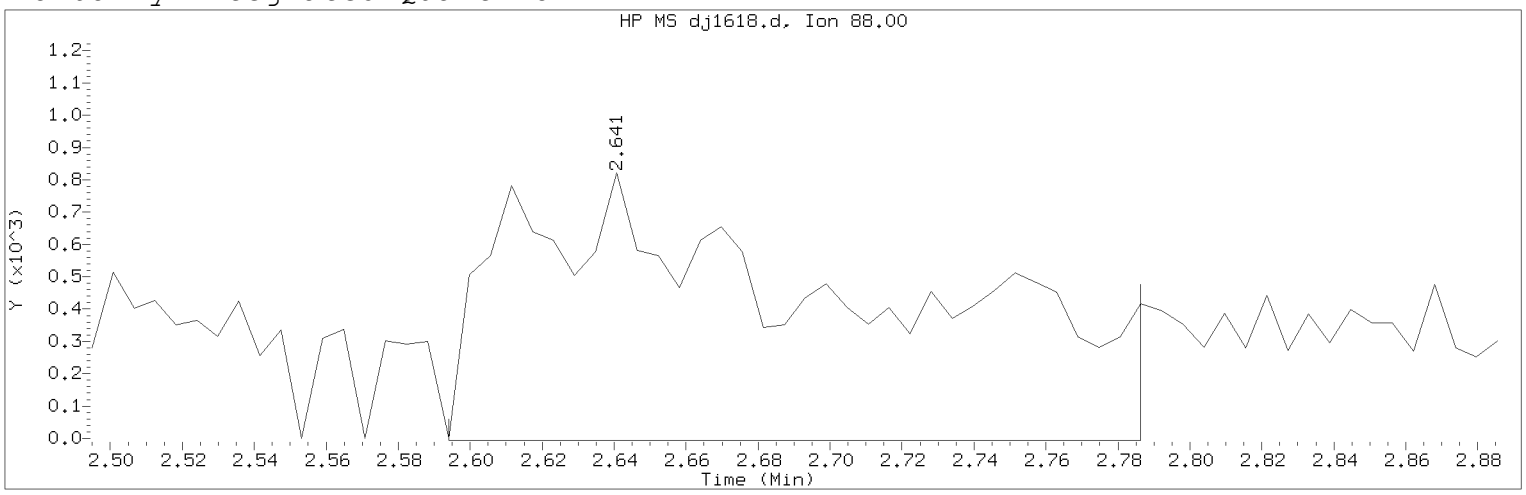
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

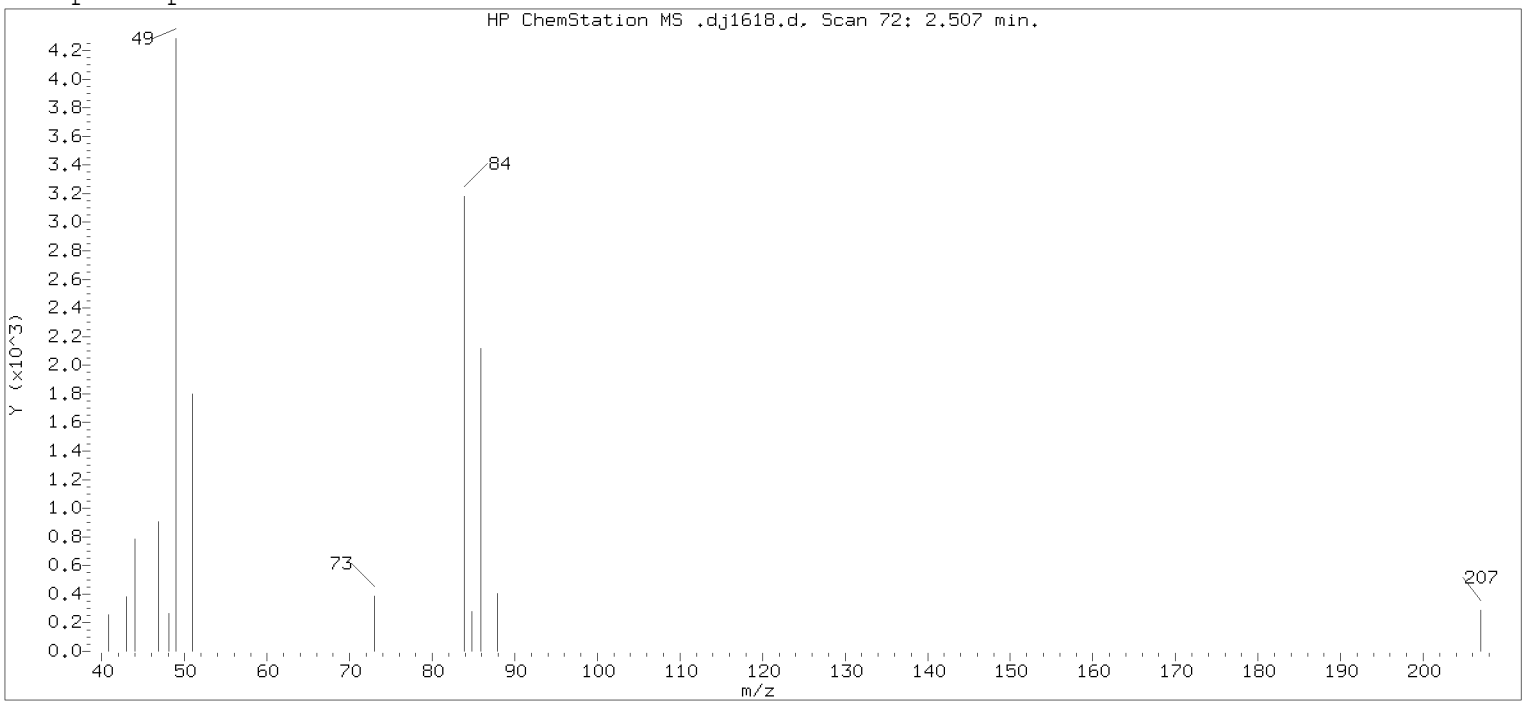
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 95		
Retention Time (minutes)	: 2.641		
Quant Ion	: 88.00		
Area (flag)	: 5674M		
On-Column Amount (ng/ul)	: 0.2886		
Integration start scan	: 86	Integration stop scan:	119
Y at integration start	: -6	Y at integration end:	-6

Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

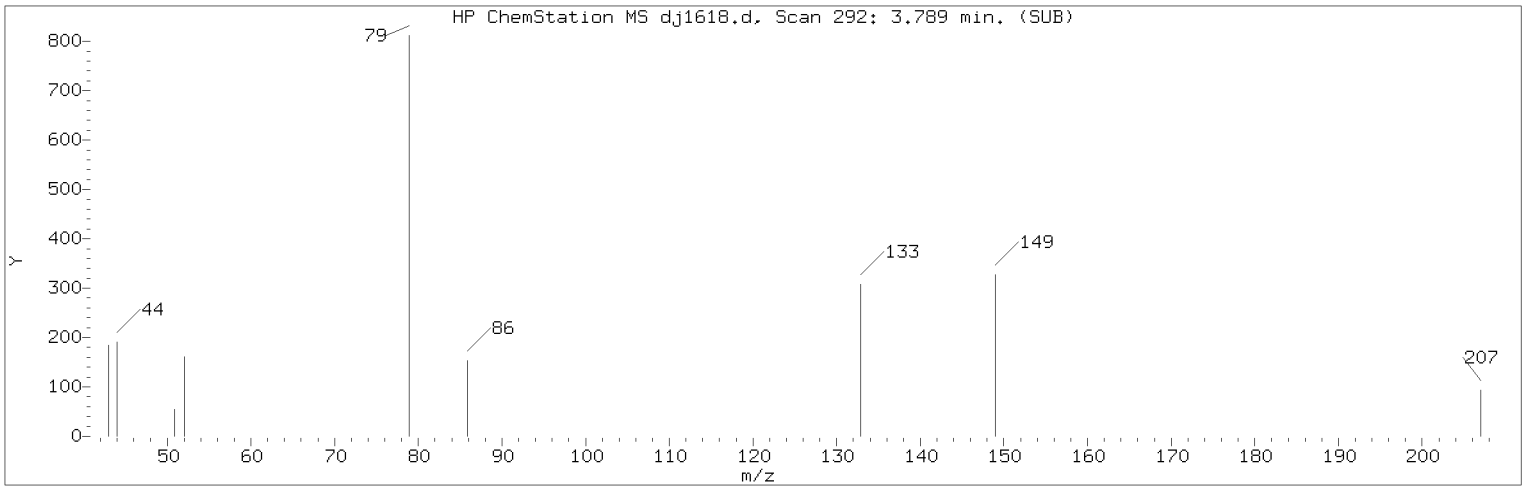
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

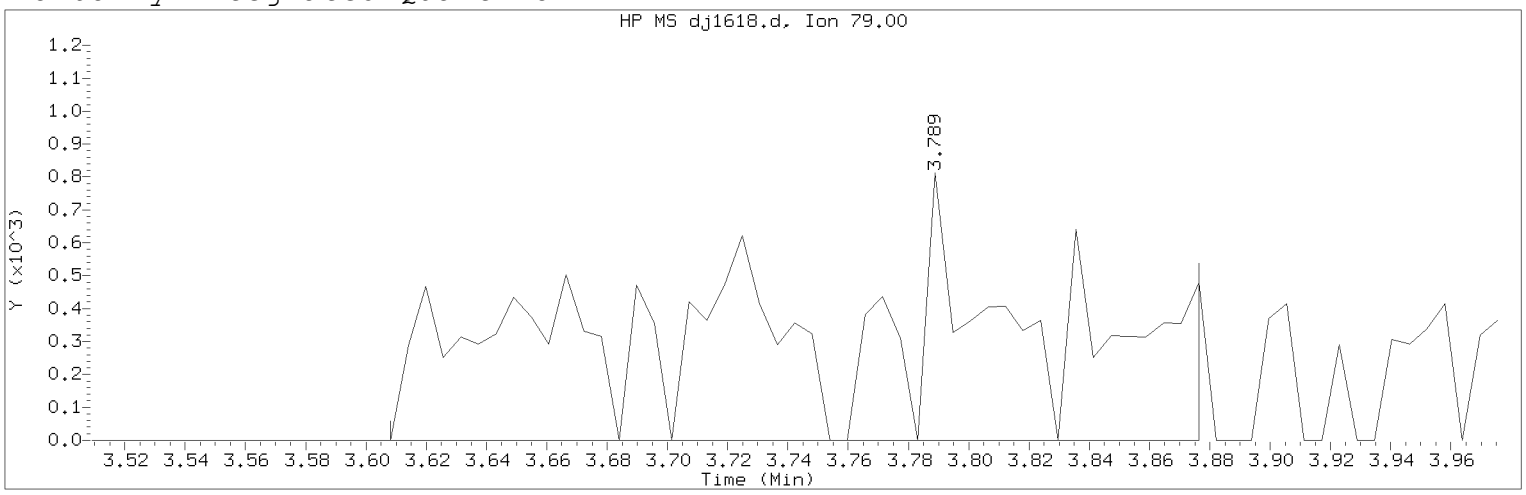
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.507
Quant Ion : 88.00

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

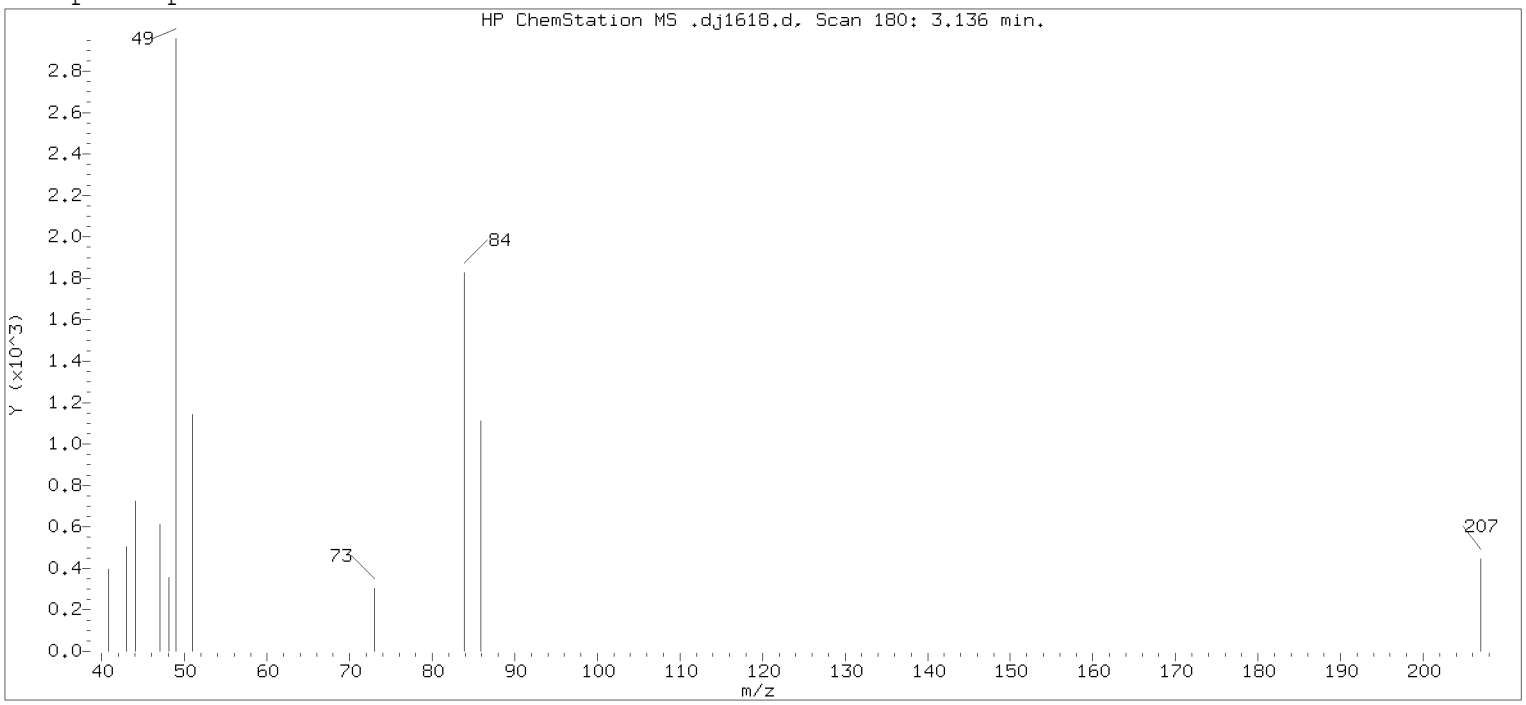
Compound Number : 5
Compound Name : Pyridine
Scan Number : 292
Retention Time (minutes) : 3.789
Quant Ion : 79.00
Area (flag) : 5401M
On-Column Amount (ng/ul) : 0.1038
Integration start scan : 260 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

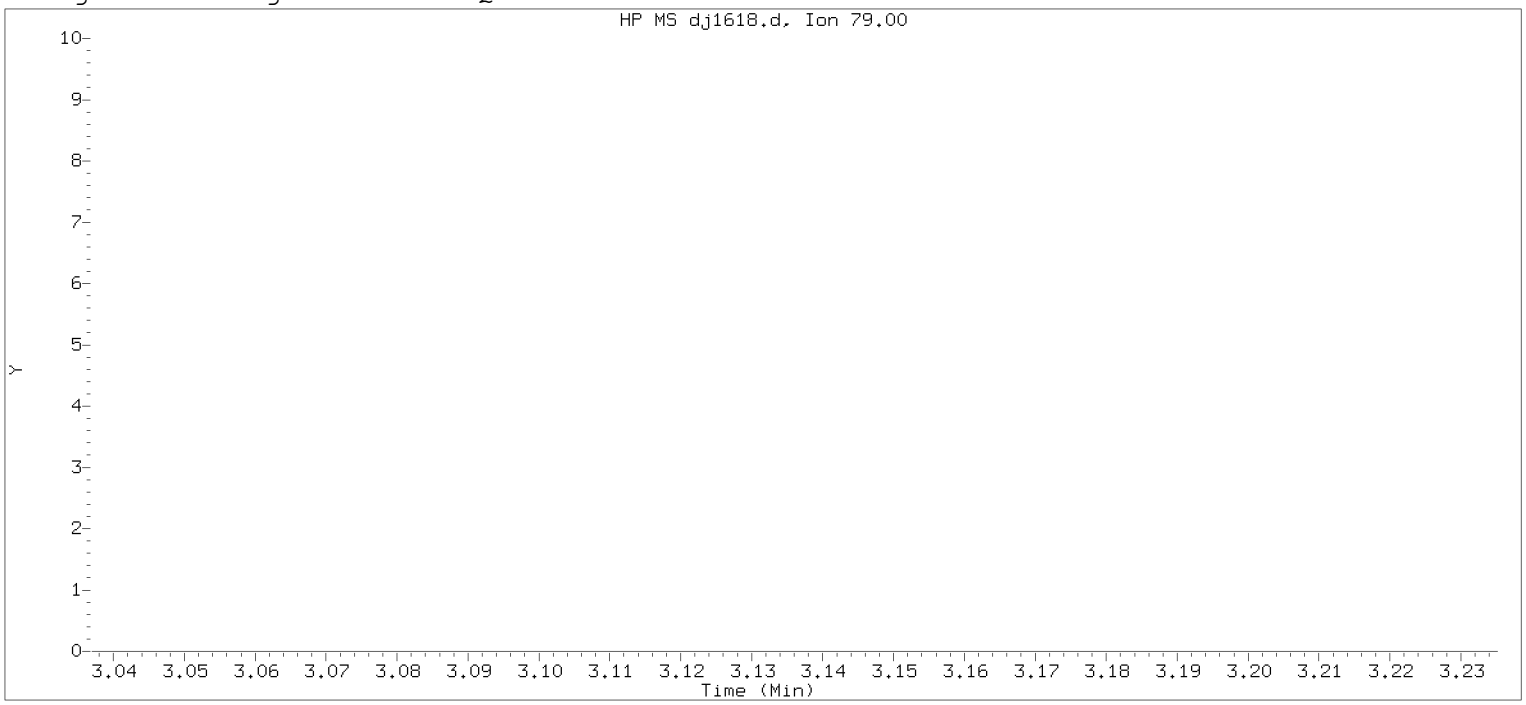
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

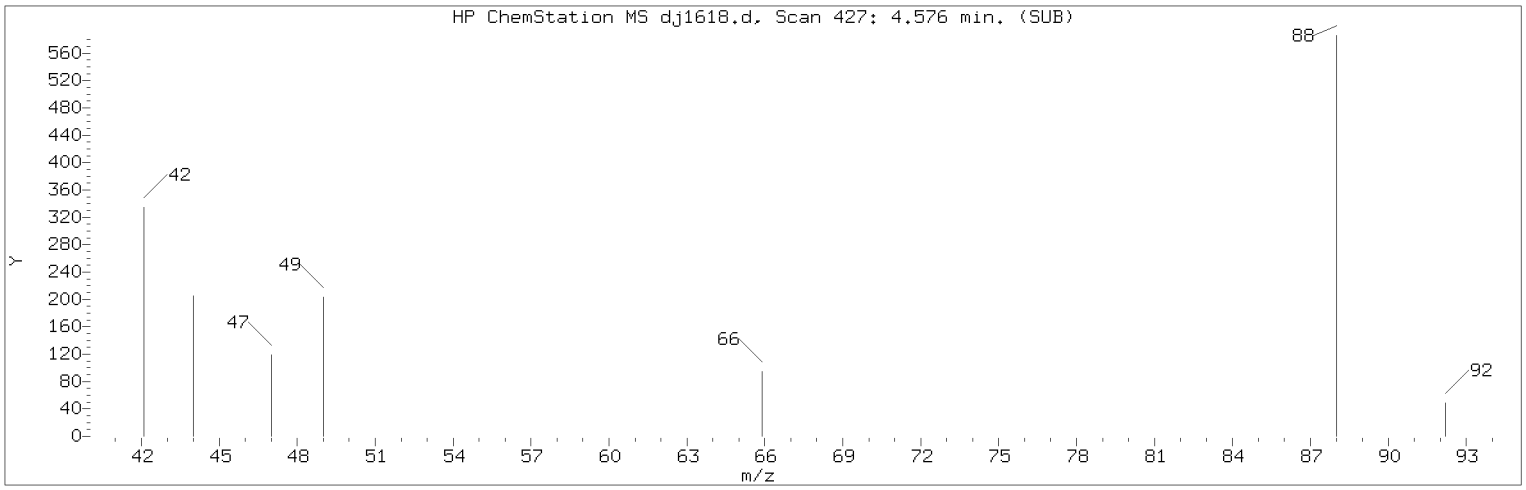
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

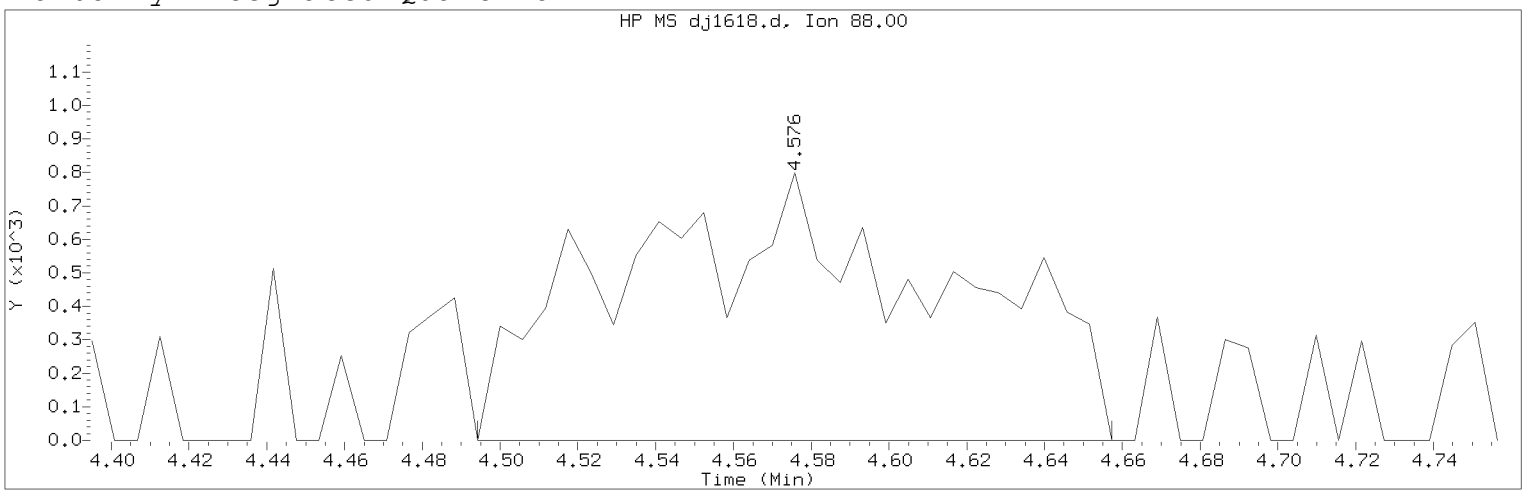
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.136
Quant Ion : 79.00

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

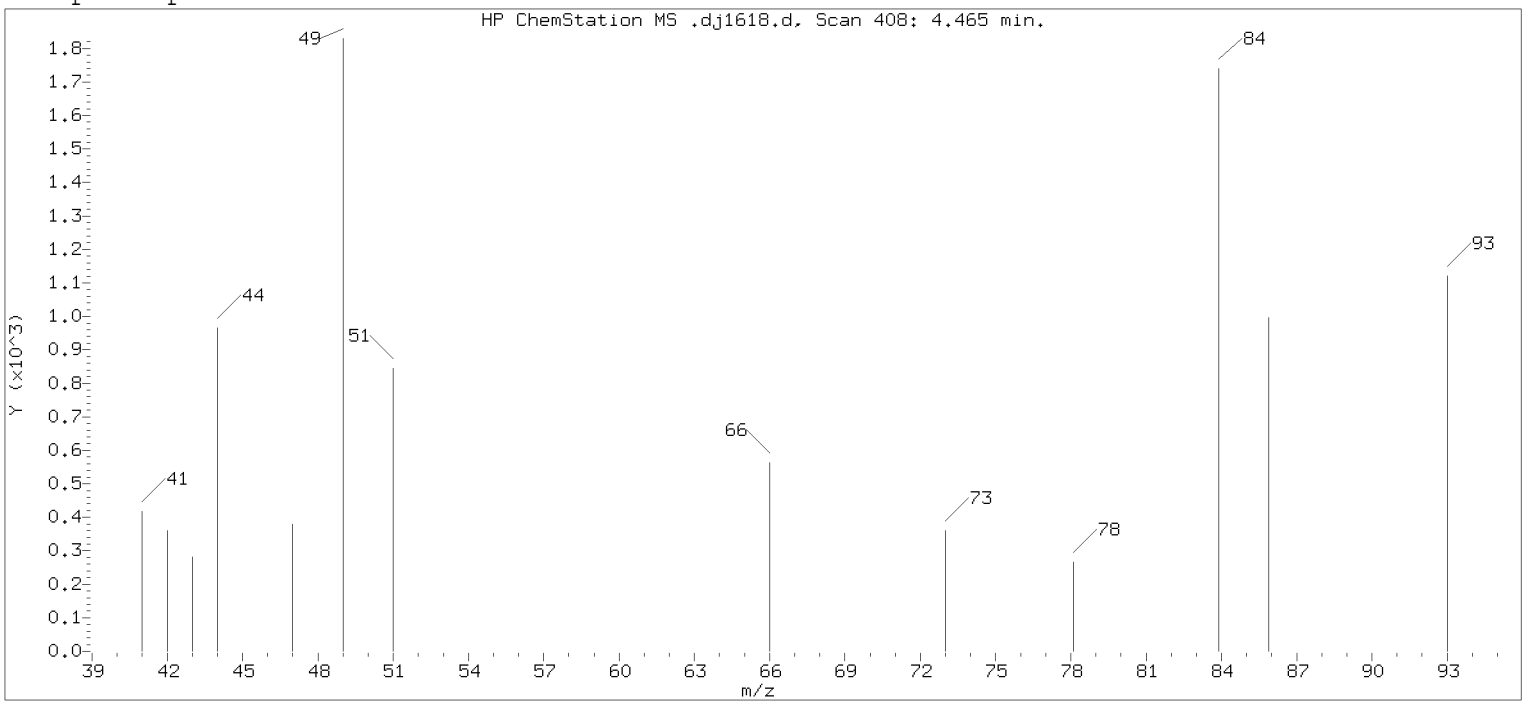
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 427
Retention Time (minutes) : 4.576
Quant Ion : 88.00
Area (flag) : 4613M
On-Column Amount (ng/ul) : 0.1884
Integration start scan : 412 Integration stop scan: 440
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

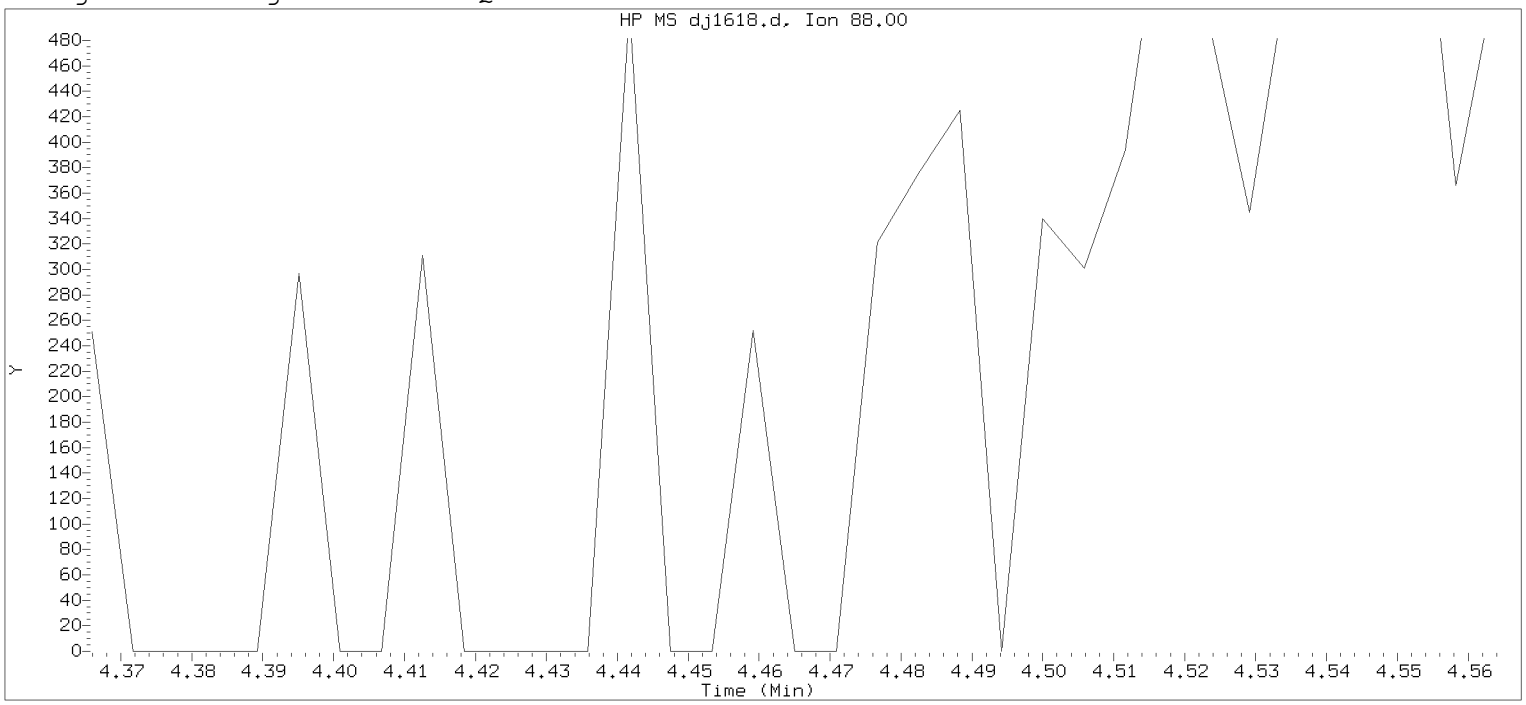
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

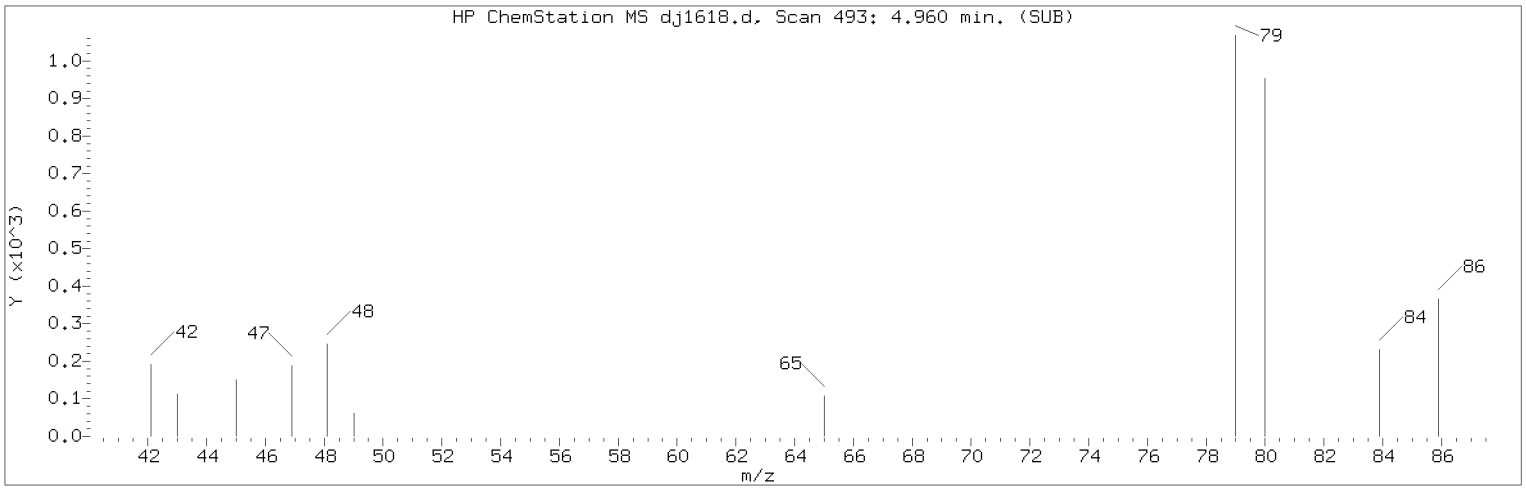
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

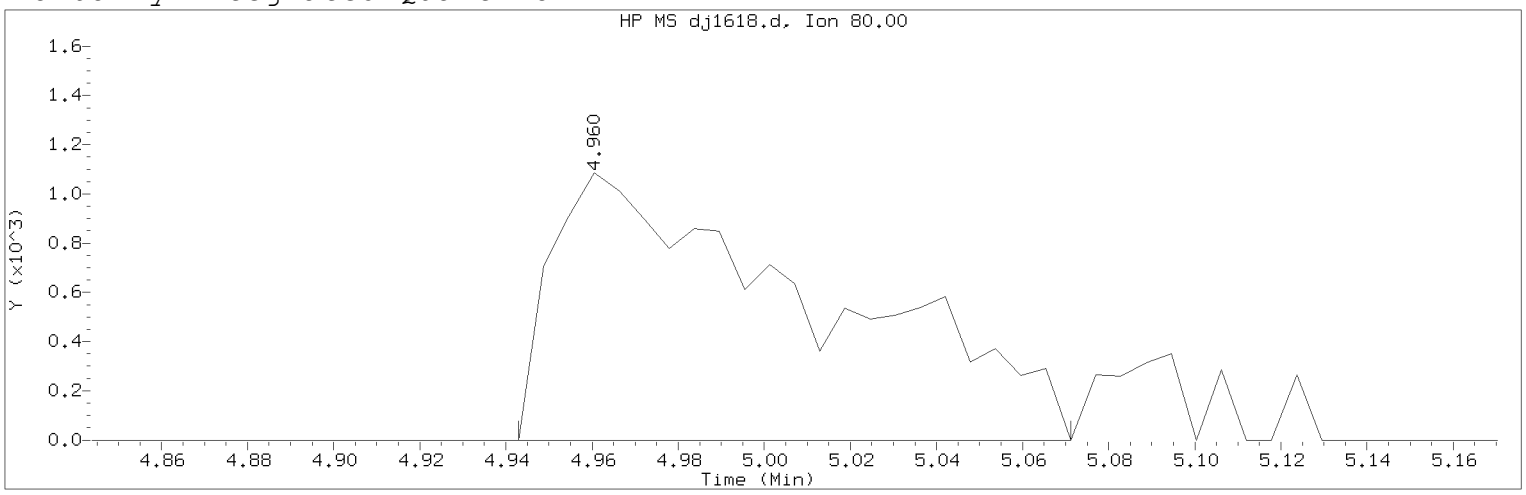
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.465
Quant Ion : 88.00

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

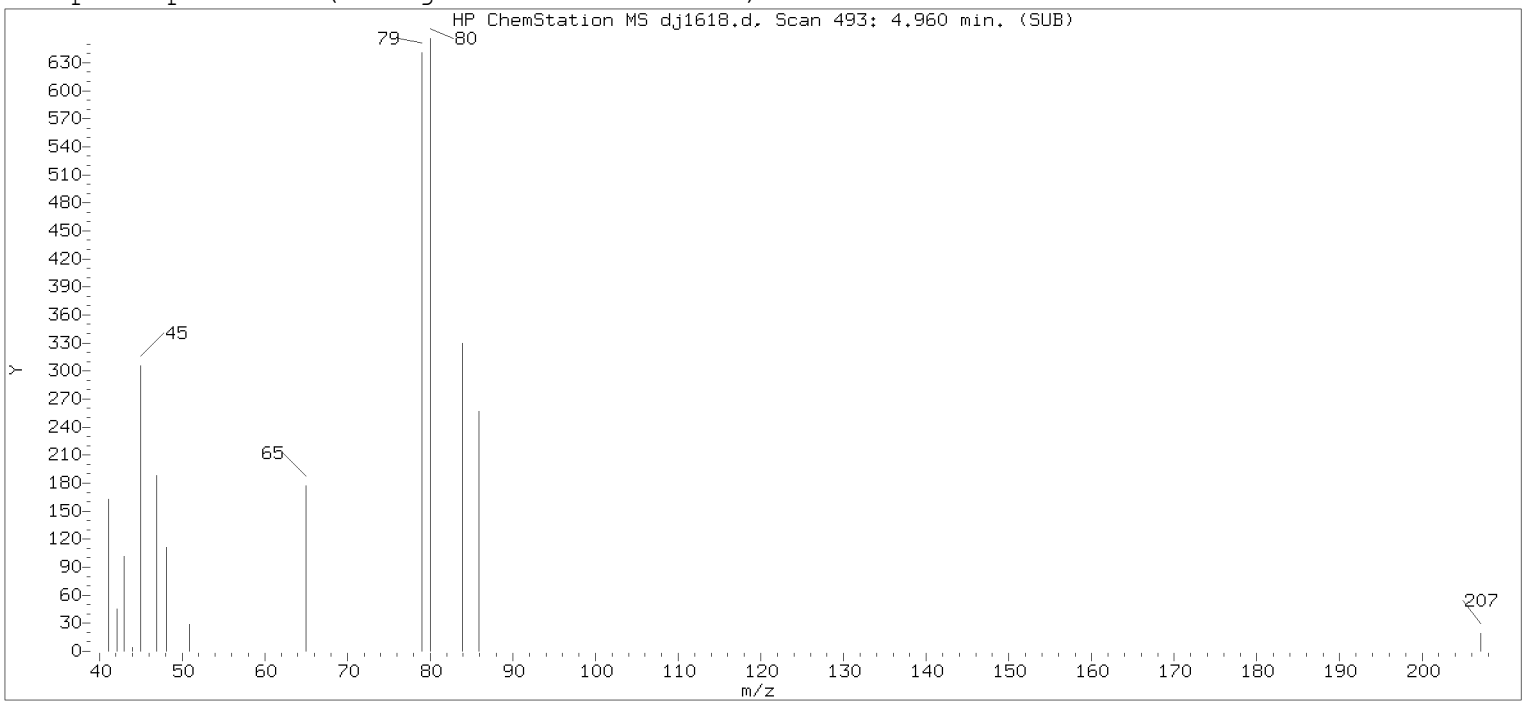
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 493
Retention Time (minutes) : 4.960
Quant Ion : 80.00
Area (flag) : 4665M
On-Column Amount (ng/ul) : 0.1875
Integration start scan : 489 Integration stop scan: 511
Y at integration start : -1 Y at integration end: -1

Reason for manual integration: improper integration

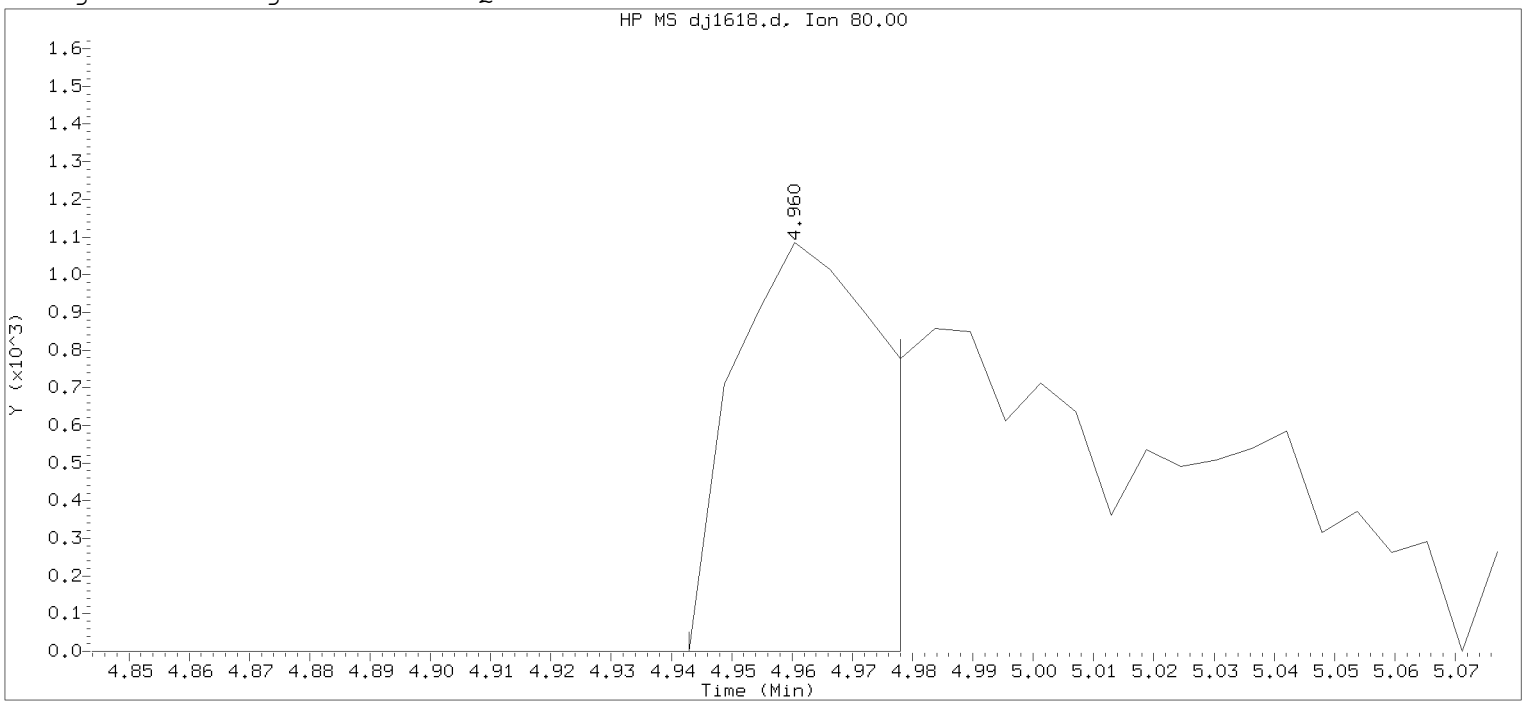
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

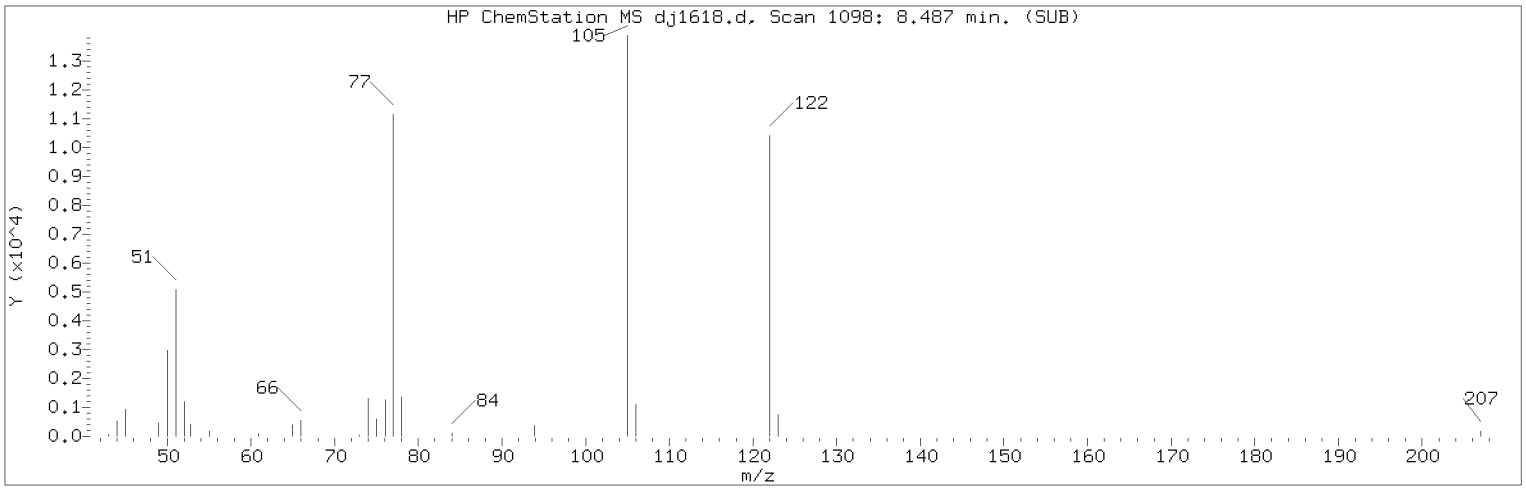
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

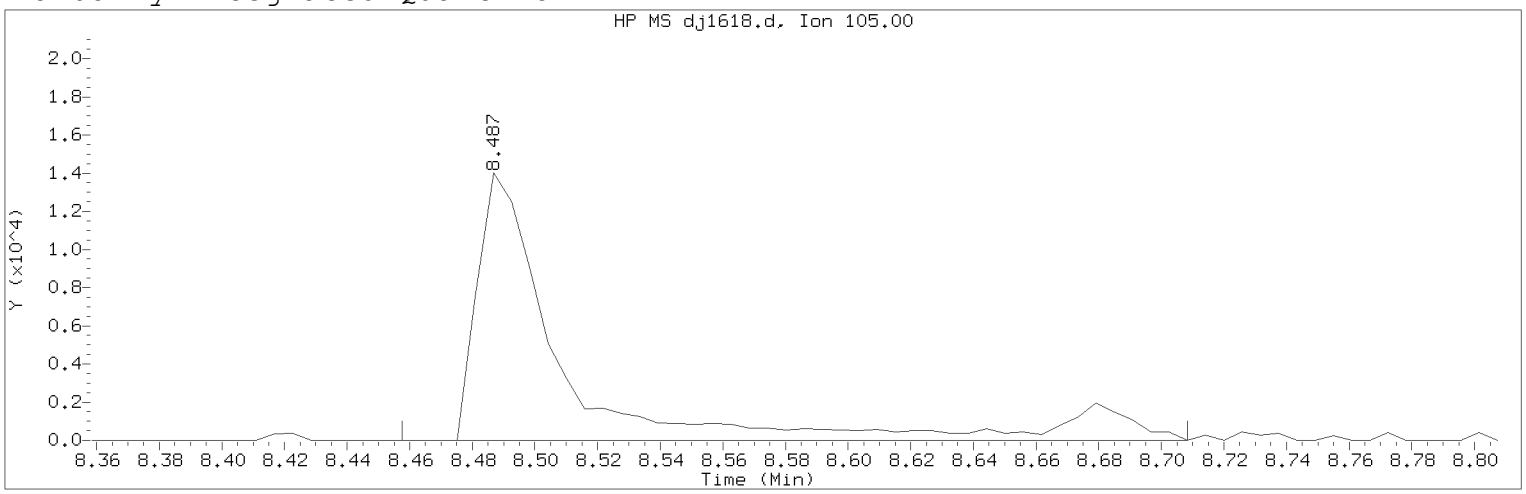
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 493		
Retention Time (minutes)	: 4.960		
Quant Ion	: 80.00		
Area	: 1749		
On-column Amount (ng/ul)	: 0.0703		
Integration start scan	: 489	Integration stop scan:	495
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during 5507

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

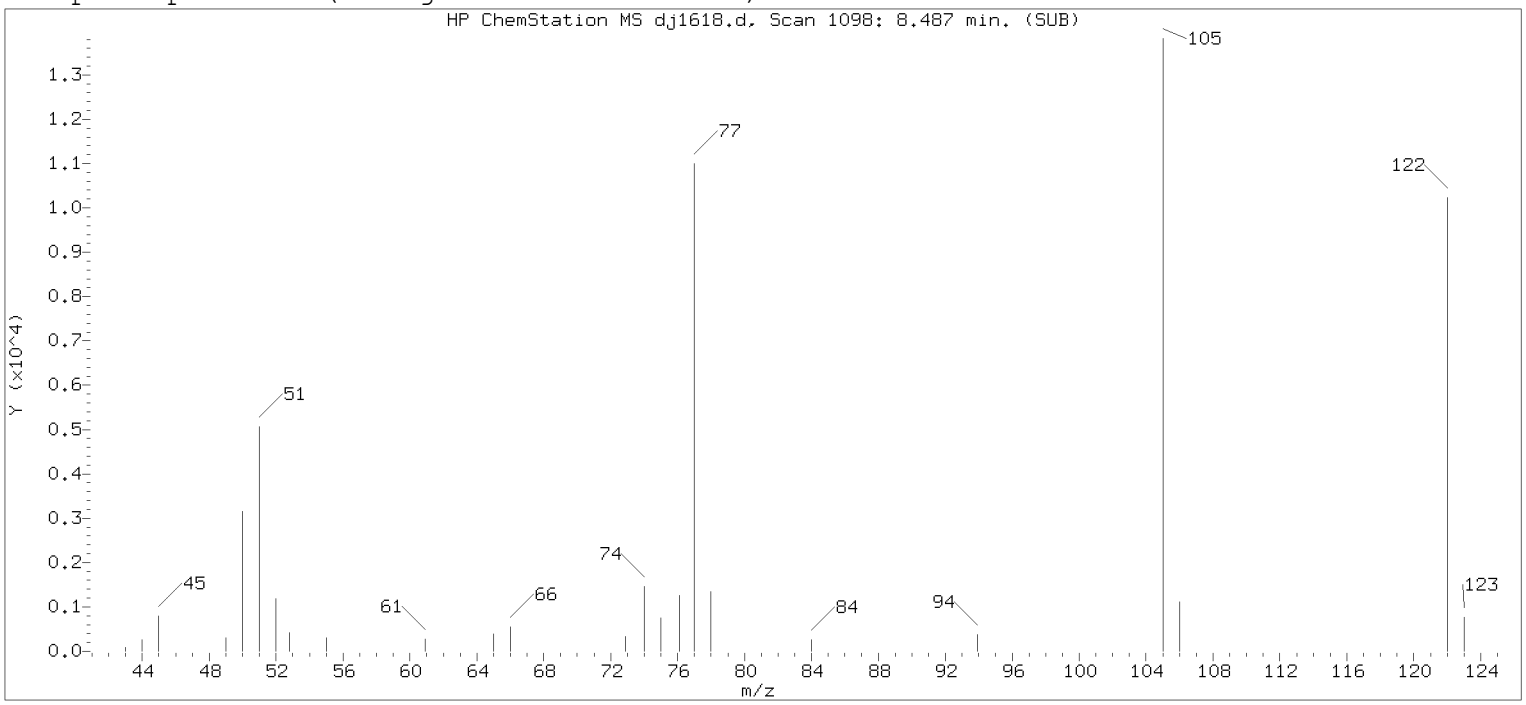
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1098
Retention Time (minutes) : 8.487
Quant Ion : 105.00
Area (flag) : 27091M
On-Column Amount (ng/ul) : 0.6861
Integration start scan : 1092 Integration stop scan: 1135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

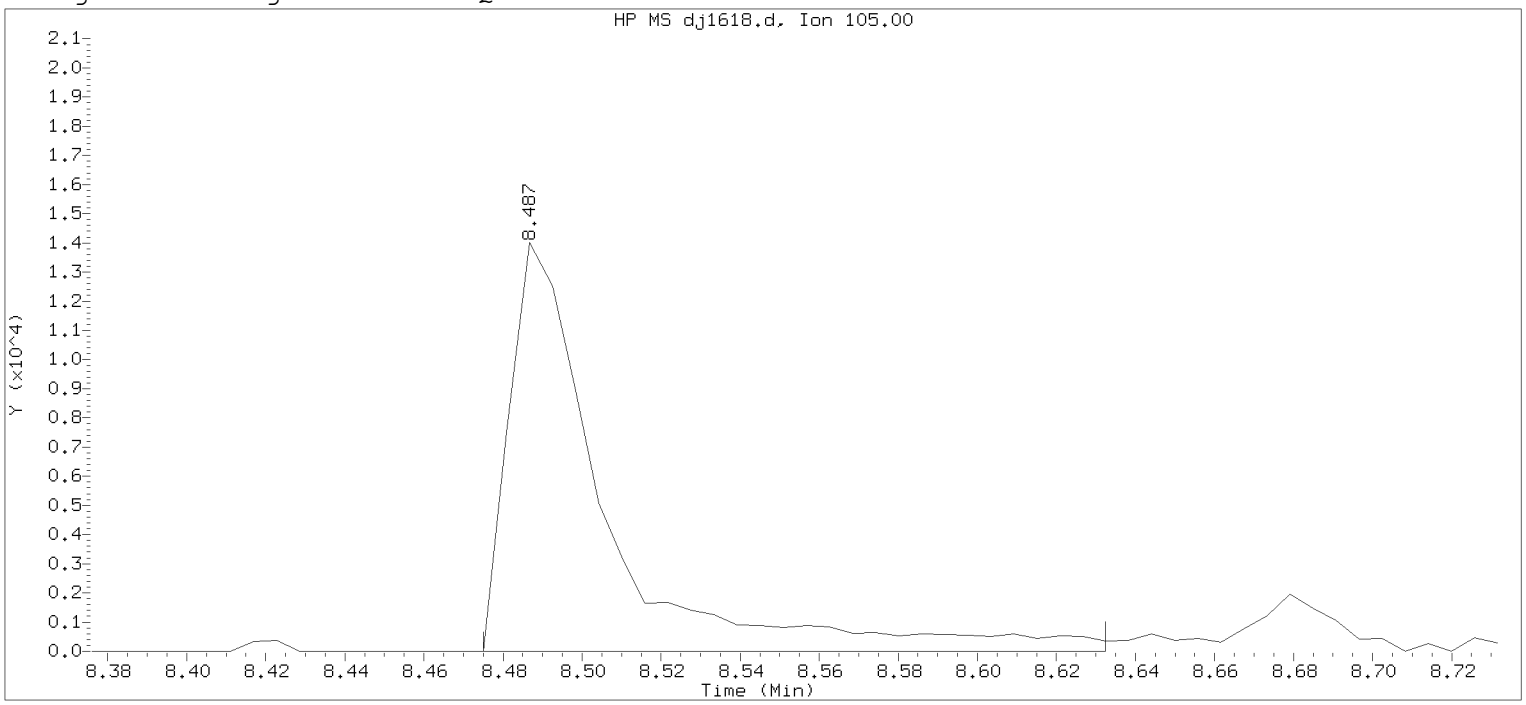
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

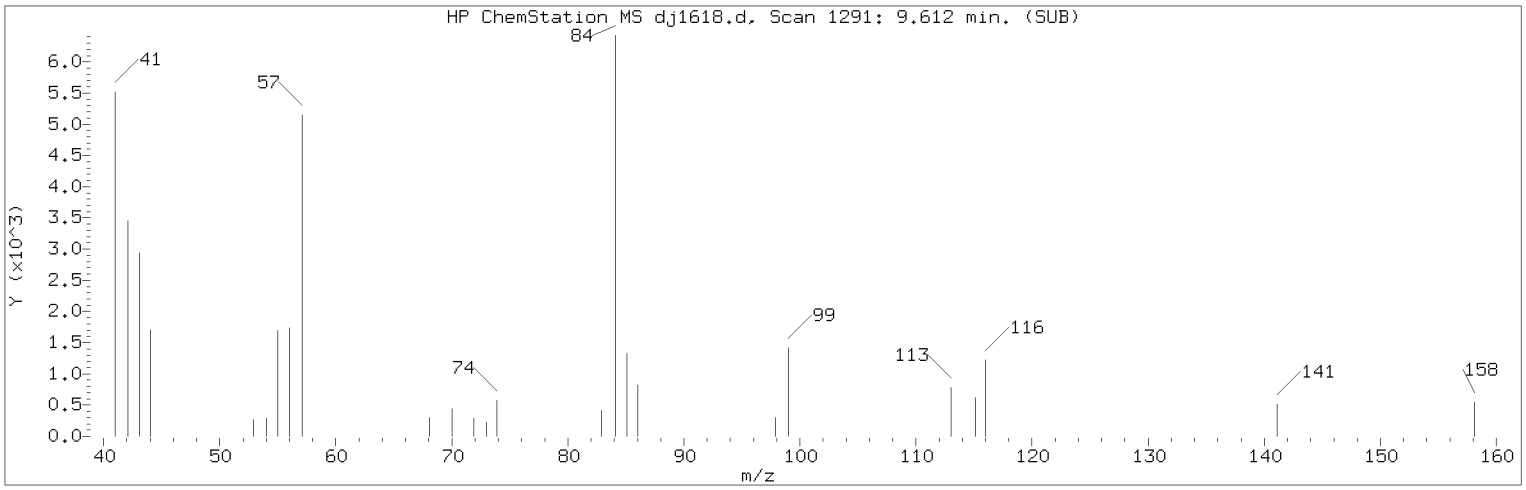
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

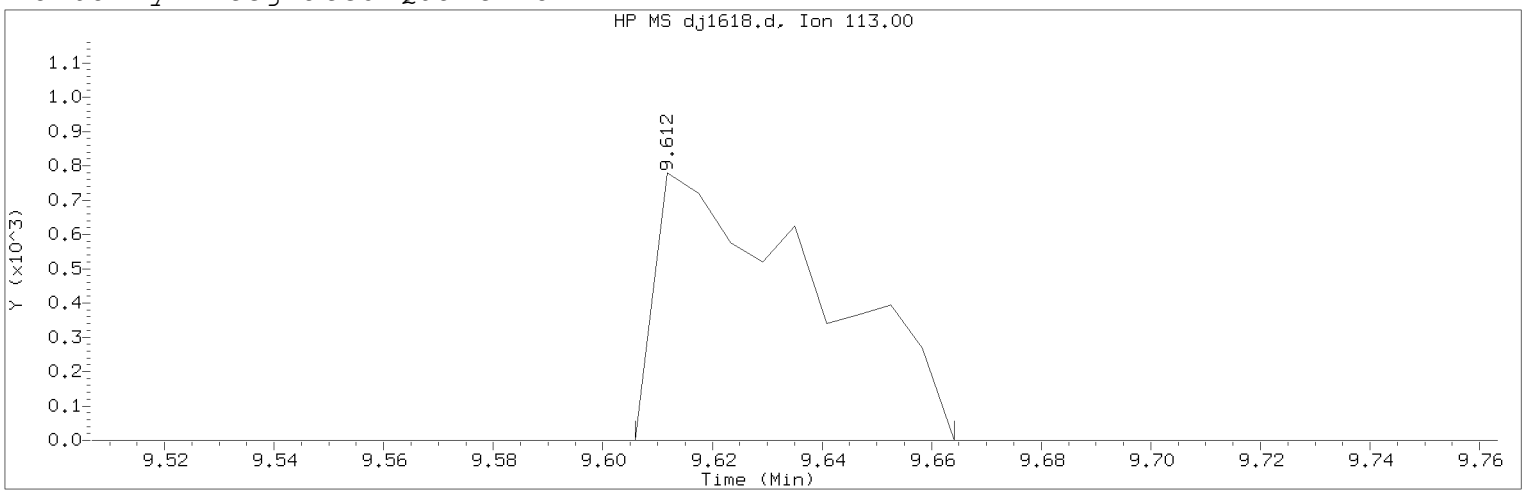
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1098		
Retention Time (minutes)	: 8.487		
Quant Ion	: 105.00		
Area	: 23725		
On-column Amount (ng/ul)	: 1.7010		
Integration start scan	: 1095	Integration stop scan:	1122
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

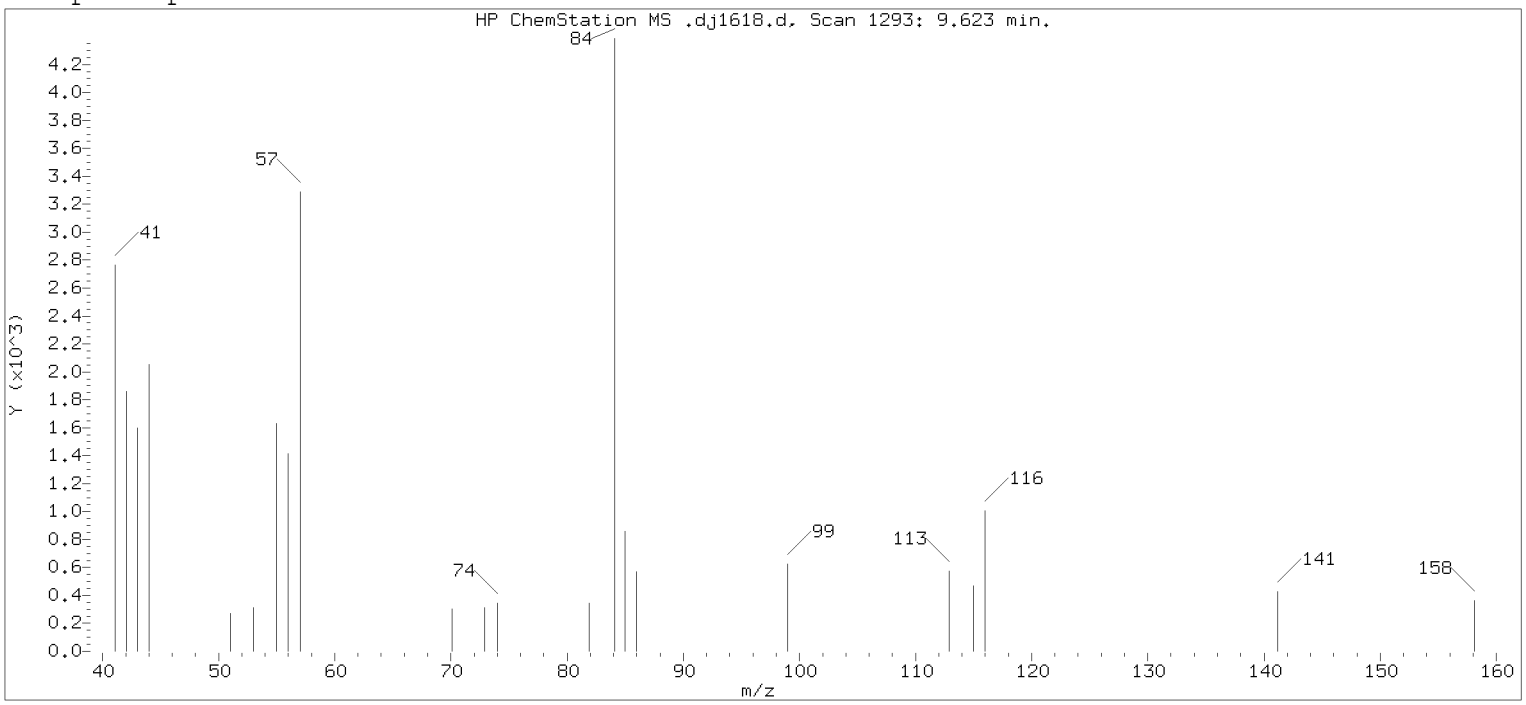
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1291
Retention Time (minutes) : 9.612
Quant Ion : 113.00
Area (flag) : 1604M
On-Column Amount (ng/ul) : 0.1367
Integration start scan : 1289 Integration stop scan: 1299
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

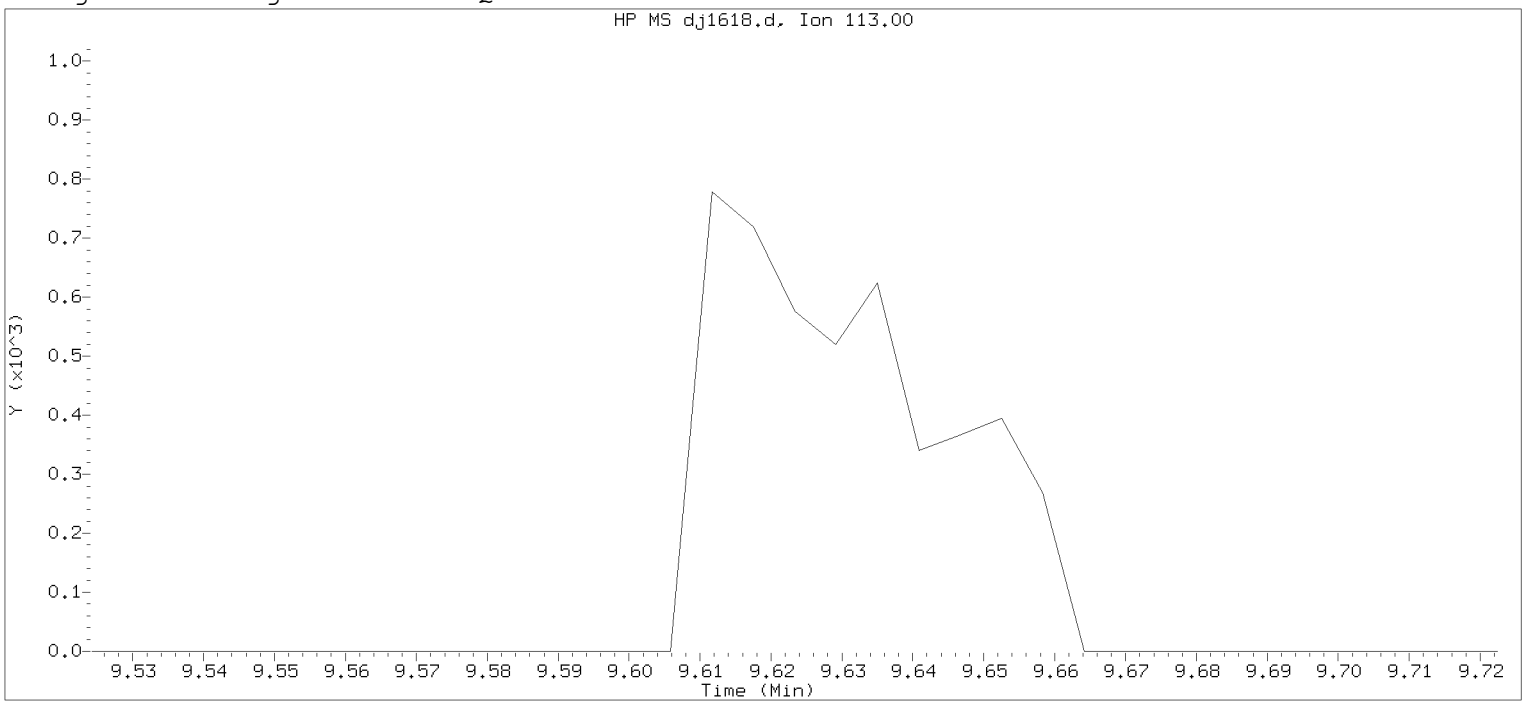
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

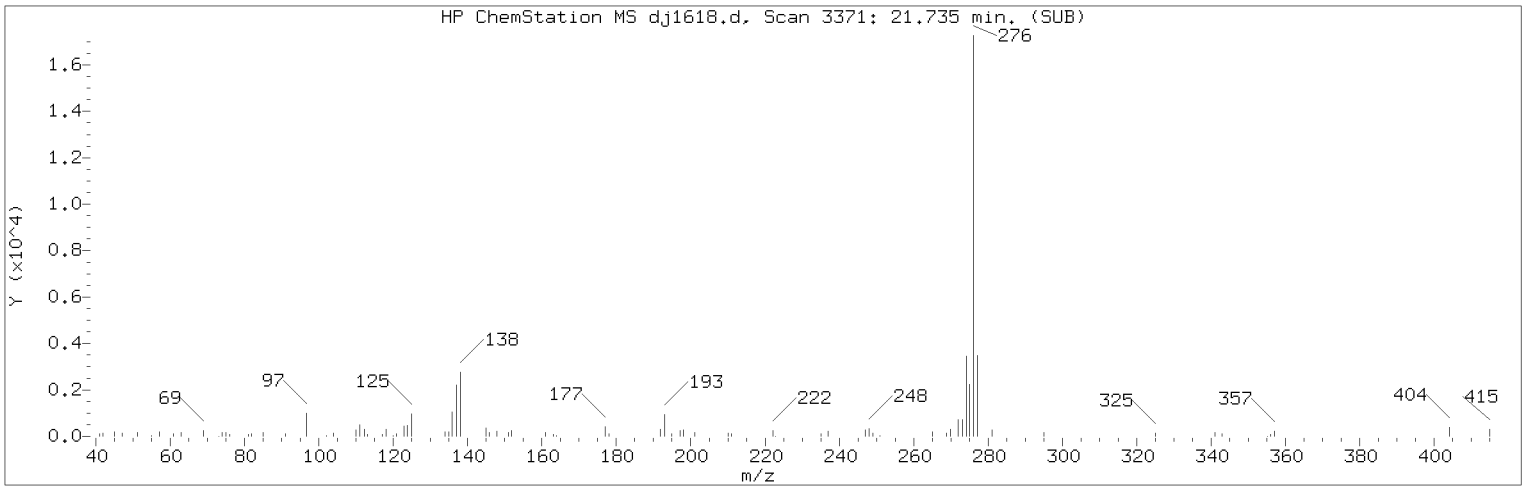
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

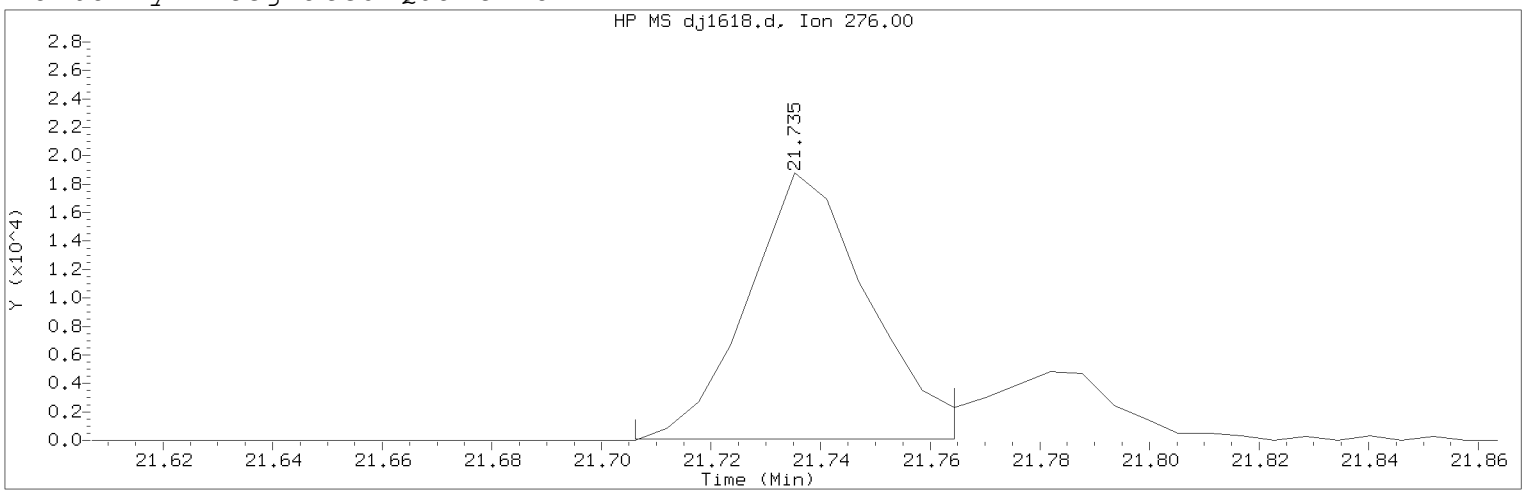
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.623
Quant Ion : 113.00

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 02:51
Date, time and analyst ID of latest file update: 31-Oct-2017 13:38 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

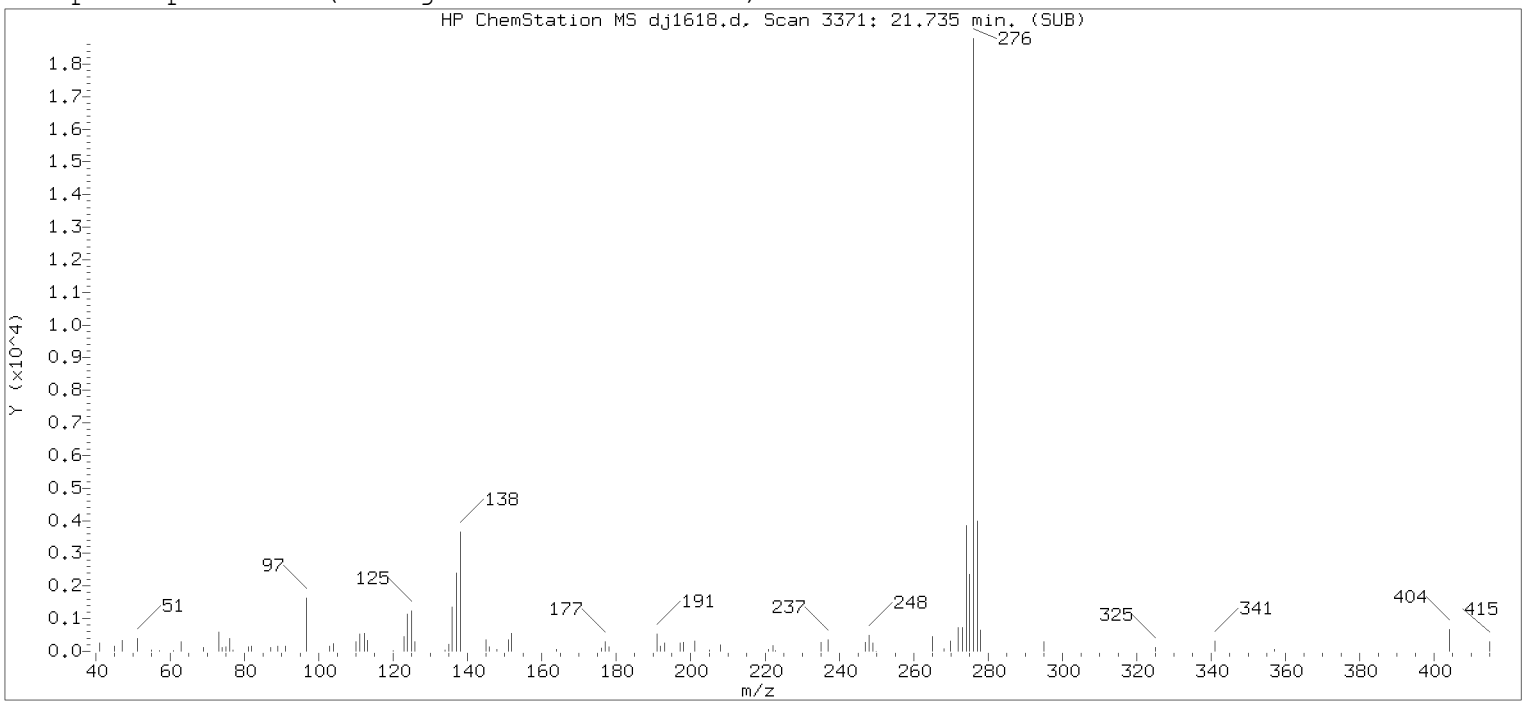
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3371
Retention Time (minutes) : 21.735
Quant Ion : 276.00
Area (flag) : 28728M
On-Column Amount (ng/ul) : 0.2195
Integration start scan : 3365 Integration stop scan: 3375
Y at integration start : 70 Y at integration end: 70

Reason for manual integration: improper integration

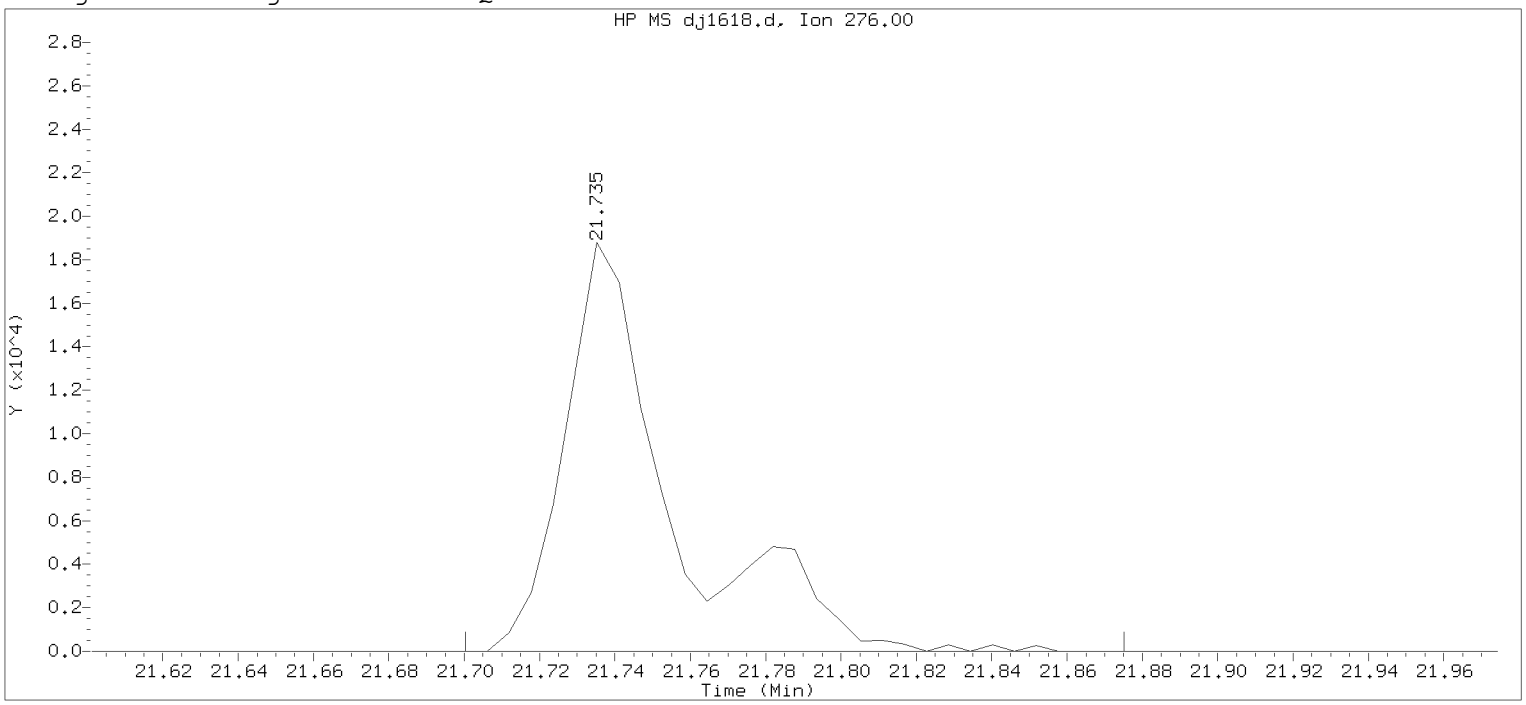
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



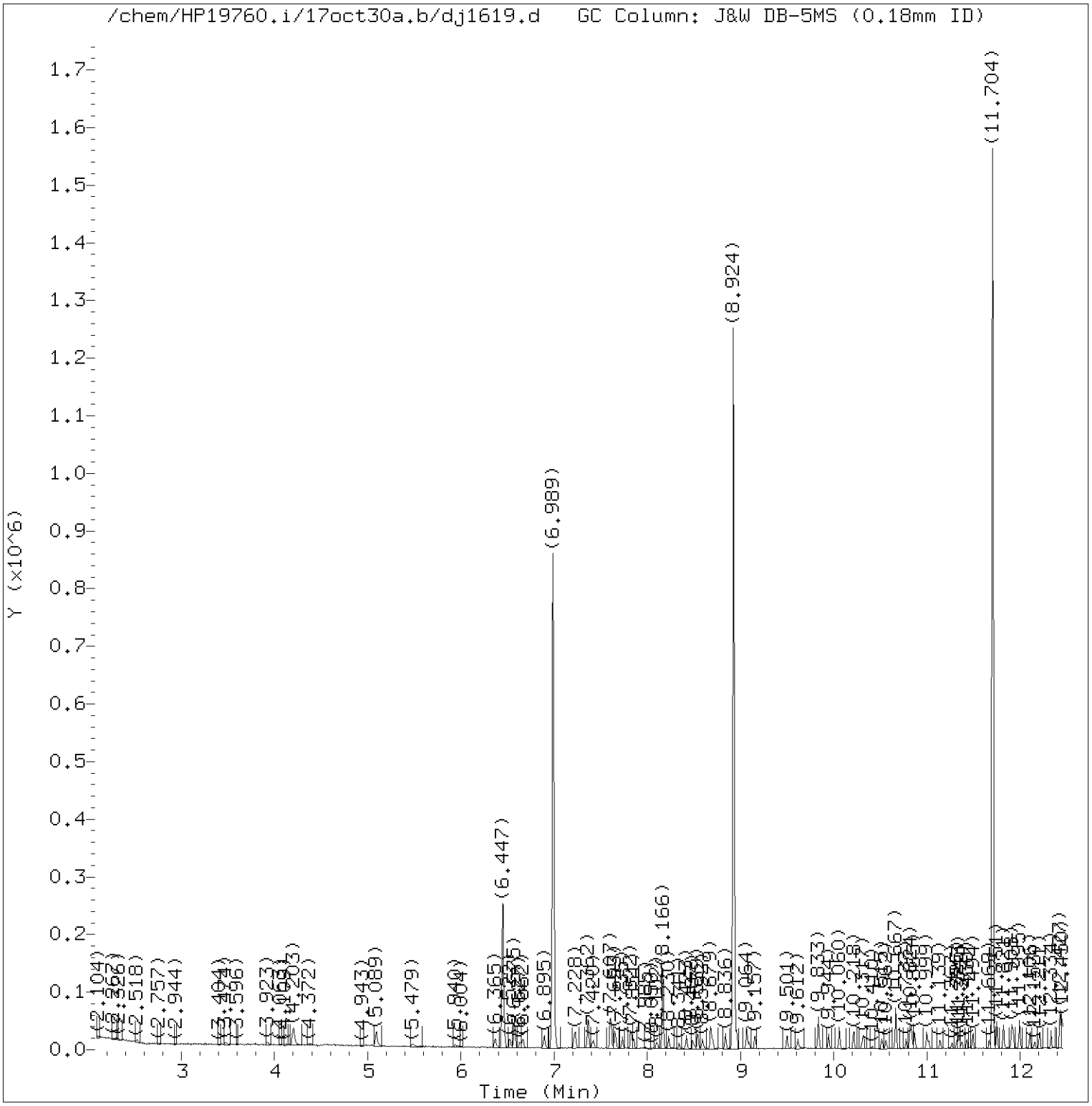
Data File: /chem/HP19760.i/17oct30a.b/dj1618.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:20 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 00:45 Automation

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3371		
Retention Time (minutes)	: 21.735		
Quant Ion	: 276.00		
Area	: 36889		
On-column Amount (ng/ul)	: 0.2293		
Integration start scan	: 3364	Integration stop scan:	3394
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

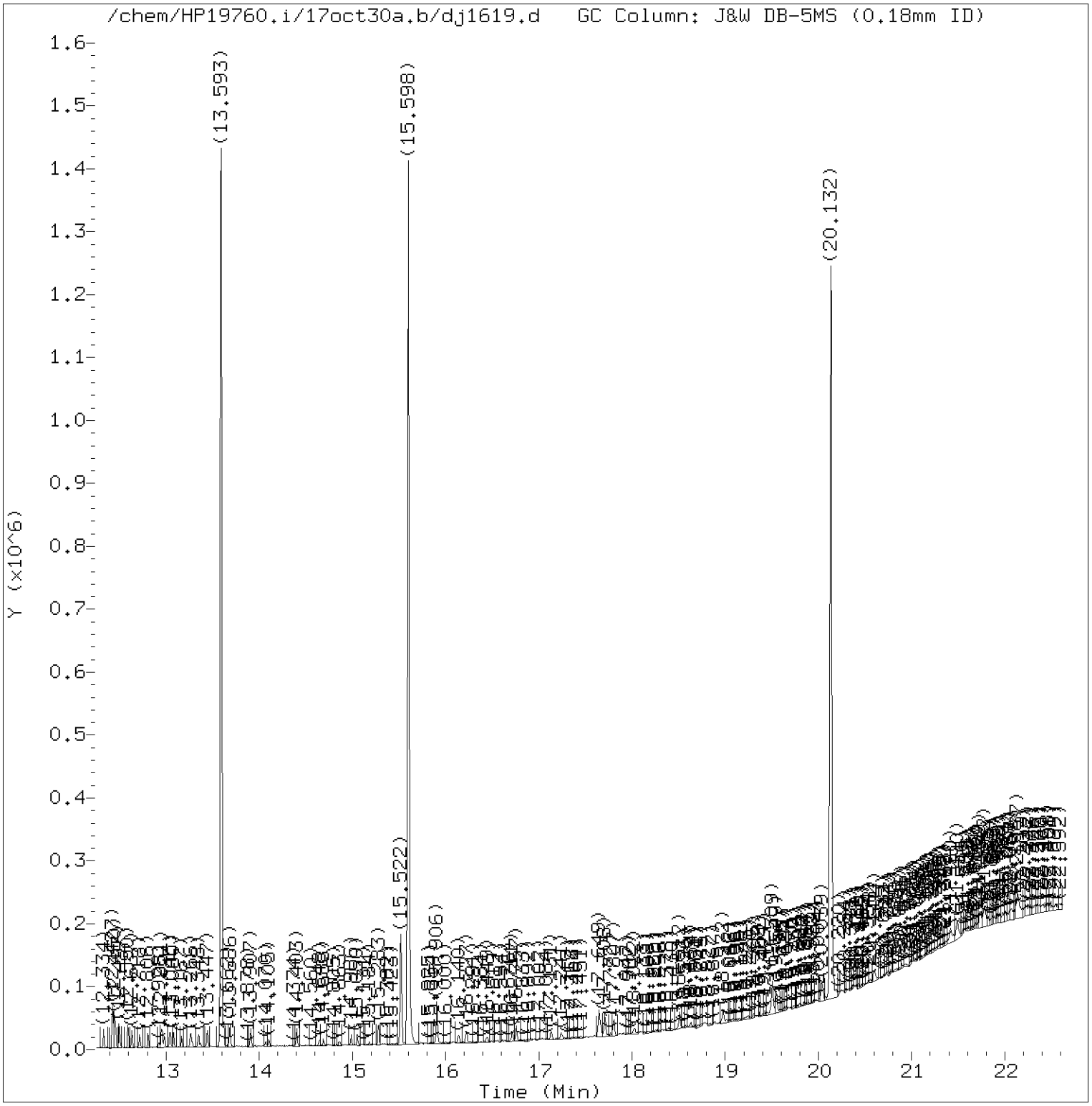
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7) 2-Picoline	(1)	4.552	93	1466M	0.025
9) Methyl methanesulfonate	(1)	5.013	80	1556M	0.060
11)$2-Fluorophenol	(1)	5.089	112	11493	0.232
13) N-Nitrosodiethylamine	(1)	5.491	102	1672	0.070
42) Total Cresols	(1)			11880	0.241
15) Ethyl methanesulfonate	(1)	5.934	109	1844M	0.076
16) Benzaldehyde	(1)	6.371	77	5549	0.126
17)$Phenol-d6	(1)	6.447	99	15052	0.230
18) Phenol	(1)	6.464	94	8694	0.126
19) Aniline	(1)	6.528	93	9224	0.109
20) a-methylstyrene	(1)	6.575	118	6942	0.128
22) bis(2-Chloroethyl)ether	(1)	6.627	93	5962	0.108
23) 2-Chlorophenol	(1)	6.668	128	5607	0.110
24) 1,3-Dichlorobenzene	(1)	6.895	146	7072	0.127
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	169096	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	7120	0.126
27) Benzyl alcohol	(1)	7.216	108	3757	0.111
28) 1,2-Dichlorobenzene	(1)	7.228	146	6613	0.124
30) Indene	(1)	7.362	115	12617	0.132
31) 2-Methylphenol	(1)	7.368	108	5379	0.112
97) Isosafrole	(3)			3755	0.110
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	9792	0.130
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	9792	0.130
36) Acetophenone	(1)	7.601	105	8293	0.108
37) 4-Methylphenol	(1)	7.607	108	6501	0.130
38) N-Nitroso-di-n-propylamine	(1)	7.612	70	5102	0.122
35) N-Nitrosopyrrolidine	(1)	7.612	100	2220M	0.091
40) o-Toluidine	(1)	7.653	106	10294	0.122
39) N-Nitrosomorpholine	(1)	7.665	56	3339	0.109
43) Hexachloroethane	(1)	7.735	117	2685	0.117
44)$Nitrobenzene-d5	(2)	7.822	82	14340	0.235
45) Nitrobenzene	(2)	7.851	77	7331	0.118
120) 2,4_2,6-Dinitrotoluenes	(3)			4472	0.186
48) N-Nitrosopiperidine	(2)	8.102	114	2614	0.105
50) Isophorone	(2)	8.230	82	11965	0.115
51) 2-Nitrophenol	(2)	8.341	139	2356	0.098
53) 2,4-Dimethylphenol	(2)	8.423	107	5774	0.108
56) Benzoic acid	(2)	8.487	105	7725	0.232
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	2492	0.103
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	6827	0.103

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

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.679	104	10814	0.137
60) 2,4-Dichlorophenol	(2)	8.696	162	4718	0.117
146) Diallate trans/cis	(4)			5119	0.114
62) 1,2,4-Trichlorobenzene	(2)	8.836	180	5876	0.126
65)*Naphthalene-d8	(2)	8.924	136	653386	5.000
68) 2,6-Dichlorophenol	(2)	9.064	162	4456	0.113
67) 4-Chloroaniline	(2)	9.070	127	6820	0.113
69) Hexachloropropene	(2)	9.093	213	2929	0.119
71) Hexachlorobutadiene	(2)	9.157	225	3226	0.123
75) Quinoline	(2)	9.501	129	10853	0.123
77) N-Nitrosodi-n-butylamine	(2)	9.617	84	4573	0.101
80) 4-Chloro-3-methylphenol	(2)	9.839	107	4503	0.101
82) Safrole	(2)	9.944	162	3800	0.104
85) Hexachlorocyclopentadiene	(3)	10.305	237	2768	0.121
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	5338	0.115
88) cis-Isosafrole	(3)	10.416	162	636	0.017
90) 2,4,6-Trichlorophenol	(3)	10.515	196	2922	0.106
92) 2,4,5-Trichlorophenol	(3)	10.562	196	3089	0.106
93)$2-Fluorobiphenyl	(3)	10.667	172	25860	0.253
94) trans-Isosafrole	(3)	10.777	162	3119	0.093
95) 1,1'-Biphenyl	(3)	10.818	154	14103	0.126
96) 2-Chloronaphthalene	(3)	10.836	162	11232	0.120
98) 1-Chloronaphthalene	(3)	10.865	162	10238	0.127
99) Diphenyl ether	(3)	10.999	170	7219	0.120
100) 2-Nitroaniline	(3)	11.022	138	2443	0.093
104) 1,4-Naphthoquinone	(3)	11.145	158	3161	0.093
105) 1,4-Dinitrobenzene	(3)	11.267	168	1069M	0.079
106) Dimethylphthalate	(3)	11.343	163	12045	0.127
107) 1,3-Dinitrobenzene	(3)	11.378	168	1385M	0.093
108) 2,6-Dinitrotoluene	(3)	11.430	165	2143	0.104
112) 3-Nitroaniline	(3)	11.669	138	2258	0.100
113)*Acenaphthene-d10	(3)	11.704	164	338217	5.000
115) 2,4-Dinitrophenol	(3)	11.821	184	4948	0.388
116) 4-Nitrophenol	(3)	11.908	109	5963	0.342
117) Pentachlorobenzene	(3)	11.926	250	4675	0.127
119) Dibenzofuran	(3)	11.995	168	14736	0.123
118) 2,4-Dinitrotoluene	(3)	12.001	165	2329	0.082
121) 1-Naphthylamine	(3)	12.106	143	9574	0.105
122) 2,3,4,6-Tetrachlorophenol	(3)	12.153	232	1740M	0.078
123) 2-Naphthylamine	(3)	12.211	143	9278	0.105

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Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	12.334	149	10908	0.118
125) Thionazin	(3)	12.427	107	2318	0.142
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	5341	0.119
128) 5-Nitro-o-toluidine	(3)	12.456	152	2617	0.101
129) 4-Nitroaniline	(3)	12.462	138	2185	0.096
130) 4,6-Dinitro-2-methylphenol	(4)	12.503	198	4862	0.283
131) N-Nitrosodiphenylamine	(4)	12.590	169	8464	0.111
132) NDPA as diphenylamine	(4)	12.590	169	8464	0.111
134) 1,2-Diphenylhydrazine	(4)	12.637	77	12017	0.113
135)$2,4,6-Tribromophenol	(3)	12.718	330	2645	0.207
137) Tetraethyldithiopyrophosphate	(4)	12.806	97	2029	0.114
139) 1,3,5-Trinitrobenzene	(4)	12.928	213	673M	0.065
140) Diallate (peak 1)	(4)	12.951	86	4369	0.094
141) Phorate	(4)	12.963	75	7374	0.102
142) Phenacetin	(4)	12.981	108	4345	0.086
143) 4-Bromophenyl-phenylether	(4)	13.045	248	3064	0.117
144) Diallate (peak 2)	(4)	13.056	86	750M	0.020
147) Dimethoate	(4)	13.167	87	3470	0.082
148) Atrazine	(4)	13.260	200	2468	0.100
149) Pentachlorophenol	(4)	13.342	266	1259	0.070
151) Pentachloronitrobenzene	(4)	13.354	237	1145	0.097
150) 4-Aminobiphenyl	(4)	13.371	169	2189	0.103
152) Pronamide	(4)	13.447	173	3993	0.095
154) Dinoseb	(4)	13.593	211	900M	0.037
153)*Phenanthrene-d10	(4)	13.593	188	612367	5.000
163) Carbazole	(4)	13.907	167	13192	0.103
164) Methyl parathion	(4)	14.105	109	2792	0.085
165) Di-n-butylphthalate	(4)	14.403	149	15299	0.100
167) Parathion	(4)	14.648	109	1681	0.081
168) 4-Nitroquinoline-1-oxide	(4)	14.688	190	686	0.046
169) Octachlorostyrene	(4)	14.986	308	1429M	0.136
171) Isodrin	(4)	15.050	193	2207M	0.131
174) Benzidine	(5)	15.522	184	82281	0.786
175)*Pyrene-d10	(5)	15.598	212	708702	5.000
179)$Terphenyl-d14	(5)	15.906	244	24694	0.236
182) p-Dimethylaminoazobenzene	(5)	16.140	225	1585	0.077
185) Chlorobenzilate	(5)	16.227	139	4792	0.101
187) 3,3'-Dimethylbenzidine	(5)	16.717	212	8518	0.089
188) Butylbenzylphthalate	(5)	16.757	149	6390	0.092
191) 2-Acetylaminofluorene	(5)	17.131	181	3910	0.063

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Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

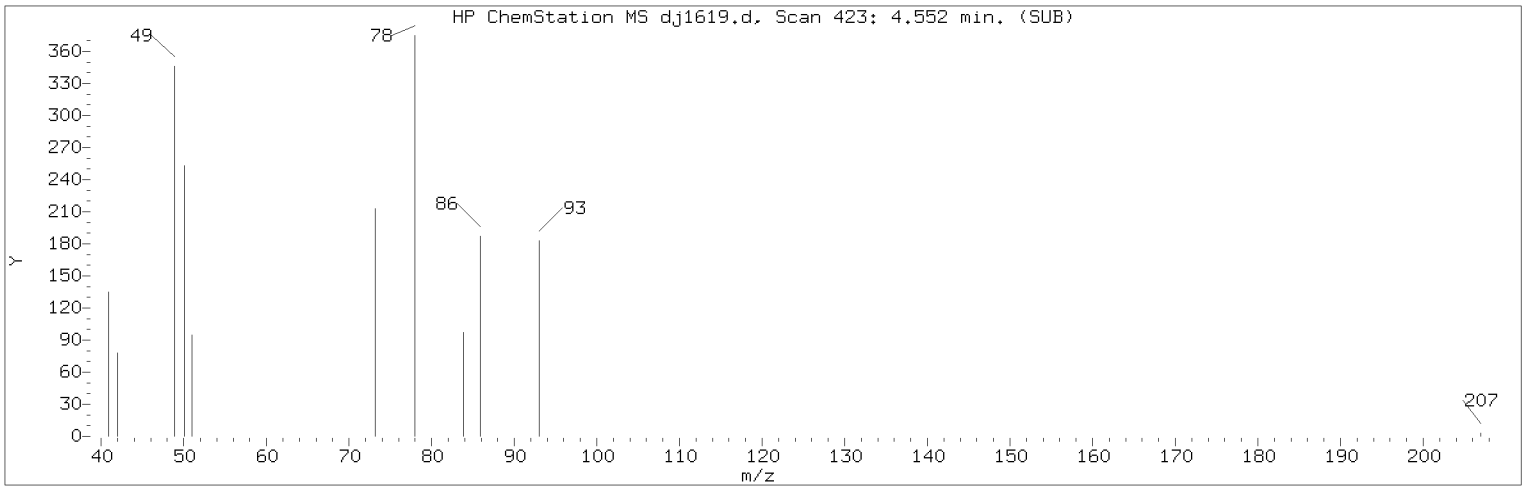
Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
193) 3,3'-Dichlorobenzidine	(5)	17.649	252	5171	0.090
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.667	231	2228	0.077
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	8774	0.087
203) 6-Methylchrysene	(5)	18.512	242	10380	0.100
205) Di-n-octylphthalate	(6)	18.978	149	14131	0.084
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.509	256	5574	0.094
213)*Perylene-d12	(6)	20.132	264	590613	5.000
215) 3-Methylcholanthrene	(6)	20.604	268	6332	0.126
217) Dibenz(a,h)acridine	(6)	21.420	279	11366	0.097
218) Dibenz(a,j)acridine	(6)	21.490	279	11819	0.097

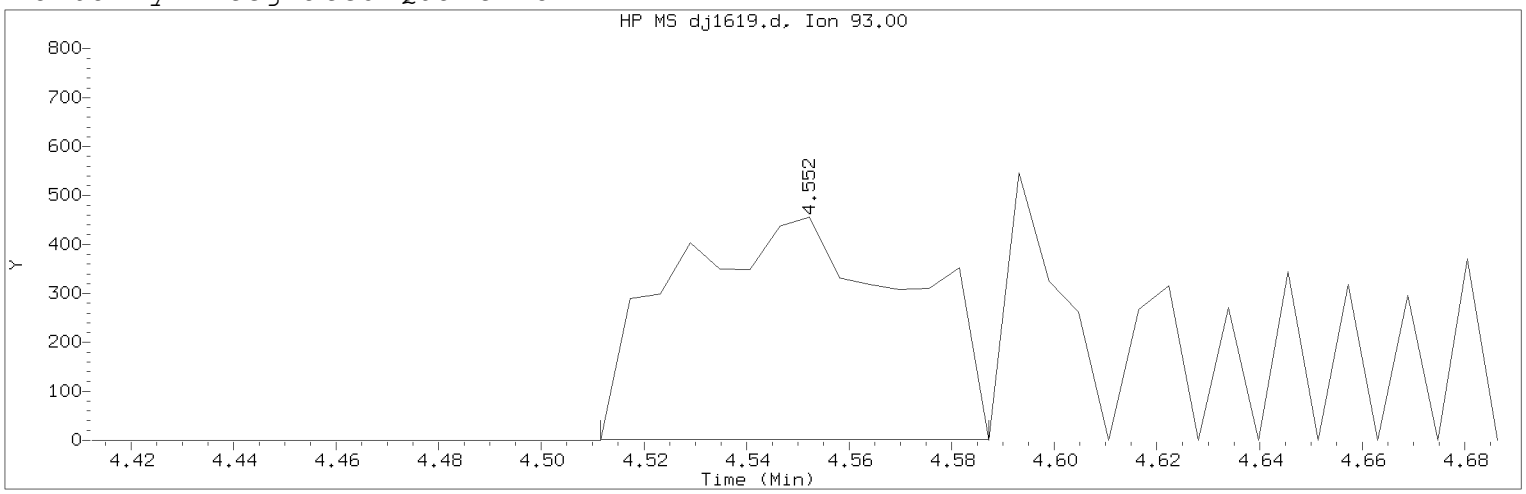
* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

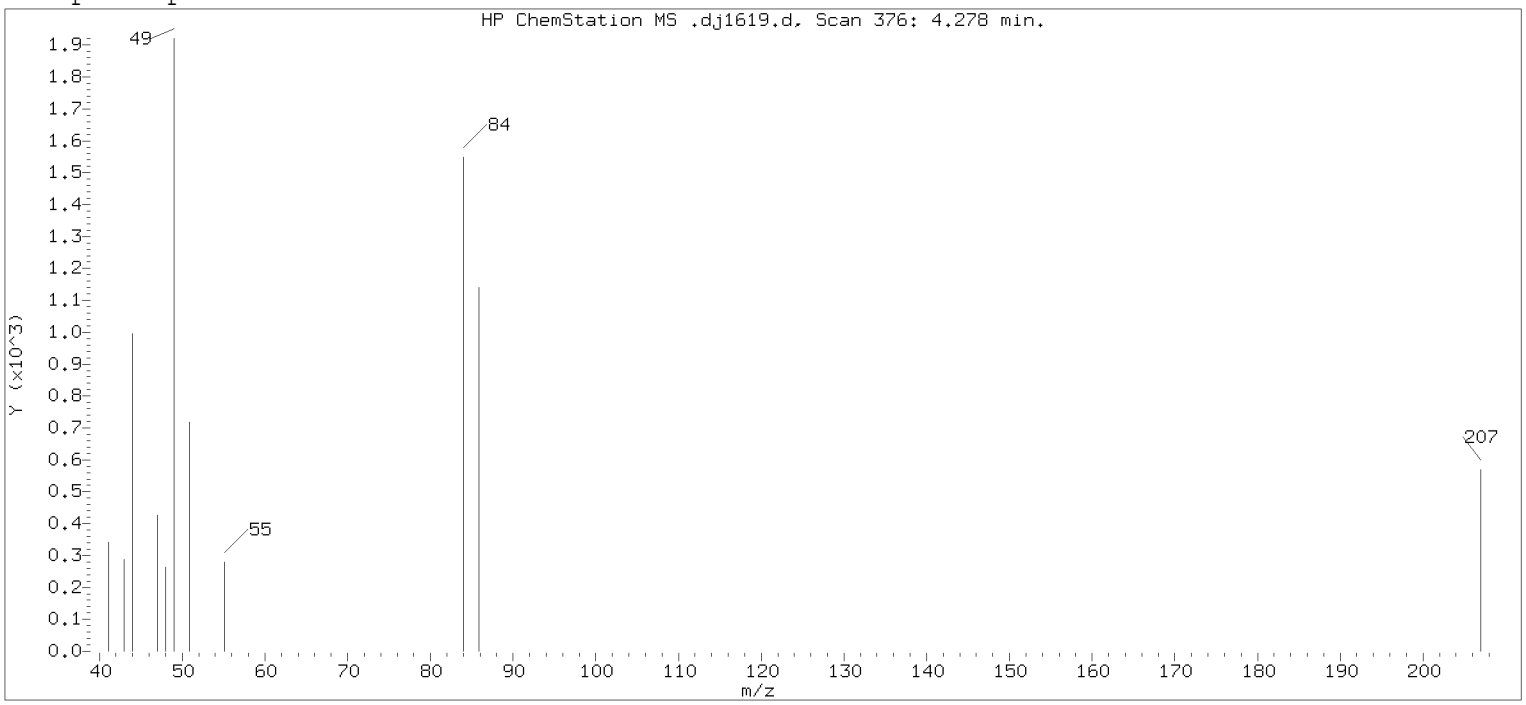
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 423
Retention Time (minutes) : 4.552
Quant Ion : 93.00
Area (flag) : 1466M
On-Column Amount (ng/ul) : 0.0249
Integration start scan : 415 Integration stop scan: 428
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: missed peak

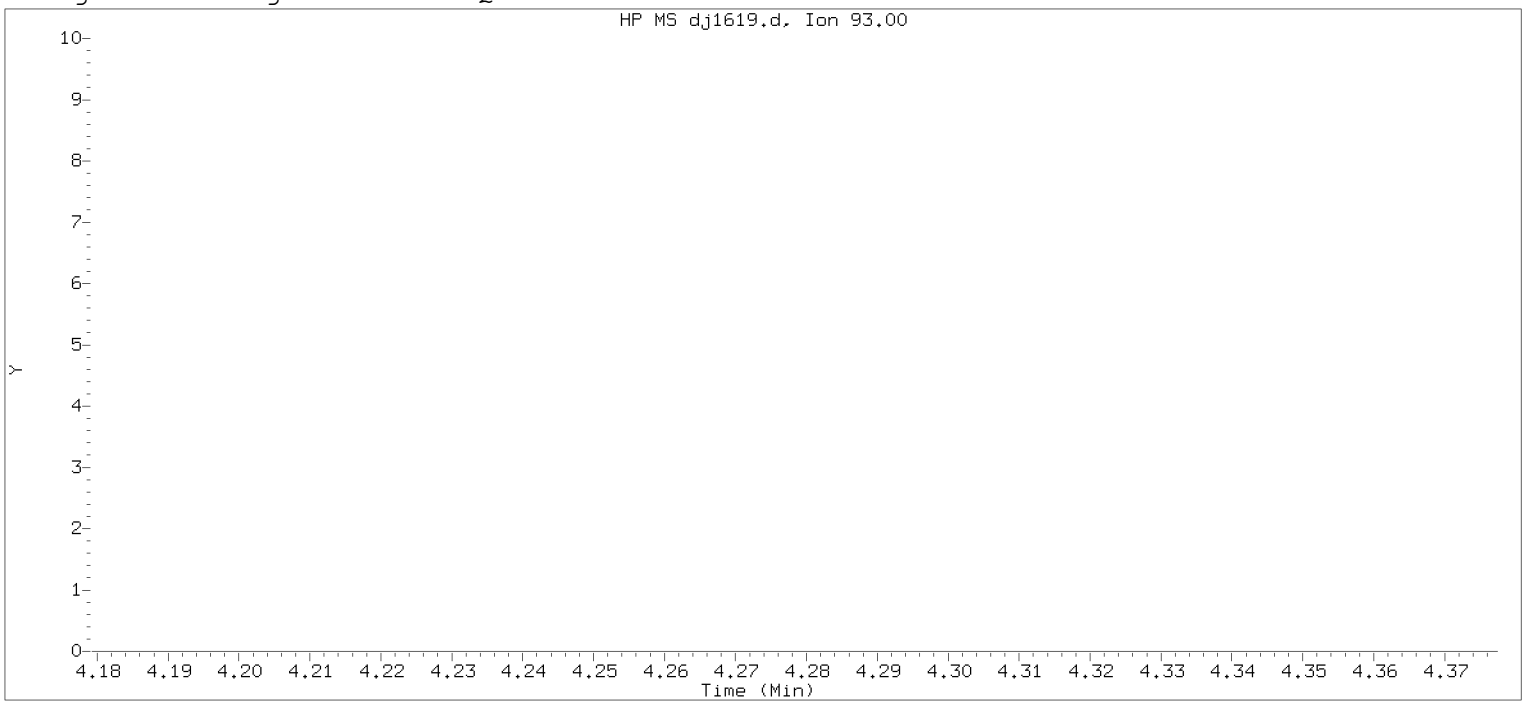
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

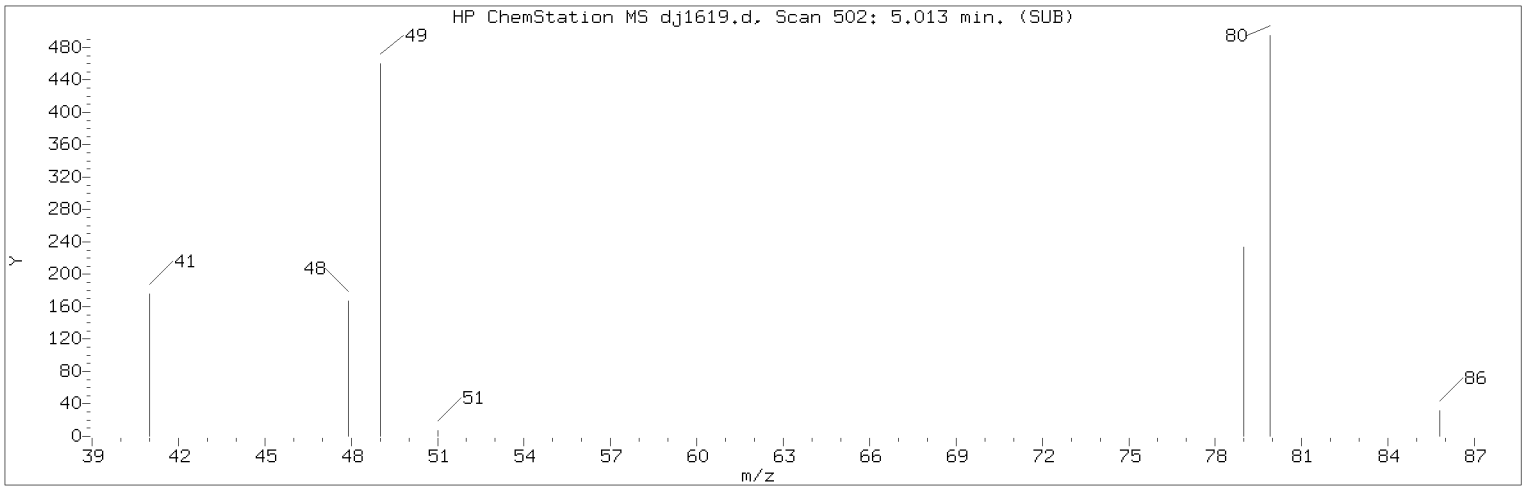
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

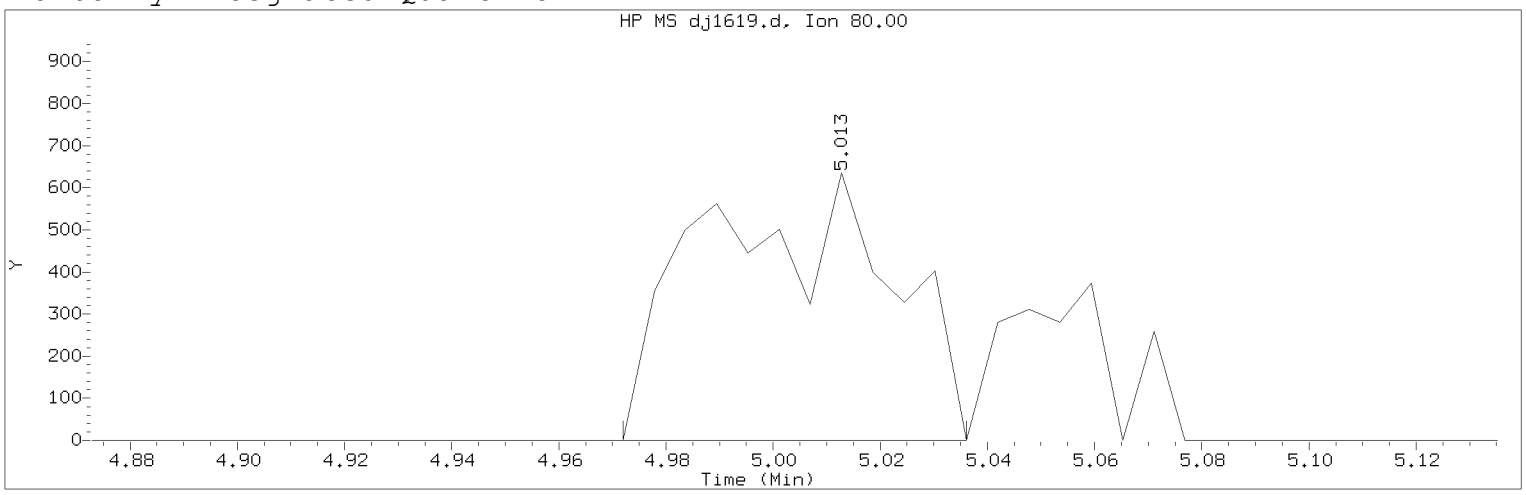
Compound Number : 7
Compound Name : 2-Picoline
Expected RT (minutes) : 4.279
Quant Ion : 93.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10204

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

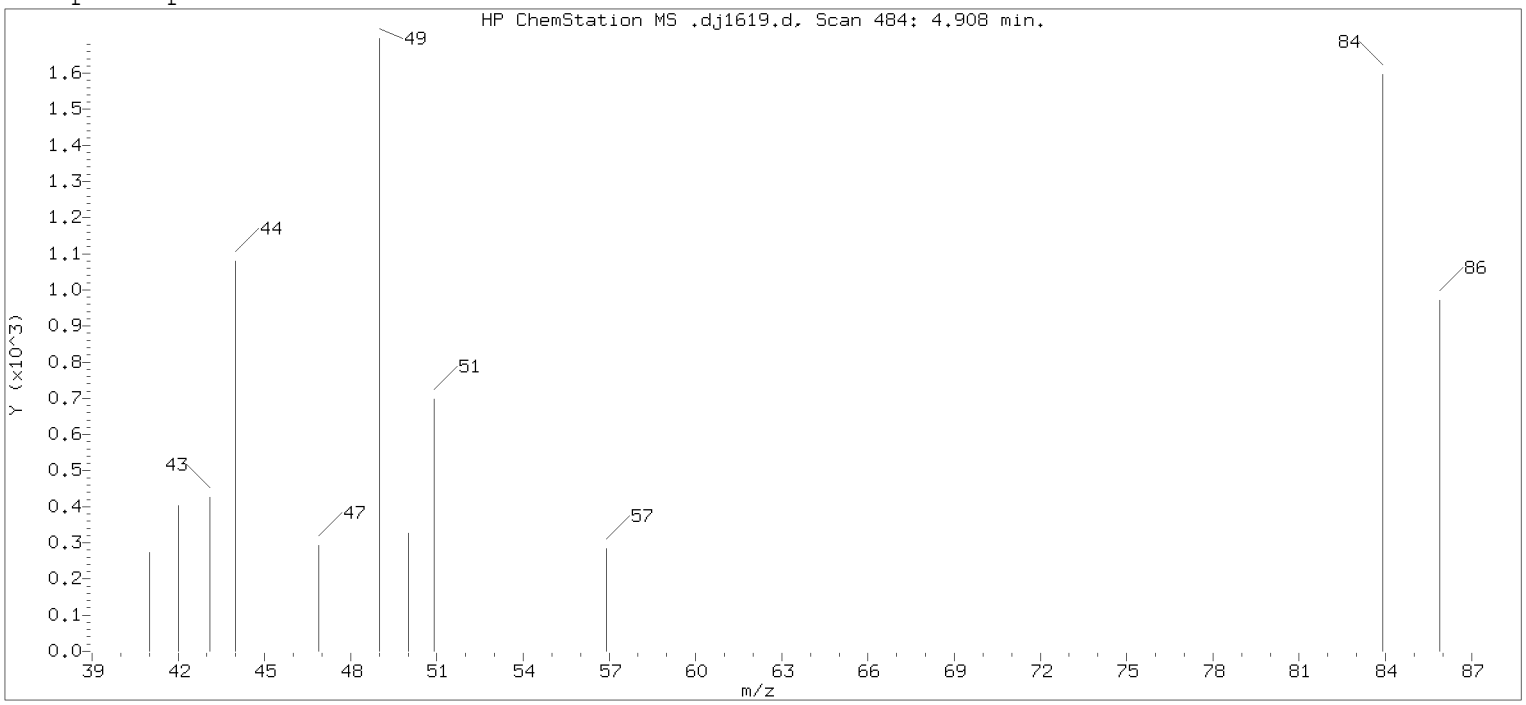
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 502
Retention Time (minutes) : 5.013
Quant Ion : 80.00
Area (flag) : 1556M
On-Column Amount (ng/ul) : 0.0602
Integration start scan : 494 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

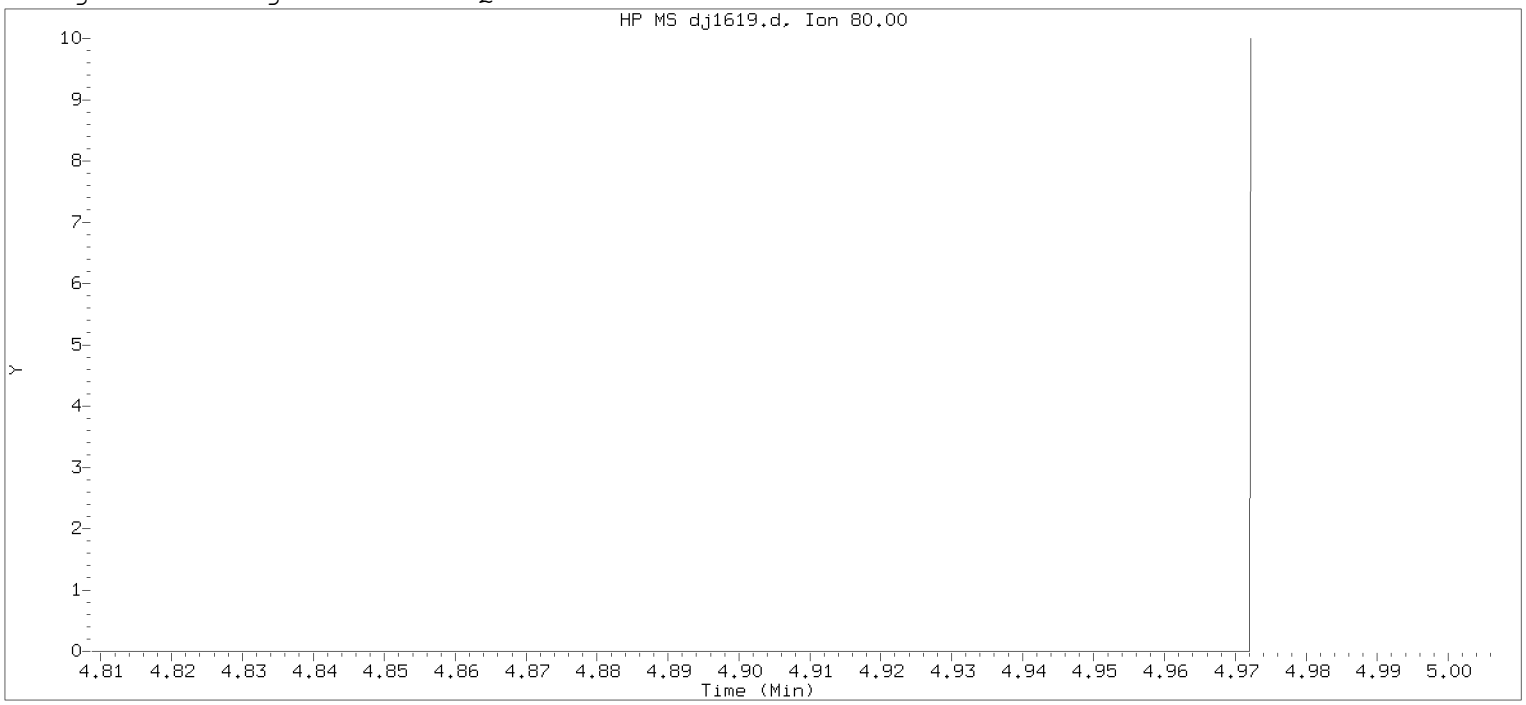
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

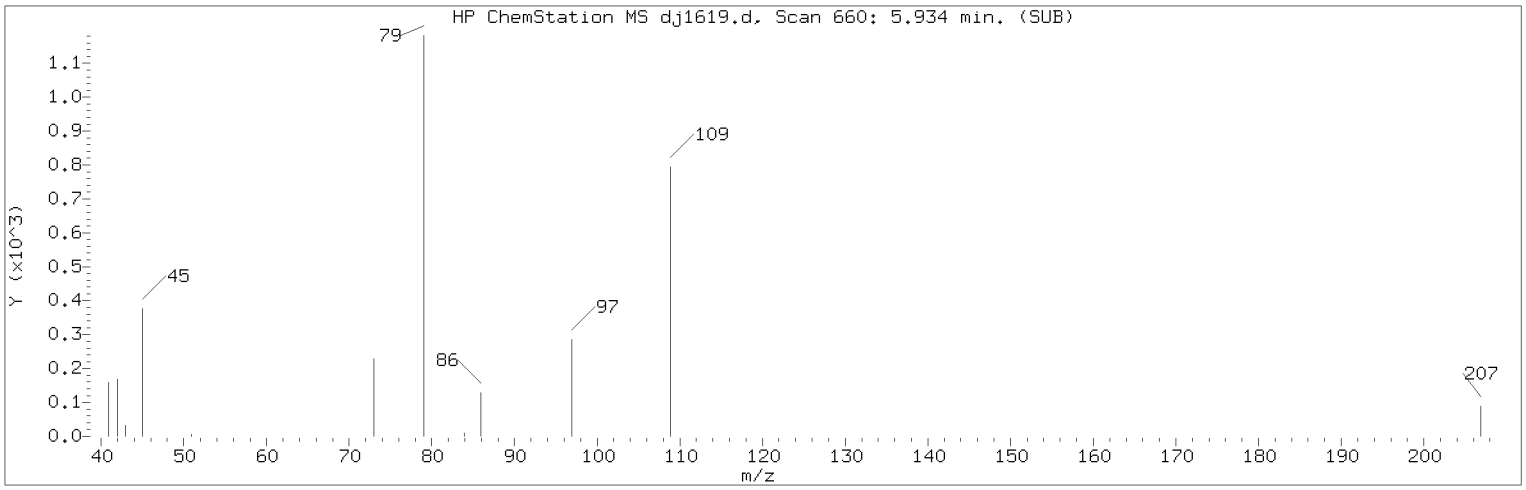
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

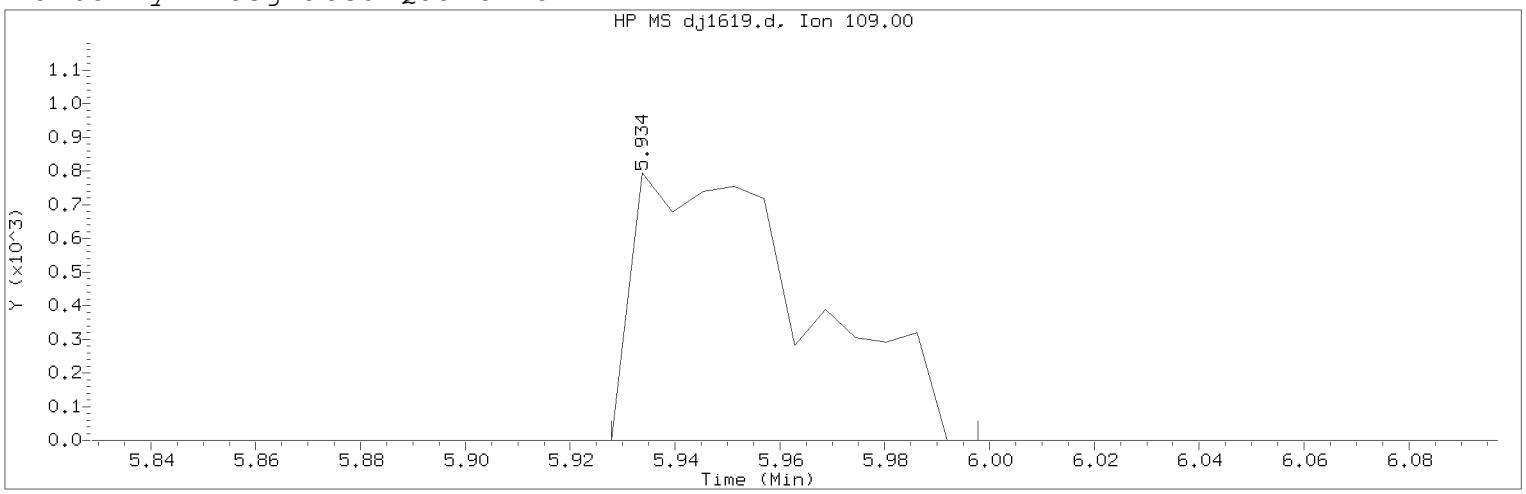
Compound Number : 9
Compound Name : Methyl methanesulfonate
Expected RT (minutes) : 4.908
Quant Ion : 80.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

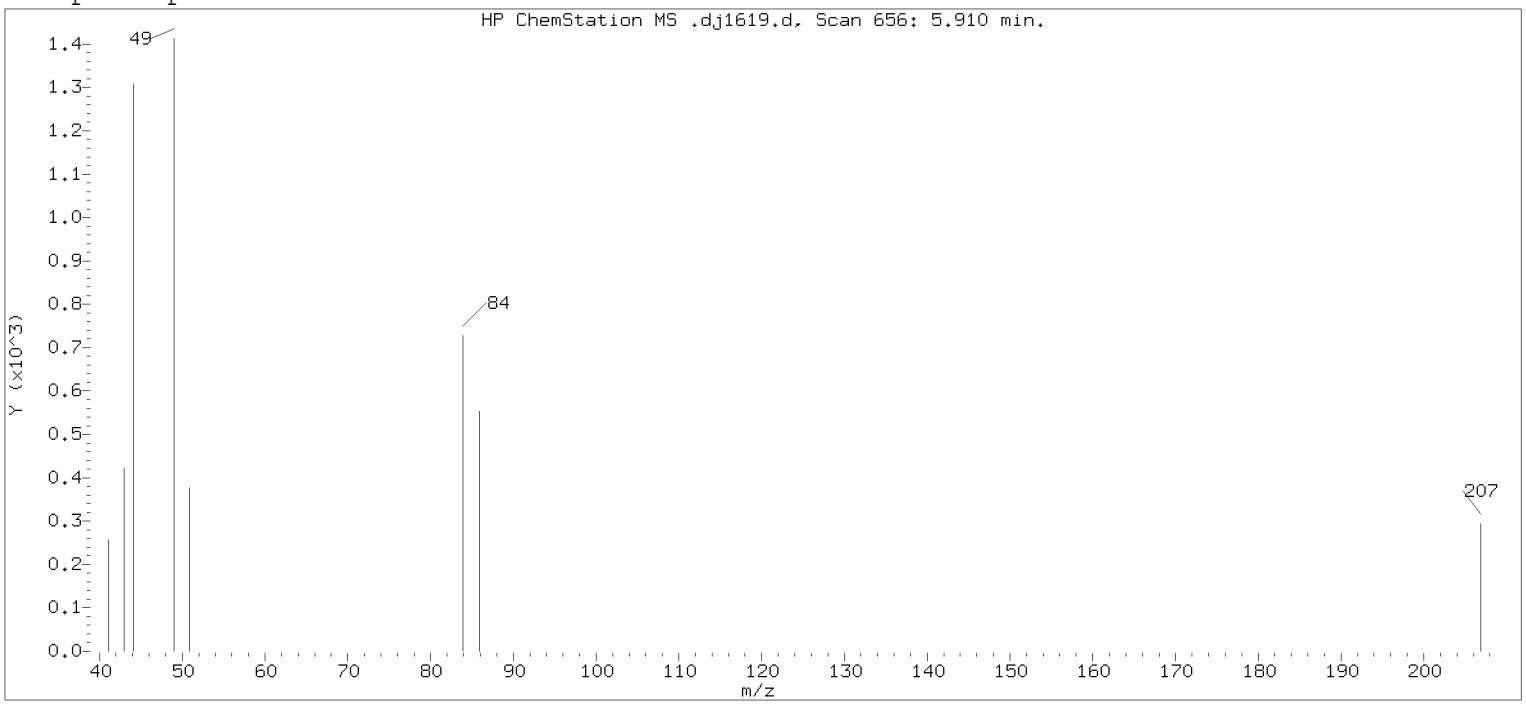
Compound Number : 15
Compound Name : Ethyl methanesulfonate
Scan Number : 660
Retention Time (minutes) : 5.934
Quant Ion : 109.00
Area (flag) : 1844M
On-Column Amount (ng/ul) : 0.0761
Integration start scan : 658 Integration stop scan: 670
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

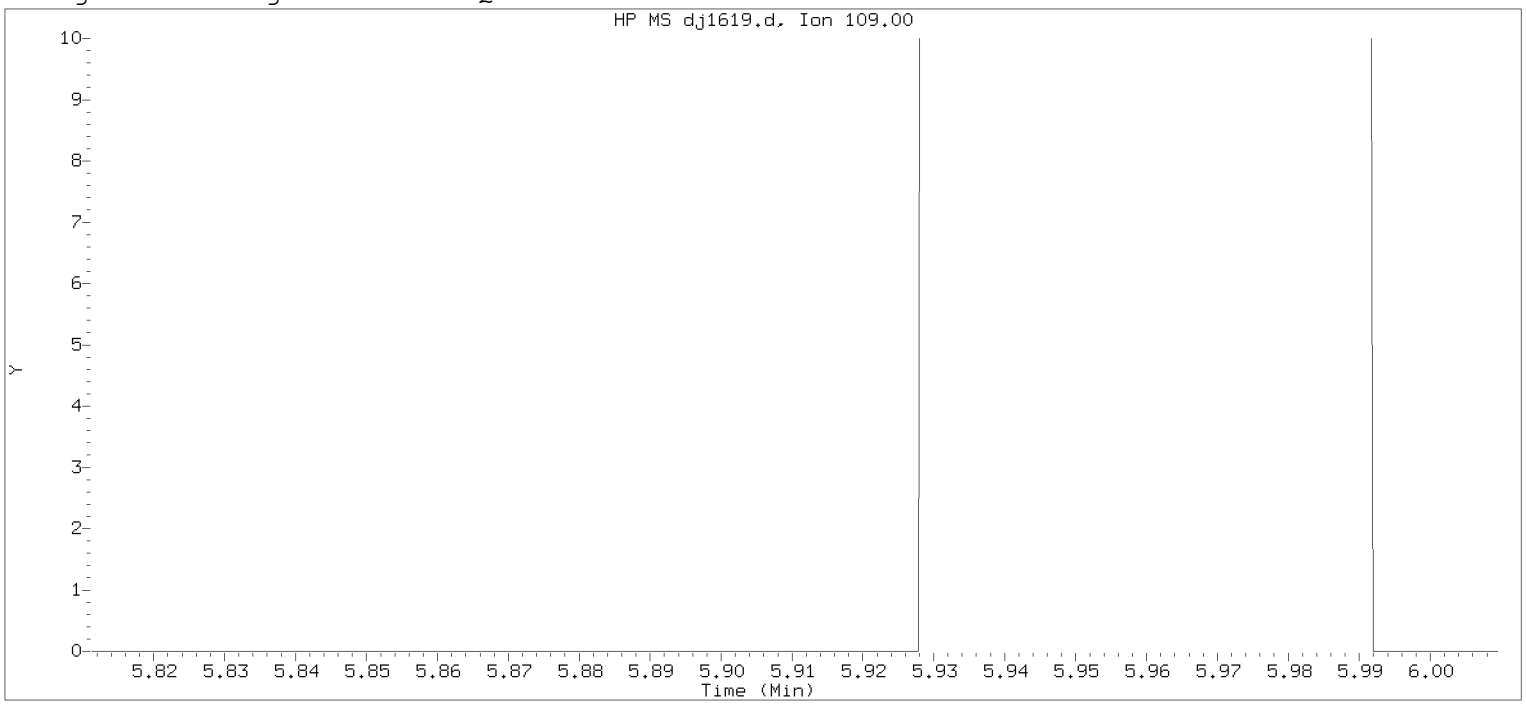
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

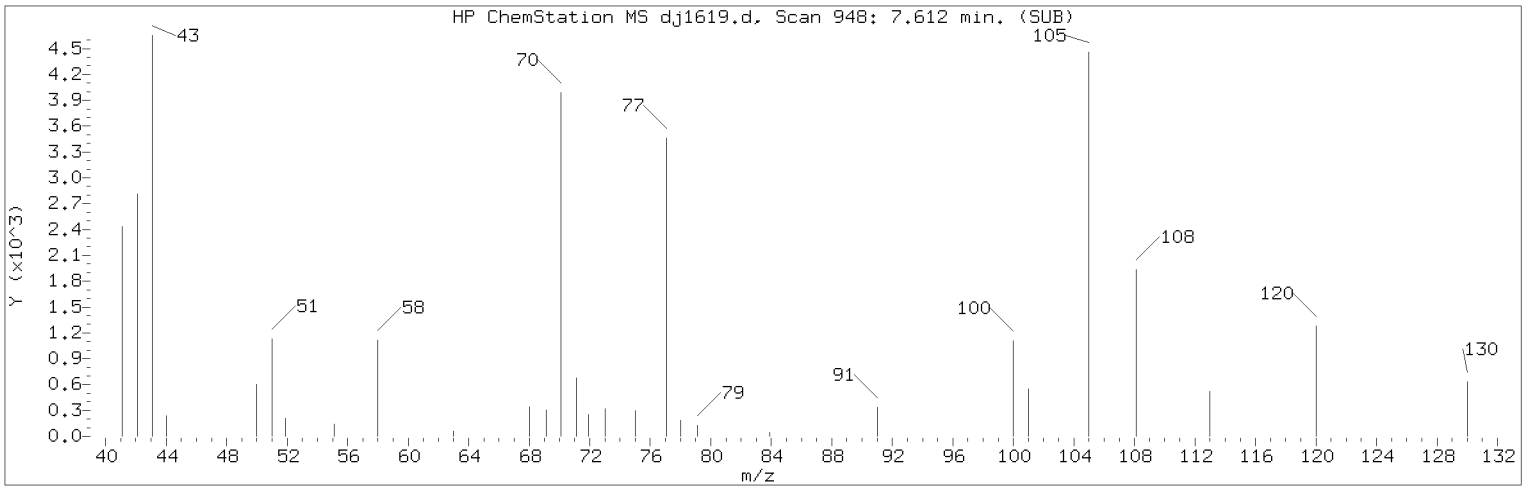
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

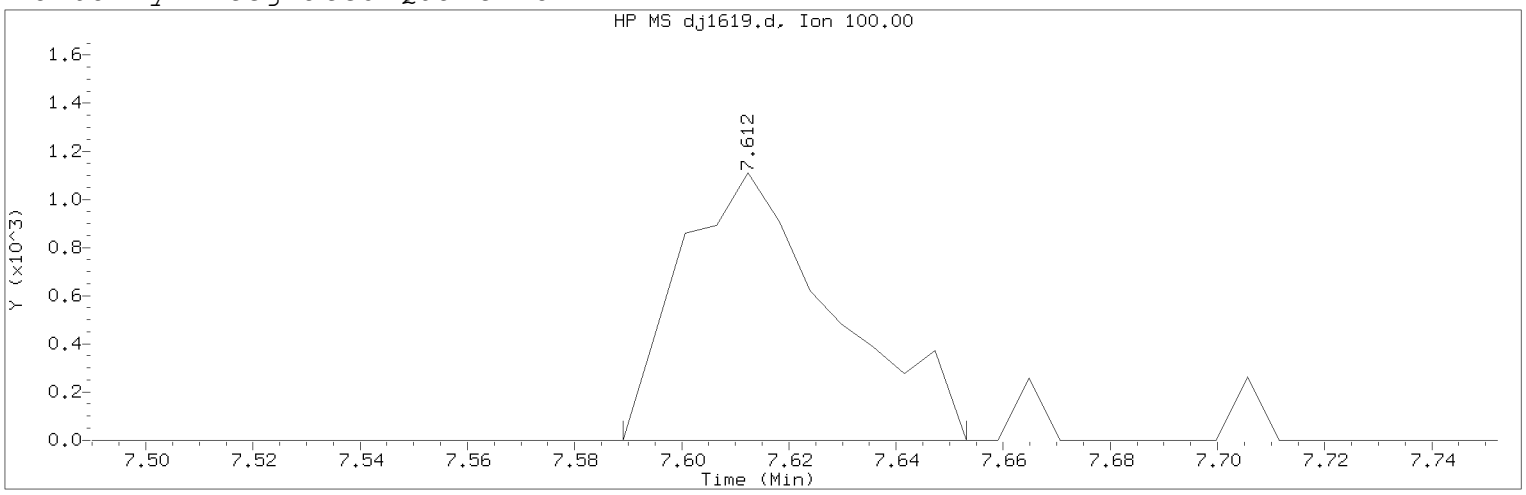
Compound Number : 15
Compound Name : Ethyl methanesulfonate
Expected RT (minutes) : 5.911
Quant Ion : 109.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

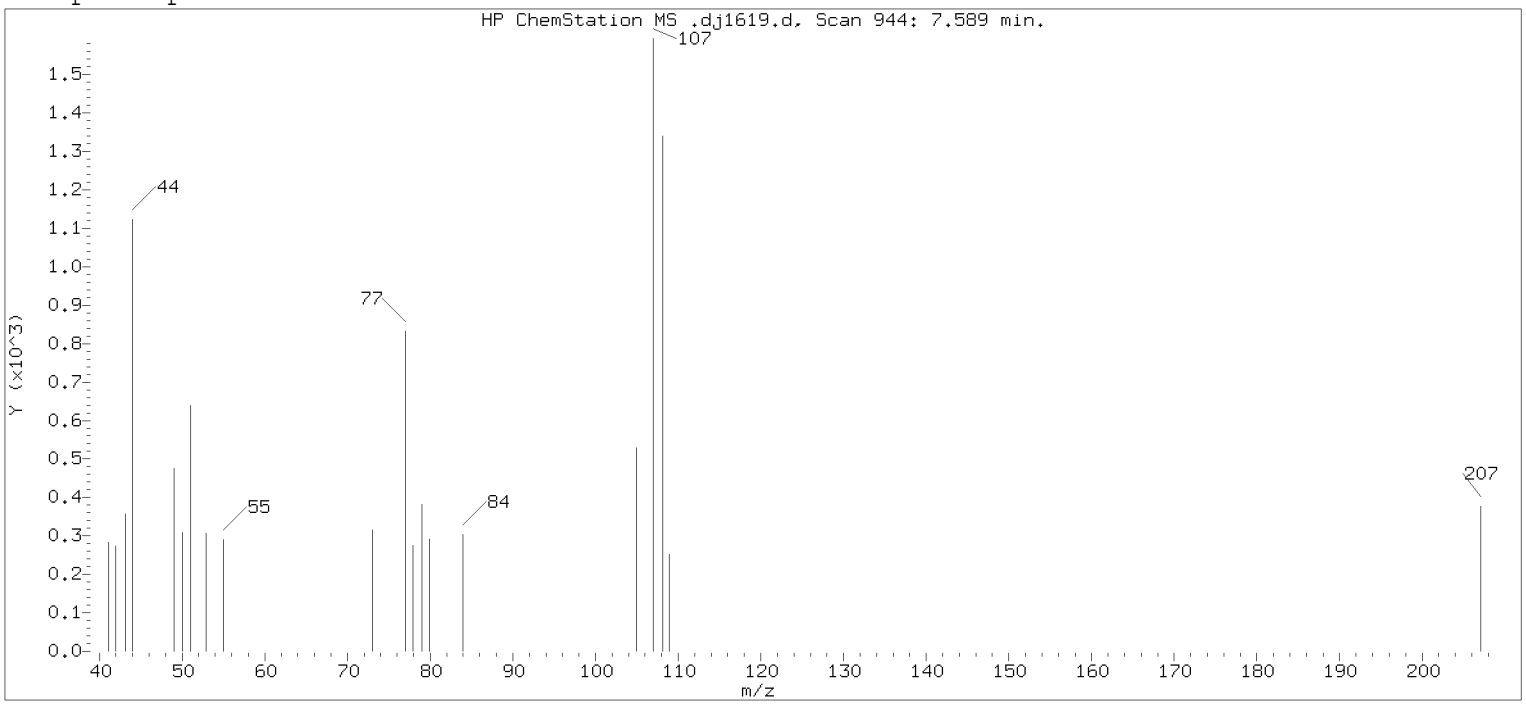
Compound Number : 35
Compound Name : N-Nitrosopyrrolidine
Scan Number : 948
Retention Time (minutes) : 7.612
Quant Ion : 100.00
Area (flag) : 2220M
On-Column Amount (ng/ul) : 0.0908
Integration start scan : 943 Integration stop scan: 954
Y at integration start : -1 Y at integration end: -1

Reason for manual integration: missed peak

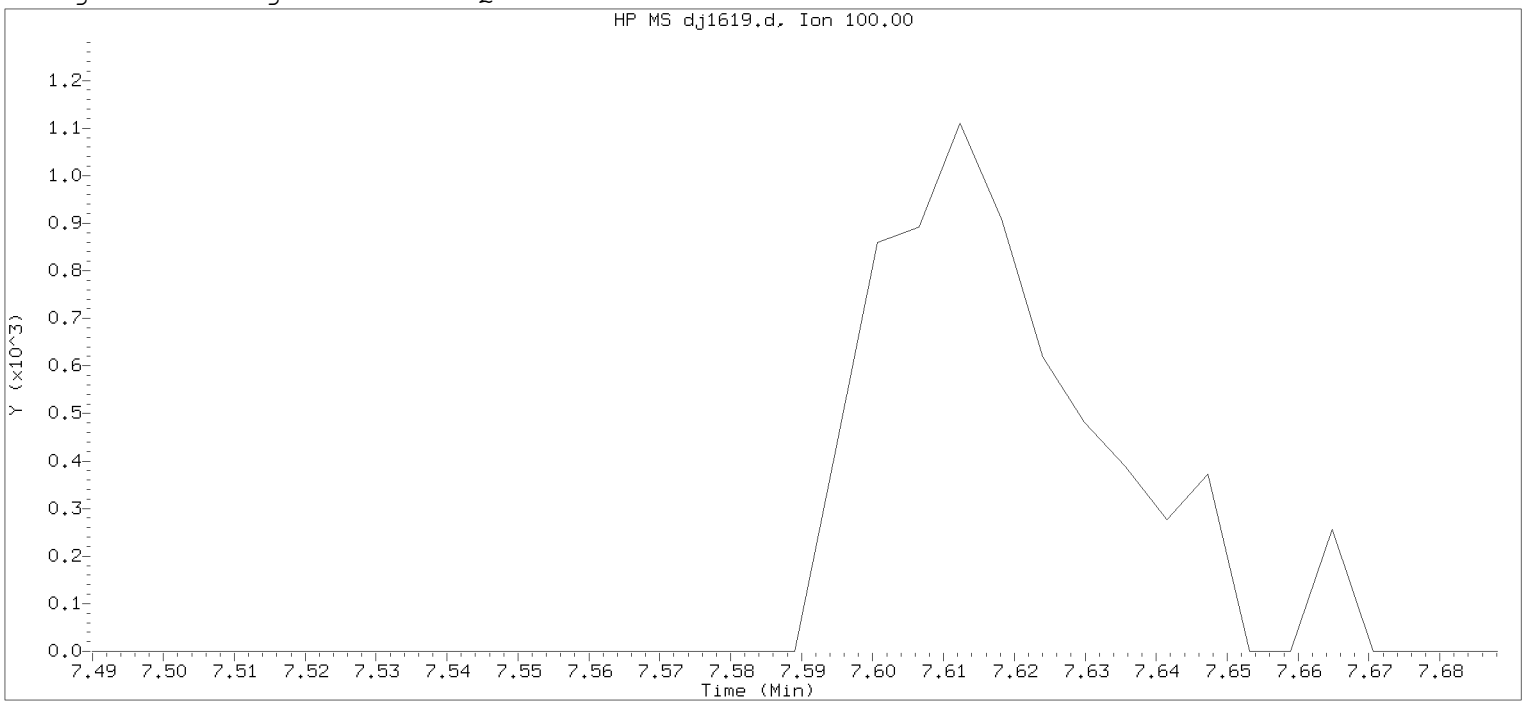
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

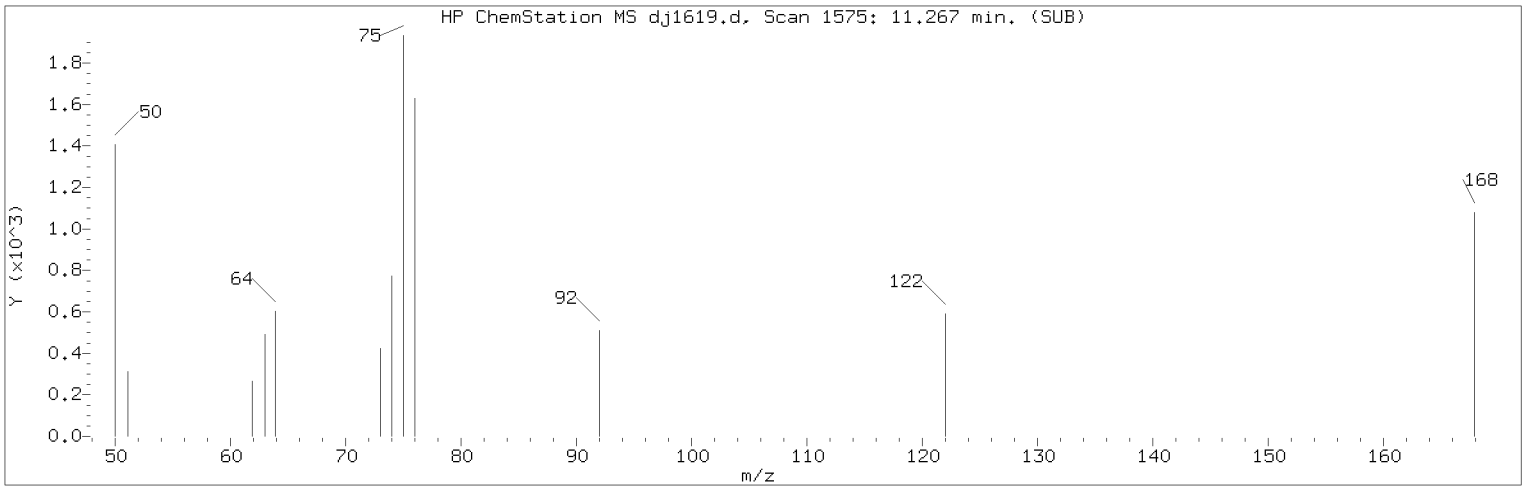
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

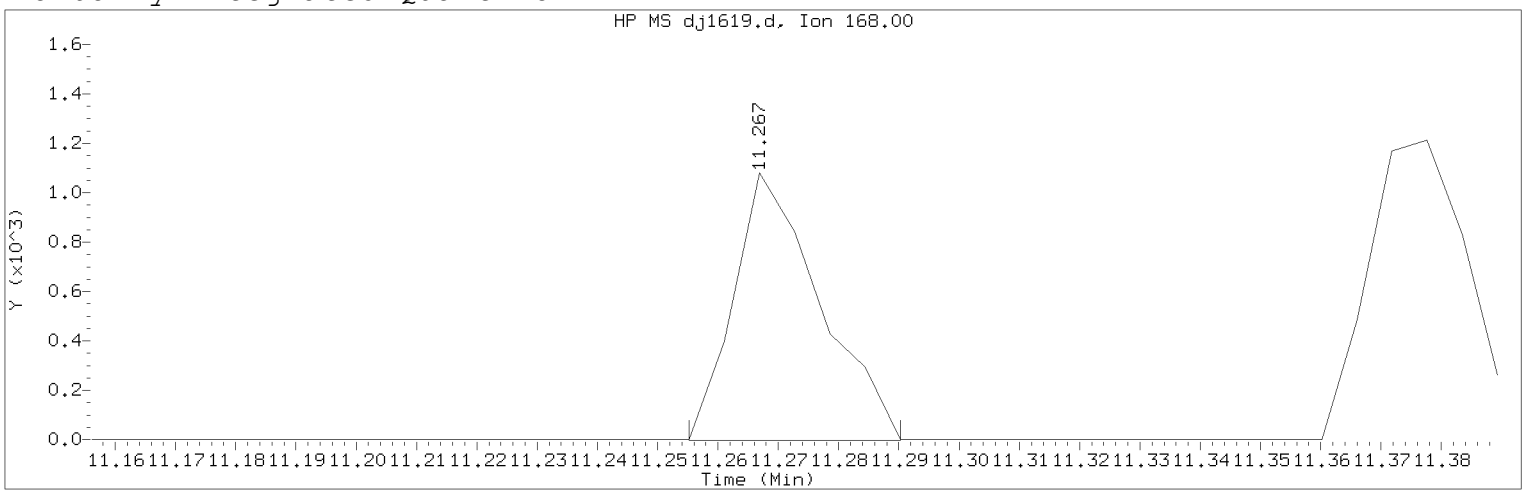
Compound Number : 35
Compound Name : N-Nitrosopyrrolidine
Expected RT (minutes) : 7.589
Quant Ion : 100.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature used to approve this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

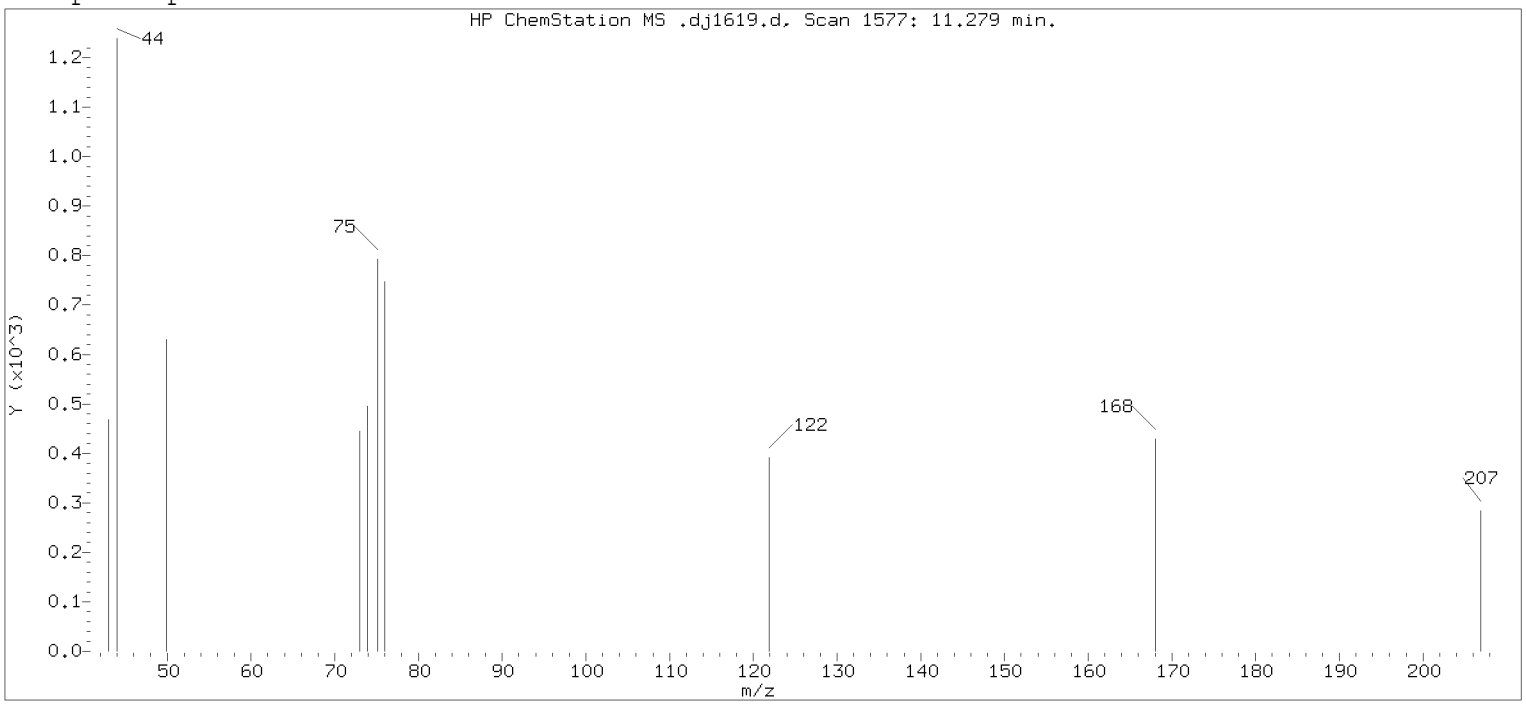
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1575
Retention Time (minutes) : 11.267
Quant Ion : 168.00
Area (flag) : 1069M
On-Column Amount (ng/ul) : 0.0789
Integration start scan : 1572 Integration stop scan: 1578
Y at integration start : -2 Y at integration end: -2

Reason for manual integration: missed peak

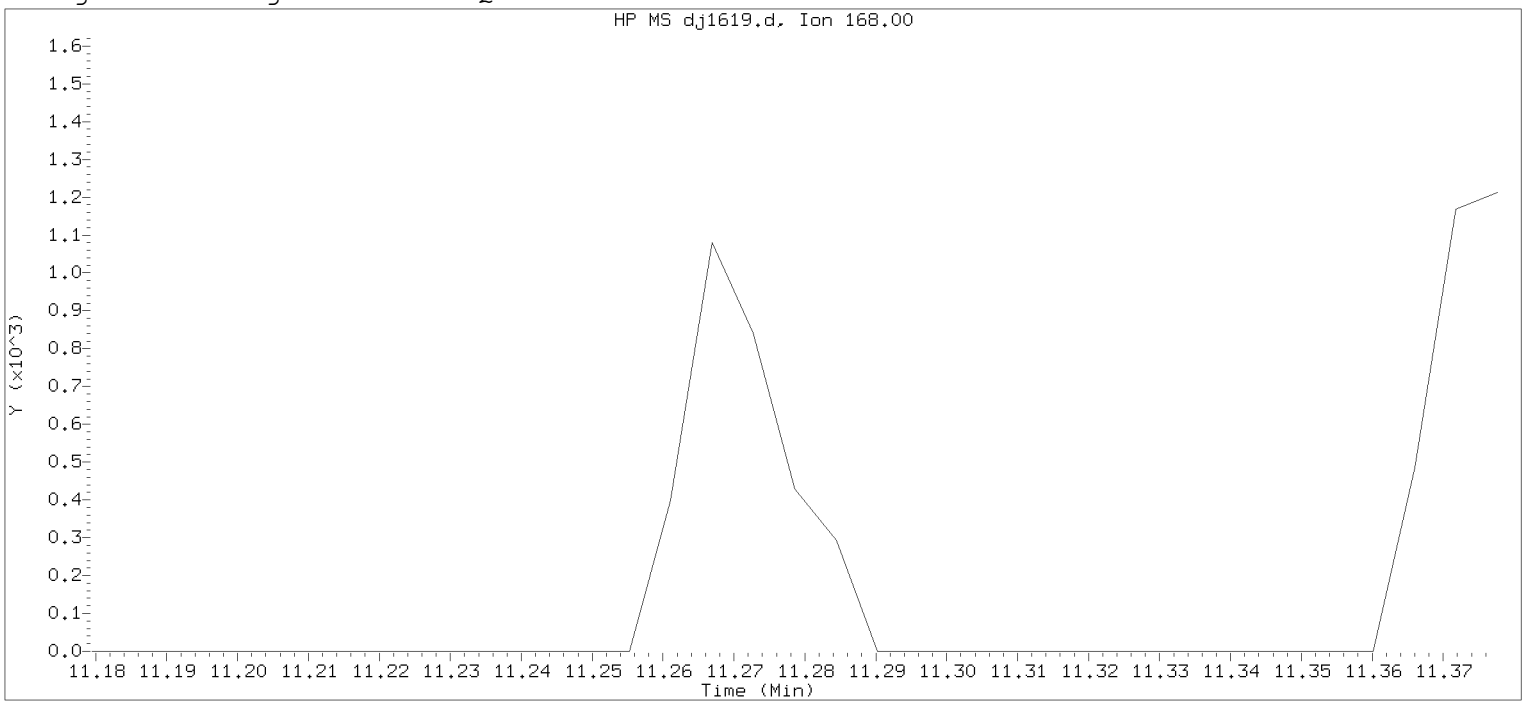
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

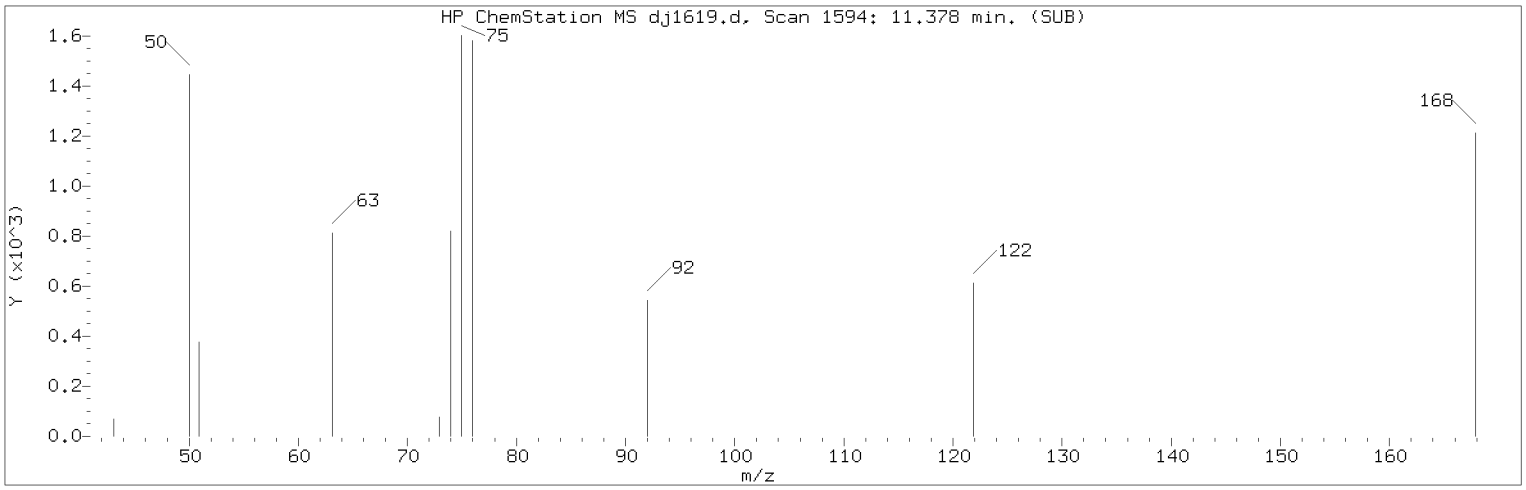
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

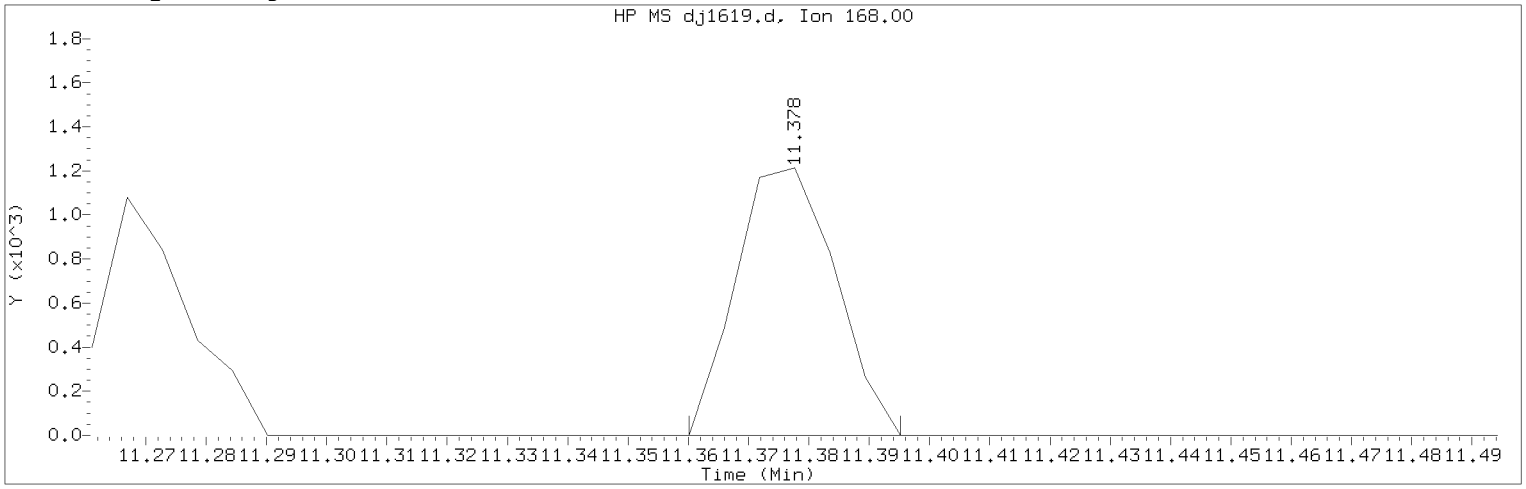
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 11.279
Quant Ion : 168.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user Appr 1012

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

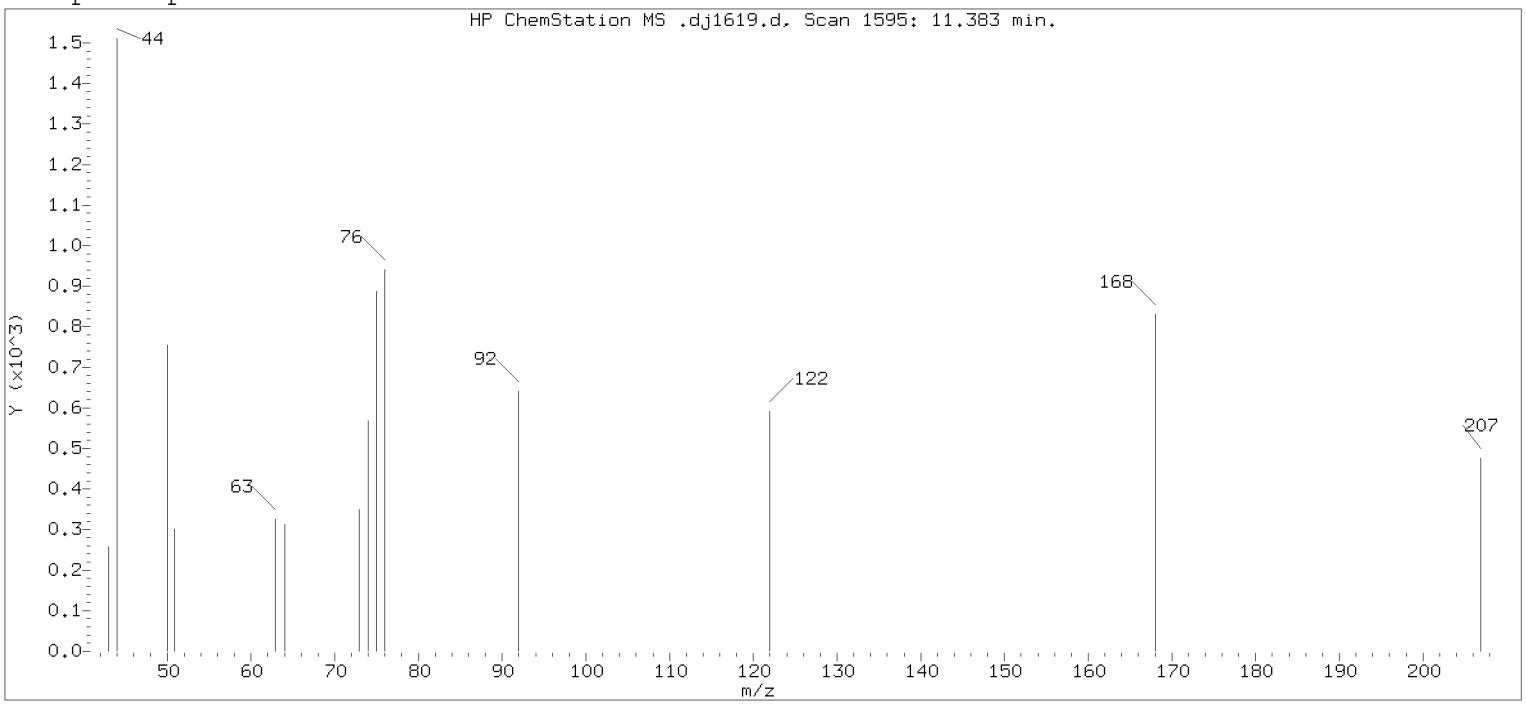
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1594
Retention Time (minutes) : 11.378
Quant Ion : 168.00
Area (flag) : 1385M
On-Column Amount (ng/ul) : 0.0926
Integration start scan : 1590 Integration stop scan: 1596
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

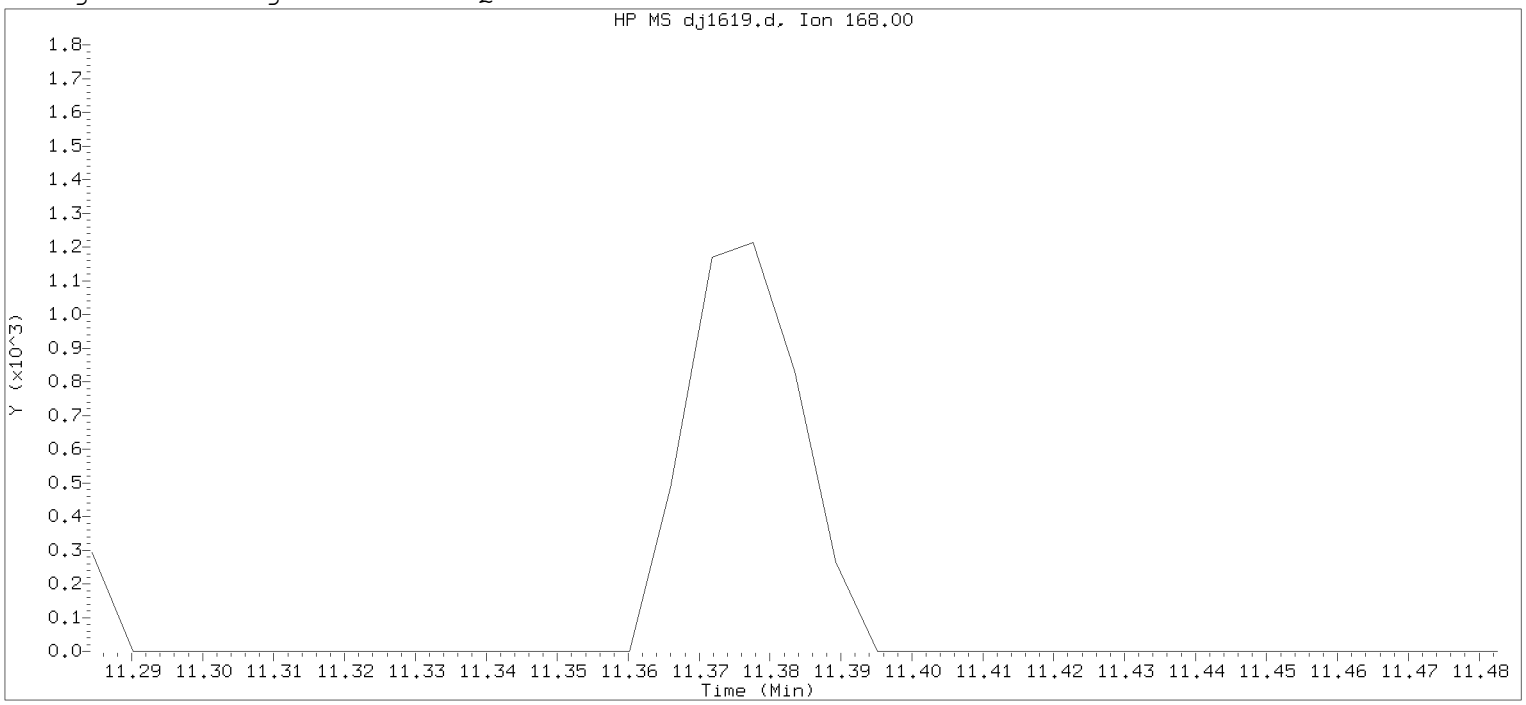
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

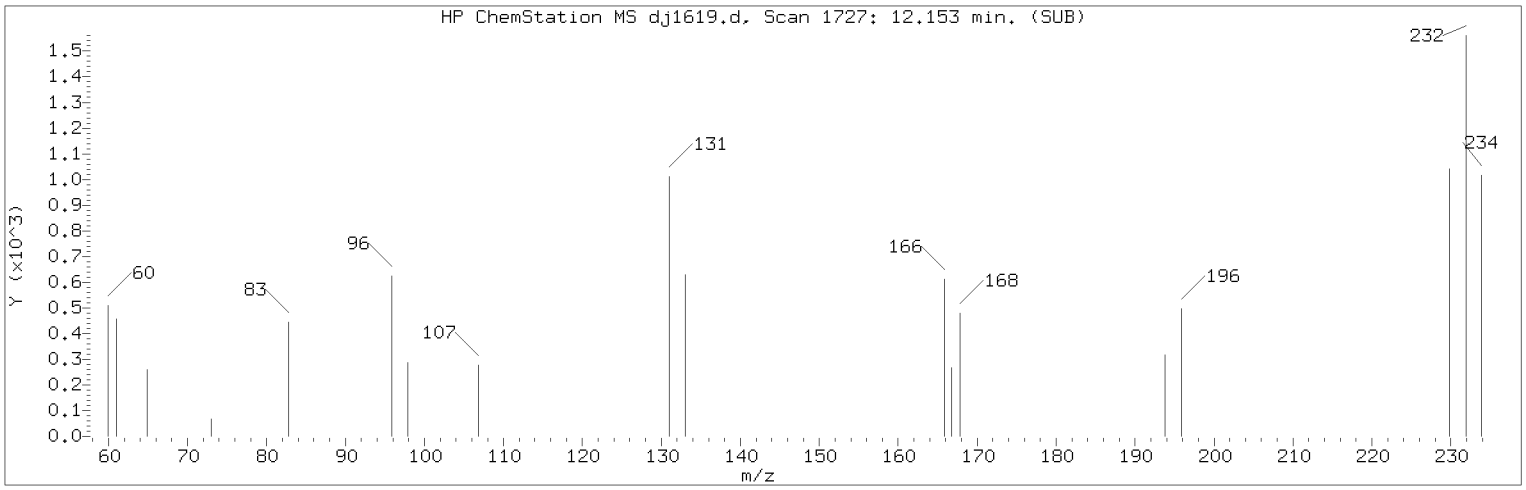
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

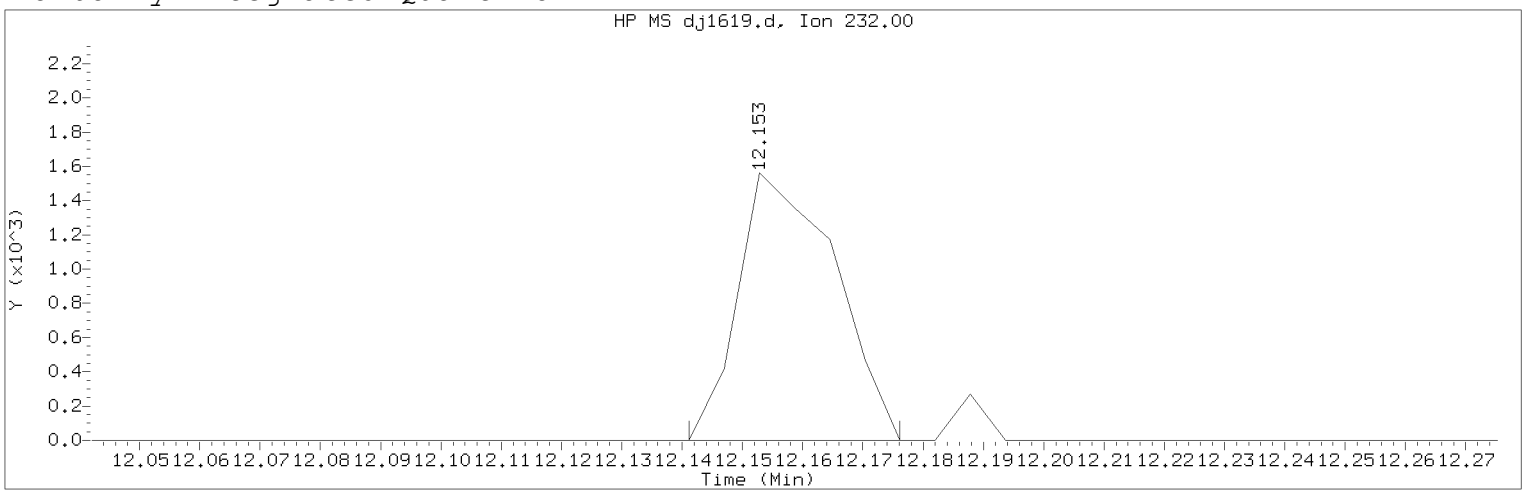
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.384
Quant Ion : 168.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

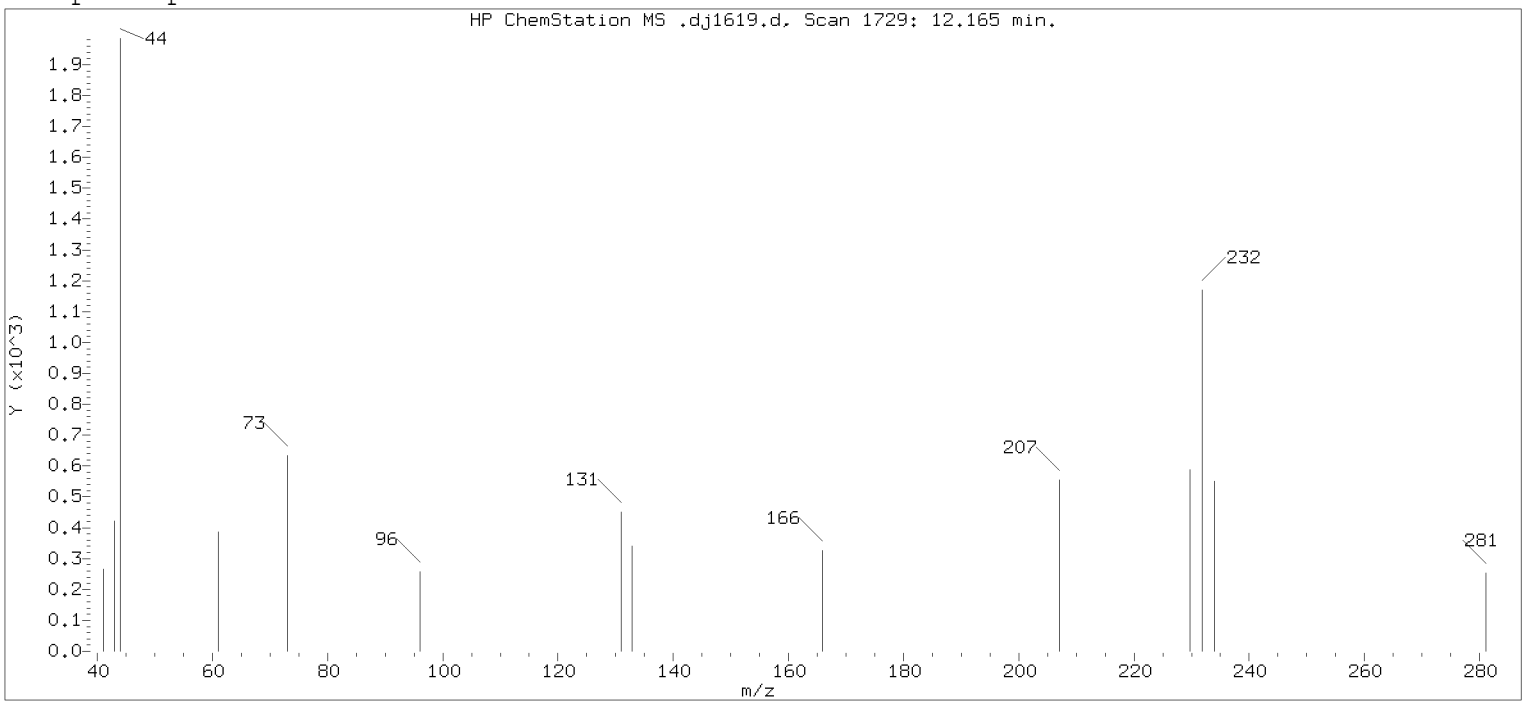
Compound Number : 122
Compound Name : 2,3,4,6-Tetrachlorophenol
Scan Number : 1727
Retention Time (minutes) : 12.153
Quant Ion : 232.00
Area (flag) : 1740M
On-Column Amount (ng/ul) : 0.0784
Integration start scan : 1724 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

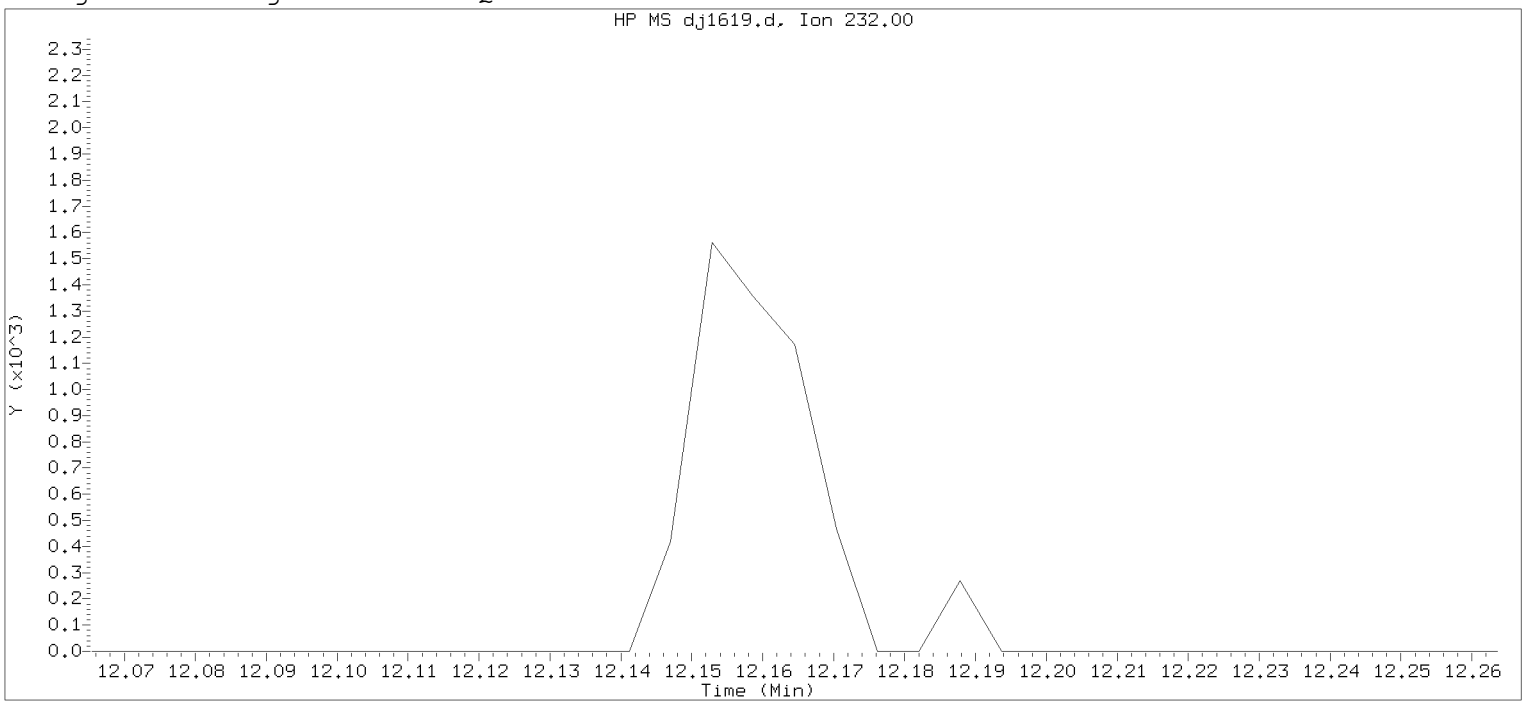
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

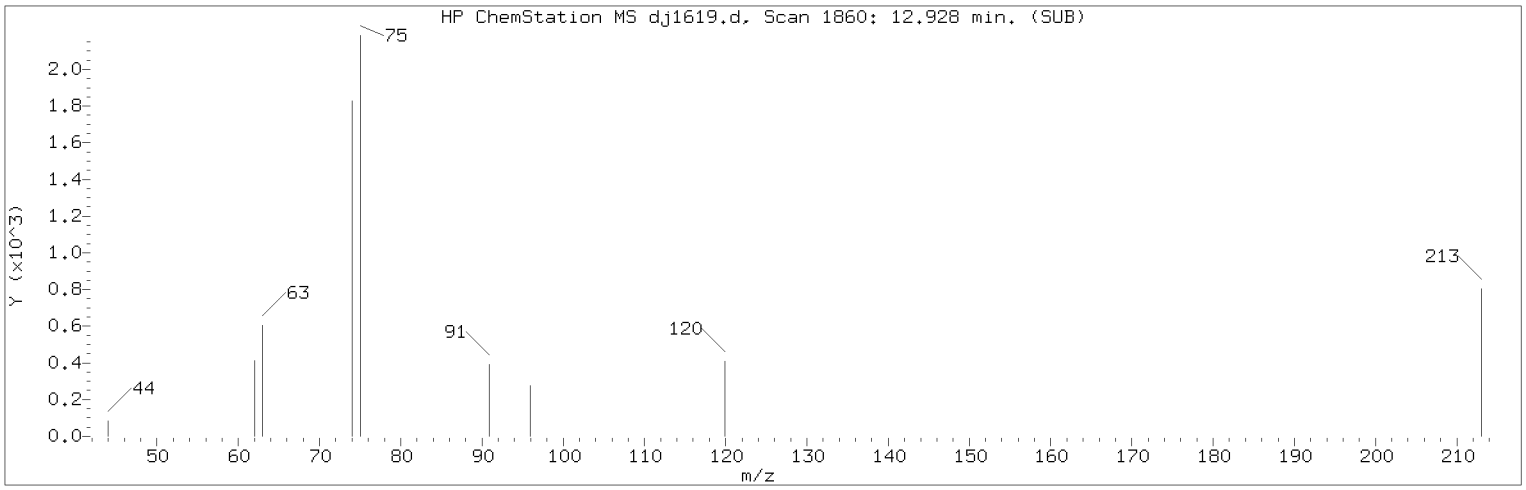
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

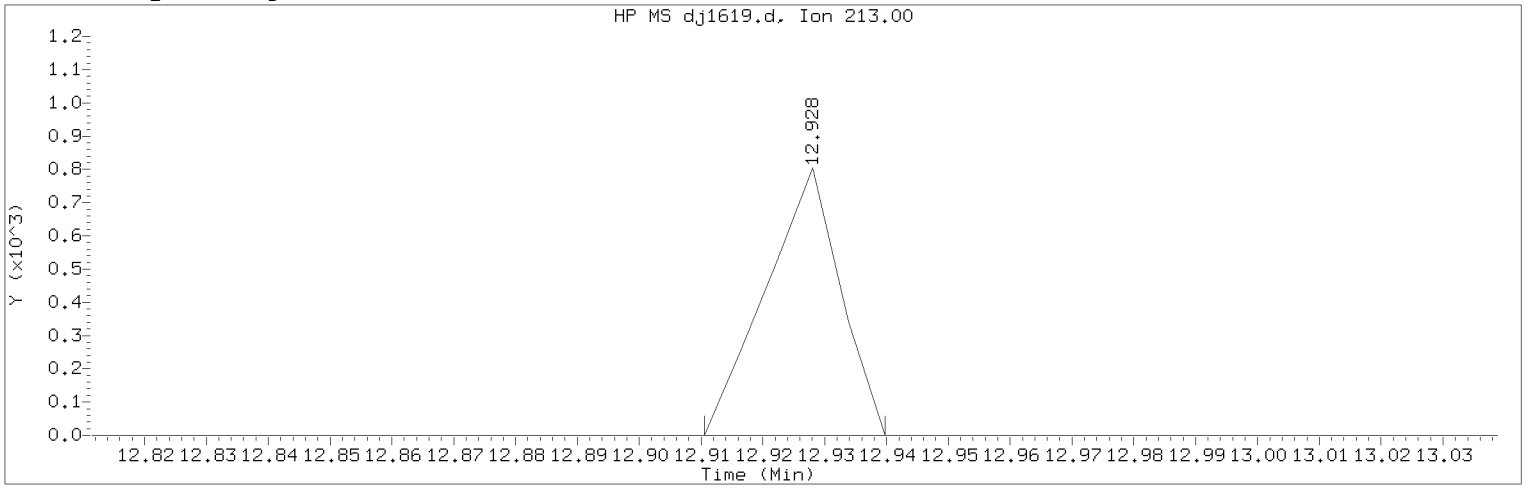
Compound Number : 122
Compound Name : 2,3,4,6-Tetrachlorophenol
Expected RT (minutes) : 12.165
Quant Ion : 232.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

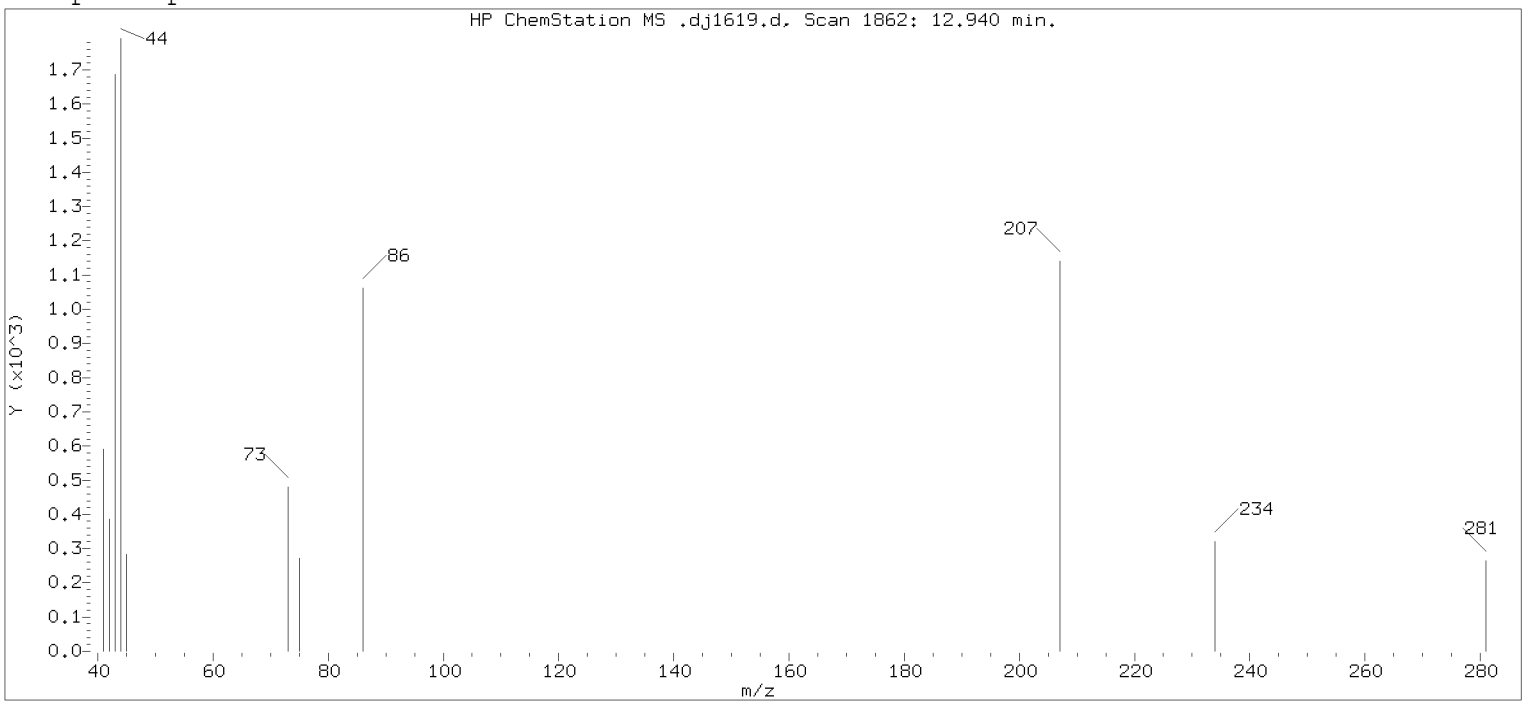
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1860
Retention Time (minutes) : 12.928
Quant Ion : 213.00
Area (flag) : 673M
On-Column Amount (ng/ul) : 0.0651
Integration start scan : 1856 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

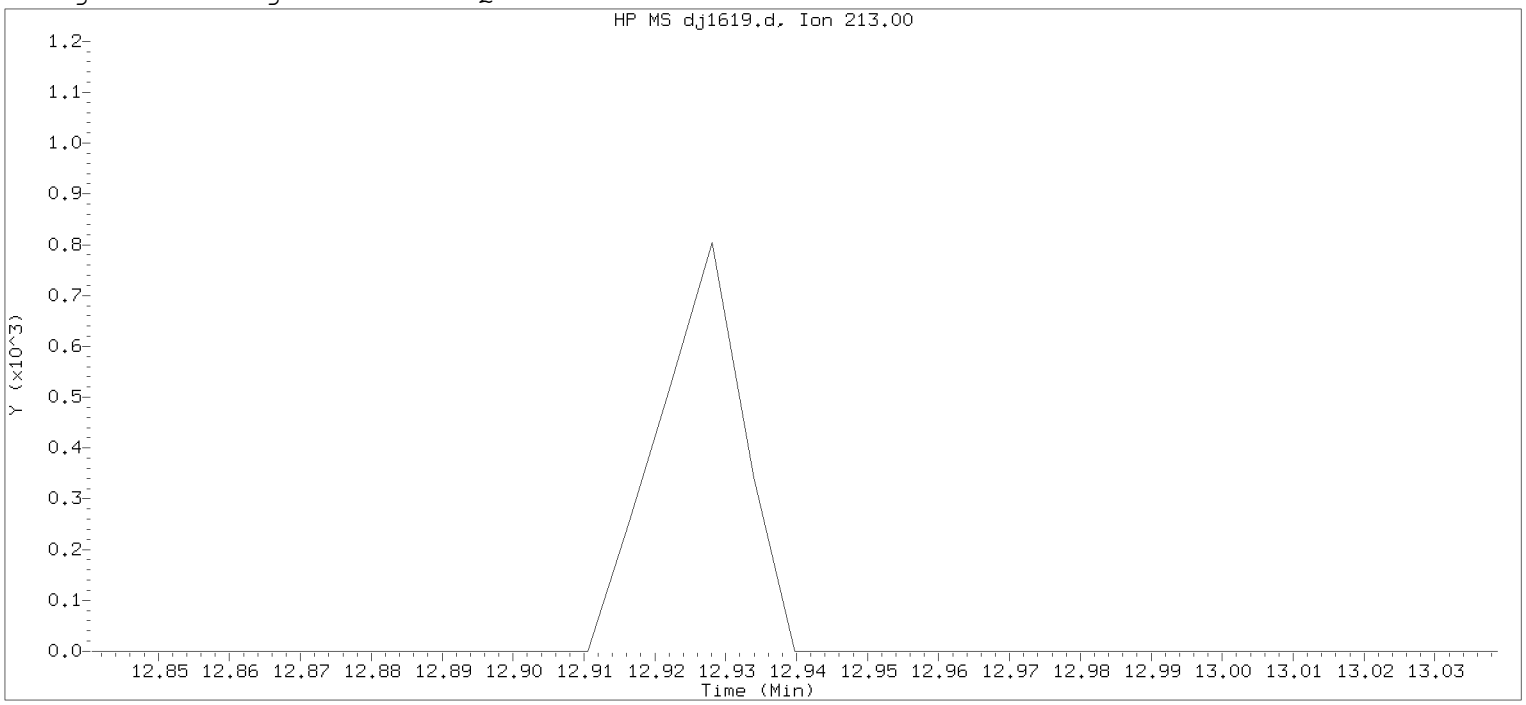
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

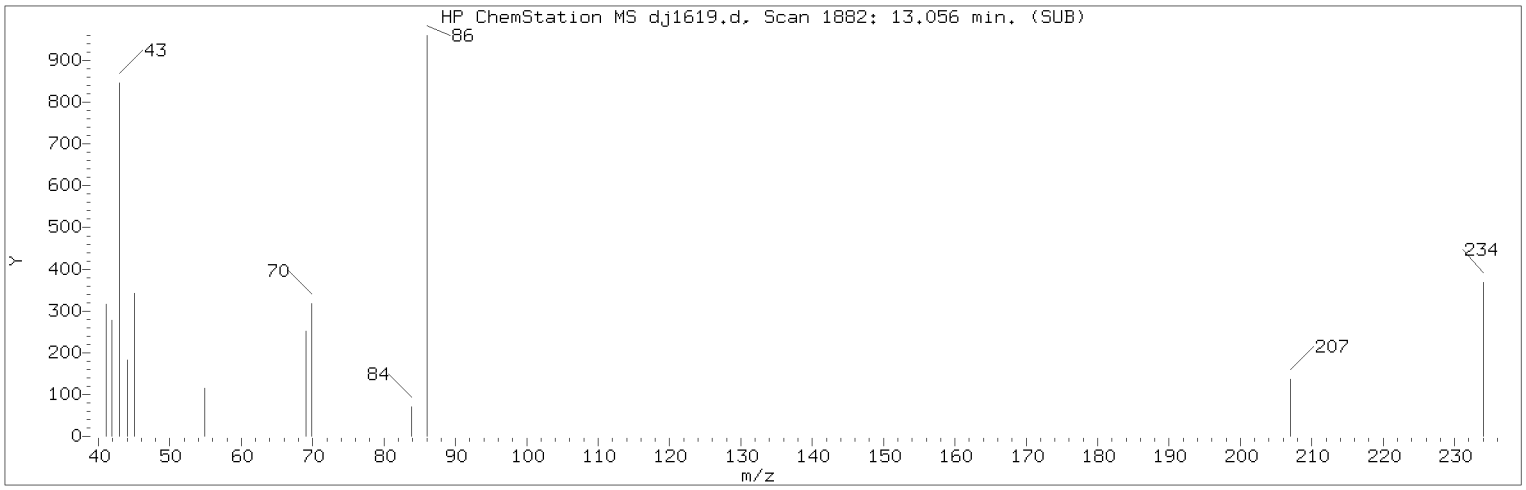
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

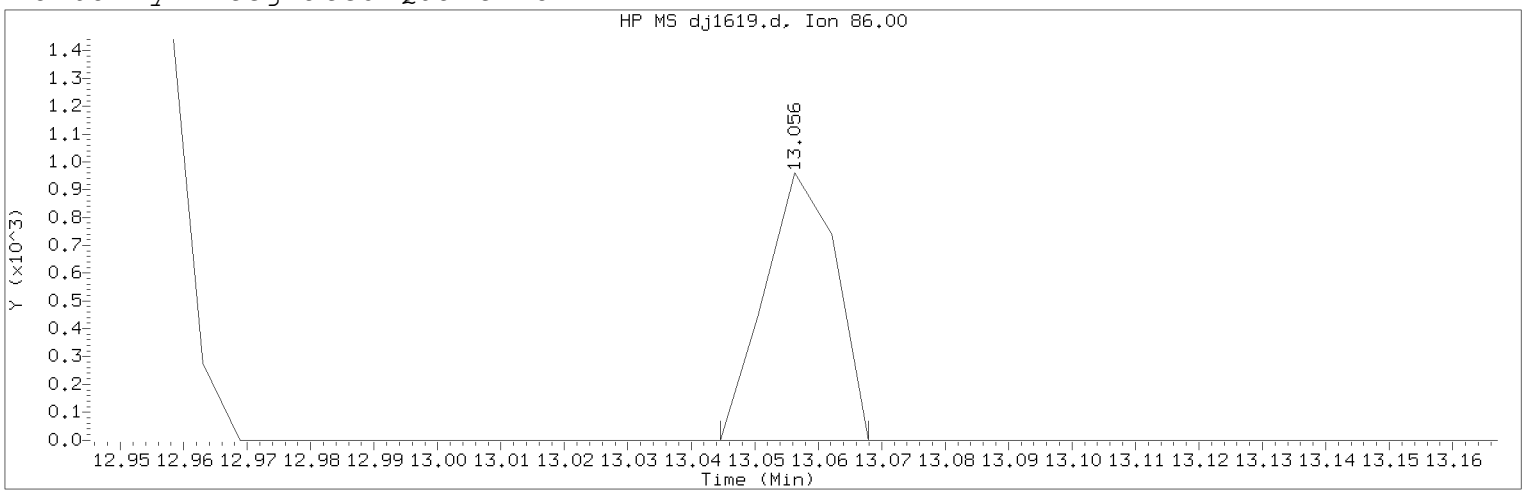
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.940
Quant Ion : 213.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

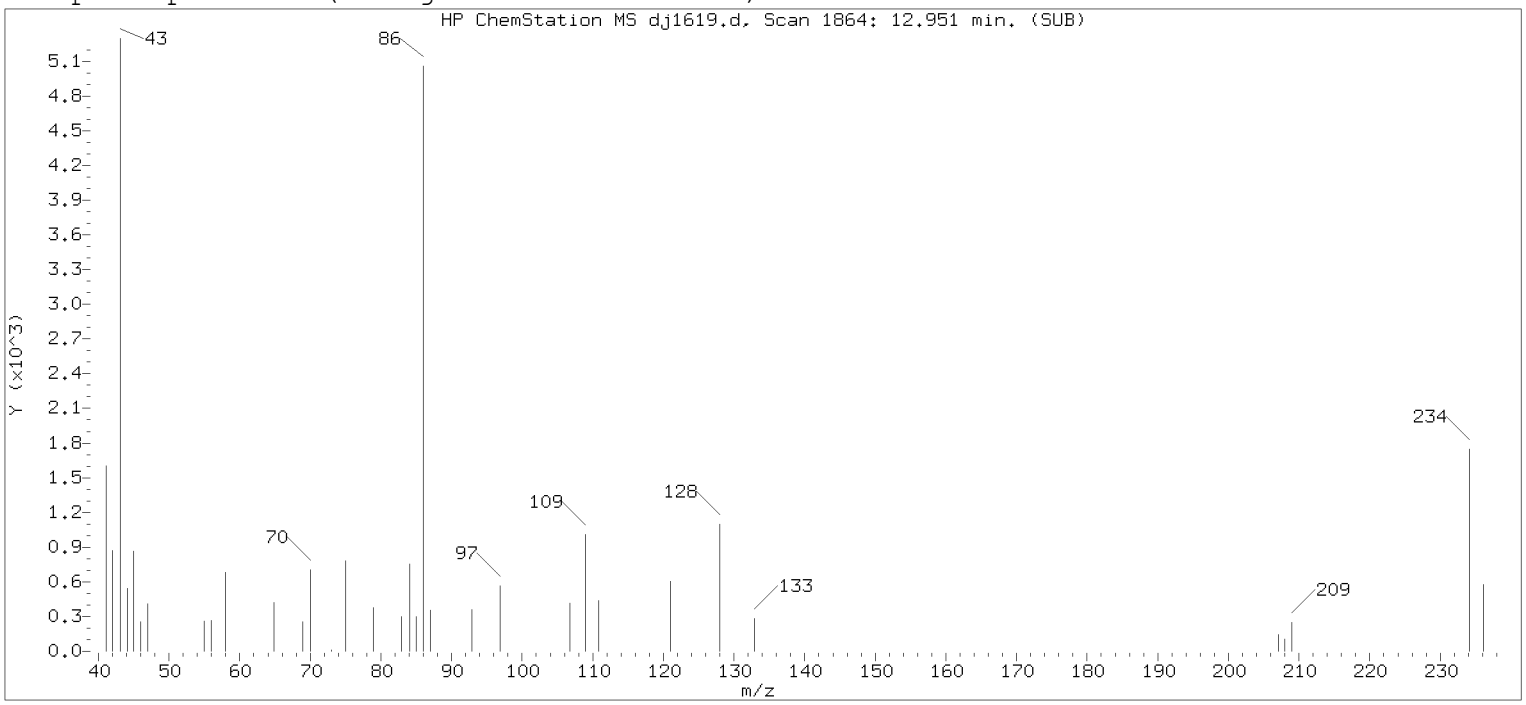
Compound Number : 144
Compound Name : Diallate (peak 2)
Scan Number : 1882
Retention Time (minutes) : 13.056
Quant Ion : 86.00
Area (flag) : 750M
On-Column Amount (ng/ul) : 0.0198
Integration start scan : 1879 Integration stop scan: 1883
Y at integration start : -1 Y at integration end: -1

Reason for manual integration: improper integration

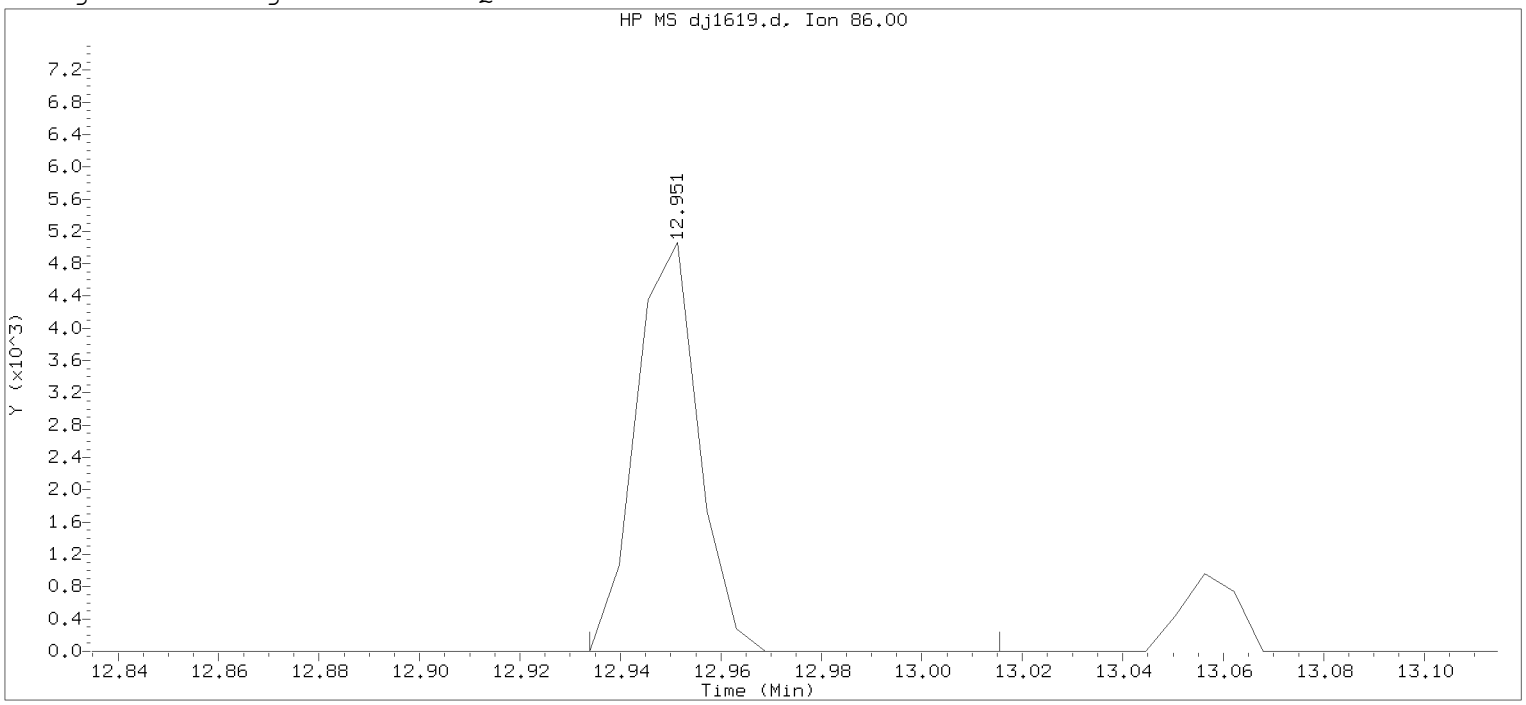
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

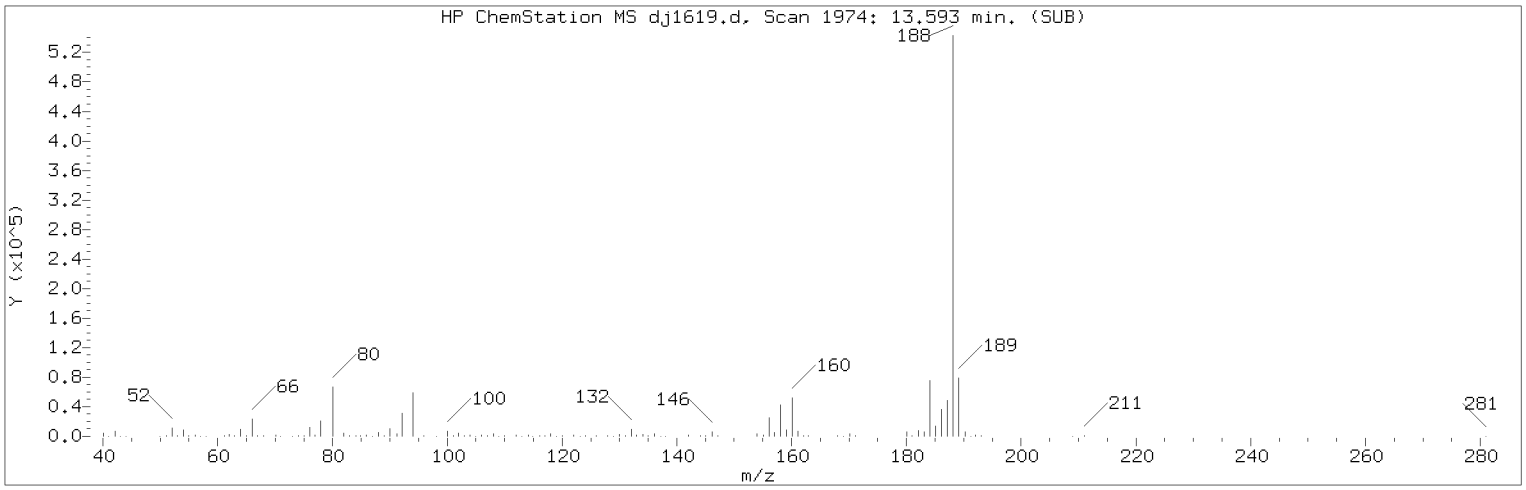
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

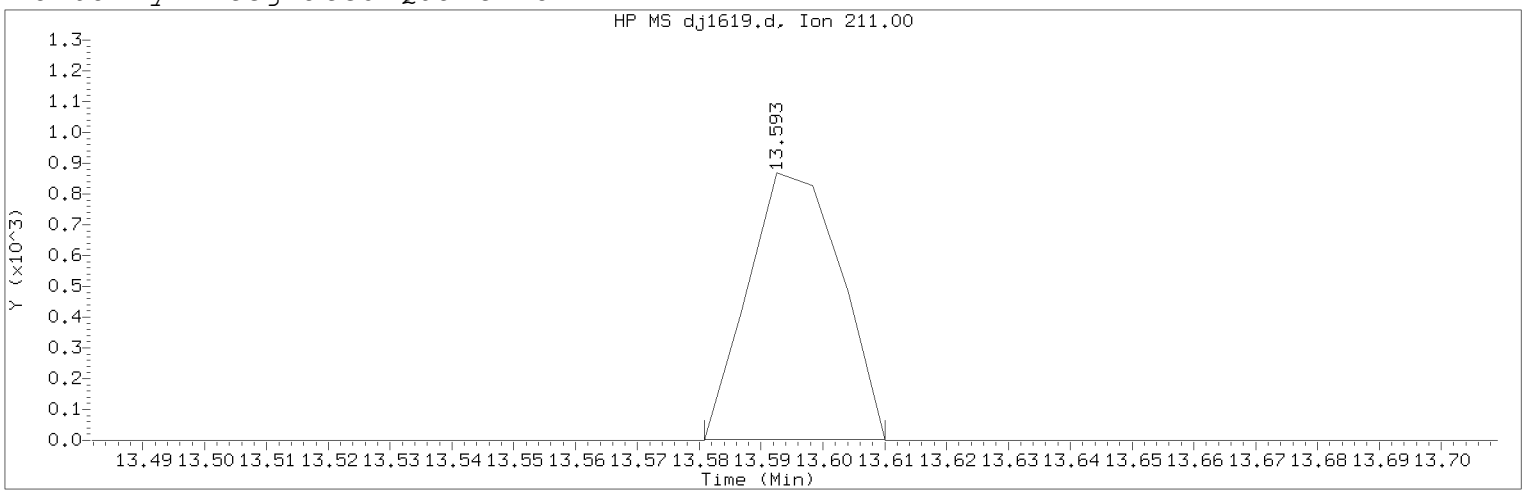
Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1864		
Retention Time (minutes)	: 12.951		
Quant Ion	: 86.00		
Area	: 4369		
On-column Amount (ng/ul)	: 0.1142		
Integration start scan	: 1860	Integration stop scan:	1874
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

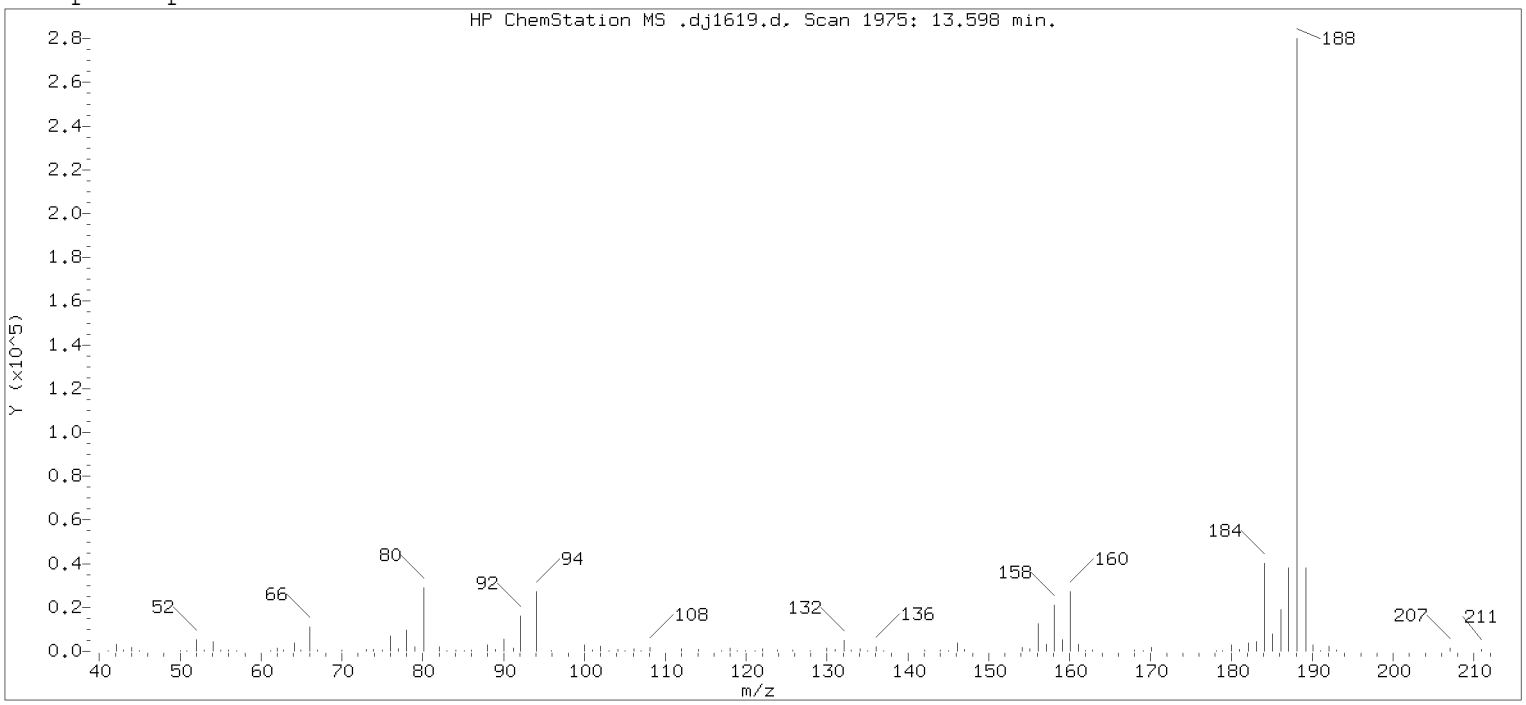
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 1974
Retention Time (minutes) : 13.593
Quant Ion : 211.00
Area (flag) : 900M
On-Column Amount (ng/ul) : 0.0366
Integration start scan : 1971 Integration stop scan: 1976
Y at integration start : 2 Y at integration end: 2

Reason for manual integration: missed peak

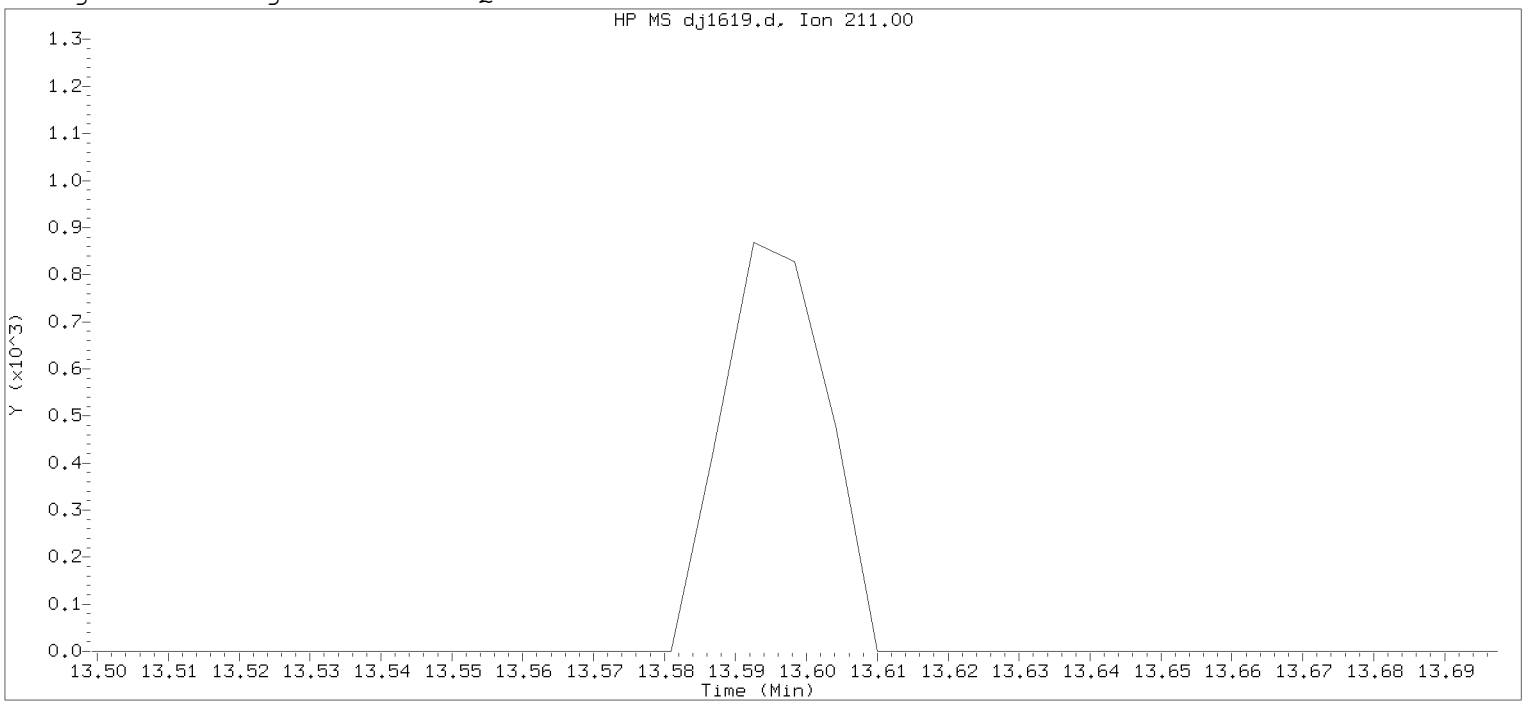
Analyst responsible for change: Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21. Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

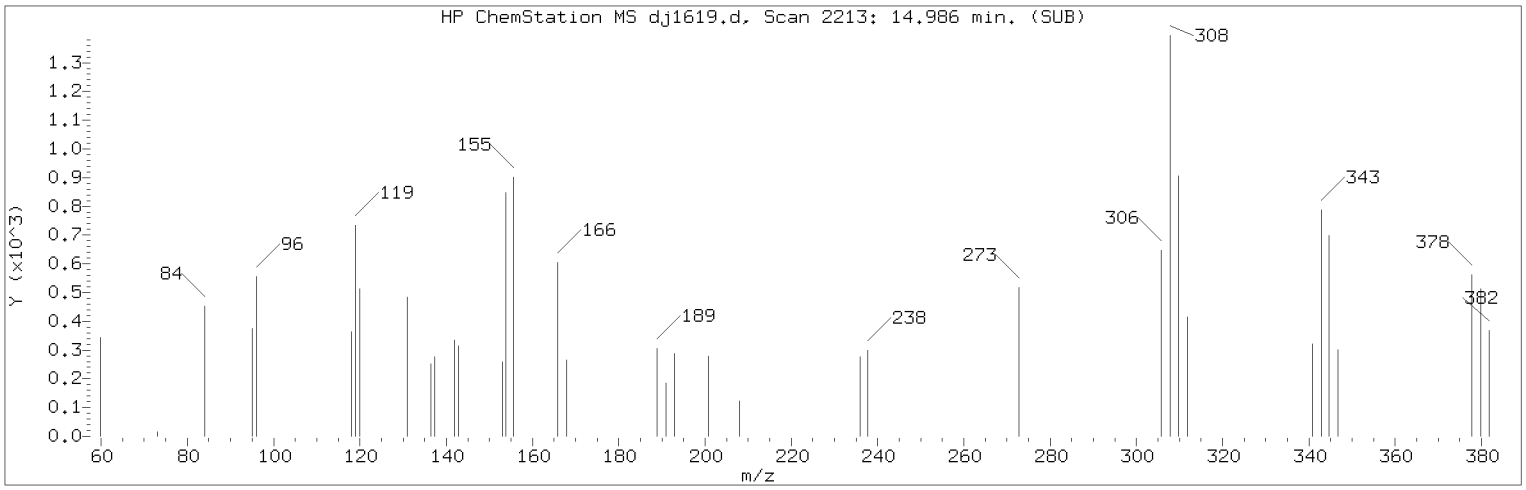
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

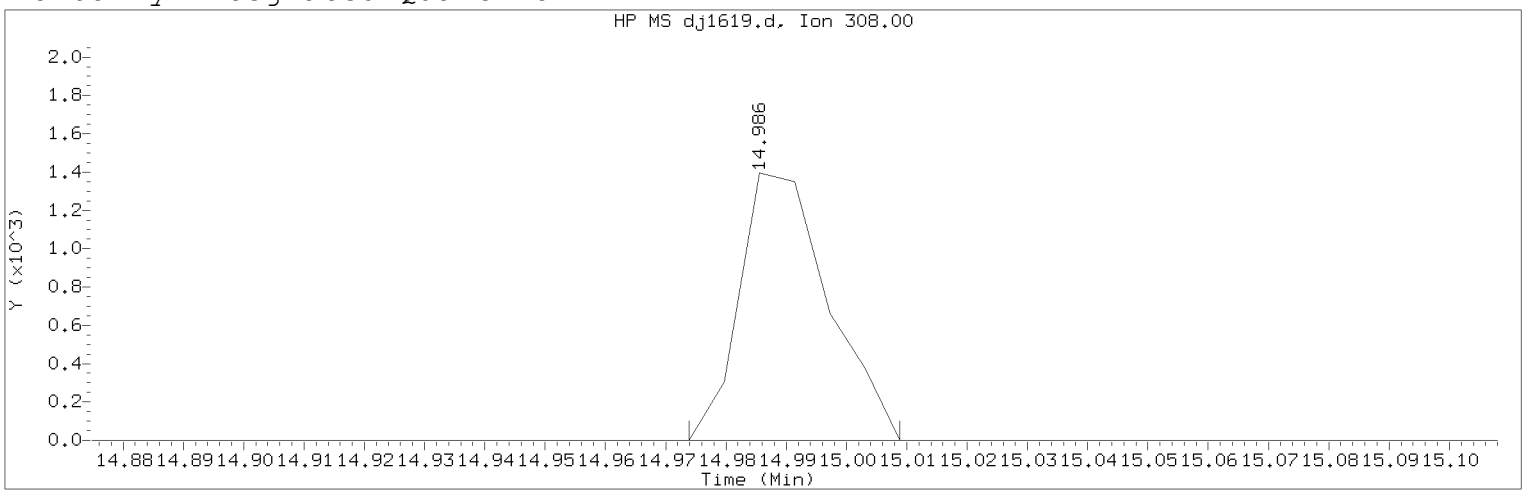
Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.599
Quant Ion : 211.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

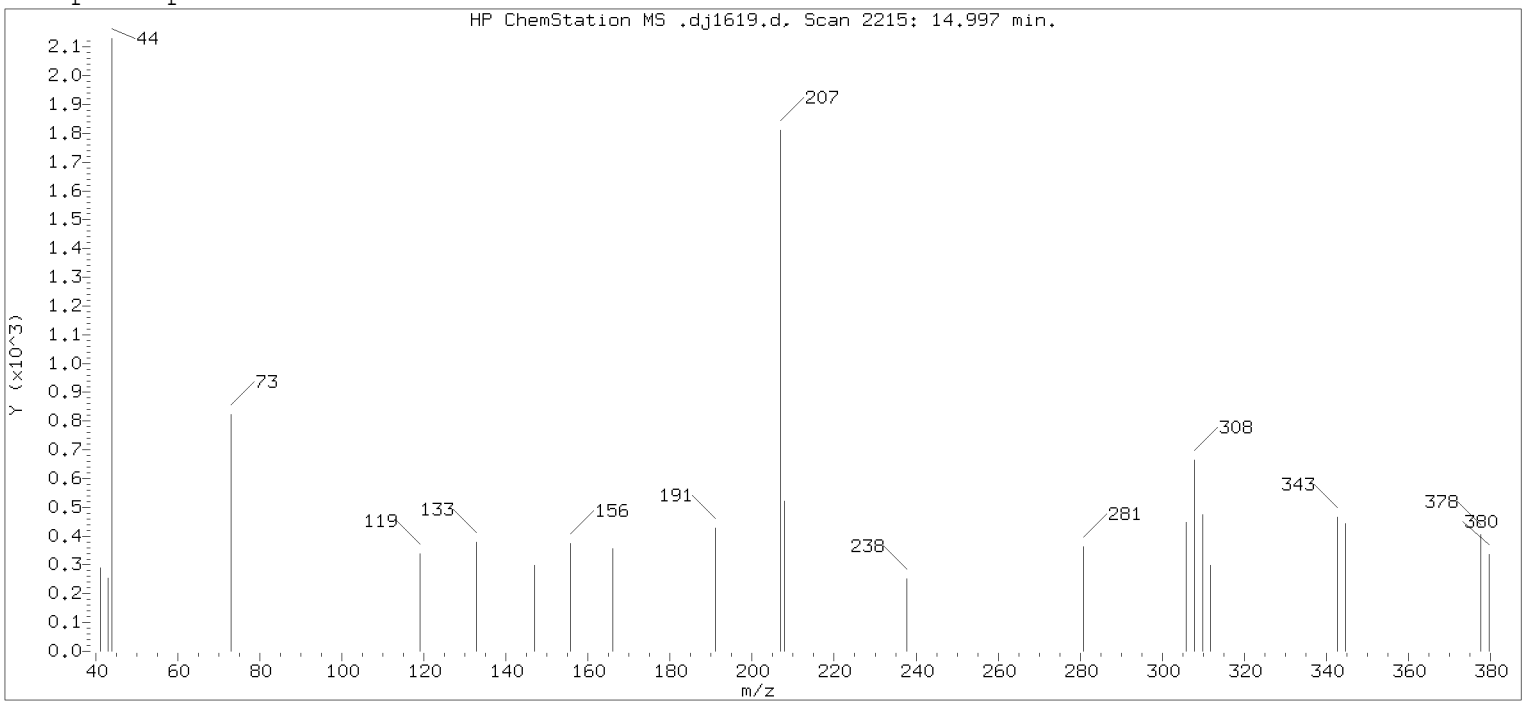
Compound Number : 169
Compound Name : Octachlorostyrene
Scan Number : 2213
Retention Time (minutes) : 14.986
Quant Ion : 308.00
Area (flag) : 1429M
On-Column Amount (ng/ul) : 0.1356
Integration start scan : 2210 Integration stop scan: 2216
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

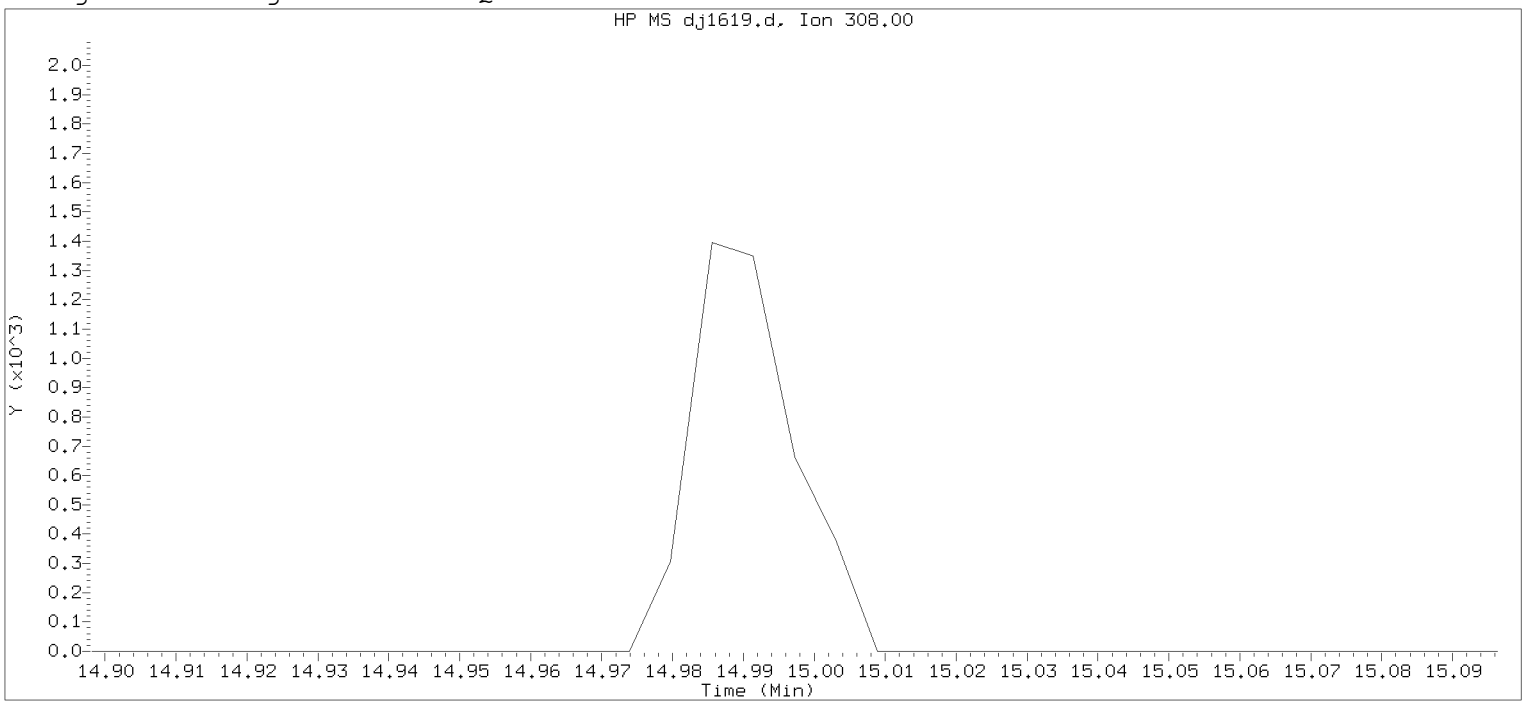
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

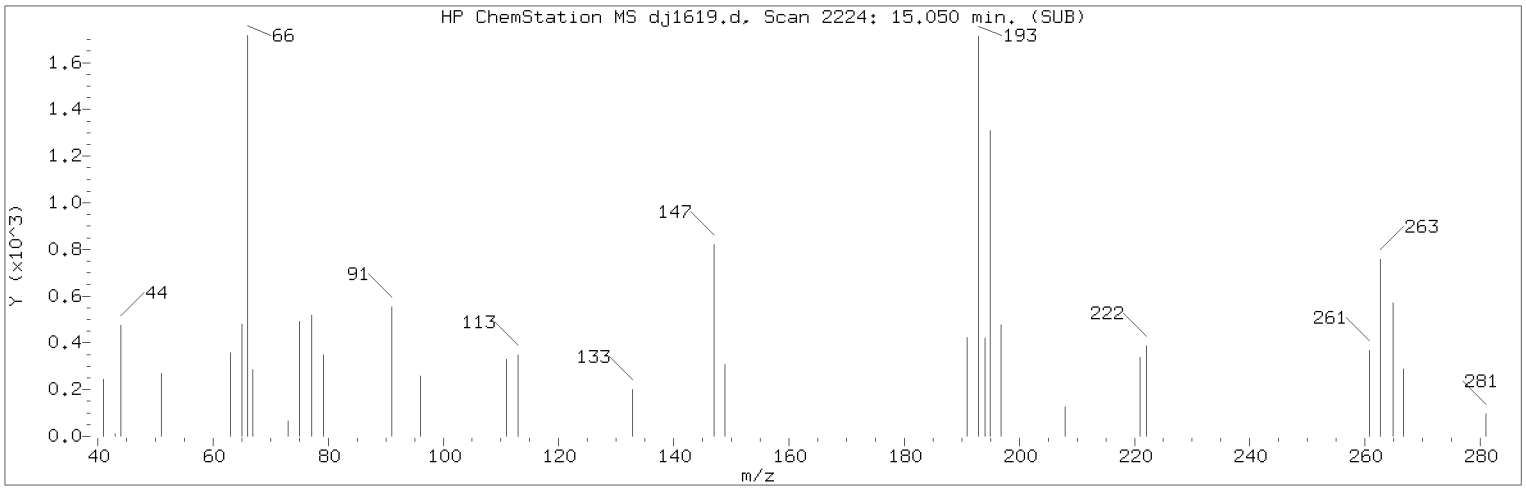
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

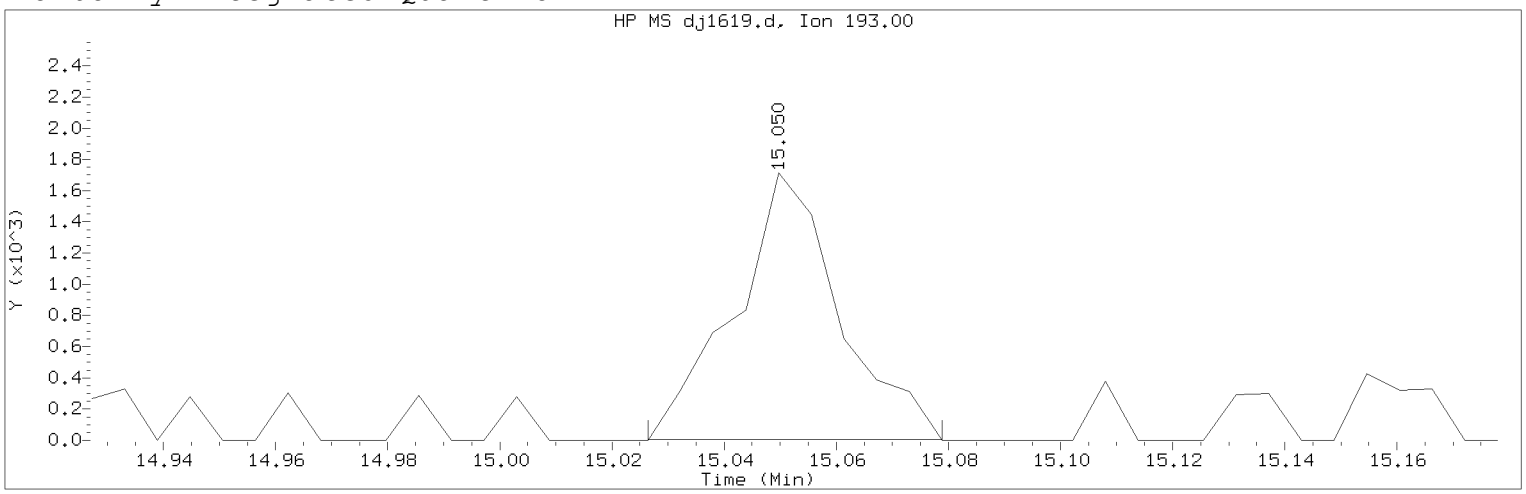
Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 14.997
Quant Ion : 308.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:18 apb10206

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

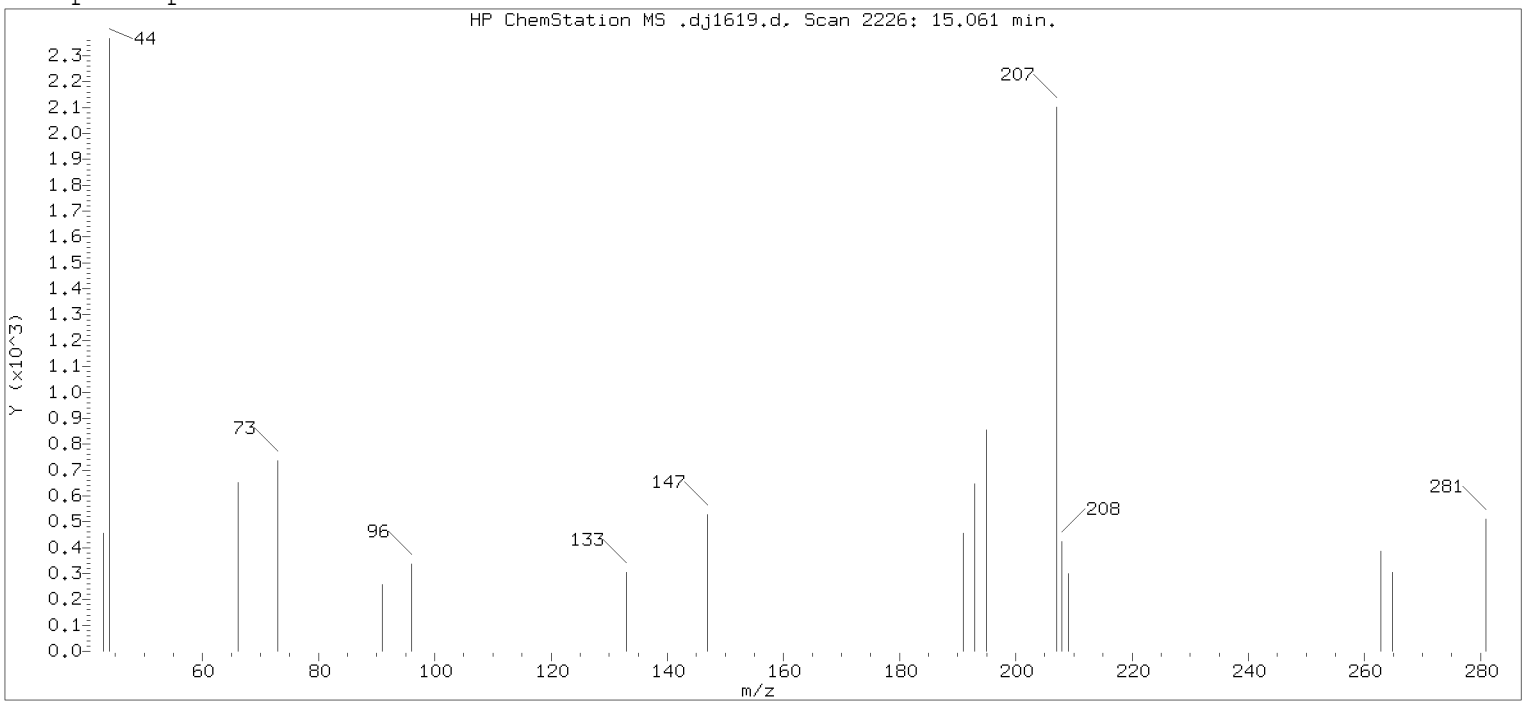
Compound Number : 171
Compound Name : Isodrin
Scan Number : 2224
Retention Time (minutes) : 15.050
Quant Ion : 193.00
Area (flag) : 2207M
On-Column Amount (ng/ul) : 0.1310
Integration start scan : 2219 Integration stop scan: 2228
Y at integration start : 3 Y at integration end: 3

Reason for manual integration: missed peak

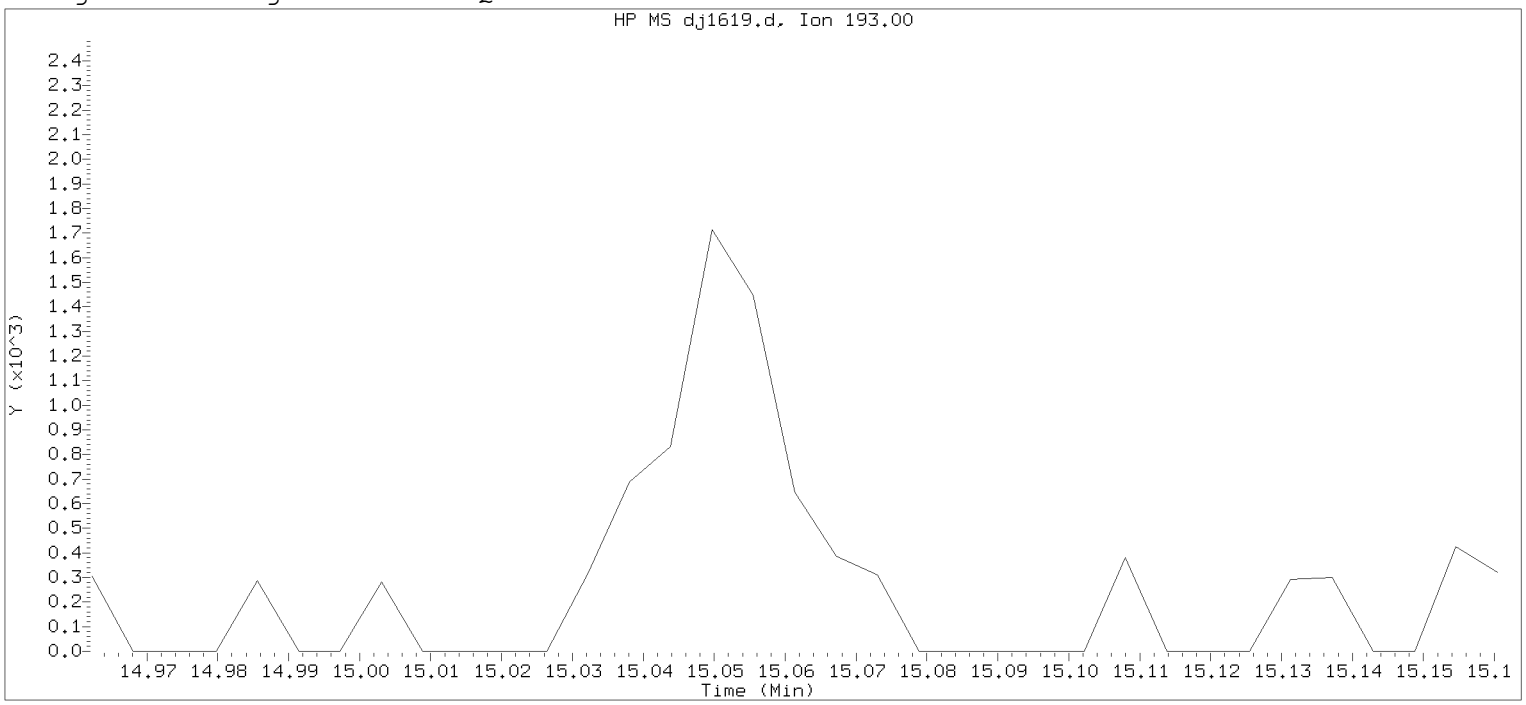
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



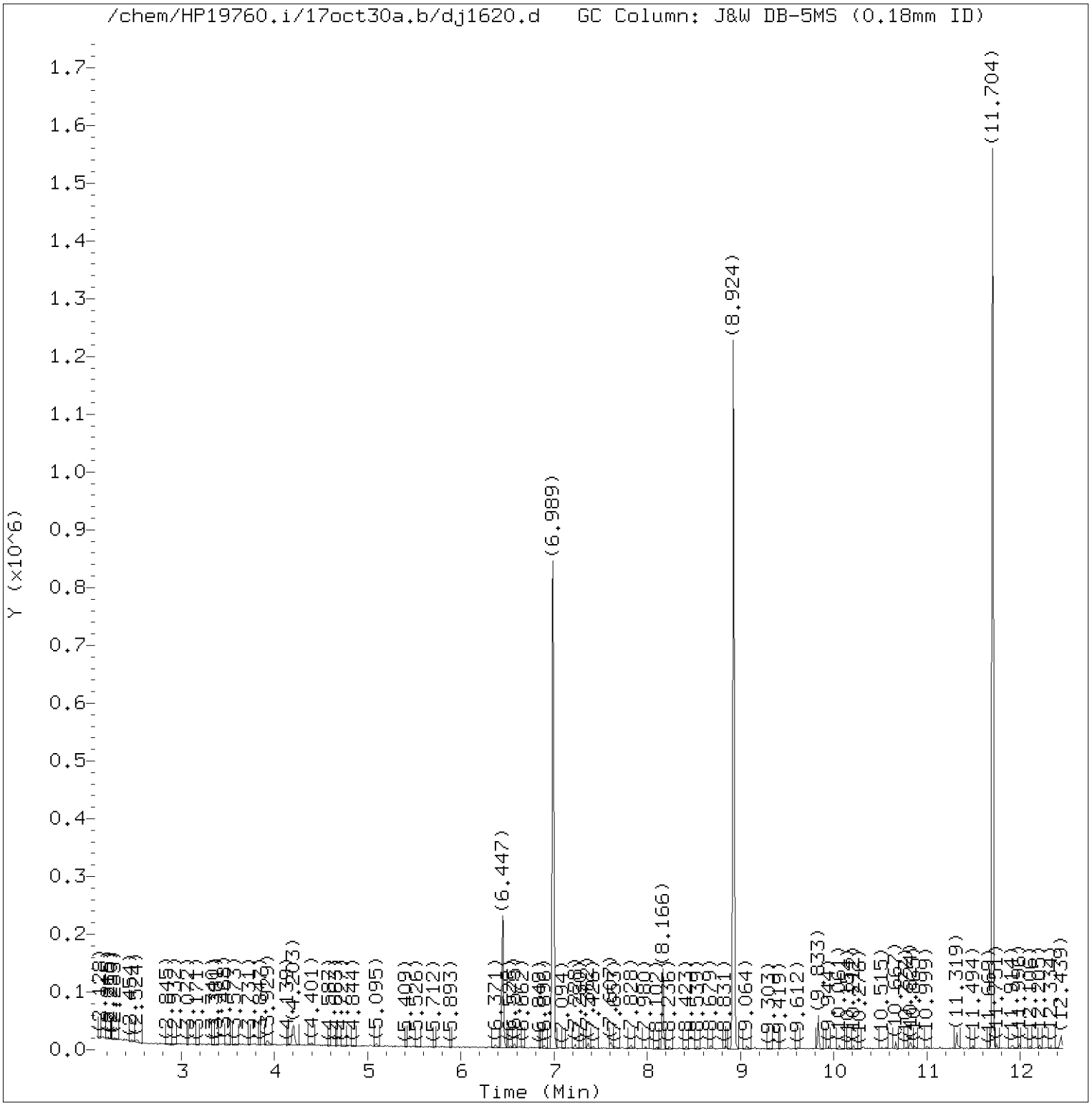
Data File: /chem/HP19760.i/17oct30a.b/dj1619.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 00:47 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:13 Automation

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compound Number : 171
Compound Name : Isodrin
Expected RT (minutes) : 15.062
Quant Ion : 193.00

Digitally signed by Anthony P. Bauer on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

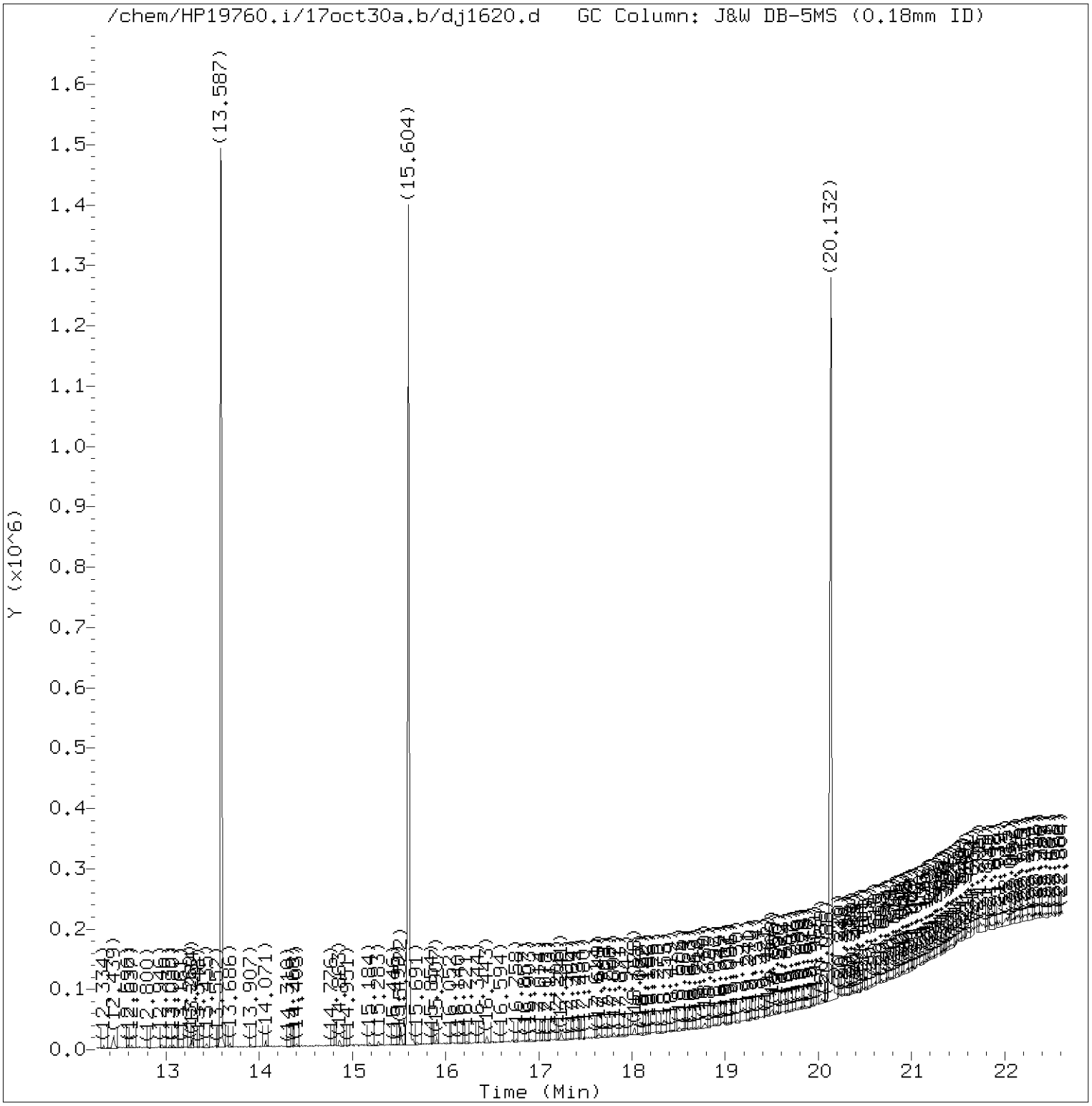
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

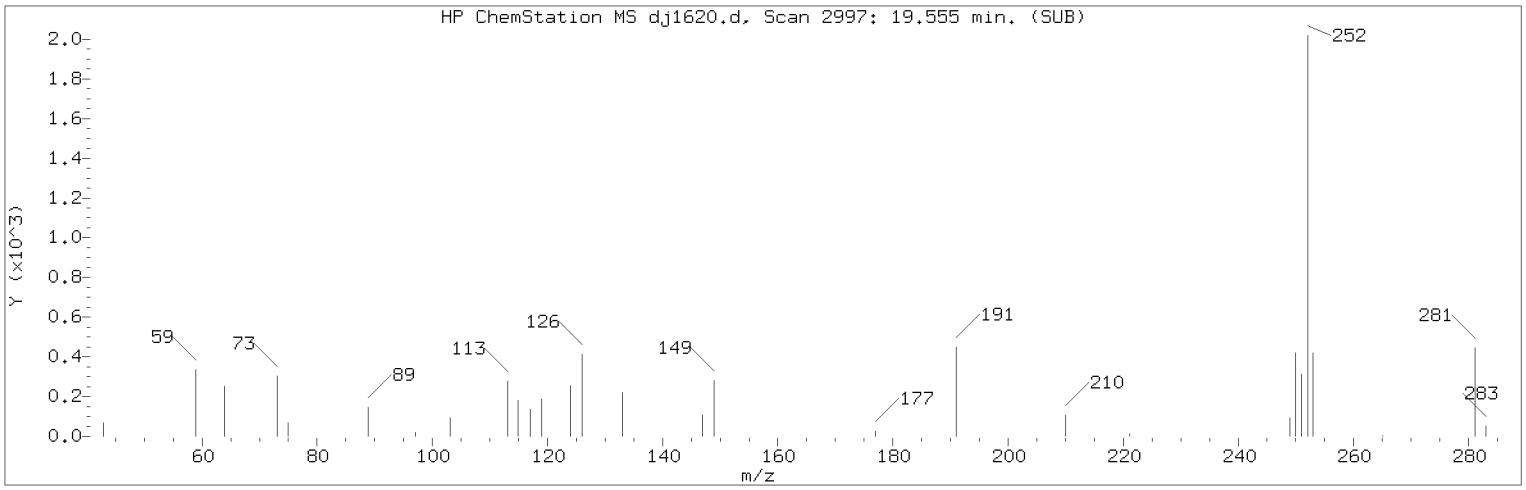
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	172435	5.000
44)$Nitrobenzene-d5	(2)	7.828	82	2788	0.045
65)*Naphthalene-d8	(2)	8.924	136	660481	5.000
66) Naphthalene	(2)	8.953	128	3999	0.027
83) 2-Methylnaphthalene	(2)	10.061	142	2473	0.025
84) 1-Methylnaphthalene	(2)	10.212	142	2136	0.024
93)$2-Fluorobiphenyl	(3)	10.667	172	5332	0.051
109) Acenaphthylene	(3)	11.494	152	2647	0.022
113)*Acenaphthene-d10	(3)	11.704	164	342645	5.000
114) Acenaphthene	(3)	11.751	153	1961	0.021
126) Fluorene	(3)	12.427	166	2105	0.022
145) Hexachlorobenzene	(4)	13.080	284	743	0.026
153)*Phenanthrene-d10	(4)	13.587	188	619730	5.000
155) Phenanthrene	(4)	13.622	178	3658	0.026
157) Anthracene	(4)	13.686	178	3055	0.022
222) Total PAHs	(6)			54590	0.411
173) Fluoranthene	(4)	15.277	202	3385	0.022
175)*Pyrene-d10	(5)	15.604	212	709788	5.000
177) Pyrene	(5)	15.627	202	4450	0.027
179)$Terphenyl-d14	(5)	15.907	244	5273	0.050
195) Benzo(a)anthracene	(5)	17.649	228	3275	0.022
196) Chrysene	(5)	17.714	228	3049	0.022
206) Benzo(b)fluoranthene	(6)	19.509	252	3155	0.021
208) Benzo(k)fluoranthene	(6)	19.555	252	3654M	0.025
211) Benzo(a)pyrene	(6)	20.039	252	2892M	0.021
213)*Perylene-d12	(6)	20.132	264	596228	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.747	276	2914M	0.022
220) Dibenz(a,h)anthracene	(6)	21.782	278	2781	0.020
221) Benzo(g,h,i)perylene	(6)	22.132	276	3001	0.022

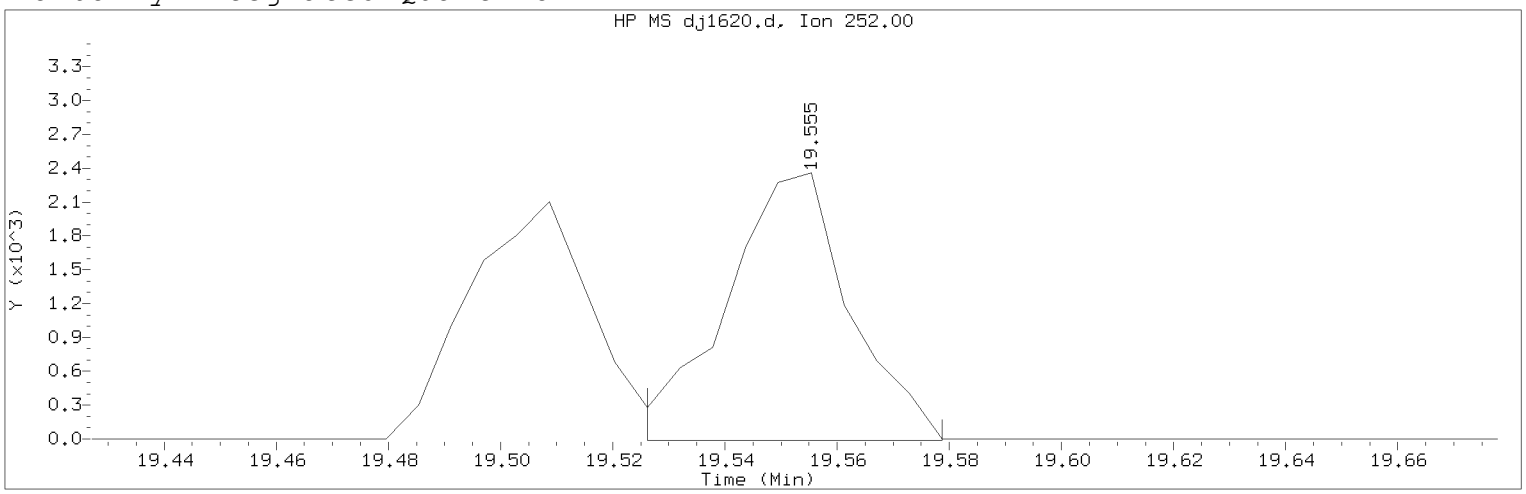
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

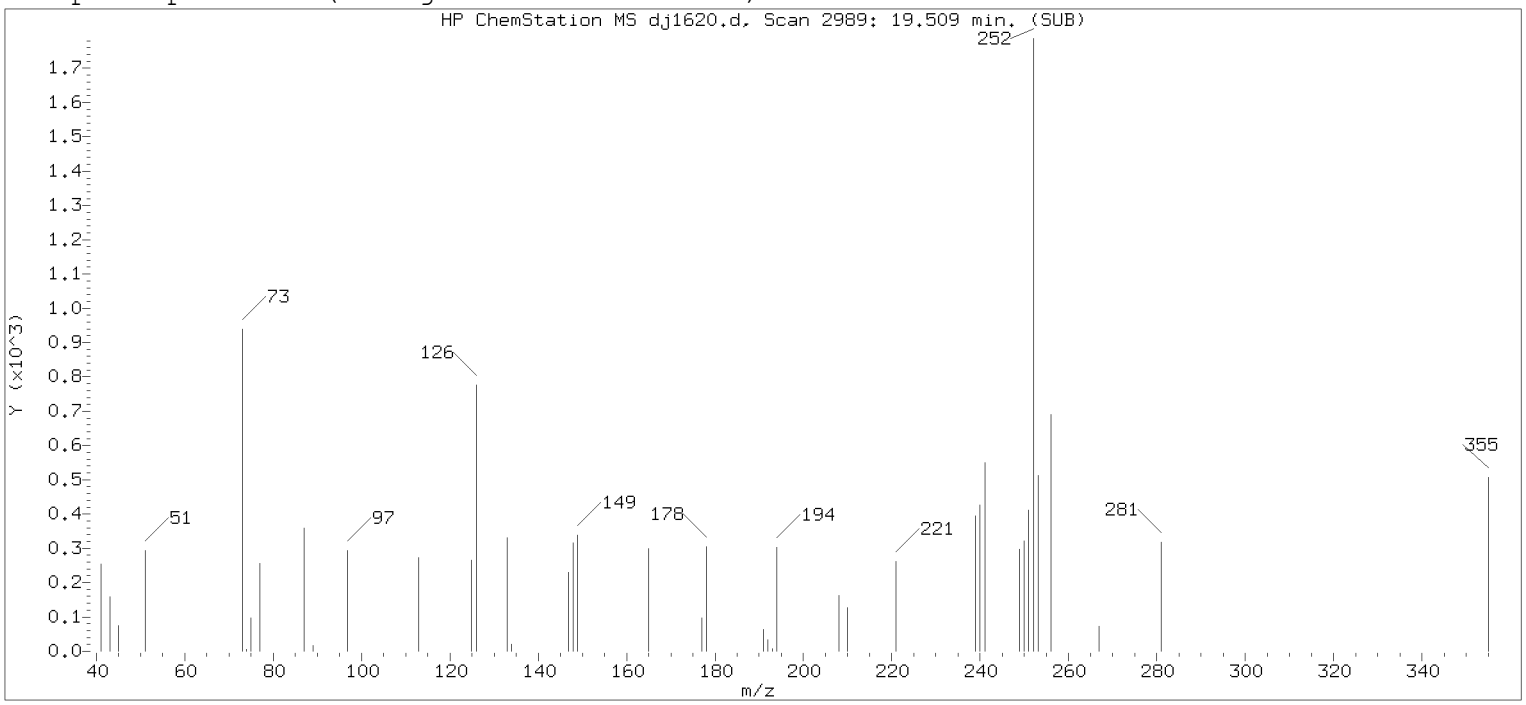
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 2997
Retention Time (minutes) : 19.555
Quant Ion : 252.00
Area (flag) : 3654M
On-Column Amount (ng/ul) : 0.0247
Integration start scan : 2991 Integration stop scan: 3000
Y at integration start : -11 Y at integration end: -11

Reason for manual integration: improper integration

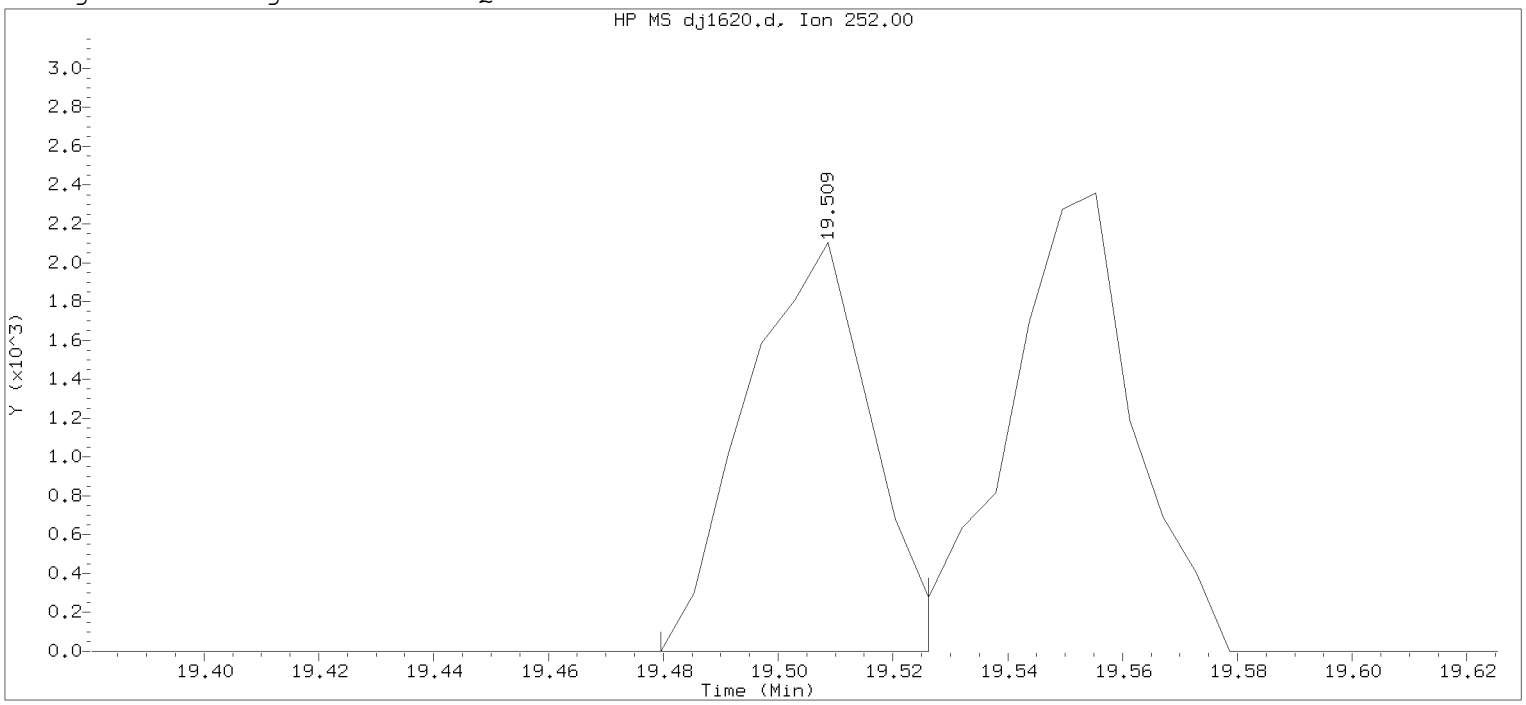
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

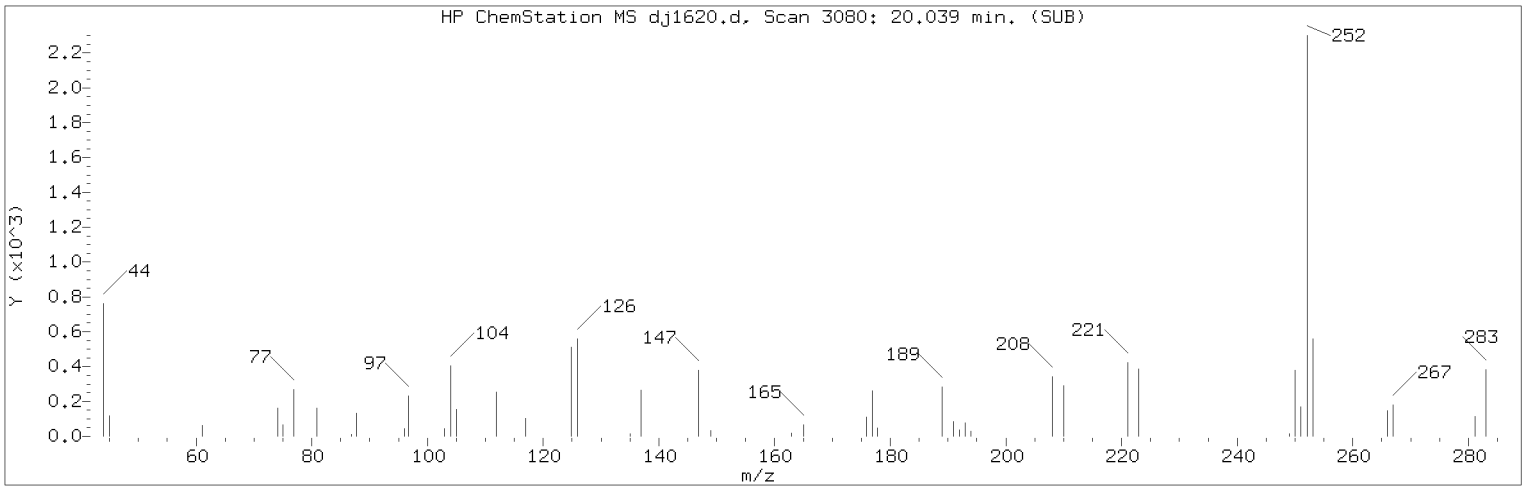
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:40 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

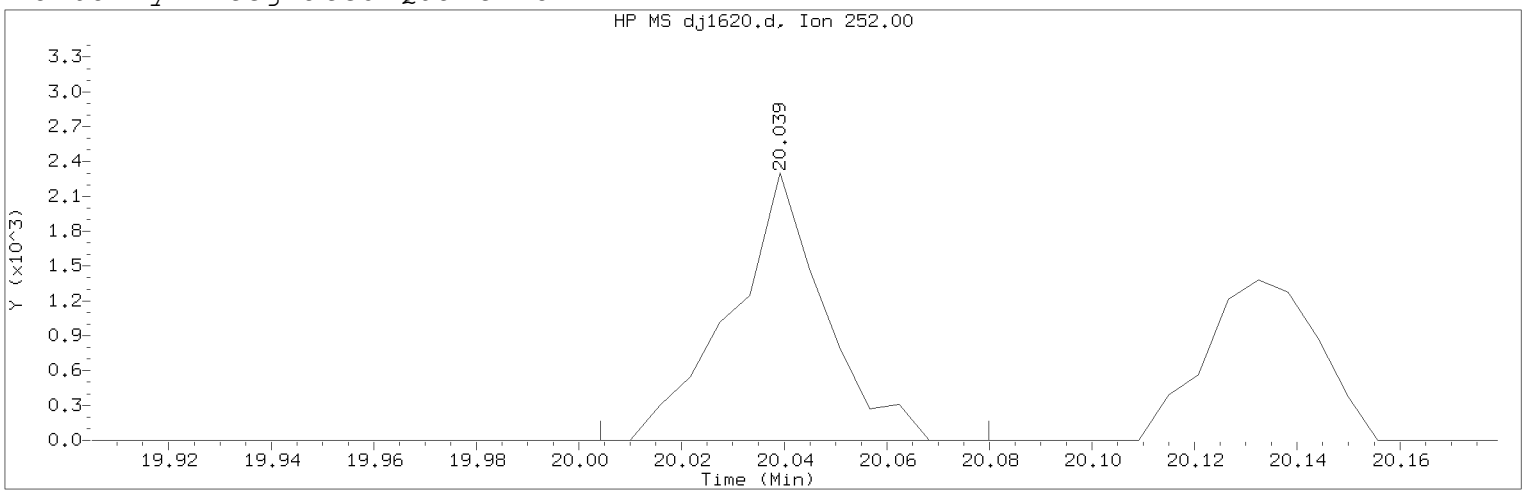
Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2989		
Retention Time (minutes)	: 19.509		
Quant Ion	: 252.00		
Area	: 3155		
On-column Amount (ng/ul)	: 0.0215		
Integration start scan	: 2983	Integration stop scan:	2991
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used. Page 1031

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

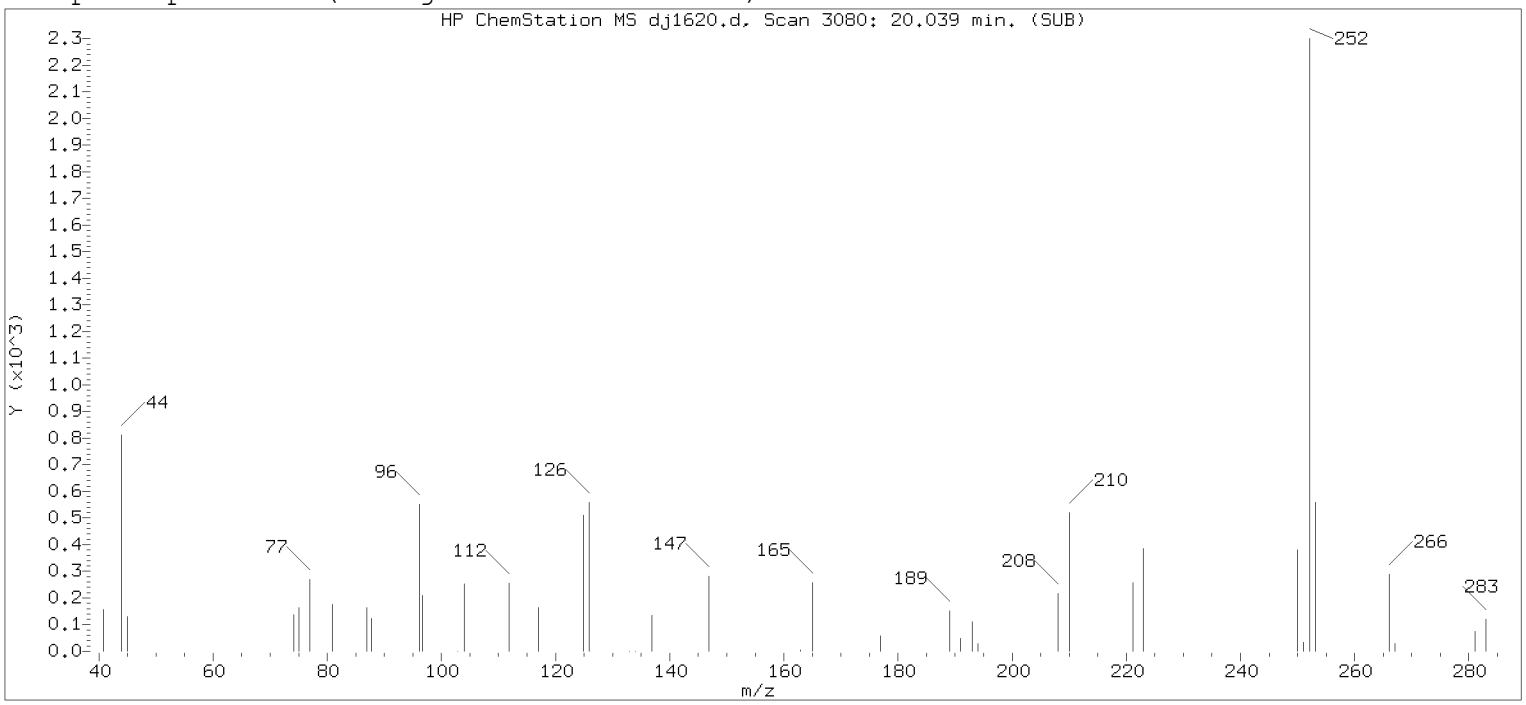
Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 3080
Retention Time (minutes) : 20.039
Quant Ion : 252.00
Area (flag) : 2892M
On-Column Amount (ng/ul) : 0.0206
Integration start scan : 3073 Integration stop scan: 3086
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

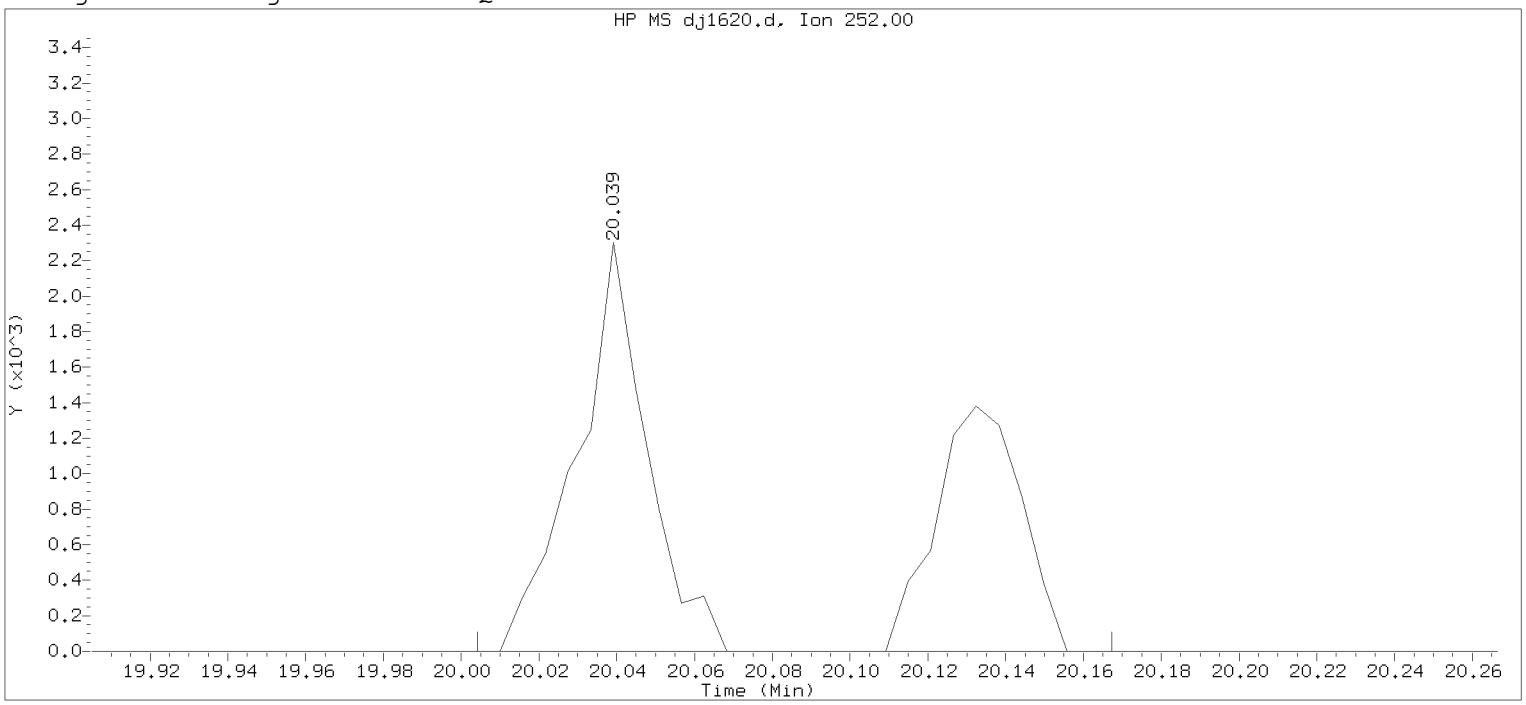
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

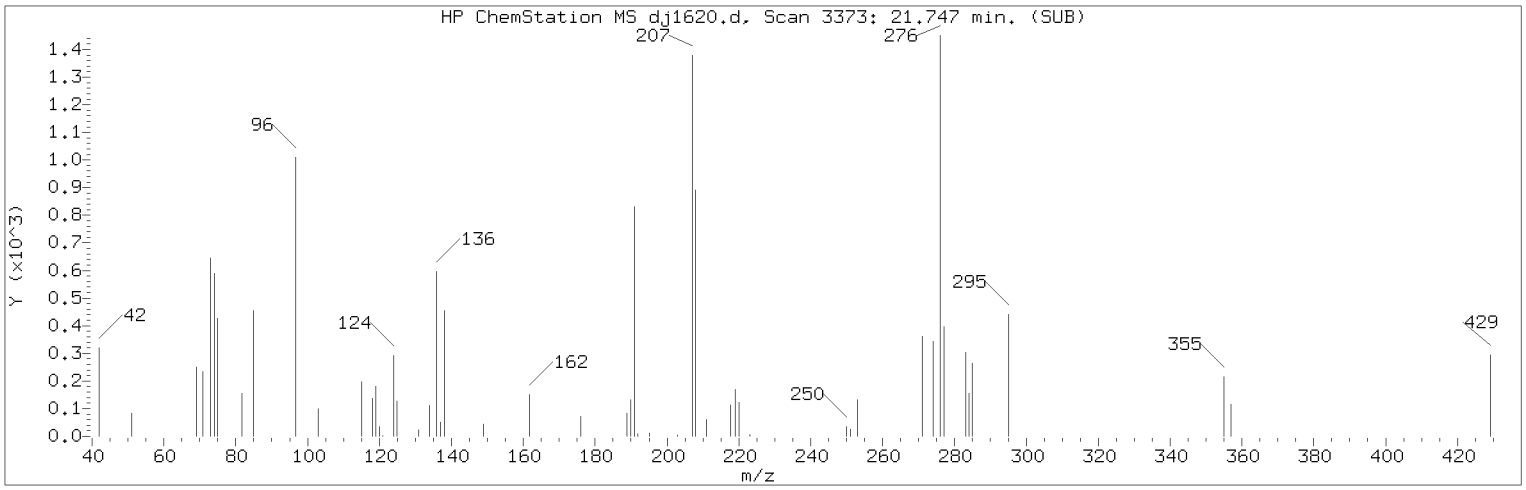
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:40 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

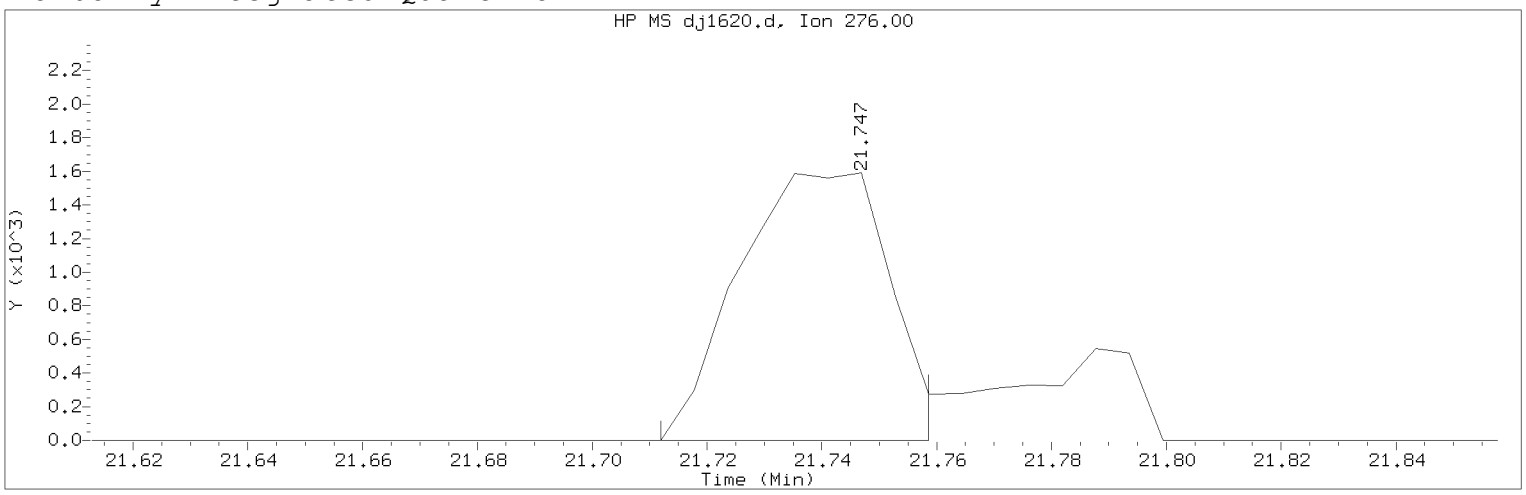
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3080		
Retention Time (minutes)	: 20.039		
Quant Ion	: 252.00		
Area	: 5021		
On-column Amount (ng/ul)	: 0.0361		
Integration start scan	: 3073	Integration stop scan:	3101
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user ID: apb10206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

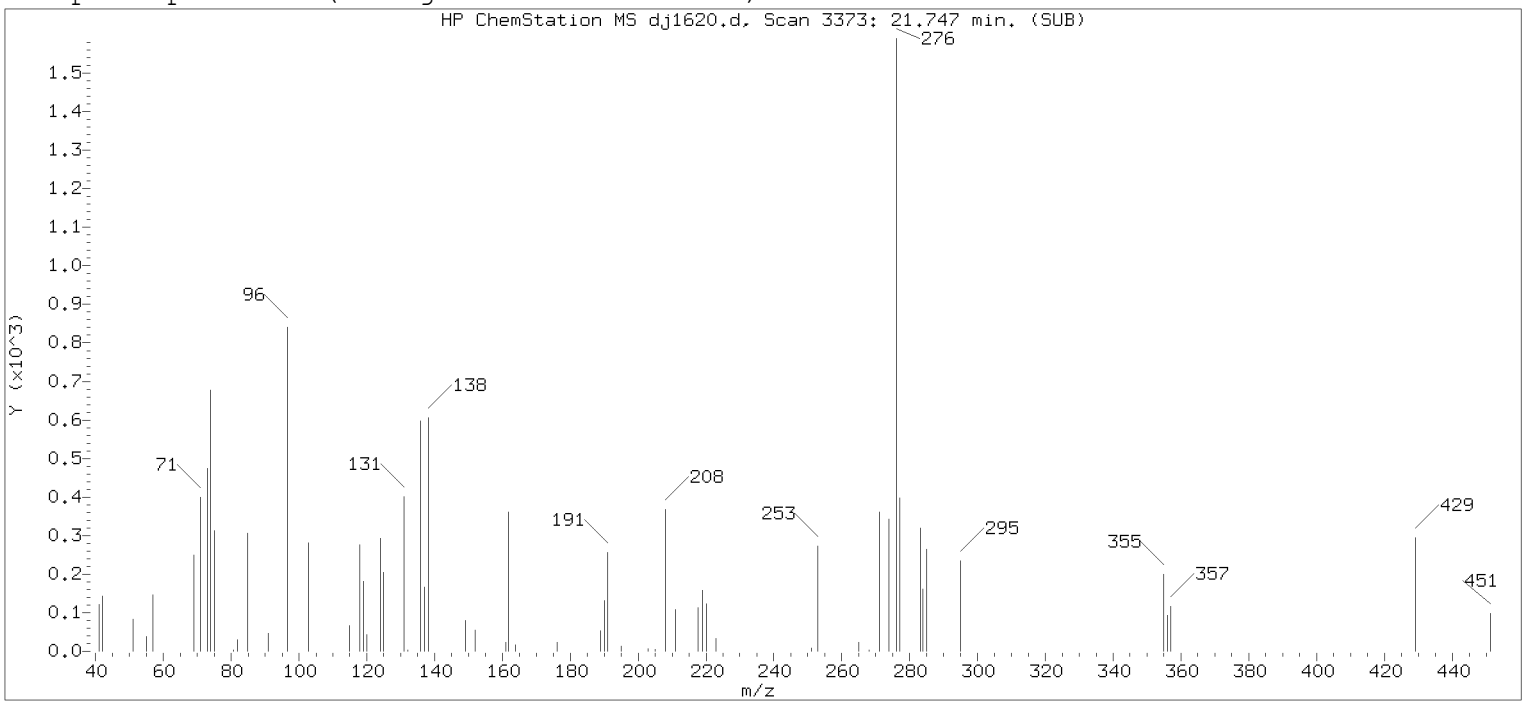
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3373
Retention Time (minutes) : 21.747
Quant Ion : 276.00
Area (flag) : 2914M
On-Column Amount (ng/ul) : 0.0221
Integration start scan : 3366 Integration stop scan: 3374
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

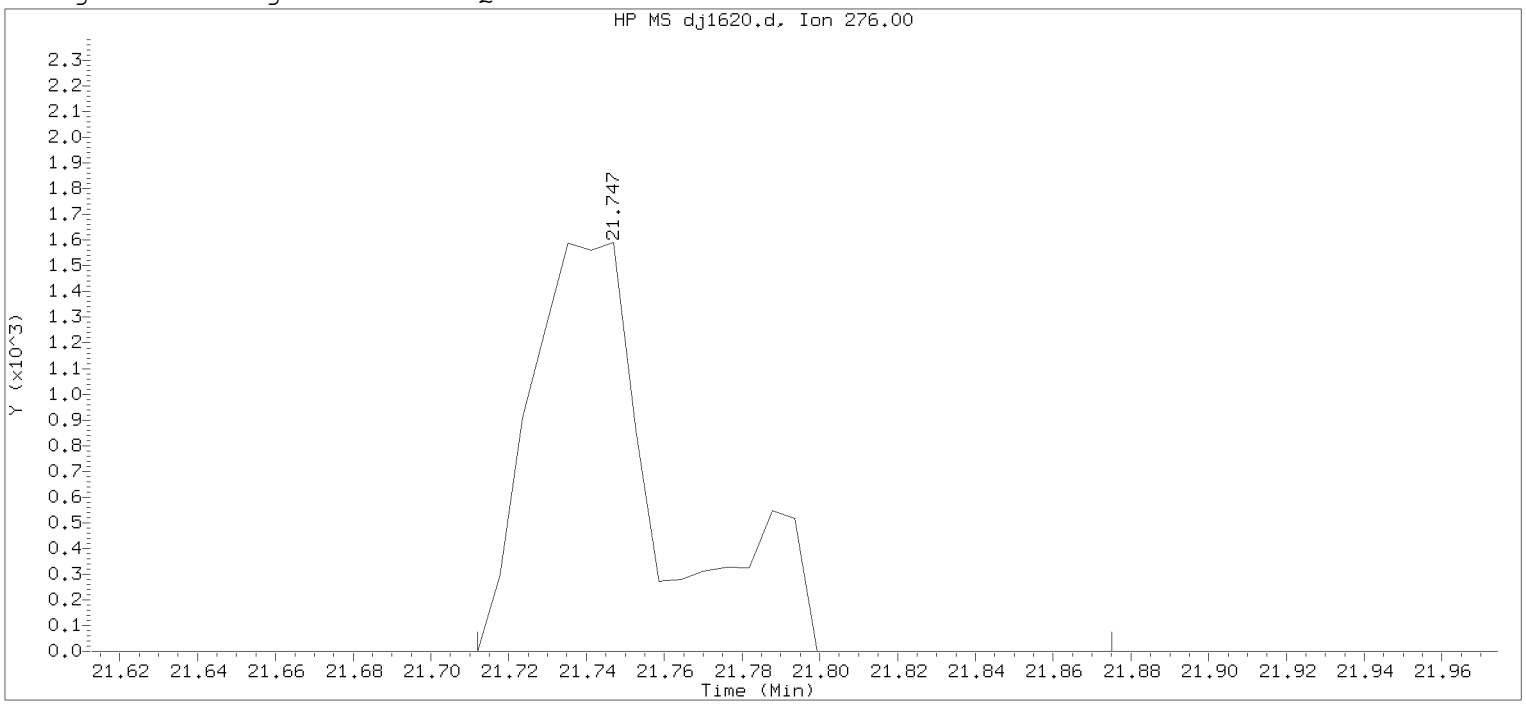
Analyst responsible for change: Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:22.
Target 3.5 esignature user ID: apb10206

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



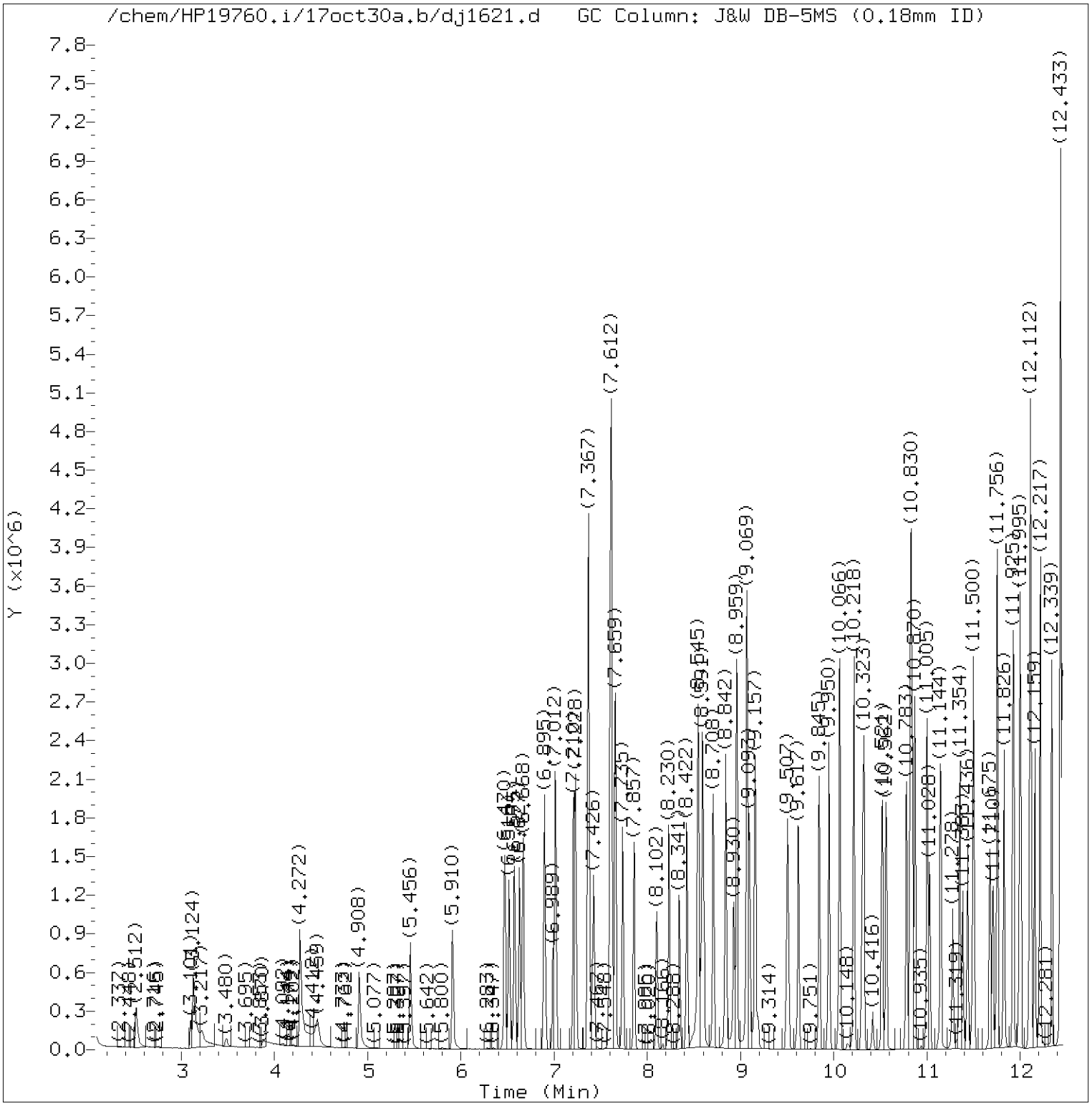
Data File: /chem/HP19760.i/17oct30a.b/dj1620.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:15 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 01:40 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2287

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3373		
Retention Time (minutes)	: 21.747		
Quant Ion	: 276.00		
Area	: 3721		
On-column Amount (ng/ul)	: 0.0229		
Integration start scan	: 3366	Integration stop scan:	3394
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature used. Page 1035



Total Ion Chromatogram (TIC)

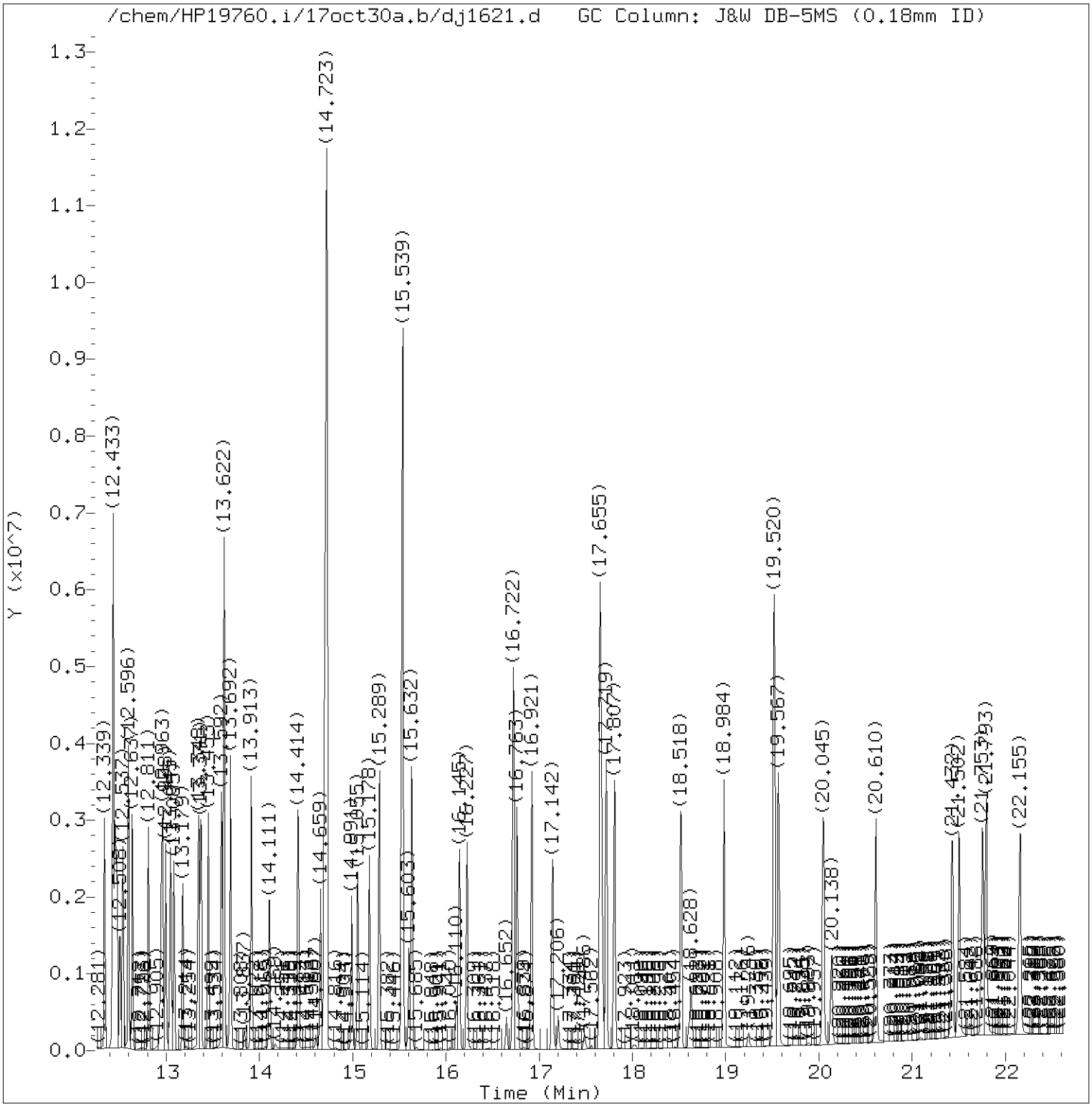
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.518	88	247380	13.007
5) Pyridine	(1)	3.124	79	557587	11.072
7) 2-Picoline	(1)	4.272	93	701306	12.785
8) N-Nitrosomethylethylamine	(1)	4.465	88	285518	12.054
9) Methyl methanesulfonate	(1)	4.908	80	346906	14.410
13) N-Nitrosodiethylamine	(1)	5.456	102	274719	12.390
42) Total Cresols	(1)	5.660	100	1157337	25.283
15) Ethyl methanesulfonate	(1)	5.910	109	292624	12.975
18) Phenol	(1)	6.470	94	795352	12.410
19) Aniline	(1)	6.516	93	755998	9.633
22) bis(2-Chloroethyl)ether	(1)	6.627	93	648312	12.671
23) 2-Chlorophenol	(1)	6.668	128	602533	12.658
24) 1,3-Dichlorobenzene	(1)	6.895	146	651818	12.597
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	157430	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	669092	12.740
27) Benzyl alcohol	(1)	7.210	108	401883	12.786
28) 1,2-Dichlorobenzene	(1)	7.228	146	626987	12.656
30) Indene	(1)	7.367	115	1107614	12.428
31) 2-Methylphenol	(1)	7.367	108	559644	12.478
97) Isosafrole	(3)	7.383	162	496114	15.562
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	857063	12.209
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	857063	12.209
35) N-Nitrosopyrrolidine	(1)	7.589	100	298874	13.129
36) Acetophenone	(1)	7.606	105	887305	12.450
37) 4-Methylphenol	(1)	7.612	108	597693	12.798
38) N-Nitroso-di-n-propylamine	(1)	7.618	70	497165	12.783
40) o-Toluidine	(1)	7.653	106	919848	11.710
39) N-Nitrosomorpholine	(1)	7.659	56	361111	12.695
43) Hexachloroethane	(1)	7.735	117	266790	12.468
45) Nitrobenzene	(2)	7.857	77	701524	12.203
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	579391	25.622
48) N-Nitrosopiperidine	(2)	8.102	114	270022	11.699
50) Isophorone	(2)	8.230	82	1060085	11.044
51) 2-Nitrophenol	(2)	8.341	139	291880	13.120
53) 2,4-Dimethylphenol	(2)	8.422	107	476110	9.647
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	270894	12.058
55) bis(2-Chloroethoxy)methane	(2)	8.591	93	790051	12.919
56) Benzoic acid	(2)	8.609	105	880420	23.404
60) 2,4-Dichlorophenol	(2)	8.708	162	470209	12.580
146) Diallate trans/cis	(4)	8.775	86	510047	11.625

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 1,2,4-Trichlorobenzene	(2)	8.842	180	529166	12.273
65)*Naphthalene-d8	(2)	8.930	136	604442	5.000
66) Naphthalene	(2)	8.959	128	1689677	12.312
68) 2,6-Dichlorophenol	(2)	9.069	162	450895	12.350
67) 4-Chloroaniline	(2)	9.069	127	617500	11.102
69) Hexachloropropene	(2)	9.093	213	371062	16.302
71) Hexachlorobutadiene	(2)	9.157	225	293506	12.123
75) Quinoline	(2)	9.507	129	1028746	12.559
77) N-Nitrosodi-n-butylamine	(2)	9.623	84	440157	10.521
80) 4-Chloro-3-methylphenol	(2)	9.845	107	523981	12.730
82) Safrole	(2)	9.950	162	408460	12.047
83) 2-Methylnaphthalene	(2)	10.066	142	1093094	12.268
84) 1-Methylnaphthalene	(2)	10.218	142	1015680	12.572
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	527887	12.188
88) cis-Isosafrole	(3)	10.416	162	55080	1.588
90) 2,4,6-Trichlorophenol	(3)	10.521	196	341124	13.209
92) 2,4,5-Trichlorophenol	(3)	10.562	196	361002	13.218
94) trans-Isosafrole	(3)	10.783	162	441034	14.088
95) 1,1'-Biphenyl	(3)	10.824	154	1322731	12.647
96) 2-Chloronaphthalene	(3)	10.841	162	1110113	12.735
98) 1-Chloronaphthalene	(3)	10.870	162	879762	11.639
99) Diphenyl ether	(3)	11.005	170	699850	12.447
100) 2-Nitroaniline	(3)	11.028	138	318846	13.021
104) 1,4-Naphthoquinone	(3)	11.150	158	492860	15.567
105) 1,4-Dinitrobenzene	(3)	11.278	168	157904	12.469
106) Dimethylphthalate	(3)	11.354	163	1062879	11.975
107) 1,3-Dinitrobenzene	(3)	11.383	168	175348	12.544
108) 2,6-Dinitrotoluene	(3)	11.442	165	242960	12.612
109) Acenaphthylene	(3)	11.500	152	1251913	11.229
112) 3-Nitroaniline	(3)	11.675	138	274526	13.035
113)*Acenaphthene-d10	(3)	11.710	164	316267	5.000
114) Acenaphthene	(3)	11.756	153	1093335	12.662
115) 2,4-Dinitrophenol	(3)	11.826	184	325862	27.327
116) 4-Nitrophenol	(3)	11.925	109	204526	12.538
117) Pentachlorobenzene	(3)	11.931	250	413091	11.964
119) Dibenzofuran	(3)	11.995	168	1378598	12.337
118) 2,4-Dinitrotoluene	(3)	12.007	165	336431	12.592
121) 1-Naphthylamine	(3)	12.112	143	1488209	17.477
122) 2,3,4,6-Tetrachlorophenol	(3)	12.159	232	284446	13.712
123) 2-Naphthylamine	(3)	12.217	143	1375613	16.705

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Diethylphthalate	(3)	12.339	149	1064906	12.314
126) Fluorene	(3)	12.433	166	1102451	12.357
125) Thionazin	(3)	12.433	107	188739	12.353
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	515220	12.314
128) 5-Nitro-o-toluidine	(3)	12.468	152	319316	13.179
129) 4-Nitroaniline	(3)	12.479	138	275575	13.003
130) 4,6-Dinitro-2-methylphenol	(4)	12.508	198	206140	12.348
132) NDPA as diphenylamine	(4)	12.596	169	932593	12.514
131) N-Nitrosodiphenylamine	(4)	12.596	169	932593	12.514
134) 1,2-Diphenylhydrazine	(4)	12.637	77	1302541	12.548
137) Tetraethyldithiopyrophosphate	(4)	12.811	97	197452	11.412
139) 1,3,5-Trinitrobenzene	(4)	12.940	213	119863	11.917
140) Diallate (peak 1)	(4)	12.951	86	384686	8.492
141) Phorate	(4)	12.963	75	773702	10.946
142) Phenacetin	(4)	12.998	108	608701	12.440
143) 4-Bromophenyl-phenylether	(4)	13.045	248	313678	12.265
144) Diallate (peak 2)	(4)	13.056	86	125361	3.394
145) Hexachlorobenzene	(4)	13.085	284	322188	11.836
147) Dimethoate	(4)	13.179	87	500160	12.137
149) Pentachlorophenol	(4)	13.348	266	231963	13.335
151) Pentachloronitrobenzene	(4)	13.353	237	139957	12.221
150) 4-Aminobiphenyl	(4)	13.377	169	1117571	53.785
152) Pronamide	(4)	13.453	173	509757	12.433
153)*Phenanthrene-d10	(4)	13.592	188	595813	5.000
154) Dinoseb	(4)	13.592	211	305222	12.761
155) Phenanthrene	(4)	13.622	178	1661590	12.073
157) Anthracene	(4)	13.692	178	1618356	12.046
163) Carbazole	(4)	13.913	167	1540708	12.391
164) Methyl parathion	(4)	14.105	109	411448	12.868
165) Di-n-butylphthalate	(4)	14.414	149	1871058	12.537
167) Parathion	(4)	14.659	109	254562	12.575
168) 4-Nitroquinoline-1-oxide	(4)	14.723	190	2589506	177.698
222) Total PAHs	(6)	15.000	100	29028193	225.590
171) Isodrin	(4)	15.055	193	193037	11.774
173) Fluoranthene	(4)	15.289	202	1848075	12.274
174) Benzidine	(5)	15.539	184	5081619	50.710
175)*Pyrene-d10	(5)	15.603	212	678086	5.000
177) Pyrene	(5)	15.632	202	1918935	12.232
182) p-Dimethylaminoazobenzene	(5)	16.145	225	347976	17.713
185) Chlorobenzilate	(5)	16.227	139	608181	13.343

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

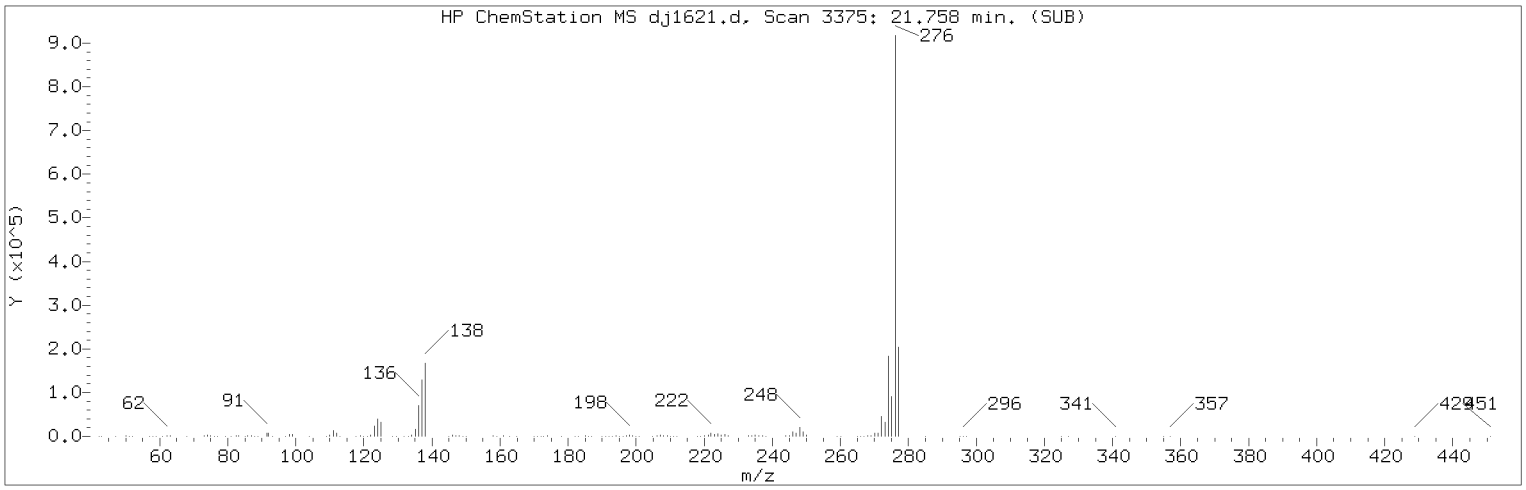
Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) 3,3'-Dimethylbenzidine	(5)	16.722	212	2248786	24.461
188) Butylbenzylphthalate	(5)	16.763	149	890683	13.345
191) 2-Acetylaminofluorene	(5)	17.142	181	783185	13.134
193) 3,3'-Dichlorobenzidine	(5)	17.655	252	691792	12.563
195) Benzo(a)anthracene	(5)	17.655	228	1906430	13.397
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.672	231	368676	13.357
196) Chrysene	(5)	17.719	228	1819620	13.443
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	1288373	13.312
203) 6-Methylchrysene	(5)	18.518	242	1246051	12.494
205) Di-n-octylphthalate	(6)	18.984	149	2259384	13.151
206) Benzo(b)fluoranthene	(6)	19.520	252	1976300	12.935
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.520	256	841626	13.817
208) Benzo(k)fluoranthene	(6)	19.567	252	1914756	12.757
211) Benzo(a)pyrene	(6)	20.051	252	1745261	12.208
213)*Perylene-d12	(6)	20.138	264	606111	5.000
215) 3-Methylcholanthrene	(6)	20.610	268	928395	17.997
217) Dibenz(a,h)acridine	(6)	21.432	279	1497076	12.472
218) Dibenz(a,j)acridine	(6)	21.502	279	1552832	12.409
219) Indeno(1,2,3-cd)pyrene	(6)	21.758	276	1721612M	12.830
220) Dibenz(a,h)anthracene	(6)	21.799	278	1856381	13.313
221) Benzo(g,h,i)perylene	(6)	22.161	276	1794727	12.820

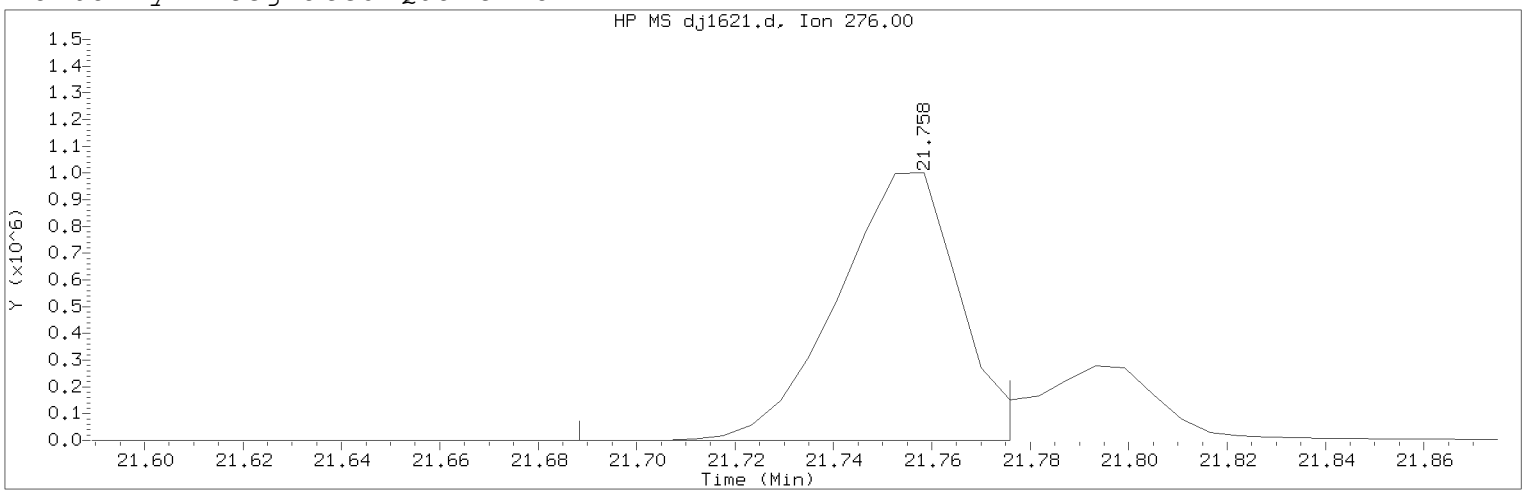
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1-f
Calibration date and time: 31-OCT-2017 13:39
Date, time and analyst ID of latest file update: 31-Oct-2017 13:39 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

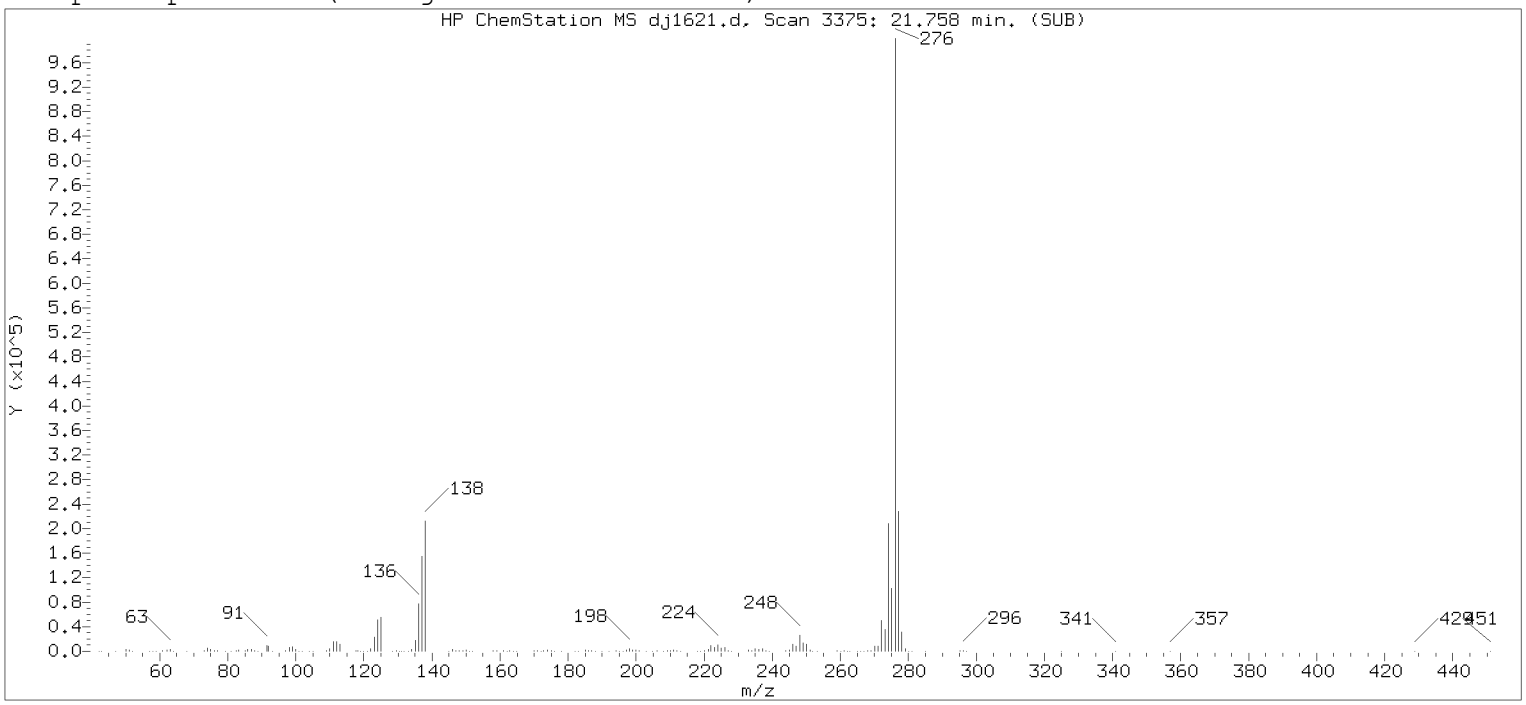
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3375
Retention Time (minutes) : 21.758
Quant Ion : 276.00
Area (flag) : 1721612M
On-Column Amount (ng/ul) : 12.8295
Integration start scan : 3362 Integration stop scan: 3377
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

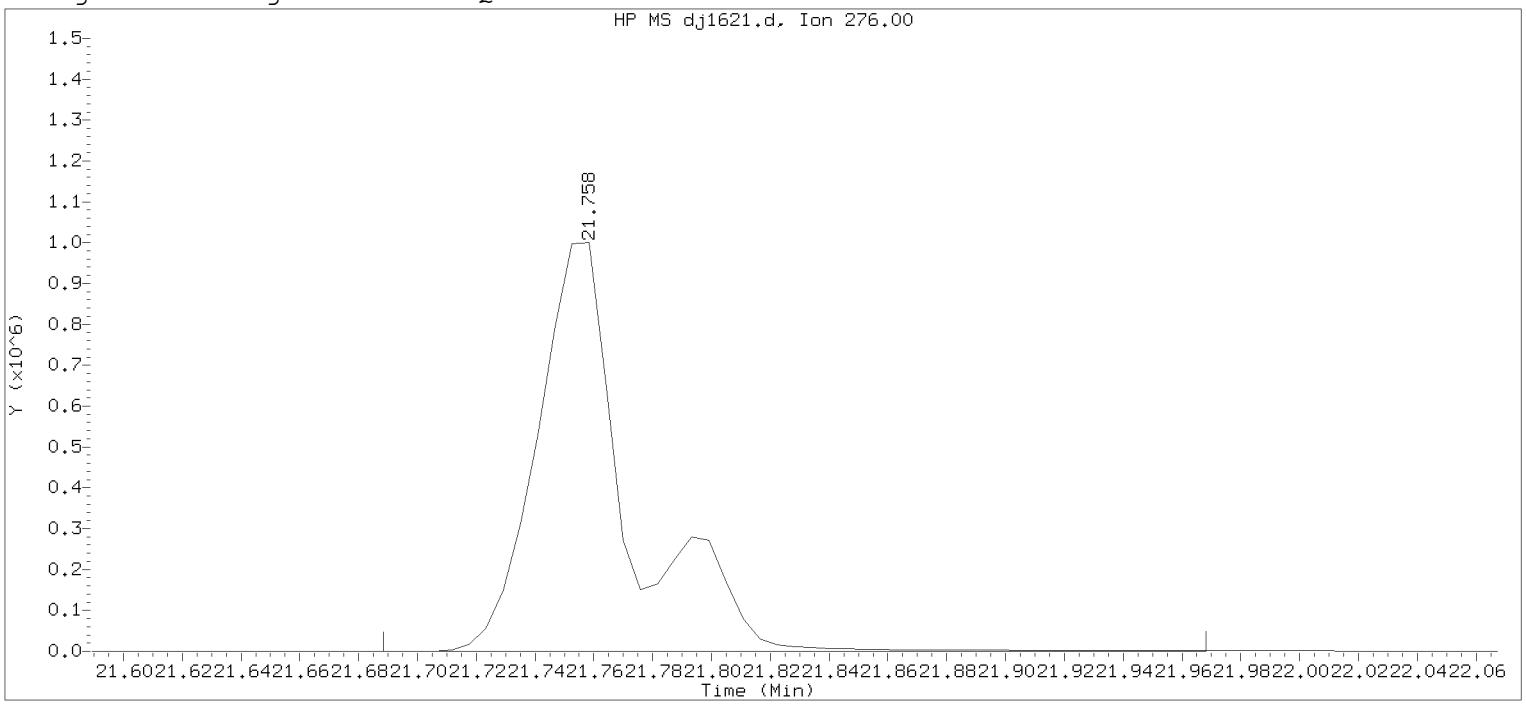
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 11/02/2017 at 12:50.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



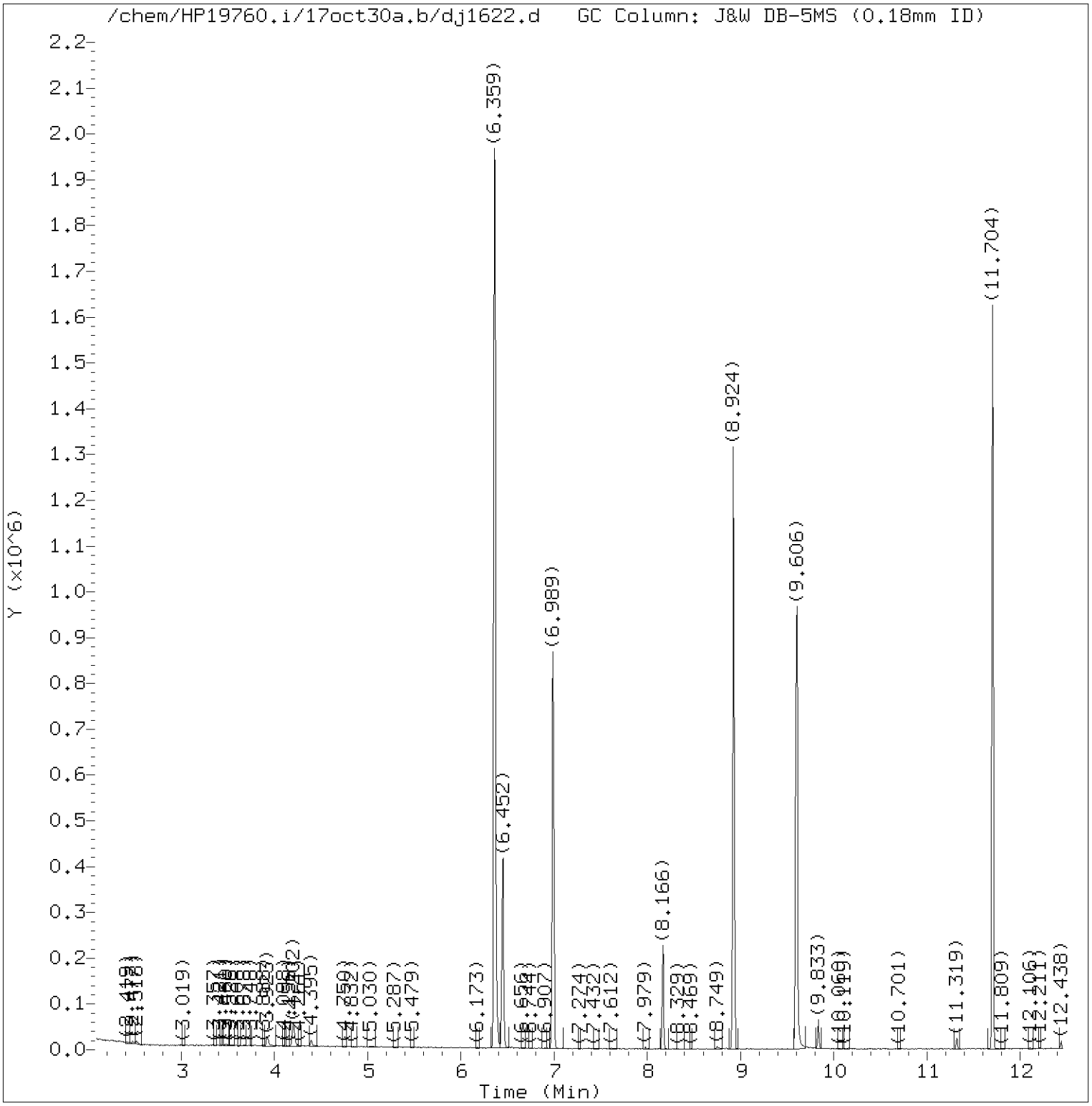
Data File: /chem/HP19760.i/17oct30a.b/dj1621.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 01:42 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 31-OCT-2017 00:45
Date, time and analyst ID of latest file update: 31-Oct-2017 02:08 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvICV2917

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3375		
Retention Time (minutes)	: 21.758		
Quant Ion	: 276.00		
Area	: 2182784		
On-column Amount (ng/ul)	: 13.2334		
Integration start scan	: 3362	Integration stop scan:	3410
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/31/2017 at 13:41.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

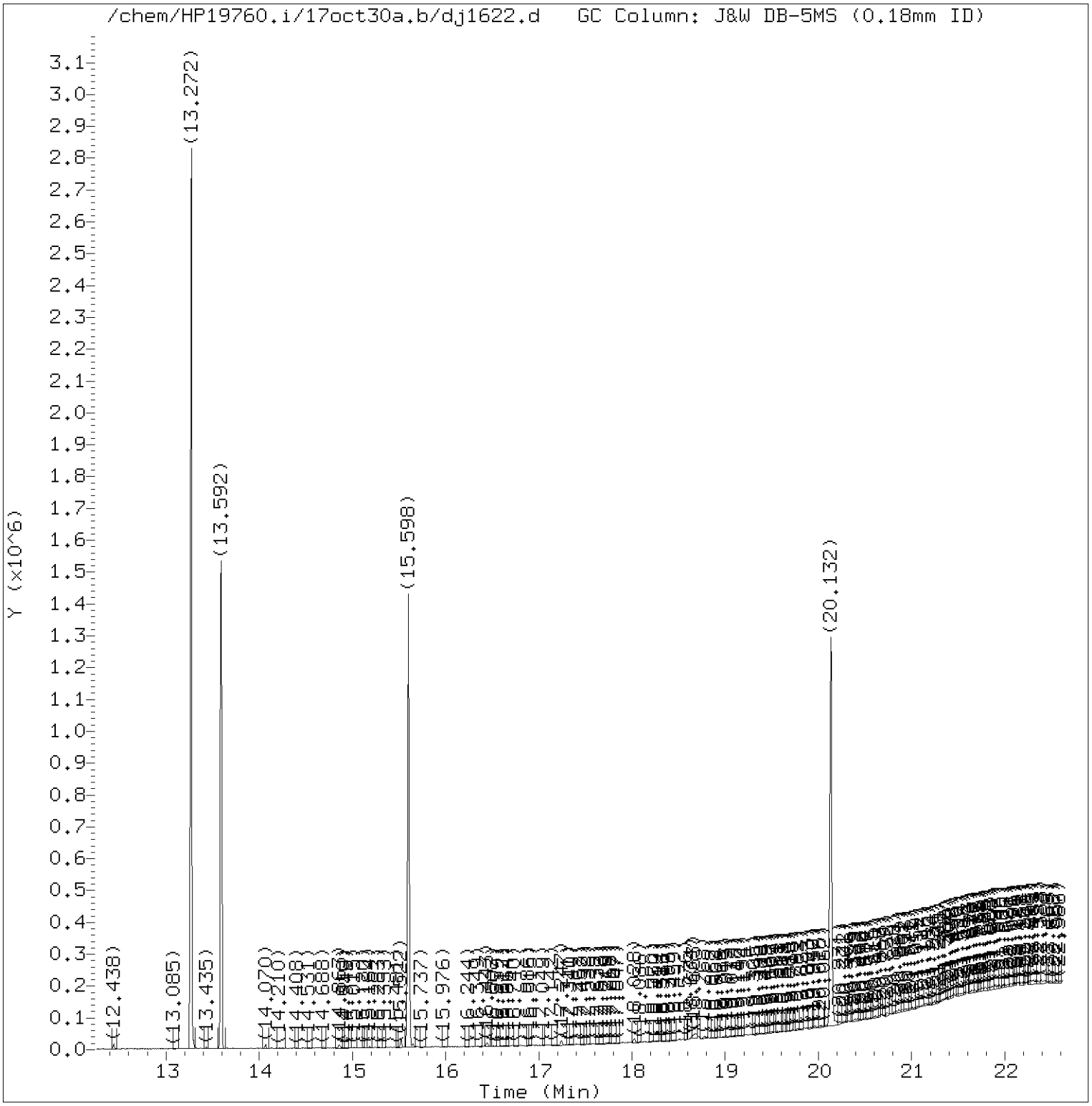
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1622.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:10 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1622.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:10 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1622.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:10 Analyst ID: apb10206

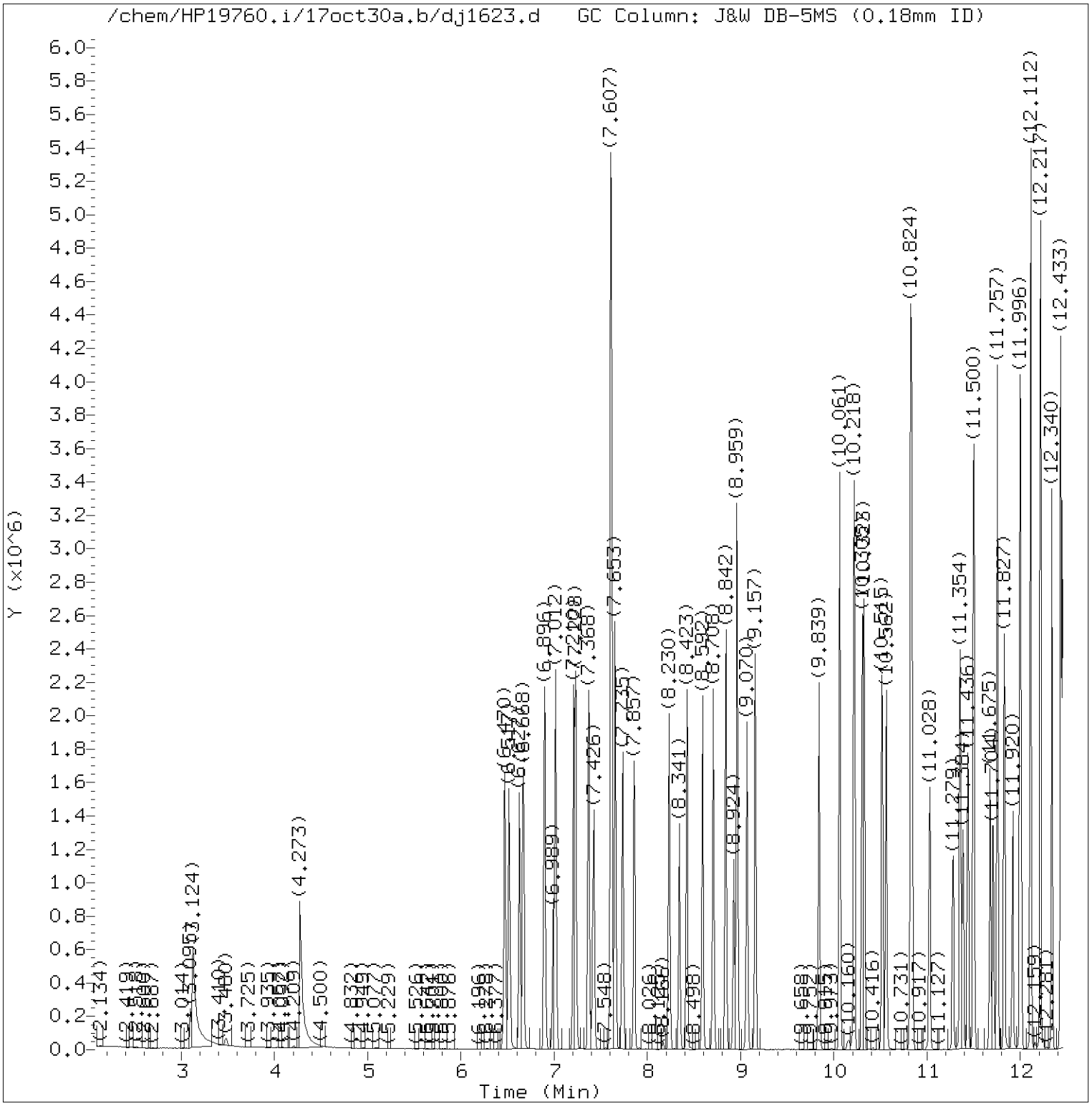
Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 31-OCT-2017 03:18
Date, time and analyst ID of latest file update: 31-Oct-2017 03:19 apb10206

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2487

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.359	77	639343	13.834
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	176758	5.000
65)*Naphthalene-d8	(2)	8.924	136	680689	5.000
76) Caprolactam	(2)	9.606	113	154221	12.249
113)*Acenaphthene-d10	(3)	11.704	164	353944	5.000
148) Atrazine	(4)	13.272	200	339949	12.883
153)*Phenanthrene-d10	(4)	13.592	188	651613	5.000
175)*Pyrene-d10	(5)	15.603	212	748688	5.000
213)*Perylene-d12	(6)	20.132	264	631387	5.000

* = Compound is an internal standard.

Digitally signed by Anthony P. Bauer
on 10/31/2017 at 03:21.
Target 3.5 esignature user ID: apb10206



Total Ion Chromatogram (TIC)

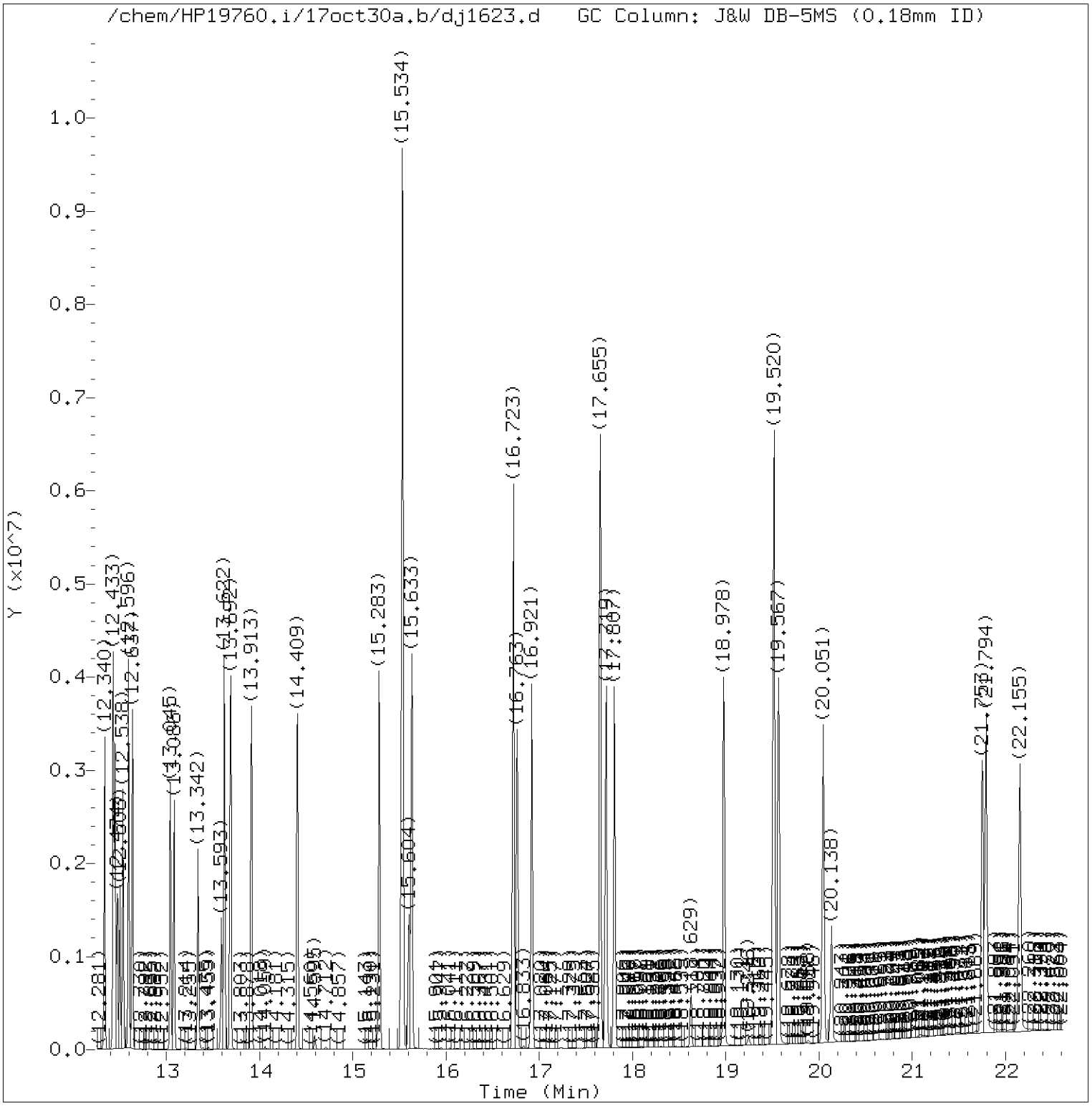
Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1623.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:37 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: hexnaph
Calibration date and time: 31-OCT-2017 06:20
Date, time and analyst ID of latest file update: 31-Oct-2017 06:20 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvHBICV2917

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 06:21.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1623.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:37 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: hexnaph
Calibration date and time: 31-OCT-2017 06:20
Date, time and analyst ID of latest file update: 31-Oct-2017 06:20 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvHBICV2917

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 06:21.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct30a.b/dj1623.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 02:37 Analyst ID: apb10206

Method used: /chem/HP19760.i/17oct30a.b/rv8270d.m Sublist used: hexnaph
Calibration date and time: 31-OCT-2017 06:20
Date, time and analyst ID of latest file update: 31-Oct-2017 06:20 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: rvHBICV2917

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	162913	5.000
65)*Naphthalene-d8	(2)	8.924	136	635306	5.000
85) Hexachlorocyclopentadiene	(3)	10.305	237	458561	20.254
113)*Acenaphthene-d10	(3)	11.710	164	334568	5.000
121) 1-Naphthylamine	(3)	12.112	143	1825587	20.267
123) 2-Naphthylamine	(3)	12.217	143	1729700	19.856
153)*Phenanthrene-d10	(4)	13.593	188	609323	5.000
175)*Pyrene-d10	(5)	15.604	212	743768	5.000
213)*Perylene-d12	(6)	20.138	264	665517	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/31/2017 at 06:21.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/17oct31.b/dj1630.d

Date : 31-OCT-2017 09:22

Client ID: DFTPP12.5

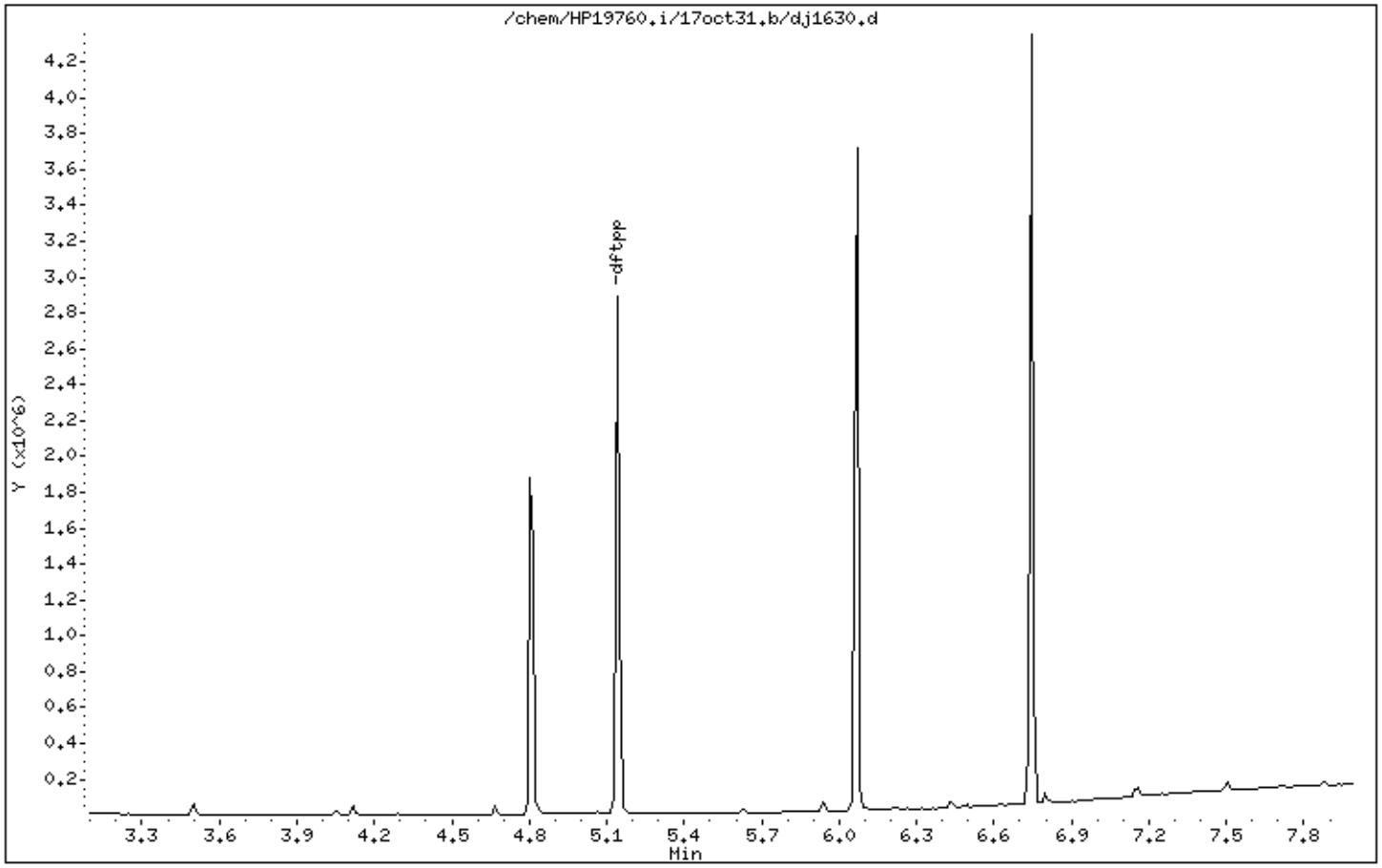
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: knk25316

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Kira N. Klaassen on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Data File: /chem/HP19760.i/17oct31.b/dj1630.d

Date : 31-OCT-2017 09:22

Client ID: DFTPP12.5

Instrument: HP19760.i

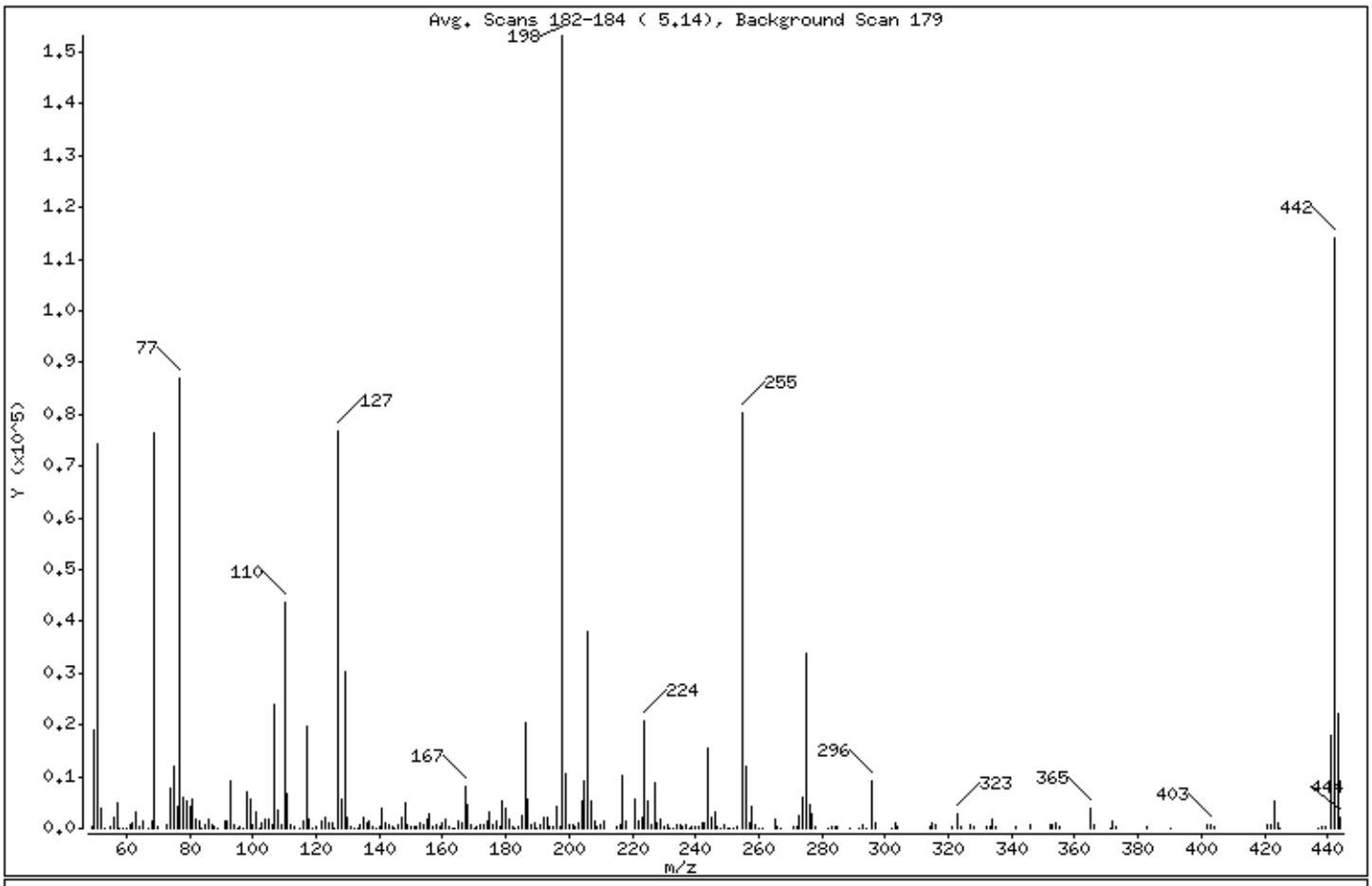
Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: knk25316

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	48.58
68	Less than 2.00% of mass 69	0.89 (1.79)
69	Mass 69 relative abundance	49.85
70	Less than 2.00% of mass 69	0.17 (0.33)
127	10.00 - 80.00% of mass 198	50.11
197	Less than 2.00% of mass 198	0.18
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 60.00% of mass 198	22.08
365	Greater than 1.00% of mass 198	2.43
441	0.01 - 24.00% of mass 442	11.71 (15.71)
442	50.00 - 99.99% of mass 198	74.52
443	15.00 - 24.00% of mass 442	14.42 (19.35)

Digitally signed by Kira N. Klaassen on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Date : 31-OCT-2017 09:22

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: knk25316

Column phase: DB-5MS Column diameter: 0.18

Data File: dj1630.d
Spectrum: Avg. Scans 182-184 (5.14), Background Scan 179
Location of Maximum: 198.00
Number of points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	477	123.00	2258	190.00	160	266.00	273
50.00	19152	124.00	946	191.00	562	267.00	106
51.00	74424	125.00	967	192.00	1995	271.00	217
52.00	3809	126.00	111	193.00	2066	272.00	250
53.00	144	127.00	76768	194.00	448	273.00	2378
55.00	208	128.00	5770	195.00	358	274.00	5854
56.00	2282	129.00	30104	196.00	4334	275.00	33824
57.00	5029	130.00	2261	197.00	281	276.00	4596
58.00	146	131.00	442	198.00	153152	277.00	2658
59.00	91	132.00	149	199.00	10493	278.00	456
60.00	84	133.00	31	200.00	653	282.00	105
61.00	834	134.00	693	201.00	851	283.00	379
62.00	950	135.00	2217	202.00	184	284.00	256
63.00	3067	136.00	996	203.00	1122	285.00	435
64.00	357	137.00	1283	204.00	5320	289.00	88
65.00	1460	138.00	236	205.00	9108	292.00	104
67.00	115	139.00	111	206.00	38088	293.00	582
68.00	1368	140.00	343	207.00	5179	294.00	122
69.00	76376	141.00	3739	208.00	1262	296.00	9053
70.00	253	142.00	1197	209.00	512	297.00	1191
73.00	627	143.00	785	210.00	558	302.00	92
74.00	7611	144.00	186	211.00	1433	303.00	959
75.00	11960	145.00	117	215.00	528	304.00	255
76.00	4323	146.00	607	216.00	802	314.00	421
77.00	87072	147.00	2074	217.00	10126	315.00	973
78.00	5862	148.00	4850	218.00	1269	316.00	556
79.00	5194	149.00	873	221.00	5636	321.00	309
80.00	4283	150.00	239	222.00	1250	323.00	2821
81.00	5805	151.00	374	223.00	2147	324.00	512
82.00	1655	152.00	186	224.00	20648	327.00	557
83.00	1311	153.00	1131	225.00	5321	328.00	279
84.00	100	154.00	876	226.00	677	332.00	271
85.00	717	155.00	1935	227.00	8657	333.00	237
86.00	1600	156.00	2748	228.00	1174	334.00	1801
87.00	744	157.00	484	229.00	1856	335.00	516

Digitally signed by Kira N. Klaassen on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Date : 31-OCT-2017 09:22

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP2717;1;3;DFTPP;

Operator: knk25316

Column phase: DB-5MS Column diameter: 0.18

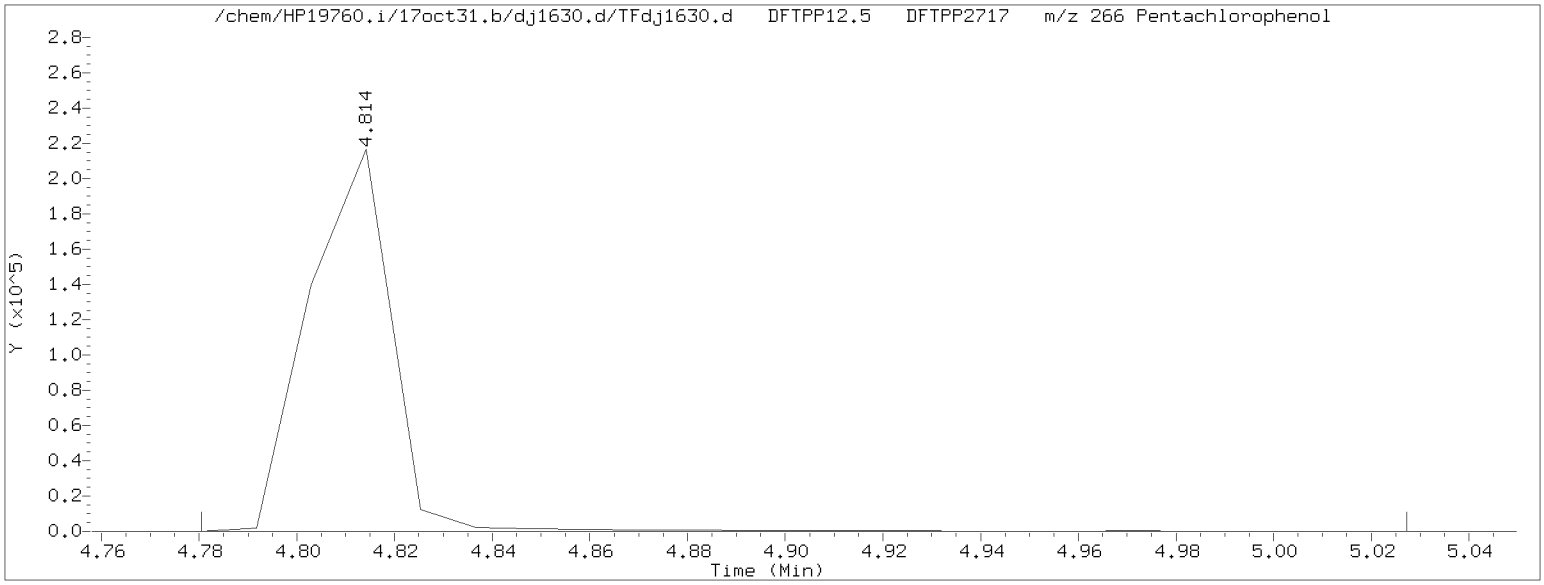
Data File: dj1630.d
Spectrum: Avg. Scans 182-184 (5.14), Background Scan 179
Location of Maximum: 198.00
Number of points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	277	158.00	564	230.00	282	341.00	281
89.00	158	159.00	491	231.00	770	346.00	555
91.00	1376	160.00	1084	232.00	94	352.00	759
92.00	1522	161.00	1745	233.00	131	353.00	565
93.00	9313	162.00	444	234.00	542	354.00	889
94.00	640	163.00	111	235.00	675	355.00	252
95.00	139	164.00	103	236.00	433	365.00	3730
96.00	425	165.00	1488	237.00	782	366.00	571
97.00	176	166.00	1072	238.00	105	371.00	112
98.00	7201	167.00	8036	239.00	340	372.00	1503
99.00	5562	168.00	4544	240.00	298	373.00	326
100.00	554	169.00	666	241.00	495	383.00	316
101.00	3158	170.00	146	242.00	1071	390.00	126
102.00	170	171.00	189	243.00	1199	402.00	622
103.00	1049	172.00	658	244.00	15631	403.00	855
104.00	1923	173.00	805	245.00	2024	404.00	251
105.00	1826	174.00	1500	246.00	3063	421.00	672
106.00	543	175.00	2999	247.00	461	422.00	825
107.00	24056	176.00	807	248.00	104	423.00	5188
108.00	3688	177.00	1435	249.00	636	424.00	1177
109.00	641	178.00	524	250.00	93	425.00	149
110.00	43712	179.00	5349	251.00	136	437.00	143
111.00	6527	180.00	3811	252.00	105	438.00	191
112.00	787	181.00	1762	253.00	448	439.00	412
113.00	312	182.00	270	255.00	80112	441.00	17936
115.00	127	183.00	158	256.00	11980	442.00	114176
116.00	1364	184.00	440	257.00	990	443.00	22088
117.00	19848	185.00	2594	258.00	4263	444.00	1998
118.00	1597	186.00	20320	259.00	683		
119.00	135	187.00	5524	260.00	89		
120.00	231	188.00	655	261.00	94		
122.00	1373	189.00	1111	265.00	1811		

Digitally signed by Kira N. Klaassen on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Assessment of GC Column Performance and Injection Port Inertness for

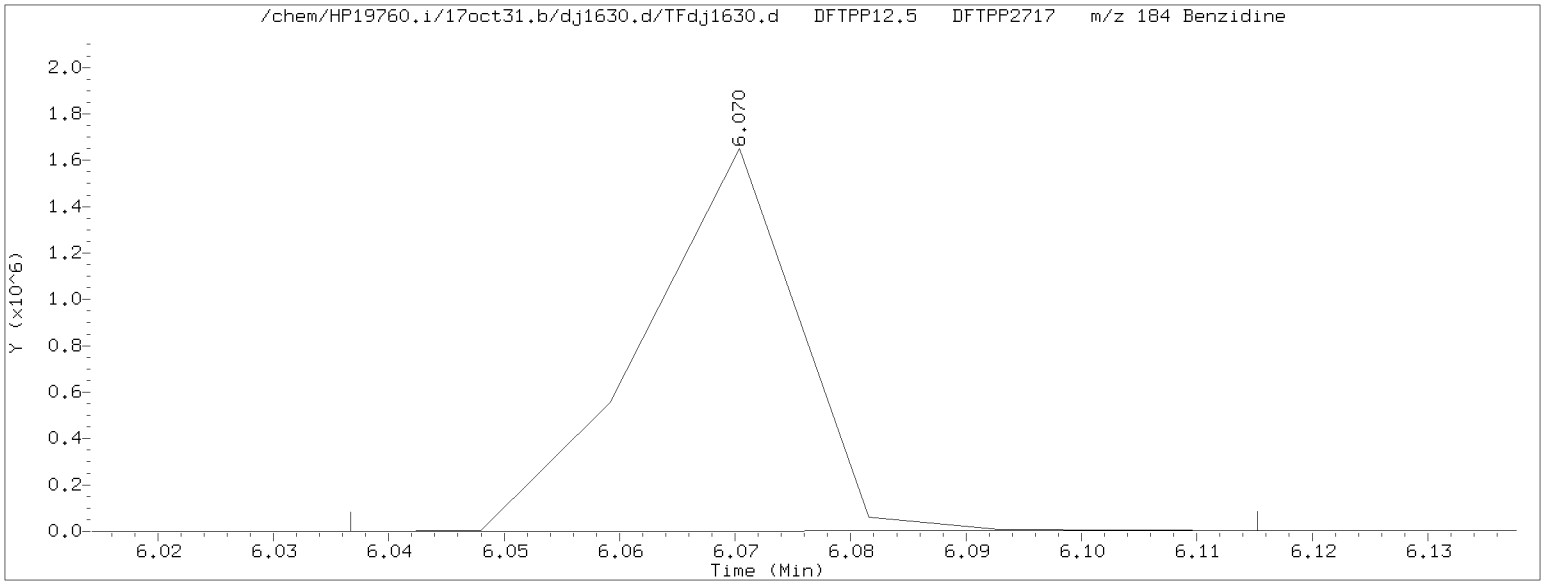
Instrument ID: HP19760.i Injection Date: 31-OCT-2017 09:22 Operator: knk25316



Pentachlorophenol EICP peak height = 216768 EICP peak height at 10% = 21677 Pentachlorophenol EICP area = 254841

Pentachlorophenol EICP peak apex (min.) = 4.814
RT at 5% of front half of EICP (min.) = 4.792 'Front' peak width (min.) = 0.0217000000
RT at 5% of back half of EICP (min.) = 4.827 'Tailing' peak width (min.) = 0.0129666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0129666667}{0.0217000000} = 0.598$



Benzidine EICP peak height = 1648242 EICP peak height at 2.5% = 41206 Benzidine EICP area = 1529873

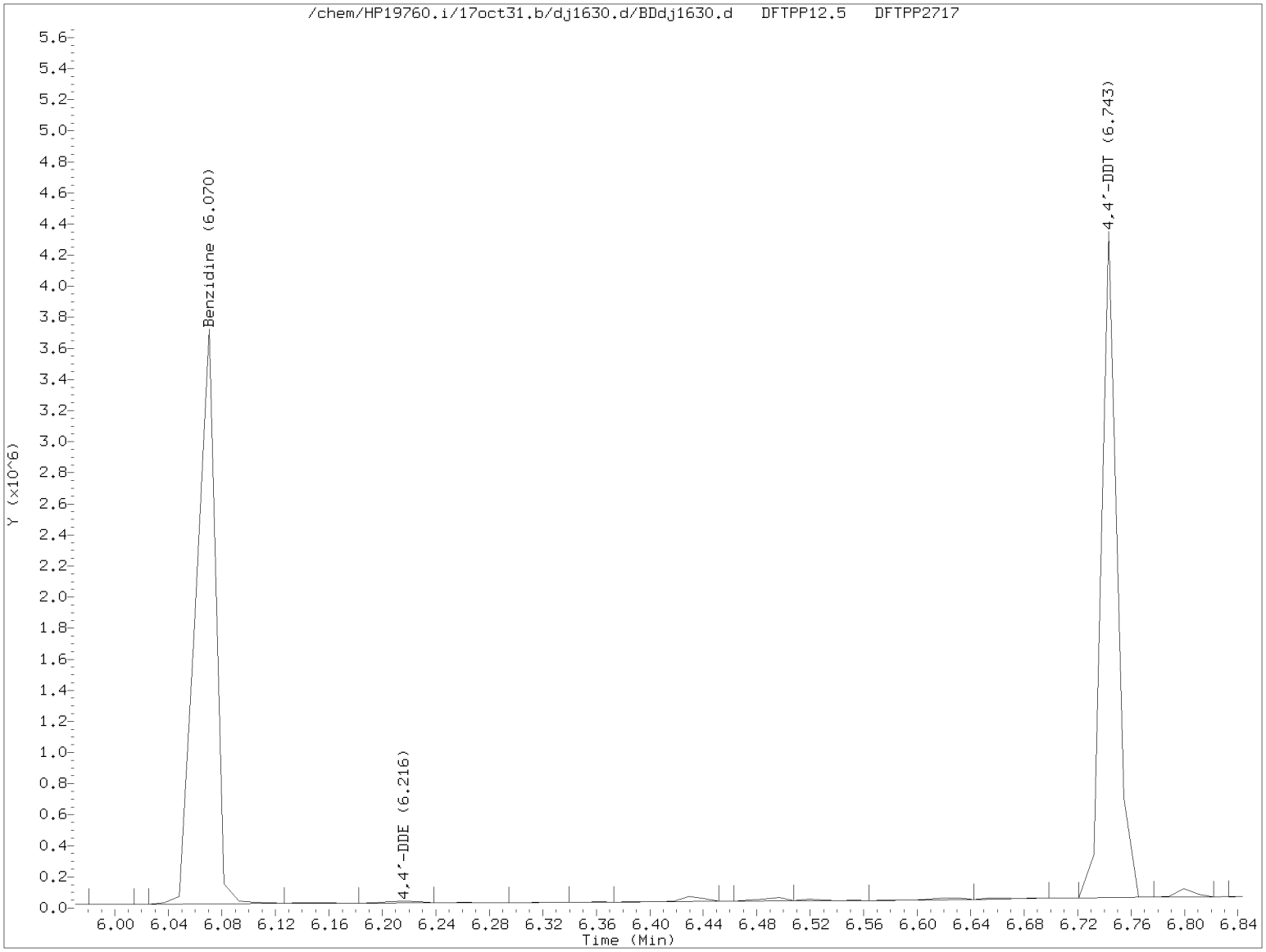
Benzidine EICP peak apex (min.) = 6.070
RT at 2.5% of front half of EICP (min.) = 6.049 'Front' peak width (min.) = 0.0216333333
RT at 2.5% of back half of EICP (min.) = 6.086 'Tailing' peak width (min.) = 0.0152500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0152500000}{0.0216333333} = 0.705$

Secondary review performed and digitally signed by Chad A. Moline on 11/03/2017 at 11:53. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

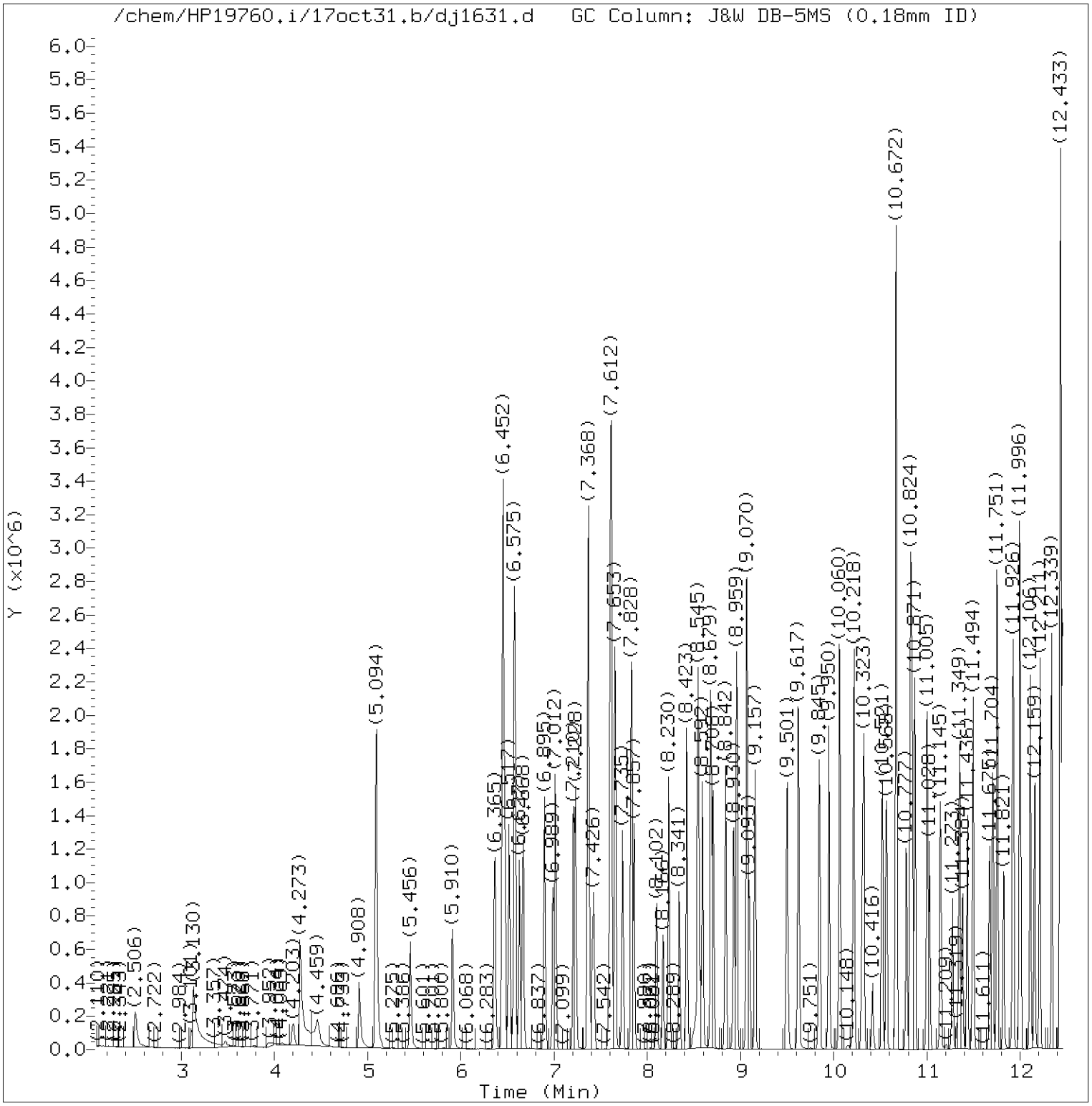
Instrument ID: HP19760.i Injection Date: 31-OCT-2017 09:22 Operator: knk25316



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{18573 + 0}{18573 + 0 + 3504548} \times 100 = 0.5$$

Secondary review performed and digitally signed by Chad A. Moline on 11/03/2017 at 11:53. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

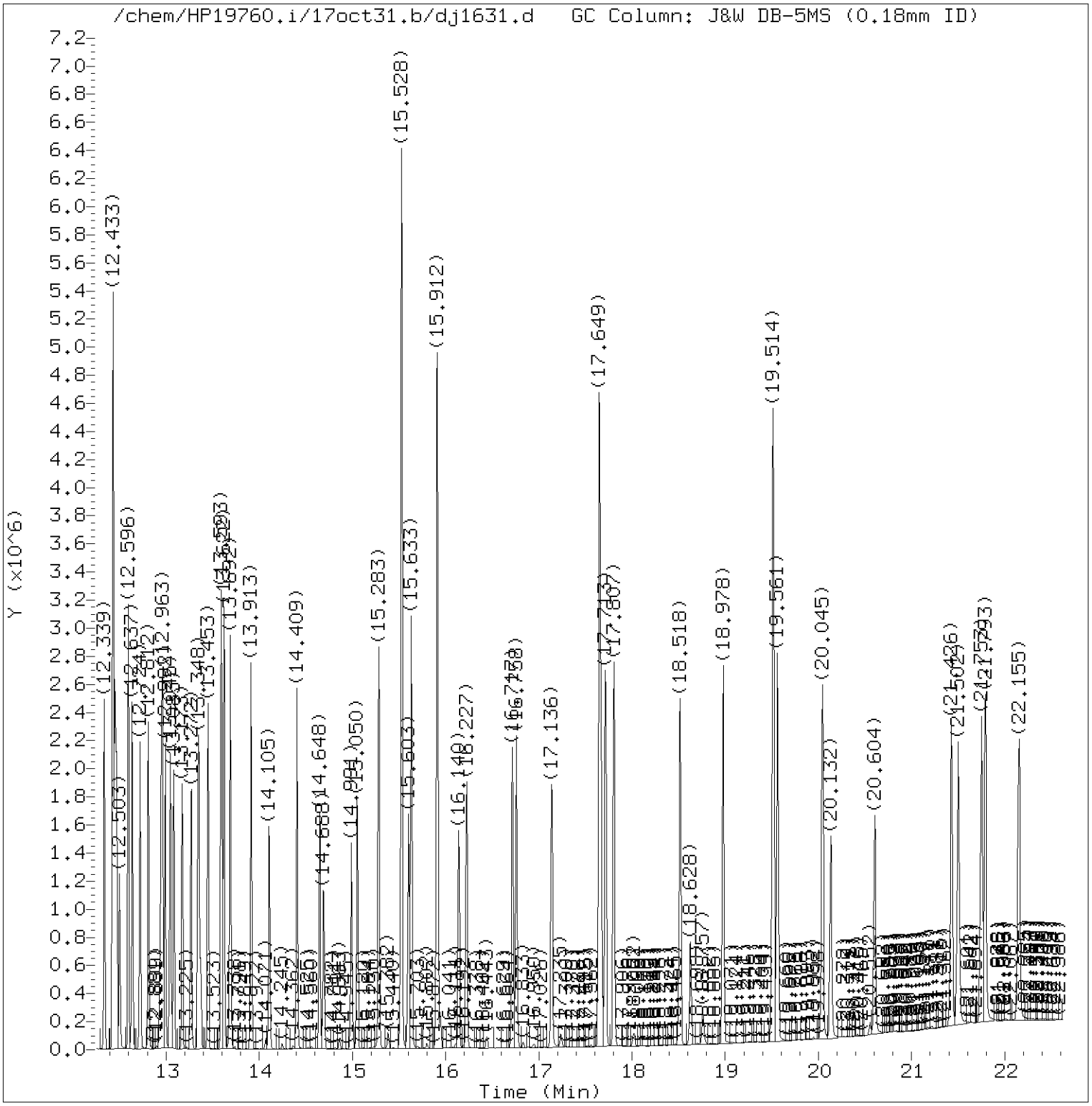
Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.506	88	184146	7.897
4) N-Nitrosodimethylamine	(1)	3.107	74	197632	6.946
5) Pyridine	(1)	3.130	79	429376	6.954
7) 2-Picoline	(1)	4.273	93	527637	7.845
8) N-Nitrosomethylethylamine	(1)	4.459	88	220717	7.600
9) Methyl methanesulfonate	(1)	4.908	80	233023	7.895
11)$2-Fluorophenol	(1)	5.094	112	887136	15.668
13) N-Nitrosodiethylamine	(1)	5.456	102	213425	7.851
42) Total Cresols	(1)			882327	15.721
15) Ethyl methanesulfonate	(1)	5.910	109	225197	8.144
16) Benzaldehyde	(1)	6.365	77	384184	7.613
17)$Phenol-d6	(1)	6.452	99	1165907	15.637
18) Phenol	(1)	6.470	94	615047	7.827
19) Aniline	(1)	6.517	93	748272	7.777
20) a-methylstyrene	(1)	6.575	118	473610	7.627
22) bis(2-Chloroethyl)ether	(1)	6.627	93	498631	7.949
23) 2-Chlorophenol	(1)	6.668	128	450807	7.725
24) 1,3-Dichlorobenzene	(1)	6.895	146	481912	7.596
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	193016	5.000
26) 1,4-Dichlorobenzene	(1)	7.012	146	491257	7.629
27) Benzyl alcohol	(1)	7.210	108	295135	7.658
28) 1,2-Dichlorobenzene	(1)	7.228	146	466297	7.677
31) 2-Methylphenol	(1)	7.368	108	430836	7.835
30) Indene	(1)	7.368	115	836488	7.656
97) Isosafrole	(3)			305471	7.751
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.426	45	669353	7.777
34) bis(2-Chloroisopropyl)ether	(1)	7.426	45	669353	7.777
35) N-Nitrosopyrrolidine	(1)	7.589	100	228834	8.199
36) Acetophenone	(1)	7.607	105	654603	7.492
37) 4-Methylphenol	(1)	7.612	108	451491	7.885
38) N-Nitroso-di-n-propylamine	(1)	7.618	70	381751	8.006
40) o-Toluidine	(1)	7.653	106	763362	7.926
39) N-Nitrosomorpholine	(1)	7.659	56	275650	7.904
43) Hexachloroethane	(1)	7.735	117	204960	7.812
44)$Nitrobenzene-d5	(2)	7.828	82	1063694	15.565
45) Nitrobenzene	(2)	7.857	77	550949	7.928
120) 2,4_2,6-Dinitrotoluenes	(3)			449852	16.093
48) N-Nitrosopiperidine	(2)	8.102	114	218995	7.850
50) Isophorone	(2)	8.230	82	931219	8.026
51) 2-Nitrophenol	(2)	8.341	139	219043	8.145

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

Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.423	107	479150	8.032
57) O,O,O-Triethylphosphorothioate	(2)	8.545	198	209861	7.728
56) Benzoic acid	(2)	8.562	105	401504	10.804
55) bis(2-Chloroethoxy)methane	(2)	8.592	93	594051	8.036
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.679	104	678593	7.691
60) 2,4-Dichlorophenol	(2)	8.708	162	365565	8.091
146) Diallate trans/cis	(4)			418170	7.906
62) 1,2,4-Trichlorobenzene	(2)	8.842	180	399375	7.663
65)*Naphthalene-d8	(2)	8.930	136	730635	5.000
66) Naphthalene	(2)	8.959	128	1278798	7.709
68) 2,6-Dichlorophenol	(2)	9.064	162	352892	7.996
67) 4-Chloroaniline	(2)	9.070	127	539191	8.020
69) Hexachloropropene	(2)	9.093	213	212361	7.718
71) Hexachlorobutadiene	(2)	9.157	225	224095	7.657
75) Quinoline	(2)	9.501	129	780170	7.880
77) N-Nitrosodi-n-butylamine	(2)	9.617	84	421542	8.336
76) Caprolactam	(2)	9.623	113	100061	7.404
80) 4-Chloro-3-methylphenol	(2)	9.845	107	409079	8.222
82) Safrole	(2)	9.950	162	325565	7.943
83) 2-Methylnaphthalene	(2)	10.060	142	851857	7.909
84) 1-Methylnaphthalene	(2)	10.218	142	767408	7.858
85) Hexachlorocyclopentadiene	(3)	10.305	237	204513	7.730
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.323	216	401583	7.500
88) cis-Isosafrole	(3)	10.416	162	56704	1.322
90) 2,4,6-Trichlorophenol	(3)	10.521	196	255289	7.997
92) 2,4,5-Trichlorophenol	(3)	10.568	196	266385	7.890
93)$2-Fluorobiphenyl	(3)	10.672	172	1843993	15.608
94) trans-Isosafrole	(3)	10.777	162	248767	6.428
95) 1,1'-Biphenyl	(3)	10.824	154	953406	7.374
96) 2-Chloronaphthalene	(3)	10.841	162	776368	7.204
98) 1-Chloronaphthalene	(3)	10.871	162	784546	8.396
99) Diphenyl ether	(3)	11.005	170	543559	7.820
100) 2-Nitroaniline	(3)	11.028	138	243192	8.034
104) 1,4-Naphthoquinone	(3)	11.145	158	308523	7.883
105) 1,4-Dinitrobenzene	(3)	11.273	168	122524	7.826
106) Dimethylphthalate	(3)	11.349	163	857213	7.813
107) 1,3-Dinitrobenzene	(3)	11.384	168	134736	7.797
108) 2,6-Dinitrotoluene	(3)	11.436	165	193157	8.111
109) Acenaphthylene	(3)	11.494	152	1099475	7.977
112) 3-Nitroaniline	(3)	11.675	138	208060	7.992

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Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.704	164	390968	5.000
114) Acenaphthene	(3)	11.751	153	838173	7.852
115) 2,4-Dinitrophenol	(3)	11.826	184	146646	9.948
116) 4-Nitrophenol	(3)	11.920	109	152238	7.549
117) Pentachlorobenzene	(3)	11.926	250	328826	7.704
119) Dibenzofuran	(3)	11.996	168	1075573	7.786
118) 2,4-Dinitrotoluene	(3)	12.007	165	256695	7.772
121) 1-Naphthylamine	(3)	12.106	143	787649	7.483
122) 2,3,4,6-Tetrachlorophenol	(3)	12.159	232	203995	7.955
123) 2-Naphthylamine	(3)	12.211	143	769413	7.558
124) Diethylphthalate	(3)	12.339	149	847545	7.928
125) Thionazin	(3)	12.433	107	150737	7.981
126) Fluorene	(3)	12.433	166	854031	7.744
127) 4-Chlorophenyl-phenylether	(3)	12.450	204	399733	7.728
128) 5-Nitro-o-toluidine	(3)	12.462	152	240652	8.034
129) 4-Nitroaniline	(3)	12.473	138	218839	8.353
130) 4,6-Dinitro-2-methylphenol	(4)	12.503	198	150533	7.480
132) NDPA as diphenylamine	(4)	12.596	169	711130	7.915
131) N-Nitrosodiphenylamine	(4)	12.596	169	711130	7.915
134) 1,2-Diphenylhydrazine	(4)	12.637	77	1008347	8.058
135)$2,4,6-Tribromophenol	(3)	12.724	330	235388	15.949
137) Tetraethyldithiopyrophosphate	(4)	12.812	97	168178	8.063
139) 1,3,5-Trinitrobenzene	(4)	12.940	213	89425	7.375
140) Diallate (peak 1)	(4)	12.951	86	359414	6.582
141) Phorate	(4)	12.963	75	639451	7.505
142) Phenacetin	(4)	12.992	108	481018	8.155
143) 4-Bromophenyl-phenylether	(4)	13.045	248	237878	7.716
144) Diallate (peak 2)	(4)	13.056	86	58756	1.320
145) Hexachlorobenzene	(4)	13.085	284	246746	7.520
147) Dimethoate	(4)	13.173	87	400309	8.058
148) Atrazine	(4)	13.272	200	221894	7.629
149) Pentachlorophenol	(4)	13.342	266	161841	7.718
151) Pentachloronitrobenzene	(4)	13.354	237	107067	7.756
150) 4-Aminobiphenyl	(4)	13.371	169	207808	8.296
152) Pronamide	(4)	13.453	173	410011	8.296
154) Dinoseb	(4)	13.593	211	226411	7.852
153)*Phenanthrene-d10	(4)	13.593	188	718246	5.000
155) Phenanthrene	(4)	13.622	178	1290246	7.777
157) Anthracene	(4)	13.692	178	1294627	7.994
163) Carbazole	(4)	13.913	167	1204640	8.037

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Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

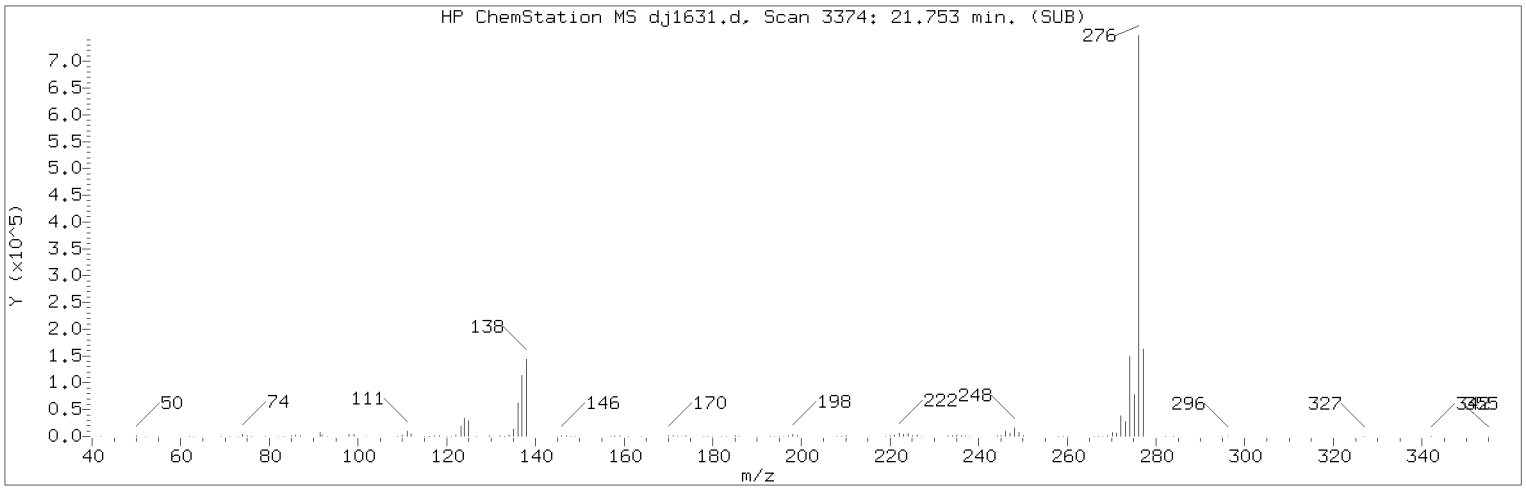
Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.105	109	314776	8.167
165) Di-n-butylphthalate	(4)	14.409	149	1458302	8.106
167) Parathion	(4)	14.648	109	195183	7.998
168) 4-Nitroquinoline-1-oxide	(4)	14.694	190	124963	7.114
169) Octachlorostyrene	(4)	14.991	308	95402	7.717
222) Total PAHs	(6)			22487635	146.522
171) Isodrin	(4)	15.050	193	149026	7.540
173) Fluoranthene	(4)	15.283	202	1451559	7.997
174) Benzidine	(5)	15.528	184	2967078	23.328
175)*Pyrene-d10	(5)	15.603	212	860639	5.000
177) Pyrene	(5)	15.633	202	1545237	7.761
179)$Terphenyl-d14	(5)	15.912	244	1992257	15.712
182) p-Dimethylaminoazobenzene	(5)	16.140	225	205512	8.242
185) Chlorobenzilate	(5)	16.227	139	457963	7.916
187) 3,3'-Dimethylbenzidine	(5)	16.717	212	916192	7.852
188) Butylbenzylphthalate	(5)	16.763	149	669268	7.901
191) 2-Acetylaminofluorene	(5)	17.136	181	569368	7.523
193) 3,3'-Dichlorobenzidine	(5)	17.649	252	536490	7.676
195) Benzo(a)anthracene	(5)	17.655	228	1456388	8.064
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.673	231	258307	7.374
196) Chrysene	(5)	17.713	228	1363276	7.935
199) bis(2-Ethylhexyl)phthalate	(5)	17.807	149	968984	7.889
203) 6-Methylchrysene	(5)	18.518	242	963649	7.613
205) Di-n-octylphthalate	(6)	18.978	149	1685798	8.227
206) Benzo(b)fluoranthene	(6)	19.514	252	1504660	8.257
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.514	256	599820	8.256
208) Benzo(k)fluoranthene	(6)	19.561	252	1460665	8.159
211) Benzo(a)pyrene	(6)	20.045	252	1392605	8.167
213)*Perylene-d12	(6)	20.132	264	722922	5.000
215) 3-Methylcholanthrene	(6)	20.604	268	486484	7.907
217) Dibenz(a,h)acridine	(6)	21.426	279	1109390	7.749
218) Dibenz(a,j)acridine	(6)	21.502	279	1167139	7.820
219) Indeno(1,2,3-cd)pyrene	(6)	21.753	276	1306194M	8.161
220) Dibenz(a,h)anthracene	(6)	21.793	278	1392209	8.371
221) Benzo(g,h,i)perylene	(6)	22.155	276	1340227	8.027

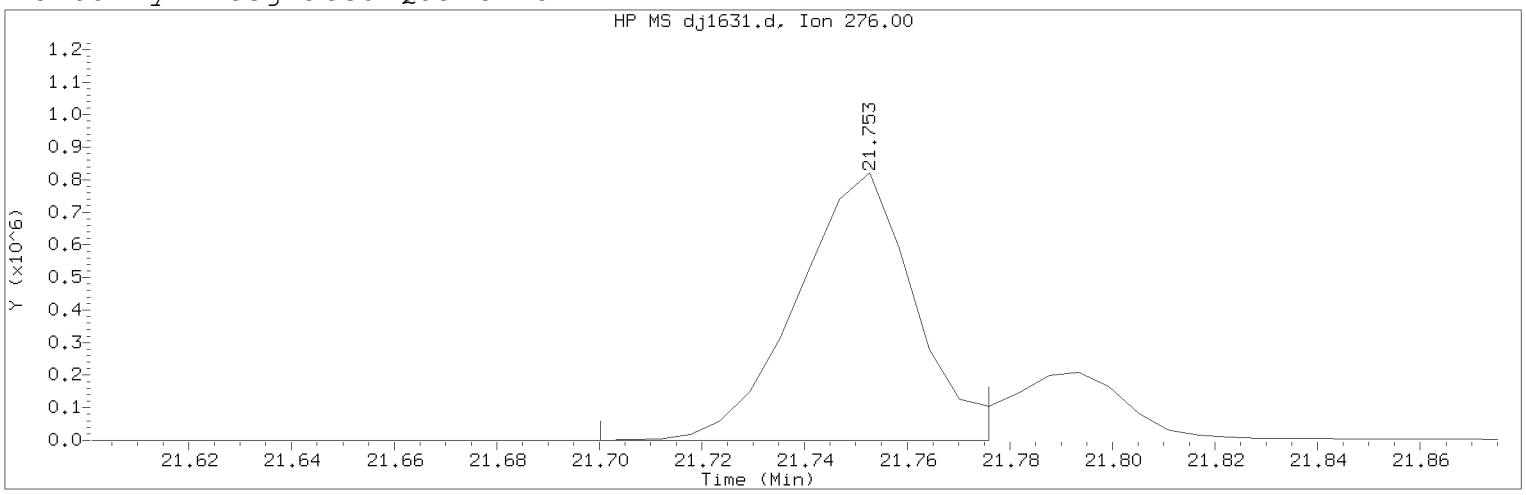
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:29
Date, time and analyst ID of latest file update: 31-Oct-2017 10:29 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

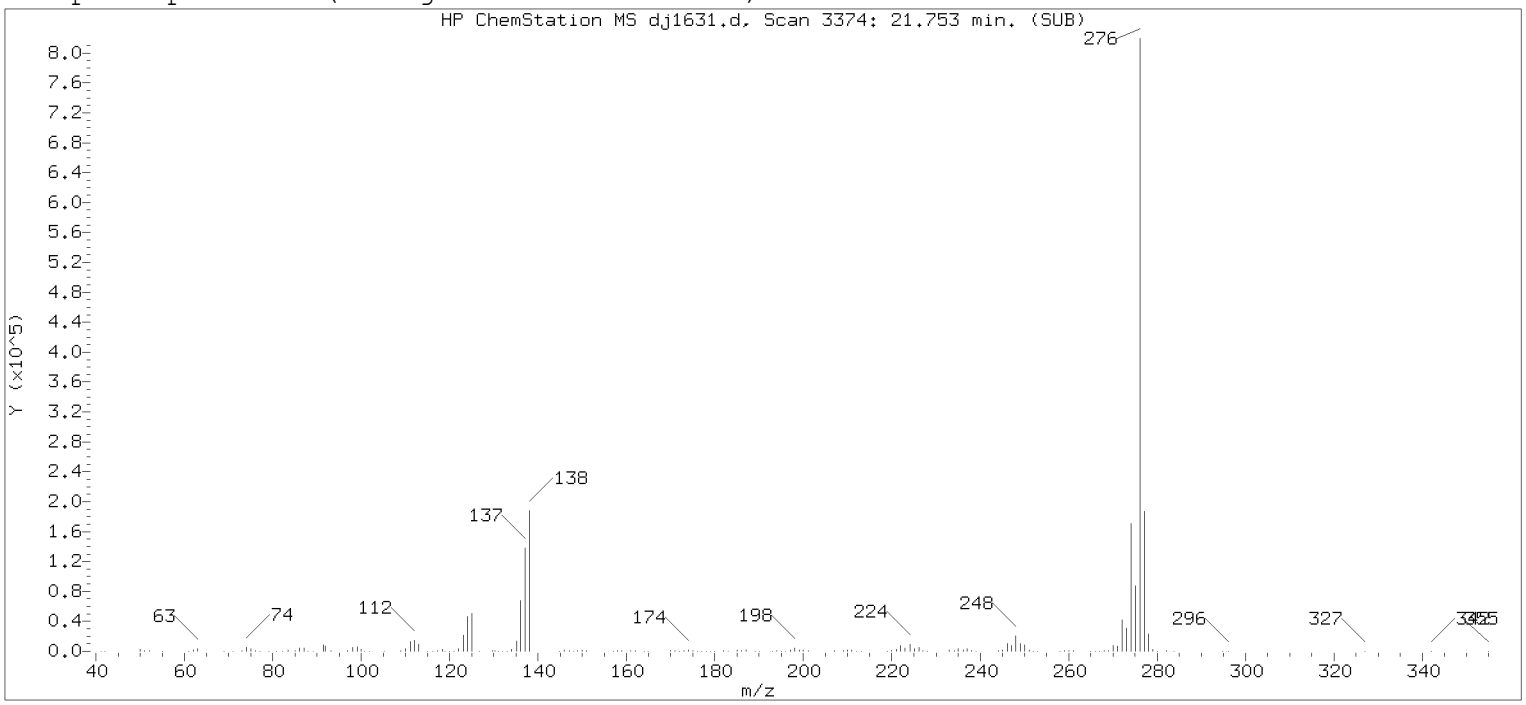
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3374
Retention Time (minutes) : 21.753
Quant Ion : 276.00
Area (flag) : 1306194M
On-Column Amount (ng/ul) : 8.1610
Integration start scan : 3364 Integration stop scan: 3377
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

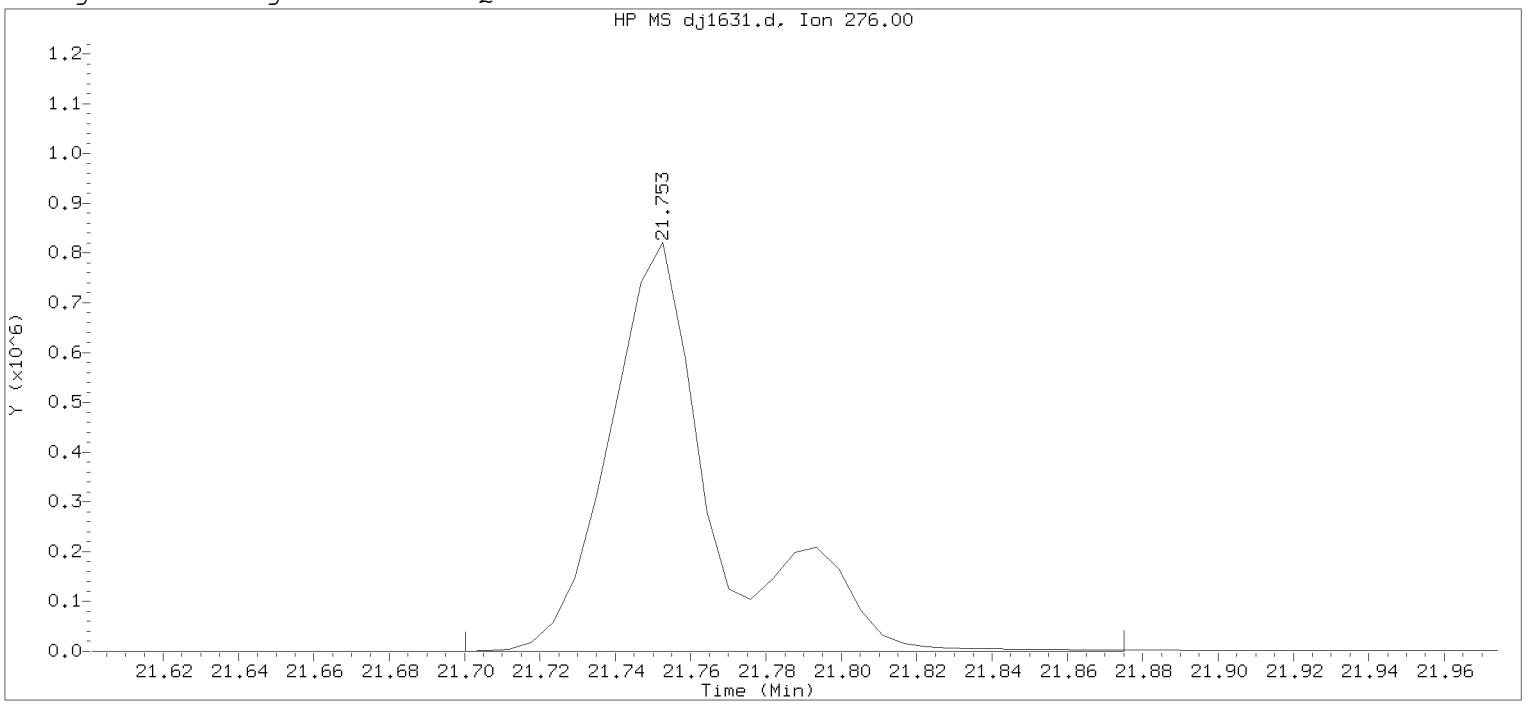
Analyst responsible for change: Digitally signed by Kira N. Klaassen
on 10/31/2017 at 12:32.
Target 3.5 esignature user ID: knk25316

Secondary review performed and digitally signed by Chad A. Moline on 11/03/2017 at 11:53.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/17oct31.b/dj1631.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 09:37 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: all1
Calibration date and time: 31-OCT-2017 10:28
Date, time and analyst ID of latest file update: 31-Oct-2017 10:28 knk25316

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3374		
Retention Time (minutes)	: 21.753		
Quant Ion	: 276.00		
Area	: 1618040		
On-column Amount (ng/ul)	: 10.1094		
Integration start scan	: 3364	Integration stop scan:	3394
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kira N. Klaassen on 10/31/2017 at 12:32.
Target 3.5 esignature used.

Data File: /chem/HP20296.i/17oct12d.b/lj0480d.d

Date : 12-OCT-2017 16:57

Client ID: DFTPP12.5

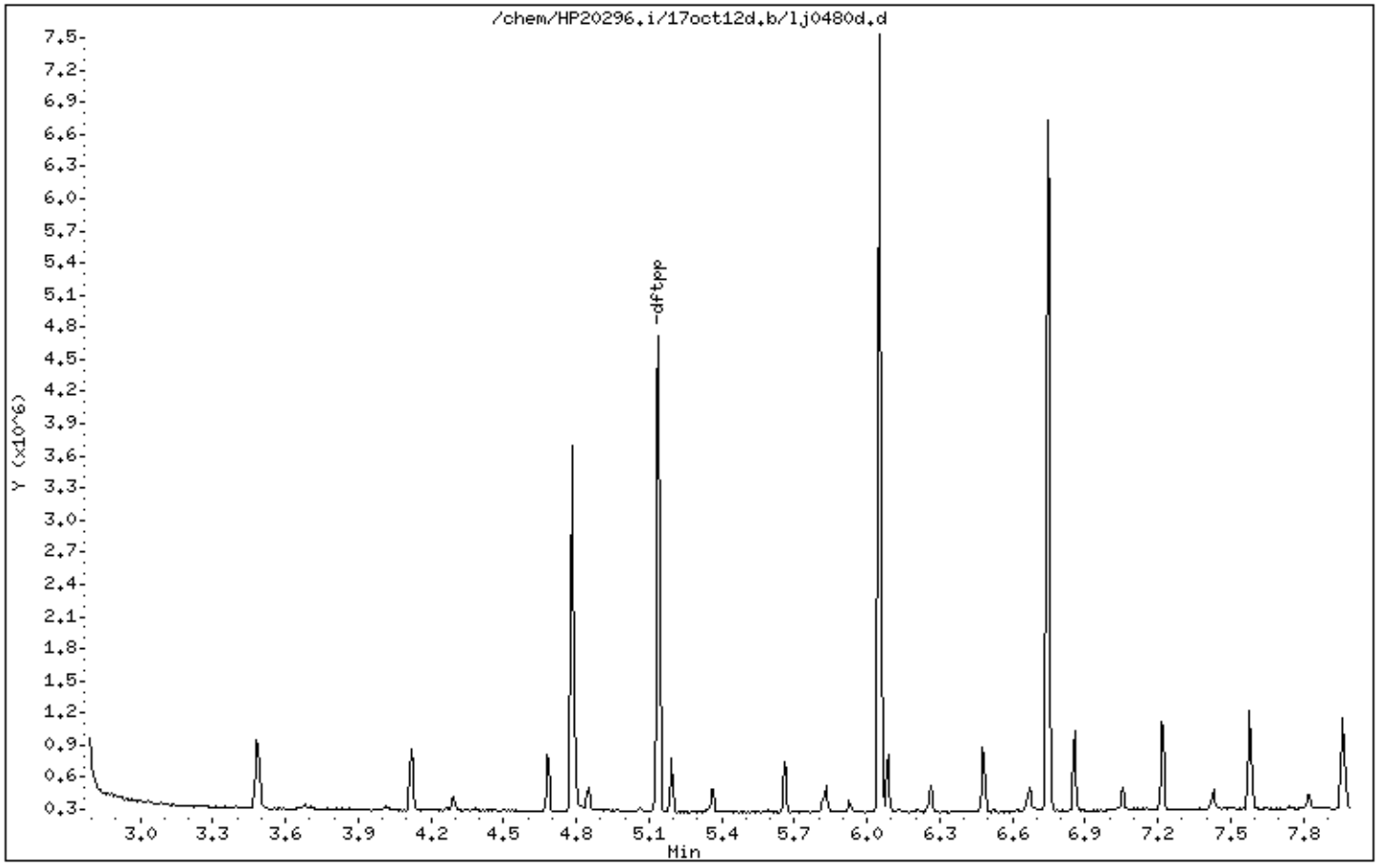
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:35.
Target 3.5 esignature user ID: bkc25363

Data File: /chem/HP20296.i/17oct12d.b/lj0480d.d

Date : 12-OCT-2017 16:57

Client ID: DFTPP12.5

Instrument: HP20296.i

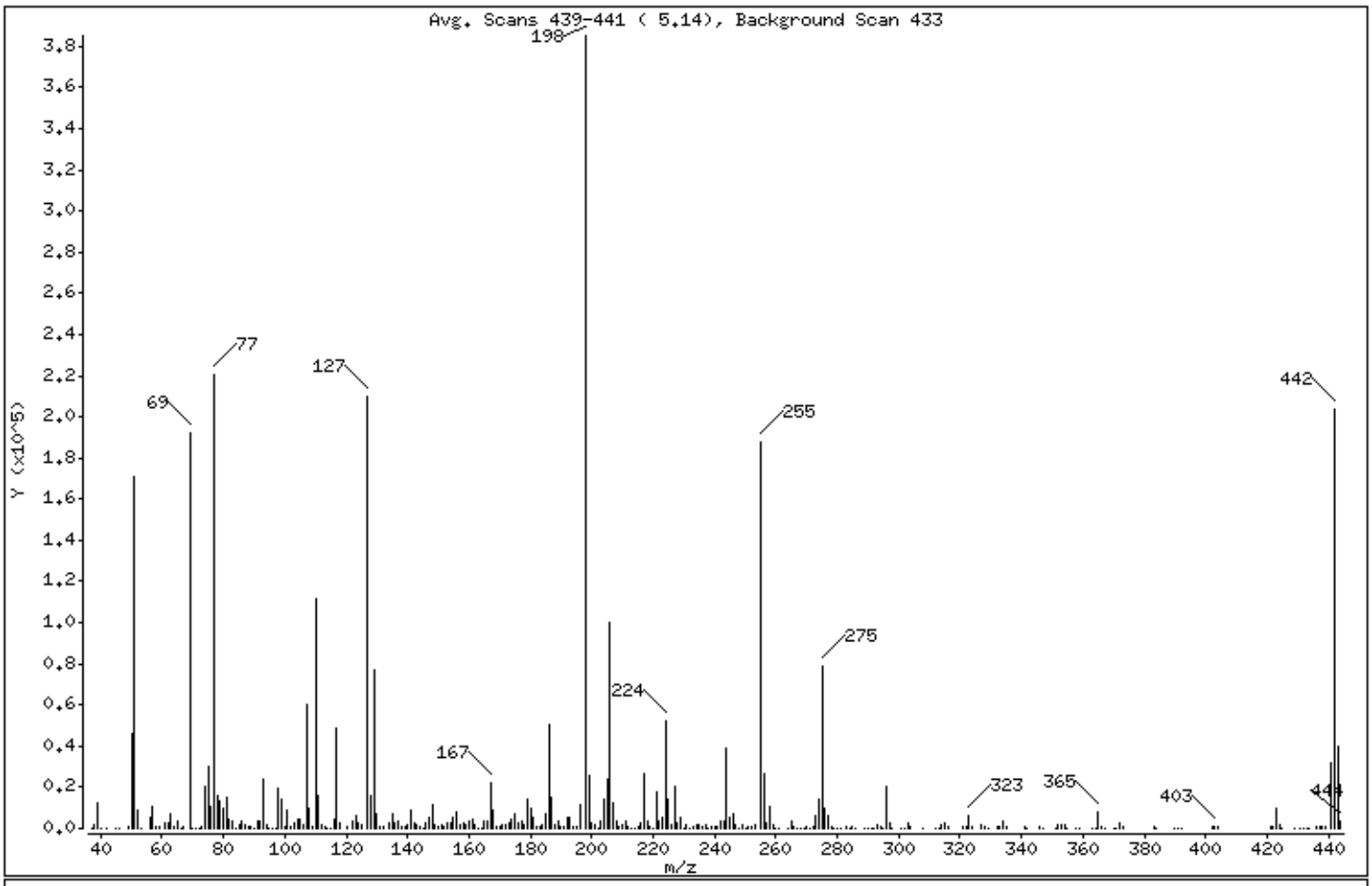
Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

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	44.30
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	49.96
70	Less than 2.00% of mass 69	0.06 (0.12)
127	10.00 - 80.00% of mass 198	54.38
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	20.44
365	Greater than 1.00% of mass 198	2.12
441	0.01 - 24.00% of mass 442	8.30 (15.69)
442	50.00 - 99.99% of mass 198	52.91
443	15.00 - 24.00% of mass 442	10.30 (19.46)

Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:35.
Target 3.5 esignature user ID: bkc25363

Date : 12-OCT-2017 16:57

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: lj0480d.d
Spectrum: Avg. Scans 439-441 (5.14), Background Scan 433
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	281	127.00	209472	207.00	12606	291.00	109
38.00	1965	128.00	15914	208.00	3593	292.00	198
39.00	12123	129.00	76664	209.00	886	293.00	1667
40.00	276	130.00	7300	210.00	1880	294.00	626
42.00	34	131.00	936	211.00	3816	295.00	359
45.00	54	132.00	755	212.00	479	296.00	20368
46.00	137	134.00	2236	213.00	420	297.00	2939
49.00	514	135.00	7161	214.00	342	298.00	83
50.00	46320	136.00	2228	215.00	1044	301.00	253
51.00	170624	137.00	3126	216.00	2667	302.00	379
52.00	8465	138.00	631	217.00	26976	303.00	2354
53.00	105	139.00	636	218.00	3466	304.00	695
56.00	5615	140.00	1604	219.00	629	308.00	122
57.00	10740	141.00	9294	220.00	183	312.00	111
58.00	973	142.00	2960	221.00	17320	313.00	117
59.00	853	143.00	2080	222.00	3888	314.00	1357
61.00	2576	144.00	853	223.00	5421	315.00	2411
62.00	2917	145.00	300	224.00	52536	316.00	1238
63.00	7290	146.00	2362	225.00	13962	321.00	638
64.00	979	147.00	5045	226.00	2106	322.00	597
65.00	3466	148.00	11694	227.00	20776	323.00	6517
66.00	377	149.00	2146	228.00	2892	324.00	1213
67.00	743	150.00	667	229.00	5187	327.00	1610
69.00	192448	151.00	1669	230.00	425	328.00	535
70.00	239	152.00	644	231.00	2124	329.00	86
71.00	138	153.00	2974	232.00	335	332.00	465
72.00	120	154.00	2515	233.00	576	333.00	756
73.00	1004	155.00	5151	234.00	1432	334.00	3887
74.00	19952	156.00	7928	235.00	1671	335.00	675
75.00	29880	157.00	1361	236.00	835	341.00	760
76.00	10915	158.00	2347	237.00	1811	342.00	111
77.00	220672	159.00	1506	238.00	404	346.00	1144
78.00	15792	160.00	3496	239.00	760	347.00	131
79.00	13584	161.00	4653	240.00	951	351.00	98
80.00	9878	162.00	1536	241.00	1294	352.00	1868

Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:35.
Target 3.5 esignature user ID: bkc25363

Date : 12-OCT-2017 16:57

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: lj0480d.d
Spectrum: Avg. Scans 439-441 (5.14), Background Scan 433
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	14757	163.00	361	242.00	3252	353.00	1358
82.00	4023	164.00	439	243.00	3201	354.00	2125
83.00	3703	165.00	3596	244.00	38768	355.00	203
84.00	382	166.00	3421	245.00	5278	358.00	90
85.00	1827	167.00	21792	246.00	7372	359.00	102
86.00	3562	168.00	9098	247.00	1881	363.00	94
87.00	1434	169.00	836	248.00	412	364.00	138
88.00	587	170.00	553	249.00	1415	365.00	8177
89.00	528	171.00	1347	250.00	427	366.00	1053
90.00	395	172.00	2124	251.00	545	367.00	188
91.00	3376	173.00	2360	252.00	613	370.00	90
92.00	3669	174.00	4166	253.00	1976	371.00	215
93.00	23976	175.00	7324	255.00	187456	372.00	2397
94.00	1473	176.00	2690	256.00	26464	373.00	709
95.00	276	177.00	3801	257.00	2571	383.00	599
96.00	259	178.00	1521	258.00	10287	384.00	317
97.00	386	179.00	14144	259.00	1649	390.00	103
98.00	19560	180.00	9619	260.00	277	391.00	94
99.00	14188	181.00	4879	261.00	406	392.00	179
100.00	903	182.00	1162	264.00	322	402.00	1106
101.00	8785	183.00	611	265.00	3347	403.00	1217
102.00	833	184.00	1596	266.00	975	404.00	534
103.00	2711	185.00	7215	267.00	57	421.00	1286
104.00	4820	186.00	50840	268.00	120	422.00	1194
105.00	4576	187.00	14645	269.00	115	423.00	9645
106.00	2002	188.00	1765	270.00	664	424.00	1937
107.00	60016	189.00	3257	271.00	362	425.00	95
108.00	9477	190.00	1000	272.00	924	429.00	83
109.00	710	191.00	1301	273.00	6311	431.00	88
110.00	111504	192.00	4945	274.00	14507	432.00	83
111.00	16191	193.00	5394	275.00	78752	433.00	92
112.00	1718	194.00	1233	276.00	9936	434.00	208
113.00	833	195.00	655	277.00	6151	436.00	475
114.00	142	196.00	11951	278.00	1183	437.00	718
115.00	392	198.00	385216	279.00	404	438.00	563

Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:35.
Target 3.5 esignature user ID: bkc25363

Date : 12-OCT-2017 16:57

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

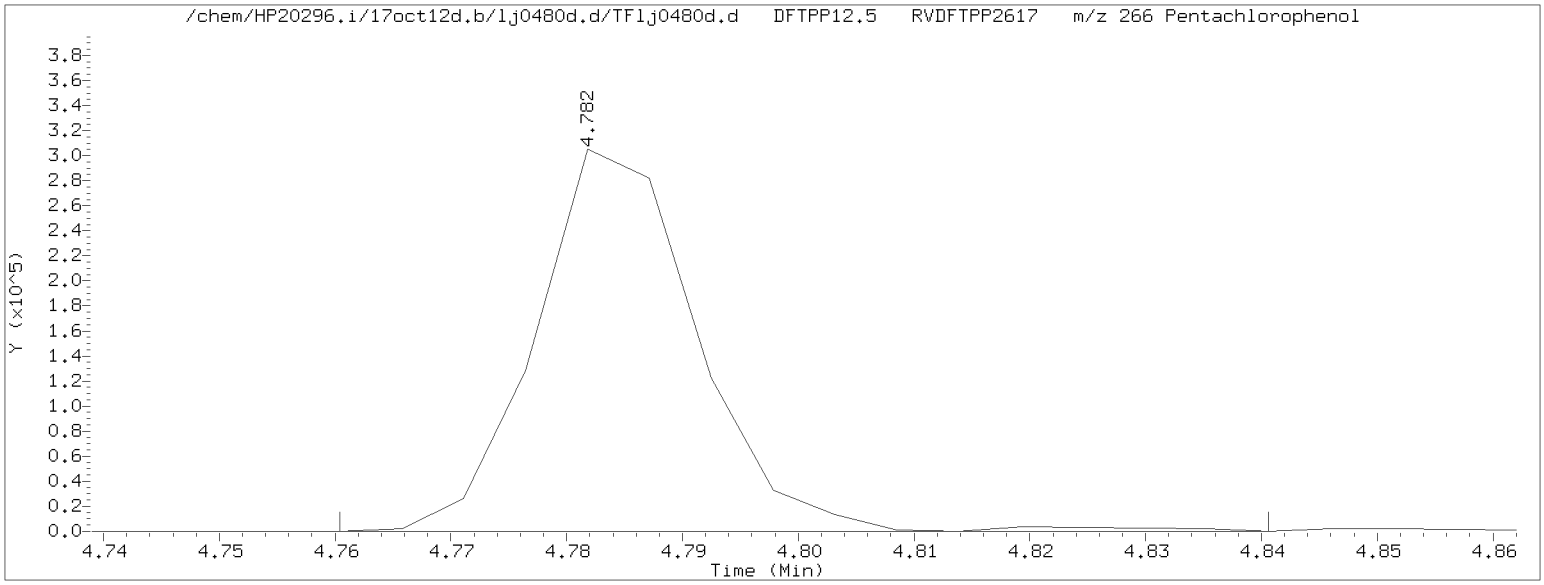
Data File: lj0480d.d
Spectrum: Avg. Scans 439-441 (5.14), Background Scan 433
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	4113	199.00	25968	280.00	95	439.00	948
117.00	48736	200.00	2283	281.00	204	441.00	31976
118.00	2890	201.00	1621	283.00	558	442.00	203776
120.00	658	202.00	248	284.00	193	443.00	39664
122.00	3479	203.00	3656	285.00	1122	444.00	3788
123.00	5814	204.00	14071	286.00	234		
124.00	2427	205.00	24168	289.00	88		
125.00	2118	206.00	100088	290.00	92		

Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:35.
Target 3.5 esignature user ID: bkc25363

Assessment of GC Column Performance and Injection Port Inertness for

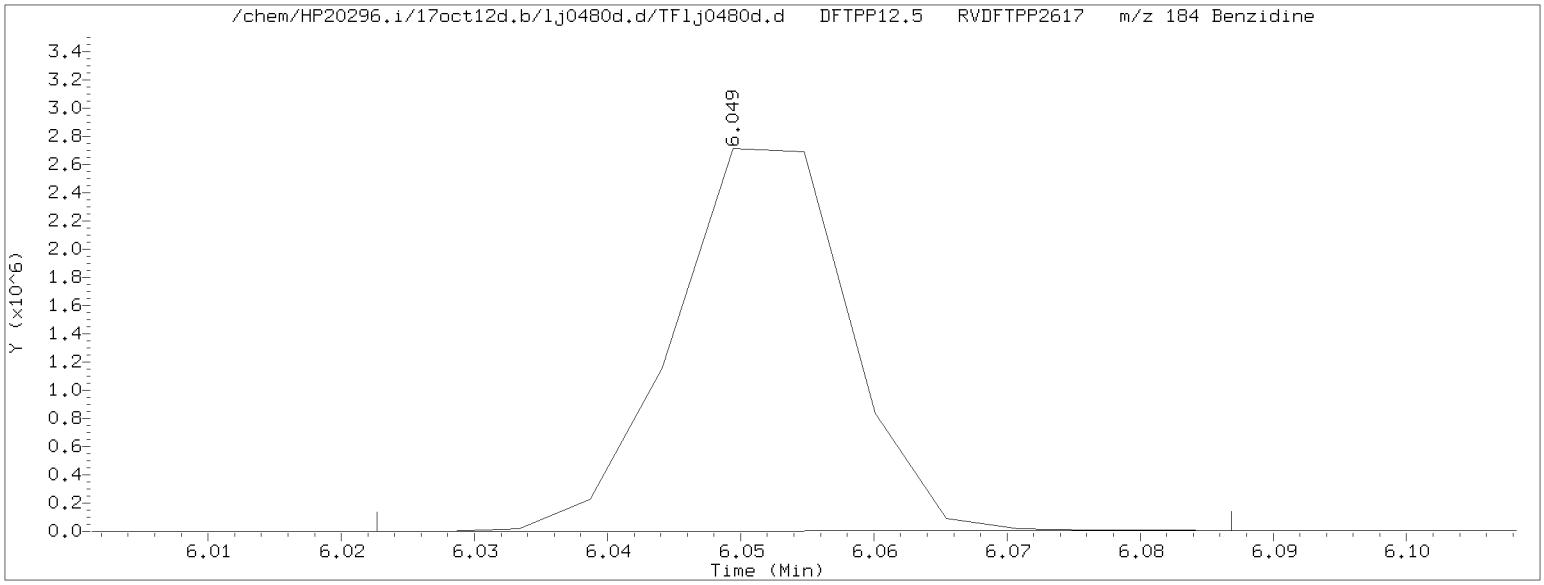
Instrument ID: HP20296.i Injection Date: 12-OCT-2017 16:57 Operator: hbz01996



Pentachlorophenol EICP peak height = 305280 EICP peak height at 10% = 30528 Pentachlorophenol EICP area = 296700

Pentachlorophenol EICP peak apex (min.) = 4.782
RT at 10% of front half of EICP (min.) = 4.771 'Front' peak width (min.) = 0.0104500000
RT at 10% of back half of EICP (min.) = 4.798 'Tailing' peak width (min.) = 0.0166500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0166500000}{0.0104500000} = 1.593$$



Benzidine EICP peak height = 2710553 EICP peak height at 10% = 271055 Benzidine EICP area = 2485781

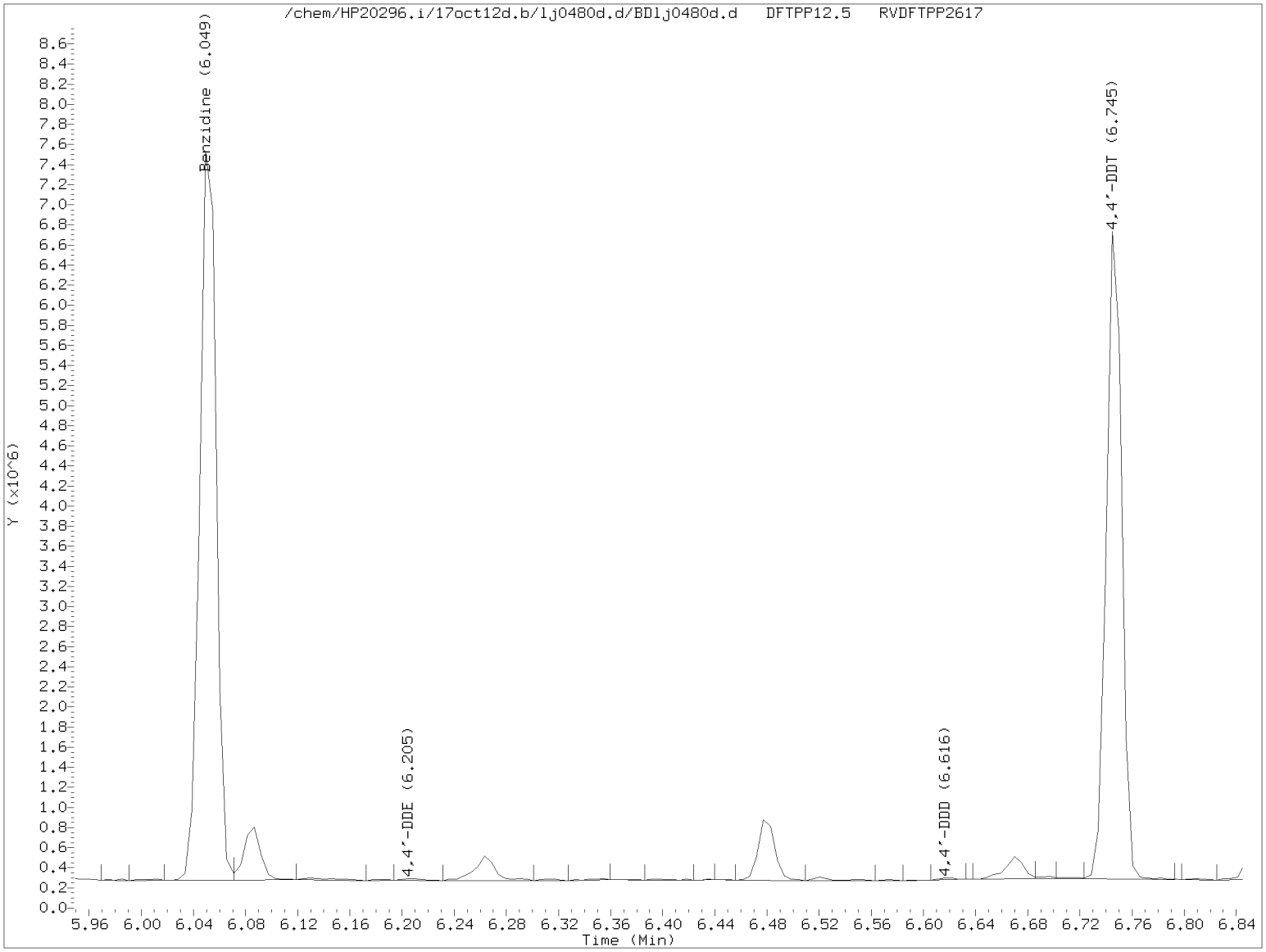
Benzidine EICP peak apex (min.) = 6.049
RT at 10% of front half of EICP (min.) = 6.039 'Front' peak width (min.) = 0.0104333333
RT at 10% of back half of EICP (min.) = 6.064 'Tailing' peak width (min.) = 0.0147333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0147333333}{0.0104333333} = 1.412$$

Secondary review performed and digitally signed by Chad A. Moline on 10/25/2017 at 08:33. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

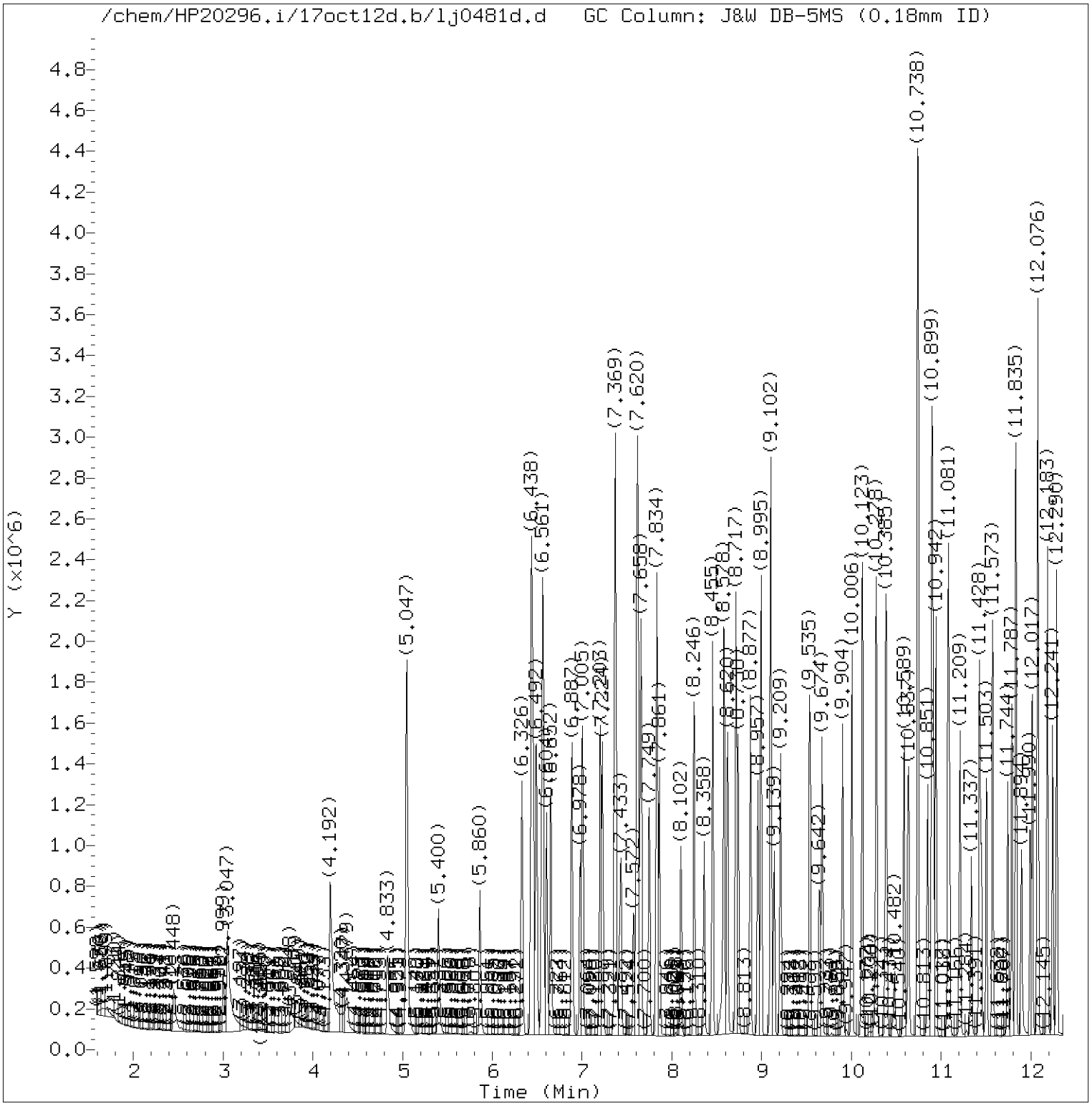
Instrument ID: HP20296.i Injection Date: 12-OCT-2017 16:57 Operator: hbz01996



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{18941 + 13029}{18941 + 13029 + 5374114} \times 100 = 0.6$$

Secondary review performed and digitally signed by Chad A. Moline on 10/25/2017 at 08:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

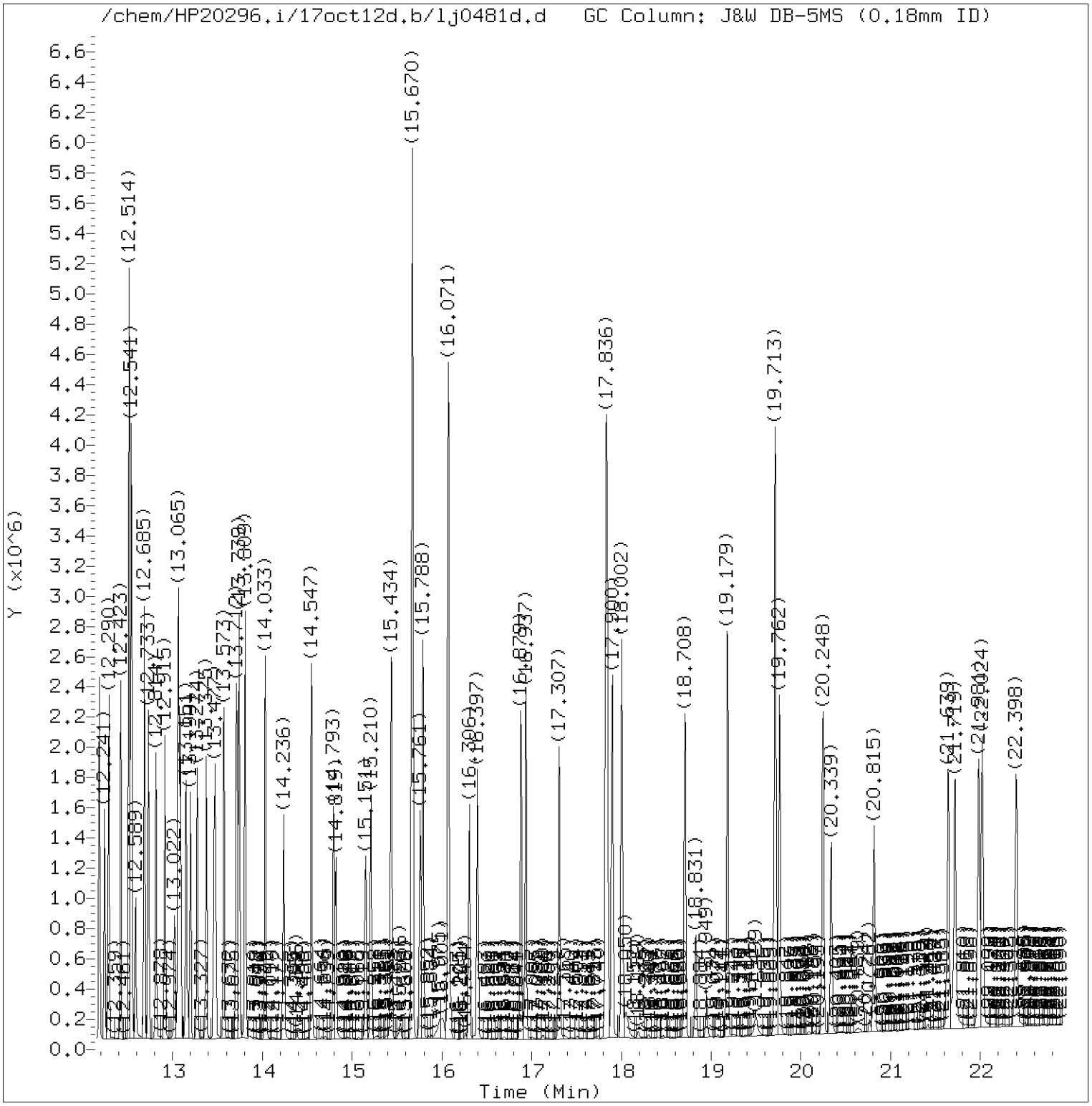
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.448	88	197159	8.013
4) N-Nitrosodimethylamine	(1)	2.999	74	309663	8.142
5) Pyridine	(1)	3.047	79	517886	7.787
7) 2-Picoline	(1)	4.192	93	555600	7.747
8) N-Nitrosomethylethylamine	(1)	4.384	88	230119	7.797
9) Methyl methanesulfonate	(1)	4.833	80	221101	7.865
11)$2-Fluorophenol	(1)	5.047	112	881130	15.415
13) N-Nitrosodiethylamine	(1)	5.400	102	225928	7.993
42) Total Cresols	(1)			881676	15.321
15) Ethyl methanesulfonate	(1)	5.860	109	224495	7.755
16) Benzaldehyde	(1)	6.326	77	407828	7.382
17)$Phenol-d6	(1)	6.438	99	1183067	15.680
18) Phenol	(1)	6.454	94	676412	7.919
19) Aniline	(1)	6.492	93	796362	7.808
20) a-methylstyrene	(1)	6.566	118	464946	7.558
22) bis(2-Chloroethyl)ether	(1)	6.604	93	478904	7.671
23) 2-Chlorophenol	(1)	6.652	128	429704	7.672
24) 1,3-Dichlorobenzene	(1)	6.887	146	463334	7.560
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	183794	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	460072	7.457
27) Benzyl alcohol	(1)	7.203	108	309295	7.729
28) 1,2-Dichlorobenzene	(1)	7.224	146	441501	7.532
30) Indene	(1)	7.363	115	830966	7.568
31) 2-Methylphenol	(1)	7.374	108	429955	7.695
97) Isosafrole	(3)			294631	7.993
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.433	45	587371	7.876
34) bis(2-Chloroisopropyl)ether	(1)	7.433	45	587371	7.876
35) N-Nitrosopyrrolidine	(1)	7.572	100	232963	7.812
36) Acetophenone	(1)	7.604	105	629787	7.356
37) 4-Methylphenol	(1)	7.620	108	451721	7.626
38) N-Nitroso-di-n-propylamine	(1)	7.625	70	347568	7.683
39) N-Nitrosomorpholine	(1)	7.647	56	273185	7.923
40) o-Toluidine	(1)	7.658	106	753568	7.665
43) Hexachloroethane	(1)	7.749	117	196238	7.846
44)$Nitrobenzene-d5	(2)	7.834	82	1044499	15.515
45) Nitrobenzene	(2)	7.861	77	525960	7.782
120) 2,4_2,6-Dinitrotoluenes	(3)			418591	16.182
48) N-Nitrosopiperidine	(2)	8.102	114	222945	7.783
50) Isophorone	(2)	8.246	82	917484	7.692
51) 2-Nitrophenol	(2)	8.364	139	211191	8.065

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.455	107	467685	7.804
56) Benzoic acid	(2)	8.583	105	241750	8.520
57) O,O,O-Triethylphosphorothioate	(2)	8.583	198	186204	7.514
55) bis(2-Chloroethoxy)methane	(2)	8.620	93	577533	7.747
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.717	104	662101	7.499
60) 2,4-Dichlorophenol	(2)	8.738	162	336602	7.622
146) Diallate trans/cis	(4)			426516	7.971
62) 1,2,4-Trichlorobenzene	(2)	8.877	180	364446	7.620
65)*Naphthalene-d8	(2)	8.963	136	715672	5.000
66) Naphthalene	(2)	8.995	128	1242189	7.611
67) 4-Chloroaniline	(2)	9.102	127	517469	7.674
68) 2,6-Dichlorophenol	(2)	9.107	162	327659	7.608
69) Hexachloropropene	(2)	9.139	213	183076	7.816
71) Hexachlorobutadiene	(2)	9.209	225	193742	7.684
75) Quinoline	(2)	9.535	129	768178	7.606
76) Caprolactam	(2)	9.642	113	110635	7.194
77) N-Nitrosodi-n-butylamine	(2)	9.674	84	347294	7.072
80) 4-Chloro-3-methylphenol	(2)	9.904	107	395328	7.765
82) Safrole	(2)	10.006	162	304690	7.558
83) 2-Methylnaphthalene	(2)	10.123	142	824380	7.728
84) 1-Methylnaphthalene	(2)	10.278	142	734371	7.532
85) Hexachlorocyclopentadiene	(3)	10.380	237	180690	8.358
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.391	216	344516	7.720
88) cis-Isosafrole	(3)	10.482	162	55251	1.361
90) 2,4,6-Trichlorophenol	(3)	10.589	196	229155	8.092
92) 2,4,5-Trichlorophenol	(3)	10.637	196	250674	8.103
93)$2-Fluorobiphenyl	(3)	10.744	172	1687597	15.551
94) trans-Isosafrole	(3)	10.851	162	239380	6.633
95) 1,1'-Biphenyl	(3)	10.899	154	909459	7.561
96) 2-Chloronaphthalene	(3)	10.910	162	733888	7.717
98) 1-Chloronaphthalene	(3)	10.942	162	707461	8.081
99) Diphenyl ether	(3)	11.081	170	492062	7.898
100) 2-Nitroaniline	(3)	11.091	138	243281	8.539
104) 1,4-Naphthoquinone	(3)	11.209	158	305896	8.035
105) 1,4-Dinitrobenzene	(3)	11.337	168	111016	7.856
106) Dimethylphthalate	(3)	11.428	163	799215	7.774
107) 1,3-Dinitrobenzene	(3)	11.450	168	124817	7.765
108) 2,6-Dinitrotoluene	(3)	11.503	165	181116	8.332
109) Acenaphthylene	(3)	11.573	152	1050217	7.968
112) 3-Nitroaniline	(3)	11.744	138	204500	8.039

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.787	164	371349	5.000
114) Acenaphthene	(3)	11.835	153	772772	7.689
115) 2,4-Dinitrophenol	(3)	11.894	184	114082	9.129
116) 4-Nitrophenol	(3)	11.995	109	134138	7.656
117) Pentachlorobenzene	(3)	12.017	250	263084	7.843
119) Dibenzofuran	(3)	12.076	168	1009453	7.773
118) 2,4-Dinitrotoluene	(3)	12.081	165	237475	7.850
121) 1-Naphthylamine	(3)	12.183	143	780692	7.670
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	168088	7.852
123) 2-Naphthylamine	(3)	12.290	143	751436	7.635
124) Diethylphthalate	(3)	12.423	149	819160	8.027
126) Fluorene	(3)	12.514	166	820782	7.775
125) Thionazin	(3)	12.514	107	173249	8.409
128) 5-Nitro-o-toluidine	(3)	12.541	152	231104	8.111
127) 4-Chlorophenyl-phenylether	(3)	12.541	204	363972	7.779
129) 4-Nitroaniline	(3)	12.546	138	213808	8.125
130) 4,6-Dinitro-2-methylphenol	(4)	12.589	198	122477	7.363
132) NDPA as diphenylamine	(4)	12.685	169	677991	7.707
131) N-Nitrosodiphenylamine	(4)	12.685	169	677991	7.707
134) 1,2-Diphenylhydrazine	(4)	12.733	77	980817	7.907
135)$2,4,6-Tribromophenol	(3)	12.814	330	152084	15.599
137) Tetraethyldithiopyrophosphate	(4)	12.915	97	162888	7.883
139) 1,3,5-Trinitrobenzene	(4)	13.022	213	75767	7.363
140) Diallate (peak 1)	(4)	13.060	86	365534	6.615
141) Phorate	(4)	13.070	75	639224	8.271
142) Phenacetin	(4)	13.086	108	492934	8.186
143) 4-Bromophenyl-phenylether	(4)	13.151	248	183847	7.635
144) Diallate (peak 2)	(4)	13.172	86	60982	1.355
145) Hexachlorobenzene	(4)	13.199	284	185267	7.920
147) Dimethoate	(4)	13.274	87	407115	8.145
148) Atrazine	(4)	13.375	200	200513	7.455
149) Pentachlorophenol	(4)	13.461	266	115914	7.698
150) 4-Aminobiphenyl	(4)	13.477	169	224937	7.880
151) Pentachloronitrobenzene	(4)	13.477	237	89901	7.999
152) Pronamide	(4)	13.573	173	382458	8.149
153)*Phenanthrene-d10	(4)	13.712	188	660950	5.000
154) Dinoseb	(4)	13.718	211	179425	7.764
155) Phenanthrene	(4)	13.739	178	1178411	7.613
157) Anthracene	(4)	13.809	178	1191387	7.842
163) Carbazole	(4)	14.033	167	1149340	7.868

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

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

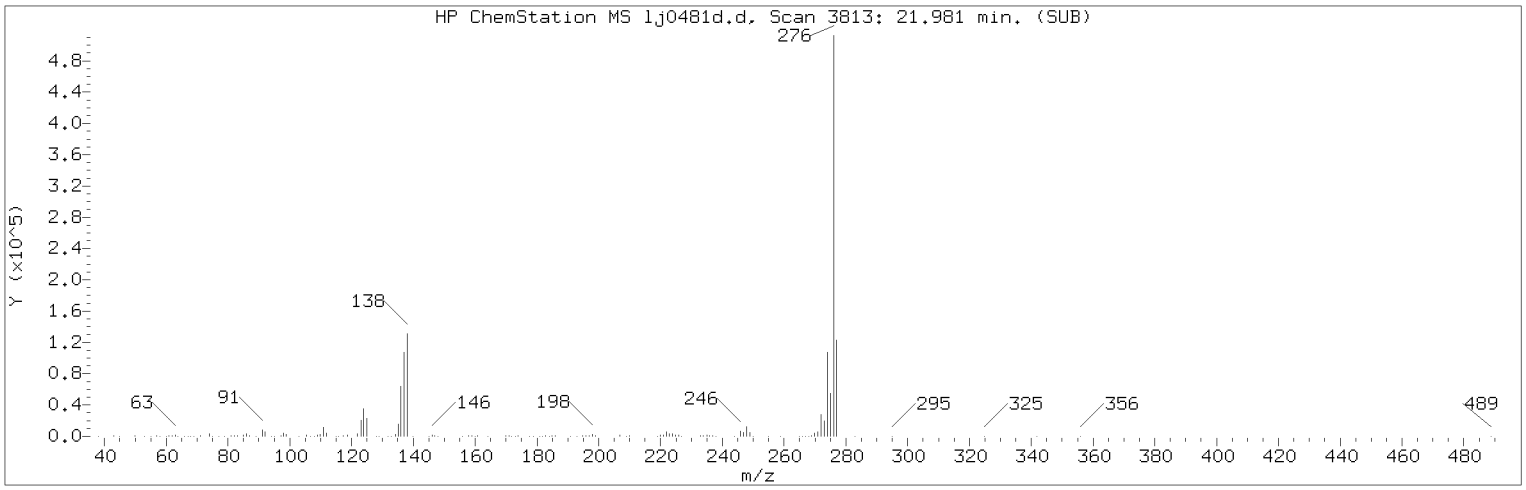
Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.236	109	300069	7.994
165) Di-n-butylphthalate	(4)	14.547	149	1461035	7.975
167) Parathion	(4)	14.793	109	192894	8.173
168) 4-Nitroquinoline-1-oxide	(4)	14.819	190	129424	7.477
222) Total PAHs	(6)			17087268	124.249
169) Octachlorostyrene	(4)	15.151	308	69013	8.122
171) Isodrin	(4)	15.210	193	134739	7.759
173) Fluoranthene	(4)	15.440	202	1289071	7.778
174) Benzidine	(5)	15.675	184	2993483	23.291
175)*Pyrene-d10	(5)	15.761	212	759549	5.000
177) Pyrene	(5)	15.788	202	1360641	7.573
179)$Terphenyl-d14	(5)	16.071	244	1672843	15.155
182) p-Dimethylaminoazobenzene	(5)	16.306	225	201880	8.568
185) Chlorobenzilate	(5)	16.397	139	443626	7.825
187) 3,3'-Dimethylbenzidine	(5)	16.879	212	958873	8.160
188) Butylbenzylphthalate	(5)	16.937	149	665924	7.914
191) 2-Acetylaminofluorene	(5)	17.307	181	603957	8.057
193) 3,3'-Dichlorobenzidine	(5)	17.825	252	467723	7.911
195) Benzo(a)anthracene	(5)	17.836	228	1262257	7.816
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.847	231	227315	7.439
196) Chrysene	(5)	17.900	228	1148247	7.721
199) bis(2-Ethylhexyl)phthalate	(5)	18.007	149	997705	8.117
203) 6-Methylchrysene	(5)	18.708	242	835848	7.819
205) Di-n-octylphthalate	(6)	19.184	149	1779042	8.234
206) Benzo(b)fluoranthene	(6)	19.713	252	1202550	7.932
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.719	256	526781	8.131
208) Benzo(k)fluoranthene	(6)	19.762	252	1112969	7.680
211) Benzo(a)pyrene	(6)	20.248	252	1120452	7.903
213)*Perylene-d12	(6)	20.339	264	582640	5.000
215) 3-Methylcholanthrene	(6)	20.821	268	411081	8.179
217) Dibenz(a,h)acridine	(6)	21.644	279	897629	7.810
218) Dibenz(a,j)acridine	(6)	21.719	279	929296	7.797
219) Indeno(1,2,3-cd)pyrene	(6)	21.981	276	1008928M	7.836
220) Dibenz(a,h)anthracene	(6)	22.024	278	1041420	7.993
221) Benzo(g,h,i)perylene	(6)	22.404	276	1041743	7.869

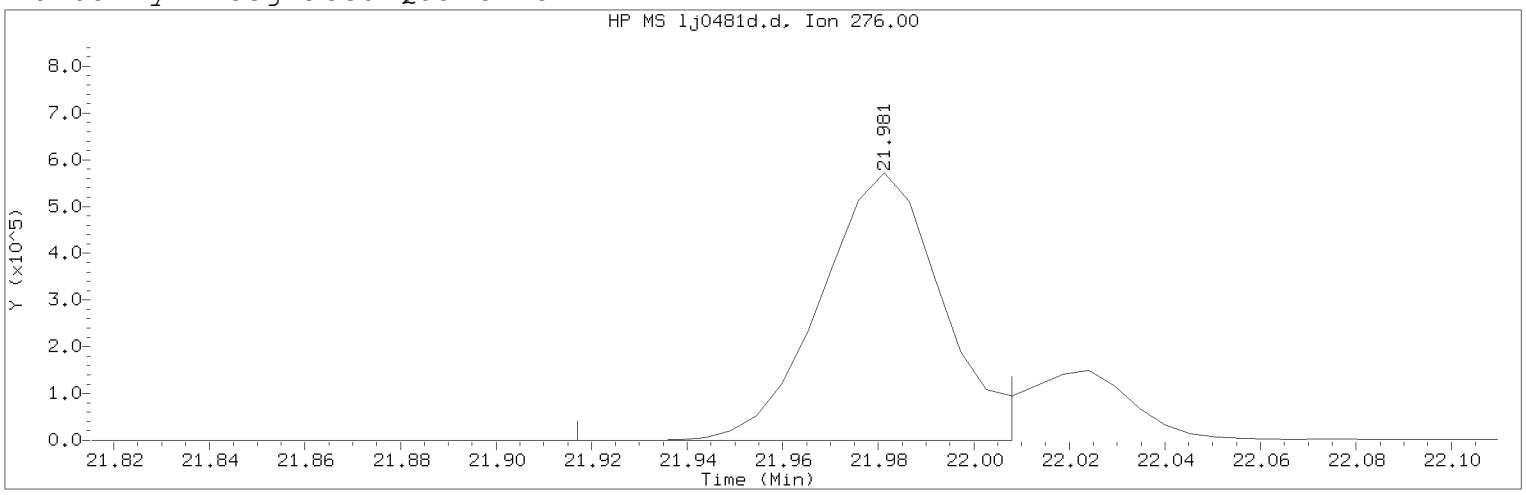
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

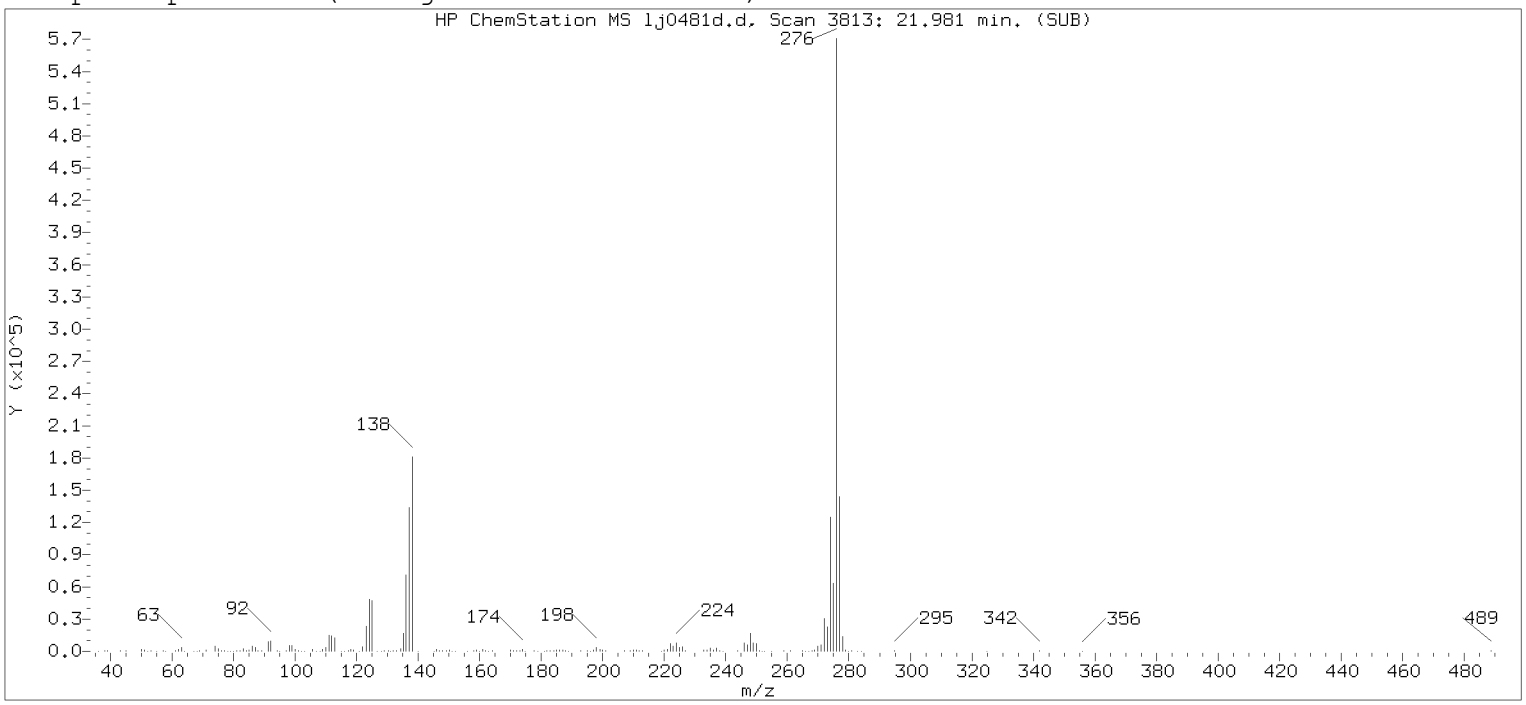
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3813
Retention Time (minutes) : 21.981
Quant Ion : 276.00
Area (flag) : 1008928M
On-Column Amount (ng/ul) : 7.8357
Integration start scan : 3800 Integration stop scan: 3817
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

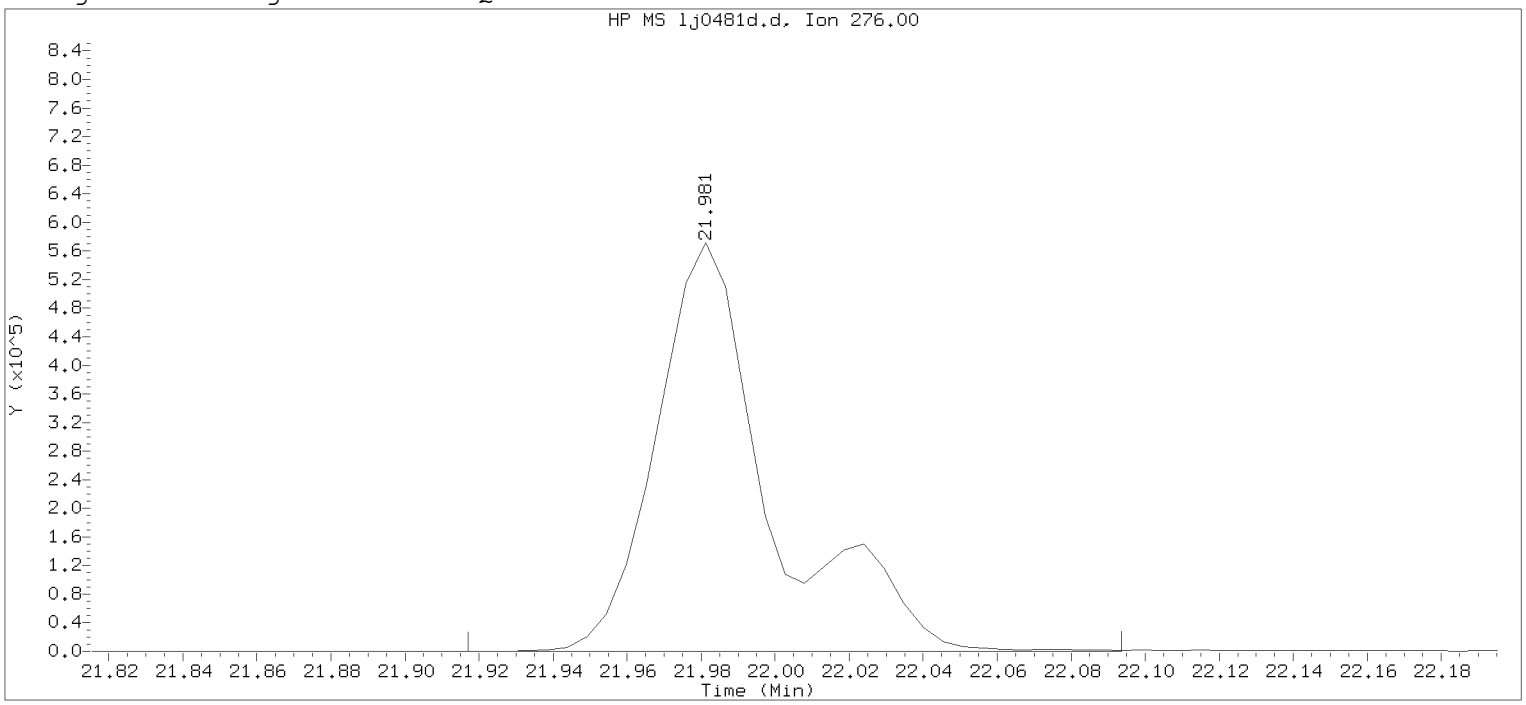
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



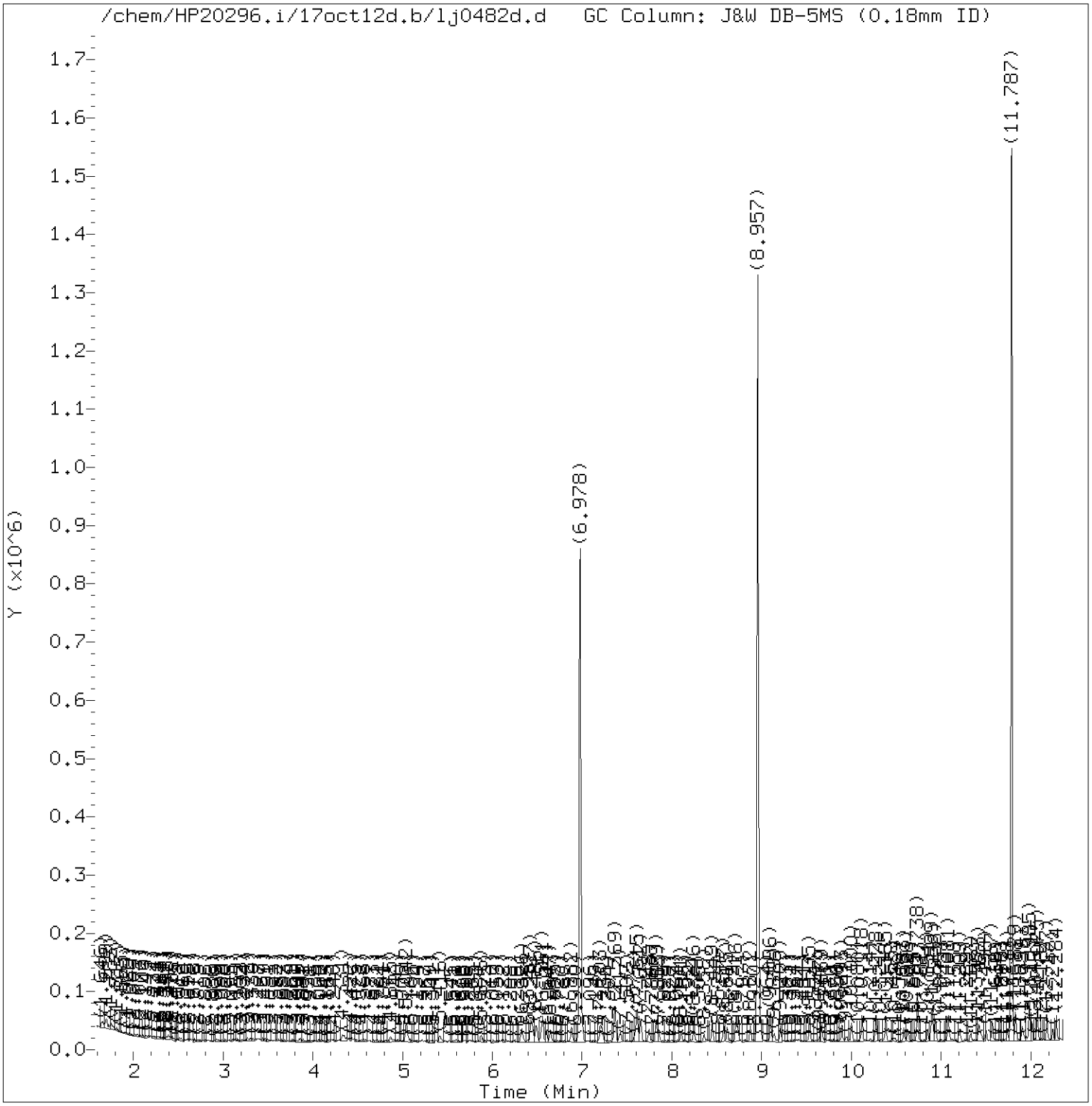
Data File: /chem/HP20296.i/17oct12d.b/lj0481d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 17:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct13.b/rv8270c.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:01
Date, time and analyst ID of latest file update: 23-Oct-2017 20:01 bkc25363

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3813		
Retention Time (minutes)	: 21.981		
Quant Ion	: 276.00		
Area	: 1222450		
On-column Amount (ng/ul)	: 9.2605		
Integration start scan	: 3800	Integration stop scan:	3833
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

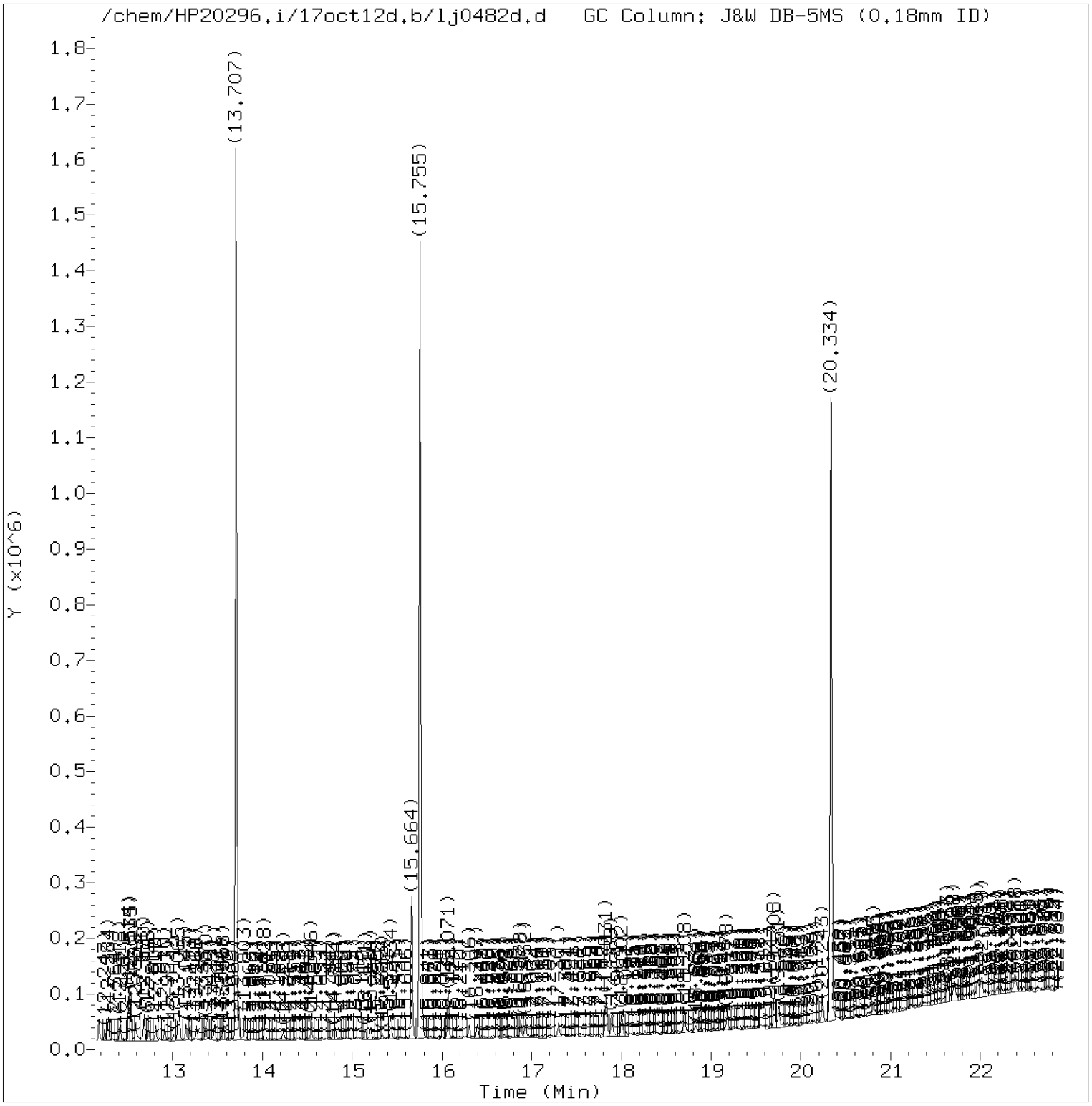
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	3.159	74	2102	0.059
7) 2-Picoline	(1)	4.106	93	308	0.005
9) Methyl methanesulfonate	(1)	4.865	80	2894	0.110
11)$2-Fluorophenol	(1)	5.042	112	13338	0.250
13) N-Nitrosodiethylamine	(1)	5.416	102	3480	0.132
42) Total Cresols	(1)			15399	0.287
15) Ethyl methanesulfonate	(1)	5.871	109	3814	0.141
16) Benzaldehyde	(1)	6.326	77	7416	0.144
17)$Phenol-d6	(1)	6.433	99	19471	0.276
18) Phenol	(1)	6.454	94	10905	0.137
19) Aniline	(1)	6.491	93	12833	0.135
20) a-methylstyrene	(1)	6.561	118	8079	0.141
22) bis(2-Chloroethyl)ether	(1)	6.604	93	8225	0.141
23) 2-Chlorophenol	(1)	6.647	128	6512	0.125
24) 1,3-Dichlorobenzene	(1)	6.887	146	7514	0.131
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	171578	5.000
26) 1,4-Dichlorobenzene	(1)	7.000	146	7741	0.134
27) Benzyl alcohol	(1)	7.203	108	5155	0.138
28) 1,2-Dichlorobenzene	(1)	7.224	146	6747	0.123
30) Indene	(1)	7.363	115	14214	0.139
31) 2-Methylphenol	(1)	7.369	108	7731	0.148
97) Isosafrole	(3)			4521	0.124
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.427	45	9939	0.143
34) bis(2-Chloroisopropyl)ether	(1)	7.427	45	9939	0.143
35) N-Nitrosopyrrolidine	(1)	7.583	100	3192	0.115
36) Acetophenone	(1)	7.604	105	10176	0.127
37) 4-Methylphenol	(1)	7.615	108	7668	0.139
38) N-Nitroso-di-n-propylamine	(1)	7.615	70	5976	0.141
39) N-Nitrosomorpholine	(1)	7.652	56	4052	0.126
40) o-Toluidine	(1)	7.652	106	12381	0.135
43) Hexachloroethane	(1)	7.743	117	3385	0.145
44)$Nitrobenzene-d5	(2)	7.829	82	17796	0.276
45) Nitrobenzene	(2)	7.855	77	8764	0.135
120) 2,4_2,6-Dinitrotoluenes	(3)			4504	0.176
48) N-Nitrosopiperidine	(2)	8.107	114	3029	0.110
50) Isophorone	(2)	8.251	82	14862	0.130
51) 2-Nitrophenol	(2)	8.363	139	2844	0.113
53) 2,4-Dimethylphenol	(2)	8.449	107	7509	0.131
56) Benzoic acid	(2)	8.561	105	966	3.195
57) O,O,O-Triethylphosphorothioate	(2)	8.577	198	3025	0.127

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) bis(2-Chloroethoxy)methane	(2)	8.615	93	9242	0.129
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.711	104	11354	0.134
60) 2,4-Dichlorophenol	(2)	8.738	162	5020	0.118
146) Diallate trans/cis	(4)			10720	0.223
62) 1,2,4-Trichlorobenzene	(2)	8.872	180	6140	0.134
65)*Naphthalene-d8	(2)	8.957	136	686609	5.000
66) Naphthalene	(2)	8.989	128	19036	0.122
67) 4-Chloroaniline	(2)	9.096	127	8938	0.138
68) 2,6-Dichlorophenol	(2)	9.102	162	5264	0.127
69) Hexachloropropene	(2)	9.139	213	2782	0.124
71) Hexachlorobutadiene	(2)	9.209	225	3306	0.137
75) Quinoline	(2)	9.535	129	13470	0.139
77) N-Nitrosodi-n-butylamine	(2)	9.669	84	6935	0.147
80) 4-Chloro-3-methylphenol	(2)	9.893	107	6334	0.130
82) Safrole	(2)	10.000	162	4927	0.127
83) 2-Methylnaphthalene	(2)	10.118	142	12495	0.122
84) 1-Methylnaphthalene	(2)	10.278	142	12147	0.130
85) Hexachlorocyclopentadiene	(3)	10.375	237	2011	0.094
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.385	216	5598	0.127
88) cis-Isosafrole	(3)	10.487	162	857	0.021
90) 2,4,6-Trichlorophenol	(3)	10.588	196	3168	0.113
92) 2,4,5-Trichlorophenol	(3)	10.631	196	3429	0.112
93)$2-Fluorobiphenyl	(3)	10.738	172	28480	0.266
94) trans-Isosafrole	(3)	10.845	162	3664	0.103
95) 1,1'-Biphenyl	(3)	10.893	154	14821	0.125
96) 2-Chloronaphthalene	(3)	10.909	162	11745	0.125
98) 1-Chloronaphthalene	(3)	10.936	162	11936	0.138
99) Diphenyl ether	(3)	11.075	170	8364	0.136
100) 2-Nitroaniline	(3)	11.086	138	3033	0.108
104) 1,4-Naphthoquinone	(3)	11.209	158	3711	0.099
105) 1,4-Dinitrobenzene	(3)	11.332	168	1517	0.109
106) Dimethylphthalate	(3)	11.418	163	13516	0.133
107) 1,3-Dinitrobenzene	(3)	11.439	168	1393	0.088
108) 2,6-Dinitrotoluene	(3)	11.498	165	1928	0.090
109) Acenaphthylene	(3)	11.567	152	15875	0.122
112) 3-Nitroaniline	(3)	11.733	138	2921	0.116
113)*Acenaphthene-d10	(3)	11.787	164	366666	5.000
114) Acenaphthene	(3)	11.829	153	13061	0.132
115) 2,4-Dinitrophenol	(3)	11.899	184	3051	0.247
116) 4-Nitrophenol	(3)	11.985	109	7850	0.454

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

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
117) Pentachlorobenzene	(3)	12.011	250	3324	0.100
118) 2,4-Dinitrotoluene	(3)	12.075	165	2576	0.086
119) Dibenzofuran	(3)	12.075	168	15818	0.123
121) 1-Naphthylamine	(3)	12.177	143	12368	0.123
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	2355	0.111
123) 2-Naphthylamine	(3)	12.284	143	12671	0.130
124) Diethylphthalate	(3)	12.418	149	13115	0.130
126) Fluorene	(3)	12.514	166	13376	0.128
125) Thionazin	(3)	12.514	107	2475	0.122
128) 5-Nitro-o-toluidine	(3)	12.535	152	3549	0.126
127) 4-Chlorophenyl-phenylether	(3)	12.535	204	6104	0.132
129) 4-Nitroaniline	(3)	12.541	138	3130	0.120
130) 4,6-Dinitro-2-methylphenol	(4)	12.589	198	4274	0.265
132) NDPA as diphenylamine	(4)	12.680	169	10738	0.126
131) N-Nitrosodiphenylamine	(4)	12.680	169	10738	0.126
134) 1,2-Diphenylhydrazine	(4)	12.728	77	15635	0.130
135)$2,4,6-Tribromophenol	(3)	12.808	330	766	0.080
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	2583	0.129
140) Diallate (peak 1)	(4)	13.054	86	5360	0.100
144) Diallate (peak 2)	(4)	13.054	86	5360	0.123
141) Phorate	(4)	13.065	75	8693	0.116
142) Phenacetin	(4)	13.076	108	7234	0.124
143) 4-Bromophenyl-phenylether	(4)	13.150	248	3231	0.139
145) Hexachlorobenzene	(4)	13.199	284	2950	0.130
147) Dimethoate	(4)	13.268	87	5872	0.121
148) Atrazine	(4)	13.375	200	3433	0.132
149) Pentachlorophenol	(4)	13.461	266	653	0.045
150) 4-Aminobiphenyl	(4)	13.477	169	3304	0.120
152) Pronamide	(4)	13.568	173	5356	0.118
153)*Phenanthrene-d10	(4)	13.707	188	640024	5.000
155) Phenanthrene	(4)	13.733	178	19507	0.130
157) Anthracene	(4)	13.808	178	18045	0.123
163) Carbazole	(4)	14.028	167	18943	0.134
164) Methyl parathion	(4)	14.236	109	3871	0.106
165) Di-n-butylphthalate	(4)	14.546	149	20149	0.114
167) Parathion	(4)	14.793	109	2213	0.097
168) 4-Nitroquinoline-1-oxide	(4)	14.819	190	1140	1.109
222) Total PAHs	(6)			264466	2.007
173) Fluoranthene	(4)	15.434	202	19798	0.123
174) Benzidine	(5)	15.664	184	114365	0.935

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

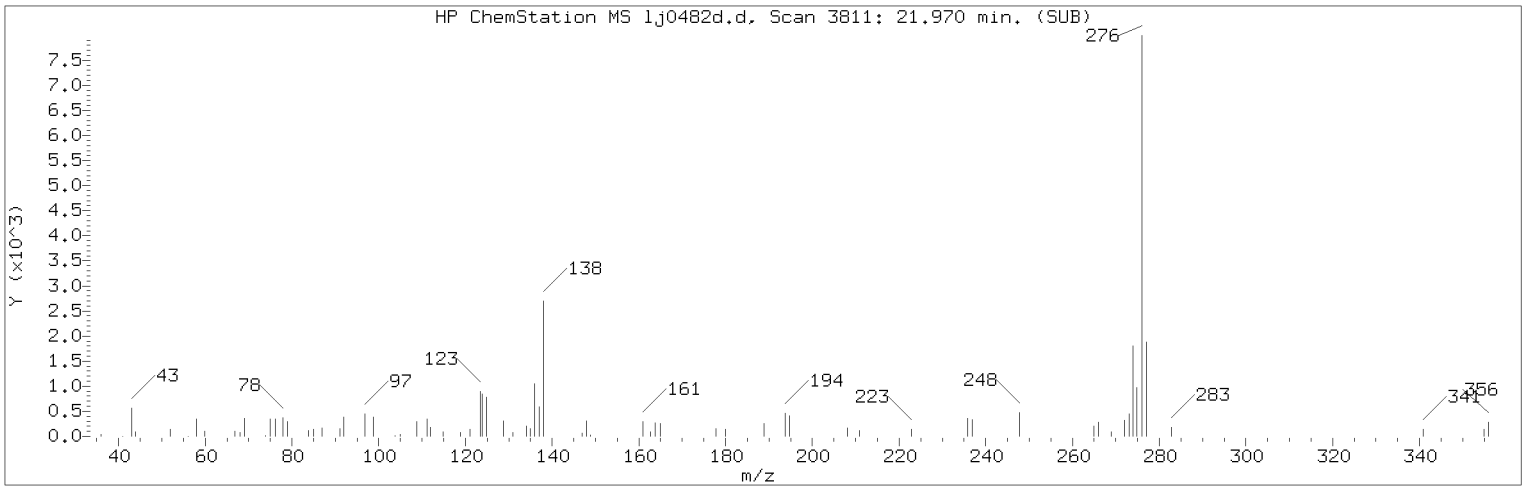
Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
175)*Pyrene-d10	(5)	15.755	212	722855	5.000
177) Pyrene	(5)	15.787	202	22740	0.133
179)$Terphenyl-d14	(5)	16.071	244	28133	0.268
182) p-Dimethylaminoazobenzene	(5)	16.301	225	2622	0.117
185) Chlorobenzilate	(5)	16.397	139	6346	0.118
187) 3,3'-Dimethylbenzidine	(5)	16.873	212	12321	0.110
188) Butylbenzylphthalate	(5)	16.937	149	8412	0.105
191) 2-Acetylaminofluorene	(5)	17.301	181	7184	0.101
193) 3,3'-Dichlorobenzidine	(5)	17.825	252	6780	0.121
195) Benzo(a)anthracene	(5)	17.831	228	19093	0.124
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.841	231	3276	0.113
196) Chrysene	(5)	17.895	228	17931	0.127
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	12843	0.110
203) 6-Methylchrysene	(5)	18.702	242	13306	0.131
205) Di-n-octylphthalate	(6)	19.178	149	21723	0.108
206) Benzo(b)fluoranthene	(6)	19.708	252	17088	0.121
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.713	256	7143	0.118
208) Benzo(k)fluoranthene	(6)	19.751	252	16260	0.120
211) Benzo(a)pyrene	(6)	20.243	252	17048	0.129
213)*Perylene-d12	(6)	20.334	264	544702	5.000
215) 3-Methylcholanthrene	(6)	20.810	268	5525	0.118
217) Dibenz(a,h)acridine	(6)	21.633	279	12412	0.116
218) Dibenz(a,j)acridine	(6)	21.708	279	13699	0.123
219) Indeno(1,2,3-cd)pyrene	(6)	21.970	276	14881M	0.124
220) Dibenz(a,h)anthracene	(6)	22.013	278	14092	0.116
221) Benzo(g,h,i)perylene	(6)	22.388	276	15341	0.124

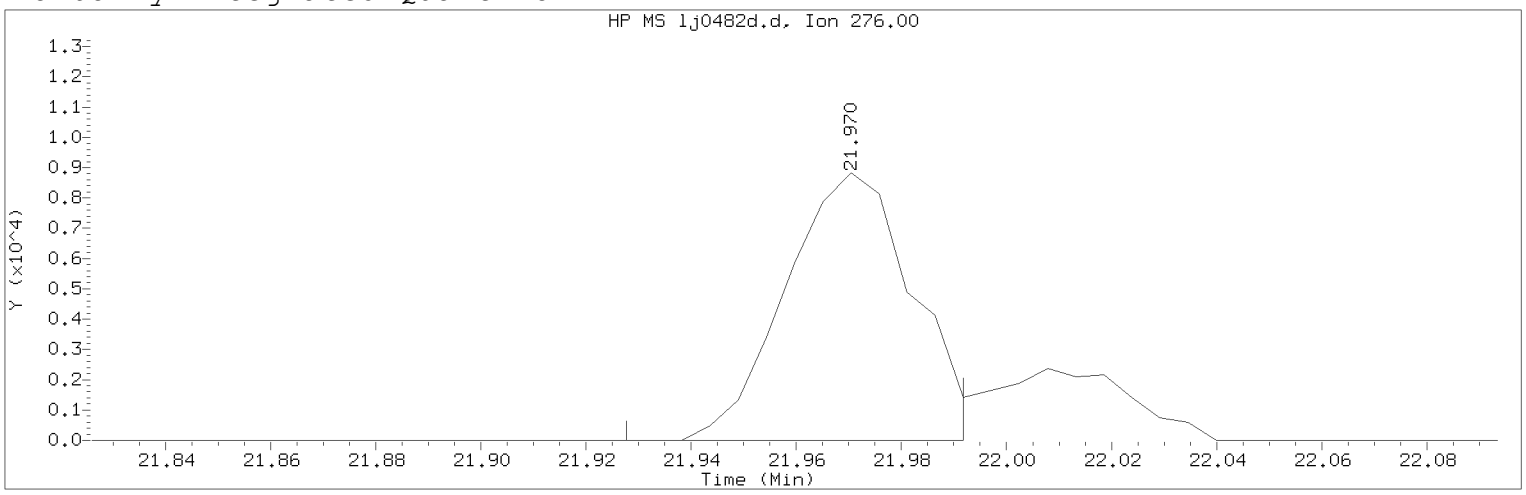
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

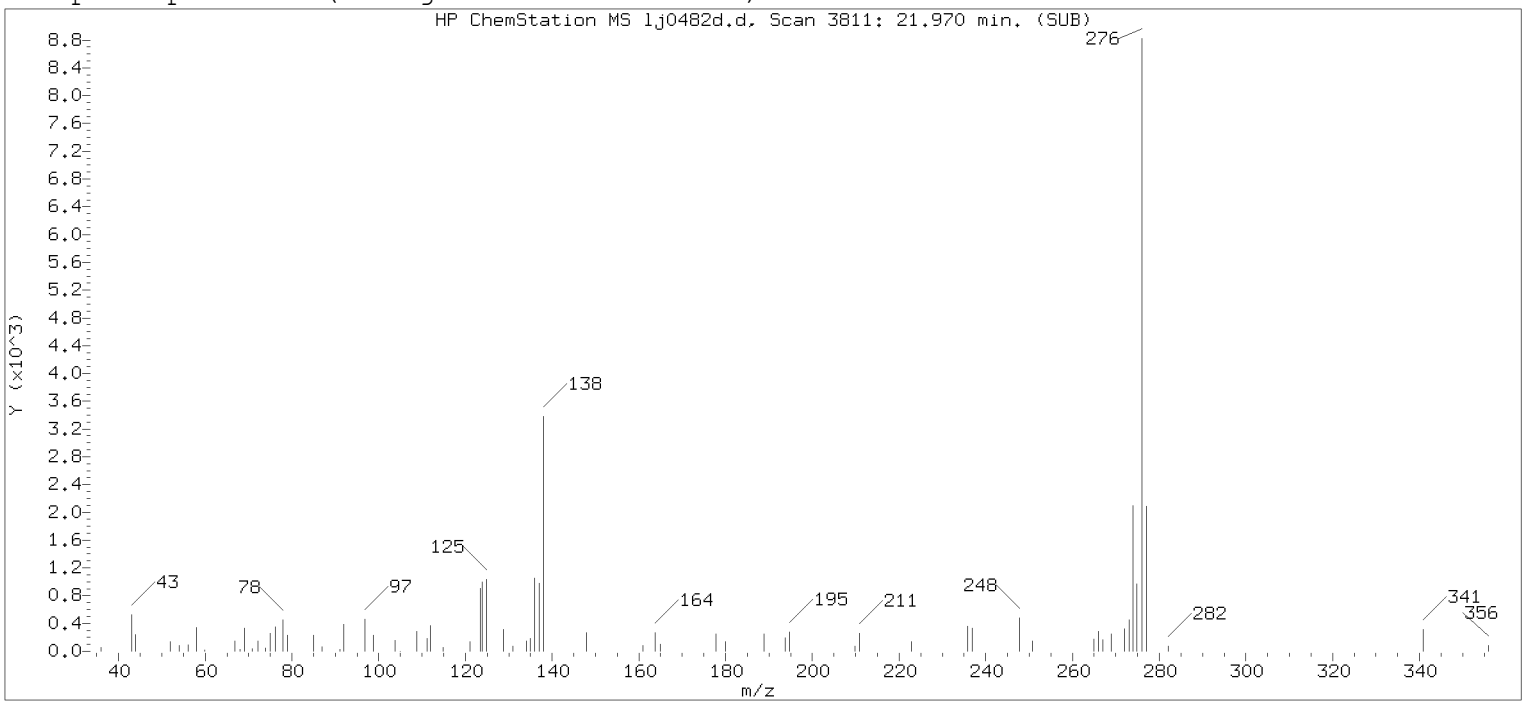
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3811		
Retention Time (minutes)	: 21.970		
Quant Ion	: 276.00		
Area (flag)	: 14881M		
On-Column Amount (ng/ul)	: 0.1236		
Integration start scan	: 3802	Integration stop scan:	3814
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

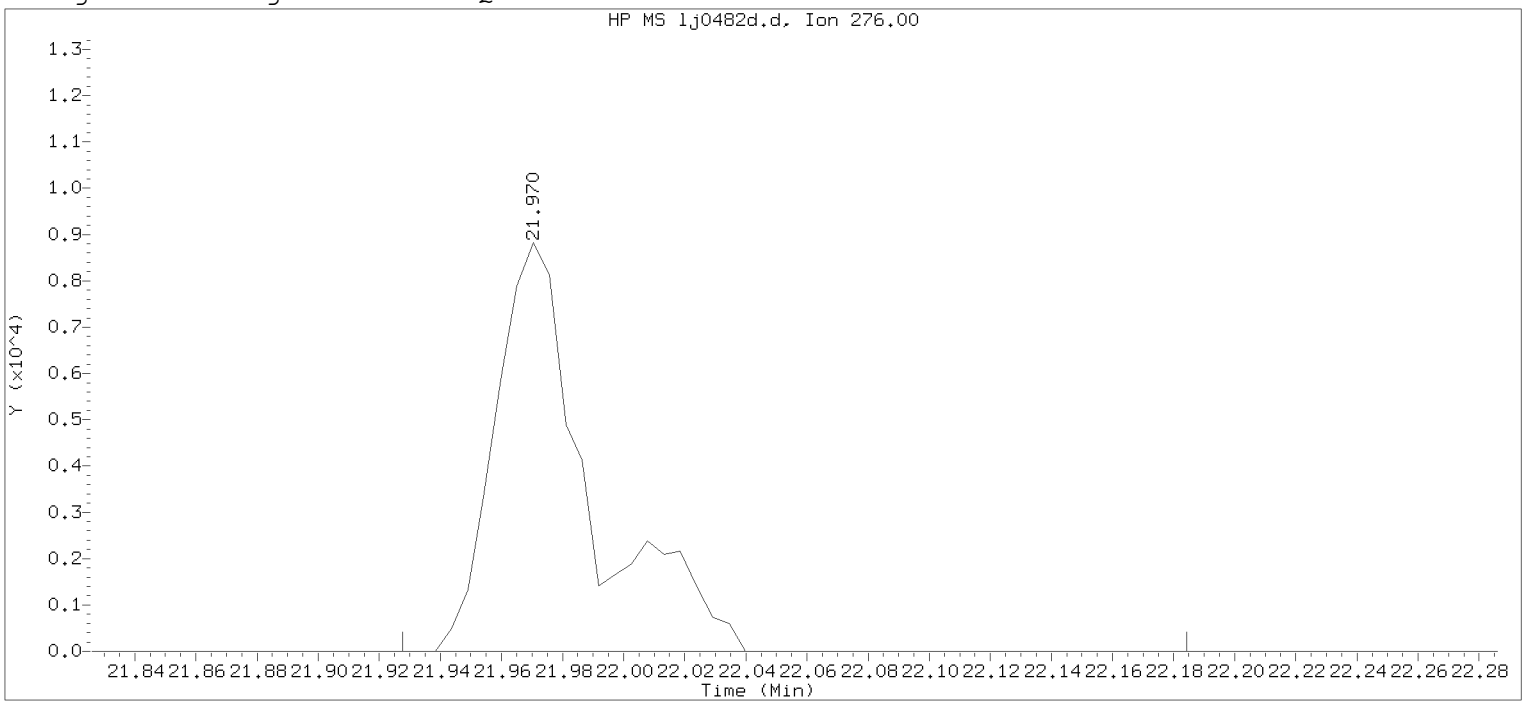
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



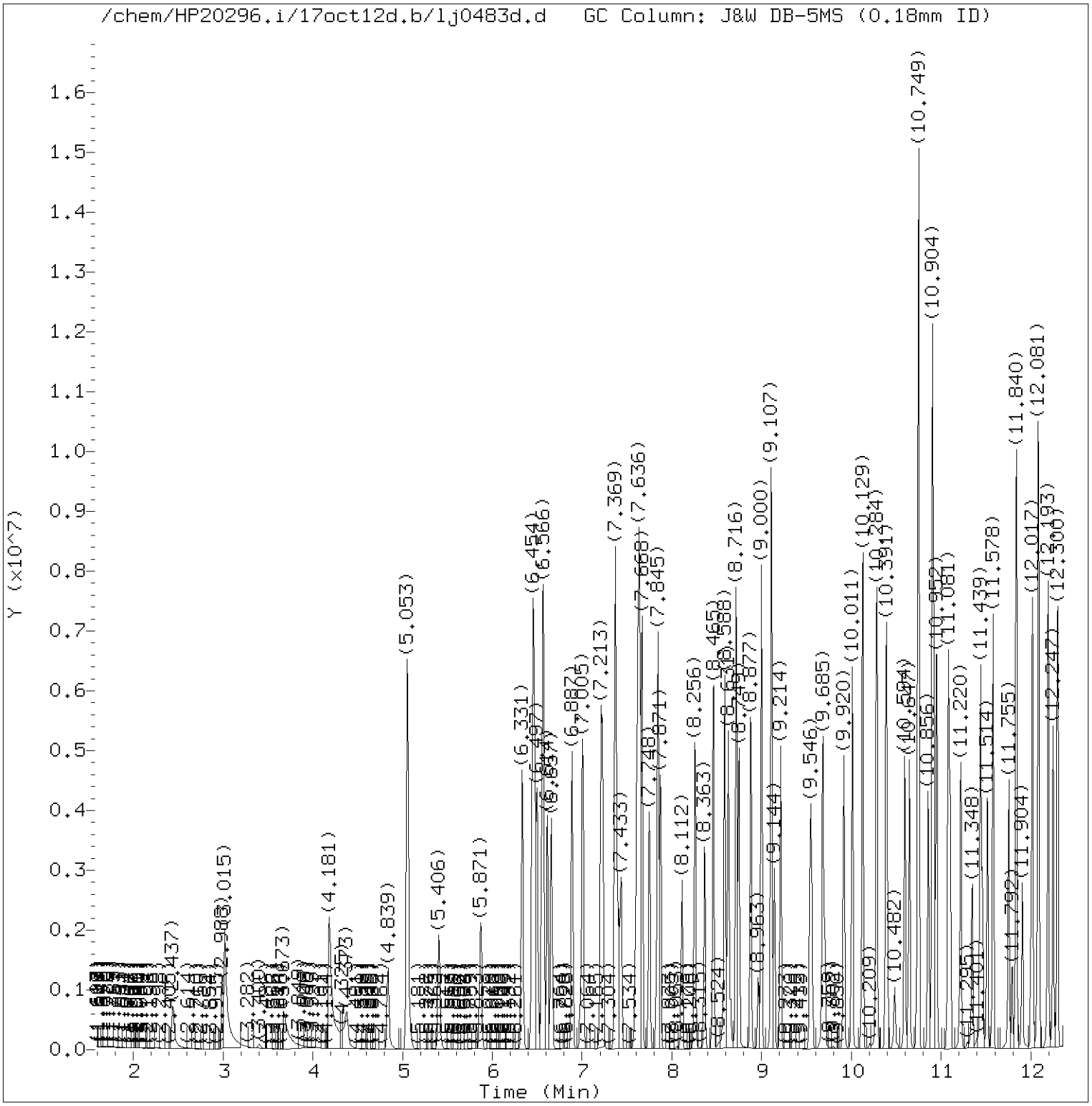
Data File: /chem/HP20296.i/17oct12d.b/lj0482d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:04
Date, time and analyst ID of latest file update: 23-Oct-2017 20:04 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3811		
Retention Time (minutes)	: 21.970		
Quant Ion	: 276.00		
Area	: 19018		
On-column Amount (ng/ul)	: 0.1356		
Integration start scan	: 3802	Integration stop scan:	3850
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1086



Total Ion Chromatogram (TIC)

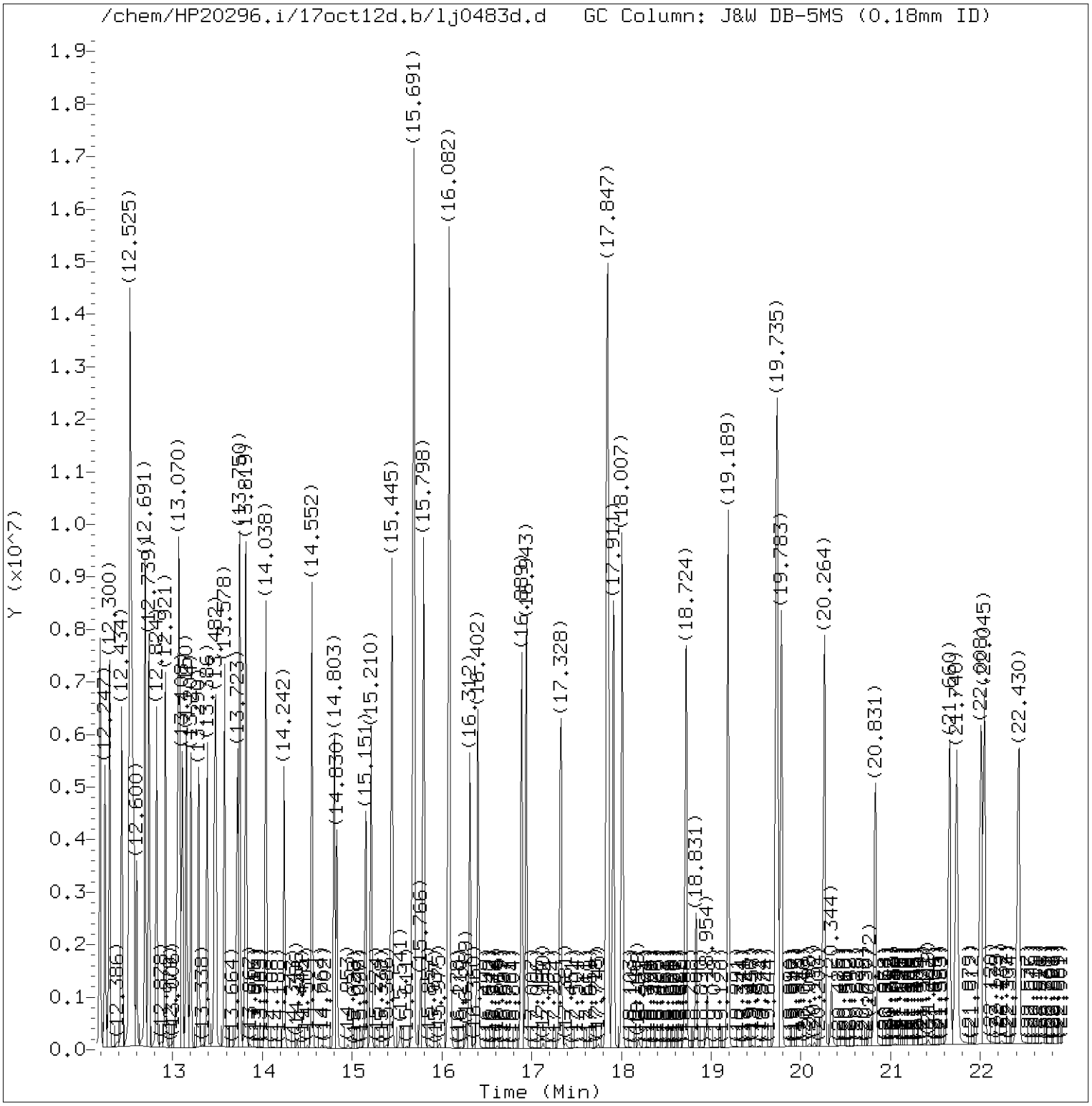
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.437	88	728791	31.686
4) N-Nitrosodimethylamine	(1)	2.988	74	1142673	32.142
5) Pyridine	(1)	3.020	79	1932598	31.085
7) 2-Picoline	(1)	4.181	93	2048787	30.559
8) N-Nitrosomethylethylamine	(1)	4.379	88	832720	30.183
9) Methyl methanesulfonate	(1)	4.839	80	805724	30.663
11)$2-Fluorophenol	(1)	5.053	112	3266205	61.128
13) N-Nitrosodiethylamine	(1)	5.406	102	815207	30.854
42) Total Cresols	(1)			3243375	60.275
15) Ethyl methanesulfonate	(1)	5.871	109	826753	30.551
16) Benzaldehyde	(1)	6.331	77	1601100	31.002
17)$Phenol-d6	(1)	6.454	99	4311657	61.133
18) Phenol	(1)	6.470	94	2471435	30.951
19) Aniline	(1)	6.497	93	2870931	30.112
20) a-methylstyrene	(1)	6.566	118	1705145	29.654
22) bis(2-Chloroethyl)ether	(1)	6.614	93	1718241	29.443
23) 2-Chlorophenol	(1)	6.657	128	1571391	30.013
24) 1,3-Dichlorobenzene	(1)	6.887	146	1700250	29.678
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	171805	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	1726961	29.944
27) Benzyl alcohol	(1)	7.208	108	1117911	29.884
28) 1,2-Dichlorobenzene	(1)	7.230	146	1618078	29.531
30) Indene	(1)	7.369	115	3050500	29.723
97) Isosafrole	(3)			1069277	30.206
31) 2-Methylphenol	(1)	7.385	108	1564201	29.950
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.433	45	2063834	29.604
34) bis(2-Chloroisopropyl)ether	(1)	7.433	45	2063834	29.604
35) N-Nitrosopyrrolidine	(1)	7.599	100	859749	30.843
36) Acetophenone	(1)	7.615	105	2530916	31.622
37) 4-Methylphenol	(1)	7.636	108	1679174	30.325
38) N-Nitroso-di-n-propylamine	(1)	7.647	70	1269121	30.010
39) N-Nitrosomorpholine	(1)	7.668	56	939404	29.146
40) o-Toluidine	(1)	7.668	106	2718024	29.575
43) Hexachloroethane	(1)	7.748	117	692929	29.637
44)$Nitrobenzene-d5	(2)	7.845	82	3766651	60.959
45) Nitrobenzene	(2)	7.871	77	1888290	30.440
120) 2,4_2,6-Dinitrotoluenes	(3)			1581765	63.399
48) N-Nitrosopiperidine	(2)	8.117	114	809963	30.808
50) Isophorone	(2)	8.256	82	3414321	31.186
51) 2-Nitrophenol	(2)	8.363	139	782445	32.554

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.465	107	1689306	30.712
57) O,O,O-Triethylphosphorothioate	(2)	8.588	198	698531	30.710
55) bis(2-Chloroethoxy)methane	(2)	8.631	93	2067927	30.224
56) Benzoic acid	(2)	8.658	105	916707	29.623
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.716	104	2441792	30.133
60) 2,4-Dichlorophenol	(2)	8.749	162	1245314	30.722
146) Diallate trans/cis	(4)			1559302	29.681
62) 1,2,4-Trichlorobenzene	(2)	8.877	180	1330221	30.302
65)*Naphthalene-d8	(2)	8.963	136	656866	5.000
66) Naphthalene	(2)	9.000	128	4558586	30.430
67) 4-Chloroaniline	(2)	9.107	127	1876821	30.326
68) 2,6-Dichlorophenol	(2)	9.112	162	1221945	30.914
69) Hexachloropropene	(2)	9.144	213	668164	31.080
71) Hexachlorobutadiene	(2)	9.214	225	716637	30.968
75) Quinoline	(2)	9.546	129	2801813	30.223
77) N-Nitrosodi-n-butylamine	(2)	9.685	84	1545133	34.280
76) Caprolactam	(2)	9.706	113	450556A	31.922
80) 4-Chloro-3-methylphenol	(2)	9.920	107	1443232	30.884
82) Safrole	(2)	10.011	162	1144173	30.921
83) 2-Methylnaphthalene	(2)	10.129	142	3025990	30.908
84) 1-Methylnaphthalene	(2)	10.284	142	2727457	30.480
85) Hexachlorocyclopentadiene	(3)	10.385	237	651465	31.373
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.396	216	1290711	30.109
88) cis-Isosafrole	(3)	10.487	162	199206	5.107
90) 2,4,6-Trichlorophenol	(3)	10.594	196	857830	31.535
92) 2,4,5-Trichlorophenol	(3)	10.647	196	892198	30.027
93)$2-Fluorobiphenyl	(3)	10.749	172	6292712	60.370
94) trans-Isosafrole	(3)	10.856	162	870071	25.099
95) 1,1'-Biphenyl	(3)	10.904	154	3637406	31.482
96) 2-Chloronaphthalene	(3)	10.920	162	2883412	31.564
98) 1-Chloronaphthalene	(3)	10.952	162	2327855	27.683
99) Diphenyl ether	(3)	11.081	170	1802162	30.116
100) 2-Nitroaniline	(3)	11.102	138	902744	32.987
104) 1,4-Naphthoquinone	(3)	11.220	158	1120602	30.645
105) 1,4-Dinitrobenzene	(3)	11.348	168	434289	31.997
106) Dimethylphthalate	(3)	11.439	163	2989056	30.270
107) 1,3-Dinitrobenzene	(3)	11.460	168	485161	31.424
108) 2,6-Dinitrotoluene	(3)	11.519	165	665012	31.850
109) Acenaphthylene	(3)	11.578	152	3882471	30.665
112) 3-Nitroaniline	(3)	11.755	138	793083	32.456

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.792	164	356693	5.000
114) Acenaphthene	(3)	11.840	153	2858269	29.609
115) 2,4-Dinitrophenol	(3)	11.904	184	399413	33.274
116) 4-Nitrophenol	(3)	12.011	109	514020	30.542
117) Pentachlorobenzene	(3)	12.022	250	954612	29.626
119) Dibenzofuran	(3)	12.081	168	3706336	29.712
118) 2,4-Dinitrotoluene	(3)	12.091	165	916753	31.549
121) 1-Naphthylamine	(3)	12.193	143	2979900	30.481
122) 2,3,4,6-Tetrachlorophenol	(3)	12.247	232	661225	32.157
123) 2-Naphthylamine	(3)	12.300	143	2918030	30.869
124) Diethylphthalate	(3)	12.434	149	2966401	30.261
126) Fluorene	(3)	12.519	166	3045608	30.034
125) Thionazin	(3)	12.530	107	623799	31.522
127) 4-Chlorophenyl-phenylether	(3)	12.541	204	1331072	29.615
128) 5-Nitro-o-toluidine	(3)	12.551	152	869138	31.759
129) 4-Nitroaniline	(3)	12.567	138	795267	31.462
130) 4,6-Dinitro-2-methylphenol	(4)	12.600	198	509125	31.165
132) NDPA as diphenylamine	(4)	12.691	169	2613036	30.242
131) N-Nitrosodiphenylamine	(4)	12.691	169	2613036	30.242
134) 1,2-Diphenylhydrazine	(4)	12.739	77	3568586	29.293
135)$2,4,6-Tribromophenol	(3)	12.824	330	600899	64.167
137) Tetraethyldithiopyrophosphate	(4)	12.921	97	595067	29.322
139) 1,3,5-Trinitrobenzene	(4)	13.049	213	322285	31.887
140) Diallate (peak 1)	(4)	13.065	86	1333647	24.575
141) Phorate	(4)	13.076	75	2296248	30.252
142) Phenacetin	(4)	13.108	108	1819381	30.762
143) 4-Bromophenyl-phenylether	(4)	13.156	248	714164	30.198
144) Diallate (peak 2)	(4)	13.172	86	225655	5.106
145) Hexachlorobenzene	(4)	13.204	284	711151	30.954
147) Dimethoate	(4)	13.290	87	1452713	29.591
148) Atrazine	(4)	13.386	200	780892	29.562
149) Pentachlorophenol	(4)	13.466	266	476765	32.238
150) 4-Aminobiphenyl	(4)	13.482	169	844351	30.118
151) Pentachloronitrobenzene	(4)	13.482	237	340593	30.856
152) Pronamide	(4)	13.578	173	1430904	31.043
153)*Phenanthrene-d10	(4)	13.712	188	649157	5.000
154) Dinoseb	(4)	13.723	211	785679	34.615
155) Phenanthrene	(4)	13.750	178	4563019	30.016
157) Anthracene	(4)	13.819	178	4499025	30.154
163) Carbazole	(4)	14.038	167	4346197	30.295

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

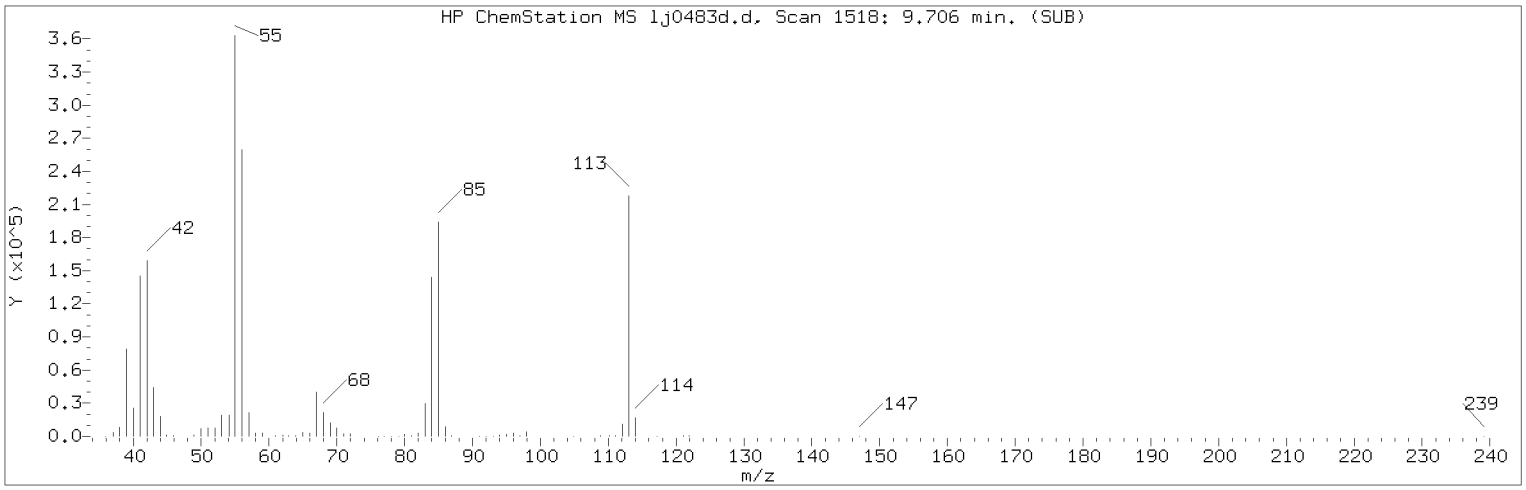
Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.242	109	1158552	31.426
165) Di-n-butylphthalate	(4)	14.552	149	5489256	30.509
167) Parathion	(4)	14.798	109	754577	32.554
168) 4-Nitroquinoline-1-oxide	(4)	14.830	190	569843	29.859
222) Total PAHs	(6)			64931951	490.500
169) Octachlorostyrene	(4)	15.151	308	252938	30.310
171) Isodrin	(4)	15.210	193	508617	29.822
173) Fluoranthene	(4)	15.445	202	4959782	30.471
174) Benzidine	(5)	15.691	184	10667028	87.044
175)*Pyrene-d10	(5)	15.766	212	724219	5.000
177) Pyrene	(5)	15.798	202	5116534	29.868
179)$Terphenyl-d14	(5)	16.082	244	6510345	61.859
182) p-Dimethylaminoazobenzene	(5)	16.312	225	764749	34.040
185) Chlorobenzilate	(5)	16.402	139	1657654	30.666
187) 3,3'-Dimethylbenzidine	(5)	16.889	212	3464018	30.916
188) Butylbenzylphthalate	(5)	16.943	149	2447954	30.513
191) 2-Acetylaminofluorene	(5)	17.328	181	2324859	32.526
193) 3,3'-Dichlorobenzidine	(5)	17.836	252	1767360	31.353
195) Benzo(a)anthracene	(5)	17.847	228	4857275	31.546
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.852	231	893463	30.665
196) Chrysene	(5)	17.911	228	4339518	30.604
199) bis(2-Ethylhexyl)phthalate	(5)	18.007	149	3677225	31.375
203) 6-Methylchrysene	(5)	18.724	242	3178885	31.187
205) Di-n-octylphthalate	(6)	19.189	149	6737094	31.670
206) Benzo(b)fluoranthene	(6)	19.729	252	4743711	31.782
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.735	256	2083439	32.662
208) Benzo(k)fluoranthene	(6)	19.783	252	4366281	30.603
211) Benzo(a)pyrene	(6)	20.264	252	4408947	31.585
213)*Perylene-d12	(6)	20.344	264	573628	5.000
215) 3-Methylcholanthrene	(6)	20.831	268	1599766	32.331
217) Dibenz(a,h)acridine	(6)	21.660	279	3548864	31.362
218) Dibenz(a,j)acridine	(6)	21.740	279	3611783	30.781
219) Indeno(1,2,3-cd)pyrene	(6)	22.008	276	4044112M	31.901
220) Dibenz(a,h)anthracene	(6)	22.045	278	4061134	31.661
221) Benzo(g,h,i)perylene	(6)	22.430	276	3984224	30.568

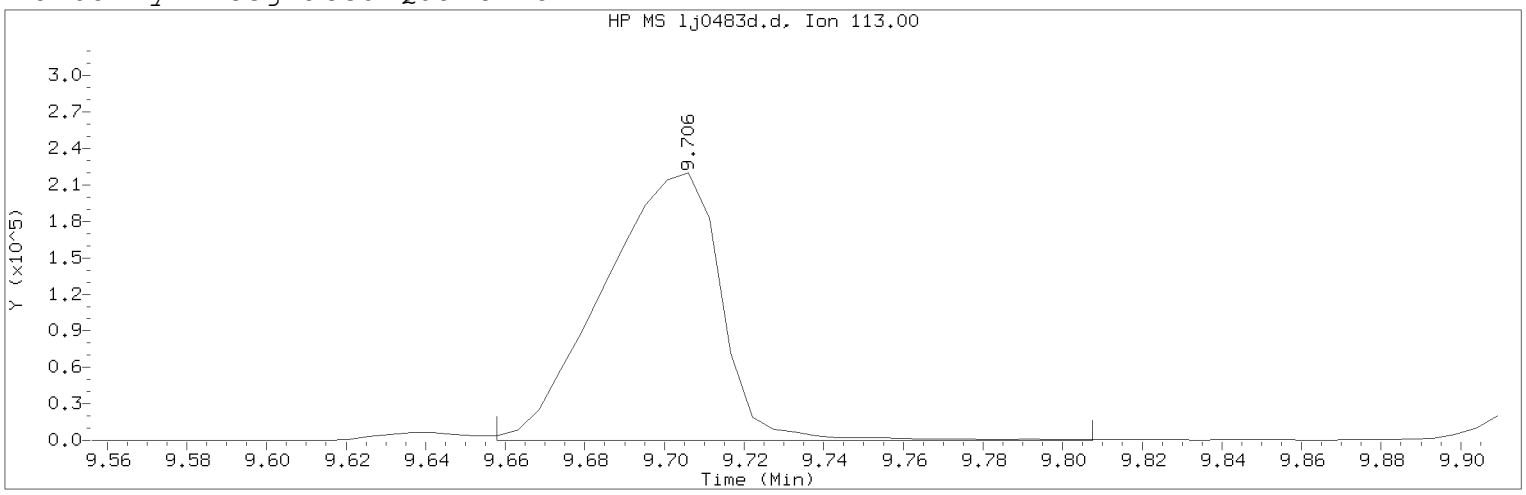
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

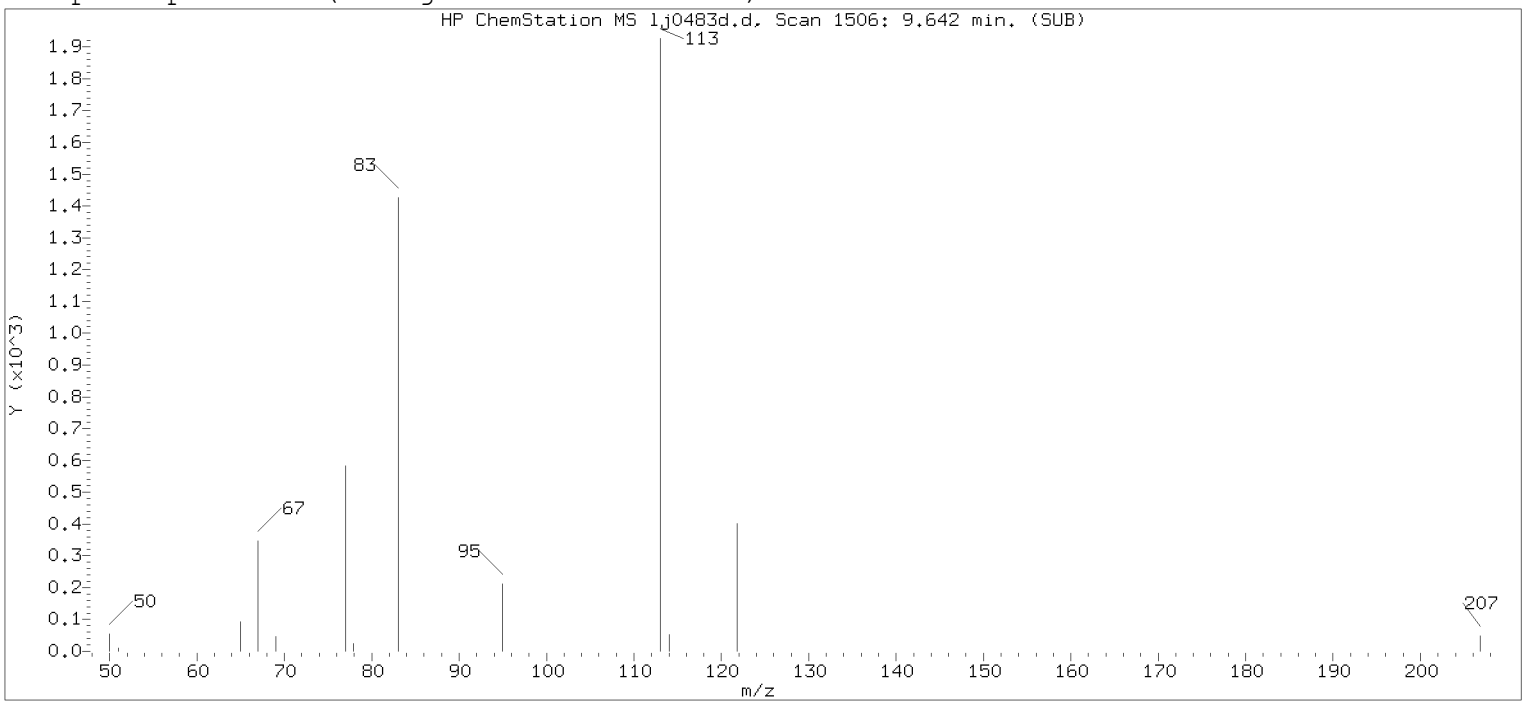
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1518
Retention Time (minutes) : 9.706
Quant Ion : 113.00
Area (flag) : 450556A
On-Column Amount (ng/ul) : 31.9218
Integration start scan : 1508 Integration stop scan: 1536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

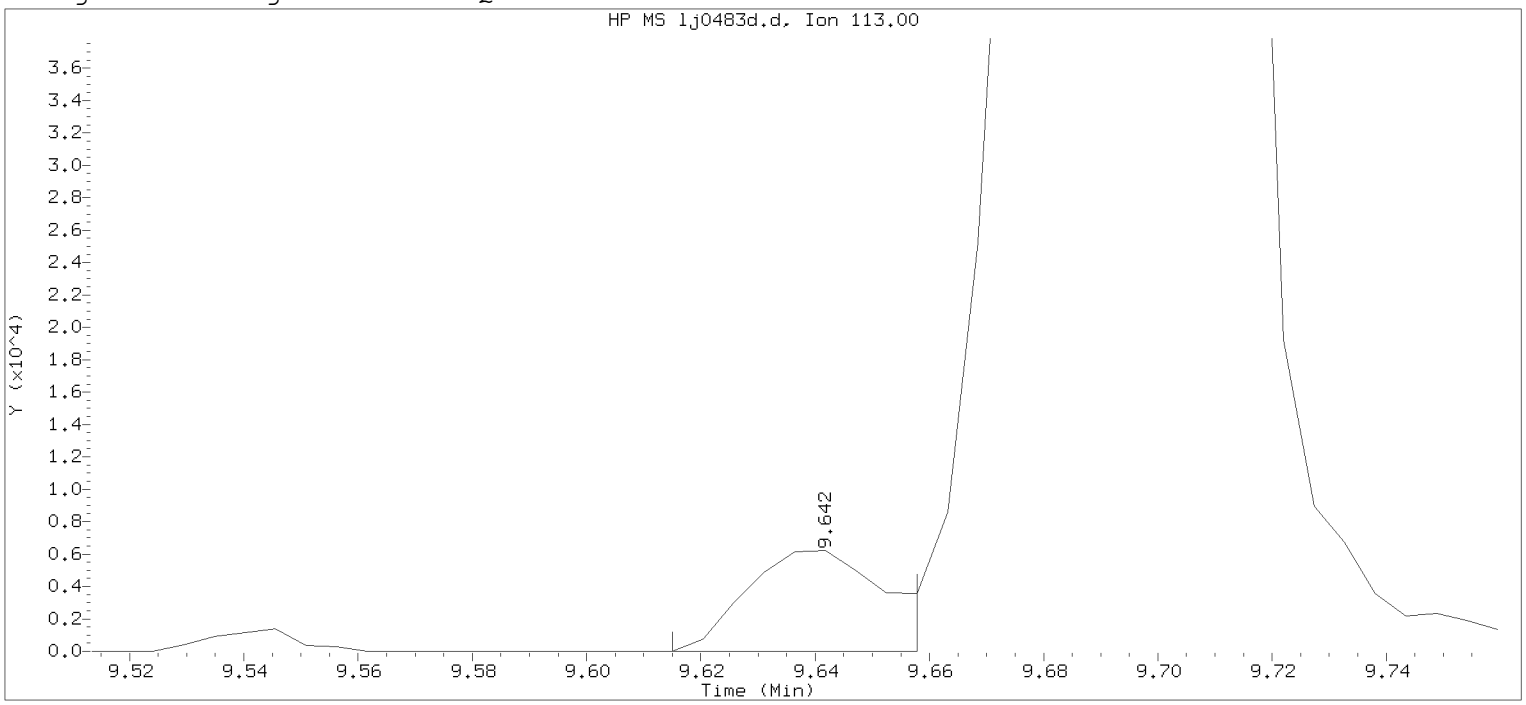
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

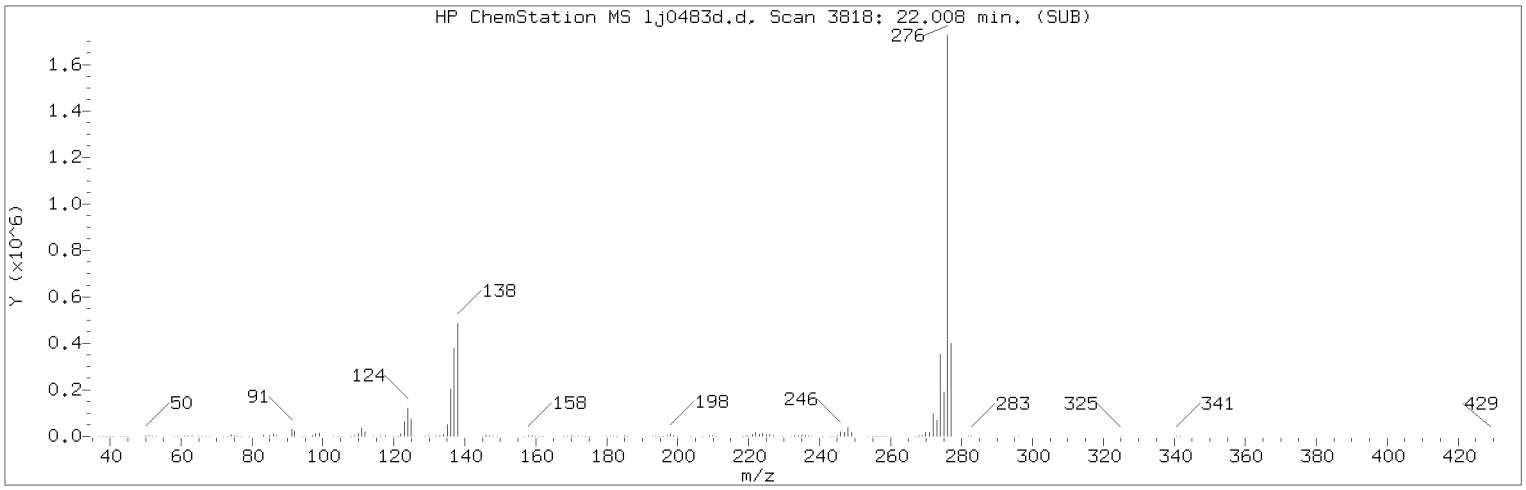
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:04
Date, time and analyst ID of latest file update: 23-Oct-2017 20:04 bkc25363

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

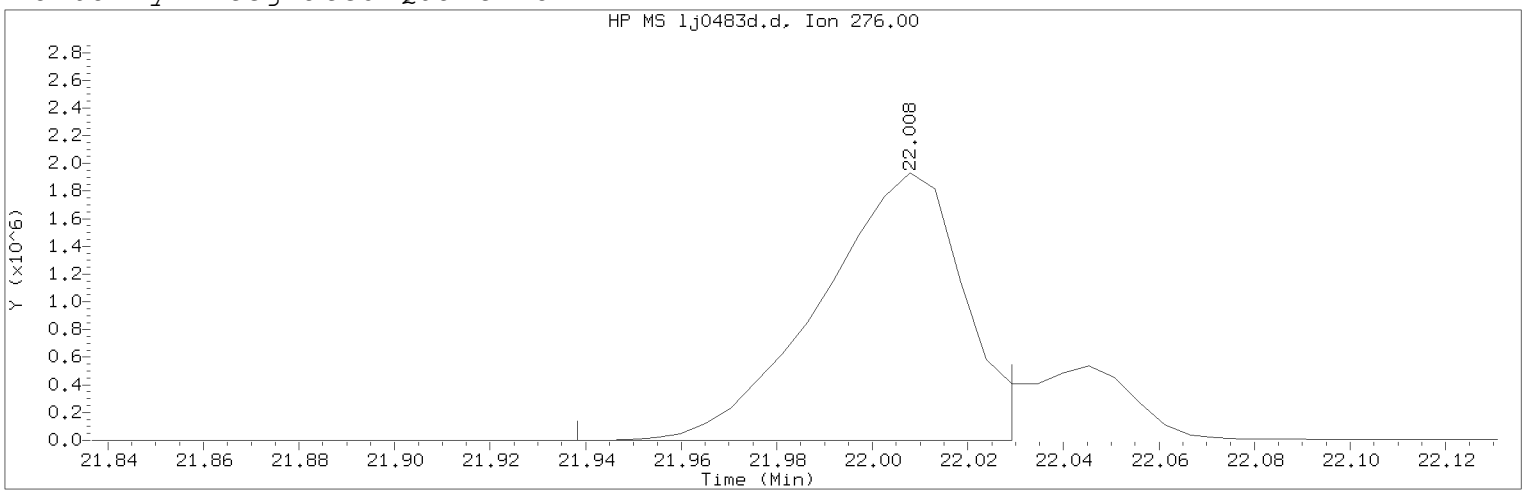
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1506		
Retention Time (minutes)	: 9.642		
Quant Ion	: 113.00		
Area	: 10067		
On-column Amount (ng/ul)	: 0.8983		
Integration start scan	: 1500	Integration stop scan:	1508
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

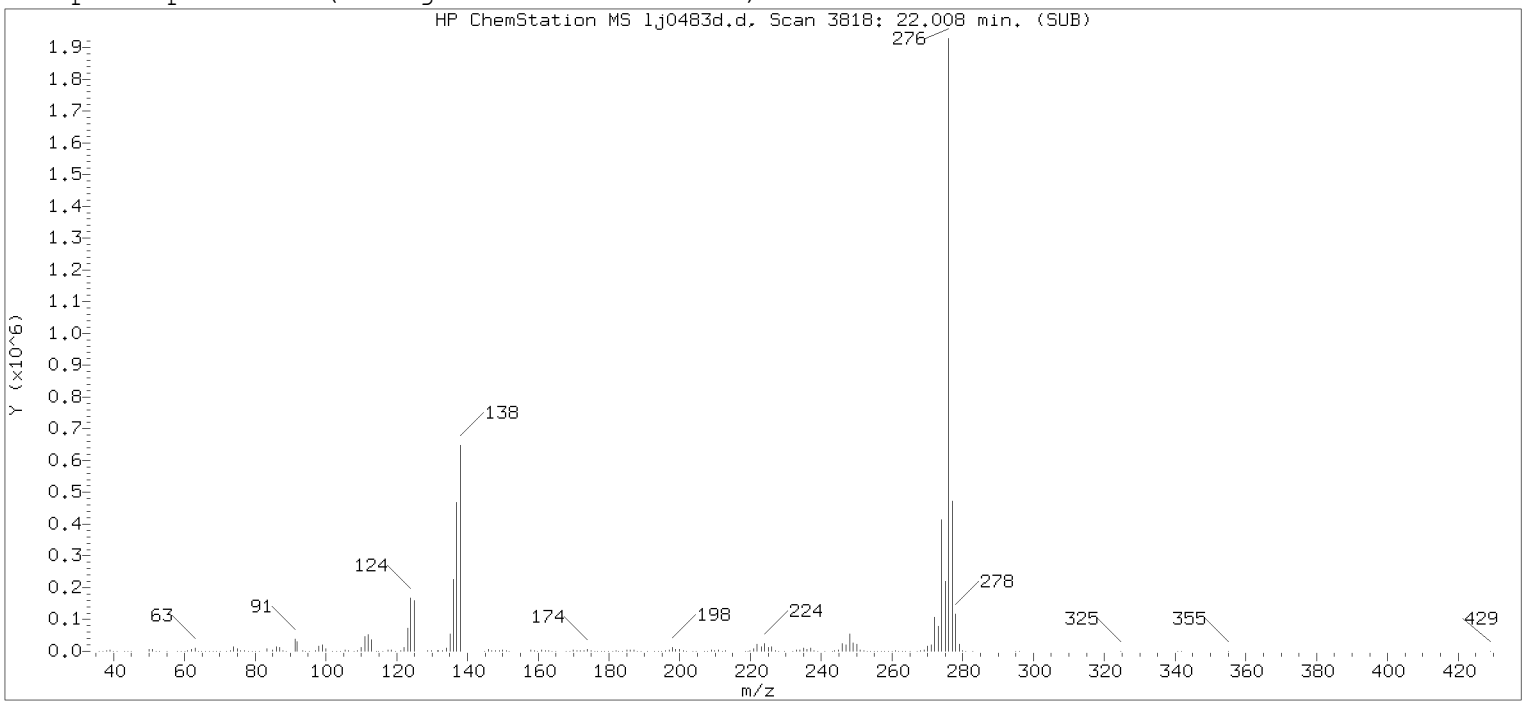
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3818
Retention Time (minutes) : 22.008
Quant Ion : 276.00
Area (flag) : 4044112M
On-Column Amount (ng/ul) : 31.9014
Integration start scan : 3804 Integration stop scan: 3821
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

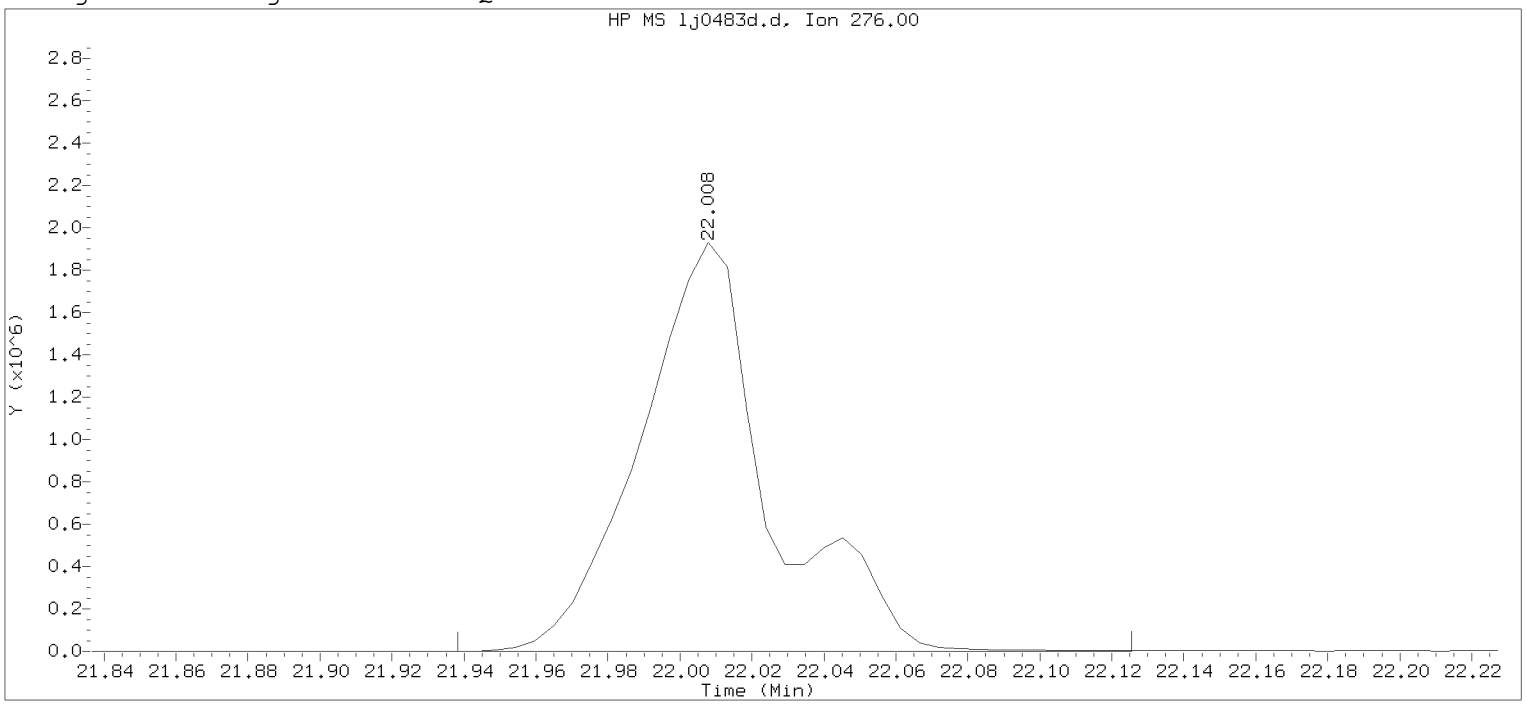
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



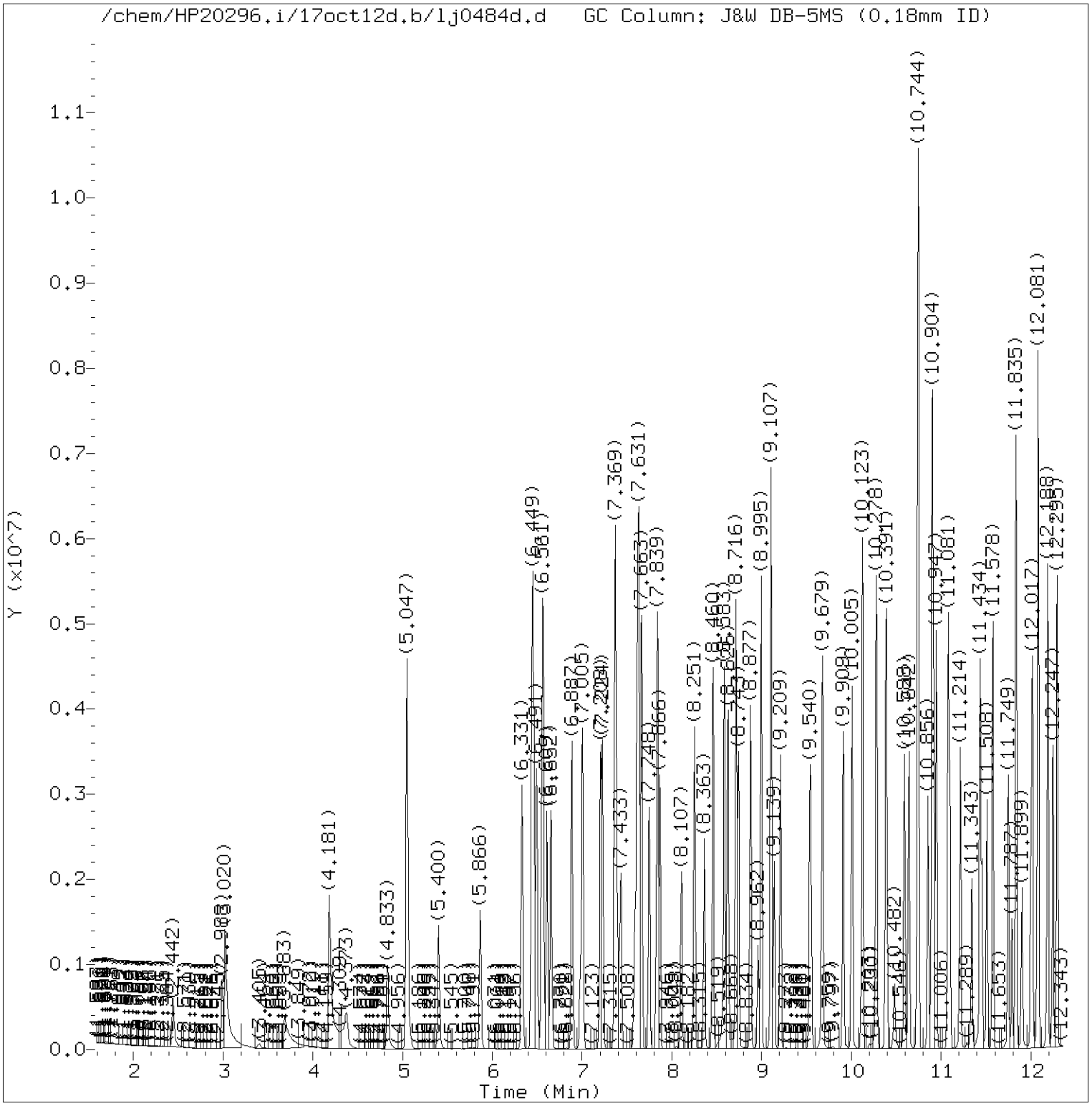
Data File: /chem/HP20296.i/17oct12d.b/lj0483d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 19:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:04
Date, time and analyst ID of latest file update: 23-Oct-2017 20:04 bkc25363

Sample Name: SSTD030 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3818		
Retention Time (minutes)	: 22.008		
Quant Ion	: 276.00		
Area	: 4807100		
On-column Amount (ng/ul)	: 32.0486		
Integration start scan	: 3804	Integration stop scan:	3839
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

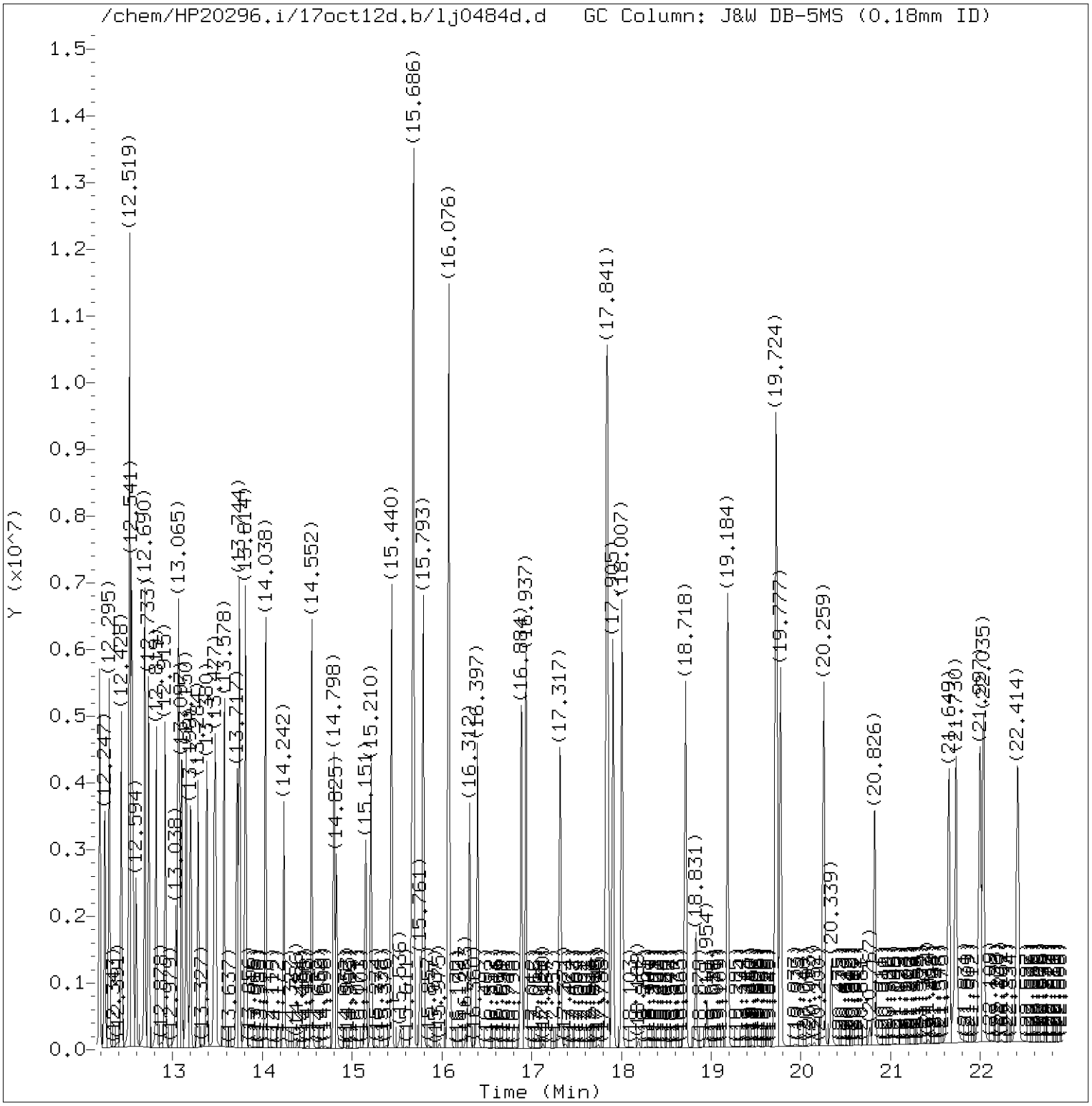
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.442	88	487288	20.700
4) N-Nitrosodimethylamine	(1)	2.988	74	783040	21.521
5) Pyridine	(1)	3.020	79	1327295	20.860
7) 2-Picoline	(1)	4.181	93	1398654	20.384
8) N-Nitrosomethylethylamine	(1)	4.373	88	576476	20.416
9) Methyl methanesulfonate	(1)	4.833	80	559205	20.793
11)$2-Fluorophenol	(1)	5.047	112	2246104	41.073
13) N-Nitrosodiethylamine	(1)	5.400	102	562909	20.817
42) Total Cresols	(1)			2243551	40.737
15) Ethyl methanesulfonate	(1)	5.866	109	562819	20.321
16) Benzaldehyde	(1)	6.331	77	1051577	19.895
17)$Phenol-d6	(1)	6.443	99	2975998	41.228
18) Phenol	(1)	6.465	94	1717772	21.020
19) Aniline	(1)	6.491	93	1969813	20.187
20) a-methylstyrene	(1)	6.566	118	1151485	19.566
22) bis(2-Chloroethyl)ether	(1)	6.609	93	1176059	19.690
23) 2-Chlorophenol	(1)	6.652	128	1090520	20.351
24) 1,3-Dichlorobenzene	(1)	6.887	146	1171677	19.983
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	175835	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	1190552	20.170
27) Benzyl alcohol	(1)	7.203	108	748576	19.553
28) 1,2-Dichlorobenzene	(1)	7.224	146	1120335	19.978
30) Indene	(1)	7.369	115	2050222	19.519
31) 2-Methylphenol	(1)	7.379	108	1080718	20.218
97) Isosafrole	(3)			741624	20.469
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.433	45	1420432	19.908
34) bis(2-Chloroisopropyl)ether	(1)	7.433	45	1420432	19.908
35) N-Nitrosopyrrolidine	(1)	7.588	100	594941	20.854
36) Acetophenone	(1)	7.609	105	1651597	20.163
37) 4-Methylphenol	(1)	7.631	108	1162833	20.519
38) N-Nitroso-di-n-propylamine	(1)	7.636	70	860429	19.880
39) N-Nitrosomorpholine	(1)	7.657	56	658977	19.977
40) o-Toluidine	(1)	7.663	106	1892843	20.124
43) Hexachloroethane	(1)	7.748	117	486004	20.311
44)$Nitrobenzene-d5	(2)	7.839	82	2599844	40.821
45) Nitrobenzene	(2)	7.866	77	1299175	20.318
120) 2,4_2,6-Dinitrotoluenes	(3)			1072444	42.101
48) N-Nitrosopiperidine	(2)	8.107	114	557531	20.574
50) Isophorone	(2)	8.251	82	2349387	20.819
51) 2-Nitrophenol	(2)	8.363	139	545082	22.002

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.460	107	1176431	20.749
57) O,O,O-Triethylphosphorothioate	(2)	8.583	198	478153	20.395
55) bis(2-Chloroethoxy)methane	(2)	8.626	93	1437986	20.390
56) Benzoic acid	(2)	8.626	105	672301	20.811
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.716	104	1641392	19.652
60) 2,4-Dichlorophenol	(2)	8.743	162	859861	20.580
146) Diallate trans/cis	(4)			1062104	20.308
62) 1,2,4-Trichlorobenzene	(2)	8.877	180	916693	20.259
65)*Naphthalene-d8	(2)	8.962	136	677062	5.000
66) Naphthalene	(2)	8.995	128	3147296	20.383
68) 2,6-Dichlorophenol	(2)	9.107	162	840525	20.630
67) 4-Chloroaniline	(2)	9.107	127	1307070	20.490
69) Hexachloropropene	(2)	9.139	213	460278	20.772
71) Hexachlorobutadiene	(2)	9.214	225	492677	20.655
75) Quinoline	(2)	9.540	129	1954861	20.458
77) N-Nitrosodi-n-butylamine	(2)	9.679	84	1047560	22.547
76) Caprolactam	(2)	9.685	113	290500A	19.968
80) 4-Chloro-3-methylphenol	(2)	9.909	107	1004197	20.848
82) Safrole	(2)	10.011	162	786125	20.611
83) 2-Methylnaphthalene	(2)	10.123	142	2080755	20.619
84) 1-Methylnaphthalene	(2)	10.278	142	1893328	20.527
85) Hexachlorocyclopentadiene	(3)	10.380	237	446805	21.024
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.391	216	885953	20.194
88) cis-Isosafrole	(3)	10.482	162	138515	3.470
90) 2,4,6-Trichlorophenol	(3)	10.588	196	593197	21.307
92) 2,4,5-Trichlorophenol	(3)	10.642	196	622173	20.460
93)$2-Fluorobiphenyl	(3)	10.744	172	4350220	40.779
94) trans-Isosafrole	(3)	10.856	162	603109	16.999
95) 1,1'-Biphenyl	(3)	10.899	154	2363223	19.985
96) 2-Chloronaphthalene	(3)	10.915	162	1914654	20.479
98) 1-Chloronaphthalene	(3)	10.947	162	1698985	19.742
99) Diphenyl ether	(3)	11.081	170	1256681	20.520
100) 2-Nitroaniline	(3)	11.097	138	611931	21.848
104) 1,4-Naphthoquinone	(3)	11.214	158	781805	20.890
105) 1,4-Dinitrobenzene	(3)	11.343	168	294768	21.220
106) Dimethylphthalate	(3)	11.434	163	2040841	20.194
107) 1,3-Dinitrobenzene	(3)	11.455	168	332060	21.015
108) 2,6-Dinitrotoluene	(3)	11.514	165	458500	21.457
109) Acenaphthylene	(3)	11.578	152	2684583	20.718
112) 3-Nitroaniline	(3)	11.749	138	545421	21.810

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.787	164	365053	5.000
114) Acenaphthene	(3)	11.835	153	1982507	20.067
115) 2,4-Dinitrophenol	(3)	11.899	184	272658	22.194
116) 4-Nitrophenol	(3)	12.006	109	360681	20.940
117) Pentachlorobenzene	(3)	12.017	250	659724	20.006
119) Dibenzofuran	(3)	12.081	168	2586951	20.263
118) 2,4-Dinitrotoluene	(3)	12.086	165	613944	20.644
121) 1-Naphthylamine	(3)	12.188	143	2046995	20.459
122) 2,3,4,6-Tetrachlorophenol	(3)	12.247	232	449764	21.373
123) 2-Naphthylamine	(3)	12.295	143	1964878	20.310
124) Diethylphthalate	(3)	12.428	149	2037203	20.306
126) Fluorene	(3)	12.519	166	2096225	20.198
125) Thionazin	(3)	12.525	107	376437	18.586
127) 4-Chlorophenyl-phenylether	(3)	12.541	204	922845	20.062
128) 5-Nitro-o-toluidine	(3)	12.546	152	609607	21.765
129) 4-Nitroaniline	(3)	12.562	138	550057	21.263
130) 4,6-Dinitro-2-methylphenol	(4)	12.594	198	349816	21.507
132) NDPA as diphenylamine	(4)	12.690	169	1769316	20.567
131) N-Nitrosodiphenylamine	(4)	12.690	169	1769316	20.567
134) 1,2-Diphenylhydrazine	(4)	12.733	77	2431737	20.049
135)$2,4,6-Tribromophenol	(3)	12.819	330	402466	41.993
137) Tetraethyldithiopyrophosphate	(4)	12.915	97	411811	20.382
139) 1,3,5-Trinitrobenzene	(4)	13.038	213	219305	21.794
140) Diallate (peak 1)	(4)	13.060	86	907771	16.801
141) Phorate	(4)	13.070	75	1564600	20.704
142) Phenacetin	(4)	13.102	108	1253759	21.292
143) 4-Bromophenyl-phenylether	(4)	13.150	248	490103	20.815
144) Diallate (peak 2)	(4)	13.172	86	154333	3.507
145) Hexachlorobenzene	(4)	13.204	284	483930	21.157
147) Dimethoate	(4)	13.284	87	1002742	20.516
148) Atrazine	(4)	13.380	200	516122	19.625
149) Pentachlorophenol	(4)	13.466	266	330109	22.420
151) Pentachloronitrobenzene	(4)	13.477	237	232969	21.199
150) 4-Aminobiphenyl	(4)	13.482	169	589513	21.120
152) Pronamide	(4)	13.578	173	982990	21.419
153)*Phenanthrene-d10	(4)	13.712	188	646311	5.000
154) Dinoseb	(4)	13.723	211	535257	23.686
155) Phenanthrene	(4)	13.744	178	3131087	20.687
157) Anthracene	(4)	13.814	178	3104025	20.896
163) Carbazole	(4)	14.038	167	3009330	21.069

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

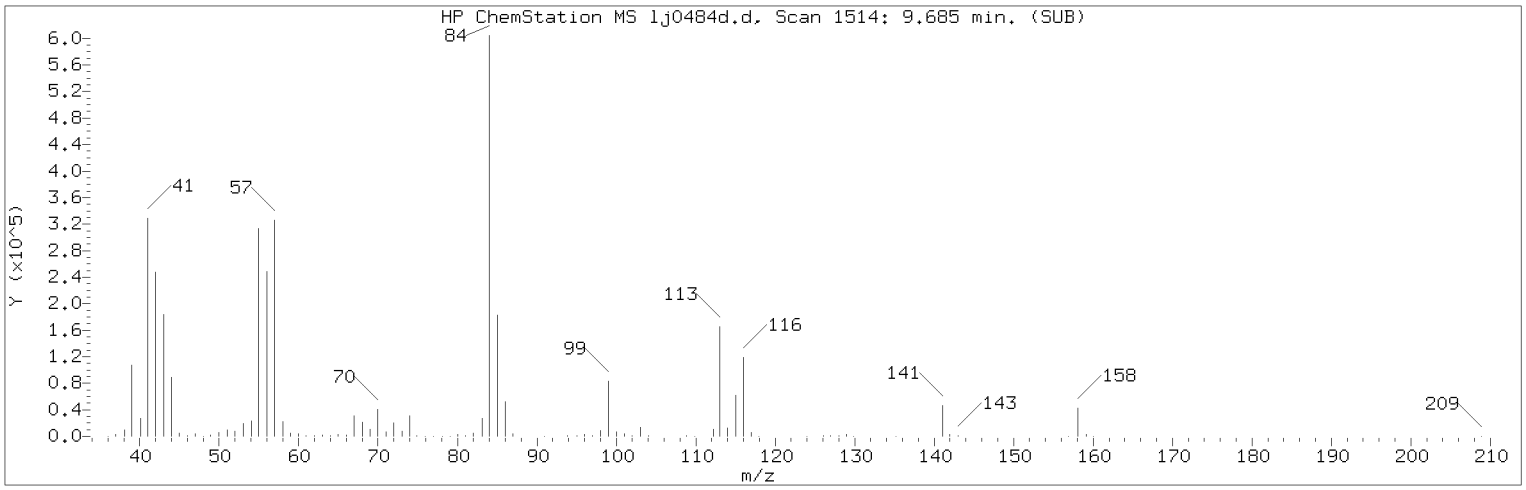
Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.242	109	806534	21.973
165) Di-n-butylphthalate	(4)	14.552	149	3749114	20.929
167) Parathion	(4)	14.798	109	510194	22.108
168) 4-Nitroquinoline-1-oxide	(4)	14.825	190	382446	20.470
222) Total PAHs	(6)			44904176	332.430
169) Octachlorostyrene	(4)	15.151	308	166544	20.045
171) Isodrin	(4)	15.210	193	344741	20.303
173) Fluoranthene	(4)	15.440	202	3436498	21.206
174) Benzidine	(5)	15.686	184	7636062	61.036
175)*Pyrene-d10	(5)	15.761	212	739354	5.000
177) Pyrene	(5)	15.793	202	3519747	20.126
179)$Terphenyl-d14	(5)	16.076	244	4465845	41.564
182) p-Dimethylaminoazobenzene	(5)	16.312	225	518905	22.624
185) Chlorobenzilate	(5)	16.397	139	1148110	20.805
187) 3,3'-Dimethylbenzidine	(5)	16.889	212	2397889	20.963
188) Butylbenzylphthalate	(5)	16.937	149	1715518	20.946
191) 2-Acetylaminofluorene	(5)	17.317	181	1596009	21.872
193) 3,3'-Dichlorobenzidine	(5)	17.831	252	1211467	21.052
195) Benzo(a)anthracene	(5)	17.841	228	3334897	21.215
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.852	231	612903	20.605
196) Chrysene	(5)	17.905	228	3016817	20.840
199) bis(2-Ethylhexyl)phthalate	(5)	18.007	149	2545045	21.270
203) 6-Methylchrysene	(5)	18.718	242	2190697	21.052
205) Di-n-octylphthalate	(6)	19.184	149	4634107	21.163
206) Benzo(b)fluoranthene	(6)	19.724	252	3288111	21.401
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.724	256	1427353	21.738
208) Benzo(k)fluoranthene	(6)	19.777	252	3015046	20.530
211) Benzo(a)pyrene	(6)	20.259	252	3064162	21.325
213)*Perylene-d12	(6)	20.339	264	590478	5.000
215) 3-Methylcholanthrene	(6)	20.826	268	1110170	21.796
217) Dibenz(a,h)acridine	(6)	21.649	279	2444005	20.982
218) Dibenz(a,j)acridine	(6)	21.730	279	2520526	20.868
219) Indeno(1,2,3-cd)pyrene	(6)	21.997	276	2781270M	21.314
220) Dibenz(a,h)anthracene	(6)	22.035	278	2820192	21.359
221) Benzo(g,h,i)perylene	(6)	22.420	276	2810787	20.950

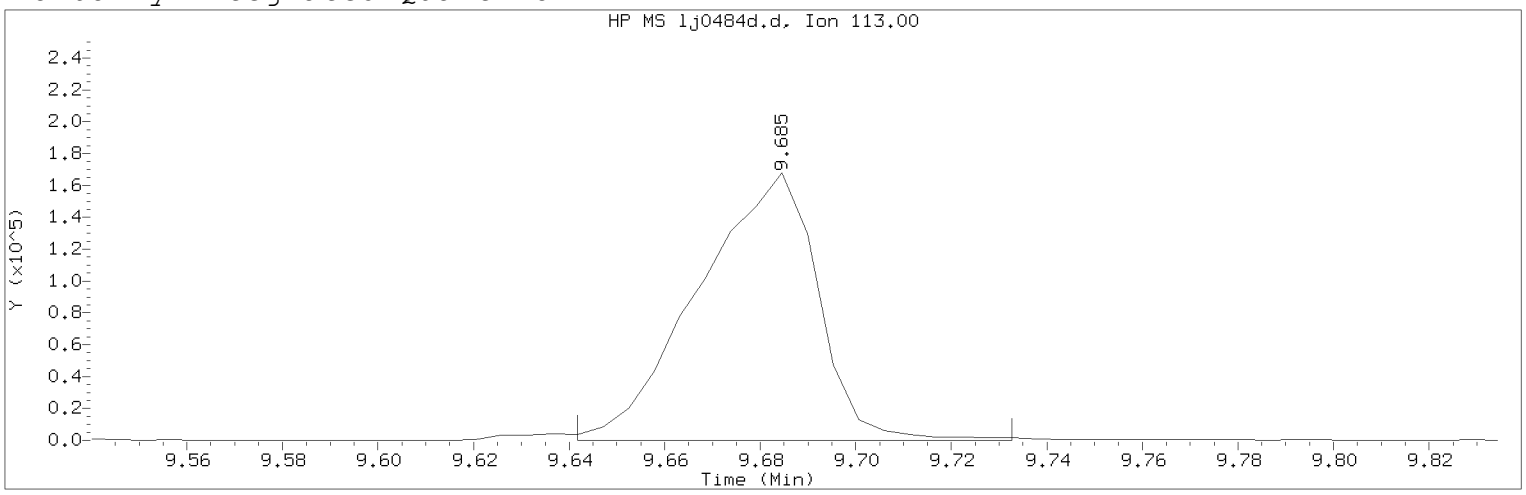
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

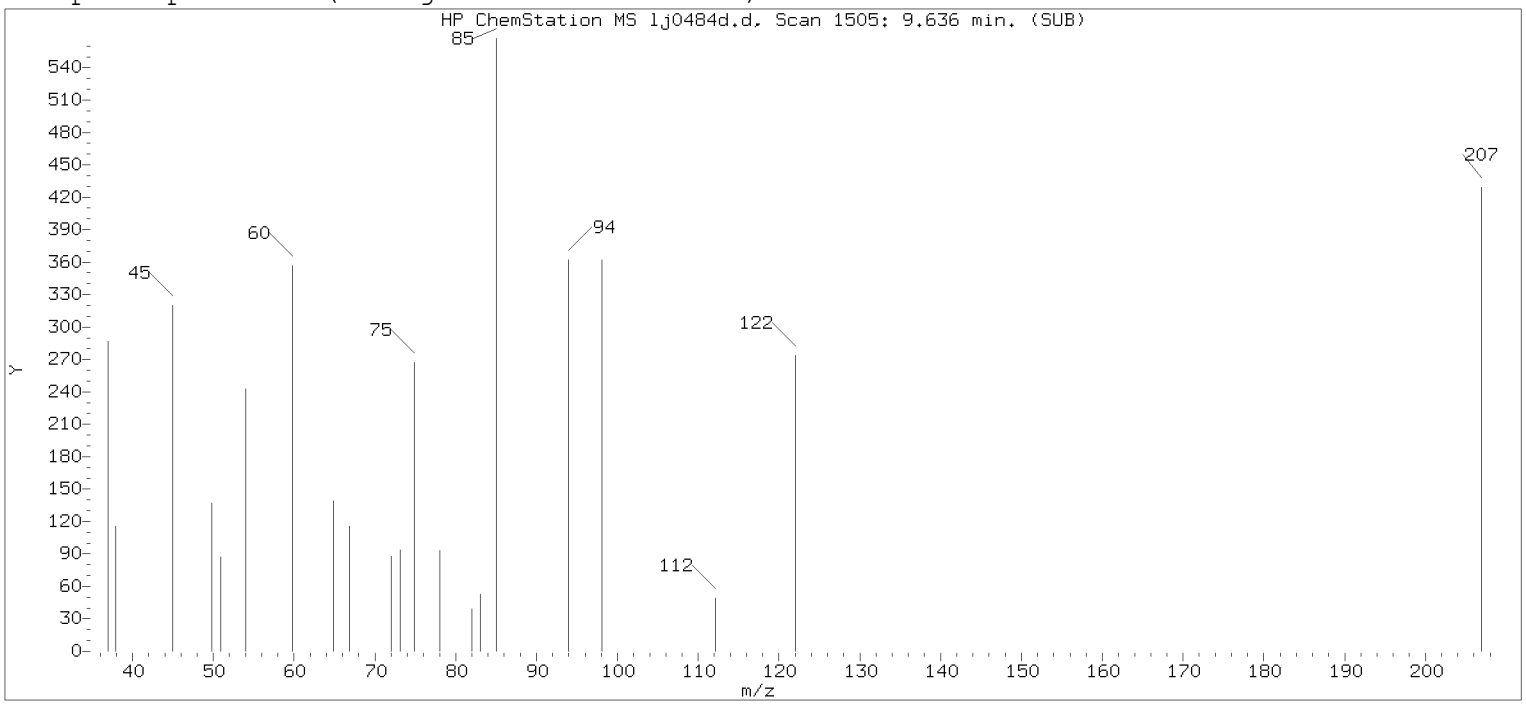
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1514
Retention Time (minutes) : 9.685
Quant Ion : 113.00
Area (flag) : 290500A
On-Column Amount (ng/ul) : 19.9679
Integration start scan : 1505 Integration stop scan: 1522
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

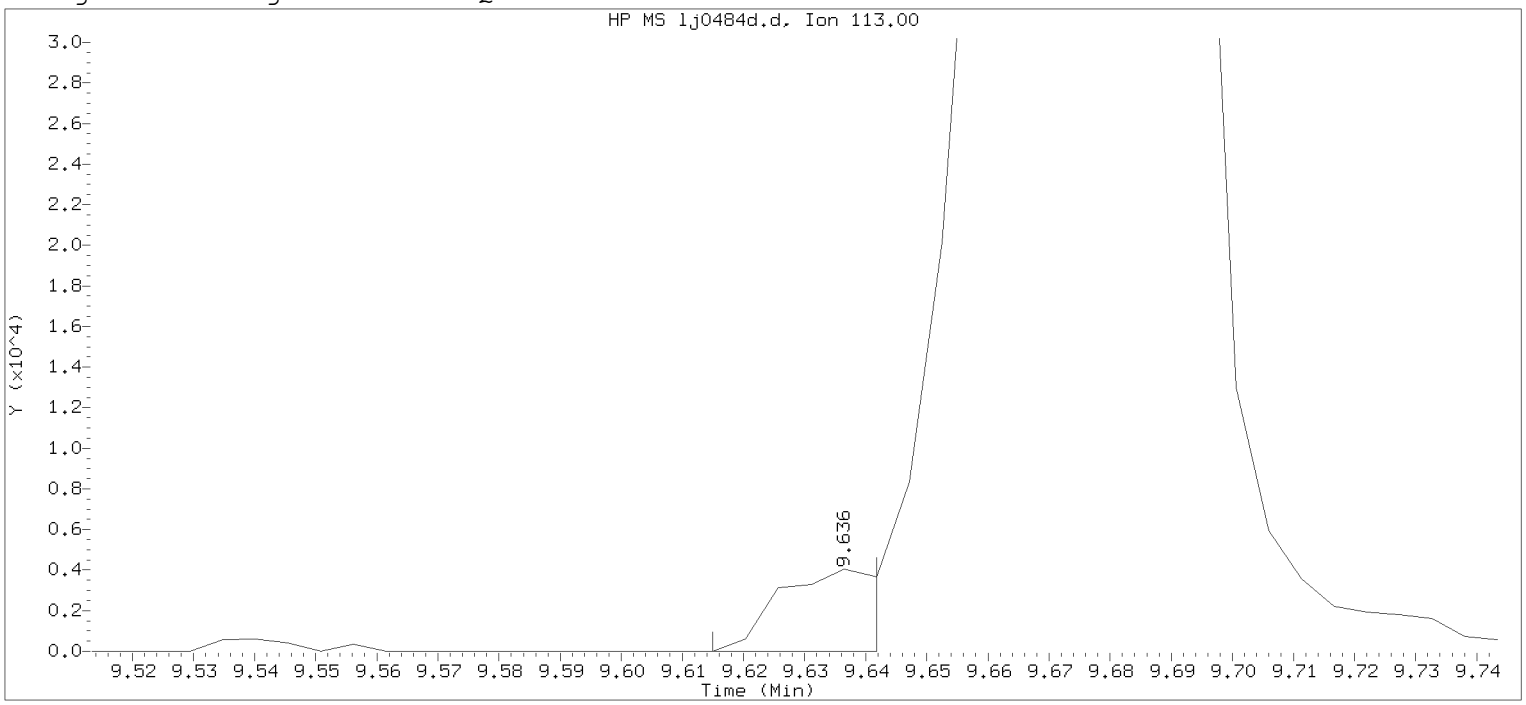
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

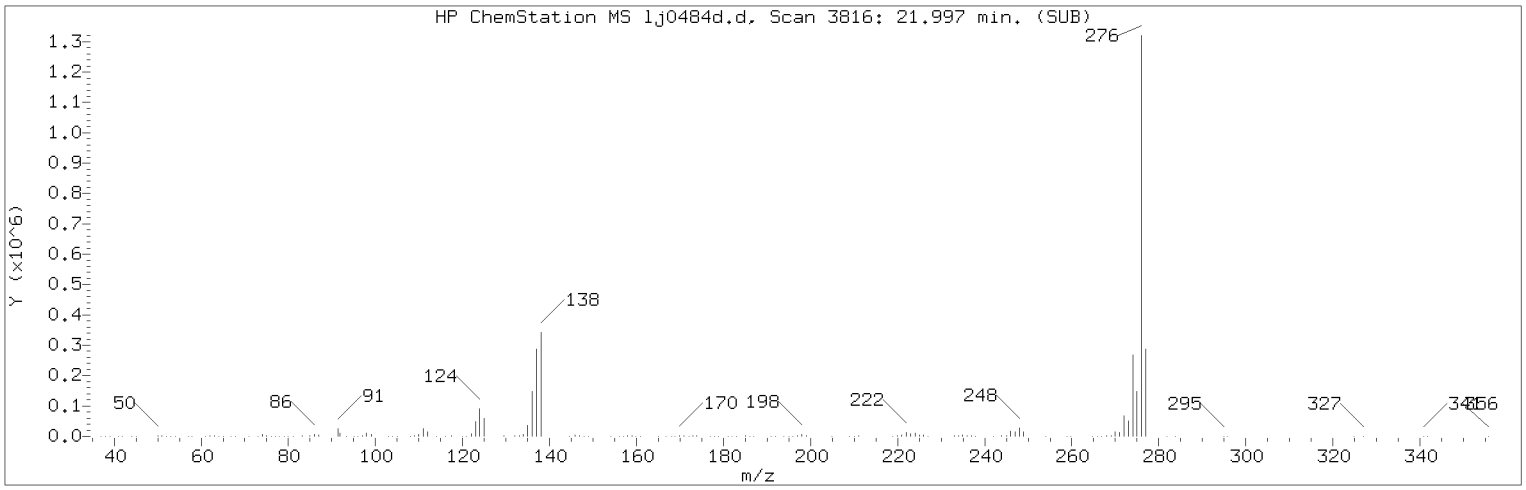
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:04
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

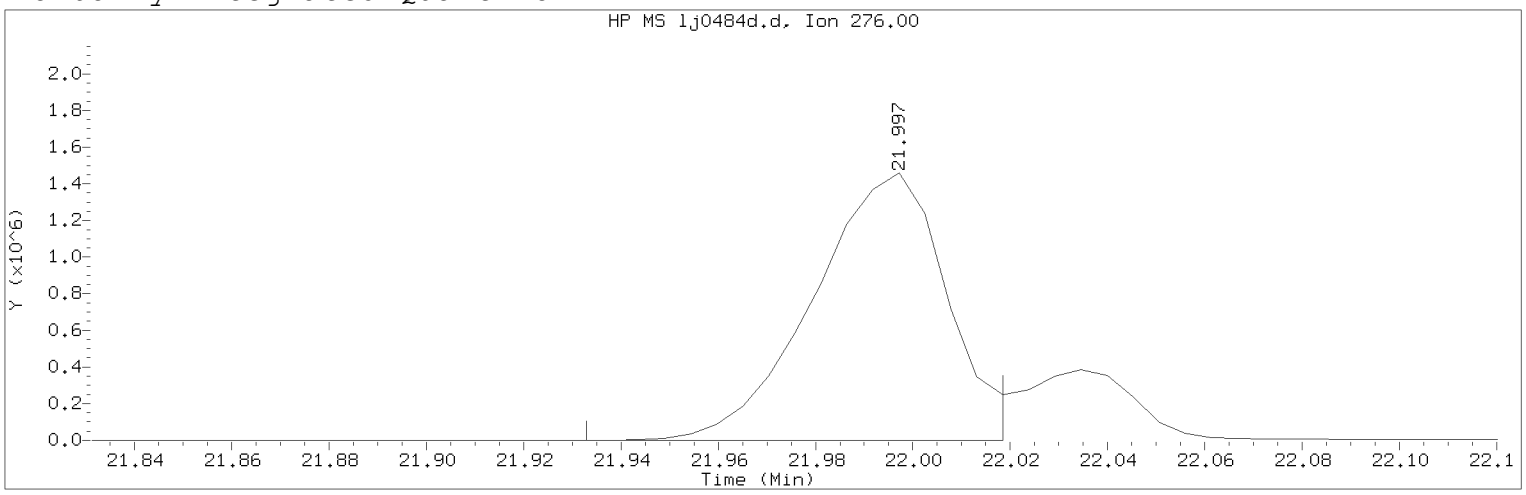
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1505		
Retention Time (minutes)	: 9.636		
Quant Ion	: 113.00		
Area	: 4132		
On-column Amount (ng/ul)	: 0.4509		
Integration start scan	: 1500	Integration stop scan:	1505
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1107

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

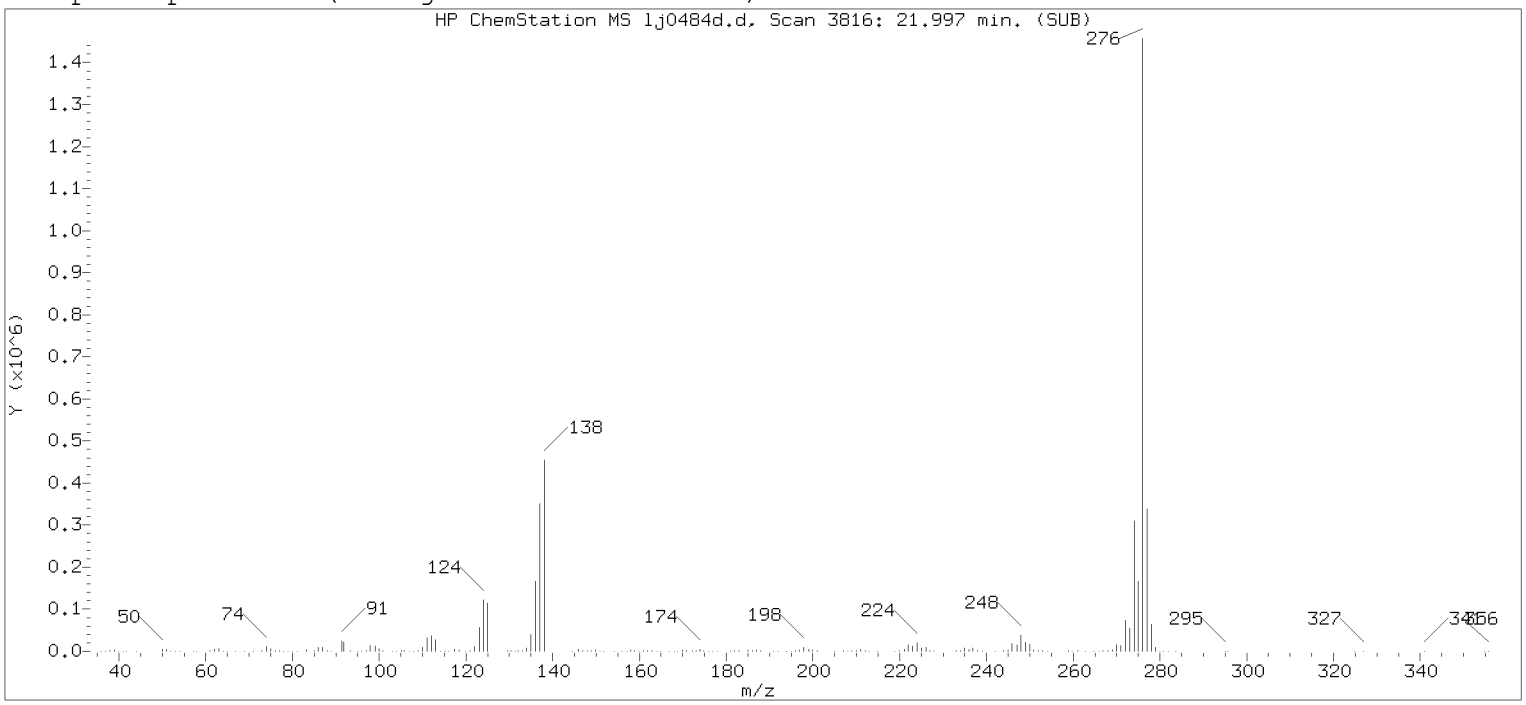
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3816
Retention Time (minutes) : 21.997
Quant Ion : 276.00
Area (flag) : 2781270M
On-Column Amount (ng/ul) : 21.3136
Integration start scan : 3803 Integration stop scan: 3819
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

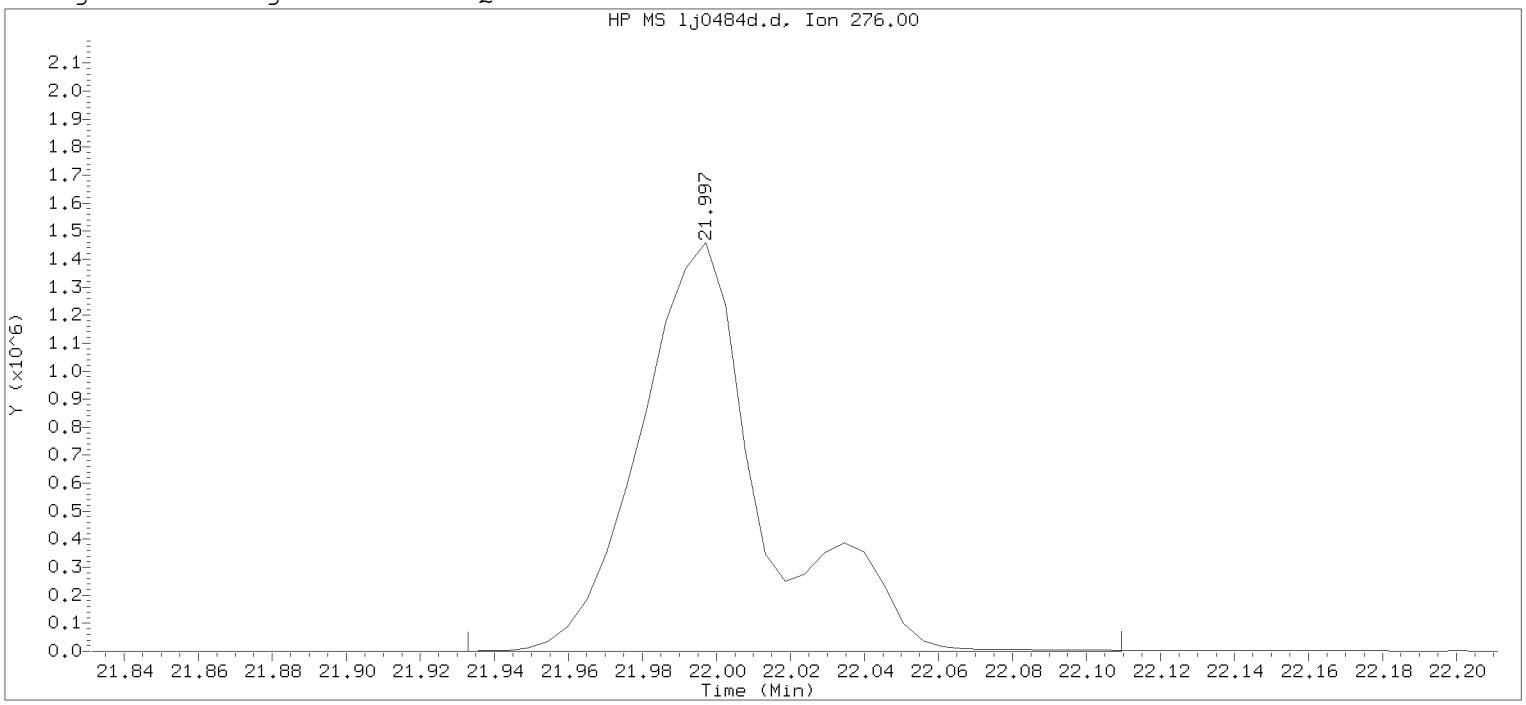
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



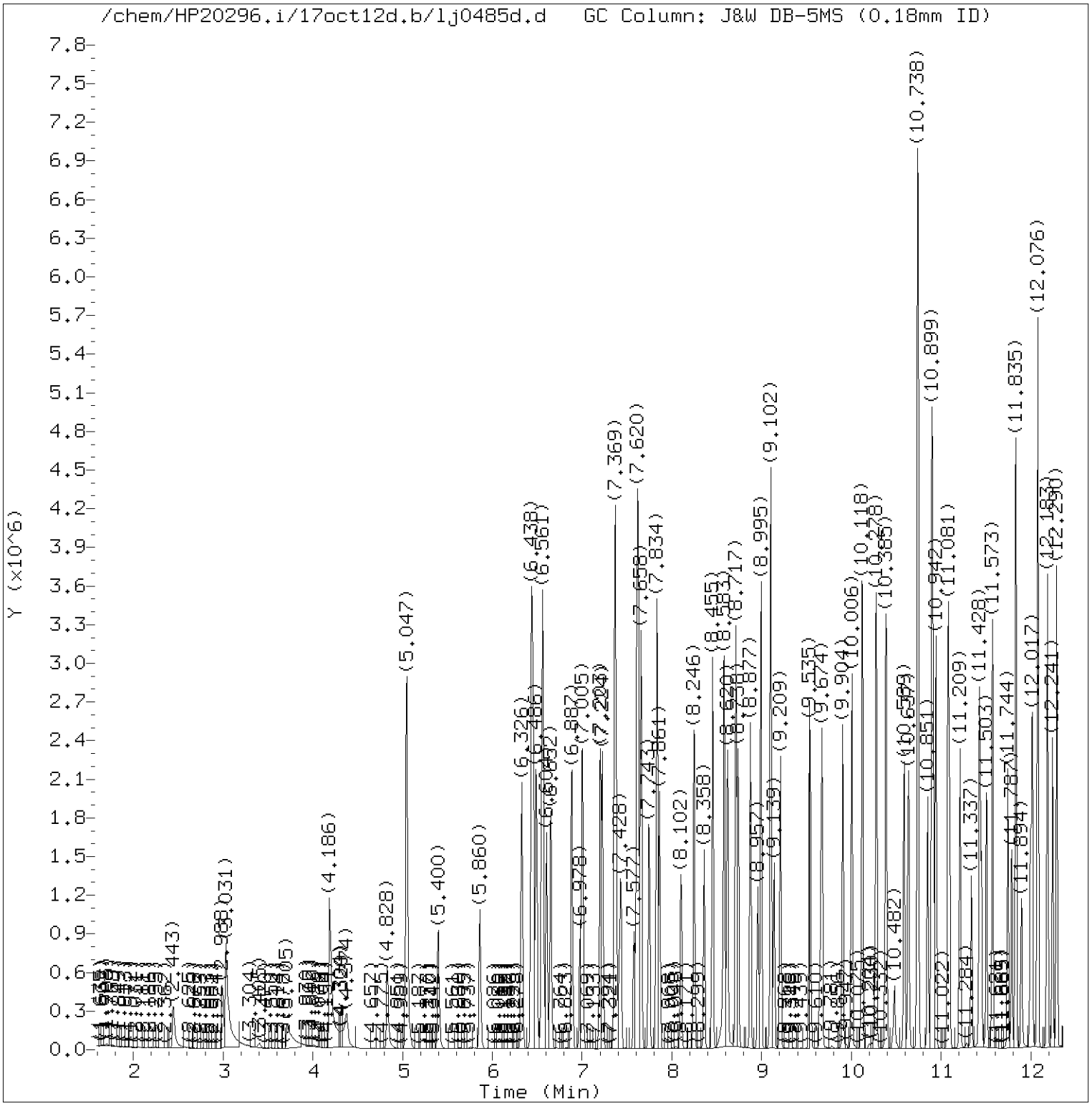
Data File: /chem/HP20296.i/17oct12d.b/lj0484d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:04
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD020 Lab Sample ID: RVSTD2857

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3816
Retention Time (minutes) : 21.997
Quant Ion : 276.00
Area : 3359573
On-column Amount (ng/ul) : 21.5286
Integration start scan : 3803 Integration stop scan: 3836
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1107



Total Ion Chromatogram (TIC)

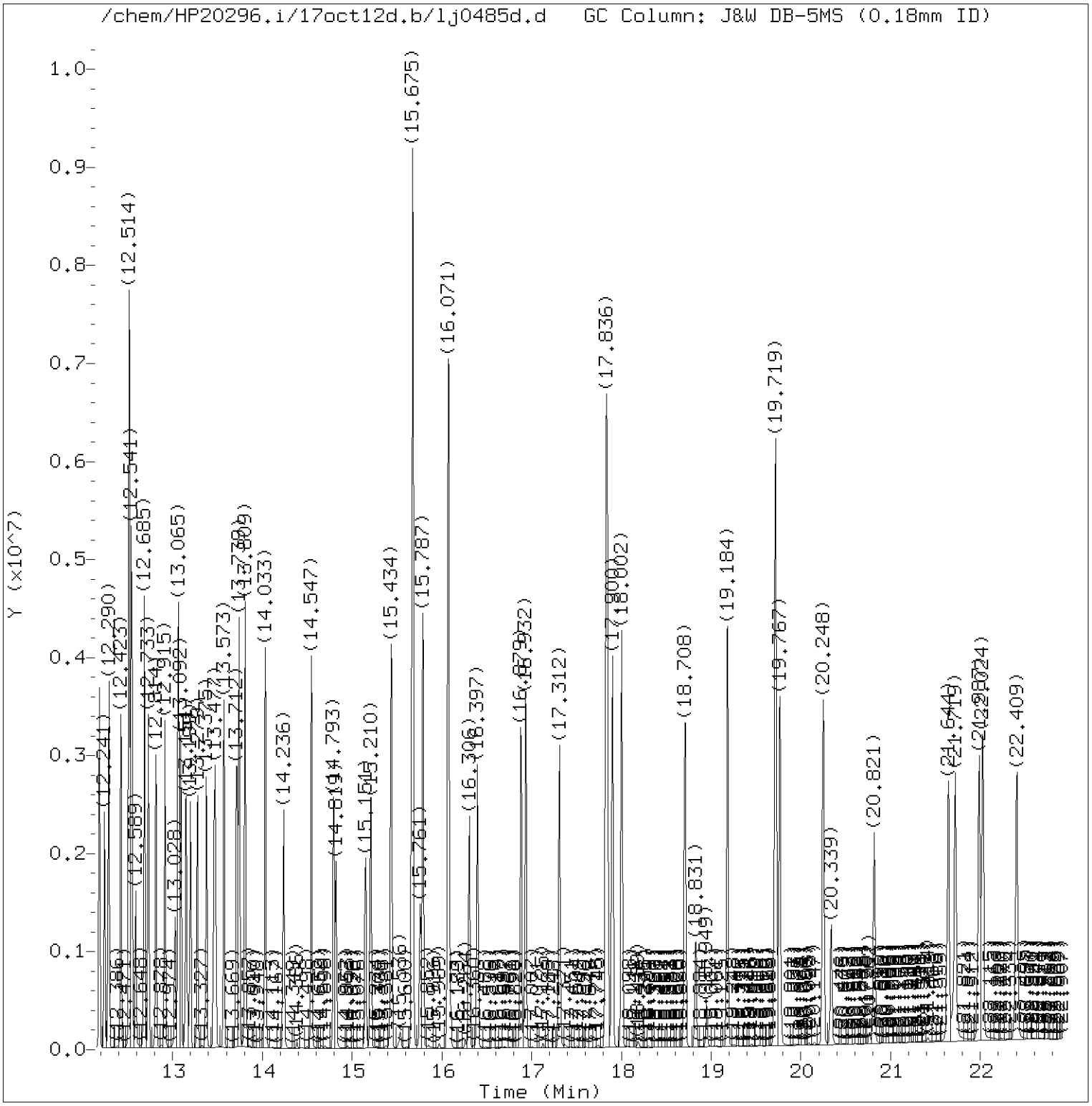
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.443	88	307589	13.113
4) N-Nitrosodimethylamine	(1)	2.988	74	482450	13.307
5) Pyridine	(1)	3.031	79	821002	12.949
7) 2-Picoline	(1)	4.186	93	874304	12.788
8) N-Nitrosomethylethylamine	(1)	4.374	88	362549	12.886
9) Methyl methanesulfonate	(1)	4.828	80	345165	12.881
11)$2-Fluorophenol	(1)	5.047	112	1419156	26.045
13) N-Nitrosodiethylamine	(1)	5.400	102	352255	13.073
42) Total Cresols	(1)			1415250	25.794
15) Ethyl methanesulfonate	(1)	5.860	109	357297	12.947
16) Benzaldehyde	(1)	6.326	77	642246	12.194
17)$Phenol-d6	(1)	6.438	99	1864900	25.928
18) Phenol	(1)	6.459	94	1076630	13.221
19) Aniline	(1)	6.486	93	1254707	12.904
20) a-methylstyrene	(1)	6.561	118	735486	12.542
22) bis(2-Chloroethyl)ether	(1)	6.604	93	751822	12.633
23) 2-Chlorophenol	(1)	6.652	128	679687	12.730
24) 1,3-Dichlorobenzene	(1)	6.887	146	742281	12.705
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	175206	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	756622	12.865
27) Benzyl alcohol	(1)	7.203	108	471509	12.360
28) 1,2-Dichlorobenzene	(1)	7.224	146	707318	12.659
30) Indene	(1)	7.363	115	1316724	12.581
31) 2-Methylphenol	(1)	7.374	108	685698	12.874
97) Isosafrole	(3)			460673	12.363
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.428	45	903317	12.706
34) bis(2-Chloroisopropyl)ether	(1)	7.428	45	903317	12.706
35) N-Nitrosopyrrolidine	(1)	7.577	100	369468	12.997
36) Acetophenone	(1)	7.609	105	1014274	12.427
37) 4-Methylphenol	(1)	7.620	108	729552	12.920
38) N-Nitroso-di-n-propylamine	(1)	7.625	70	548628	12.721
39) N-Nitrosomorpholine	(1)	7.647	56	416520	12.672
40) o-Toluidine	(1)	7.658	106	1199399	12.797
43) Hexachloroethane	(1)	7.743	117	303670	12.736
44)$Nitrobenzene-d5	(2)	7.834	82	1664254	25.408
45) Nitrobenzene	(2)	7.866	77	827208	12.579
120) 2,4_2,6-Dinitrotoluenes	(3)			682595	26.023
48) N-Nitrosopiperidine	(2)	8.102	114	351862	12.625
50) Isophorone	(2)	8.251	82	1461327	12.591
51) 2-Nitrophenol	(2)	8.358	139	335096	13.152

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.455	107	738367	12.663
57) O,O,O-Triethylphosphorothioate	(2)	8.583	198	299381	12.416
56) Benzoic acid	(2)	8.594	105	406537M	12.838
55) bis(2-Chloroethoxy)methane	(2)	8.620	93	913216	12.591
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.717	104	1049037	12.212
60) 2,4-Dichlorophenol	(2)	8.738	162	546404	12.716
146) Diallate trans/cis	(4)			679318	12.748
62) 1,2,4-Trichlorobenzene	(2)	8.877	180	578451	12.430
65)*Naphthalene-d8	(2)	8.957	136	696329	5.000
66) Naphthalene	(2)	8.995	128	1989903	12.531
67) 4-Chloroaniline	(2)	9.102	127	821351	12.519
68) 2,6-Dichlorophenol	(2)	9.107	162	538461	12.850
69) Hexachloropropene	(2)	9.139	213	293352	12.872
71) Hexachlorobutadiene	(2)	9.209	225	309628	12.622
75) Quinoline	(2)	9.535	129	1237150	12.589
76) Caprolactam	(2)	9.663	113	180392	12.056
77) N-Nitrosodi-n-butylamine	(2)	9.674	84	648482	13.572
80) 4-Chloro-3-methylphenol	(2)	9.904	107	633589	12.790
82) Safrole	(2)	10.006	162	490377	12.501
83) 2-Methylnaphthalene	(2)	10.123	142	1310826	12.630
84) 1-Methylnaphthalene	(2)	10.278	142	1190178	12.547
85) Hexachlorocyclopentadiene	(3)	10.380	237	276576	12.652
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.391	216	559303	12.394
88) cis-Isosafrole	(3)	10.482	162	85191	2.075
90) 2,4,6-Trichlorophenol	(3)	10.589	196	368883	12.881
92) 2,4,5-Trichlorophenol	(3)	10.637	196	392947	12.562
93)$2-Fluorobiphenyl	(3)	10.738	172	2737660	24.948
94) trans-Isosafrole	(3)	10.851	162	375482	10.289
95) 1,1'-Biphenyl	(3)	10.899	154	1461922	12.019
96) 2-Chloronaphthalene	(3)	10.910	162	1167008	12.135
98) 1-Chloronaphthalene	(3)	10.942	162	1112230	12.564
99) Diphenyl ether	(3)	11.081	170	795024	12.620
100) 2-Nitroaniline	(3)	11.091	138	388663	13.490
104) 1,4-Naphthoquinone	(3)	11.209	158	490229	12.734
105) 1,4-Dinitrobenzene	(3)	11.337	168	180292	12.618
106) Dimethylphthalate	(3)	11.428	163	1280162	12.314
107) 1,3-Dinitrobenzene	(3)	11.450	168	204930	12.608
108) 2,6-Dinitrotoluene	(3)	11.509	165	289703	13.180
109) Acenaphthylene	(3)	11.573	152	1709276	12.824
112) 3-Nitroaniline	(3)	11.744	138	344360	13.386

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.787	164	375508	5.000
114) Acenaphthene	(3)	11.835	153	1260715	12.406
115) 2,4-Dinitrophenol	(3)	11.894	184	163689	12.953
116) 4-Nitrophenol	(3)	11.995	109	221049	12.476
117) Pentachlorobenzene	(3)	12.017	250	419842	12.377
119) Dibenzofuran	(3)	12.076	168	1638819	12.479
118) 2,4-Dinitrotoluene	(3)	12.081	165	392892	12.843
121) 1-Naphthylamine	(3)	12.183	143	1277101	12.409
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	286138	13.219
123) 2-Naphthylamine	(3)	12.290	143	1223346	12.293
124) Diethylphthalate	(3)	12.423	149	1309318	12.687
126) Fluorene	(3)	12.514	166	1314483	12.313
125) Thionazin	(3)	12.519	107	237562	11.403
127) 4-Chlorophenyl-phenylether	(3)	12.536	204	582090	12.302
128) 5-Nitro-o-toluidine	(3)	12.541	152	379167	13.161
129) 4-Nitroaniline	(3)	12.552	138	348968	13.114
130) 4,6-Dinitro-2-methylphenol	(4)	12.589	198	215993	13.038
132) NDPA as diphenylamine	(4)	12.685	169	1117952	12.759
131) N-Nitrosodiphenylamine	(4)	12.685	169	1117952	12.759
134) 1,2-Diphenylhydrazine	(4)	12.733	77	1557363	12.606
135)$2,4,6-Tribromophenol	(3)	12.819	330	254386	25.803
137) Tetraethyldithiopyrophosphate	(4)	12.915	97	261329	12.699
139) 1,3,5-Trinitrobenzene	(4)	13.028	213	129897	12.674
140) Diallate (peak 1)	(4)	13.060	86	581697	10.570
141) Phorate	(4)	13.070	75	1009442	13.115
142) Phenacetin	(4)	13.092	108	788684	13.150
143) 4-Bromophenyl-phenylether	(4)	13.151	248	300776	12.542
144) Diallate (peak 2)	(4)	13.167	86	97621	2.178
145) Hexachlorobenzene	(4)	13.199	284	302212	12.972
147) Dimethoate	(4)	13.279	87	635391	12.763
148) Atrazine	(4)	13.375	200	328620	12.268
149) Pentachlorophenol	(4)	13.461	266	202689	13.515
150) 4-Aminobiphenyl	(4)	13.477	169	366588	12.895
151) Pentachloronitrobenzene	(4)	13.477	237	143095	12.784
152) Pronamide	(4)	13.573	173	615296	13.163
153)*Phenanthrene-d10	(4)	13.707	188	658288	5.000
154) Dinoseb	(4)	13.718	211	313609	13.625
155) Phenanthrene	(4)	13.744	178	1919802	12.454
157) Anthracene	(4)	13.809	178	1945940	12.861
163) Carbazole	(4)	14.033	167	1876388	12.898

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

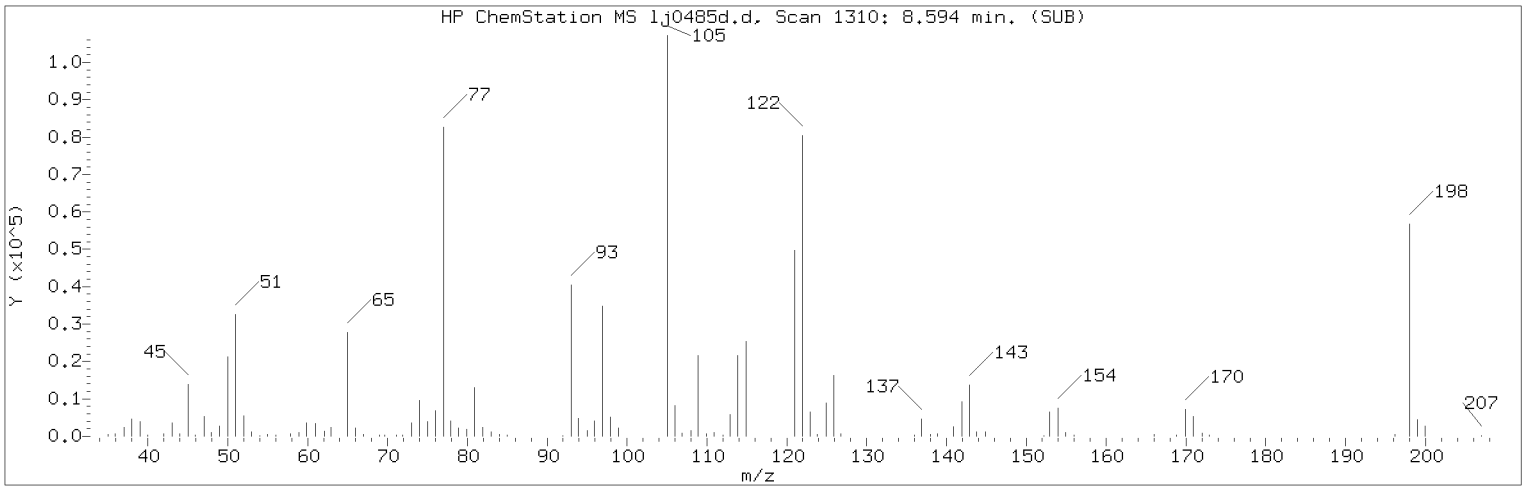
Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.236	109	494608	13.230
165) Di-n-butylphthalate	(4)	14.547	149	2329709	12.769
167) Parathion	(4)	14.793	109	312302	13.287
168) 4-Nitroquinoline-1-oxide	(4)	14.819	190	221478	12.092
222) Total PAHs	(6)			27858032	203.836
169) Octachlorostyrene	(4)	15.151	308	110303	13.035
171) Isodrin	(4)	15.210	193	216813	12.536
173) Fluoranthene	(4)	15.434	202	2133023	12.923
174) Benzidine	(5)	15.675	184	4780533	37.745
175)*Pyrene-d10	(5)	15.761	212	748478	5.000
177) Pyrene	(5)	15.787	202	2203298	12.445
179)$Terphenyl-d14	(5)	16.071	244	2772850	25.493
182) p-Dimethylaminoazobenzene	(5)	16.306	225	320963	13.823
185) Chlorobenzilate	(5)	16.397	139	717248	12.839
187) 3,3'-Dimethylbenzidine	(5)	16.879	212	1497625	12.933
188) Butylbenzylphthalate	(5)	16.932	149	1072002	12.929
191) 2-Acetylaminofluorene	(5)	17.312	181	957694	12.965
193) 3,3'-Dichlorobenzidine	(5)	17.825	252	743218	12.757
195) Benzo(a)anthracene	(5)	17.836	228	2071851	13.020
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.847	231	378472	12.569
196) Chrysene	(5)	17.900	228	1878463	12.818
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	1556052	12.846
203) 6-Methylchrysene	(5)	18.713	242	1336574	12.688
205) Di-n-octylphthalate	(6)	19.184	149	2821672	13.074
206) Benzo(b)fluoranthene	(6)	19.713	252	1942219	12.826
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.719	256	854689	13.207
208) Benzo(k)fluoranthene	(6)	19.767	252	1857900	12.836
211) Benzo(a)pyrene	(6)	20.248	252	1821484	12.862
213)*Perylene-d12	(6)	20.339	264	581958	5.000
215) 3-Methylcholanthrene	(6)	20.821	268	659387	13.135
217) Dibenz(a,h)acridine	(6)	21.644	279	1458842	12.707
218) Dibenz(a,j)acridine	(6)	21.719	279	1539507	12.932
219) Indeno(1,2,3-cd)pyrene	(6)	21.987	276	1689310M	13.135
220) Dibenz(a,h)anthracene	(6)	22.029	278	1712249	13.158
221) Benzo(g,h,i)perylene	(6)	22.409	276	1707231	12.911

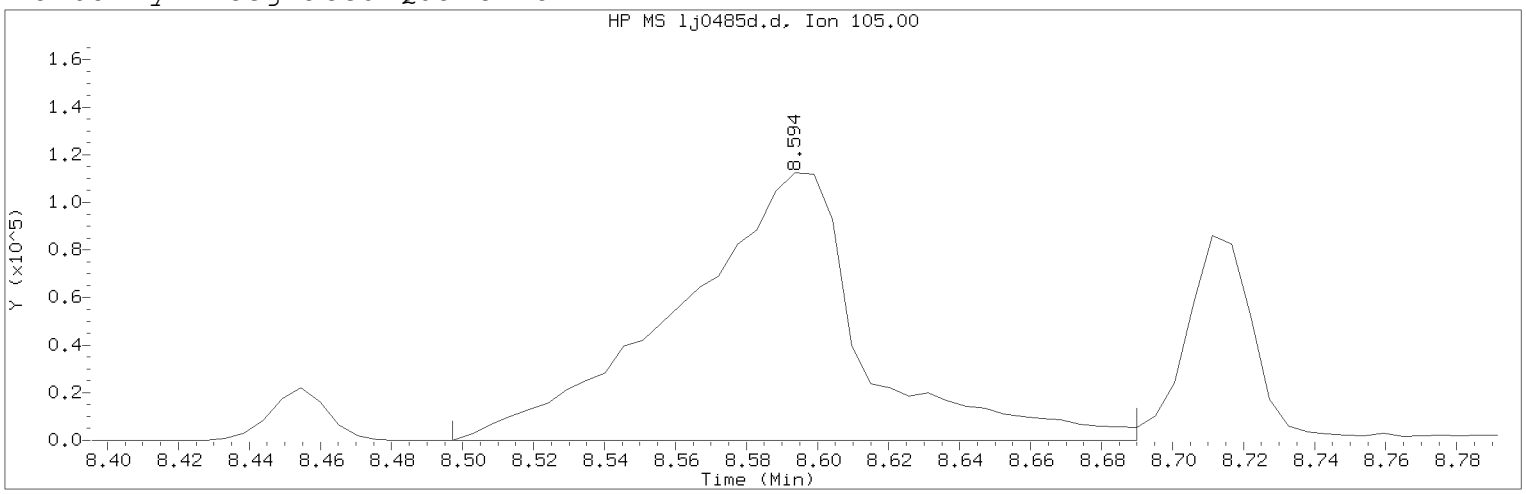
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

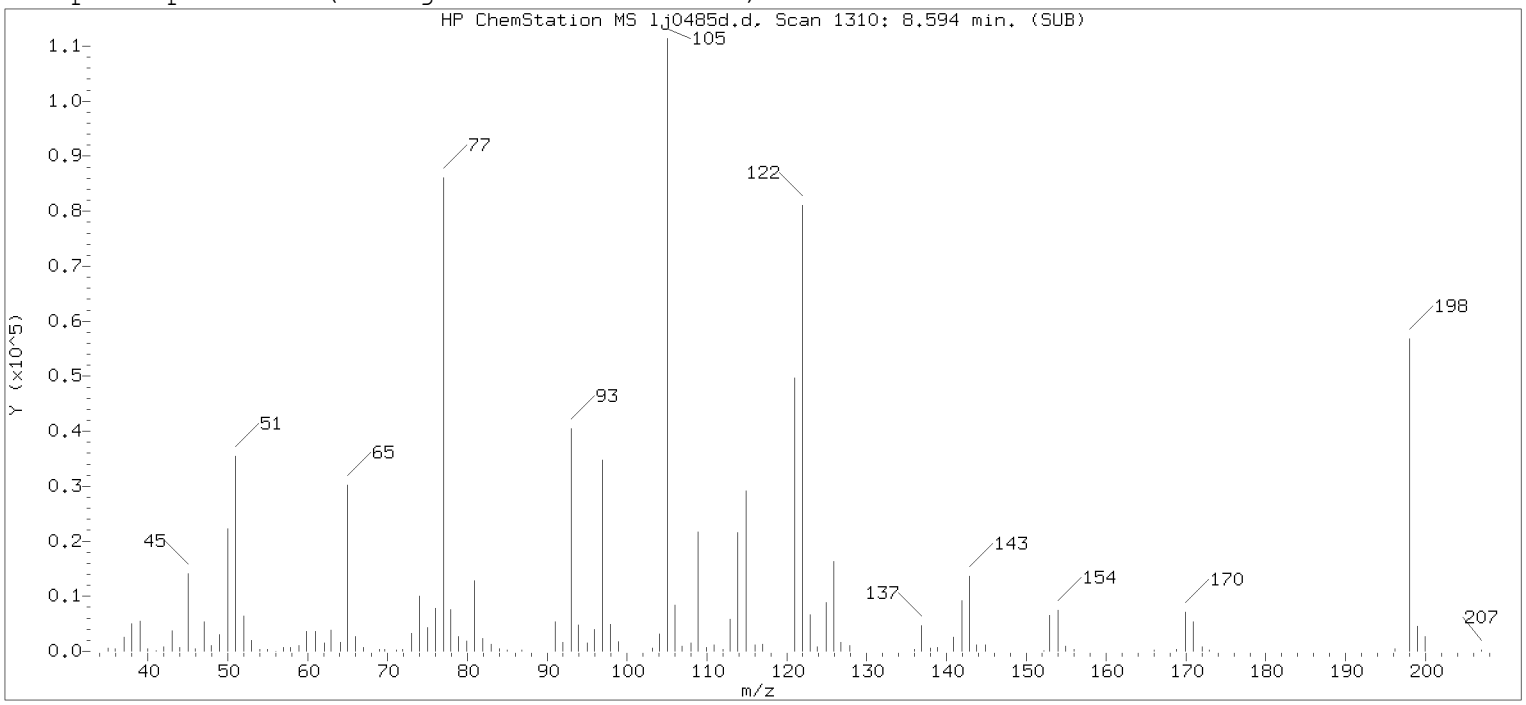
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1310
Retention Time (minutes) : 8.594
Quant Ion : 105.00
Area (flag) : 406537M
On-Column Amount (ng/ul) : 12.8376
Integration start scan : 1291 Integration stop scan: 1327
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

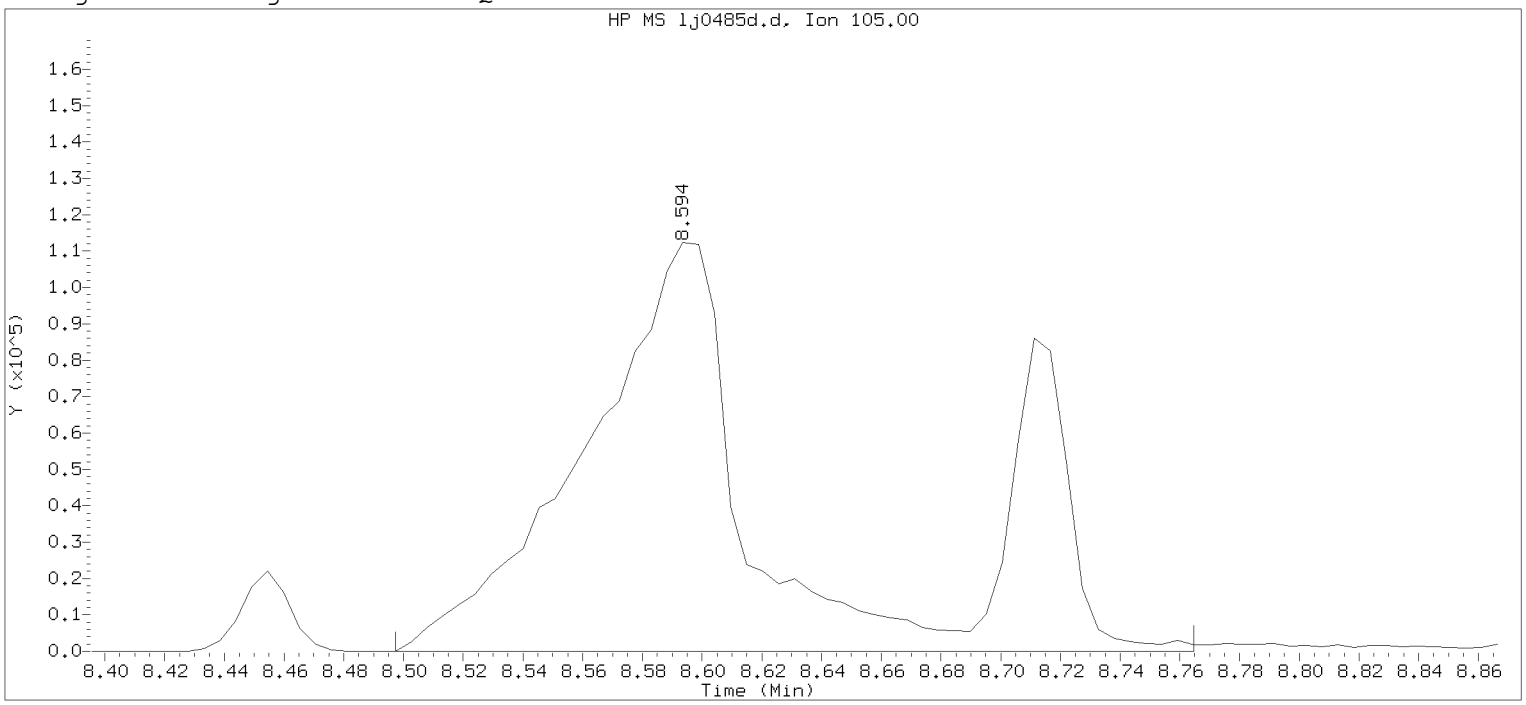
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

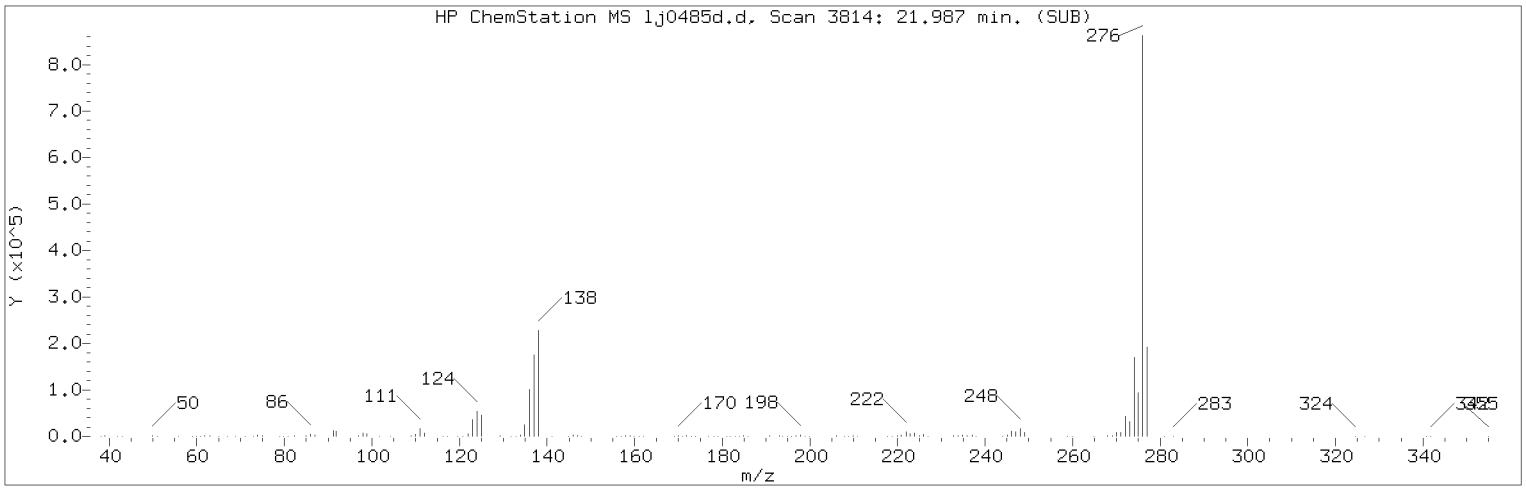
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

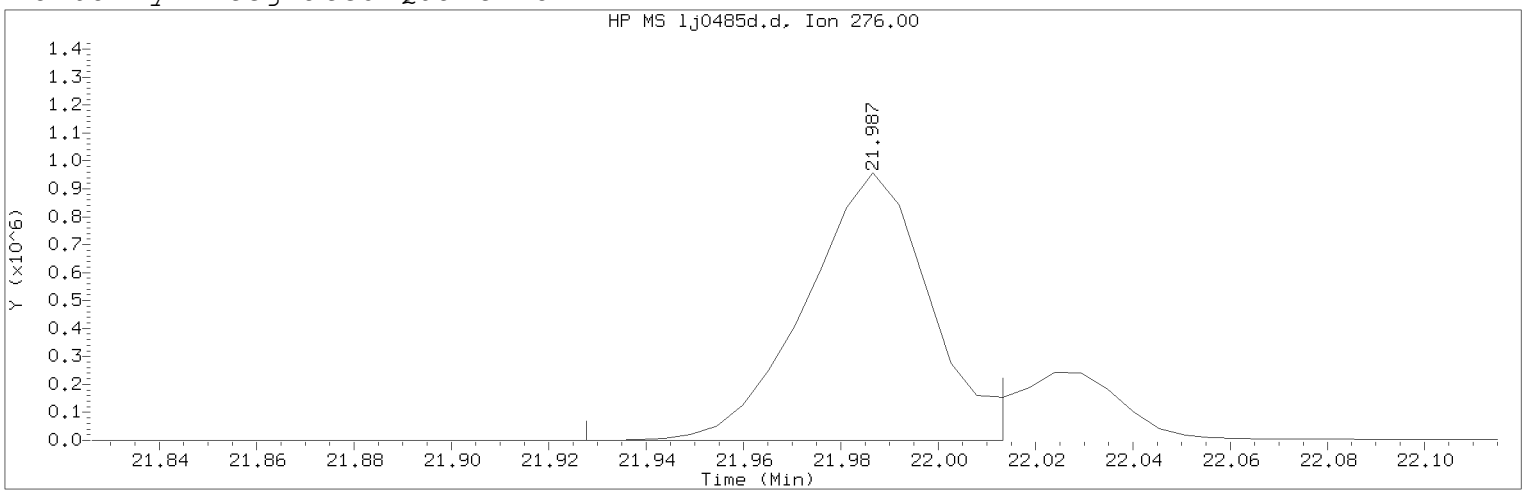
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1310
Retention Time (minutes) : 8.594
Quant Ion : 105.00
Area : 519045
On-column Amount (ng/ul) : 14.5813
Integration start scan : 1291 Integration stop scan: 1341
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

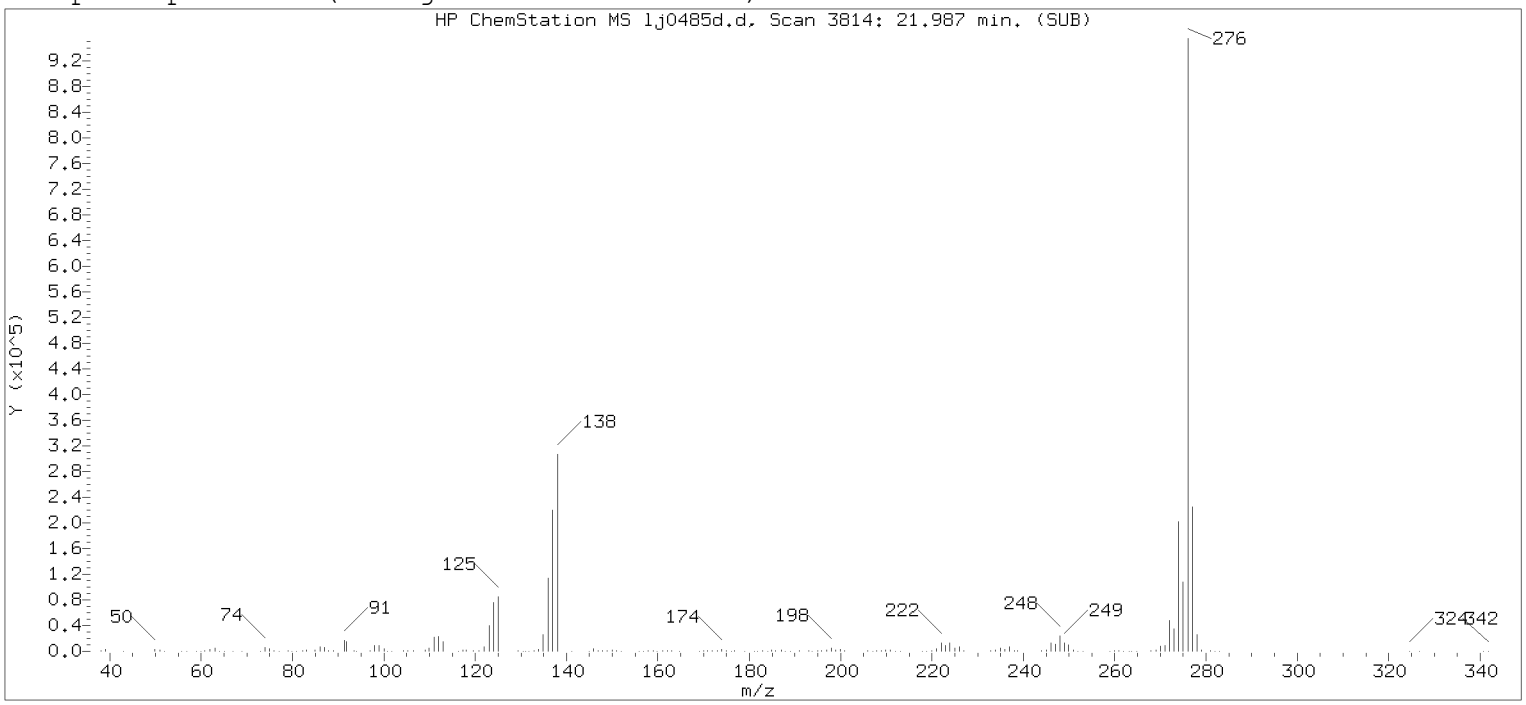
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3814
Retention Time (minutes) : 21.987
Quant Ion : 276.00
Area (flag) : 1689310M
On-Column Amount (ng/ul) : 13.1351
Integration start scan : 3802 Integration stop scan: 3818
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

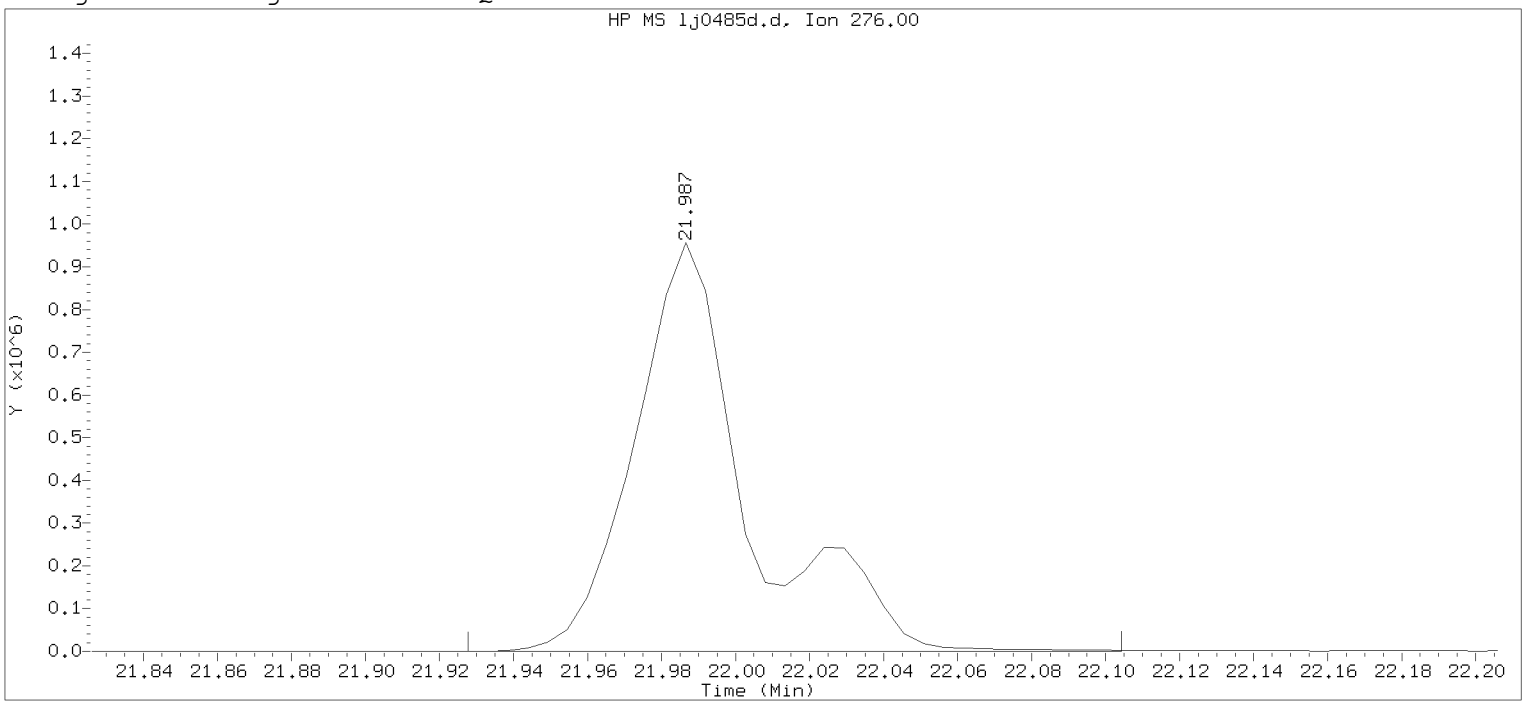
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



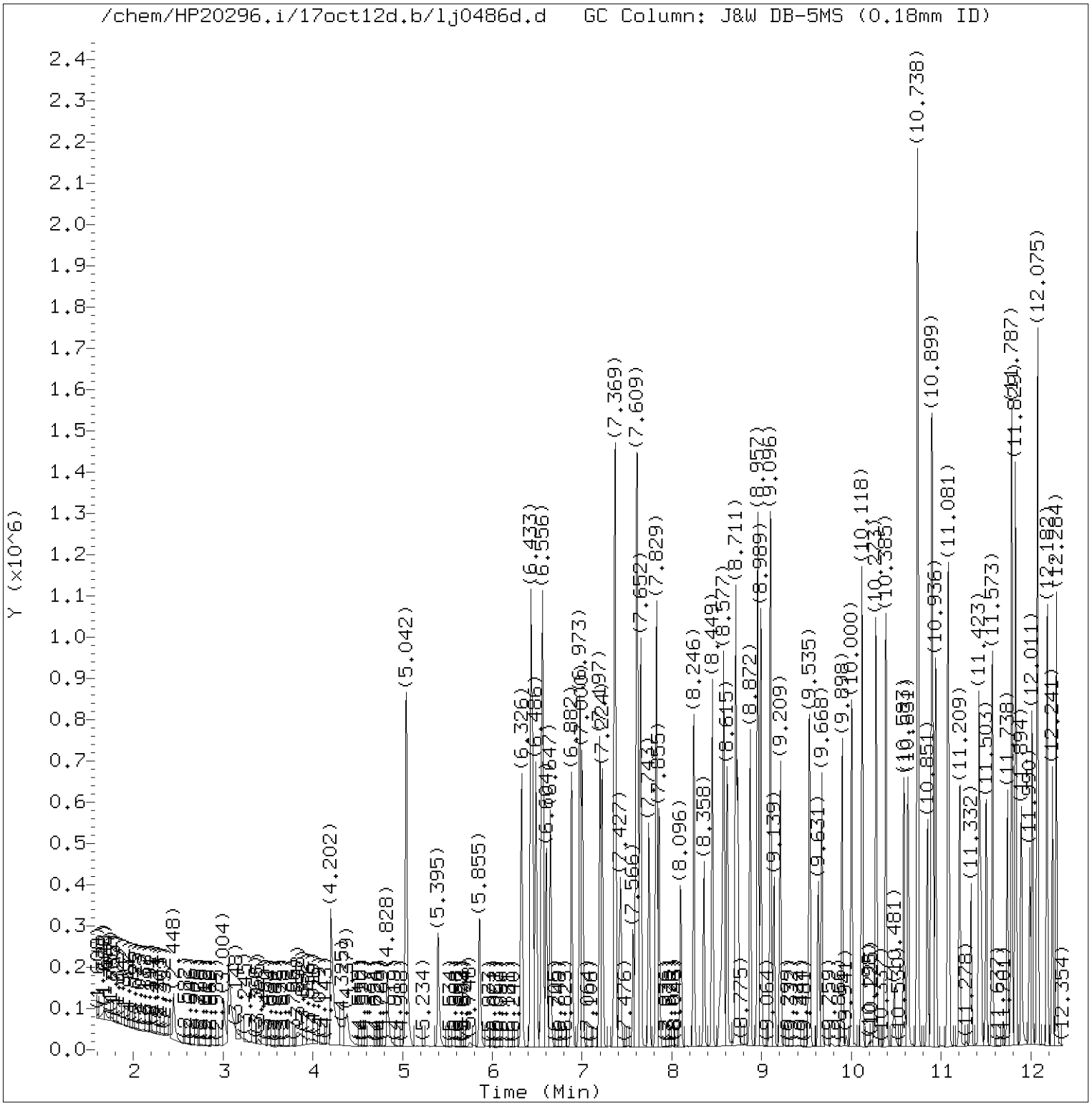
Data File: /chem/HP20296.i/17oct12d.b/lj0485d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2857

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3814
Retention Time (minutes) : 21.987
Quant Ion : 276.00
Area : 2031246
On-column Amount (ng/ul) : 13.1219
Integration start scan : 3802 Integration stop scan: 3835
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

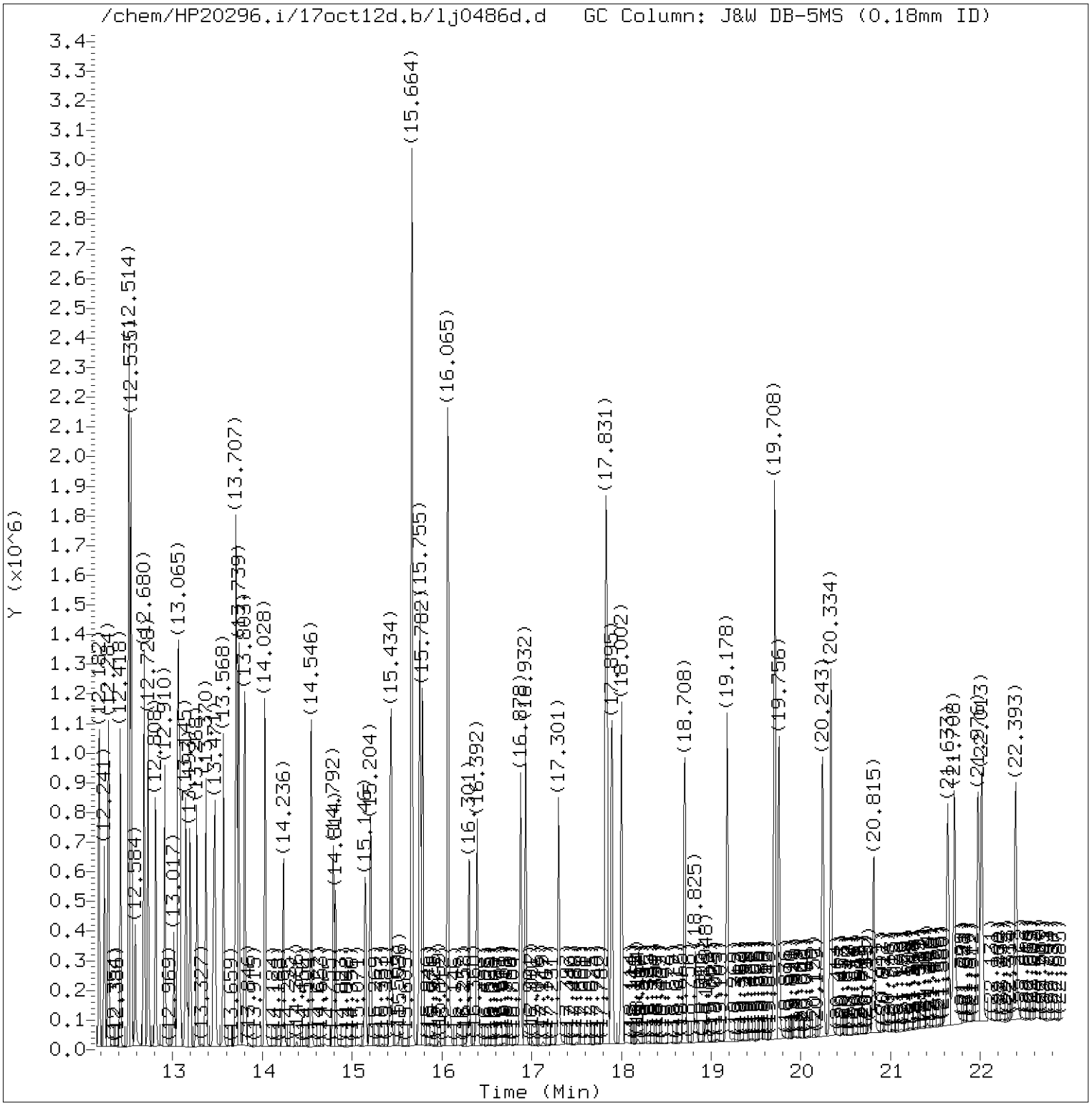
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.448	88	83803	3.500
4) N-Nitrosodimethylamine	(1)	3.004	74	129483	3.499
5) Pyridine	(1)	3.063	79	232171	3.588
7) 2-Picoline	(1)	4.202	93	258591	3.706
8) N-Nitrosomethylethylamine	(1)	4.379	88	101654	3.540
9) Methyl methanesulfonate	(1)	4.828	80	100462	3.673
11)$2-Fluorophenol	(1)	5.042	112	409217	7.358
13) N-Nitrosodiethylamine	(1)	5.395	102	102282	3.719
42) Total Cresols	(1)			425785	7.602
15) Ethyl methanesulfonate	(1)	5.860	109	106038	3.765
16) Benzaldehyde	(1)	6.326	77	202859	3.774
17)$Phenol-d6	(1)	6.433	99	542388	7.388
18) Phenol	(1)	6.449	94	291199	3.504
19) Aniline	(1)	6.486	93	364233	3.670
20) a-methylstyrene	(1)	6.561	118	226830	3.790
22) bis(2-Chloroethyl)ether	(1)	6.604	93	226380	3.727
23) 2-Chlorophenol	(1)	6.647	128	202489	3.716
24) 1,3-Dichlorobenzene	(1)	6.882	146	221561	3.716
25)*1,4-Dichlorobenzene-d4	(1)	6.973	152	178828	5.000
26) 1,4-Dichlorobenzene	(1)	7.000	146	222042	3.699
27) Benzyl alcohol	(1)	7.197	108	148667	3.818
28) 1,2-Dichlorobenzene	(1)	7.224	146	208695	3.659
30) Indene	(1)	7.363	115	408263	3.822
31) 2-Methylphenol	(1)	7.374	108	205280	3.776
97) Isosafrole	(3)			135837	3.652
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.427	45	270240	3.724
34) bis(2-Chloroisopropyl)ether	(1)	7.427	45	270240	3.724
35) N-Nitrosopyrrolidine	(1)	7.566	100	105316	3.630
36) Acetophenone	(1)	7.604	105	321497	3.859
37) 4-Methylphenol	(1)	7.615	108	220505	3.826
38) N-Nitroso-di-n-propylamine	(1)	7.620	70	164149	3.729
39) N-Nitrosomorpholine	(1)	7.641	56	122848	3.662
40) o-Toluidine	(1)	7.652	106	358509	3.748
43) Hexachloroethane	(1)	7.743	117	90117	3.703
44)$Nitrobenzene-d5	(2)	7.829	82	479659	7.274
45) Nitrobenzene	(2)	7.855	77	248100	3.748
120) 2,4_2,6-Dinitrotoluenes	(3)			194847	7.446
48) N-Nitrosopiperidine	(2)	8.096	114	102995	3.671
50) Isophorone	(2)	8.246	82	432259	3.700
51) 2-Nitrophenol	(2)	8.358	139	93371	3.640

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.449	107	212555	3.621
56) Benzoic acid	(2)	8.567	105	178446	7.140
57) O,O,O-Triethylphosphorothioate	(2)	8.577	198	87895	3.621
55) bis(2-Chloroethoxy)methane	(2)	8.615	93	270432	3.704
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.711	104	329400	3.809
60) 2,4-Dichlorophenol	(2)	8.738	162	161503	3.734
146) Diallate trans/cis	(4)			194789	3.744
62) 1,2,4-Trichlorobenzene	(2)	8.872	180	172919	3.691
65)*Naphthalene-d8	(2)	8.957	136	700990	5.000
66) Naphthalene	(2)	8.989	128	593525	3.713
67) 4-Chloroaniline	(2)	9.096	127	243244	3.683
68) 2,6-Dichlorophenol	(2)	9.102	162	156326	3.706
69) Hexachloropropene	(2)	9.139	213	80541	3.511
71) Hexachlorobutadiene	(2)	9.209	225	90983	3.684
75) Quinoline	(2)	9.535	129	362694	3.666
76) Caprolactam	(2)	9.631	113	56522	3.753
77) N-Nitrosodi-n-butylamine	(2)	9.668	84	153870	3.199
80) 4-Chloro-3-methylphenol	(2)	9.898	107	183253	3.675
82) Safrole	(2)	10.005	162	142328	3.604
83) 2-Methylnaphthalene	(2)	10.118	142	386205	3.696
84) 1-Methylnaphthalene	(2)	10.273	142	346029	3.624
85) Hexachlorocyclopentadiene	(3)	10.380	237	74803	3.429
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.391	216	162079	3.599
88) cis-Isosafrole	(3)	10.481	162	25509	0.623
90) 2,4,6-Trichlorophenol	(3)	10.583	196	103243	3.613
92) 2,4,5-Trichlorophenol	(3)	10.631	196	113572	3.639
93)$2-Fluorobiphenyl	(3)	10.738	172	804148	7.344
94) trans-Isosafrole	(3)	10.851	162	110328	3.030
95) 1,1'-Biphenyl	(3)	10.893	154	461452	3.802
96) 2-Chloronaphthalene	(3)	10.904	162	361144	3.763
98) 1-Chloronaphthalene	(3)	10.936	162	317198	3.591
99) Diphenyl ether	(3)	11.075	170	232523	3.699
100) 2-Nitroaniline	(3)	11.086	138	104782	3.645
104) 1,4-Naphthoquinone	(3)	11.209	158	138697	3.611
105) 1,4-Dinitrobenzene	(3)	11.332	168	49564	3.476
106) Dimethylphthalate	(3)	11.423	163	383702	3.699
107) 1,3-Dinitrobenzene	(3)	11.444	168	57527	3.547
108) 2,6-Dinitrotoluene	(3)	11.503	165	82866	3.778
109) Acenaphthylene	(3)	11.573	152	488222	3.671
112) 3-Nitroaniline	(3)	11.738	138	97472	3.797

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$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.787	164	374708	5.000
114) Acenaphthene	(3)	11.829	153	373393	3.682
115) 2,4-Dinitrophenol	(3)	11.894	184	78686	6.240
116) 4-Nitrophenol	(3)	11.990	109	60737	3.435
117) Pentachlorobenzene	(3)	12.011	250	122287	3.613
118) 2,4-Dinitrotoluene	(3)	12.075	165	111981	3.668
119) Dibenzofuran	(3)	12.075	168	486241	3.711
121) 1-Naphthylamine	(3)	12.182	143	364187	3.546
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	77837	3.603
123) 2-Naphthylamine	(3)	12.284	143	355300	3.578
124) Diethylphthalate	(3)	12.418	149	373846	3.630
126) Fluorene	(3)	12.514	166	393137	3.691
125) Thionazin	(3)	12.514	107	77342	3.720
128) 5-Nitro-o-toluidine	(3)	12.535	152	102528	3.566
127) 4-Chlorophenyl-phenylether	(3)	12.535	204	172132	3.646
129) 4-Nitroaniline	(3)	12.541	138	99577	3.750
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	52194	3.229
132) NDPA as diphenylamine	(4)	12.680	169	318202	3.722
131) N-Nitrosodiphenylamine	(4)	12.680	169	318202	3.722
134) 1,2-Diphenylhydrazine	(4)	12.728	77	454570	3.771
135)$2,4,6-Tribromophenol	(3)	12.813	330	66693	6.779
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	75598	3.765
139) 1,3,5-Trinitrobenzene	(4)	13.017	213	31947M	3.194
140) Diallate (peak 1)	(4)	13.054	86	167242	3.114
141) Phorate	(4)	13.065	75	285767	3.805
142) Phenacetin	(4)	13.081	108	223888	3.825
143) 4-Bromophenyl-phenylether	(4)	13.145	248	88236	3.770
144) Diallate (peak 2)	(4)	13.166	86	27547	0.630
145) Hexachlorobenzene	(4)	13.193	284	88230	3.881
147) Dimethoate	(4)	13.268	87	179849	3.702
148) Atrazine	(4)	13.370	200	104669	4.004
149) Pentachlorophenol	(4)	13.455	266	50376	3.442
151) Pentachloronitrobenzene	(4)	13.471	237	40721	3.728
150) 4-Aminobiphenyl	(4)	13.477	169	102191	3.684
152) Pronamide	(4)	13.568	173	171535	3.761
153)*Phenanthrene-d10	(4)	13.707	188	642370	5.000
154) Dinoseb	(4)	13.717	211	73316	3.264
155) Phenanthrene	(4)	13.739	178	553844	3.682
157) Anthracene	(4)	13.803	178	554571	3.756
163) Carbazole	(4)	14.028	167	527257	3.714

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

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

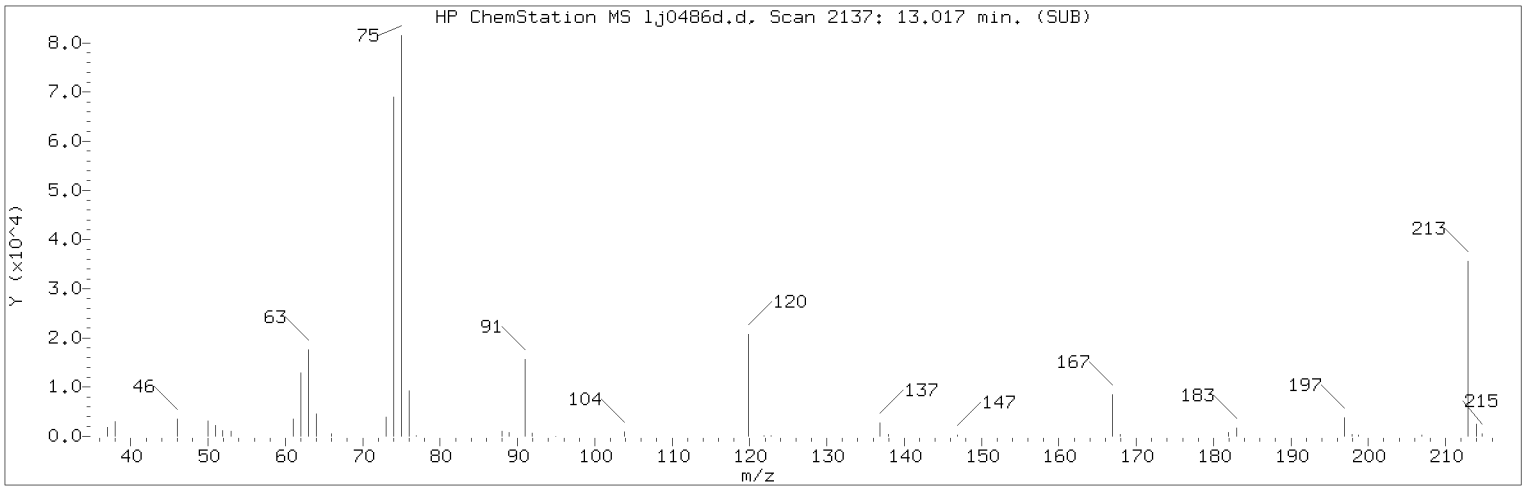
Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.236	109	129609	3.553
165) Di-n-butylphthalate	(4)	14.546	149	642762	3.610
167) Parathion	(4)	14.792	109	76403	3.331
168) 4-Nitroquinoline-1-oxide	(4)	14.814	190	47807	3.493
222) Total PAHs	(6)			7890123	58.954
169) Octachlorostyrene	(4)	15.151	308	30741	3.723
171) Isodrin	(4)	15.204	193	62417	3.698
173) Fluoranthene	(4)	15.434	202	592767	3.680
174) Benzidine	(5)	15.664	184	1358415	10.956
175)*Pyrene-d10	(5)	15.755	212	732715	5.000
177) Pyrene	(5)	15.782	202	628053	3.624
179)$Terphenyl-d14	(5)	16.065	244	783118	7.355
182) p-Dimethylaminoazobenzene	(5)	16.306	225	82898	3.647
185) Chlorobenzilate	(5)	16.392	139	199470	3.647
187) 3,3'-Dimethylbenzidine	(5)	16.878	212	402115	3.547
188) Butylbenzylphthalate	(5)	16.932	149	298178	3.674
191) 2-Acetylaminofluorene	(5)	17.301	181	250136	3.459
193) 3,3'-Dichlorobenzidine	(5)	17.820	252	200496	3.516
195) Benzo(a)anthracene	(5)	17.831	228	573064	3.679
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.841	231	105037	3.563
196) Chrysene	(5)	17.895	228	528818	3.686
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	414607	3.496
203) 6-Methylchrysene	(5)	18.708	242	367618	3.565
205) Di-n-octylphthalate	(6)	19.178	149	716077	3.473
206) Benzo(b)fluoranthene	(6)	19.708	252	531713	3.675
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.713	256	223659	3.618
208) Benzo(k)fluoranthene	(6)	19.756	252	527299	3.813
211) Benzo(a)pyrene	(6)	20.243	252	493417	3.647
213)*Perylene-d12	(6)	20.334	264	555989	5.000
215) 3-Methylcholanthrene	(6)	20.815	268	169573	3.536
217) Dibenz(a,h)acridine	(6)	21.639	279	393577	3.588
218) Dibenz(a,j)acridine	(6)	21.708	279	415303	3.652
219) Indeno(1,2,3-cd)pyrene	(6)	21.976	276	452236M	3.681
220) Dibenz(a,h)anthracene	(6)	22.018	278	467790	3.763
221) Benzo(g,h,i)perylene	(6)	22.393	276	465052	3.681

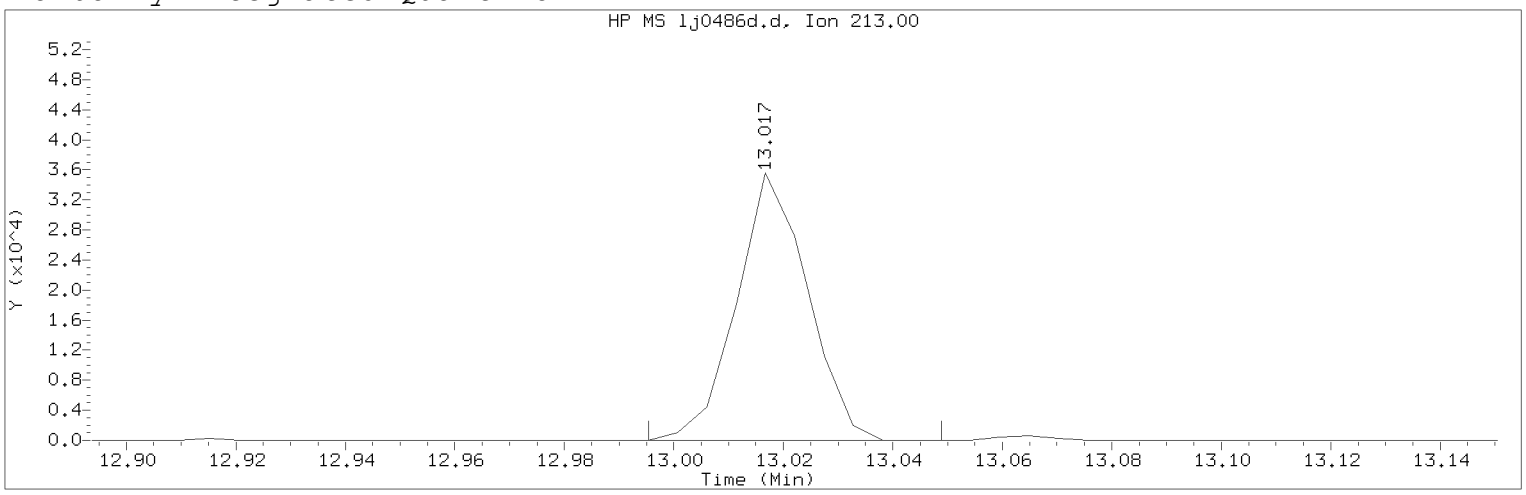
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

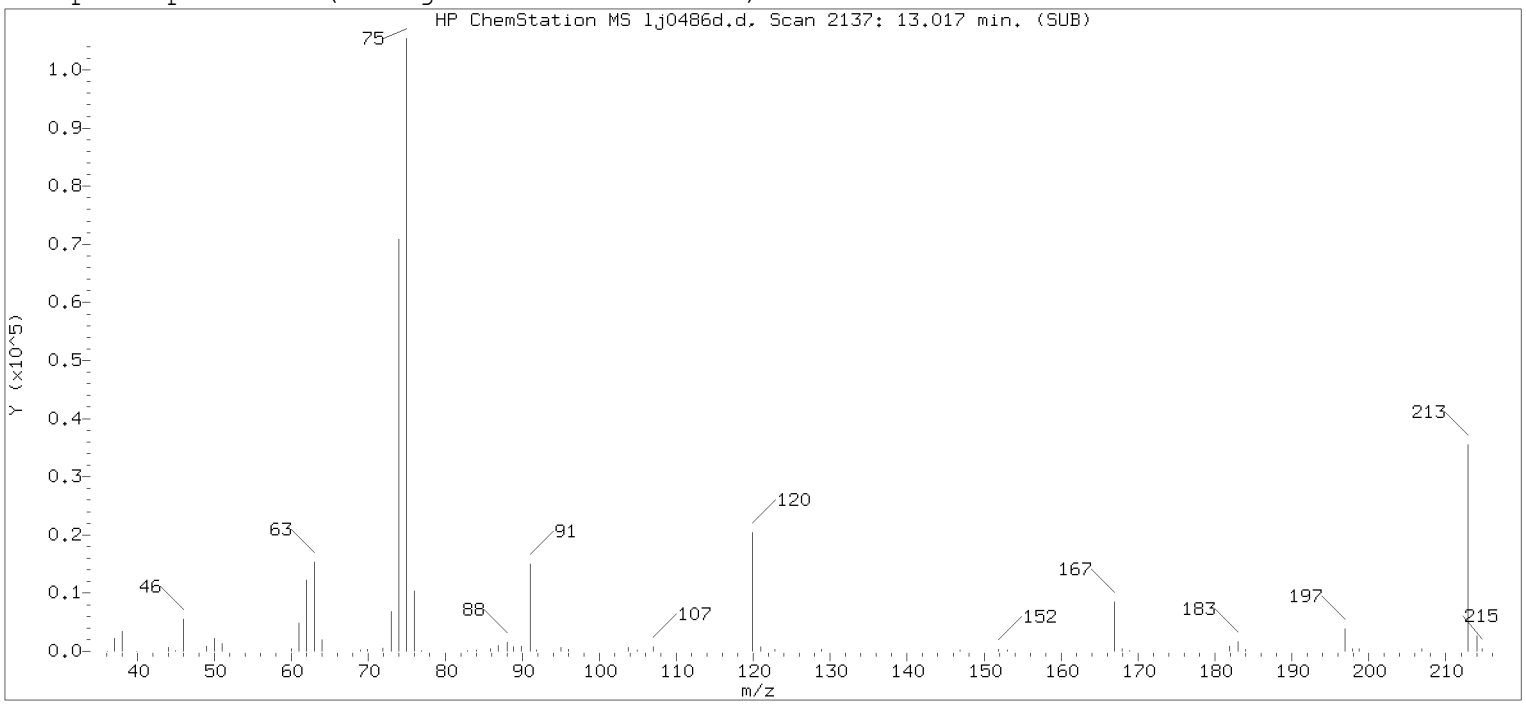
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 2137
Retention Time (minutes) : 13.017
Quant Ion : 213.00
Area (flag) : 31947M
On-Column Amount (ng/ul) : 3.1943
Integration start scan : 2132 Integration stop scan: 2142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

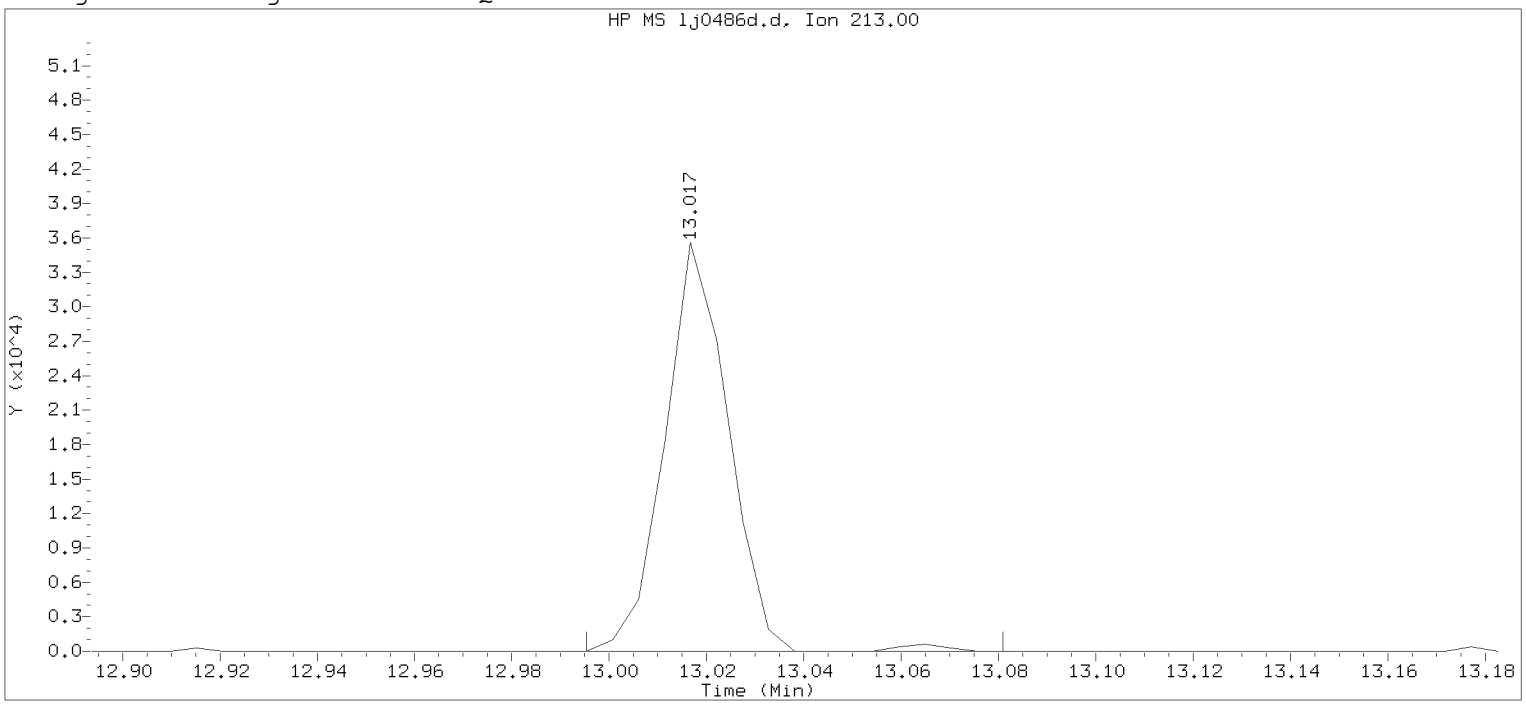
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

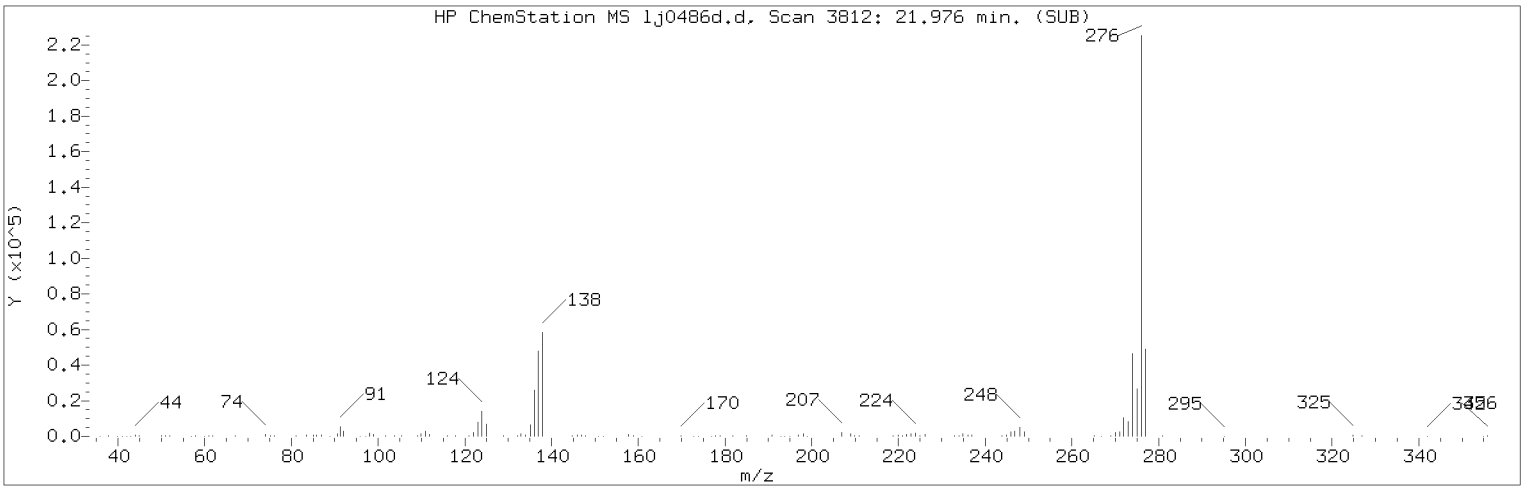
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

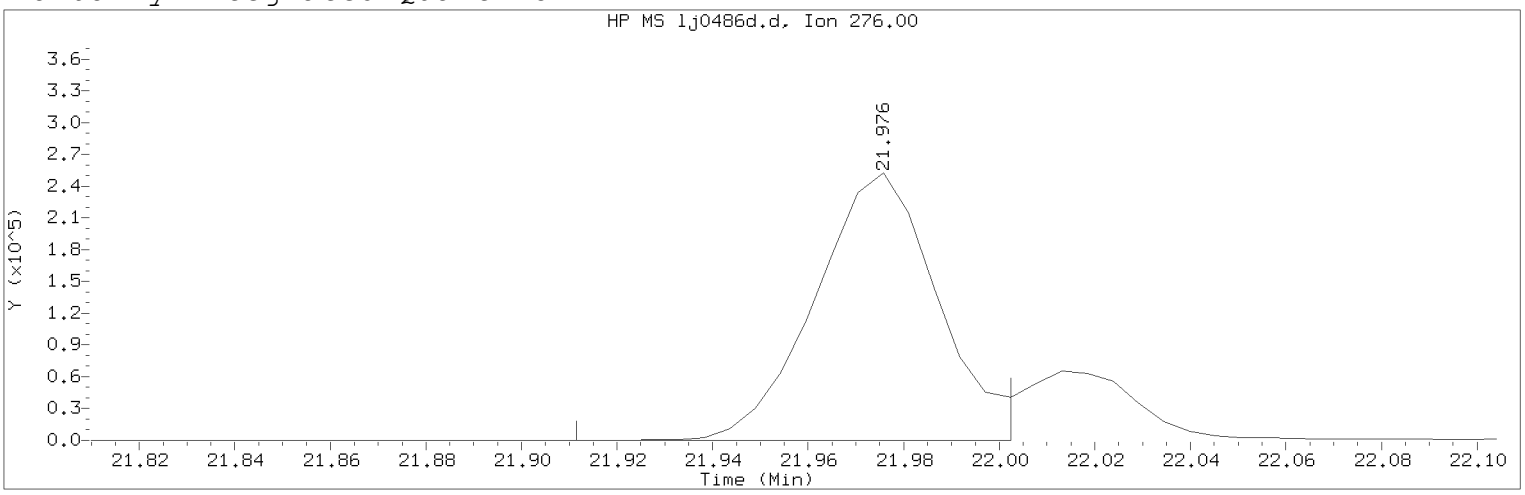
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 2137
Retention Time (minutes) : 13.017
Quant Ion : 213.00
Area : 32354
On-column Amount (ng/ul) : 3.2214
Integration start scan : 2132 Integration stop scan: 2148
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1127

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

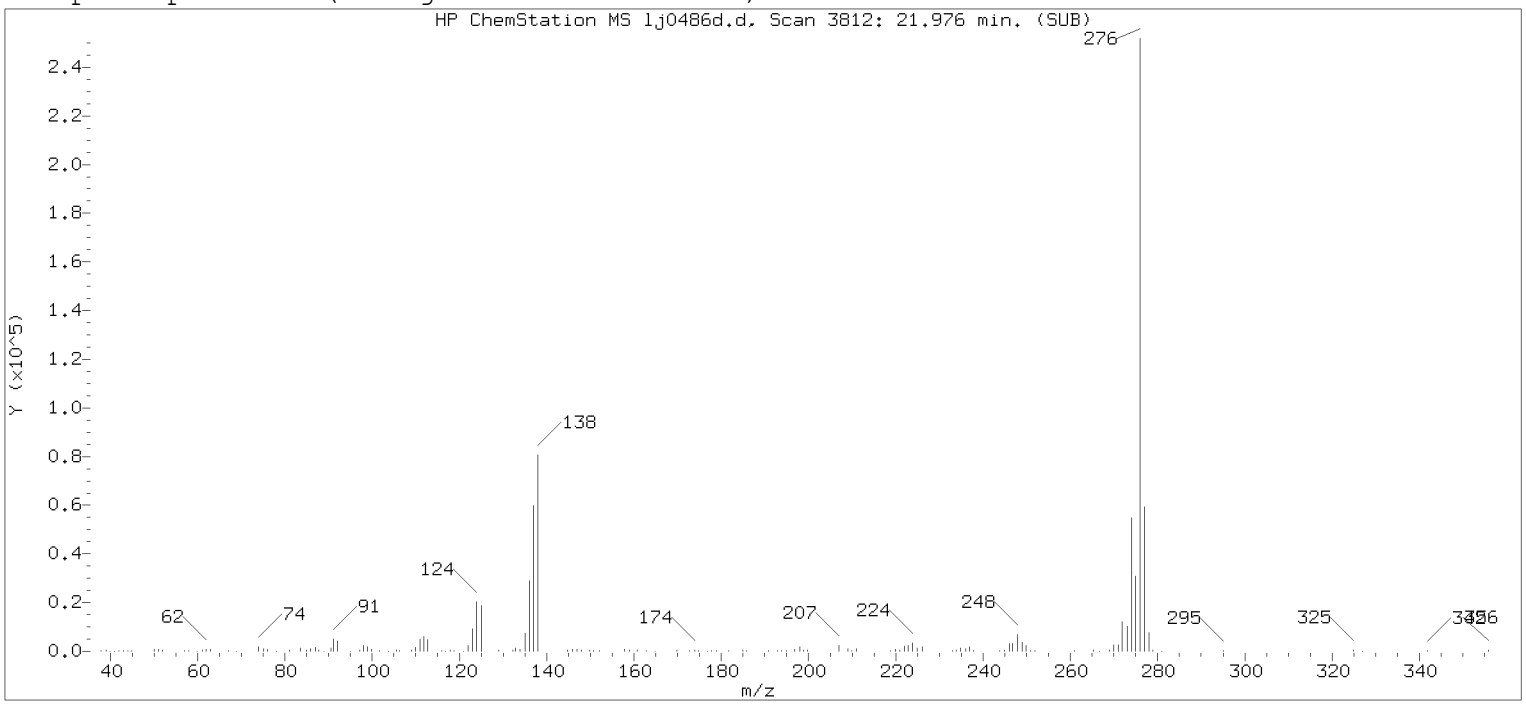
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3812
Retention Time (minutes) : 21.976
Quant Ion : 276.00
Area (flag) : 452236M
On-Column Amount (ng/ul) : 3.6806
Integration start scan : 3799 Integration stop scan: 3816
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

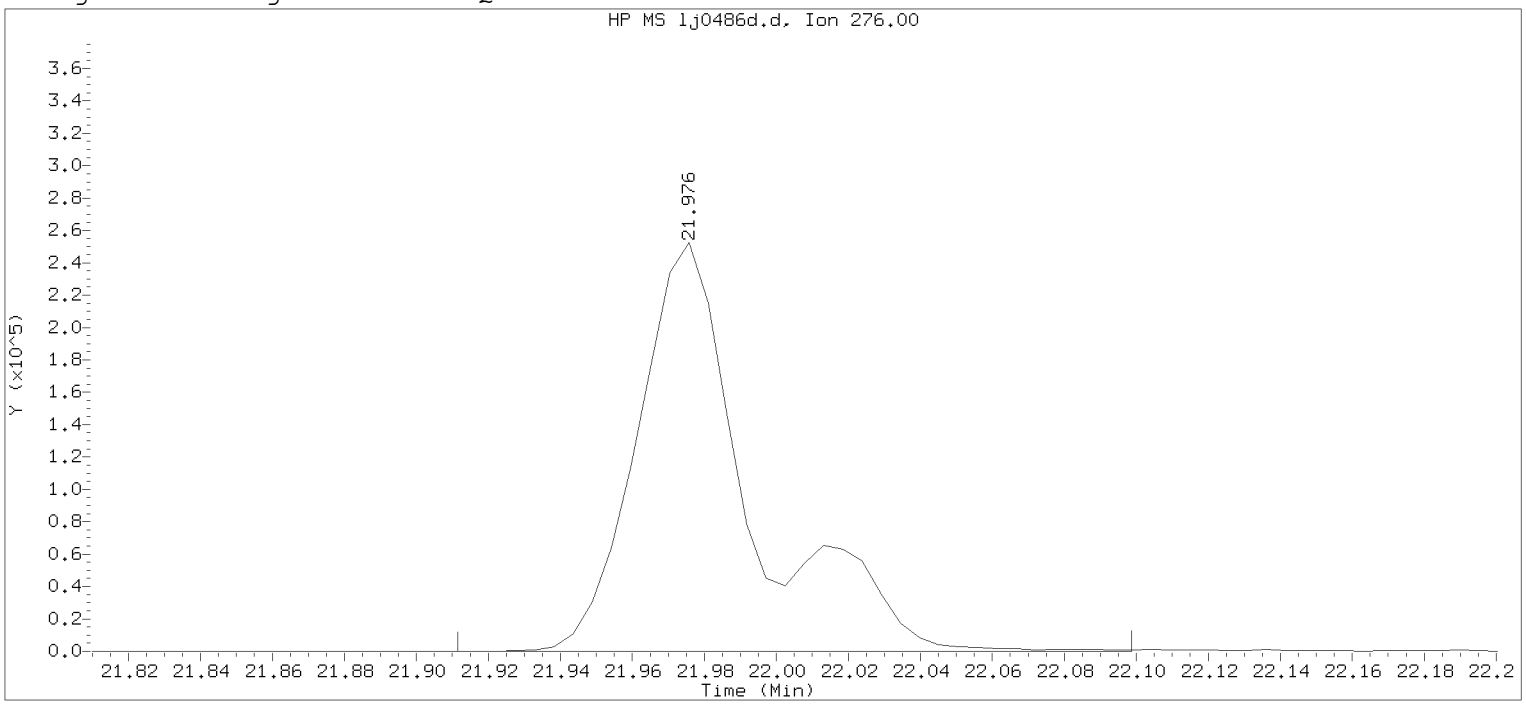
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



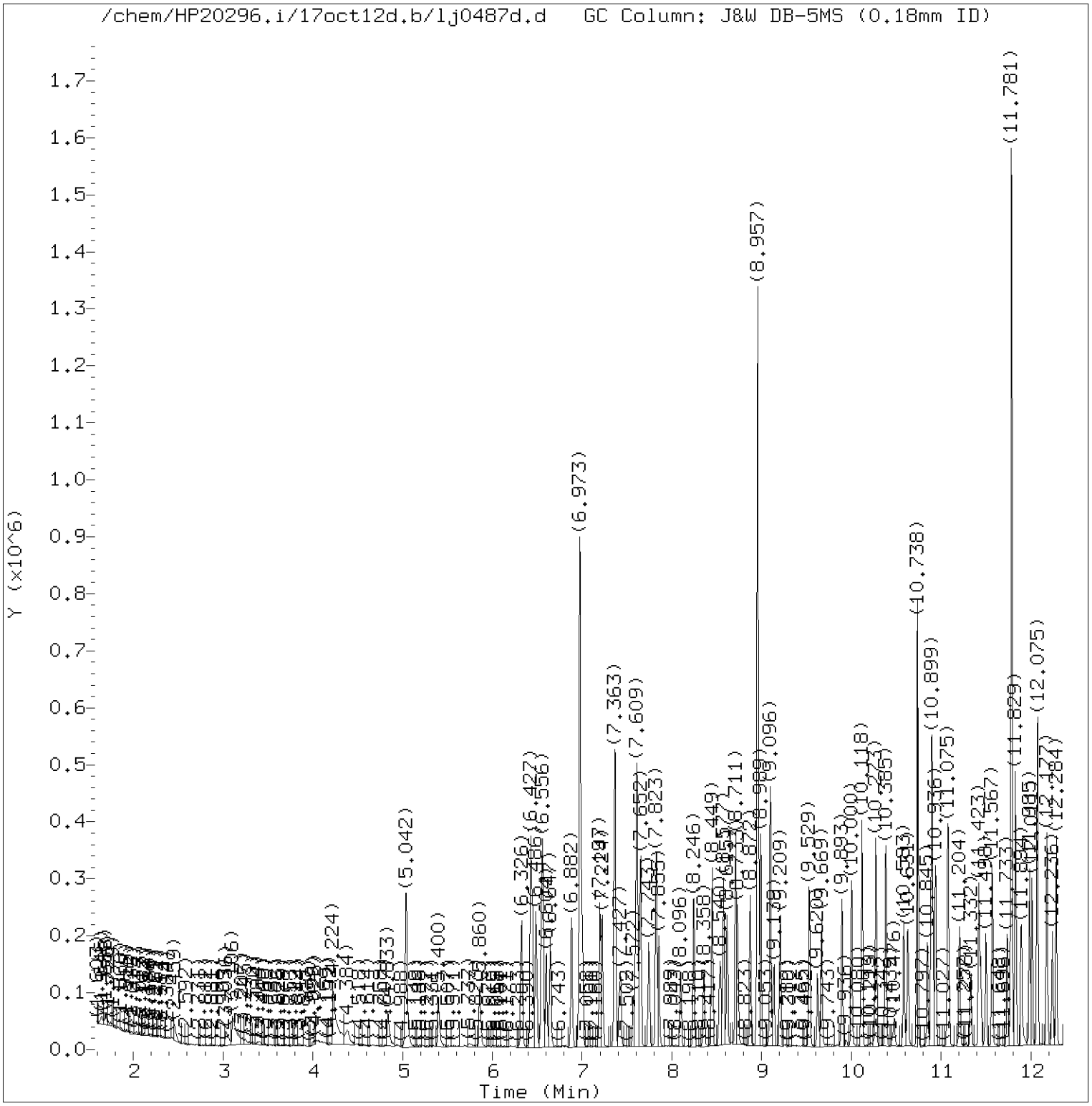
Data File: /chem/HP20296.i/17oct12d.b/lj0486d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 20:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD3.75 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3812		
Retention Time (minutes)	: 21.976		
Quant Ion	: 276.00		
Area	: 553964		
On-column Amount (ng/ul)	: 3.7244		
Integration start scan	: 3799	Integration stop scan:	3834
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

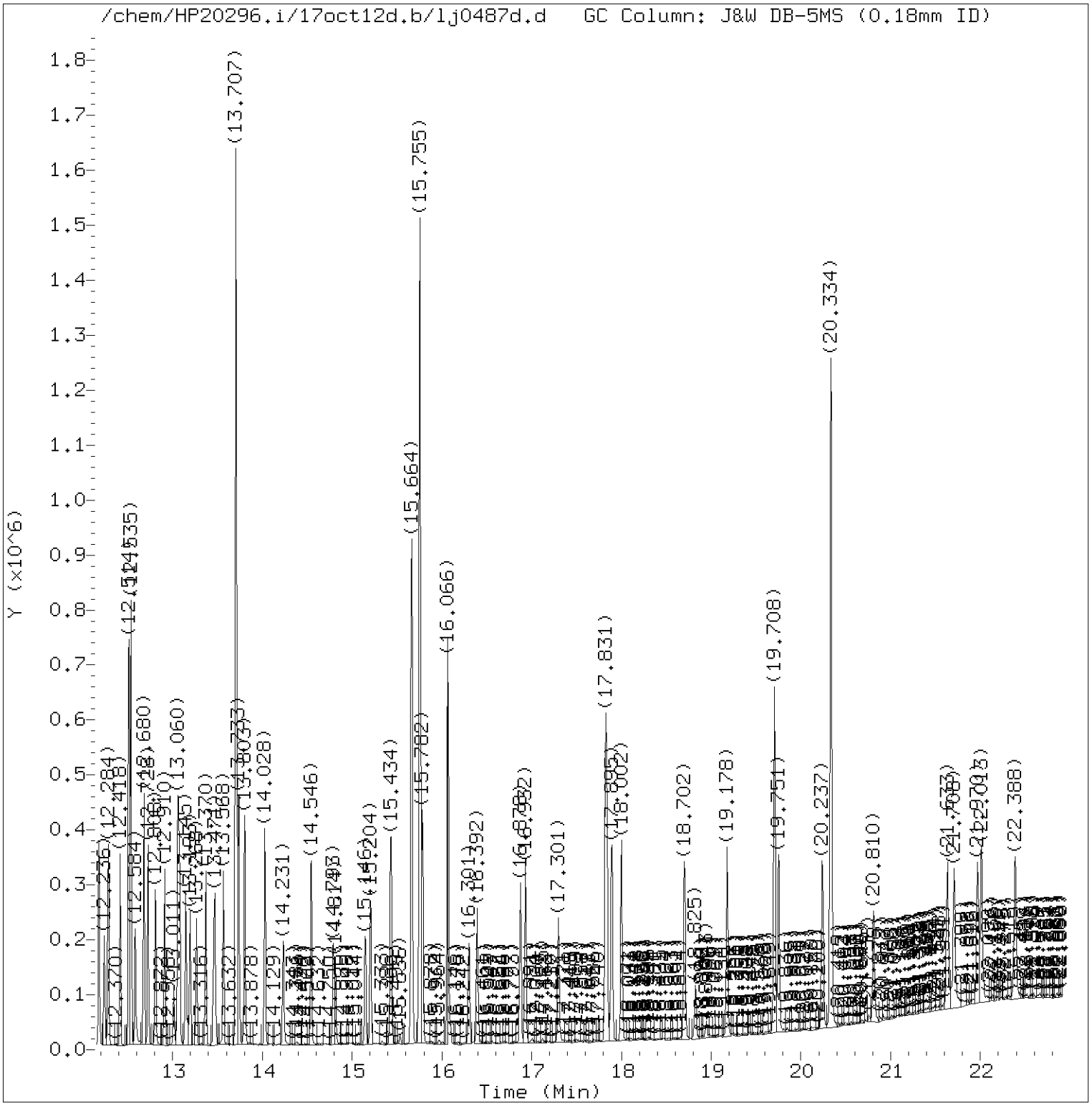
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.459	88	26359	1.072
4) N-Nitrosodimethylamine	(1)	3.036	74	36533	0.962
5) Pyridine	(1)	3.100	79	73904	1.112
7) 2-Picoline	(1)	4.224	93	82220	1.148
8) N-Nitrosomethylethylamine	(1)	4.384	88	35327	1.198
9) Methyl methanesulfonate	(1)	4.833	80	30874	1.099
11)$2-Fluorophenol	(1)	5.042	112	129961	2.276
13) N-Nitrosodiethylamine	(1)	5.400	102	32450	1.149
42) Total Cresols	(1)			135156	2.351
15) Ethyl methanesulfonate	(1)	5.860	109	34774	1.202
16) Benzaldehyde	(1)	6.326	77	69382	1.257
17)$Phenol-d6	(1)	6.427	99	179051	2.376
18) Phenol	(1)	6.449	94	96092	1.126
19) Aniline	(1)	6.486	93	122612	1.203
20) a-methylstyrene	(1)	6.561	118	77693	1.264
22) bis(2-Chloroethyl)ether	(1)	6.604	93	77171	1.237
23) 2-Chlorophenol	(1)	6.647	128	67228	1.202
24) 1,3-Dichlorobenzene	(1)	6.882	146	74310	1.214
25)*1,4-Dichlorobenzene-d4	(1)	6.973	152	183596	5.000
26) 1,4-Dichlorobenzene	(1)	7.000	146	73832	1.198
27) Benzyl alcohol	(1)	7.197	108	49407	1.236
28) 1,2-Dichlorobenzene	(1)	7.224	146	70120	1.198
30) Indene	(1)	7.363	115	136906	1.248
31) 2-Methylphenol	(1)	7.369	108	66206	1.186
97) Isosafrole	(3)			44618	1.176
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.427	45	89879	1.206
34) bis(2-Chloroisopropyl)ether	(1)	7.427	45	89879	1.206
35) N-Nitrosopyrrolidine	(1)	7.572	100	33245	1.116
36) Acetophenone	(1)	7.599	105	106211	1.242
37) 4-Methylphenol	(1)	7.609	108	68950	1.165
38) N-Nitroso-di-n-propylamine	(1)	7.615	70	53703	1.188
39) N-Nitrosomorpholine	(1)	7.641	56	42322	1.229
40) o-Toluidine	(1)	7.652	106	118979	1.211
43) Hexachloroethane	(1)	7.743	117	29484	1.180
44)$Nitrobenzene-d5	(2)	7.823	82	159518	2.421
45) Nitrobenzene	(2)	7.855	77	79886	1.207
120) 2,4_2,6-Dinitrotoluenes	(3)			59328	2.230
48) N-Nitrosopiperidine	(2)	8.101	114	34027	1.213
50) Isophorone	(2)	8.240	82	144903	1.241
51) 2-Nitrophenol	(2)	8.358	139	29142	1.137

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.449	107	71558	1.220
56) Benzoic acid	(2)	8.540	105	76115M	4.820
57) O,O,O-Triethylphosphorothioate	(2)	8.577	198	30200	1.245
55) bis(2-Chloroethoxy)methane	(2)	8.615	93	88983	1.219
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.711	104	110231	1.275
60) 2,4-Dichlorophenol	(2)	8.733	162	51817	1.199
146) Diallate trans/cis	(4)			61676	1.143
62) 1,2,4-Trichlorobenzene	(2)	8.872	180	58117	1.241
65)*Naphthalene-d8	(2)	8.957	136	700591	5.000
66) Naphthalene	(2)	8.989	128	197443	1.236
67) 4-Chloroaniline	(2)	9.096	127	80241	1.216
68) 2,6-Dichlorophenol	(2)	9.102	162	51790	1.228
69) Hexachloropropene	(2)	9.139	213	26292	1.147
71) Hexachlorobutadiene	(2)	9.209	225	31245	1.266
75) Quinoline	(2)	9.529	129	119986	1.214
76) Caprolactam	(2)	9.620	113	19064	1.266
77) N-Nitrosodi-n-butylamine	(2)	9.669	84	50978	1.060
80) 4-Chloro-3-methylphenol	(2)	9.893	107	61073	1.225
82) Safrole	(2)	10.000	162	47841	1.212
83) 2-Methylnaphthalene	(2)	10.118	142	127979	1.226
84) 1-Methylnaphthalene	(2)	10.273	142	121043	1.268
85) Hexachlorocyclopentadiene	(3)	10.375	237	23965	1.077
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.385	216	54185	1.180
88) cis-Isosafrole	(3)	10.482	162	8506	0.204
90) 2,4,6-Trichlorophenol	(3)	10.583	196	33654	1.155
92) 2,4,5-Trichlorophenol	(3)	10.631	196	37069	1.165
93)$2-Fluorobiphenyl	(3)	10.738	172	276698	2.478
94) trans-Isosafrole	(3)	10.851	162	36112	0.973
95) 1,1'-Biphenyl	(3)	10.893	154	158941	1.284
96) 2-Chloronaphthalene	(3)	10.904	162	119245	1.219
98) 1-Chloronaphthalene	(3)	10.936	162	113144	1.256
99) Diphenyl ether	(3)	11.075	170	76170	1.188
100) 2-Nitroaniline	(3)	11.086	138	32877	1.122
104) 1,4-Naphthoquinone	(3)	11.204	158	43141	1.101
105) 1,4-Dinitrobenzene	(3)	11.332	168	16148	1.111
106) Dimethylphthalate	(3)	11.423	163	128674	1.217
107) 1,3-Dinitrobenzene	(3)	11.439	168	18852	1.140
108) 2,6-Dinitrotoluene	(3)	11.498	165	25719	1.150
109) Acenaphthylene	(3)	11.567	152	164402	1.212
112) 3-Nitroaniline	(3)	11.733	138	30124	1.151

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.781	164	382069	5.000
114) Acenaphthene	(3)	11.829	153	125677	1.215
115) 2,4-Dinitrophenol	(3)	11.894	184	32154	2.501
116) 4-Nitrophenol	(3)	11.985	109	35605	1.975
117) Pentachlorobenzene	(3)	12.011	250	41347	1.198
118) 2,4-Dinitrotoluene	(3)	12.075	165	33609	1.080
119) Dibenzofuran	(3)	12.075	168	160387	1.200
121) 1-Naphthylamine	(3)	12.177	143	120027	1.146
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	26330	1.195
123) 2-Naphthylamine	(3)	12.284	143	119930	1.184
124) Diethylphthalate	(3)	12.418	149	121113	1.153
125) Thionazin	(3)	12.509	107	26349	1.243
126) Fluorene	(3)	12.514	166	131070	1.207
128) 5-Nitro-o-toluidine	(3)	12.535	152	34088M	1.163
127) 4-Chlorophenyl-phenylether	(3)	12.535	204	59721	1.241
129) 4-Nitroaniline	(3)	12.541	138	32039	1.183
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	30854	1.841
132) NDPA as diphenylamine	(4)	12.680	169	106217	1.198
131) N-Nitrosodiphenylamine	(4)	12.680	169	106217	1.198
134) 1,2-Diphenylhydrazine	(4)	12.728	77	151185	1.209
135)$2,4,6-Tribromophenol	(3)	12.814	330	22688	2.262
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	24277	1.166
139) 1,3,5-Trinitrobenzene	(4)	13.017	213	8891M	0.857
140) Diallate (peak 1)	(4)	13.054	86	53086	0.953
141) Phorate	(4)	13.065	75	92291	1.185
142) Phenacetin	(4)	13.076	108	70824	1.167
143) 4-Bromophenyl-phenylether	(4)	13.145	248	29249M	1.205
144) Diallate (peak 2)	(4)	13.167	86	8590	0.189
145) Hexachlorobenzene	(4)	13.199	284	29377	1.246
147) Dimethoate	(4)	13.263	87	56267	1.117
148) Atrazine	(4)	13.370	200	33543	1.237
149) Pentachlorophenol	(4)	13.455	266	14773M	0.973
151) Pentachloronitrobenzene	(4)	13.471	237	11724	1.035
150) 4-Aminobiphenyl	(4)	13.477	169	31799	1.105
152) Pronamide	(4)	13.568	173	54751	1.158
153)*Phenanthrene-d10	(4)	13.707	188	666126	5.000
154) Dinoseb	(4)	13.717	211	19396M	0.833
155) Phenanthrene	(4)	13.739	178	185759	1.191
157) Anthracene	(4)	13.803	178	184010	1.202
163) Carbazole	(4)	14.028	167	168522	1.145

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

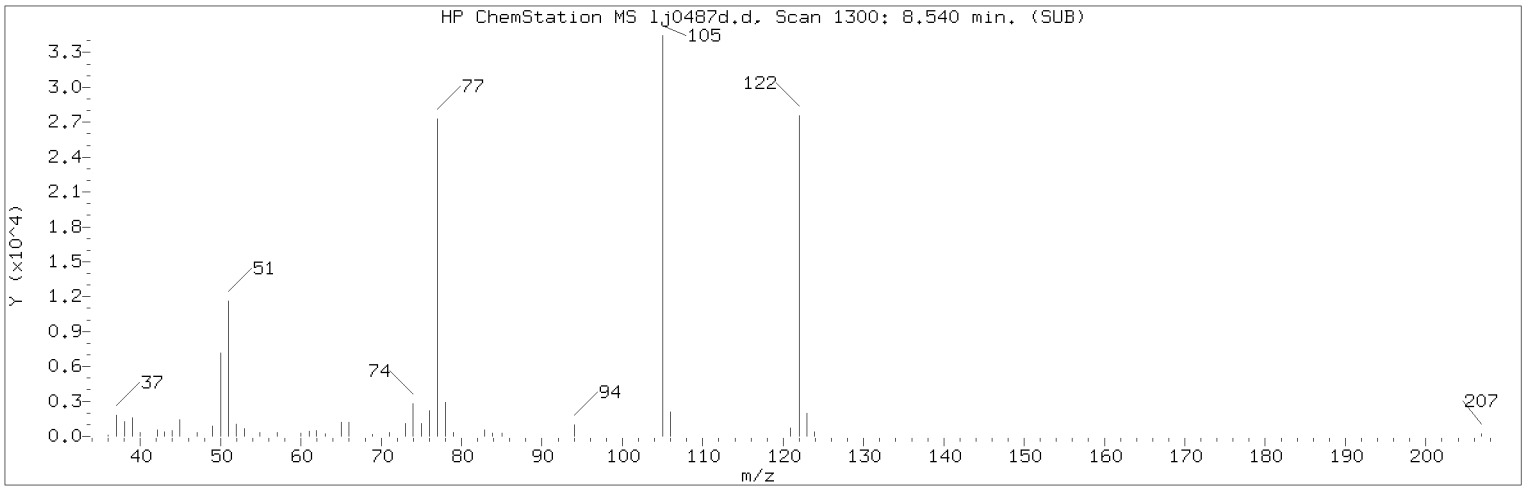
Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.231	109	36984	0.978
165) Di-n-butylphthalate	(4)	14.546	149	205153	1.111
167) Parathion	(4)	14.793	109	22848	0.961
168) 4-Nitroquinoline-1-oxide	(4)	14.814	190	11314	1.608
222) Total PAHs	(6)			2616168	19.138
169) Octachlorostyrene	(4)	15.135	308	9301	1.086
171) Isodrin	(4)	15.204	193	20546	1.174
173) Fluoranthene	(4)	15.434	202	199751	1.196
174) Benzidine	(5)	15.664	184	437740	3.432
175)*Pyrene-d10	(5)	15.755	212	753805	5.000
177) Pyrene	(5)	15.782	202	212082	1.189
179)$Terphenyl-d14	(5)	16.066	244	258007	2.355
182) p-Dimethylaminoazobenzene	(5)	16.301	225	23754	1.016
185) Chlorobenzilate	(5)	16.392	139	62911	1.118
187) 3,3'-Dimethylbenzidine	(5)	16.878	212	124310	1.066
188) Butylbenzylphthalate	(5)	16.932	149	90436	1.083
191) 2-Acetylaminofluorene	(5)	17.301	181	73317	0.985
193) 3,3'-Dichlorobenzidine	(5)	17.820	252	65227	1.112
195) Benzo(a)anthracene	(5)	17.831	228	186373	1.163
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.841	231	32919	1.085
196) Chrysene	(5)	17.895	228	179514	1.216
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	129361	1.060
203) 6-Methylchrysene	(5)	18.702	242	119308	1.125
205) Di-n-octylphthalate	(6)	19.178	149	215341	1.020
206) Benzo(b)fluoranthene	(6)	19.708	252	175323	1.184
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.708	256	69366	1.096
208) Benzo(k)fluoranthene	(6)	19.756	252	166204	1.174
211) Benzo(a)pyrene	(6)	20.243	252	158357	1.143
213)*Perylene-d12	(6)	20.334	264	569100	5.000
215) 3-Methylcholanthrene	(6)	20.810	268	54487M	1.110
217) Dibenz(a,h)acridine	(6)	21.633	279	124997	1.113
218) Dibenz(a,j)acridine	(6)	21.708	279	128431	1.103
219) Indeno(1,2,3-cd)pyrene	(6)	21.970	276	142949M	1.137
220) Dibenz(a,h)anthracene	(6)	22.013	278	149446	1.174
221) Benzo(g,h,i)perylene	(6)	22.388	276	150313	1.162

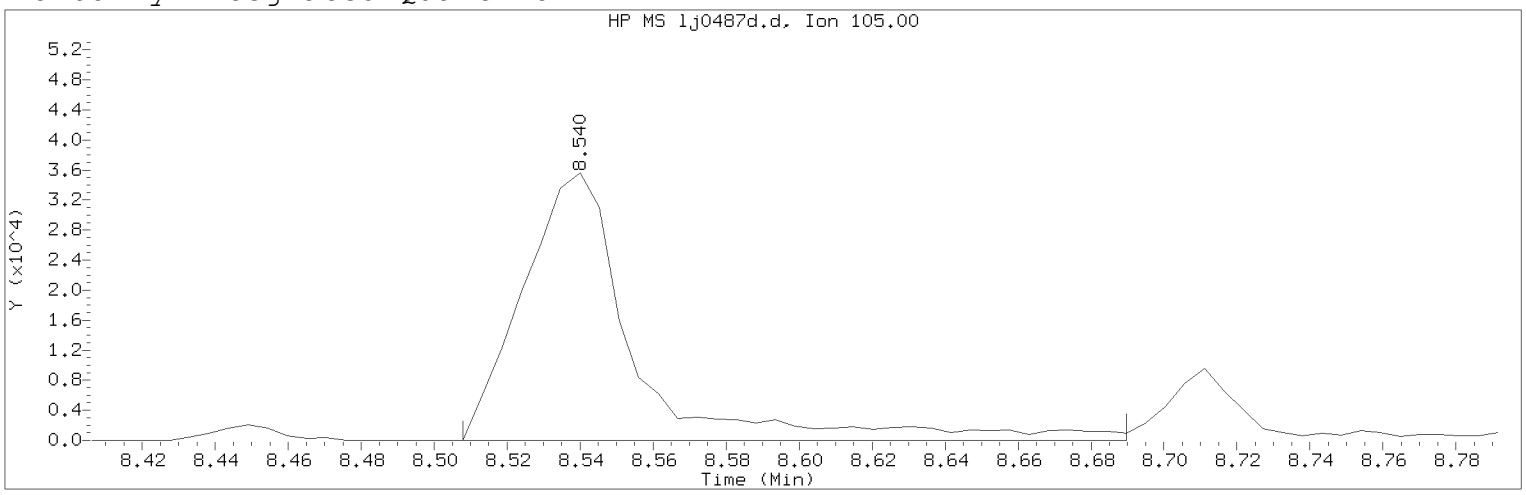
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

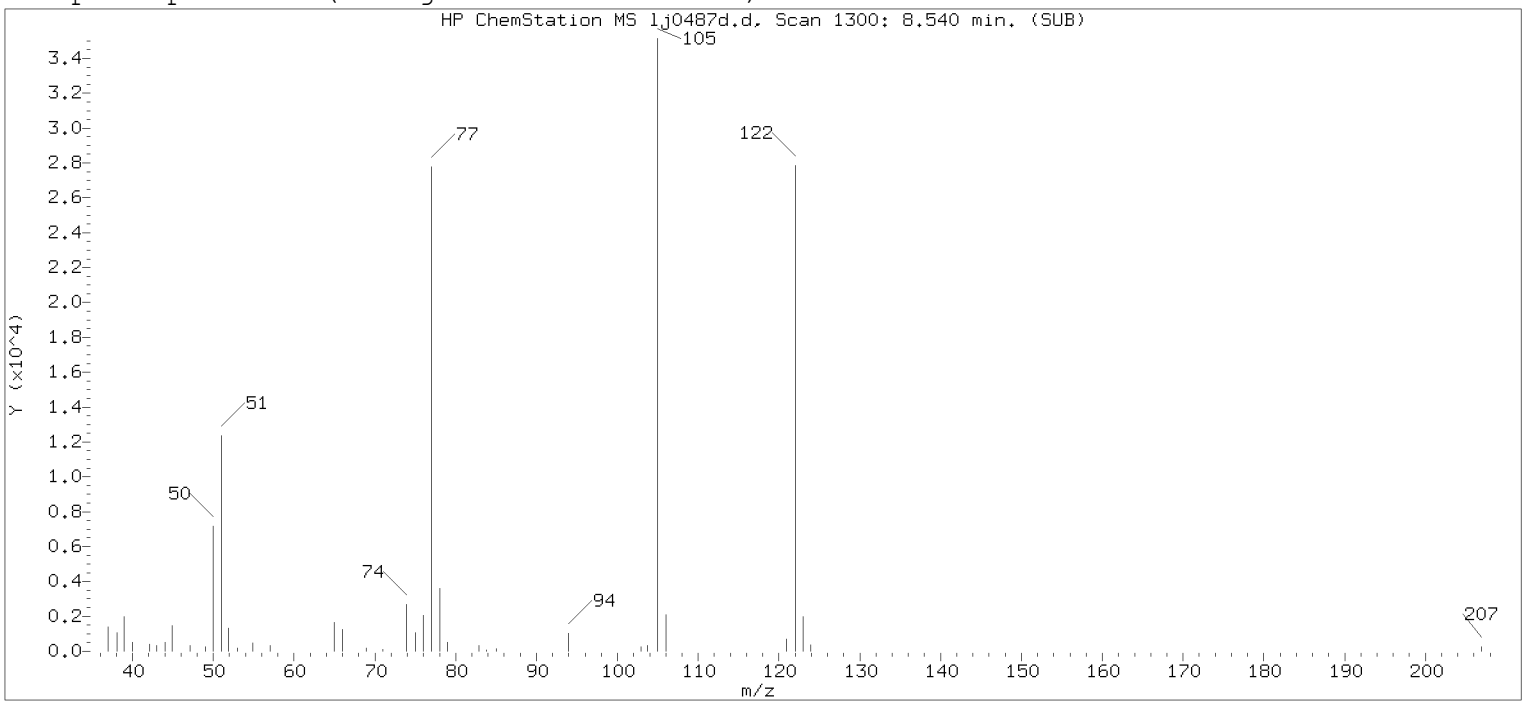
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1300
Retention Time (minutes) : 8.540
Quant Ion : 105.00
Area (flag) : 76115M
On-Column Amount (ng/ul) : 4.8197
Integration start scan : 1293 Integration stop scan: 1327
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

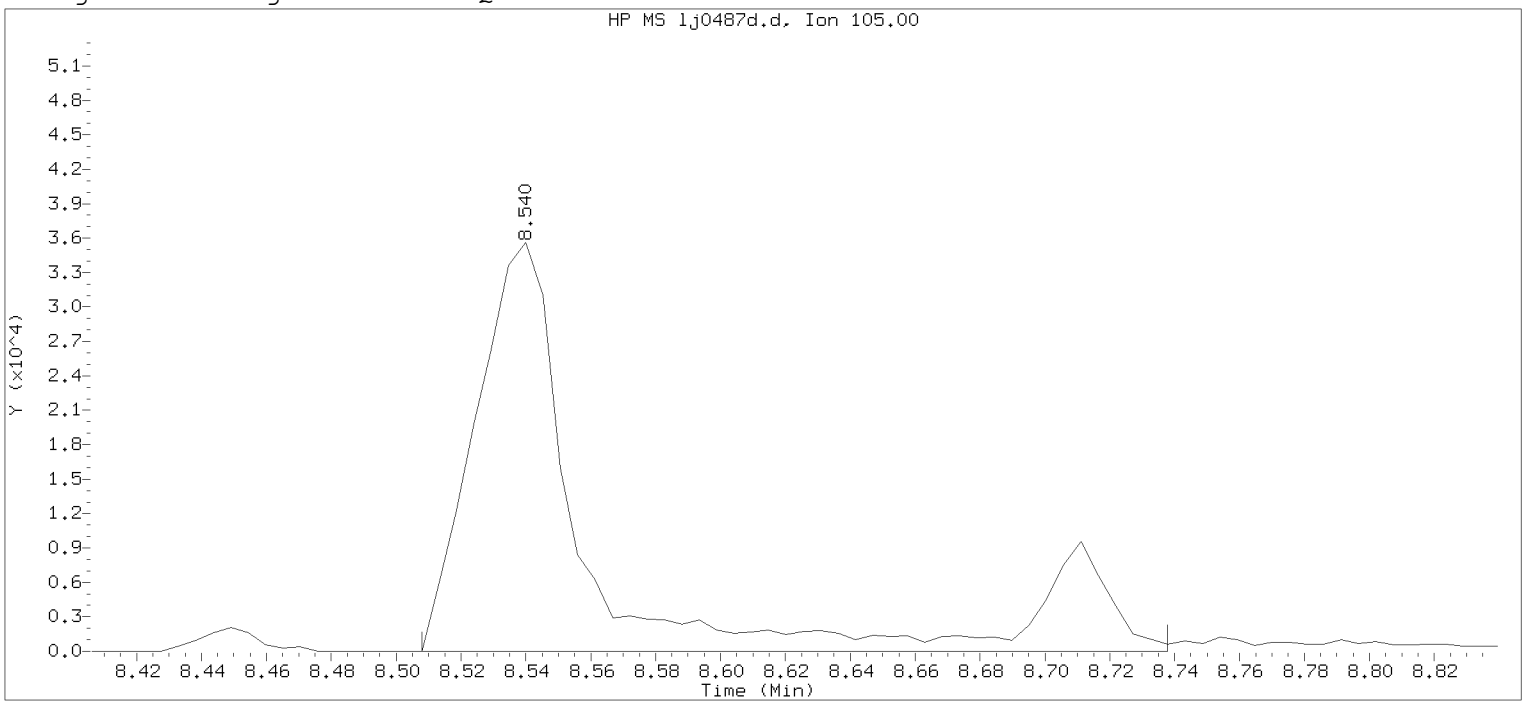
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

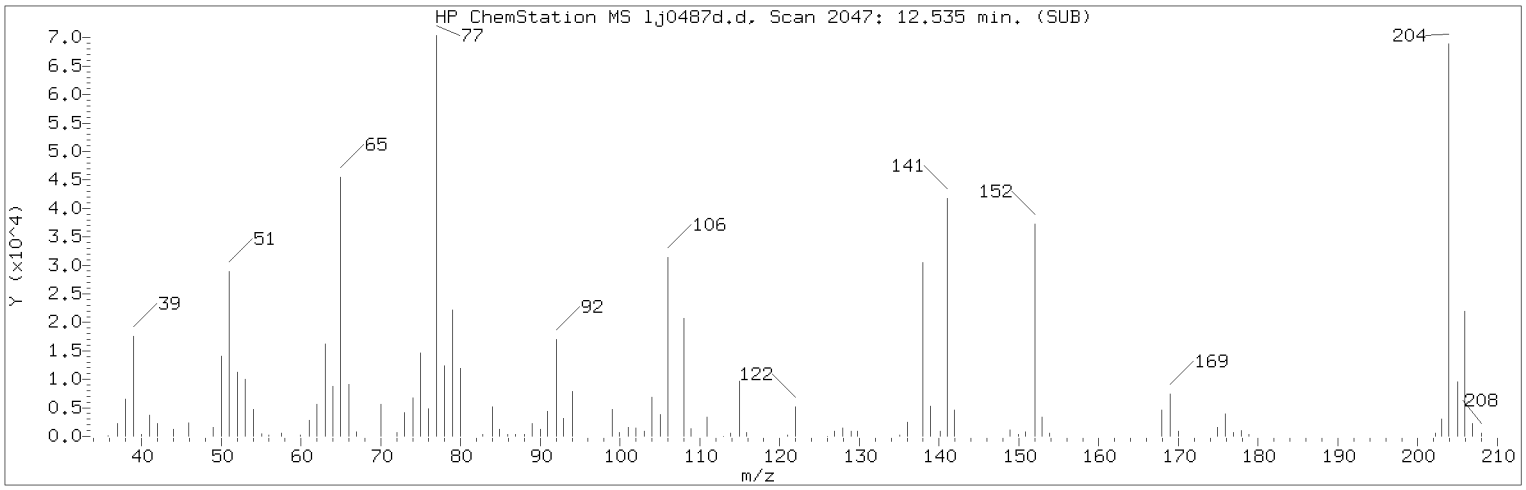
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

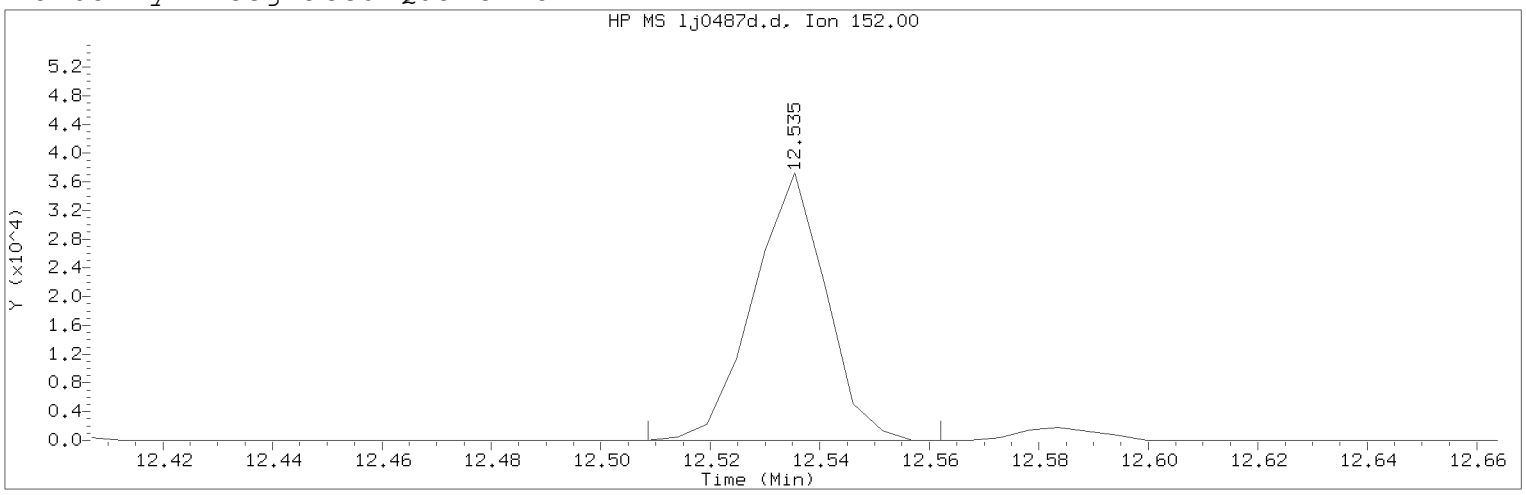
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1300		
Retention Time (minutes)	: 8.540		
Quant Ion	: 105.00		
Area	: 88129		
On-column Amount (ng/ul)	: 2.7255		
Integration start scan	: 1293	Integration stop scan:	1336
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

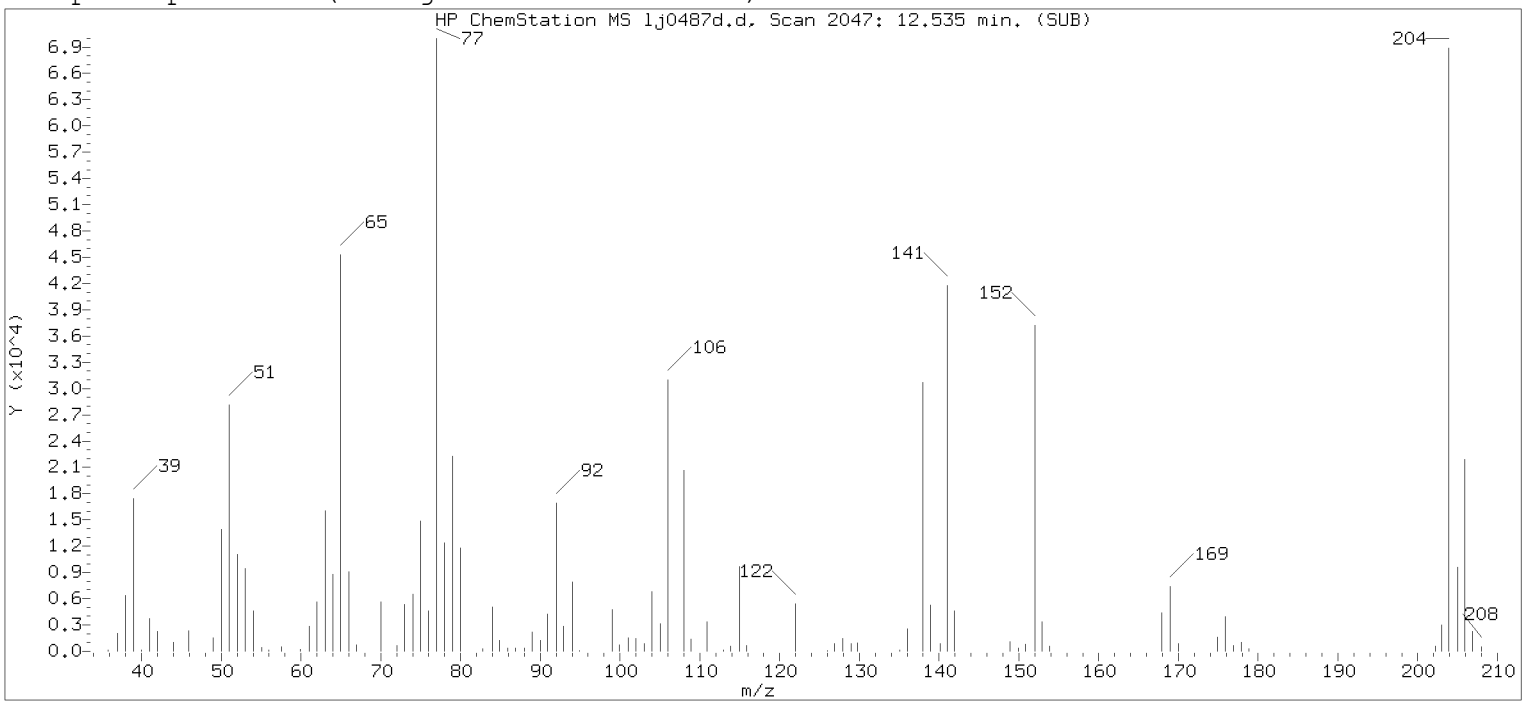
Compound Number : 128
Compound Name : 5-Nitro-o-toluidine
Scan Number : 2047
Retention Time (minutes) : 12.535
Quant Ion : 152.00
Area (flag) : 34088M
On-Column Amount (ng/ul) : 1.1629
Integration start scan : 2041 Integration stop scan: 2051
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

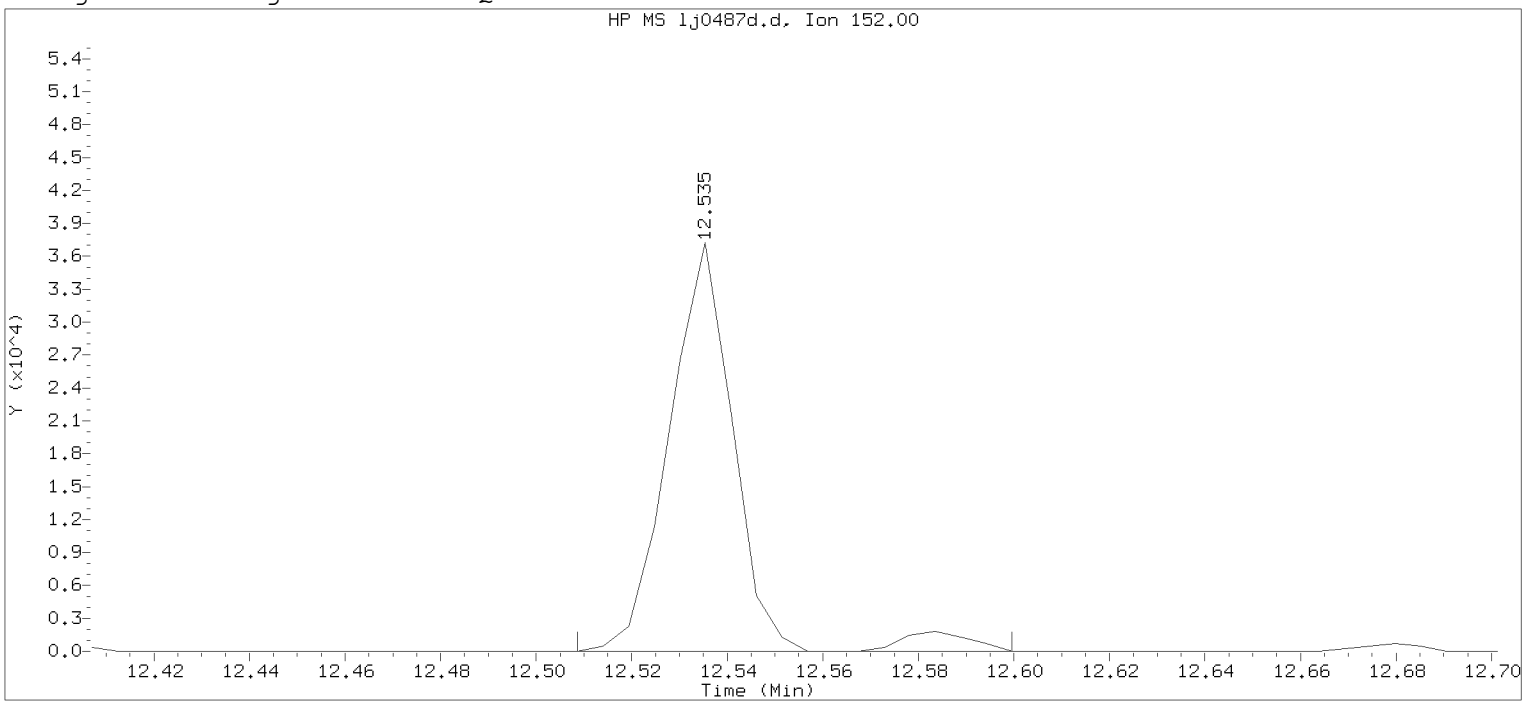
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

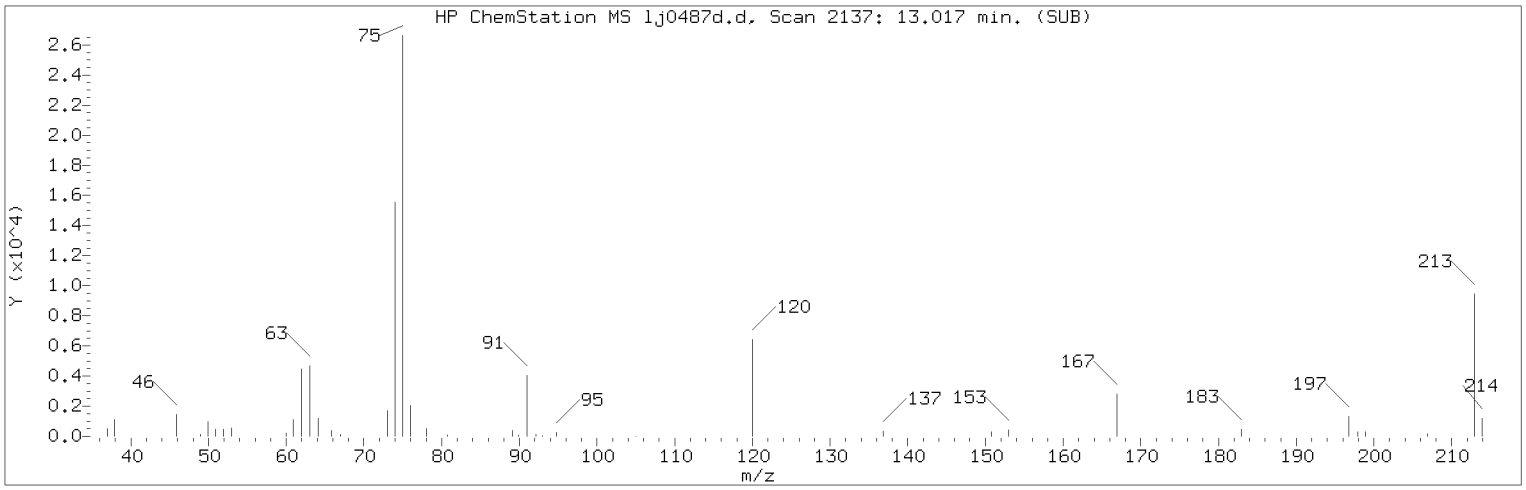
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

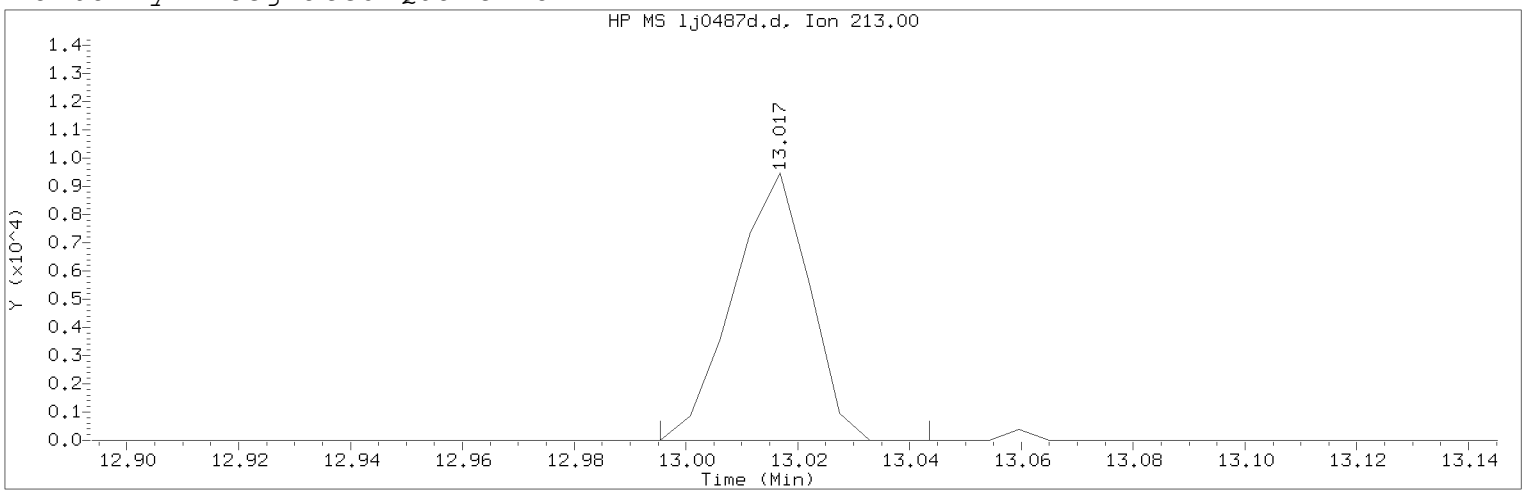
Compound Number	: 128		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 2047		
Retention Time (minutes)	: 12.535		
Quant Ion	: 152.00		
Area	: 35879		
On-column Amount (ng/ul)	: 1.2411		
Integration start scan	: 2041	Integration stop scan:	2058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

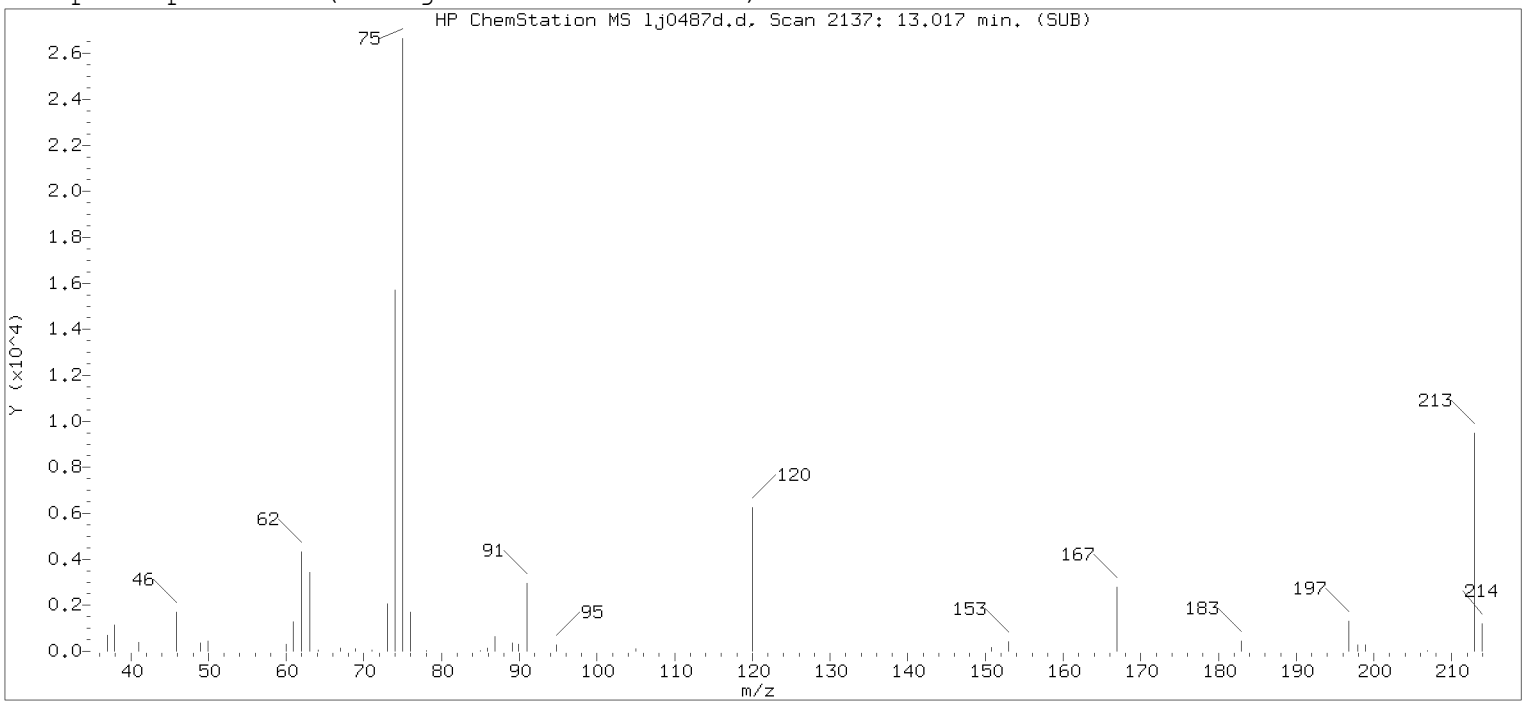
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 2137
Retention Time (minutes) : 13.017
Quant Ion : 213.00
Area (flag) : 8891M
On-Column Amount (ng/ul) : 0.8573
Integration start scan : 2132 Integration stop scan: 2141
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

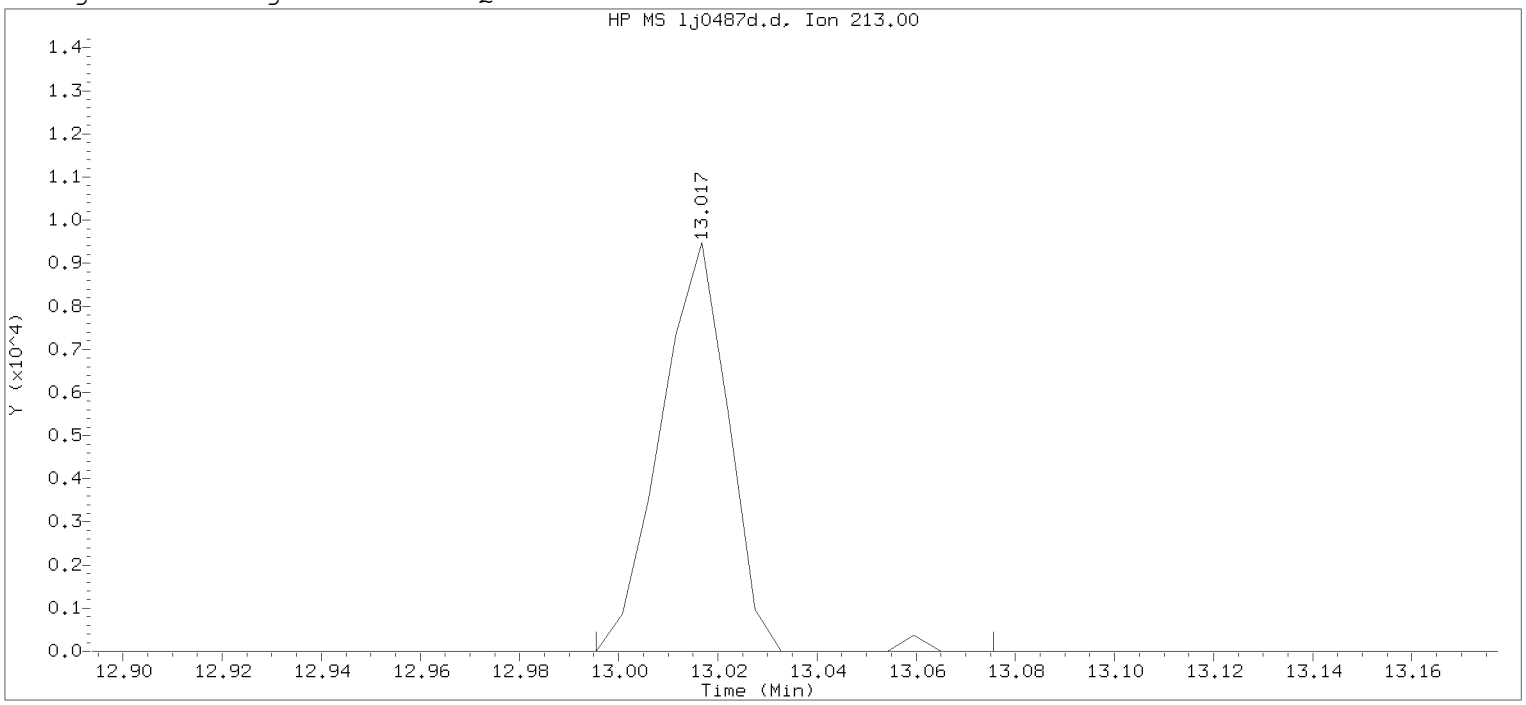
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

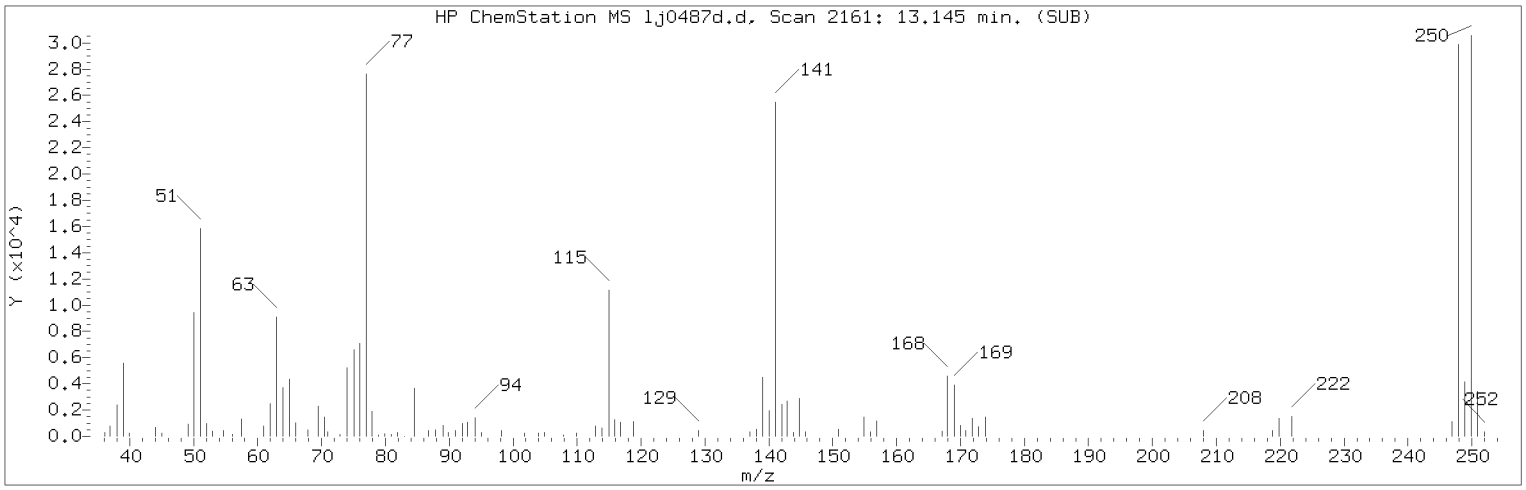
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

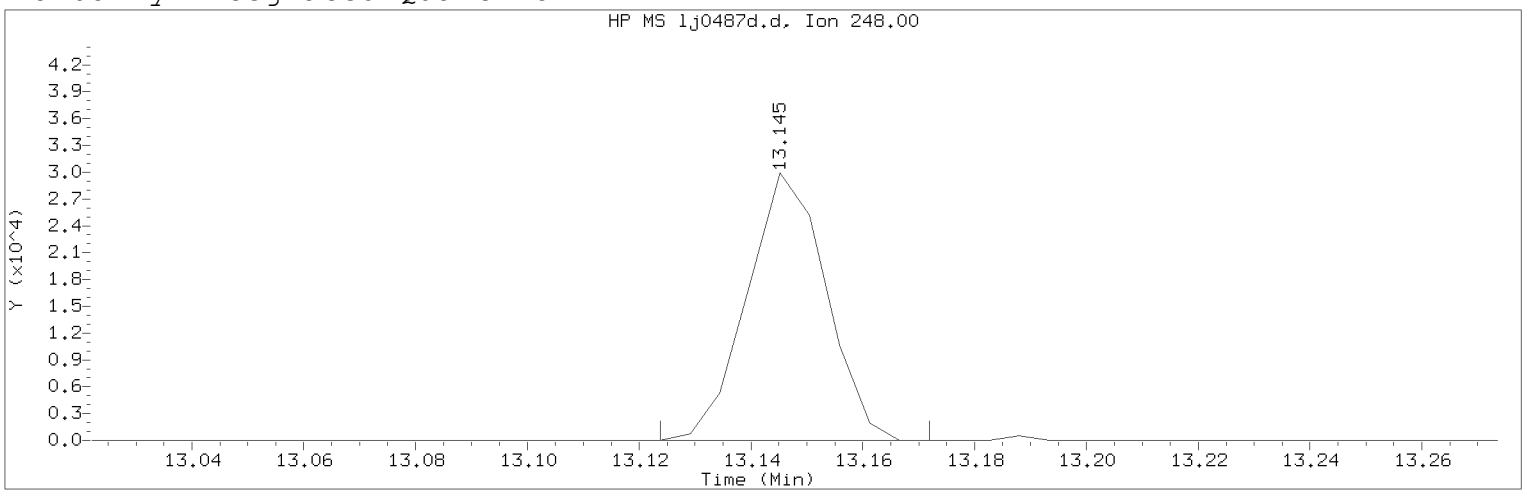
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 2137
Retention Time (minutes) : 13.017
Quant Ion : 213.00
Area : 9012
On-column Amount (ng/ul) : 0.8654
Integration start scan : 2132 Integration stop scan: 2147
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1138

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

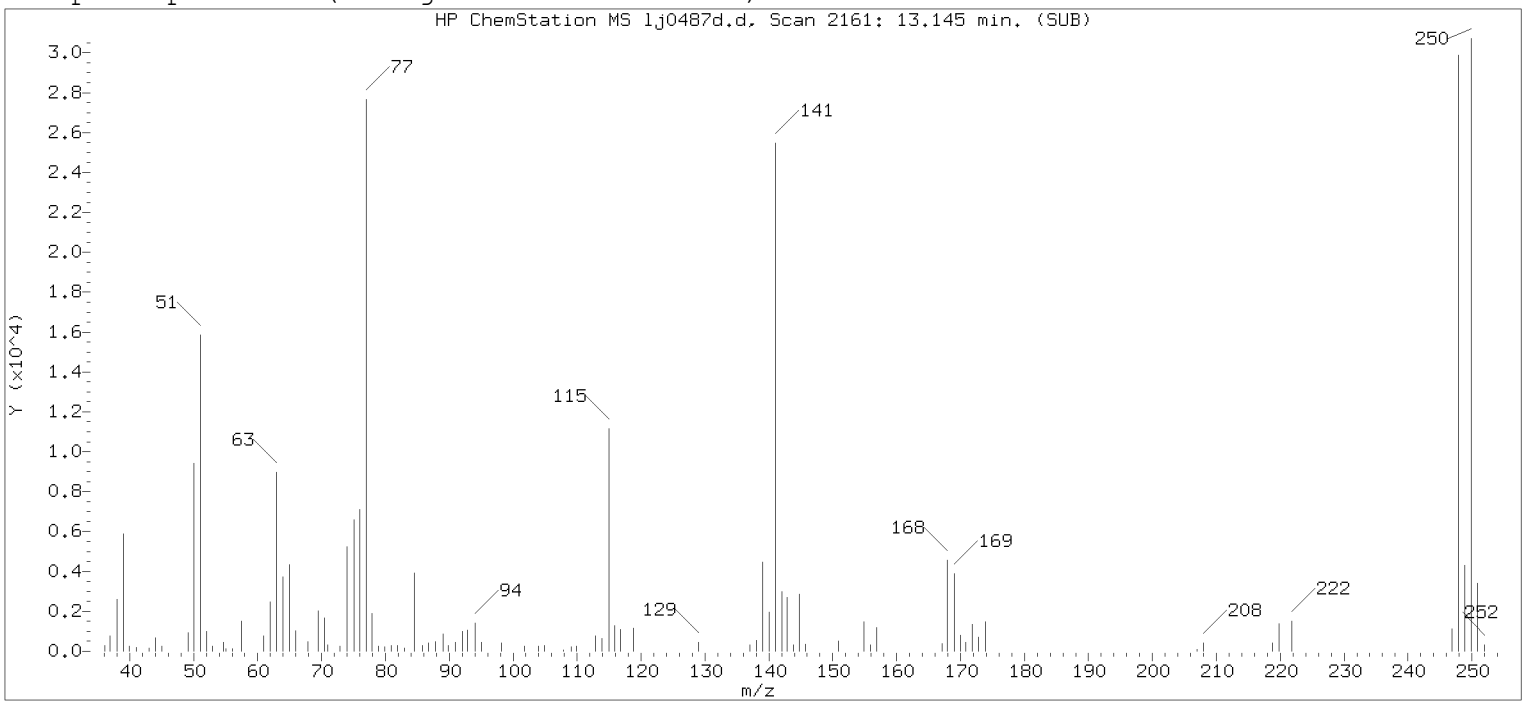
Compound Number : 143
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 2161
Retention Time (minutes) : 13.145
Quant Ion : 248.00
Area (flag) : 29249M
On-Column Amount (ng/ul) : 1.2053
Integration start scan : 2156 Integration stop scan: 2165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

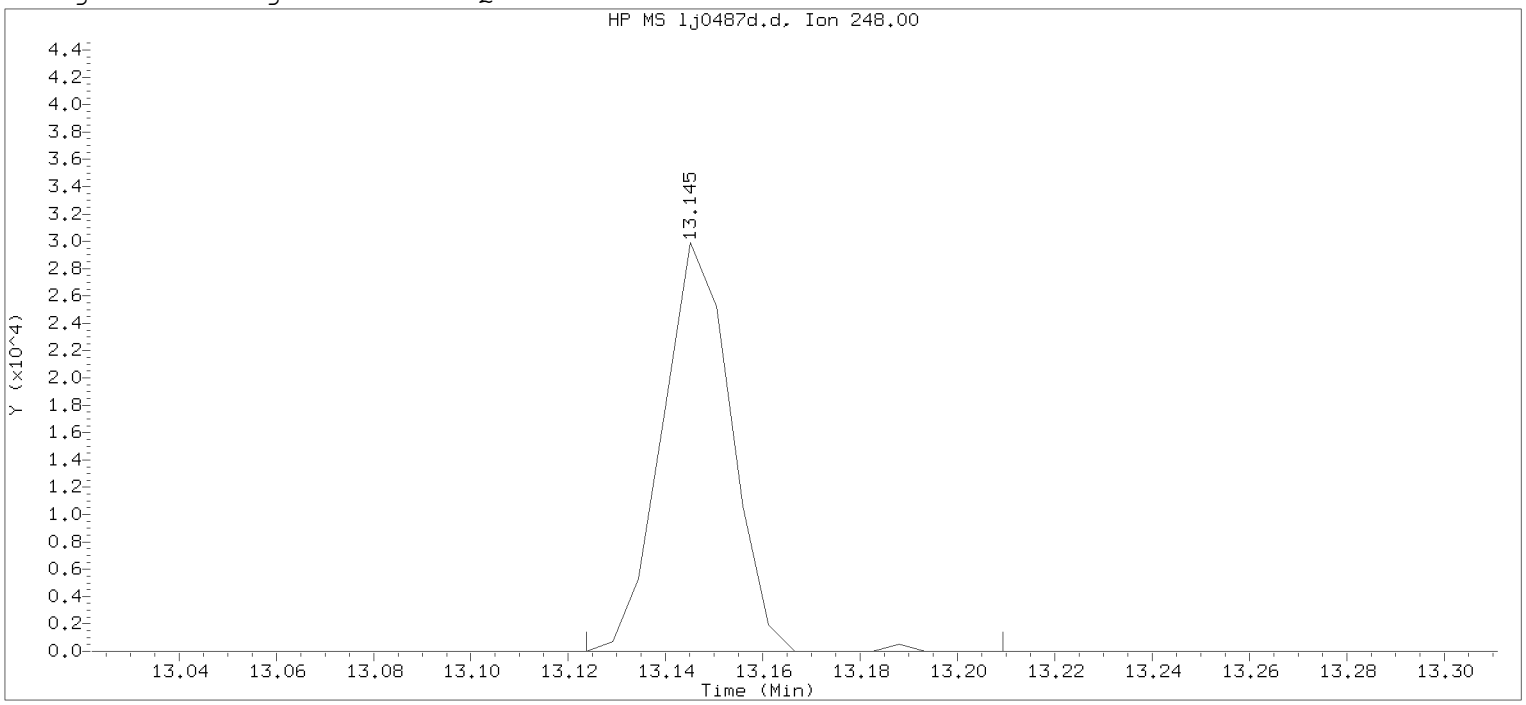
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

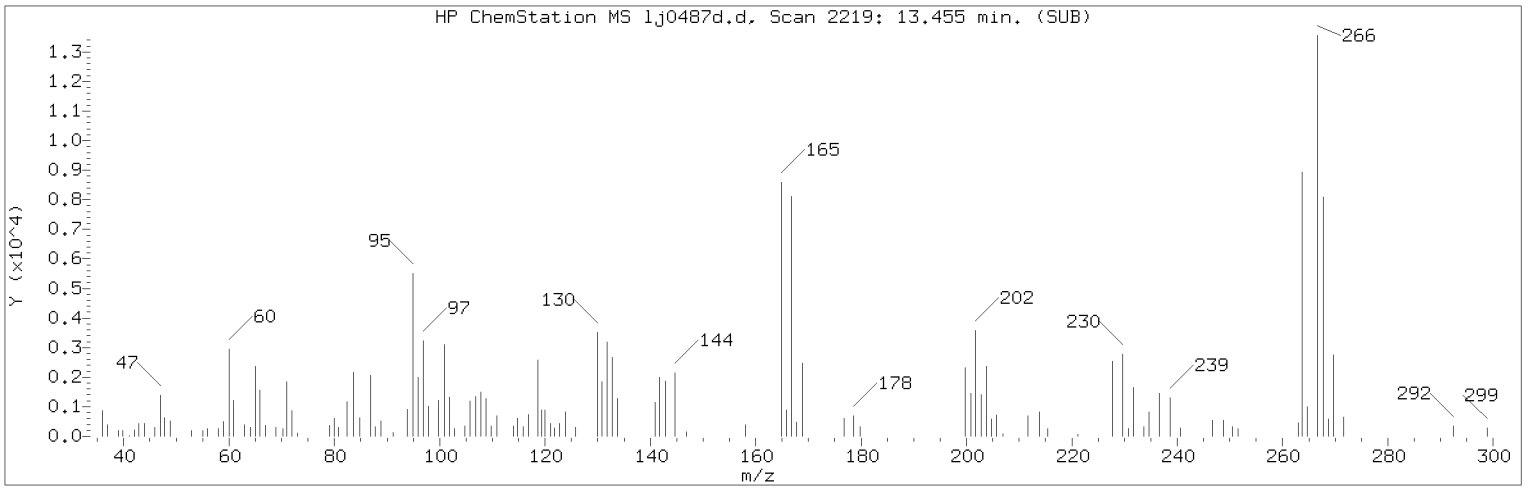
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

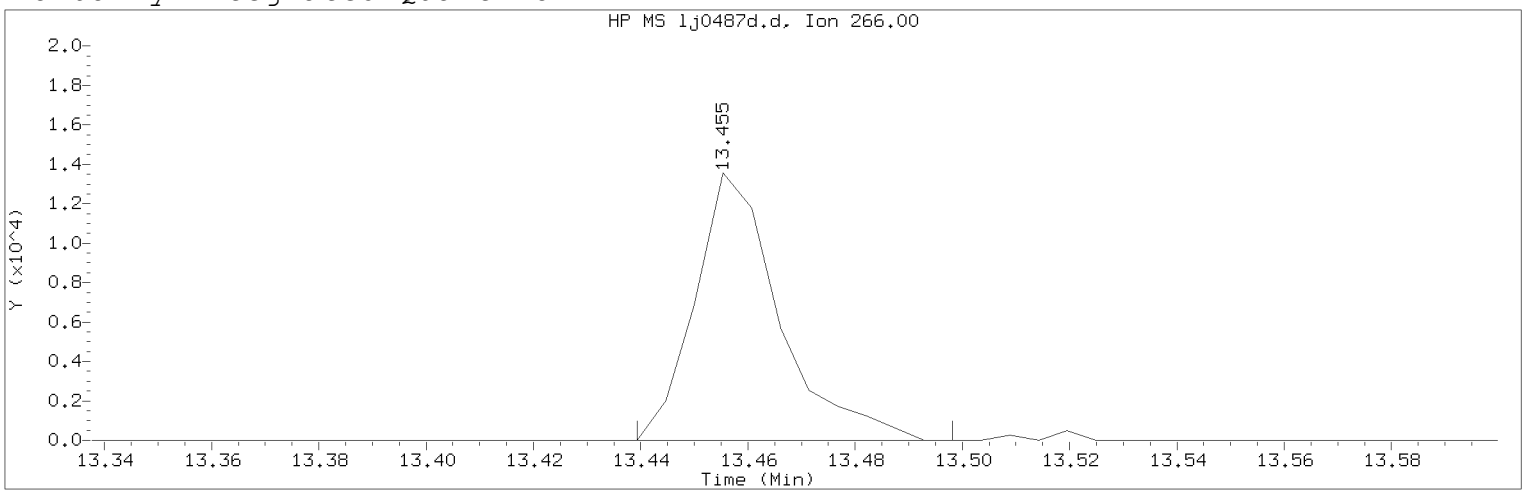
Compound Number : 143
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 2161
Retention Time (minutes) : 13.145
Quant Ion : 248.00
Area : 29421
On-column Amount (ng/ul) : 1.1936
Integration start scan : 2156 Integration stop scan: 2172
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

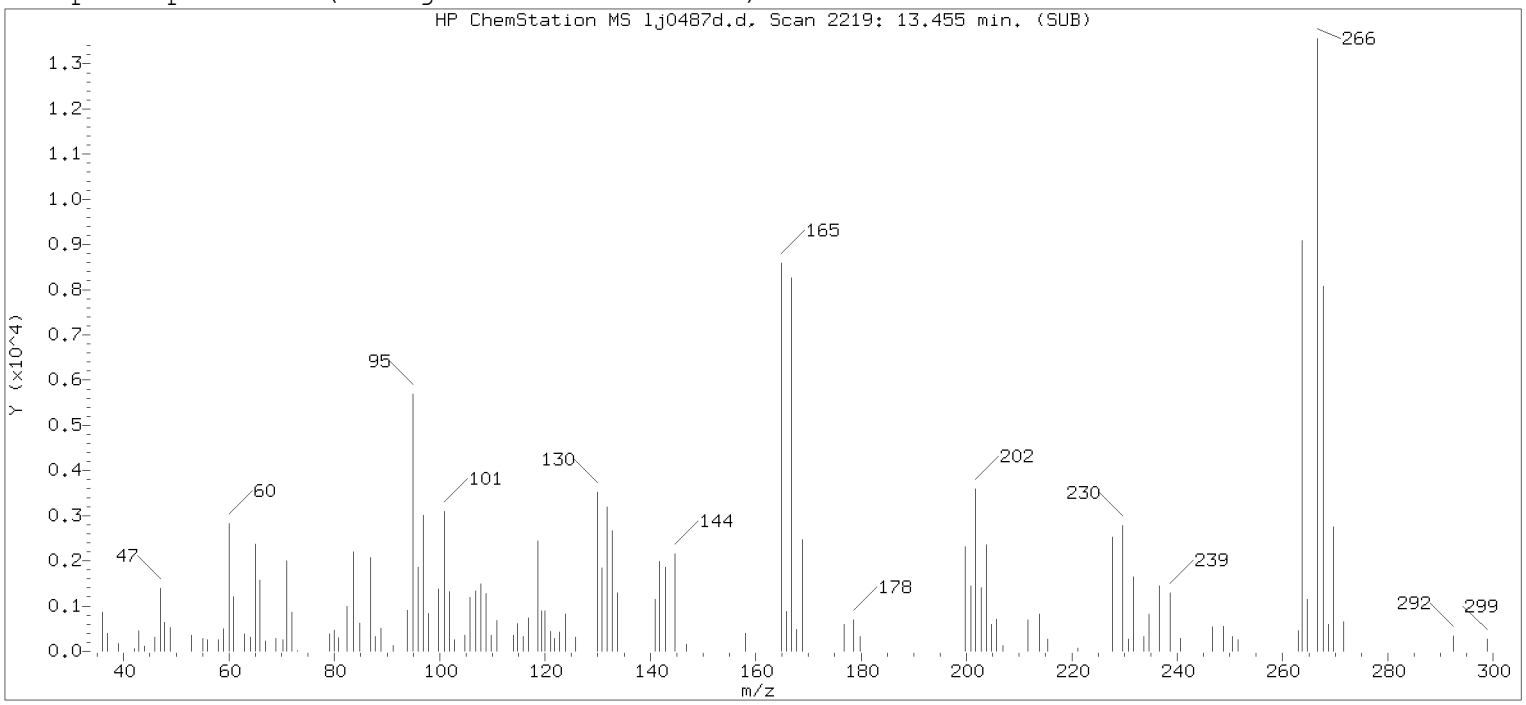
Compound Number : 149
Compound Name : Pentachlorophenol
Scan Number : 2219
Retention Time (minutes) : 13.455
Quant Ion : 266.00
Area (flag) : 14773M
On-Column Amount (ng/ul) : 0.9735
Integration start scan : 2215 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

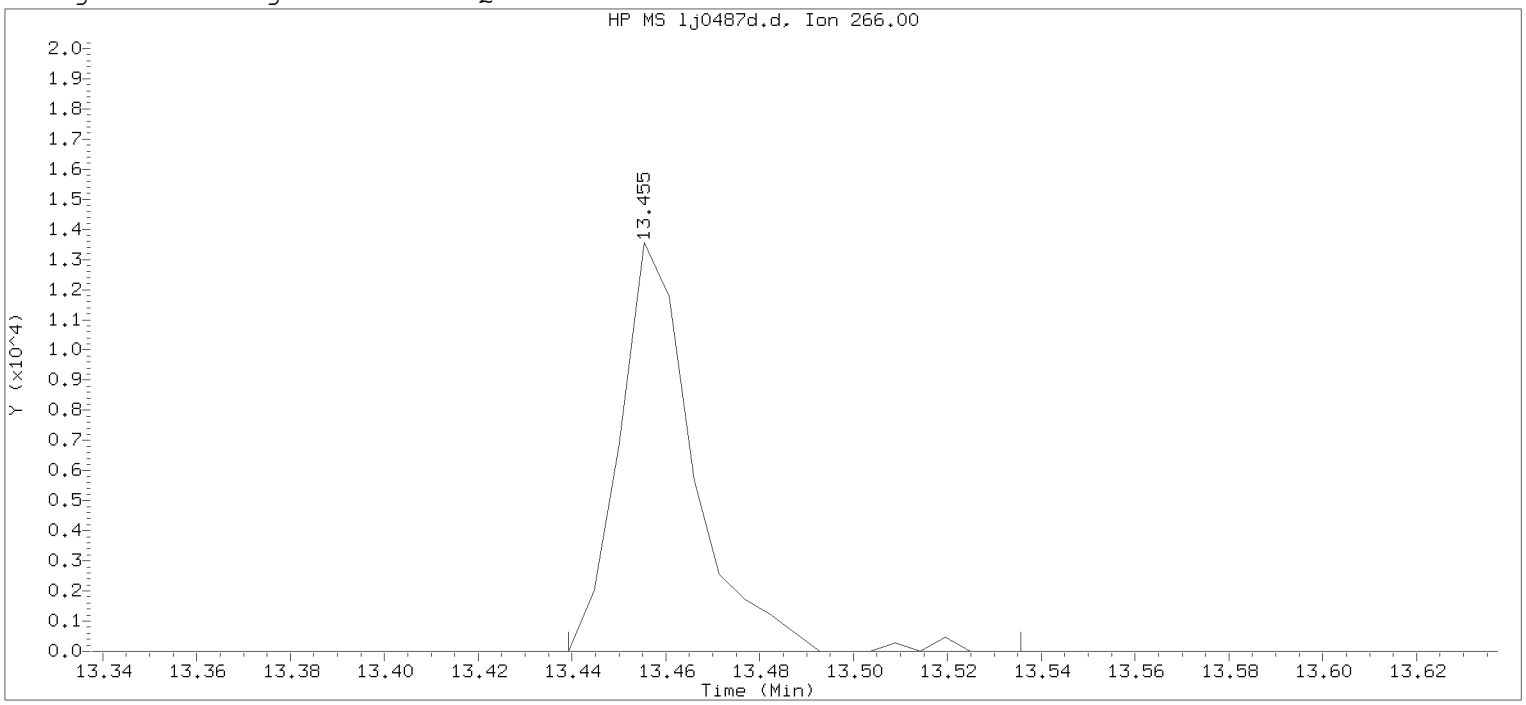
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

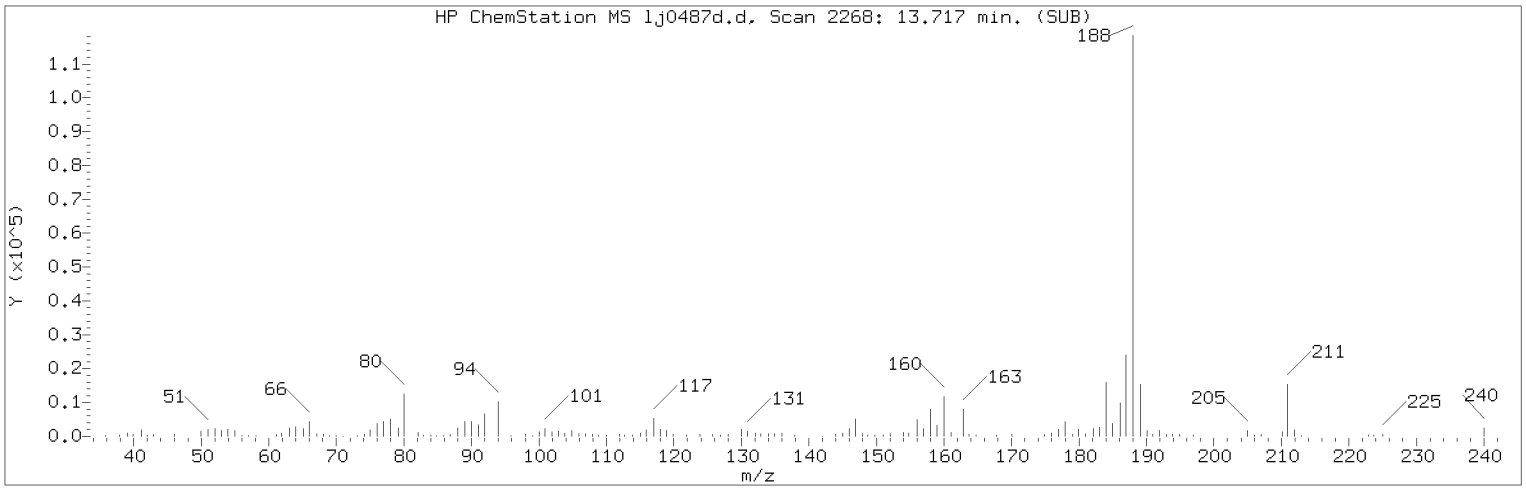
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

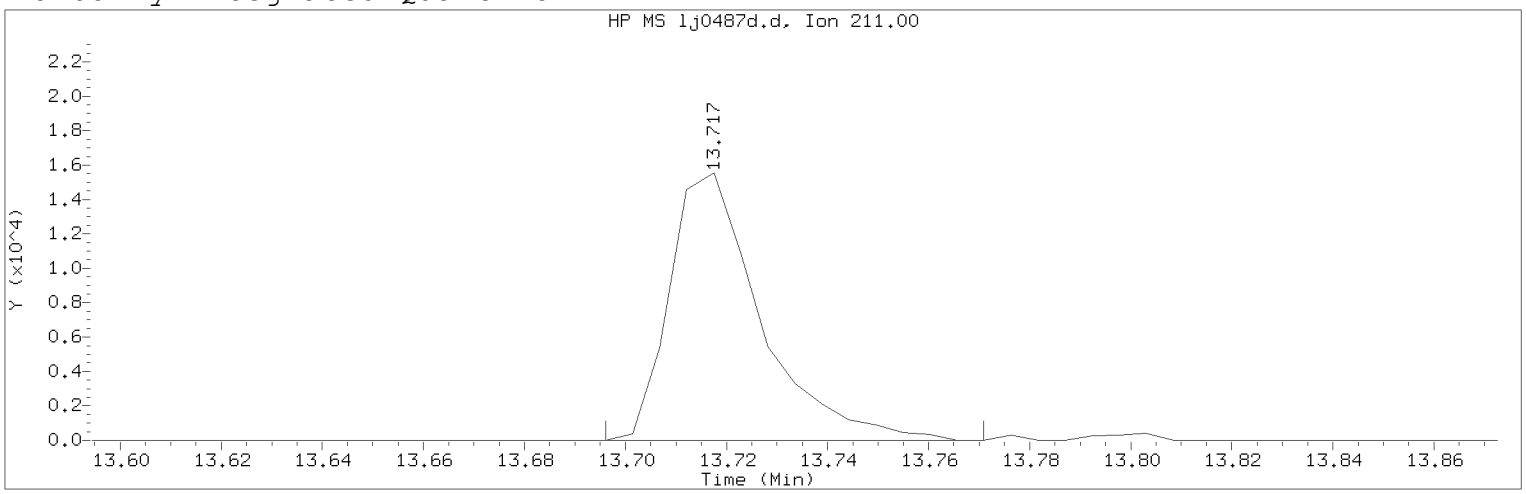
Compound Number : 149
Compound Name : Pentachlorophenol
Scan Number : 2219
Retention Time (minutes) : 13.455
Quant Ion : 266.00
Area : 15014
On-column Amount (ng/ul) : 0.9720
Integration start scan : 2215 Integration stop scan: 2233
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

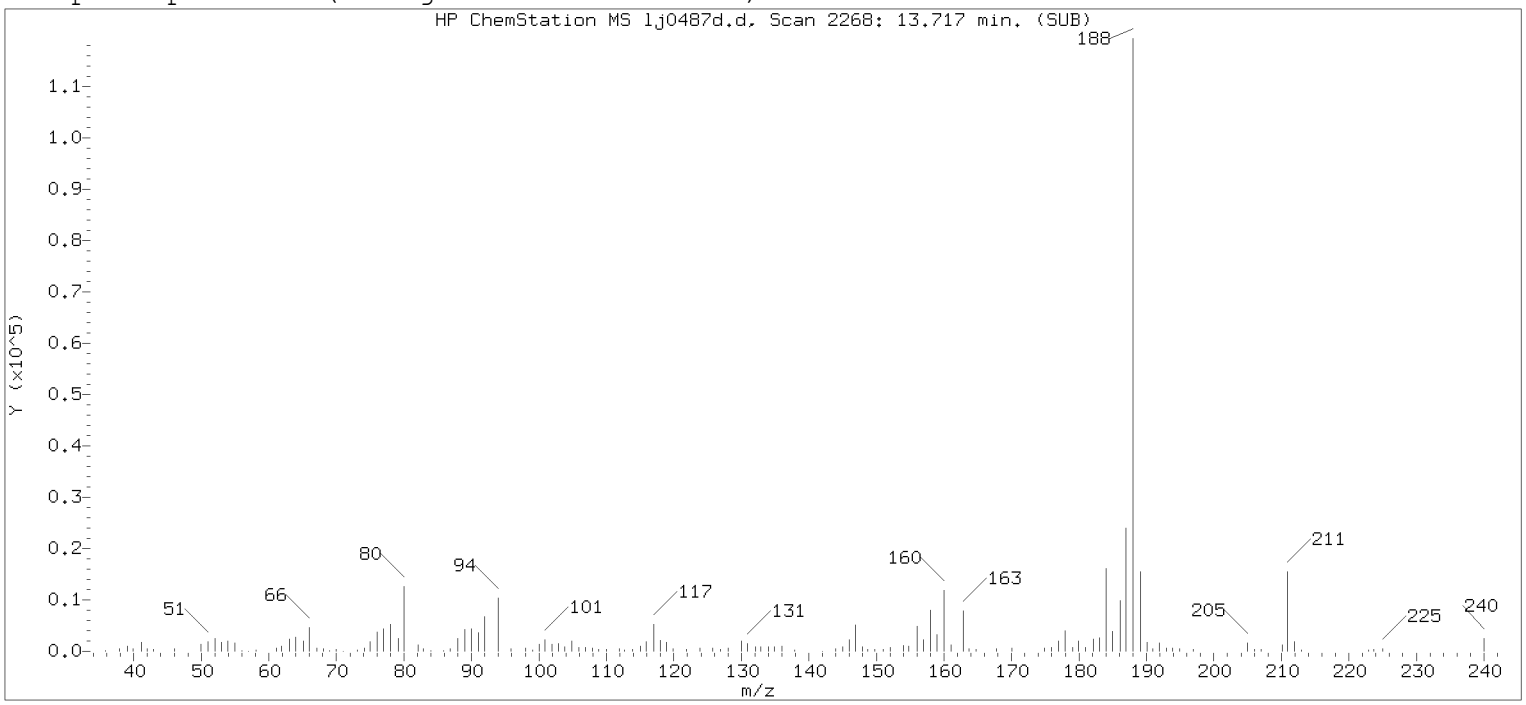
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 2268
Retention Time (minutes) : 13.717
Quant Ion : 211.00
Area (flag) : 19396M
On-Column Amount (ng/ul) : 0.8328
Integration start scan : 2263 Integration stop scan: 2277
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

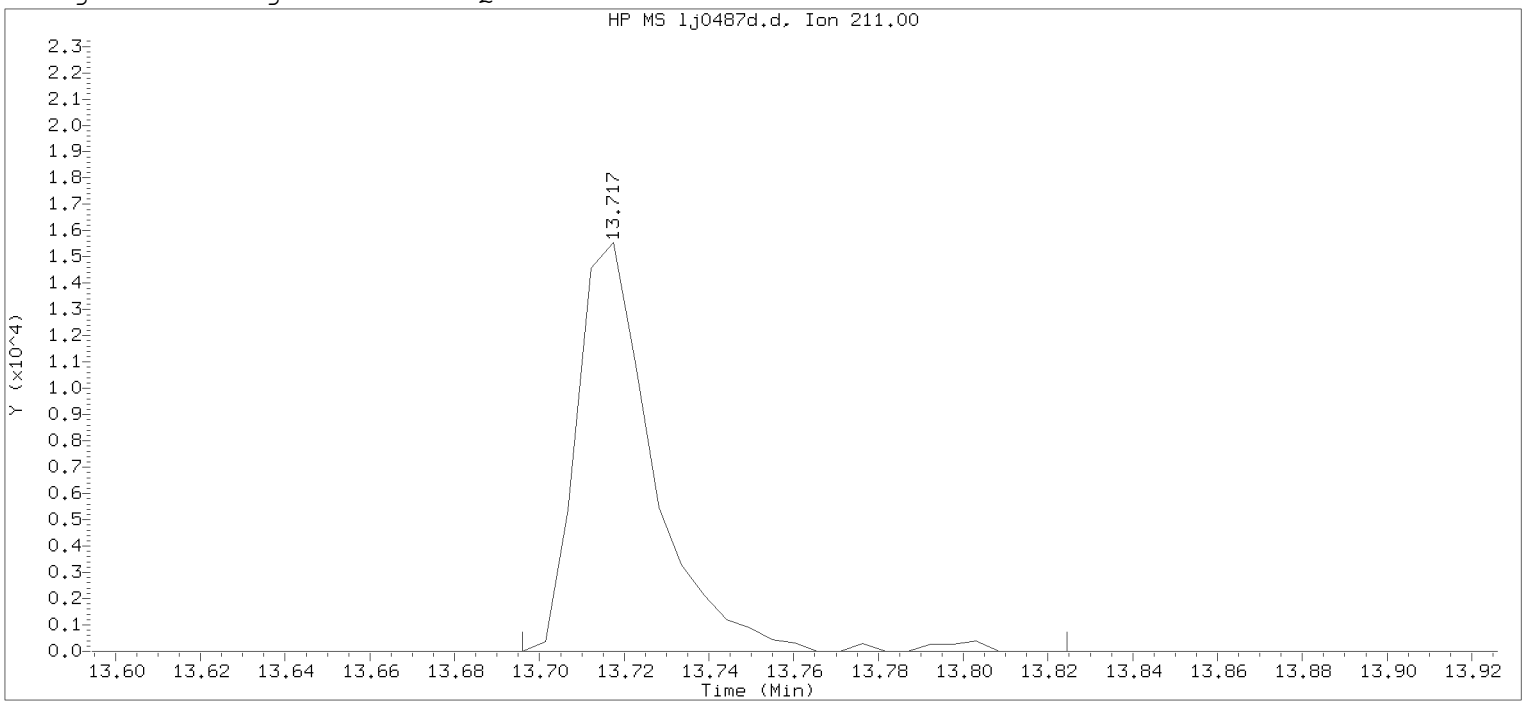
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

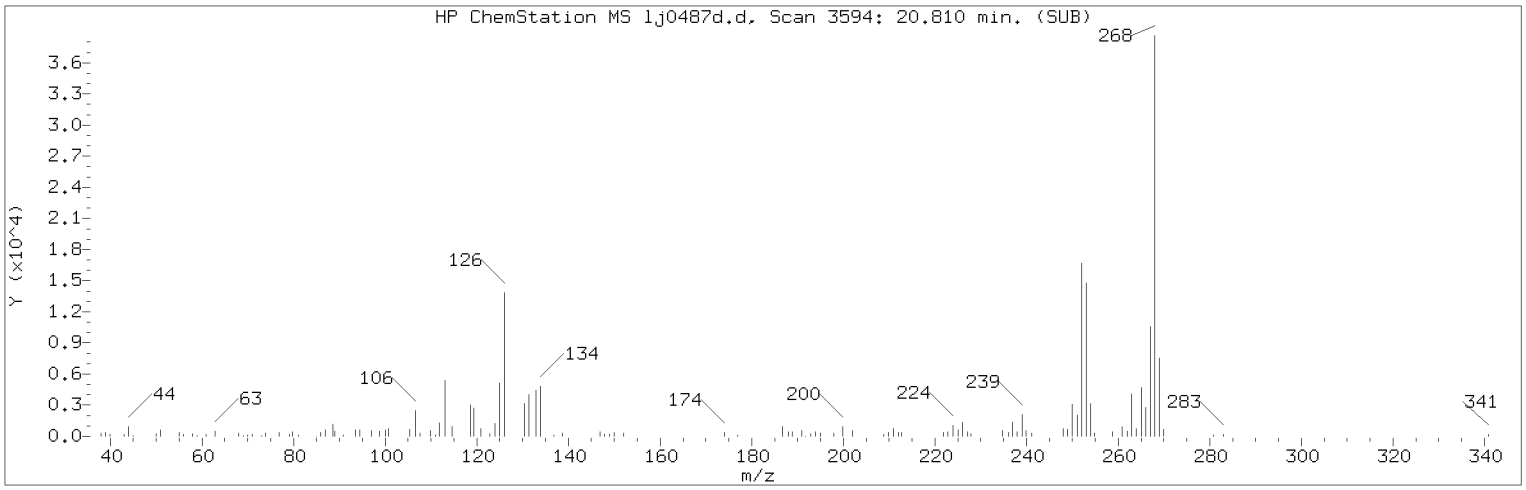
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

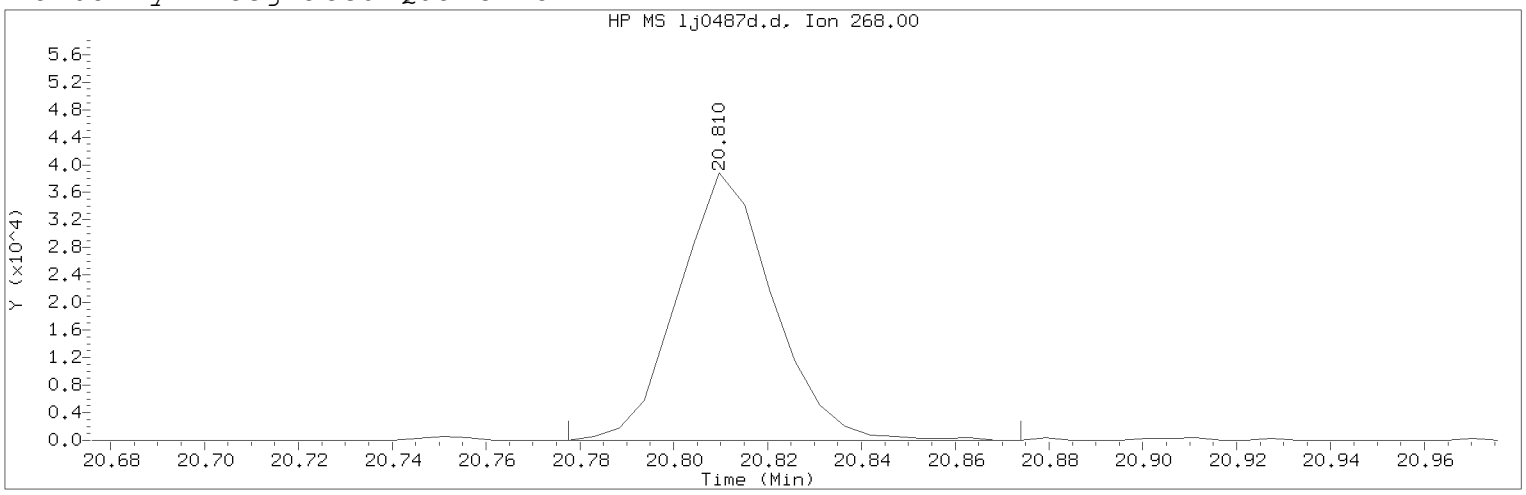
Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 2268		
Retention Time (minutes)	: 13.717		
Quant Ion	: 211.00		
Area	: 19794		
On-column Amount (ng/ul)	: 0.8402		
Integration start scan	: 2263	Integration stop scan:	2287
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1147

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

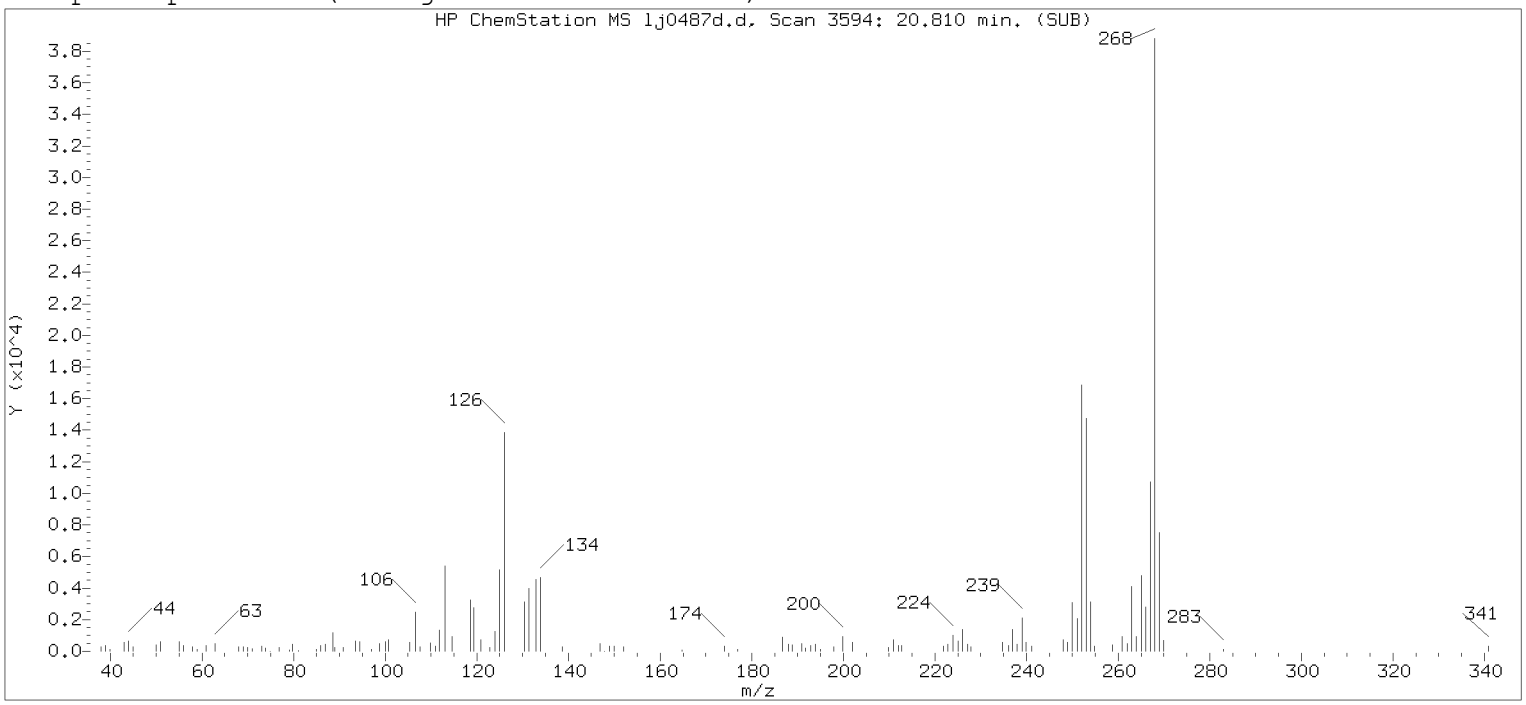
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 3594
Retention Time (minutes) : 20.810
Quant Ion : 268.00
Area (flag) : 54487M
On-Column Amount (ng/ul) : 1.1099
Integration start scan : 3587 Integration stop scan: 3605
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

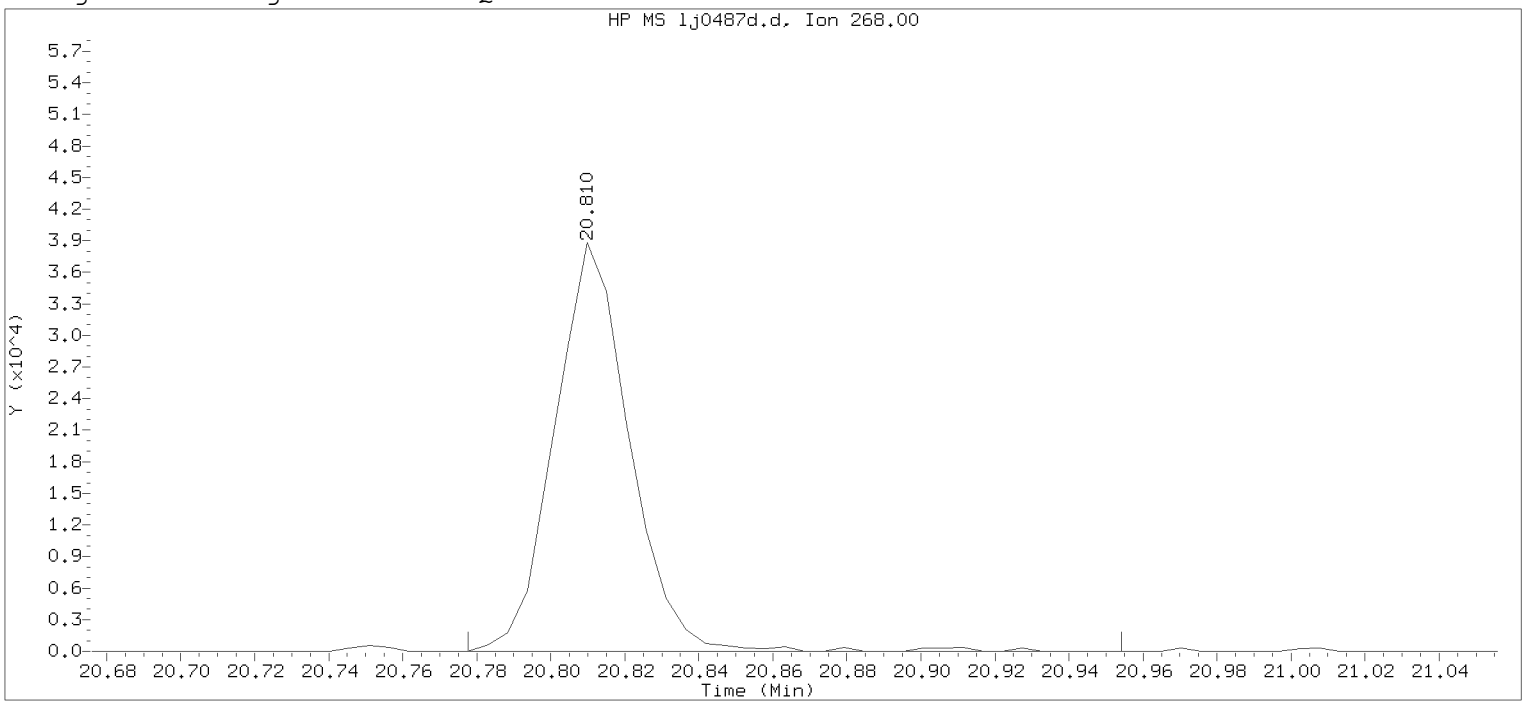
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

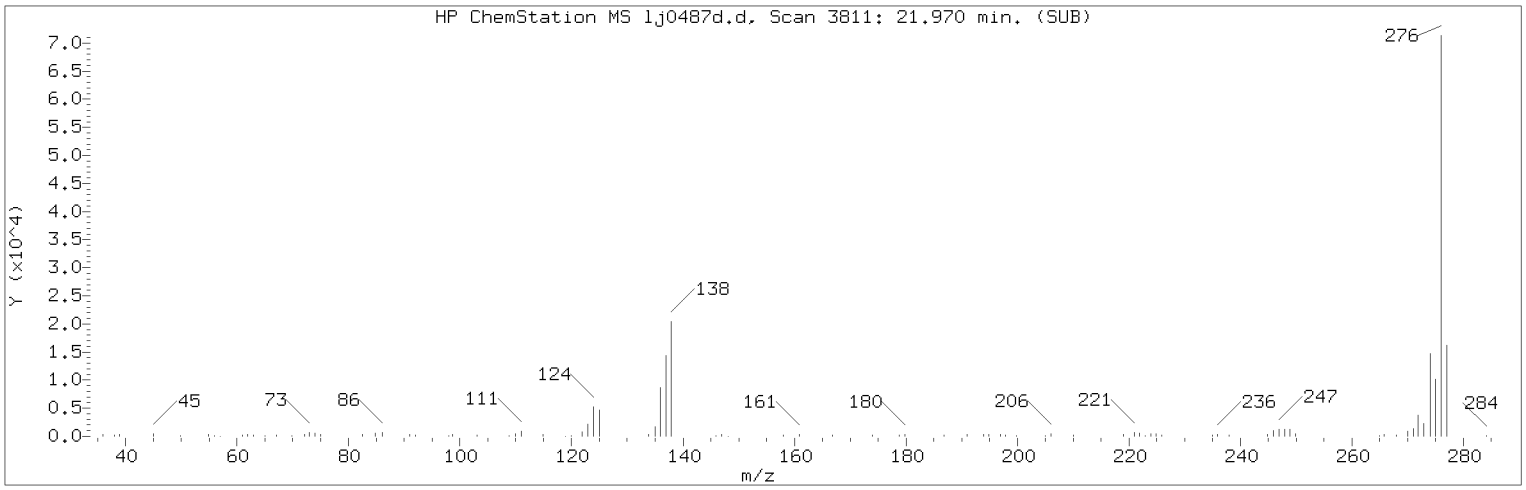
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

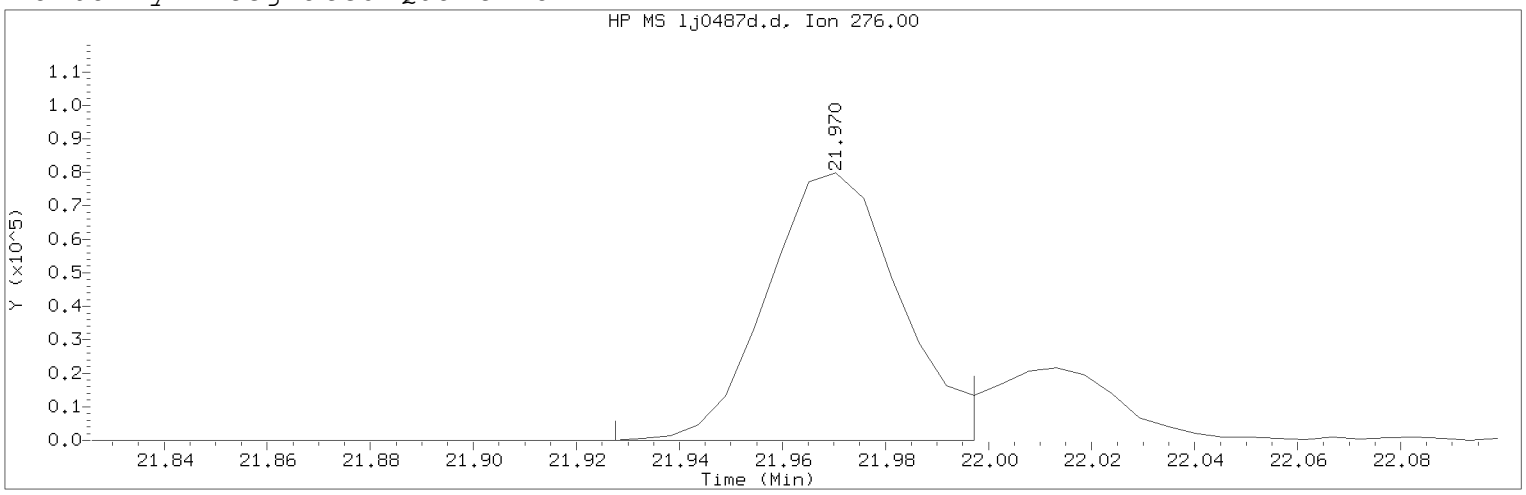
Compound Number	: 215		
Compound Name	: 3-Methylcholanthrene		
Scan Number	: 3594		
Retention Time (minutes)	: 20.810		
Quant Ion	: 268.00		
Area	: 55001		
On-column Amount (ng/ul)	: 1.0866		
Integration start scan	: 3587	Integration stop scan:	3620
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: 1146

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

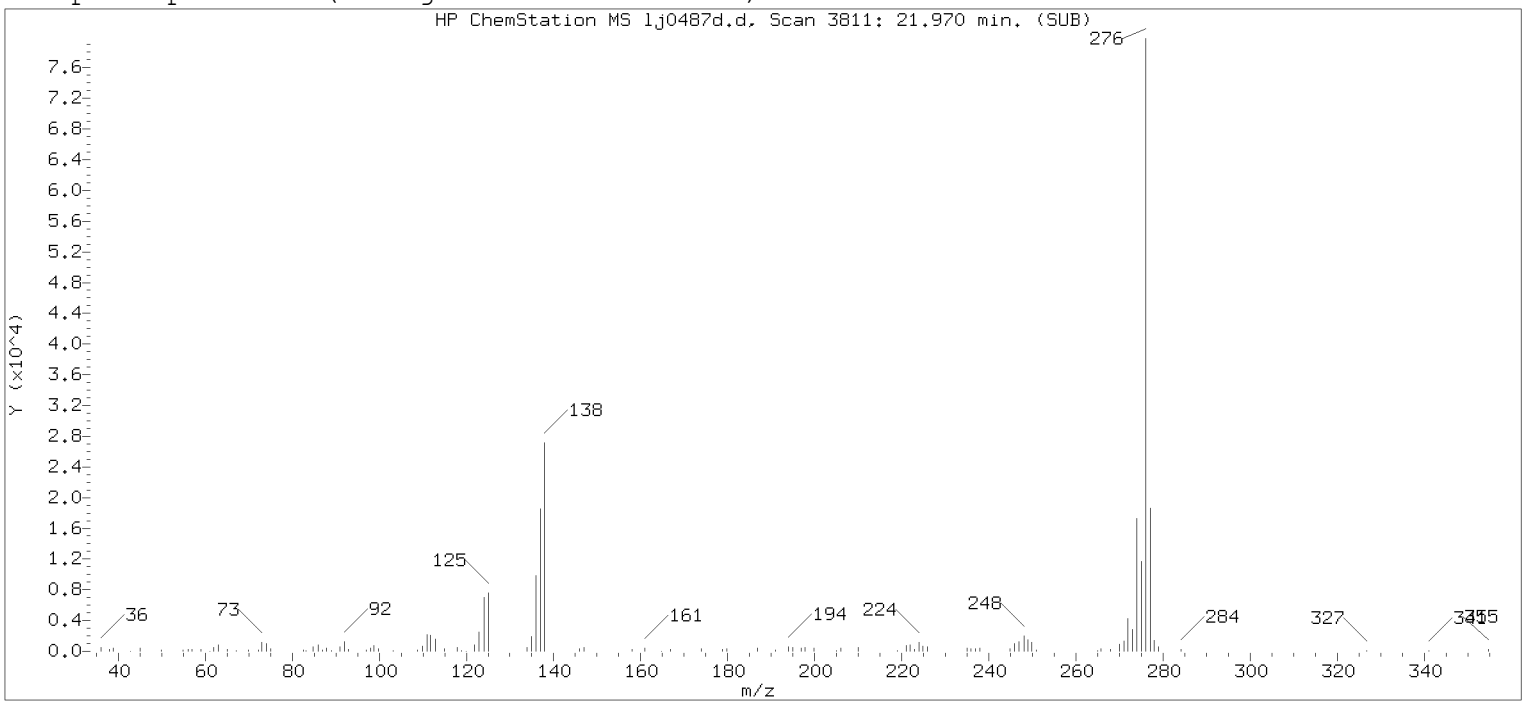
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3811
Retention Time (minutes) : 21.970
Quant Ion : 276.00
Area (flag) : 142949M
On-Column Amount (ng/ul) : 1.1366
Integration start scan : 3802 Integration stop scan: 3815
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

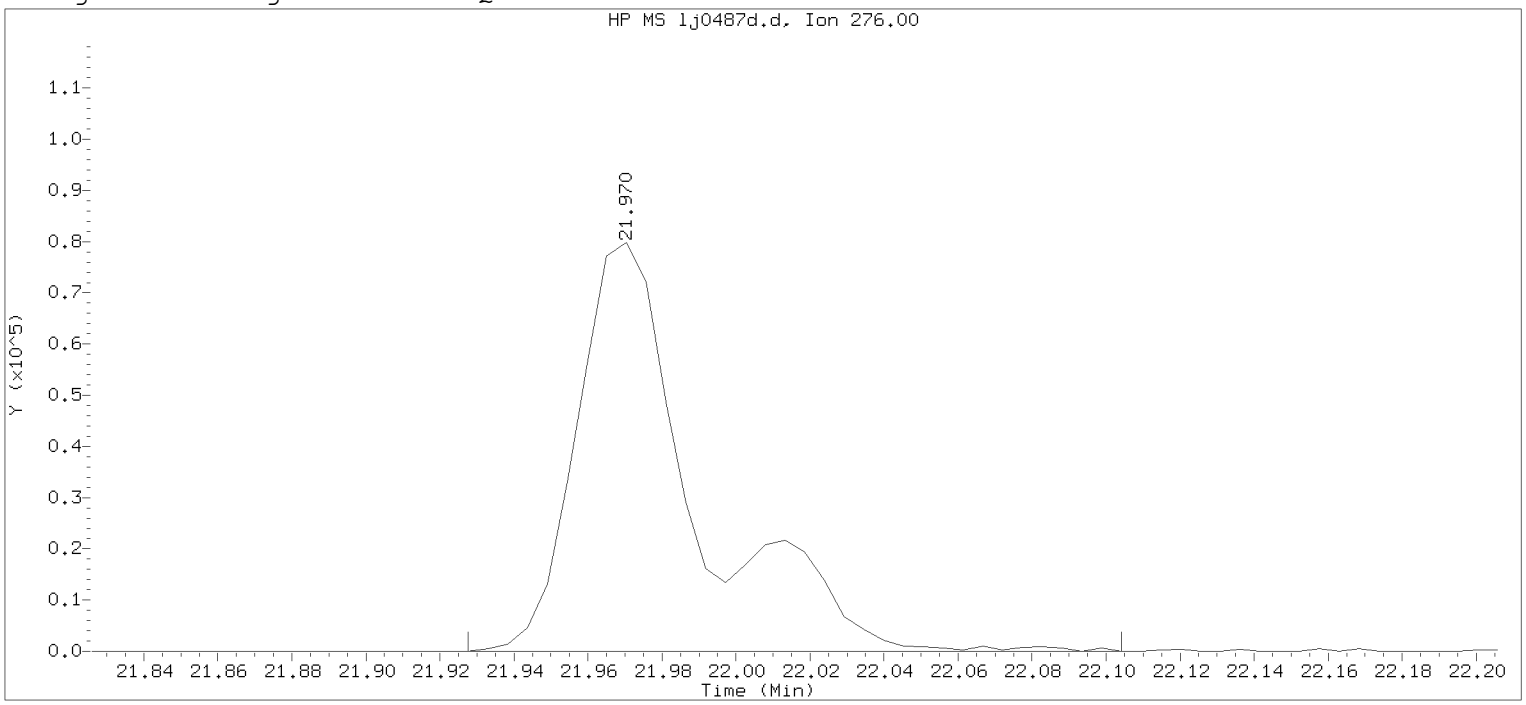
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



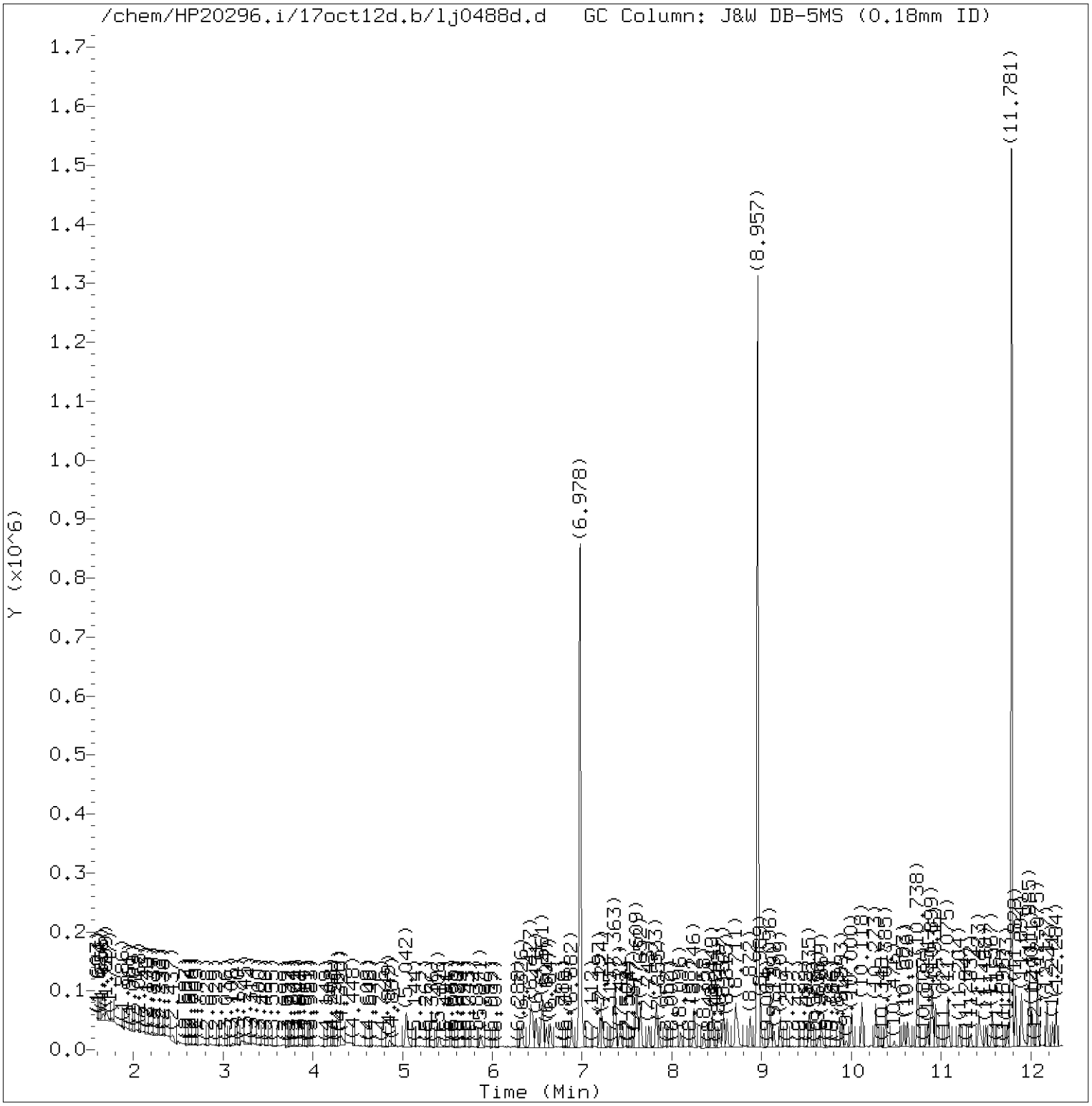
Data File: /chem/HP20296.i/17oct12d.b/lj0487d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 21:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD1.25 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3811		
Retention Time (minutes)	: 21.970		
Quant Ion	: 276.00		
Area	: 179108		
On-column Amount (ng/ul)	: 1.1739		
Integration start scan	: 3802	Integration stop scan:	3835
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:04.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

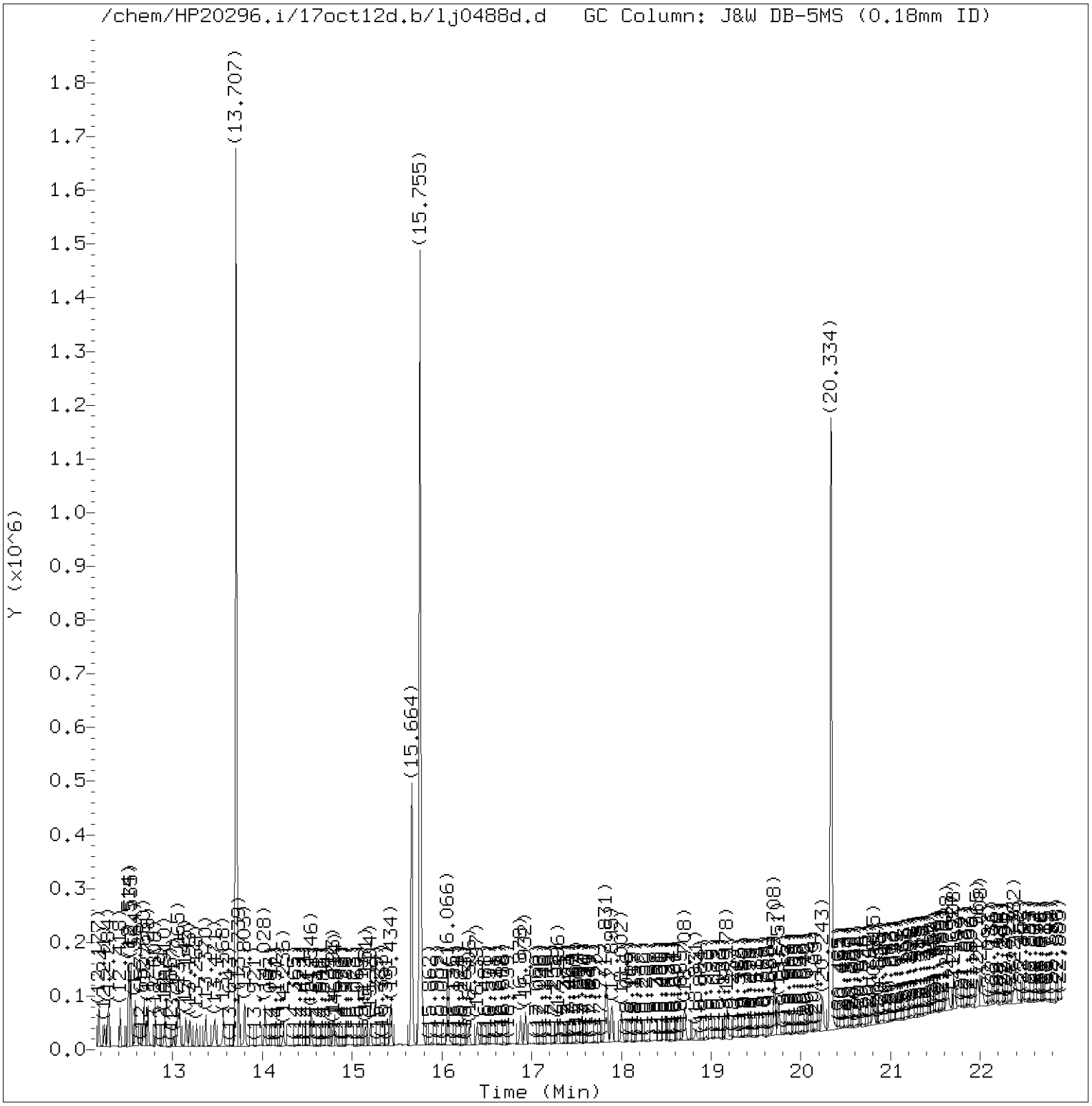
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.501	88	5640	0.235
4) N-Nitrosodimethylamine	(1)	3.116	74	4237	0.114
5) Pyridine	(1)	3.213	79	9264	0.143
7) 2-Picoline	(1)	4.288	93	16339	0.234
9) Methyl methanesulfonate	(1)	4.855	80	7886	0.288
11)$2-Fluorophenol	(1)	5.042	112	27661	0.497
13) N-Nitrosodiethylamine	(1)	5.406	102	6250M	0.227
42) Total Cresols	(1)			27177	0.485
15) Ethyl methanesulfonate	(1)	5.871	109	6558	0.233
16) Benzaldehyde	(1)	6.326	77	12855	0.239
17)$Phenol-d6	(1)	6.427	99	34278	0.466
18) Phenol	(1)	6.449	94	20152	0.242
19) Aniline	(1)	6.486	93	24149	0.243
20) a-methylstyrene	(1)	6.561	118	15832	0.264
22) bis(2-Chloroethyl)ether	(1)	6.604	93	15463	0.254
23) 2-Chlorophenol	(1)	6.647	128	13486	0.247
24) 1,3-Dichlorobenzene	(1)	6.882	146	15305	0.256
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	179060	5.000
26) 1,4-Dichlorobenzene	(1)	7.000	146	15405	0.256
27) Benzyl alcohol	(1)	7.197	108	10376	0.266
28) 1,2-Dichlorobenzene	(1)	7.224	146	15217	0.266
30) Indene	(1)	7.363	115	28543	0.267
31) 2-Methylphenol	(1)	7.369	108	13320	0.245
97) Isosafrole	(3)			9342	0.247
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.422	45	18039	0.248
34) bis(2-Chloroisopropyl)ether	(1)	7.422	45	18039	0.248
35) N-Nitrosopyrrolidine	(1)	7.577	100	7169	0.247
36) Acetophenone	(1)	7.604	105	19610	0.235
37) 4-Methylphenol	(1)	7.609	108	13857M	0.240
38) N-Nitroso-di-n-propylamine	(1)	7.615	70	11223M	0.255
39) N-Nitrosomorpholine	(1)	7.647	56	8549	0.254
40) o-Toluidine	(1)	7.652	106	23792	0.248
43) Hexachloroethane	(1)	7.743	117	5860	0.240
44)$Nitrobenzene-d5	(2)	7.823	82	32655	0.487
45) Nitrobenzene	(2)	7.855	77	16148	0.240
120) 2,4_2,6-Dinitrotoluenes	(3)			9828	0.373
48) N-Nitrosopiperidine	(2)	8.101	114	6749	0.237
50) Isophorone	(2)	8.246	82	26931	0.227
51) 2-Nitrophenol	(2)	8.358	139	5259	0.202
53) 2,4-Dimethylphenol	(2)	8.449	107	14075	0.236

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	8.524	105	14347	3.474
57) O,O,O-Triethylphosphorothioate	(2)	8.577	198	6230	0.253
55) bis(2-Chloroethoxy)methane	(2)	8.615	93	17984	0.242
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.711	104	22486	0.256
60) 2,4-Dichlorophenol	(2)	8.733	162	10537	0.240
146) Diallate trans/cis	(4)			12001	0.224
62) 1,2,4-Trichlorobenzene	(2)	8.872	180	11772	0.247
65)*Naphthalene-d8	(2)	8.957	136	712287	5.000
66) Naphthalene	(2)	8.989	128	40536	0.250
67) 4-Chloroaniline	(2)	9.096	127	16531	0.246
68) 2,6-Dichlorophenol	(2)	9.102	162	9907	0.231
69) Hexachloropropene	(2)	9.134	213	5606	0.240
71) Hexachlorobutadiene	(2)	9.209	225	5681	0.226
75) Quinoline	(2)	9.535	129	24267	0.241
76) Caprolactam	(2)	9.636	113	3467M	0.227
77) N-Nitrosodi-n-butylamine	(2)	9.669	84	10621M	0.217
80) 4-Chloro-3-methylphenol	(2)	9.893	107	11521	0.227
82) Safrole	(2)	10.000	162	9281	0.231
83) 2-Methylnaphthalene	(2)	10.118	142	25346	0.239
84) 1-Methylnaphthalene	(2)	10.273	142	22557	0.232
85) Hexachlorocyclopentadiene	(3)	10.380	237	4472	0.203
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.385	216	12092	0.266
88) cis-Isosafrole	(3)	10.482	162	2100	0.051
90) 2,4,6-Trichlorophenol	(3)	10.583	196	6406	0.222
92) 2,4,5-Trichlorophenol	(3)	10.631	196	7802	0.247
93)$2-Fluorobiphenyl	(3)	10.738	172	53665	0.485
94) trans-Isosafrole	(3)	10.851	162	7242	0.197
95) 1,1'-Biphenyl	(3)	10.893	154	28859	0.235
96) 2-Chloronaphthalene	(3)	10.904	162	22946	0.236
98) 1-Chloronaphthalene	(3)	10.936	162	23341	0.261
99) Diphenyl ether	(3)	11.075	170	15422	0.243
100) 2-Nitroaniline	(3)	11.086	138	5241	0.180
104) 1,4-Naphthoquinone	(3)	11.204	158	7451	0.192
105) 1,4-Dinitrobenzene	(3)	11.332	168	2843	0.197
106) Dimethylphthalate	(3)	11.423	163	26771	0.255
107) 1,3-Dinitrobenzene	(3)	11.444	168	2854M	0.174
108) 2,6-Dinitrotoluene	(3)	11.498	165	4285	0.193
109) Acenaphthylene	(3)	11.567	152	31246	0.232
112) 3-Nitroaniline	(3)	11.733	138	4878M	0.188
113)*Acenaphthene-d10	(3)	11.787	164	378936	5.000

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

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on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.829	153	25247	0.246
115) 2,4-Dinitrophenol	(3)	11.894	184	13505M	1.059
116) 4-Nitrophenol	(3)	11.985	109	15439M	0.864
117) Pentachlorobenzene	(3)	12.011	250	9025	0.264
118) 2,4-Dinitrotoluene	(3)	12.075	165	5543	0.180
119) Dibenzofuran	(3)	12.075	168	33528	0.253
121) 1-Naphthylamine	(3)	12.177	143	23732	0.229
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	4575	0.209
123) 2-Naphthylamine	(3)	12.284	143	24279	0.242
124) Diethylphthalate	(3)	12.418	149	25027	0.240
126) Fluorene	(3)	12.514	166	26695	0.248
125) Thionazin	(3)	12.514	107	5344	0.254
128) 5-Nitro-o-toluidine	(3)	12.535	152	6087	0.209
127) 4-Chlorophenyl-phenylether	(3)	12.535	204	12221	0.256
129) 4-Nitroaniline	(3)	12.541	138	5431	0.202
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	12876M	0.775
132) NDPA as diphenylamine	(4)	12.680	169	21194	0.241
131) N-Nitrosodiphenylamine	(4)	12.680	169	21194	0.241
134) 1,2-Diphenylhydrazine	(4)	12.728	77	30526	0.246
135)$2,4,6-Tribromophenol	(3)	12.803	330	2086	0.210
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	4821M	0.234
139) 1,3,5-Trinitrobenzene	(4)	13.011	213	1320	0.128
140) Diallate (peak 1)	(4)	13.054	86	10349	0.187
141) Phorate	(4)	13.065	75	16250	0.210
142) Phenacetin	(4)	13.081	108	12227M	0.203
143) 4-Bromophenyl-phenylether	(4)	13.150	248	5783M	0.240
144) Diallate (peak 2)	(4)	13.161	86	1652	0.037
145) Hexachlorobenzene	(4)	13.193	284	4340	0.186
147) Dimethoate	(4)	13.268	87	9548	0.191
148) Atrazine	(4)	13.375	200	6386	0.238
149) Pentachlorophenol	(4)	13.461	266	2549	0.169
151) Pentachloronitrobenzene	(4)	13.471	237	2041	0.182
150) 4-Aminobiphenyl	(4)	13.477	169	7067	0.248
152) Pronamide	(4)	13.568	173	9680	0.206
153)*Phenanthrene-d10	(4)	13.707	188	660359	5.000
154) Dinoseb	(4)	13.728	211	2237	0.097
155) Phenanthrene	(4)	13.739	178	37810	0.245
157) Anthracene	(4)	13.803	178	35329	0.233
163) Carbazole	(4)	14.028	167	34644	0.237
164) Methyl parathion	(4)	14.236	109	6115	0.163

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Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

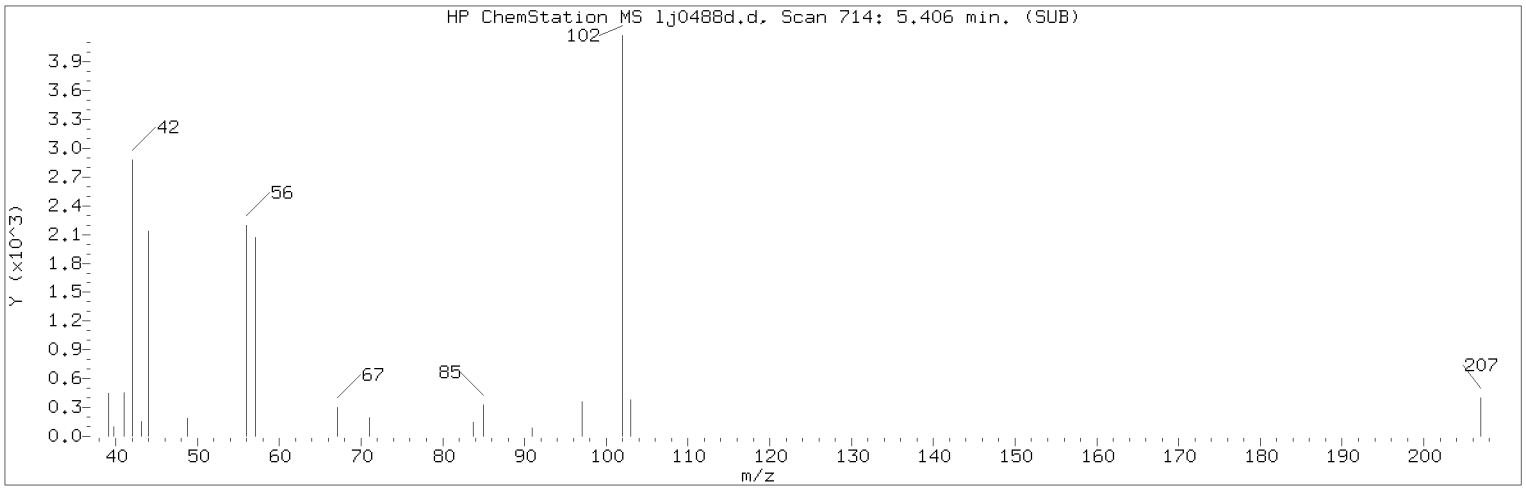
Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.546	149	37996	0.208
167) Parathion	(4)	14.793	109	3875	0.164
168) 4-Nitroquinoline-1-oxide	(4)	14.814	190	1891	1.145
222) Total PAHs	(6)			507659	3.766
169) Octachlorostyrene	(4)	15.146	308	873	0.103
171) Isodrin	(4)	15.210	193	4458	0.257
173) Fluoranthene	(4)	15.434	202	38411	0.232
174) Benzidine	(5)	15.664	184	228687	1.851
175)*Pyrene-d10	(5)	15.755	212	730101	5.000
177) Pyrene	(5)	15.787	202	43639	0.253
179)$Terphenyl-d14	(5)	16.071	244	51836	0.489
182) p-Dimethylaminoazobenzene	(5)	16.306	225	3967	0.175
185) Chlorobenzilate	(5)	16.397	139	10872	0.200
187) 3,3'-Dimethylbenzidine	(5)	16.878	212	22372	0.198
188) Butylbenzylphthalate	(5)	16.927	149	14898	0.184
191) 2-Acetylaminofluorene	(5)	17.301	181	13271	0.184
193) 3,3'-Dichlorobenzidine	(5)	17.820	252	11586	0.204
195) Benzo(a)anthracene	(5)	17.831	228	34879	0.225
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.847	231	5748	0.196
196) Chrysene	(5)	17.895	228	32639	0.228
199) bis(2-Ethylhexyl)phthalate	(5)	18.007	149	20416	0.173
203) 6-Methylchrysene	(5)	18.708	242	22011	0.214
205) Di-n-octylphthalate	(6)	19.178	149	33634	0.165
206) Benzo(b)fluoranthene	(6)	19.703	252	31907	0.224
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.708	256	12831	0.211
208) Benzo(k)fluoranthene	(6)	19.751	252	33609M	0.247
211) Benzo(a)pyrene	(6)	20.243	252	29414	0.221
213)*Perylene-d12	(6)	20.334	264	548089	5.000
215) 3-Methylcholanthrene	(6)	20.810	268	10167M	0.215
217) Dibenz(a,h)acridine	(6)	21.633	279	24169	0.224
218) Dibenz(a,j)acridine	(6)	21.708	279	25533	0.228
219) Indeno(1,2,3-cd)pyrene	(6)	21.965	276	27121M	0.224
220) Dibenz(a,h)anthracene	(6)	22.013	278	27264M	0.222
221) Benzo(g,h,i)perylene	(6)	22.388	276	29526M	0.237

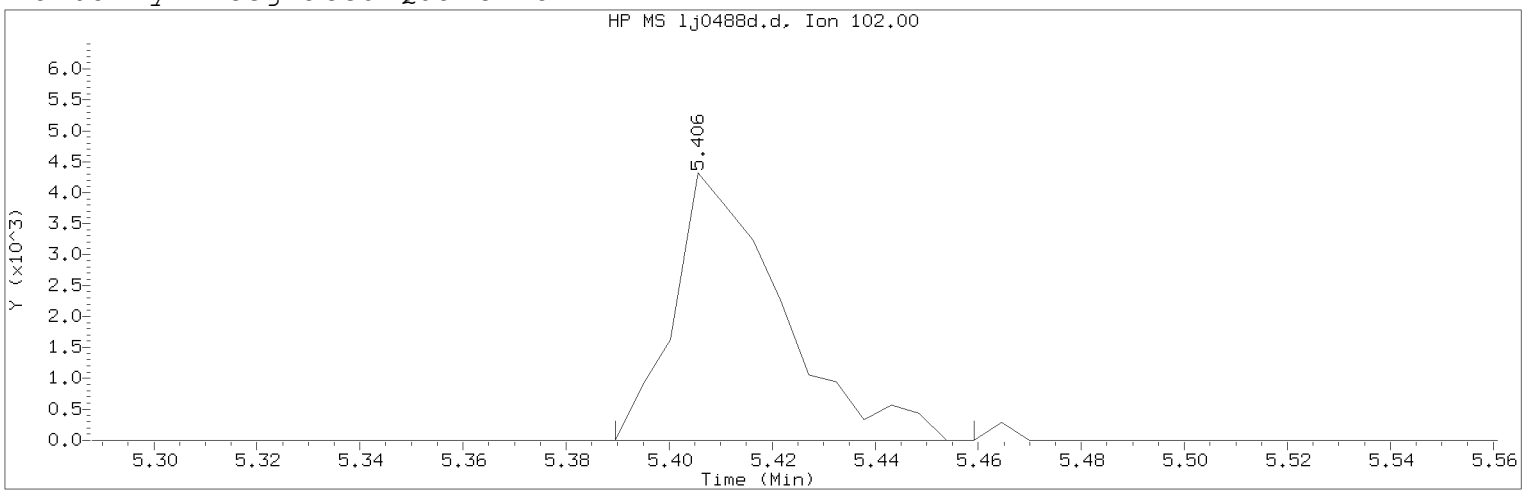
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

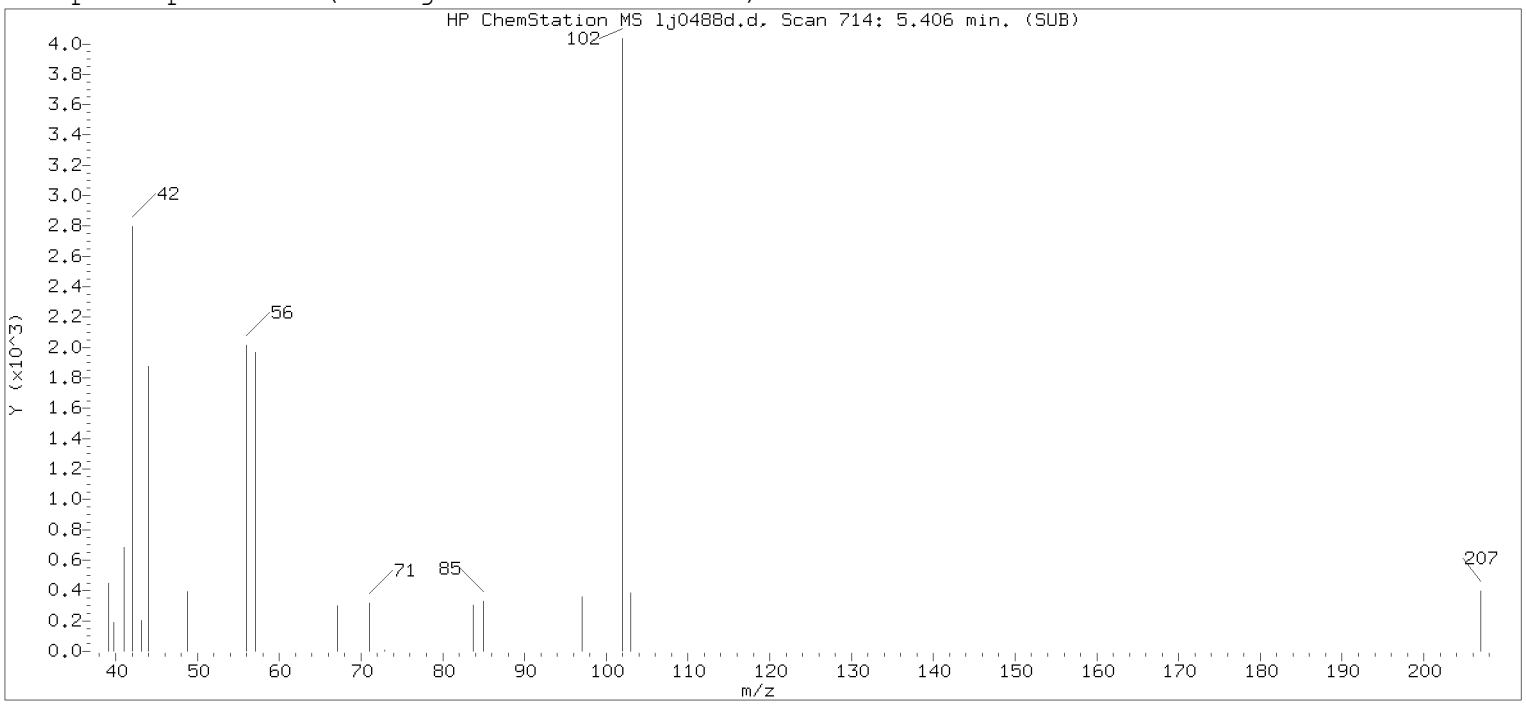
Compound Number : 13
Compound Name : N-Nitrosodiethylamine
Scan Number : 714
Retention Time (minutes) : 5.406
Quant Ion : 102.00
Area (flag) : 6250M
On-Column Amount (ng/ul) : 0.2270
Integration start scan : 710 Integration stop scan: 723
Y at integration start : -2 Y at integration end: -2

Reason for manual integration: improper integration

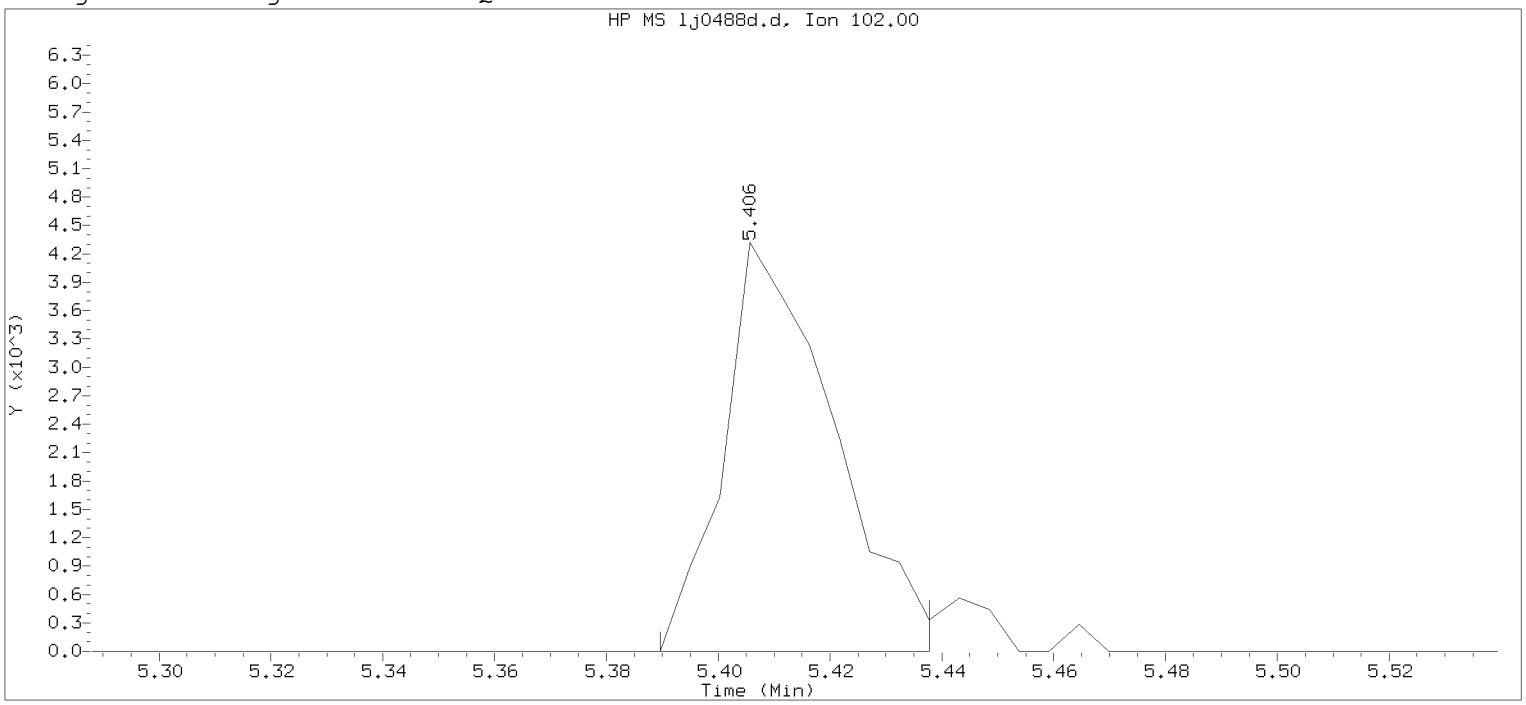
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

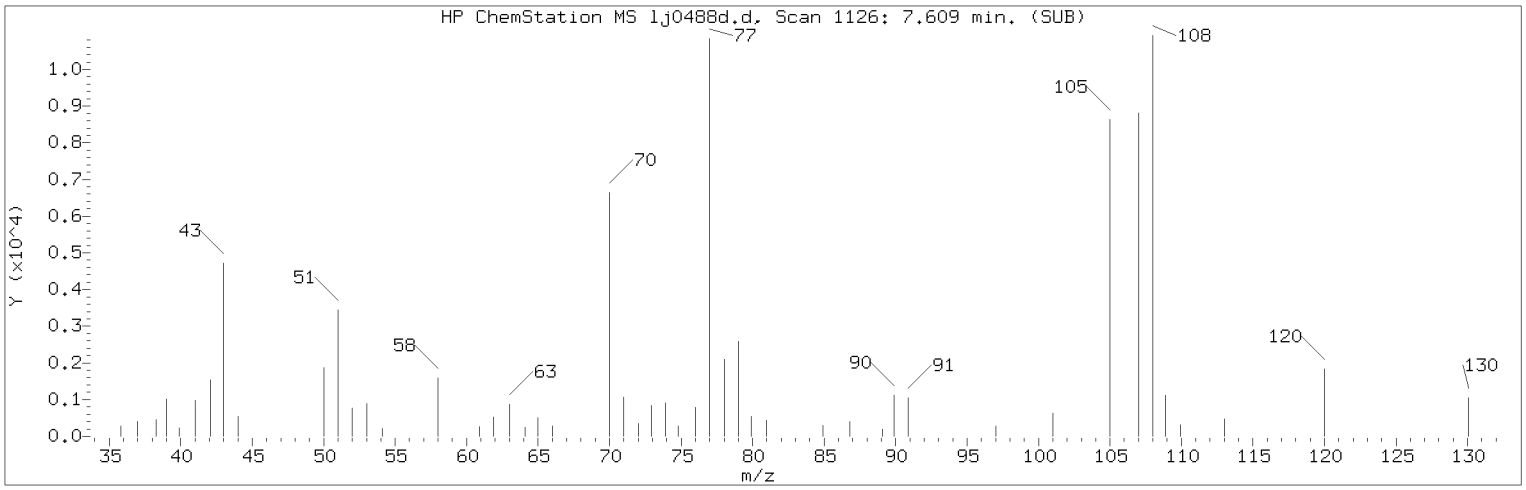
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

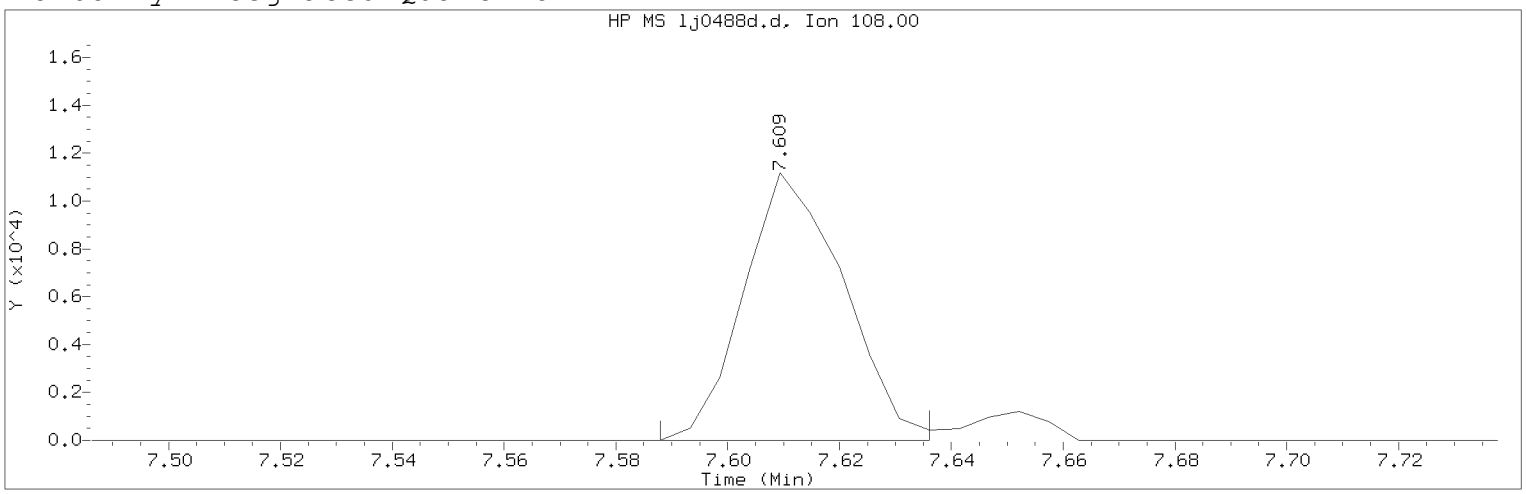
Compound Number	: 13		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 714		
Retention Time (minutes)	: 5.406		
Quant Ion	: 102.00		
Area	: 5867		
On-column Amount (ng/ul)	: 0.2153		
Integration start scan	: 710	Integration stop scan:	719
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user ID: 1156

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

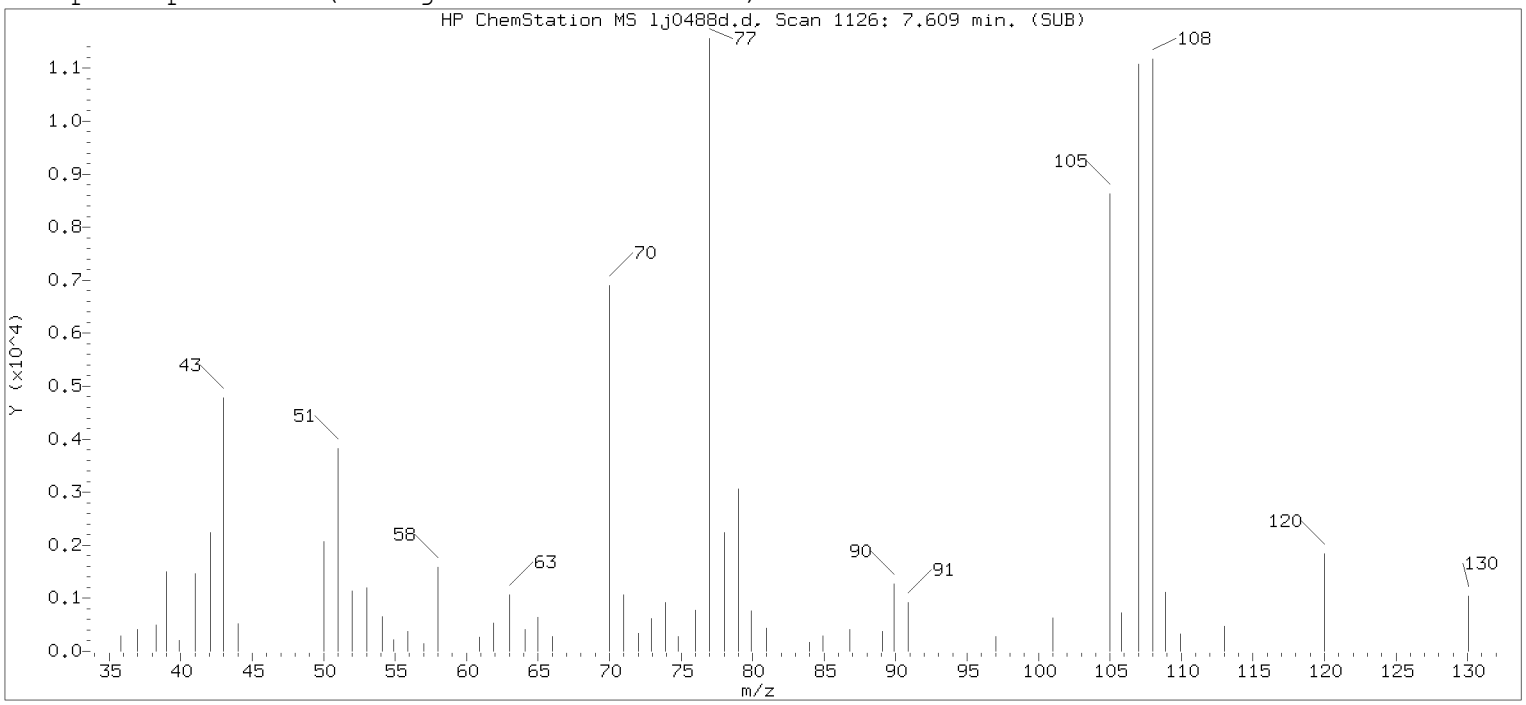
Compound Number : 37
Compound Name : 4-Methylphenol
Scan Number : 1126
Retention Time (minutes) : 7.609
Quant Ion : 108.00
Area (flag) : 13857M
On-Column Amount (ng/ul) : 0.2401
Integration start scan : 1121 Integration stop scan: 1130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

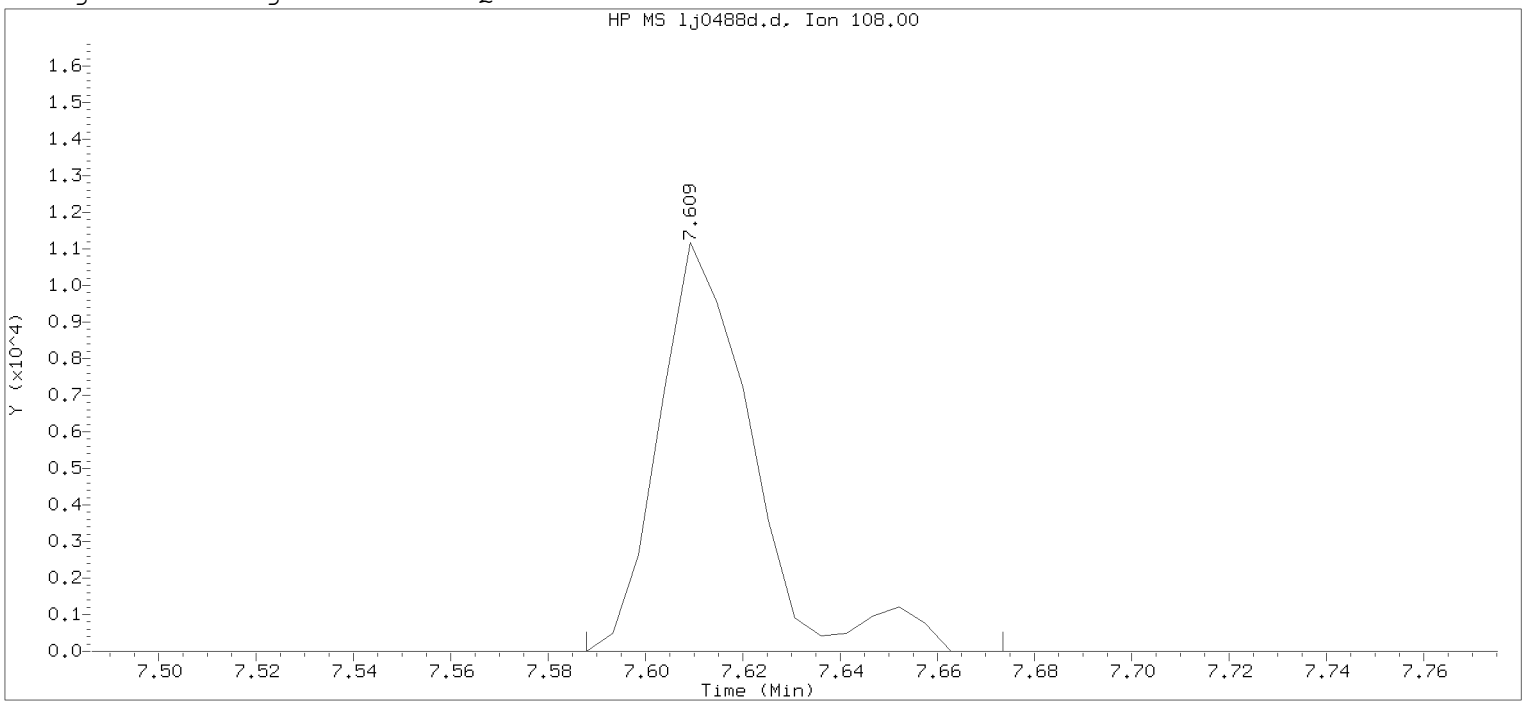
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

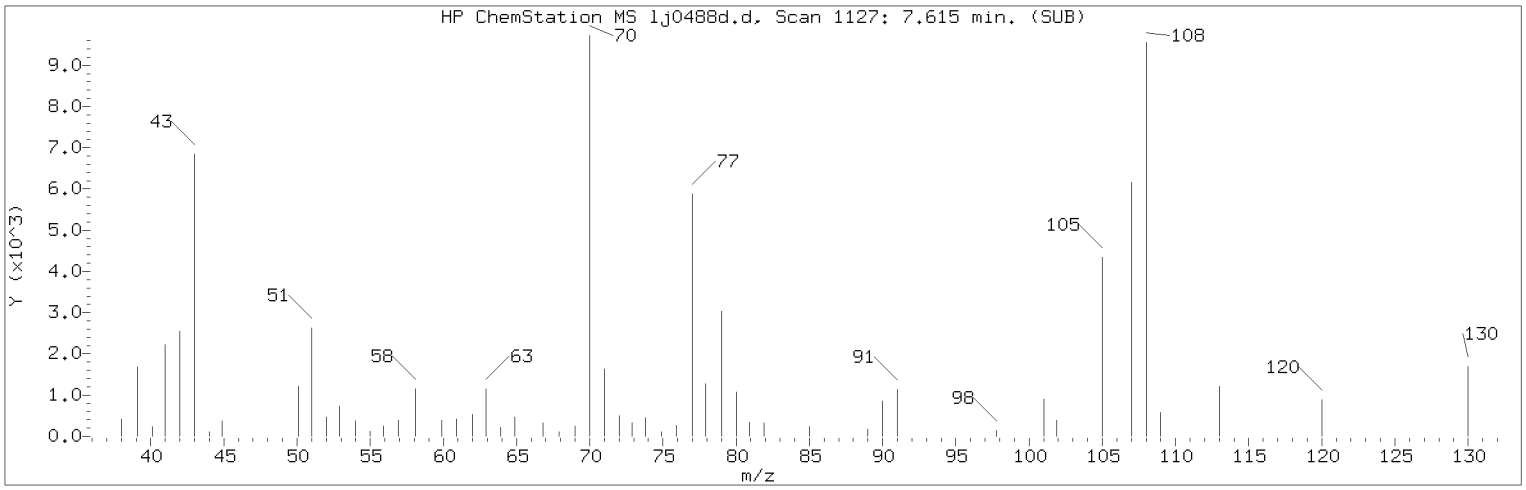
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

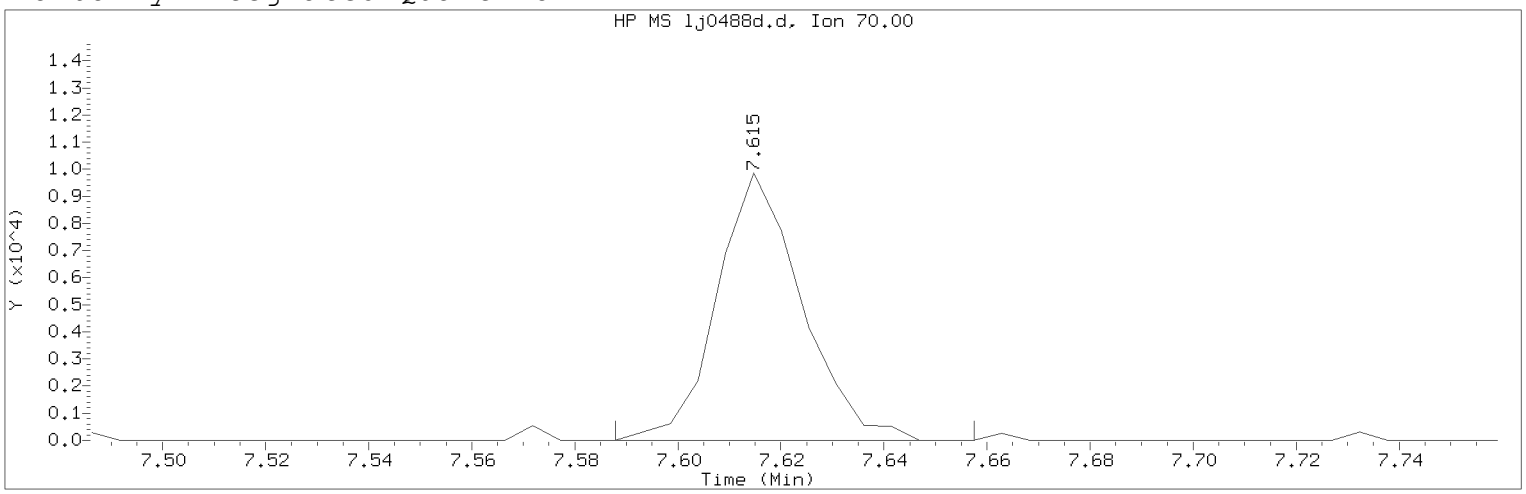
Compound Number : 37
Compound Name : 4-Methylphenol
Scan Number : 1126
Retention Time (minutes) : 7.609
Quant Ion : 108.00
Area : 14954
On-column Amount (ng/ul) : 0.2537
Integration start scan : 1121 Integration stop scan: 1137
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user ID: 51158

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

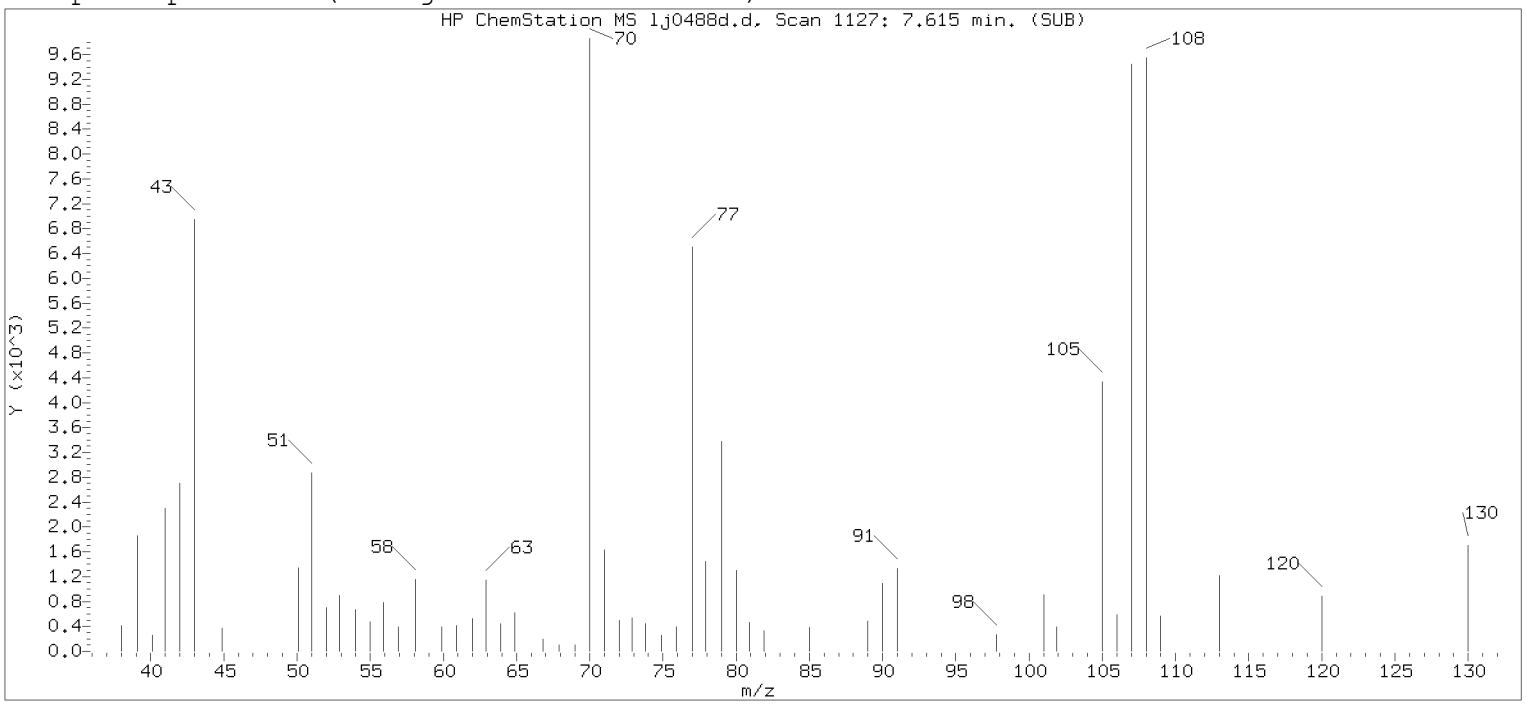
Compound Number : 38
Compound Name : N-Nitroso-di-n-propylamine
Scan Number : 1127
Retention Time (minutes) : 7.615
Quant Ion : 70.00
Area (flag) : 11223M
On-Column Amount (ng/ul) : 0.2546
Integration start scan : 1121 Integration stop scan: 1134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

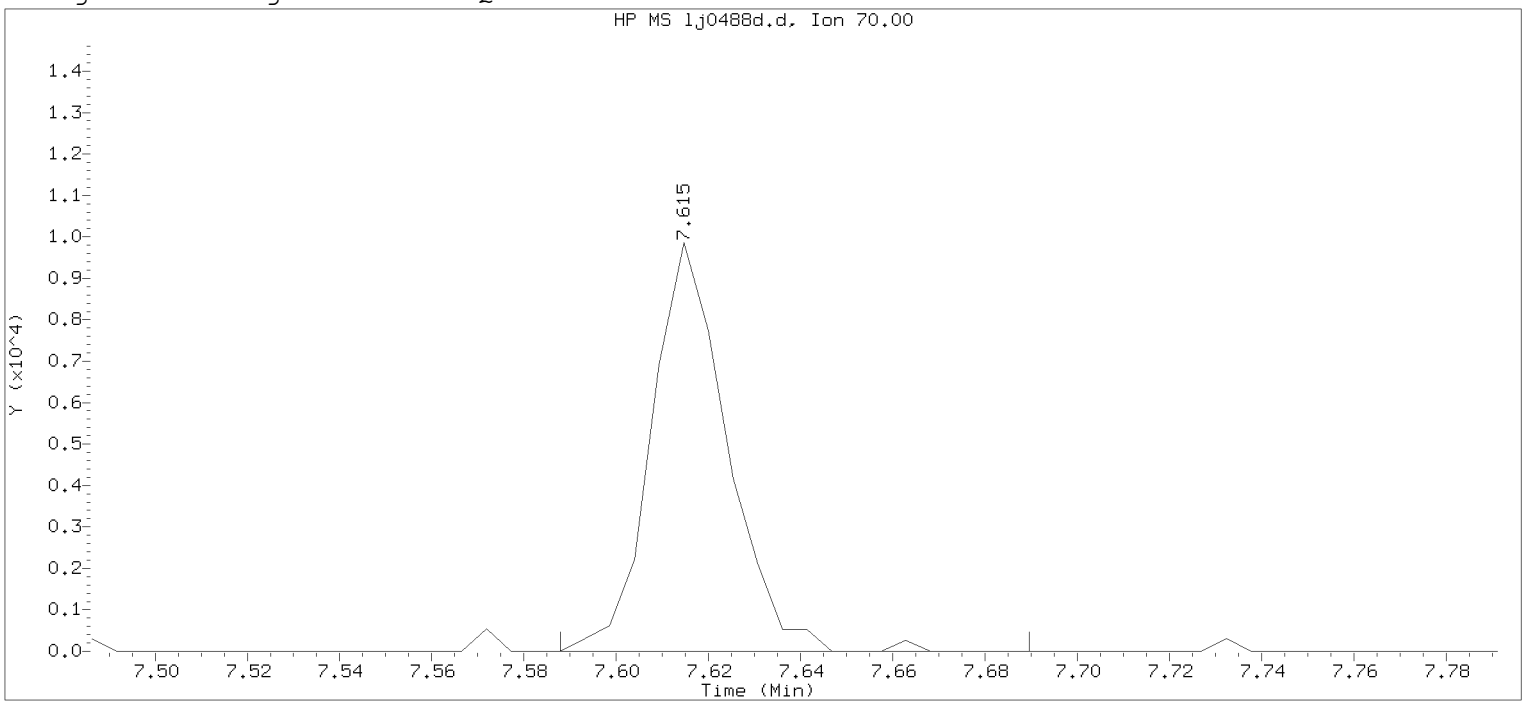
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

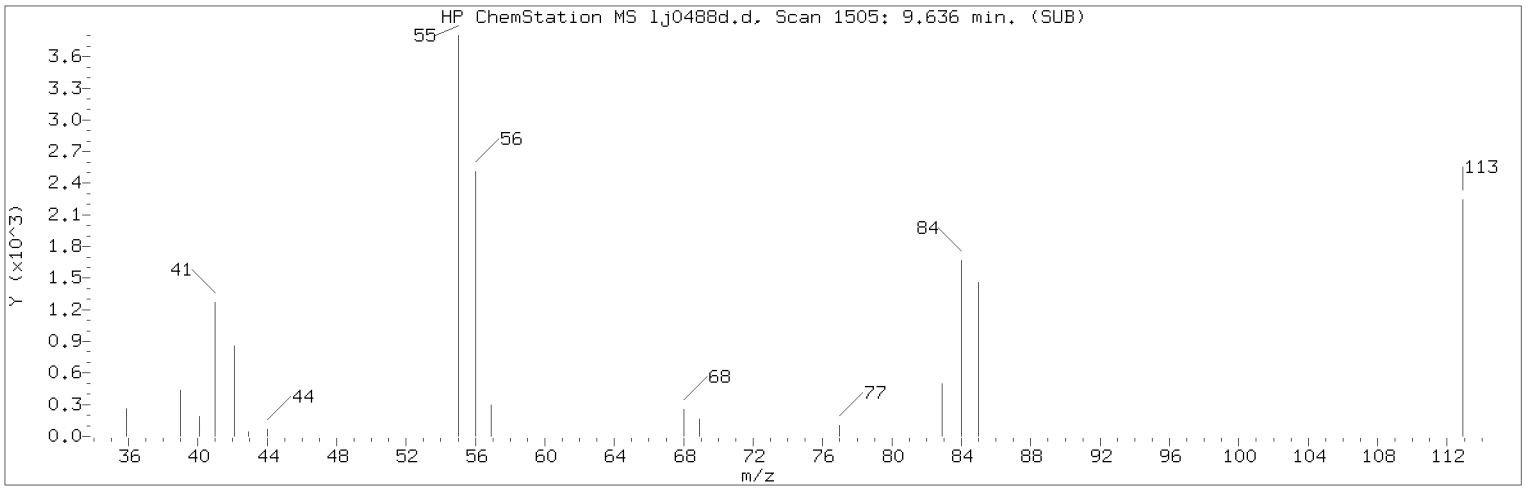
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

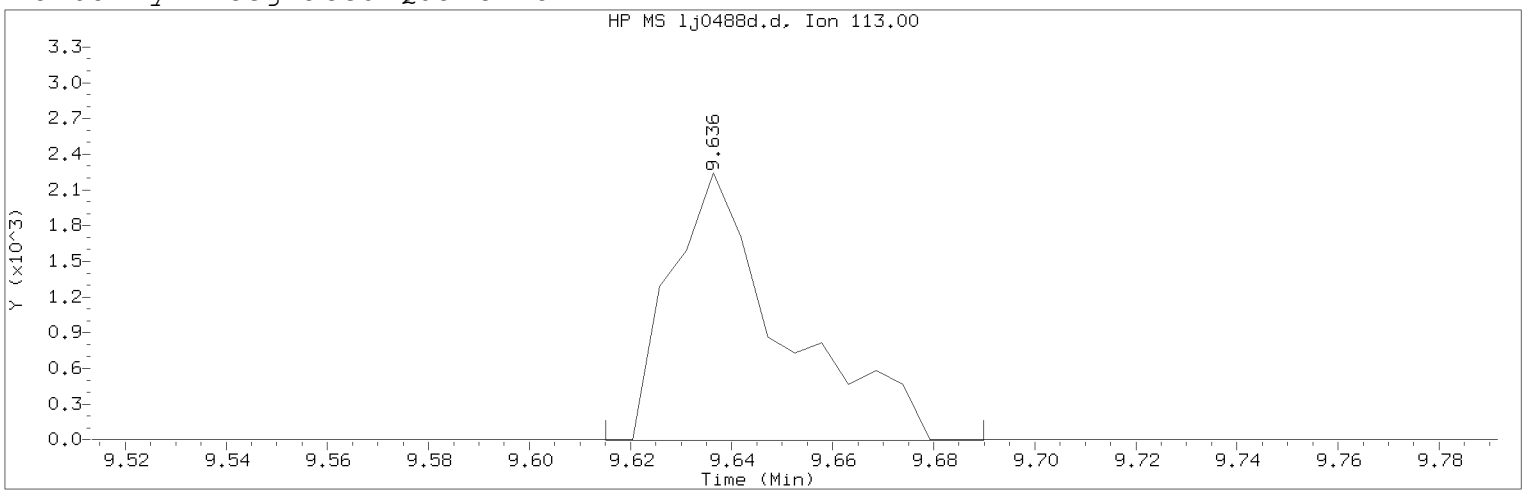
Compound Number : 38
Compound Name : N-Nitroso-di-n-propylamine
Scan Number : 1127
Retention Time (minutes) : 7.615
Quant Ion : 70.00
Area : 11309
On-column Amount (ng/ul) : 0.2532
Integration start scan : 1121 Integration stop scan: 1140
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user ID: 1160

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

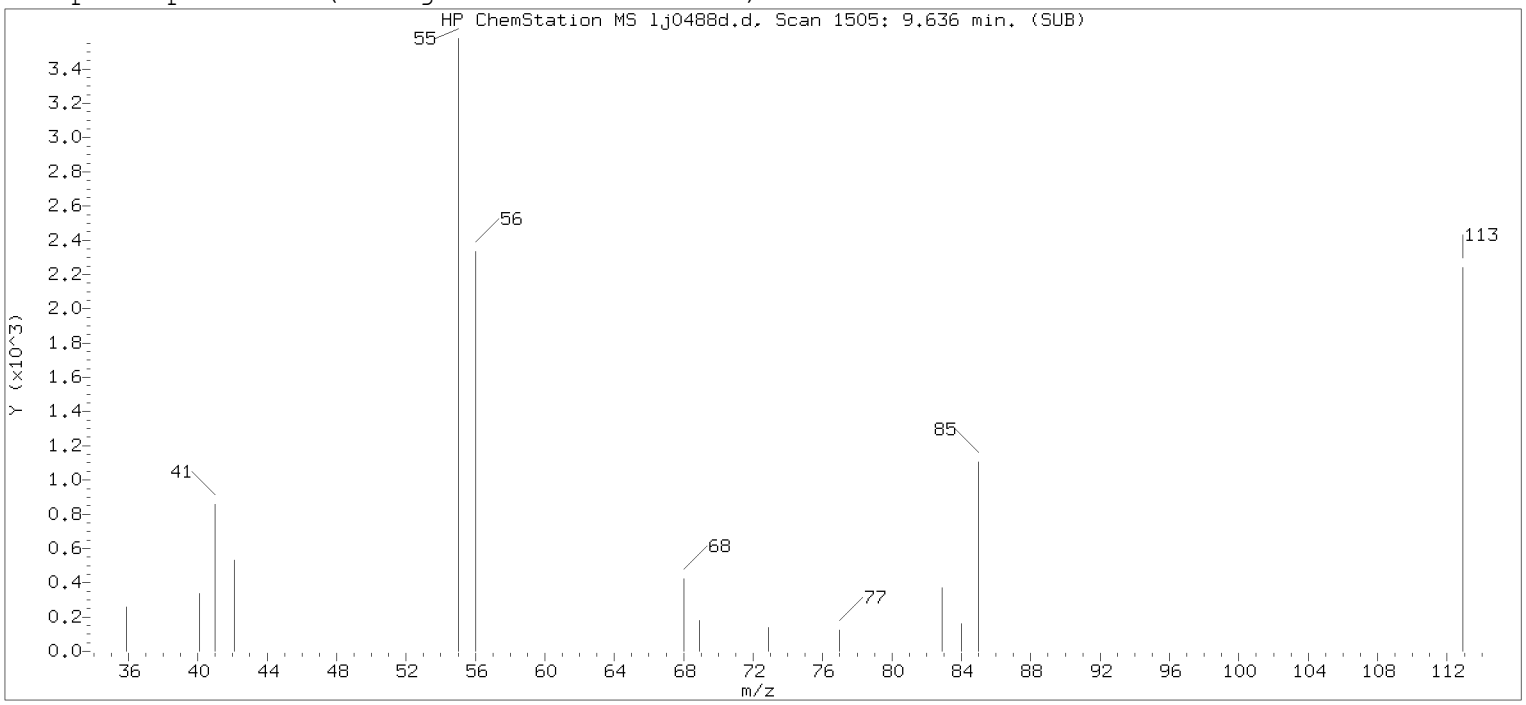
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1505
Retention Time (minutes) : 9.636
Quant Ion : 113.00
Area (flag) : 3467M
On-Column Amount (ng/ul) : 0.2265
Integration start scan : 1500 Integration stop scan: 1514
Y at integration start : -3 Y at integration end: -3

Reason for manual integration: improper integration

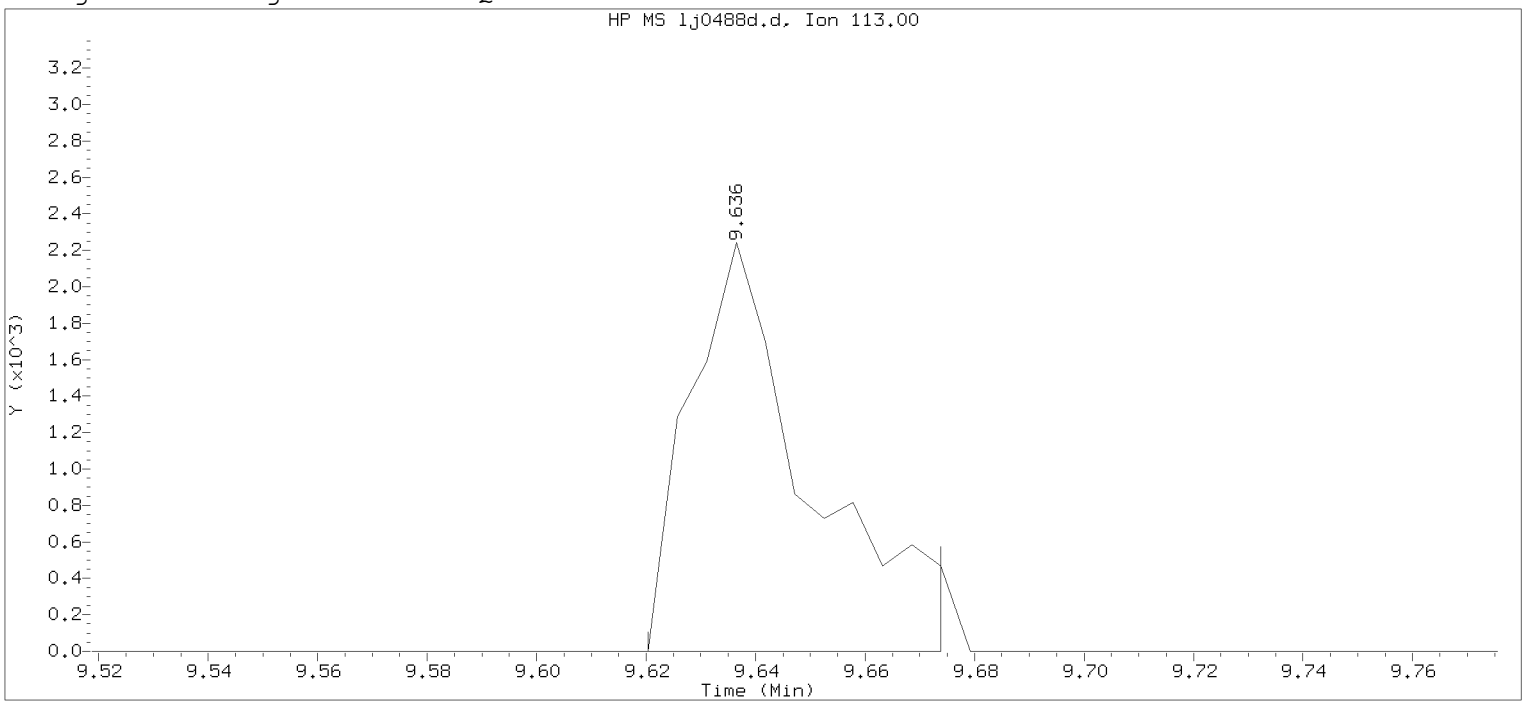
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

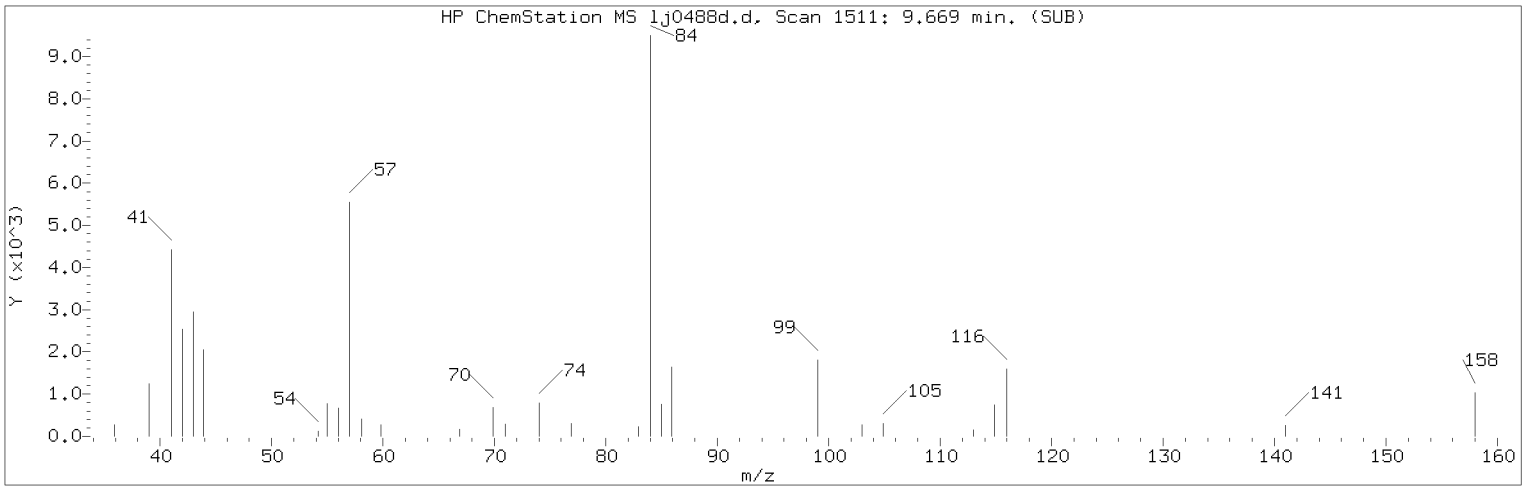
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

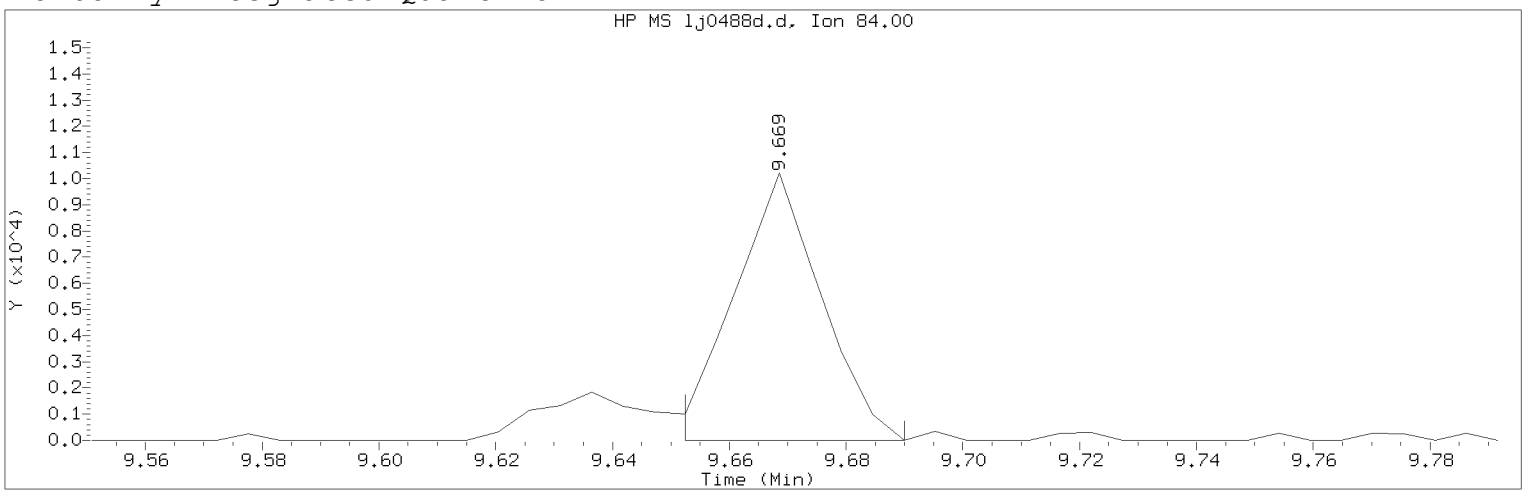
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1505		
Retention Time (minutes)	: 9.636		
Quant Ion	: 113.00		
Area	: 3377		
On-column Amount (ng/ul)	: 0.3338		
Integration start scan	: 1501	Integration stop scan:	1511
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

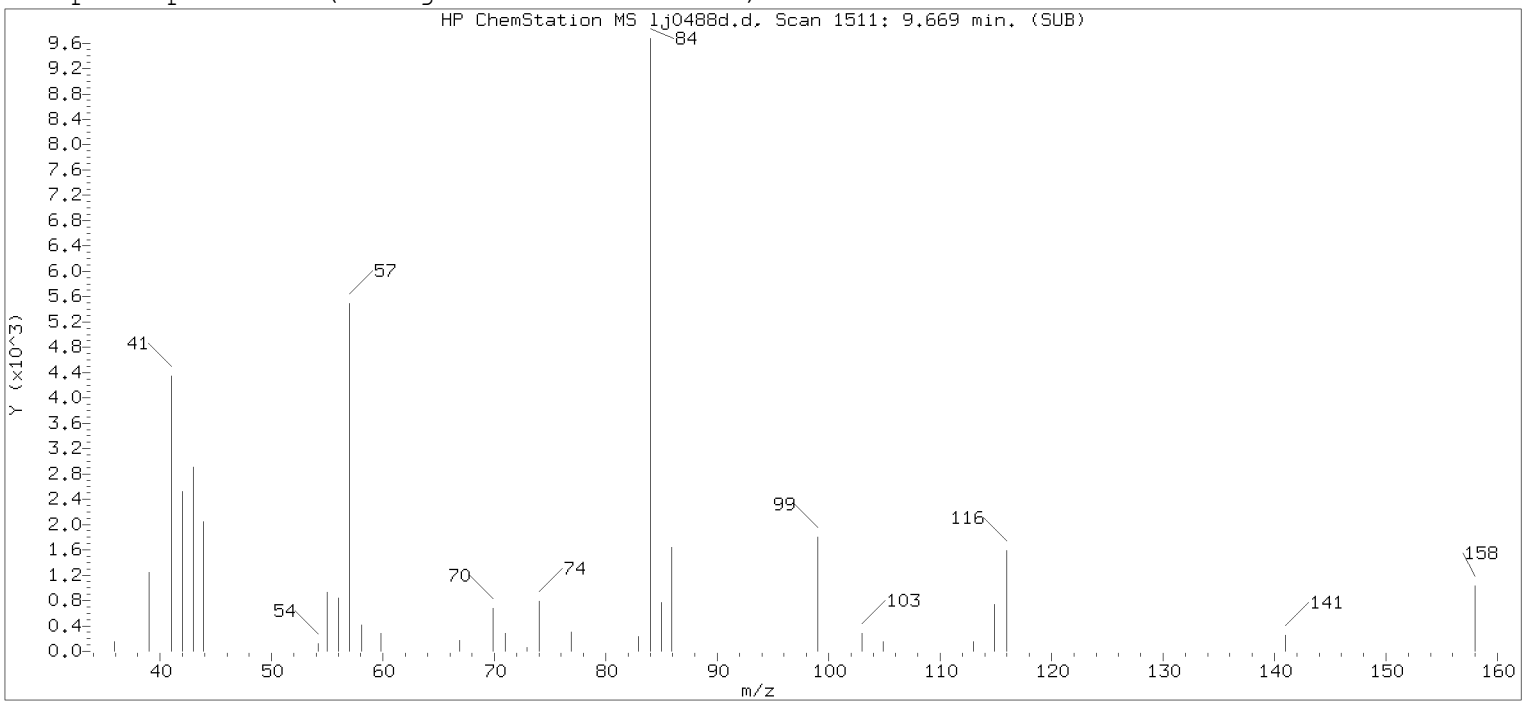
Compound Number : 77
Compound Name : N-Nitrosodi-n-butylamine
Scan Number : 1511
Retention Time (minutes) : 9.669
Quant Ion : 84.00
Area (flag) : 10621M
On-Column Amount (ng/ul) : 0.2173
Integration start scan : 1507 Integration stop scan: 1514
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

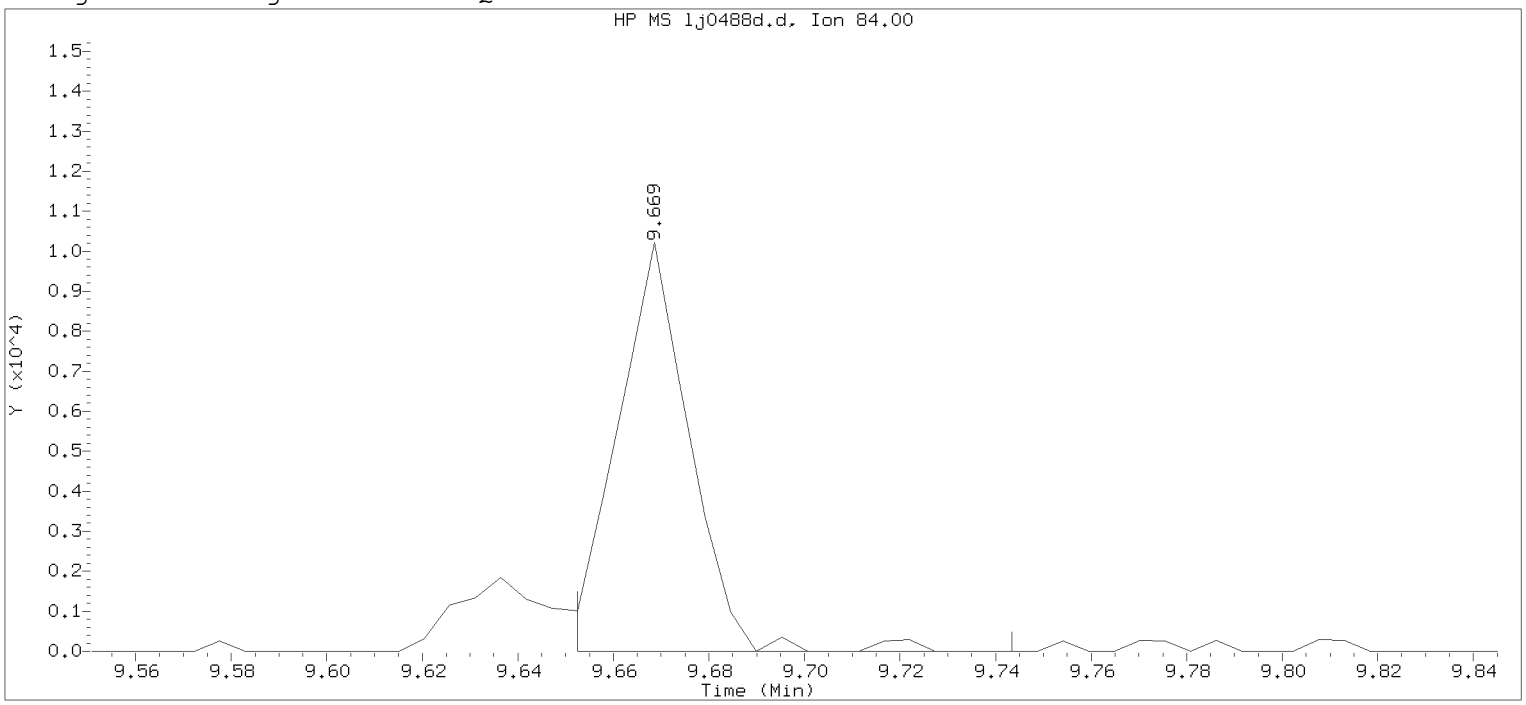
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

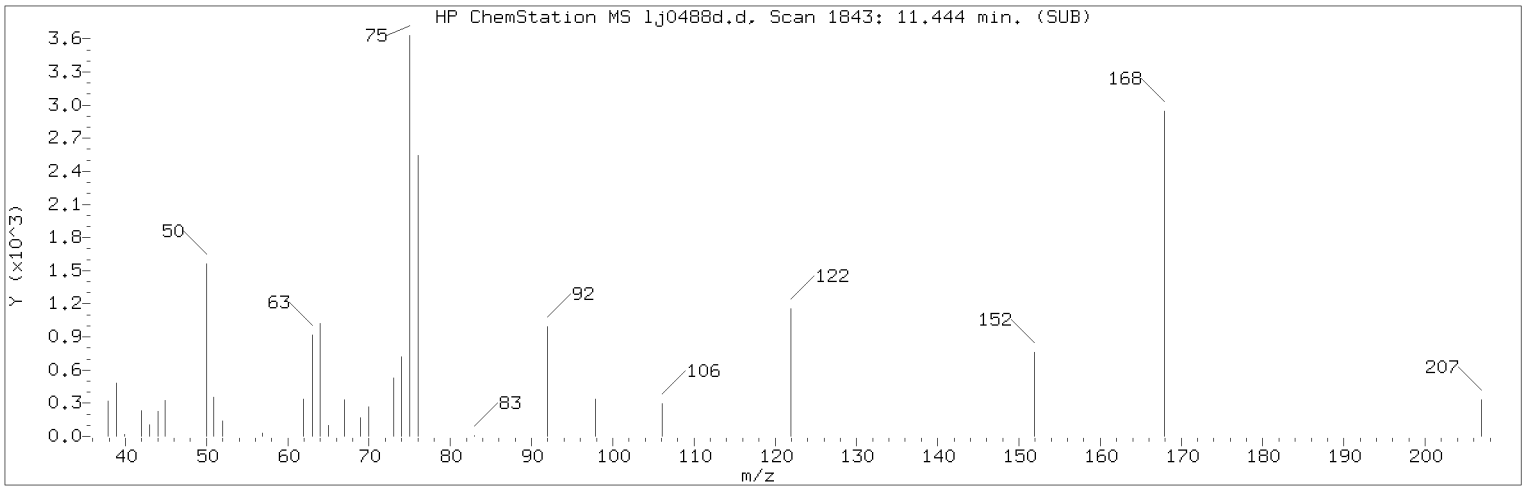
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

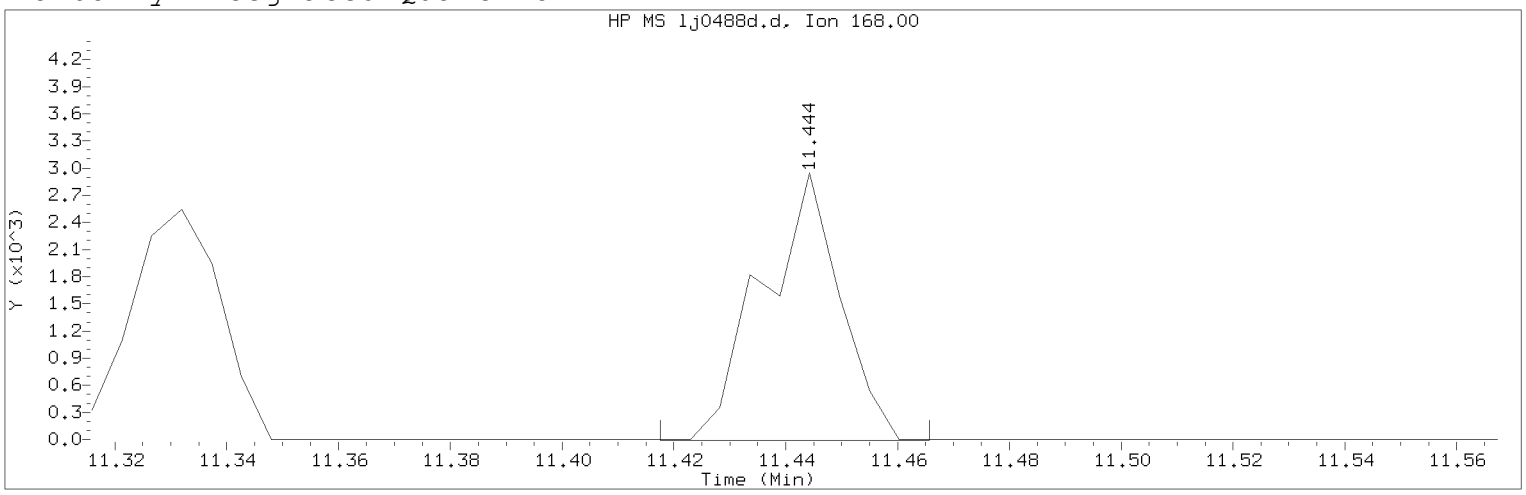
Compound Number : 77
Compound Name : N-Nitrosodi-n-butylamine
Scan Number : 1511
Retention Time (minutes) : 9.669
Quant Ion : 84.00
Area : 10746
On-column Amount (ng/ul) : 0.2185
Integration start scan : 1507 Integration stop scan: 1524
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 51167

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

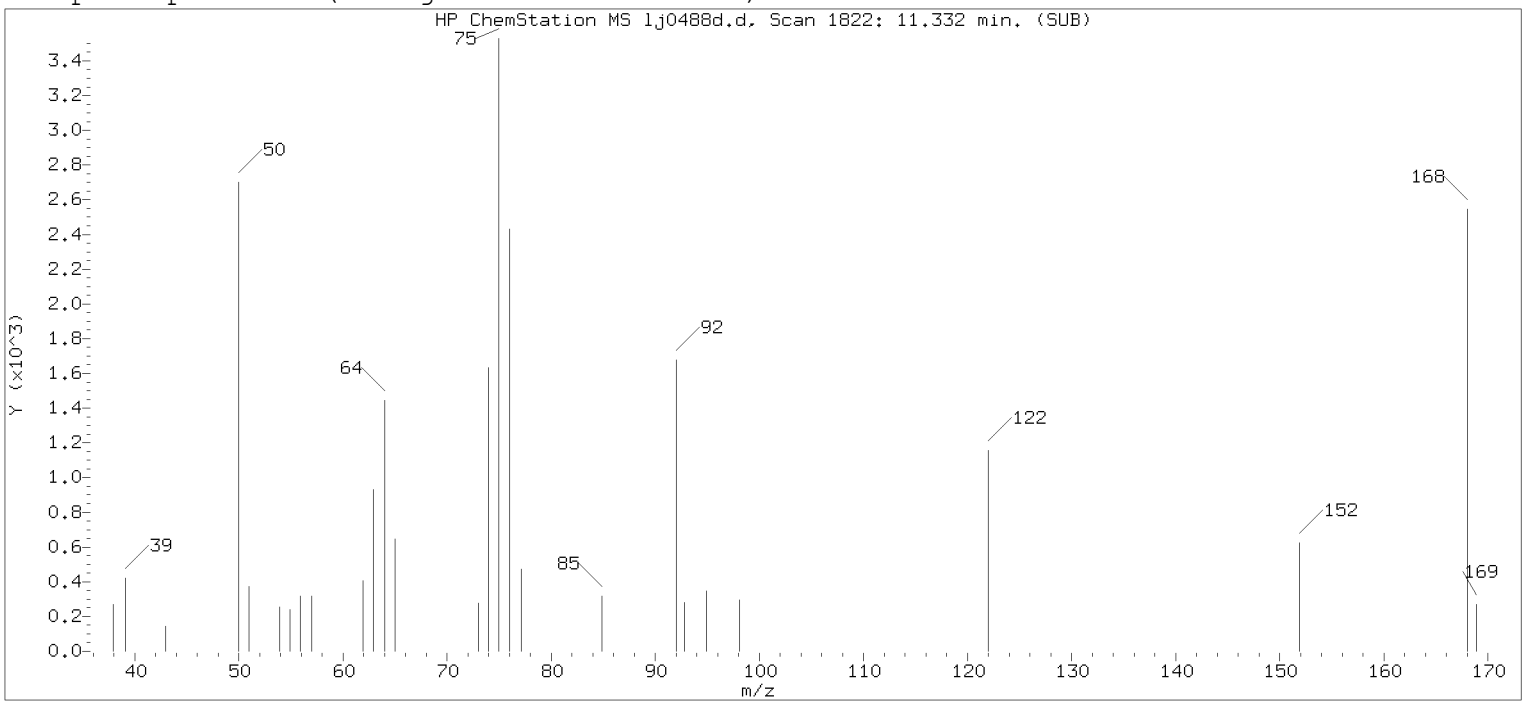
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1843
Retention Time (minutes) : 11.444
Quant Ion : 168.00
Area (flag) : 2854M
On-Column Amount (ng/ul) : 0.1740
Integration start scan : 1837 Integration stop scan: 1846
Y at integration start : -7 Y at integration end: -7

Reason for manual integration: improper integration

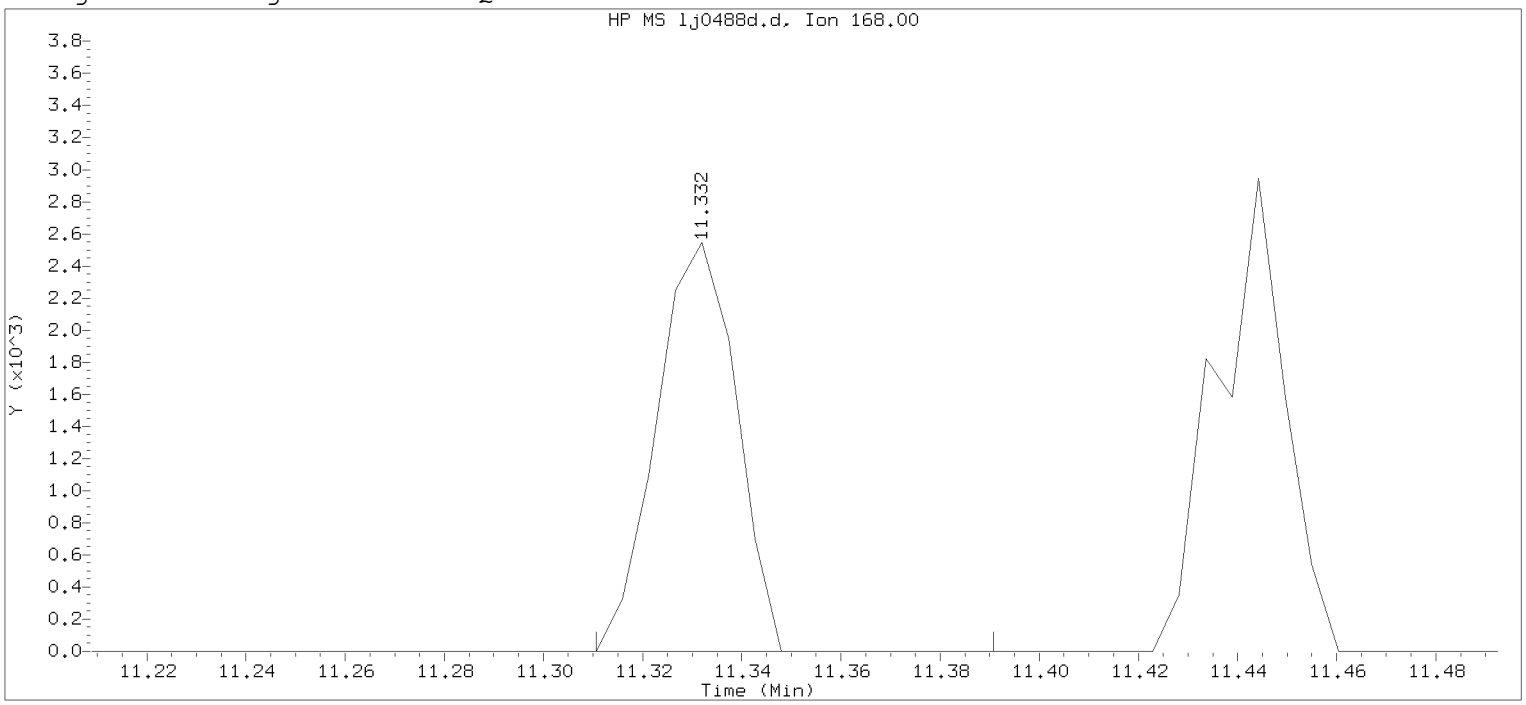
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

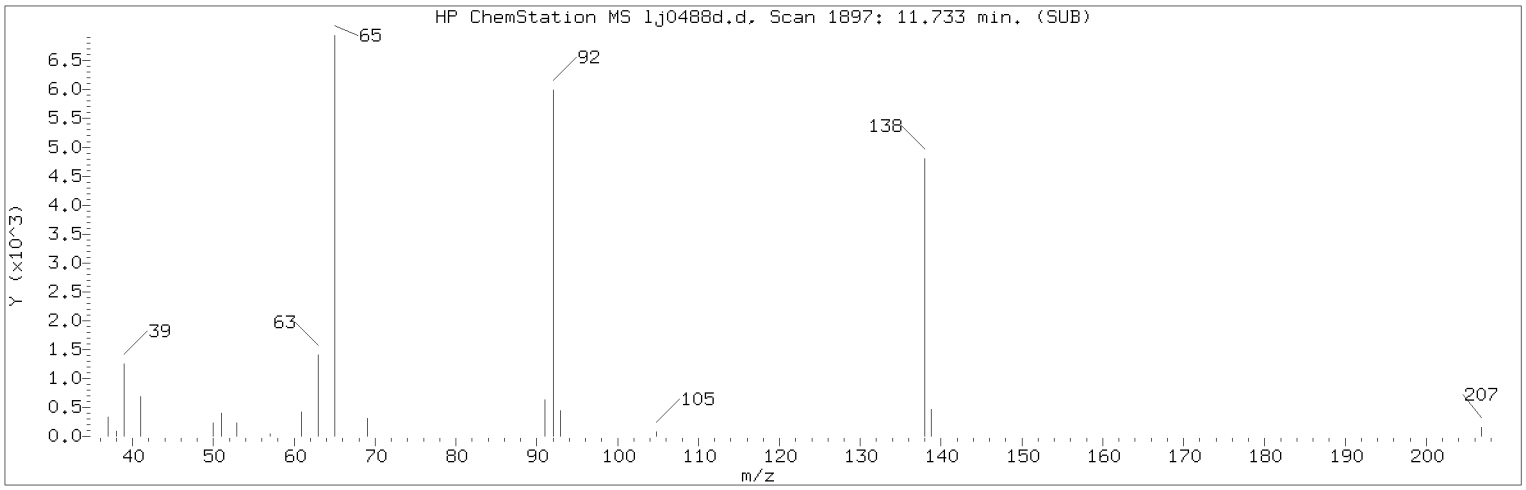
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

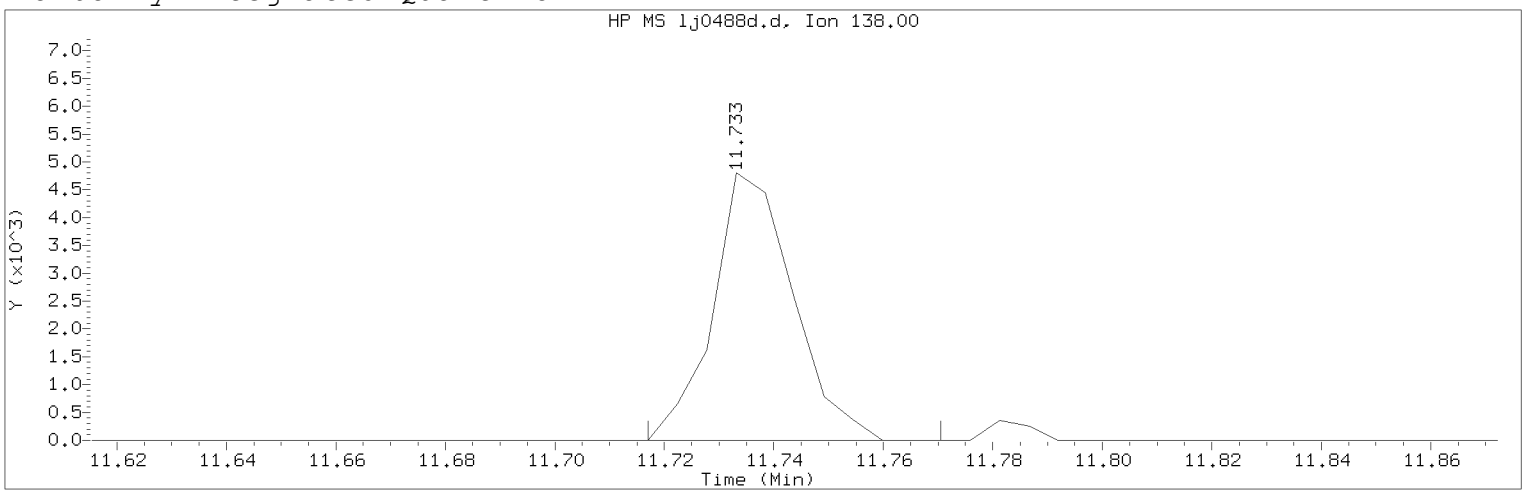
Compound Number	: 107		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1822		
Retention Time (minutes)	: 11.332		
Quant Ion	: 168.00		
Area	: 2843		
On-column Amount (ng/ul)	: 0.1745		
Integration start scan	: 1817	Integration stop scan:	1832
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

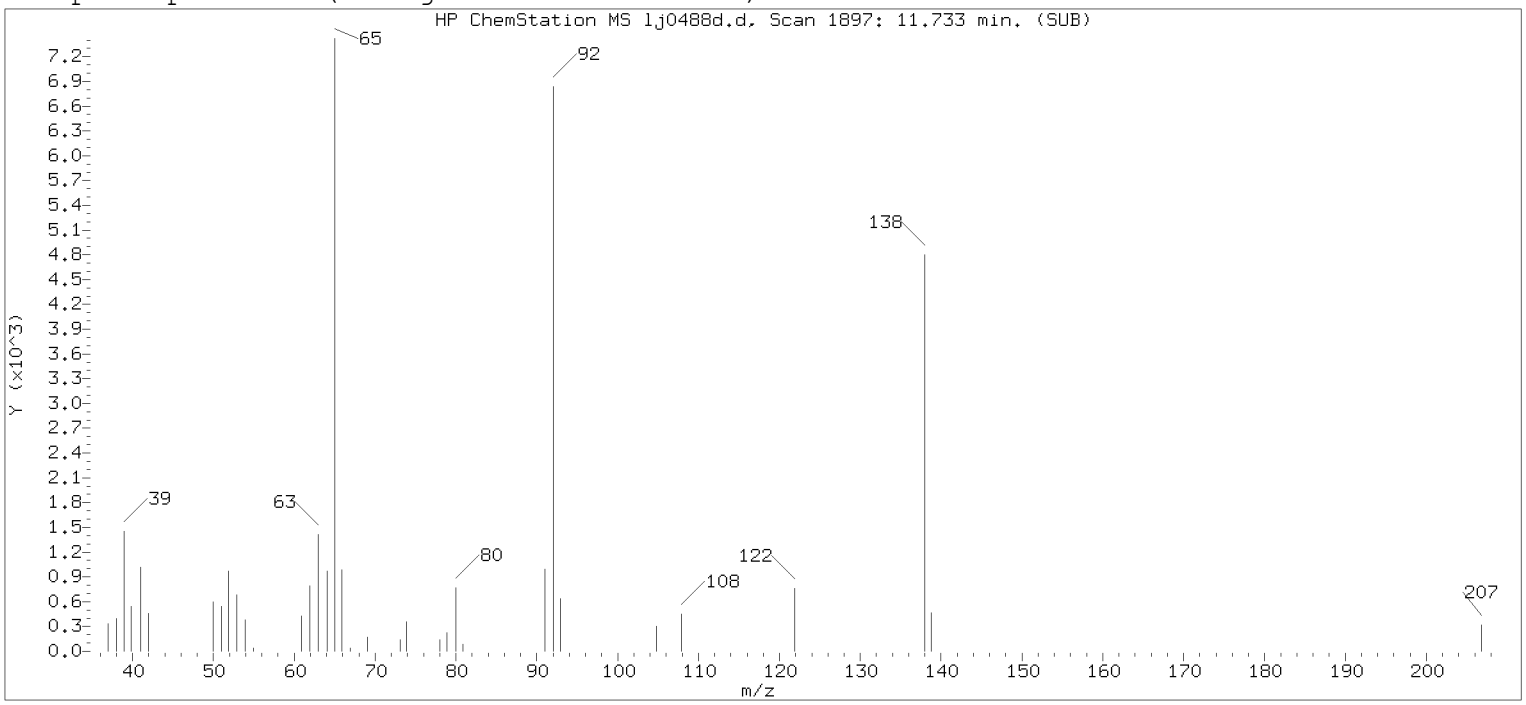
Compound Number : 112
Compound Name : 3-Nitroaniline
Scan Number : 1897
Retention Time (minutes) : 11.733
Quant Ion : 138.00
Area (flag) : 4878M
On-Column Amount (ng/ul) : 0.1879
Integration start scan : 1893 Integration stop scan: 1903
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

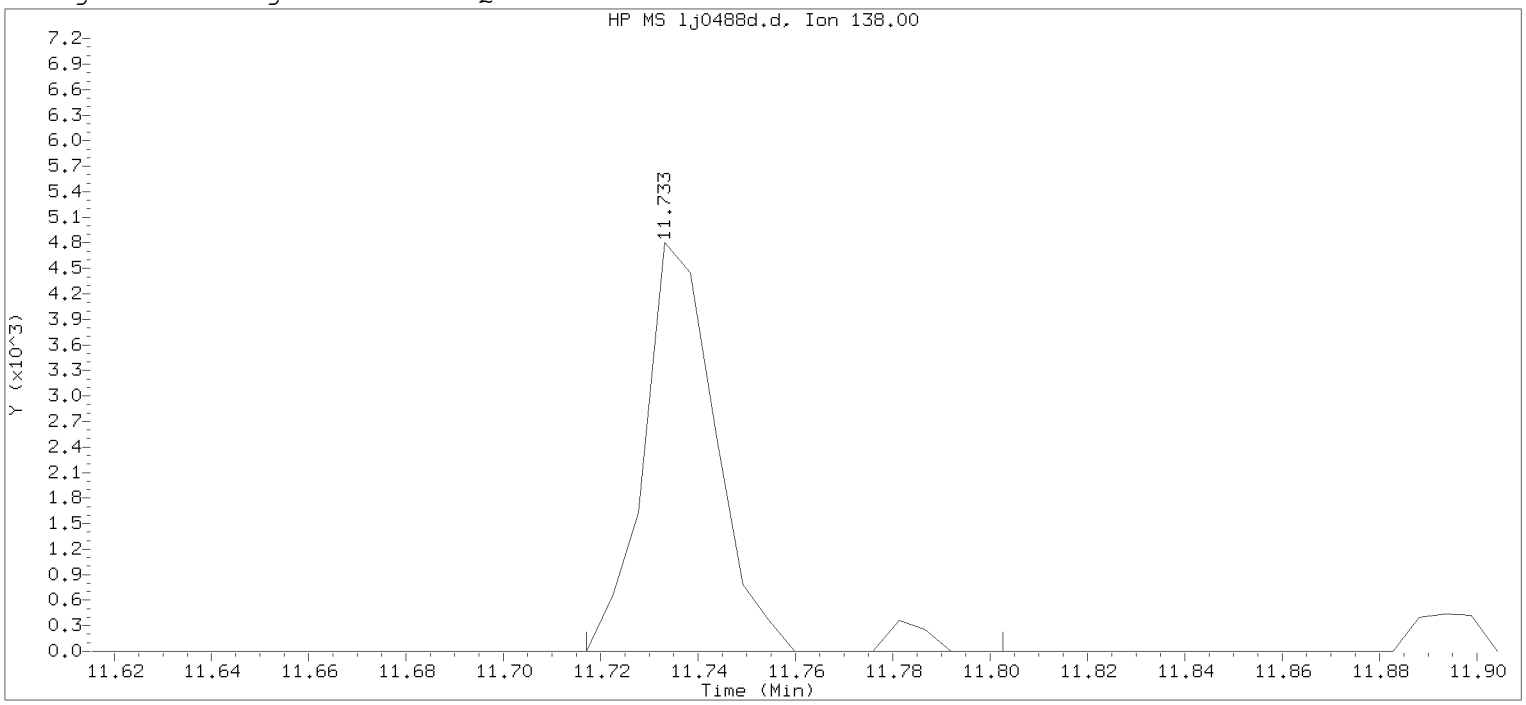
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

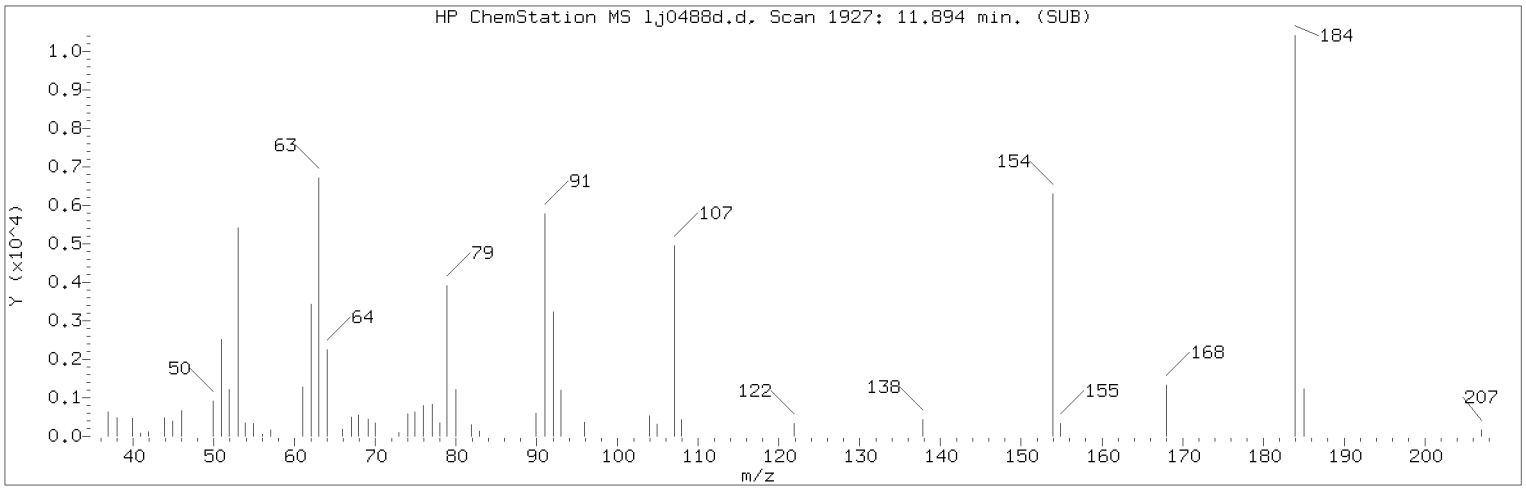
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

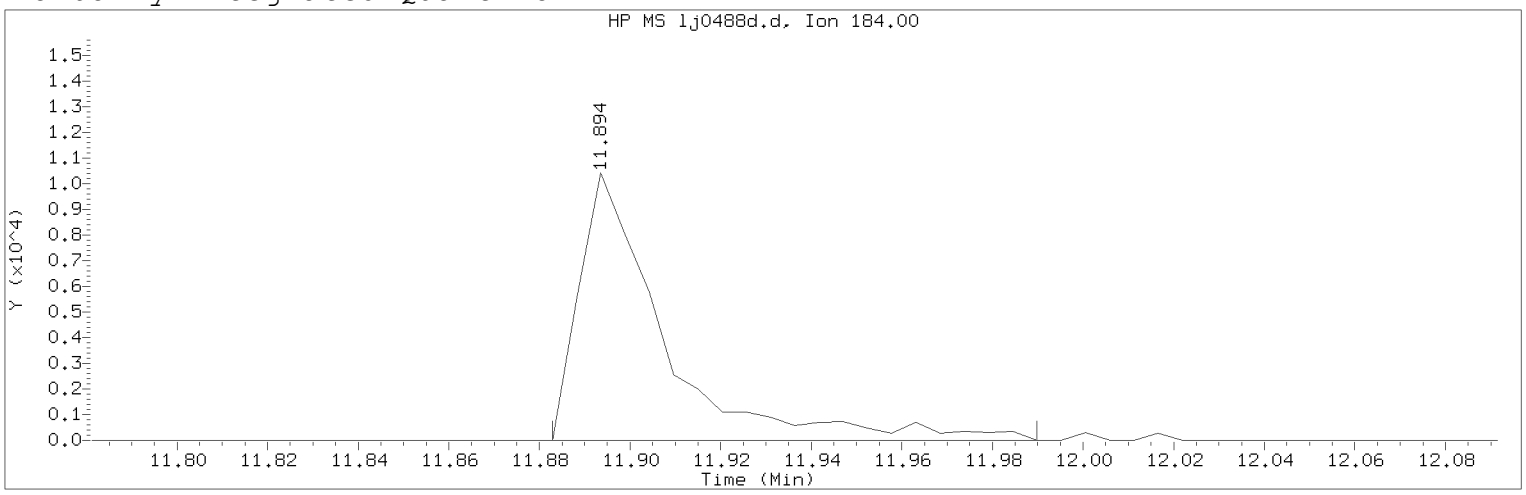
Compound Number	: 112		
Compound Name	: 3-Nitroaniline		
Scan Number	: 1897		
Retention Time (minutes)	: 11.733		
Quant Ion	: 138.00		
Area	: 5075		
On-column Amount (ng/ul)	: 0.1981		
Integration start scan	: 1893	Integration stop scan:	1909
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

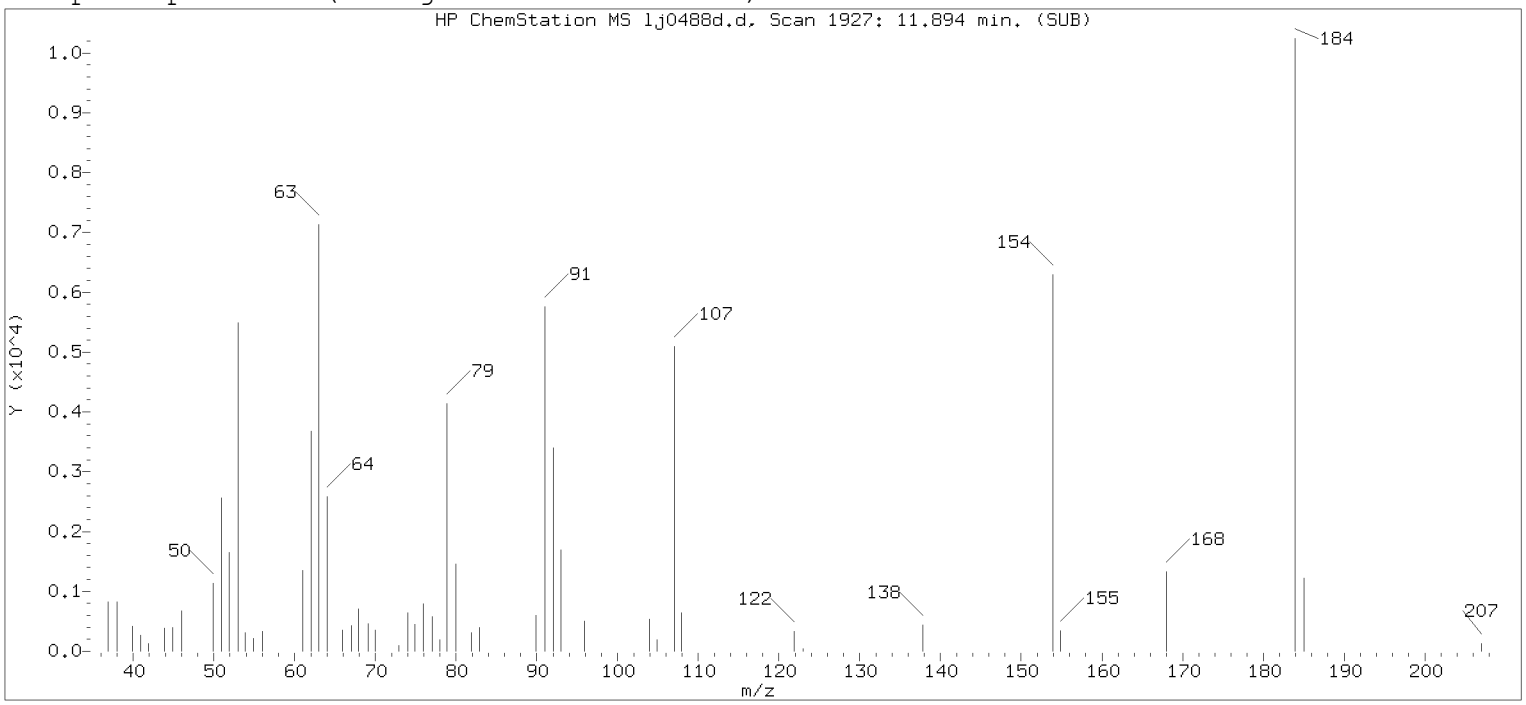
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1927
Retention Time (minutes) : 11.894
Quant Ion : 184.00
Area (flag) : 13505M
On-Column Amount (ng/ul) : 1.0590
Integration start scan : 1924 Integration stop scan: 1944
Y at integration start : 1 Y at integration end: -8

Reason for manual integration: improper integration

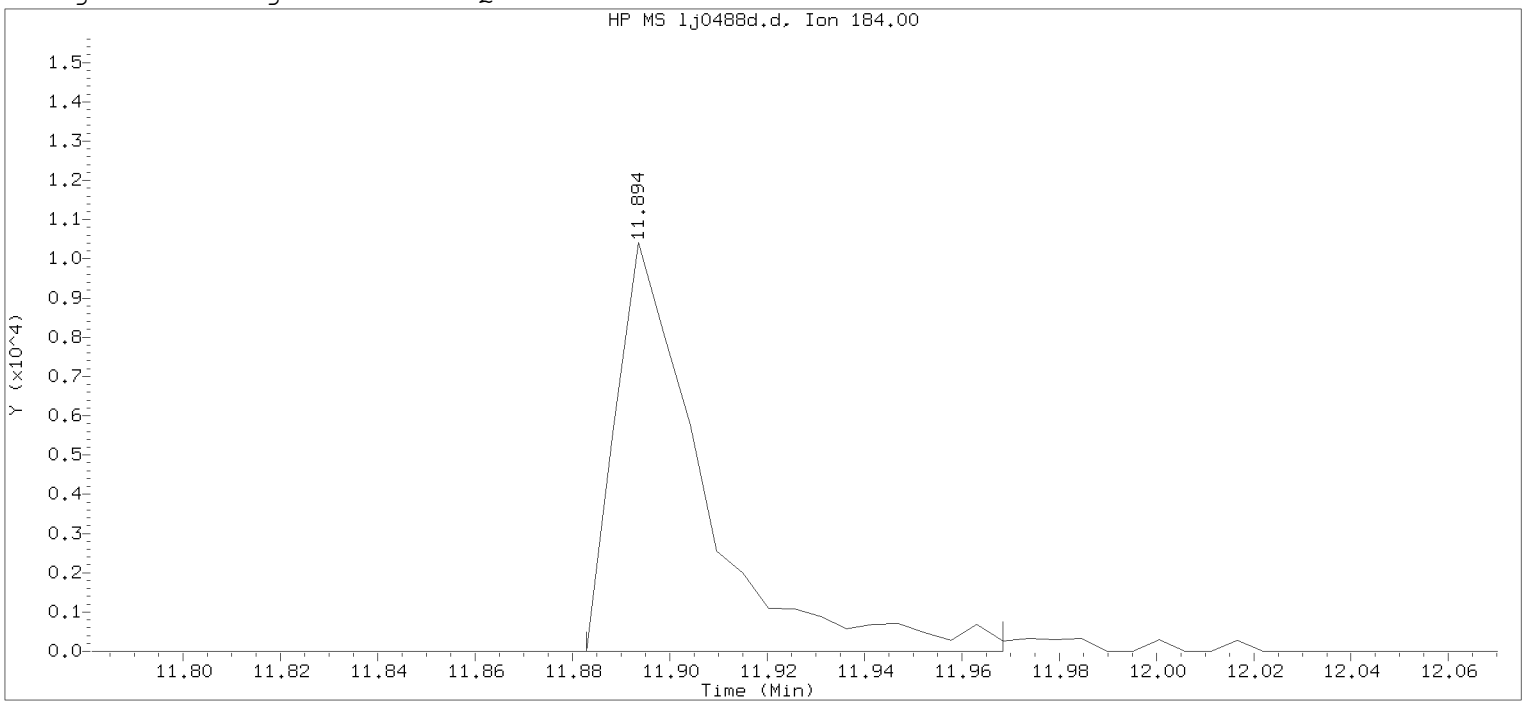
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

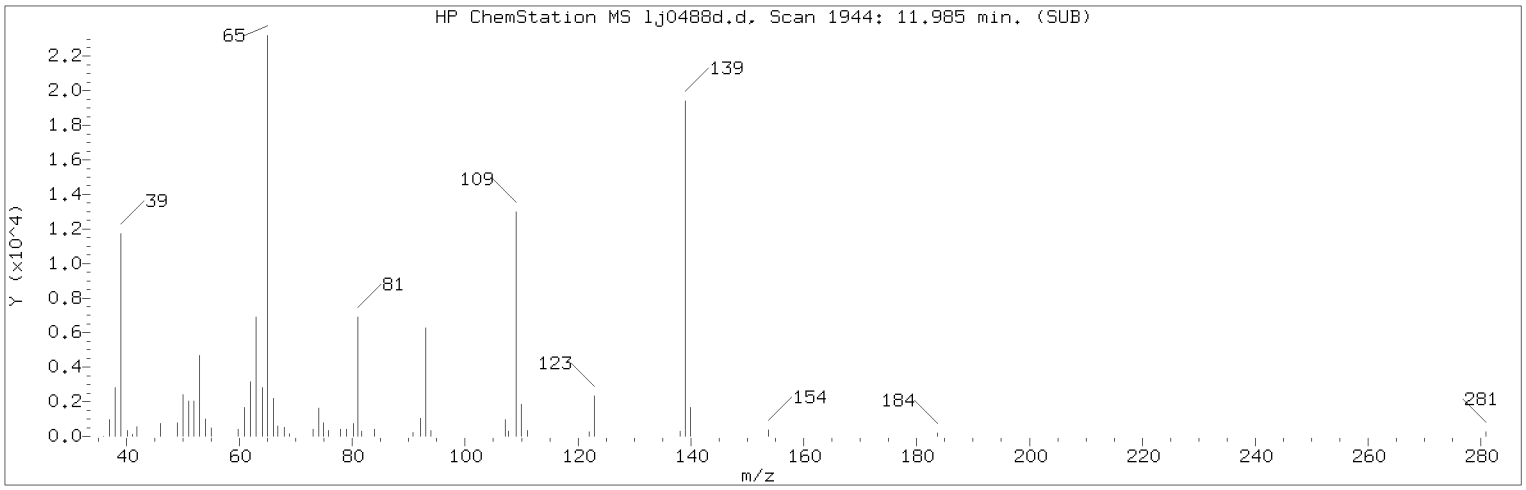
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

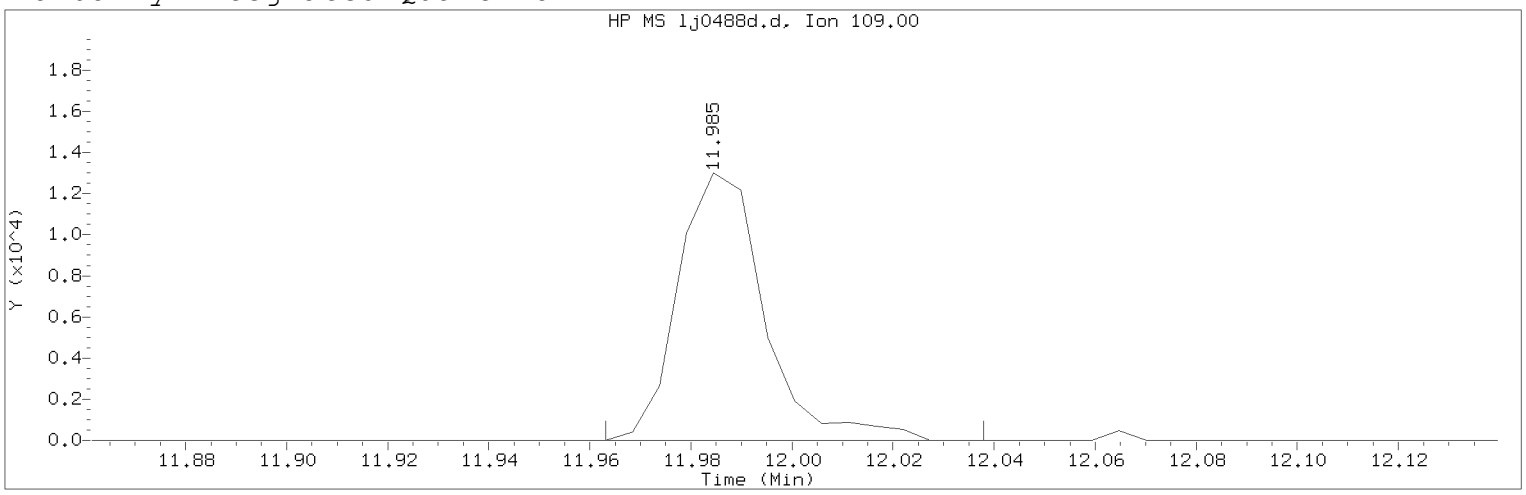
Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1927		
Retention Time (minutes)	: 11.894		
Quant Ion	: 184.00		
Area	: 13129		
On-column Amount (ng/ul)	: 1.0128		
Integration start scan	: 1924	Integration stop scan:	1940
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

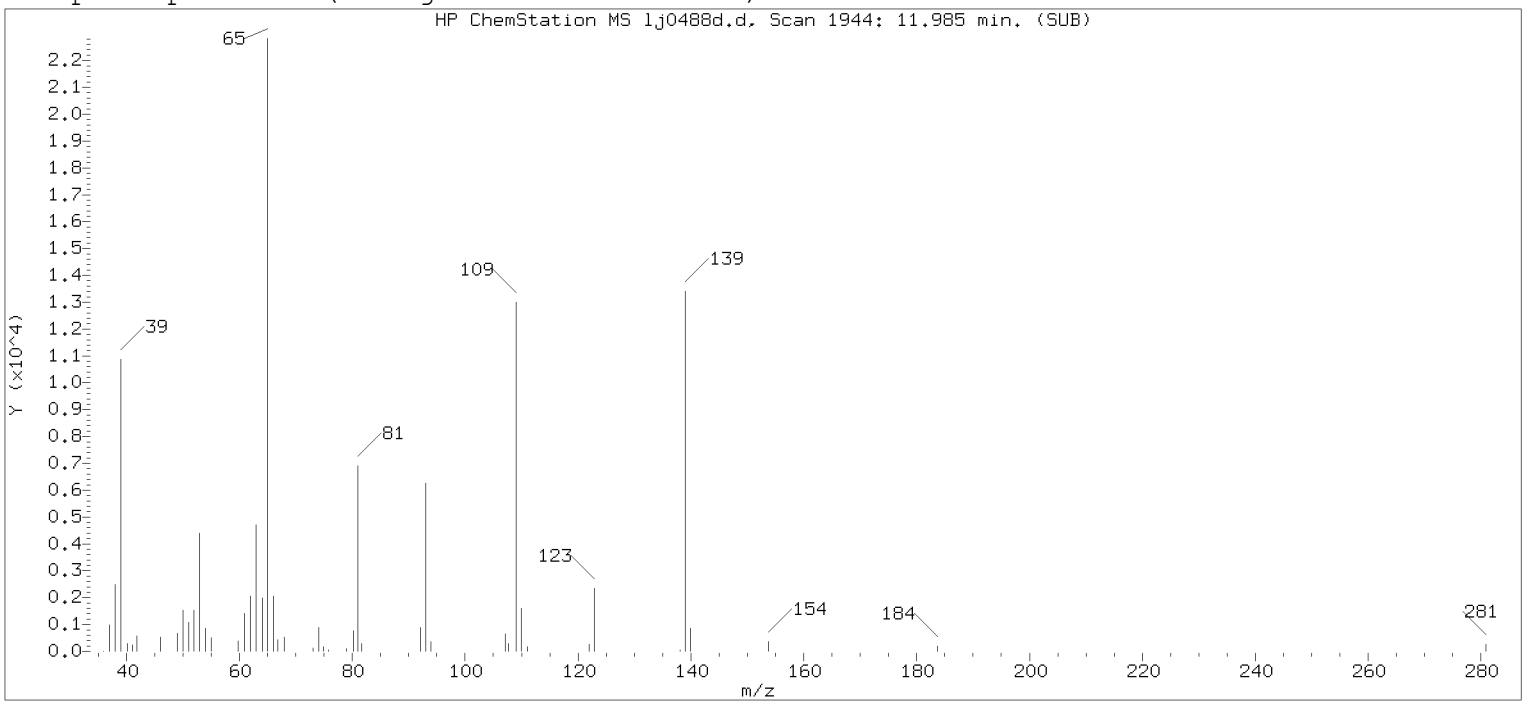
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1944
Retention Time (minutes) : 11.985
Quant Ion : 109.00
Area (flag) : 15439M
On-Column Amount (ng/ul) : 0.8635
Integration start scan : 1939 Integration stop scan: 1953
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

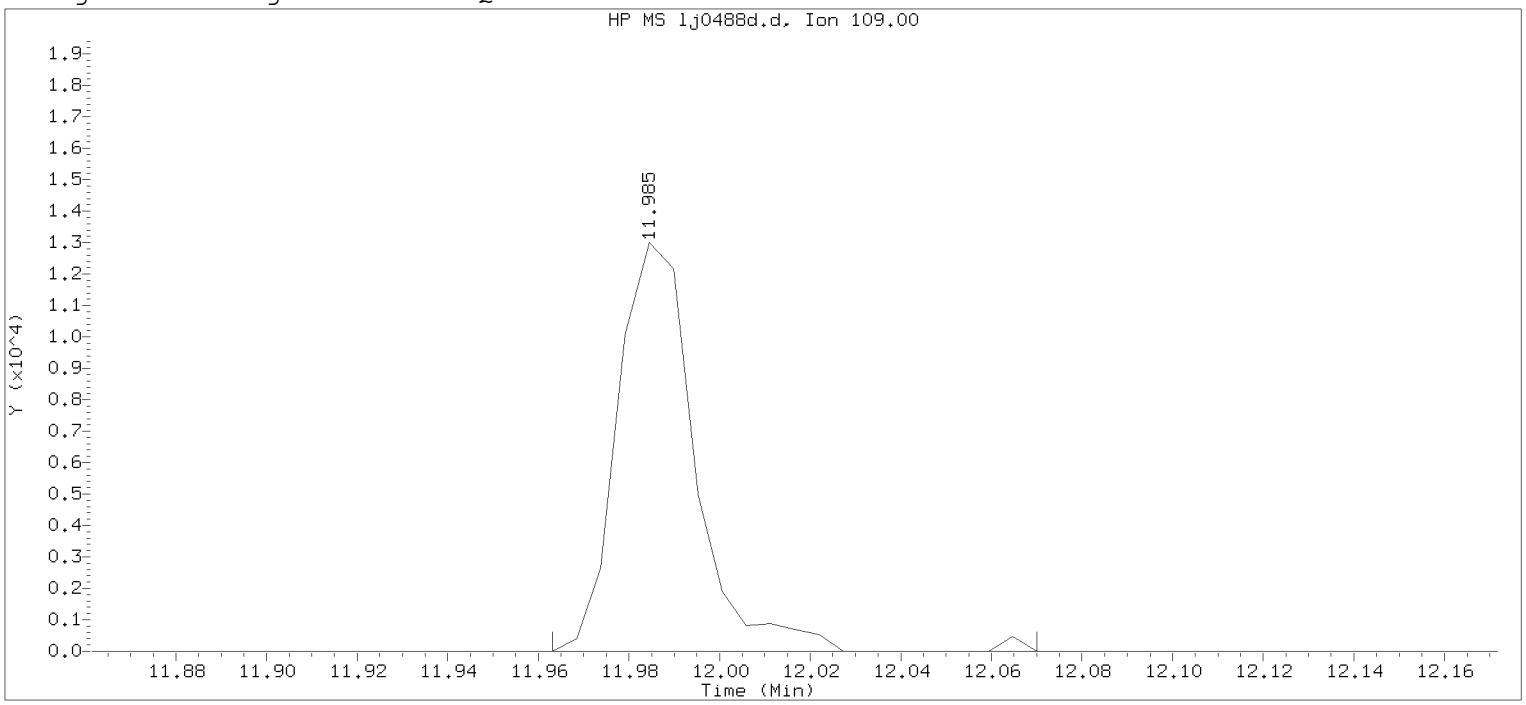
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

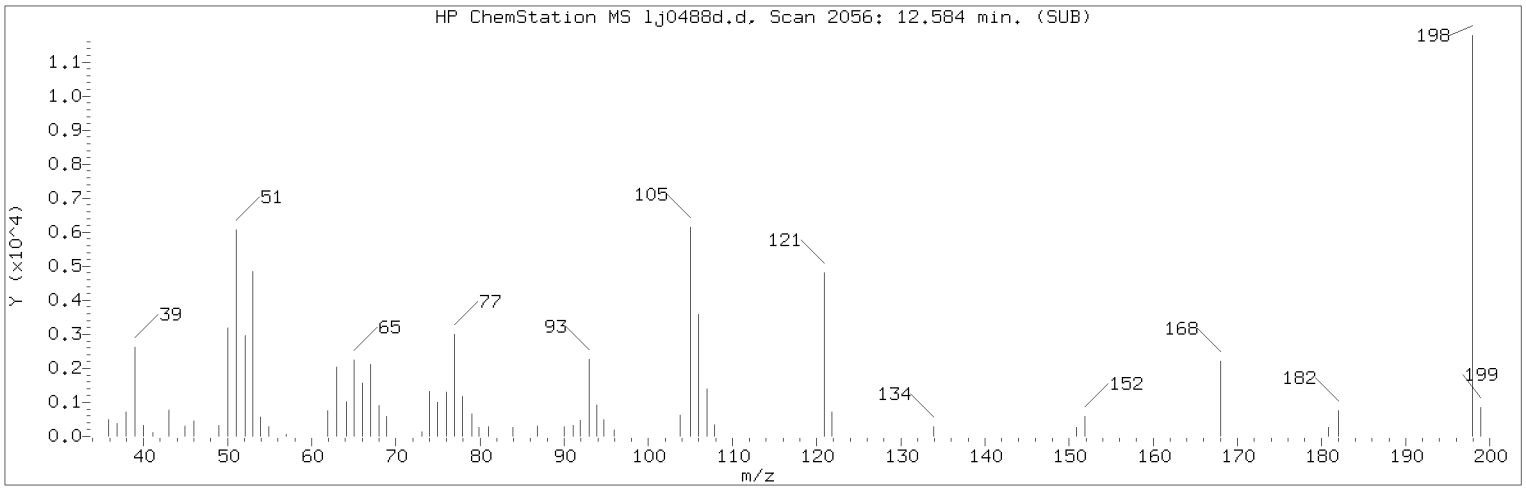
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

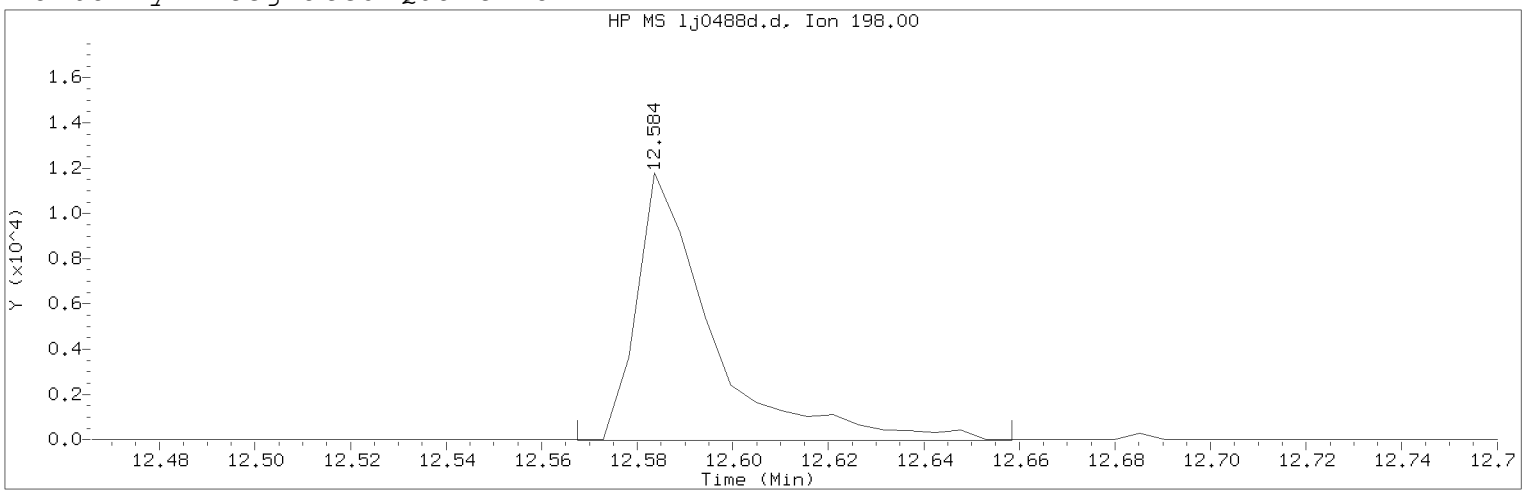
Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1944		
Retention Time (minutes)	: 11.985		
Quant Ion	: 109.00		
Area	: 15588		
On-column Amount (ng/ul)	: 0.8718		
Integration start scan	: 1939	Integration stop scan:	1959
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

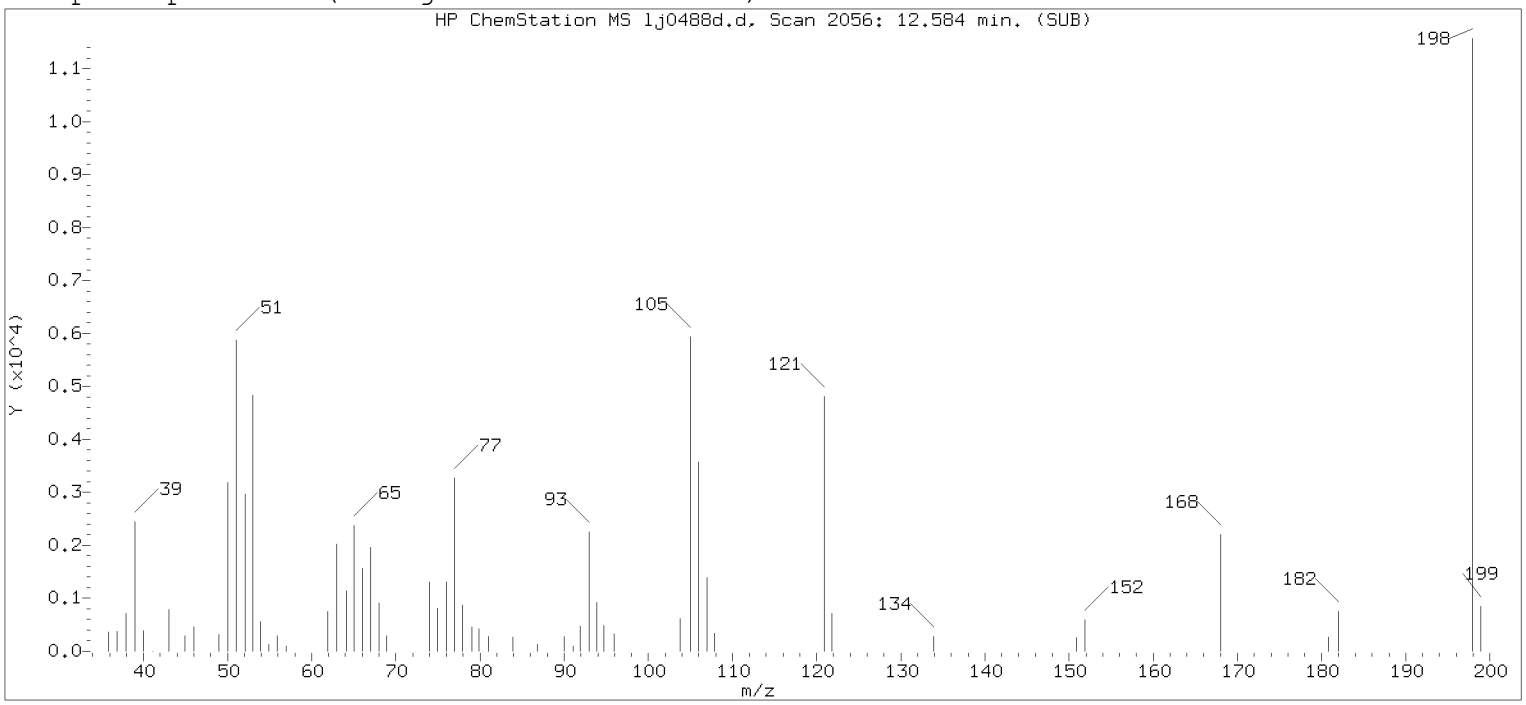
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 2056
Retention Time (minutes) : 12.584
Quant Ion : 198.00
Area (flag) : 12876M
On-Column Amount (ng/ul) : 0.7748
Integration start scan : 2052 Integration stop scan: 2069
Y at integration start : -23 Y at integration end: -23

Reason for manual integration: improper integration

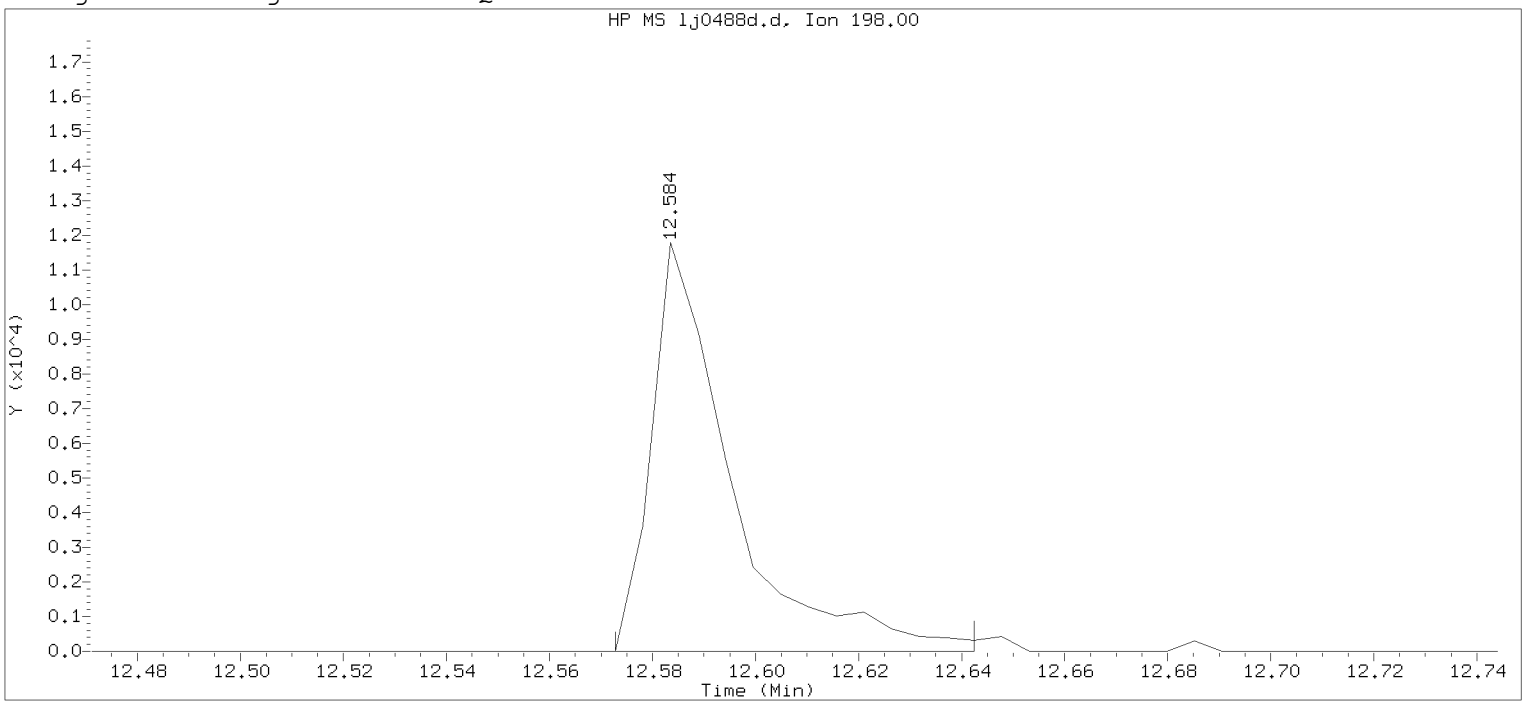
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

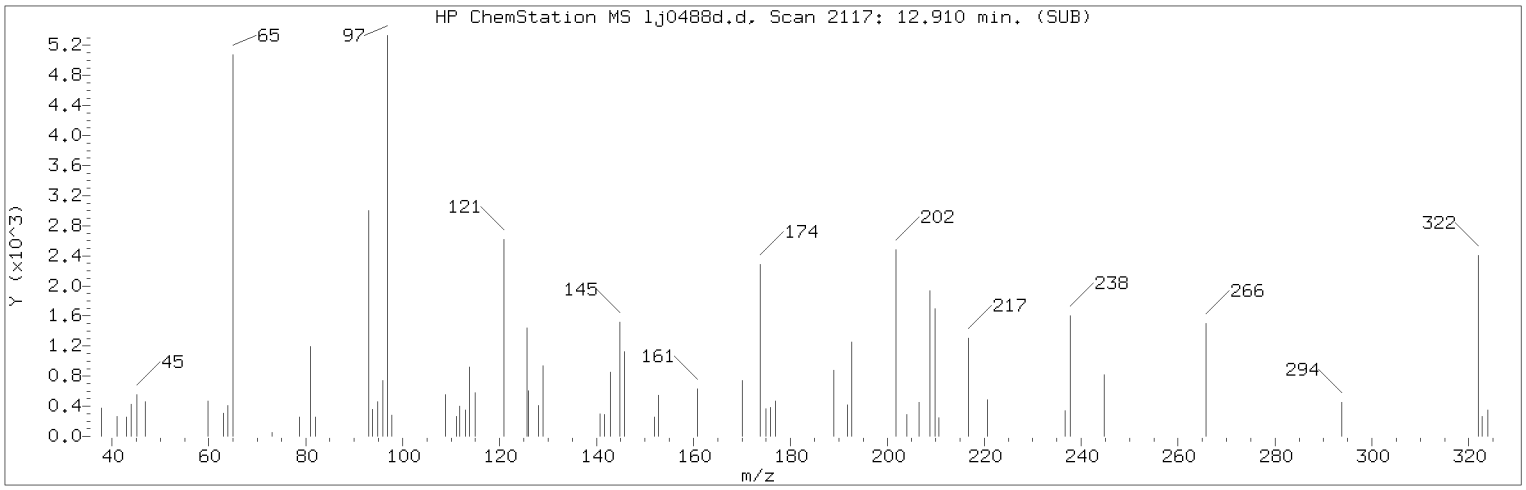
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

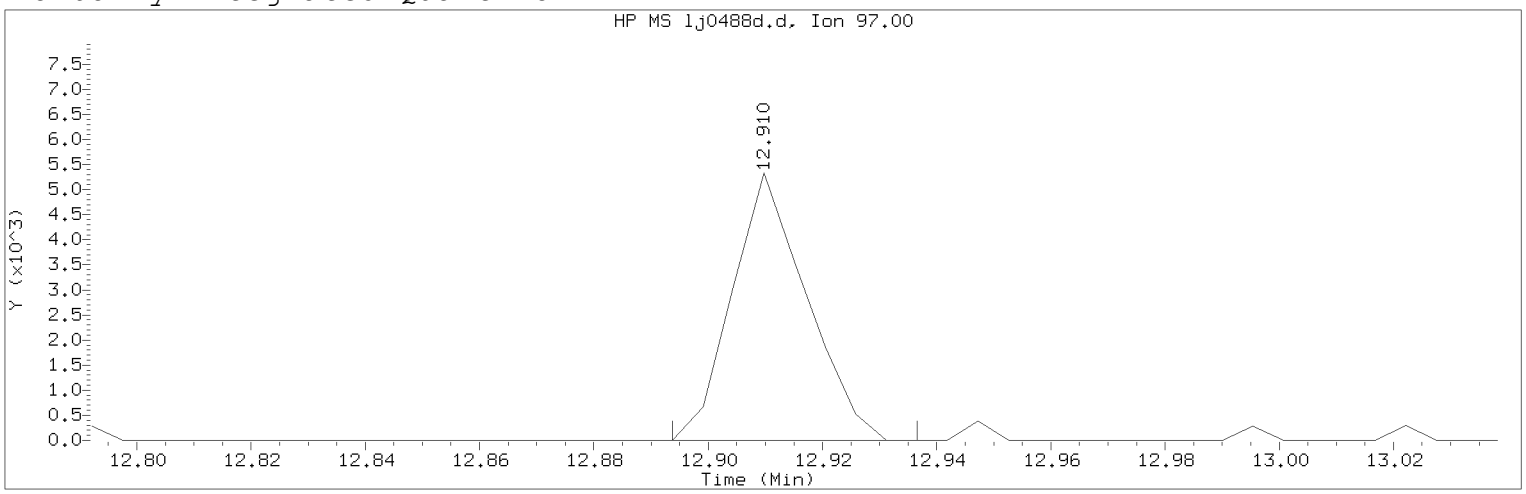
Compound Number	: 130		
Compound Name	: 4,6-Dinitro-2-methylphenol		
Scan Number	: 2056		
Retention Time (minutes)	: 12.584		
Quant Ion	: 198.00		
Area	: 12556		
On-column Amount (ng/ul)	: 0.7542		
Integration start scan	: 2053	Integration stop scan:	2066
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

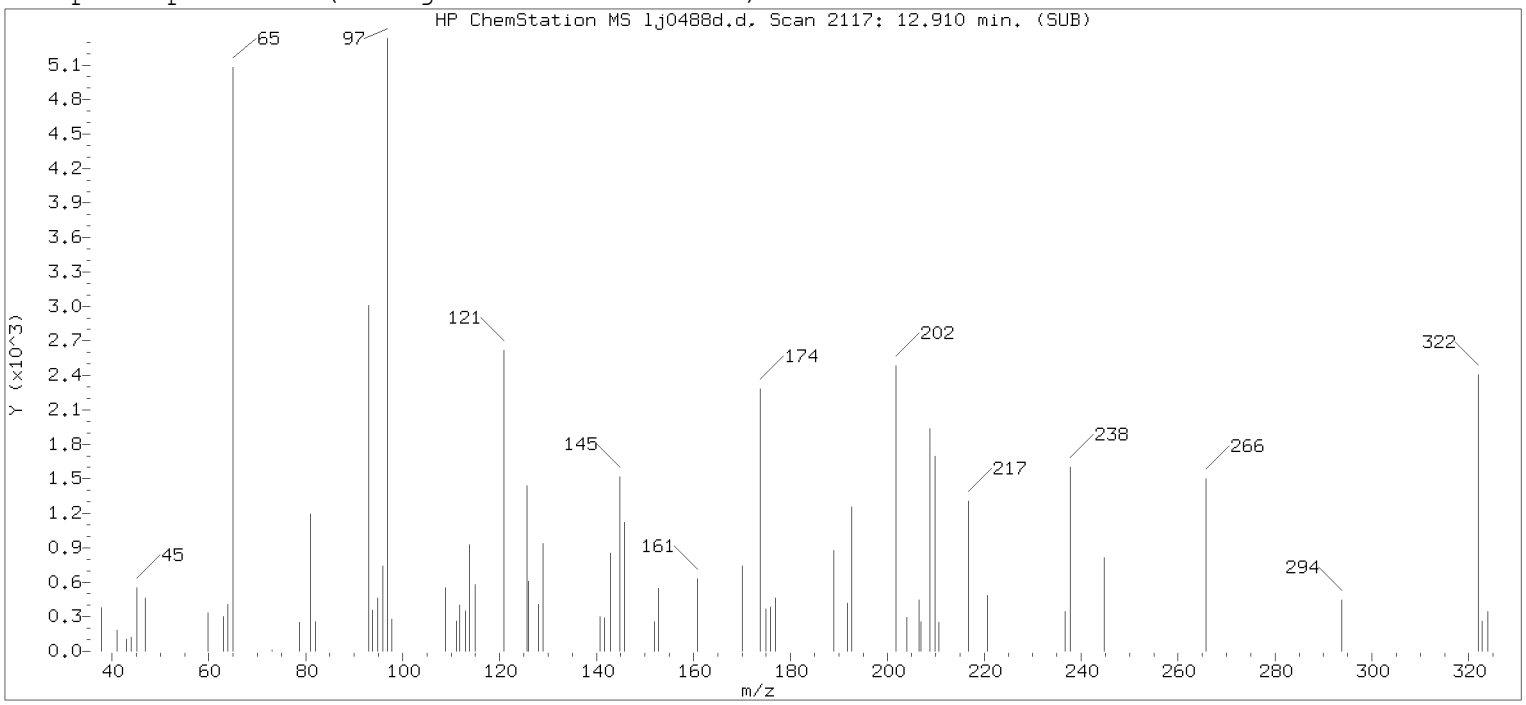
Compound Number : 137
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2117
Retention Time (minutes) : 12.910
Quant Ion : 97.00
Area (flag) : 4821M
On-Column Amount (ng/ul) : 0.2335
Integration start scan : 2113 Integration stop scan: 2121
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

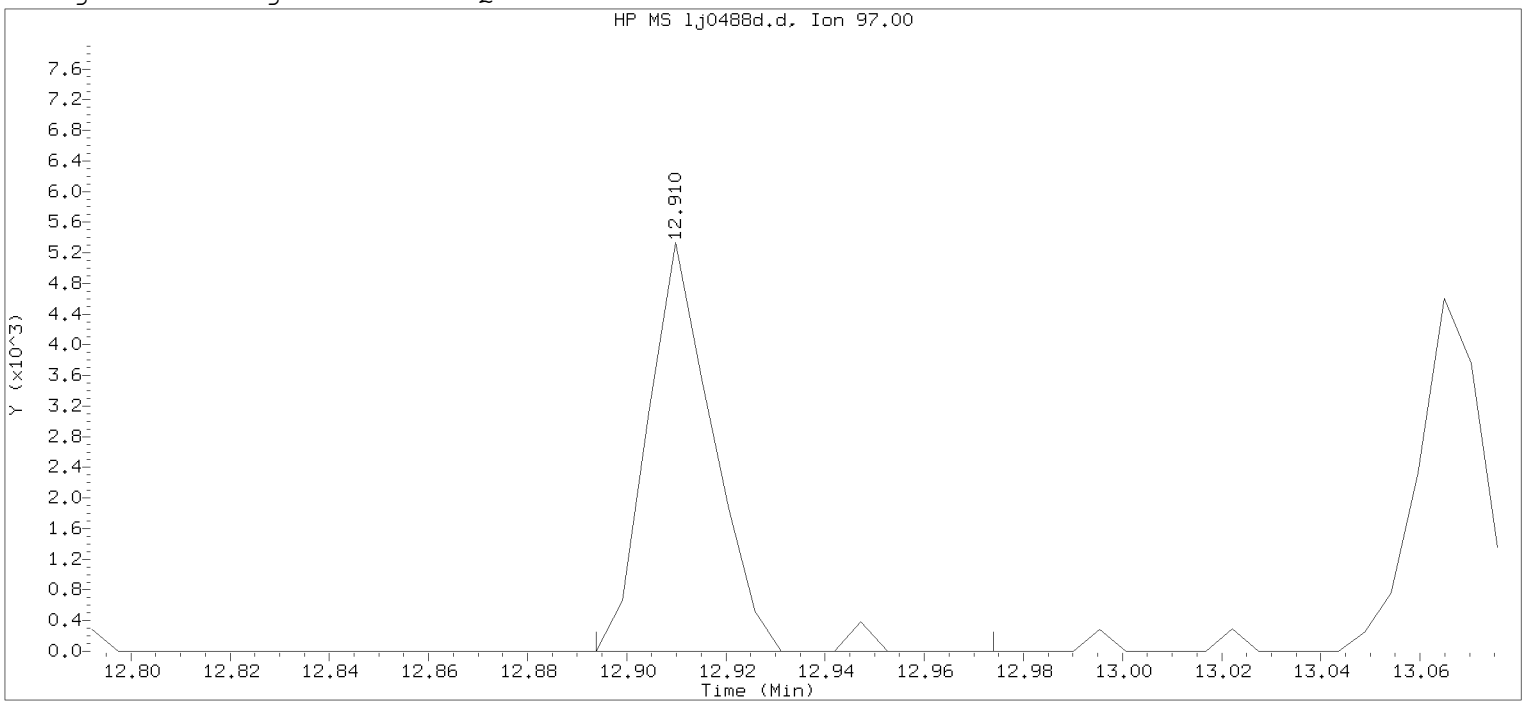
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

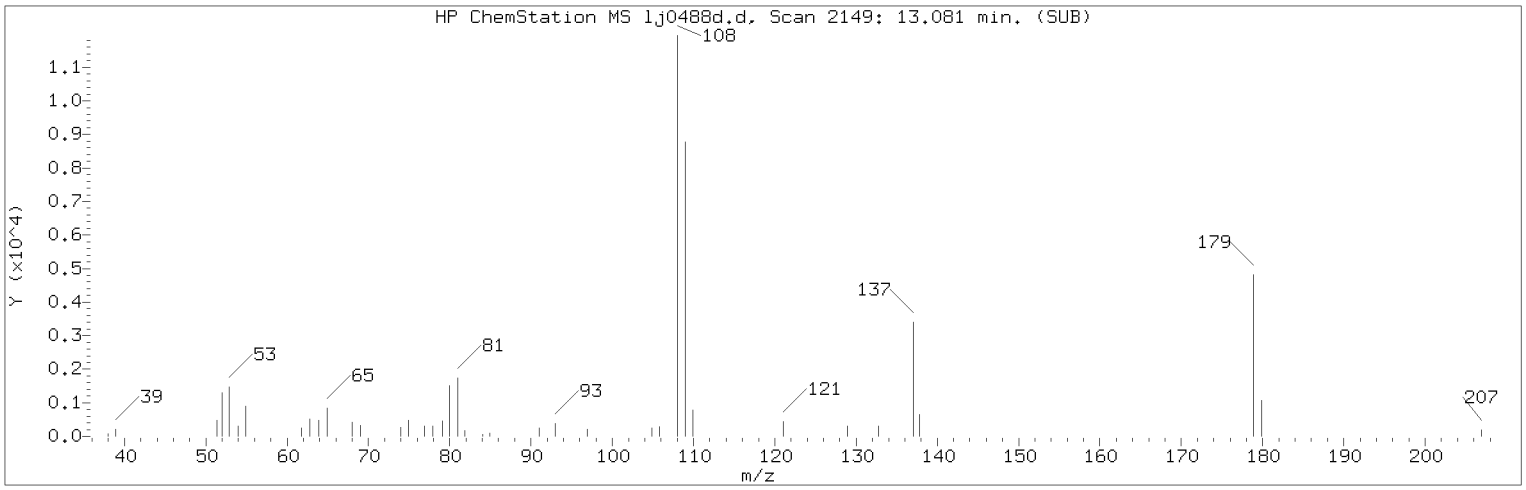
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

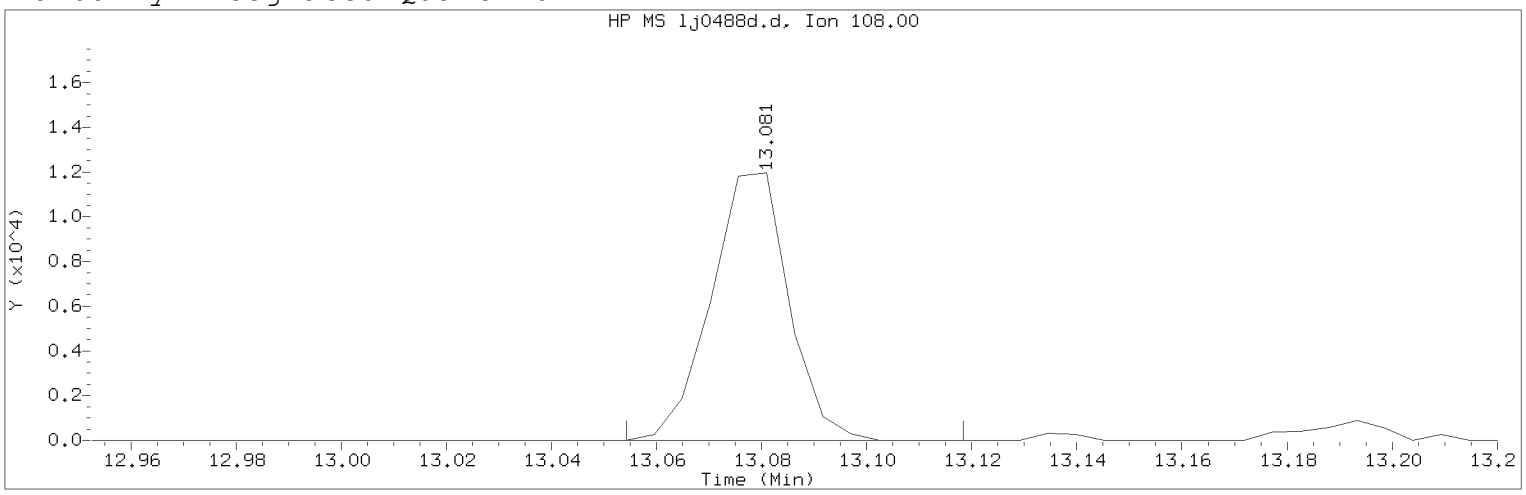
Compound Number	: 137		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2117		
Retention Time (minutes)	: 12.910		
Quant Ion	: 97.00		
Area	: 4944		
On-column Amount (ng/ul)	: 0.2429		
Integration start scan	: 2113	Integration stop scan:	2128
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

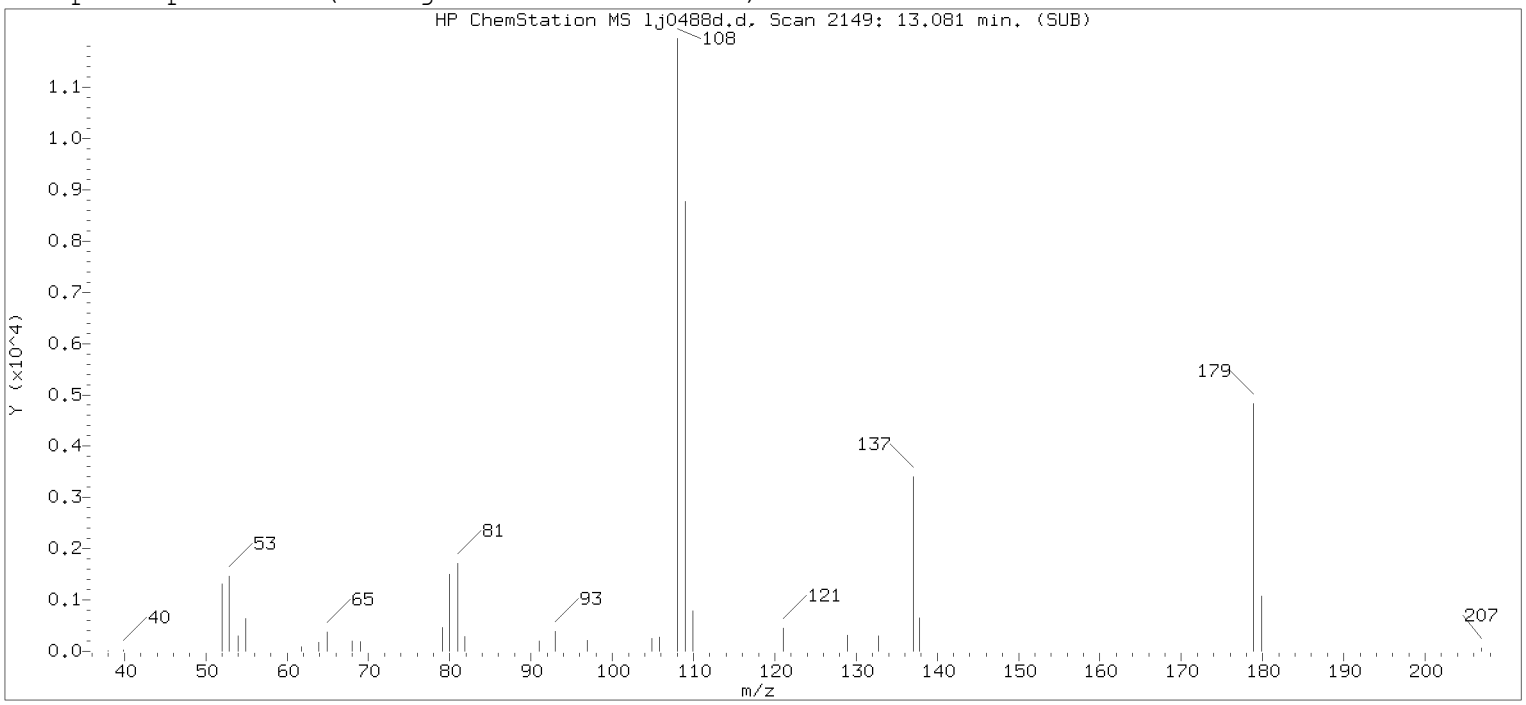
Compound Number : 142
Compound Name : Phenacetin
Scan Number : 2149
Retention Time (minutes) : 13.081
Quant Ion : 108.00
Area (flag) : 12227M
On-Column Amount (ng/ul) : 0.2032
Integration start scan : 2143 Integration stop scan: 2155
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

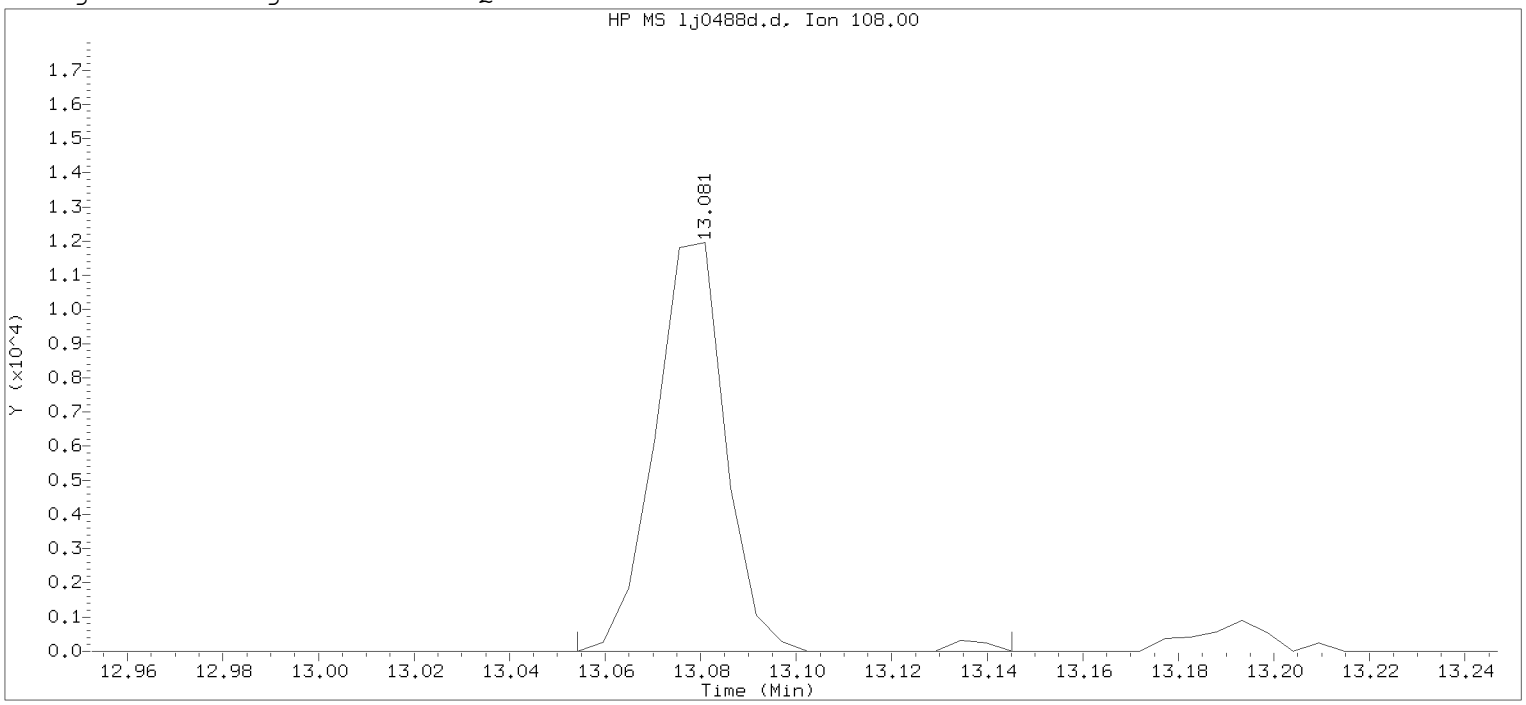
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

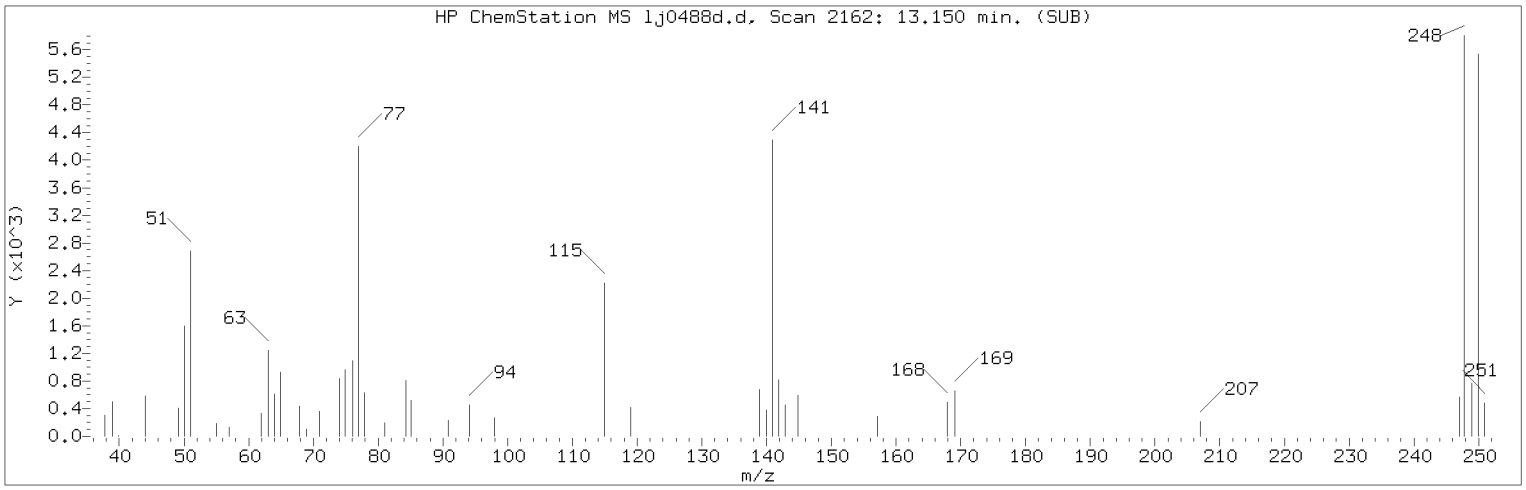
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

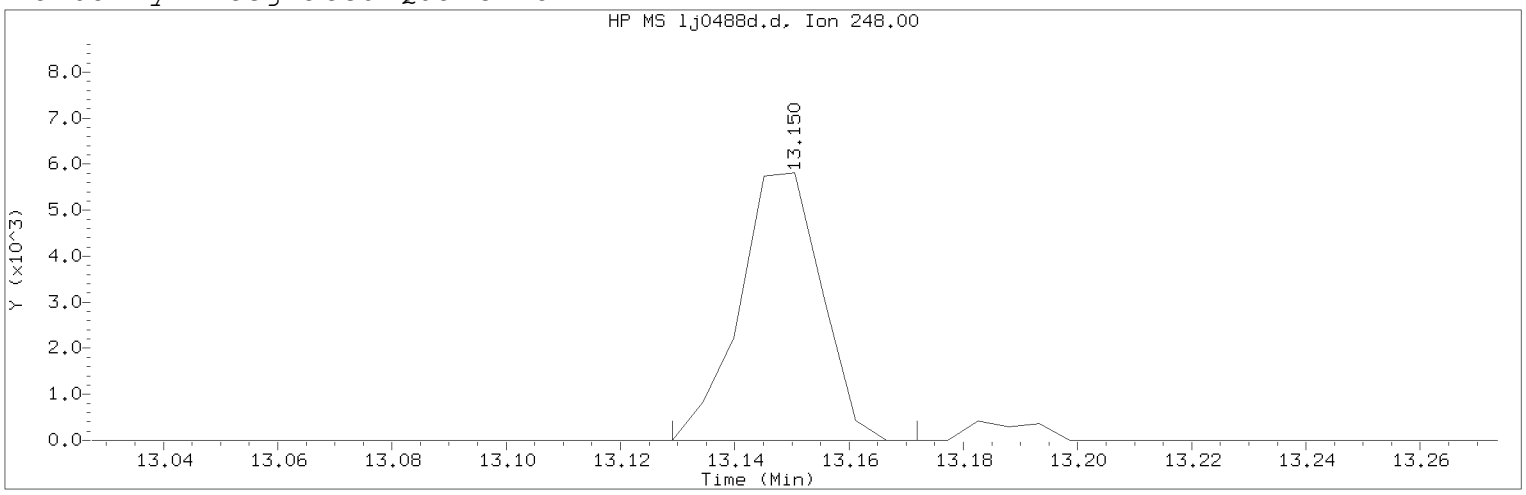
Compound Number	: 142		
Compound Name	: Phenacetin		
Scan Number	: 2149		
Retention Time (minutes)	: 13.081		
Quant Ion	: 108.00		
Area	: 12413		
On-column Amount (ng/ul)	: 0.2107		
Integration start scan	: 2143	Integration stop scan:	2160
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1178

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

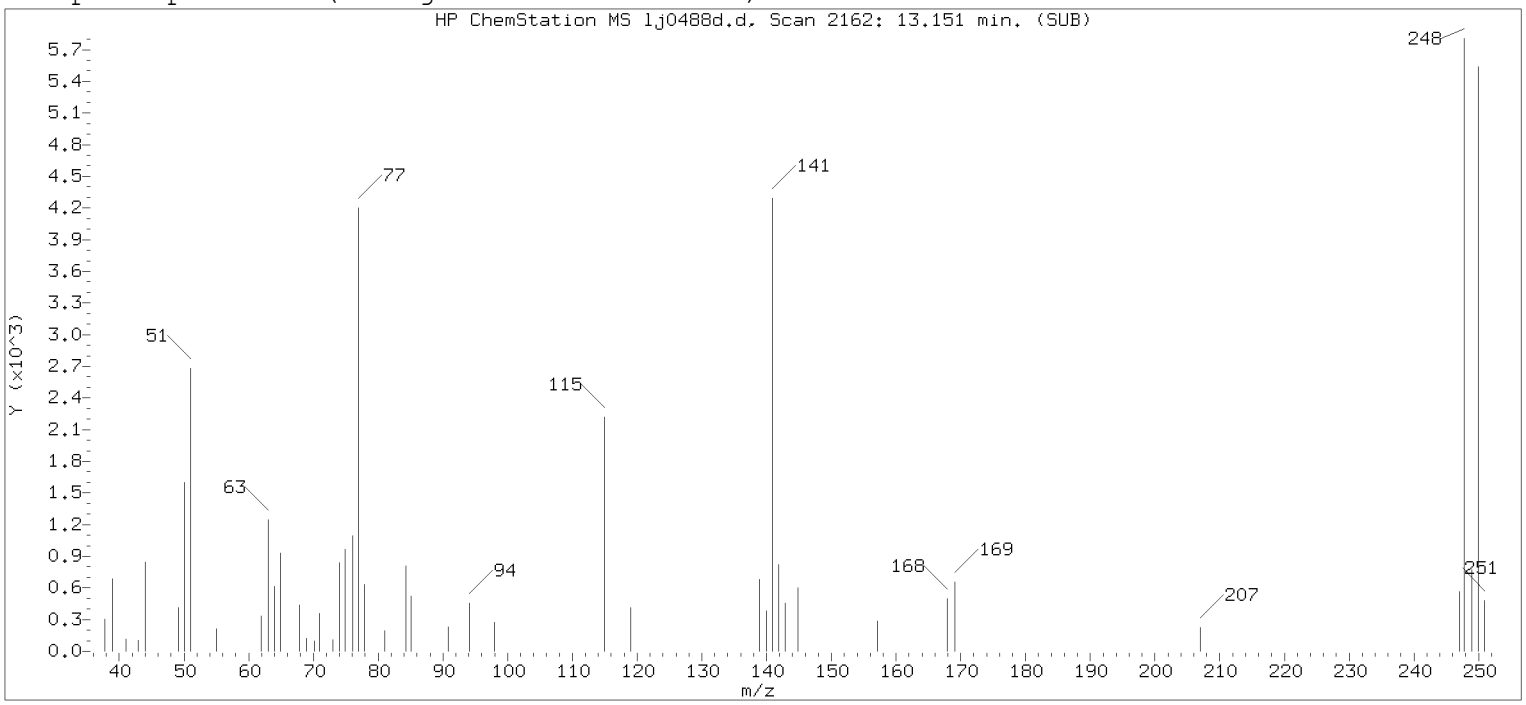
Compound Number	: 143		
Compound Name	: 4-Bromophenyl-phenylether		
Scan Number	: 2162		
Retention Time (minutes)	: 13.150		
Quant Ion	: 248.00		
Area (flag)	: 5783M		
On-Column Amount (ng/ul)	: 0.2404		
Integration start scan	: 2157	Integration stop scan:	2165
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

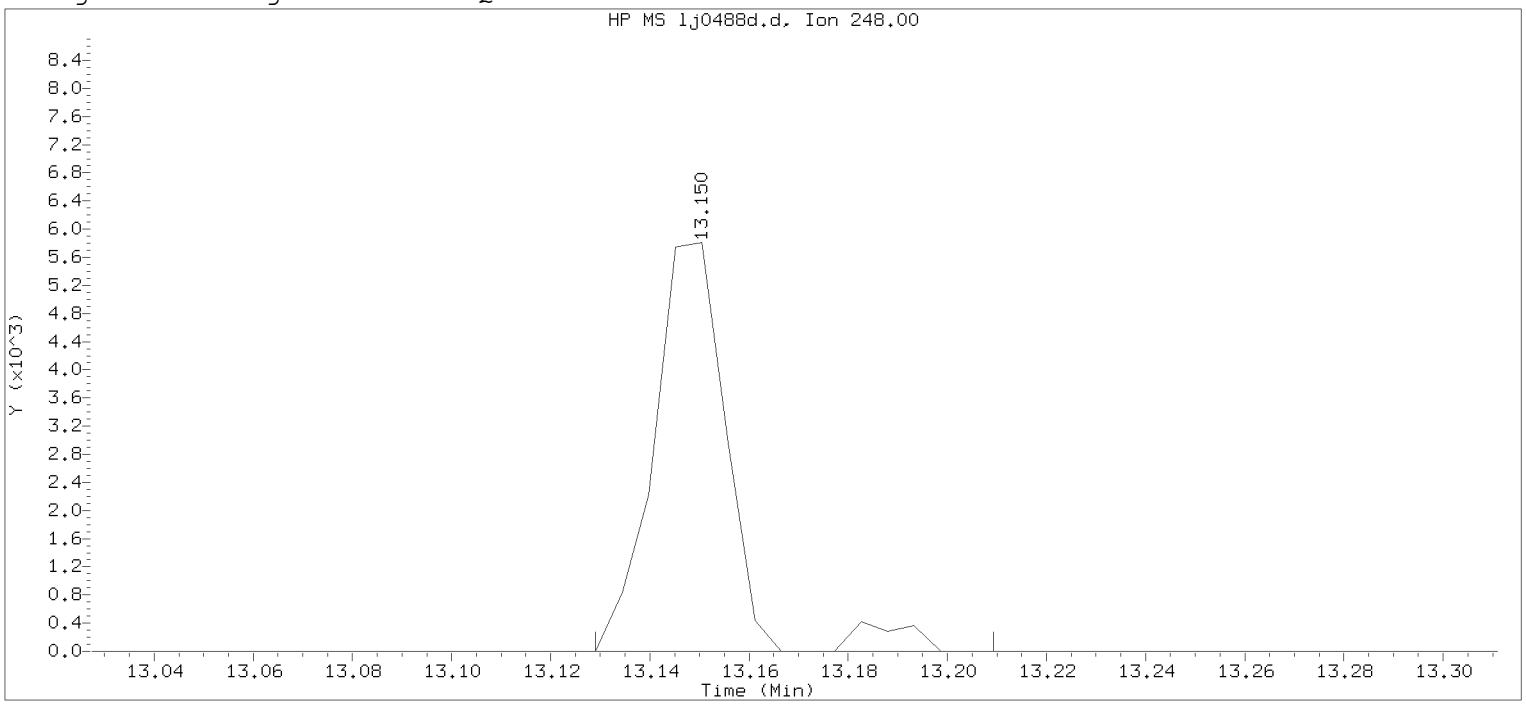
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

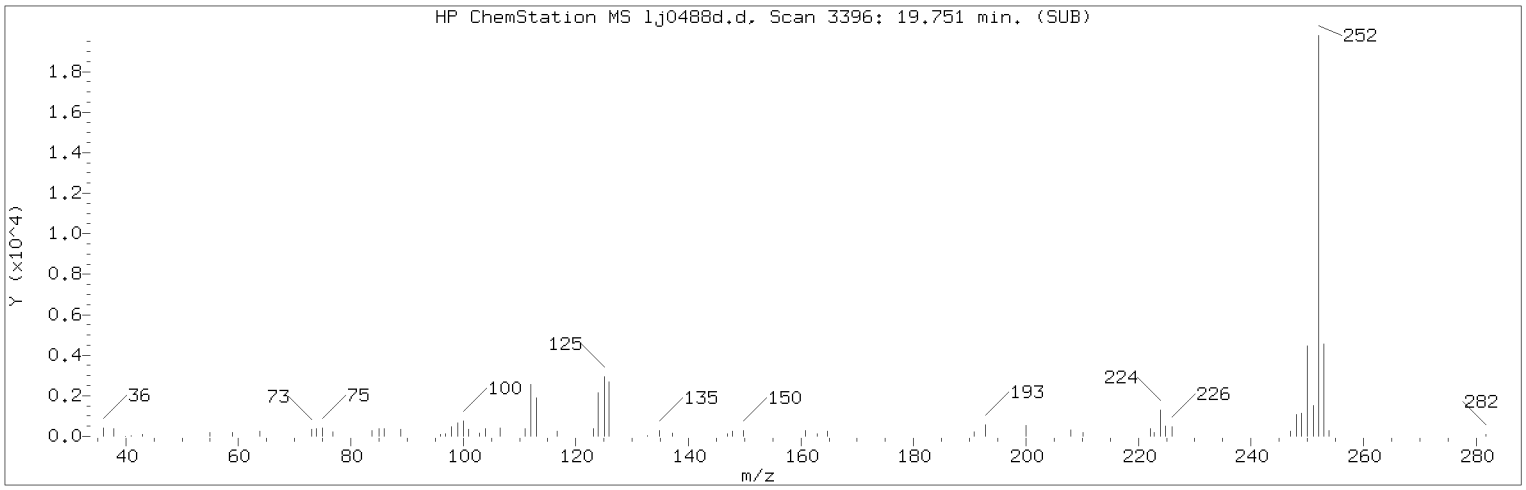
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

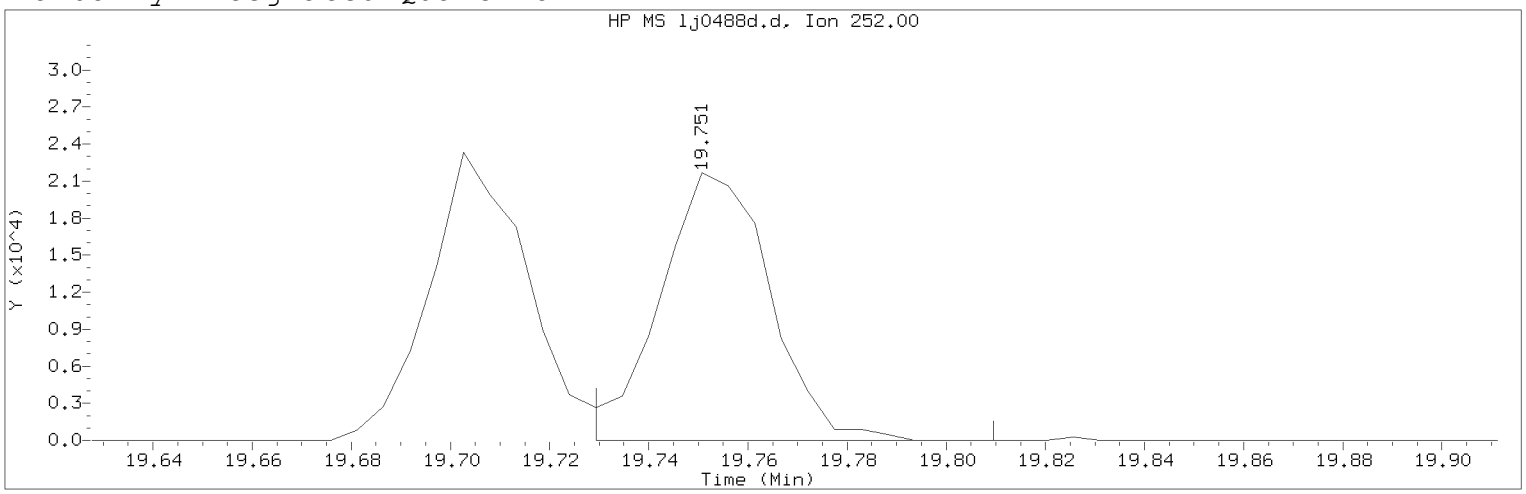
Compound Number	: 143		
Compound Name	: 4-Bromophenyl-phenylether		
Scan Number	: 2162		
Retention Time (minutes)	: 13.150		
Quant Ion	: 248.00		
Area	: 6129		
On-column Amount (ng/ul)	: 0.2531		
Integration start scan	: 2157	Integration stop scan:	2172
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

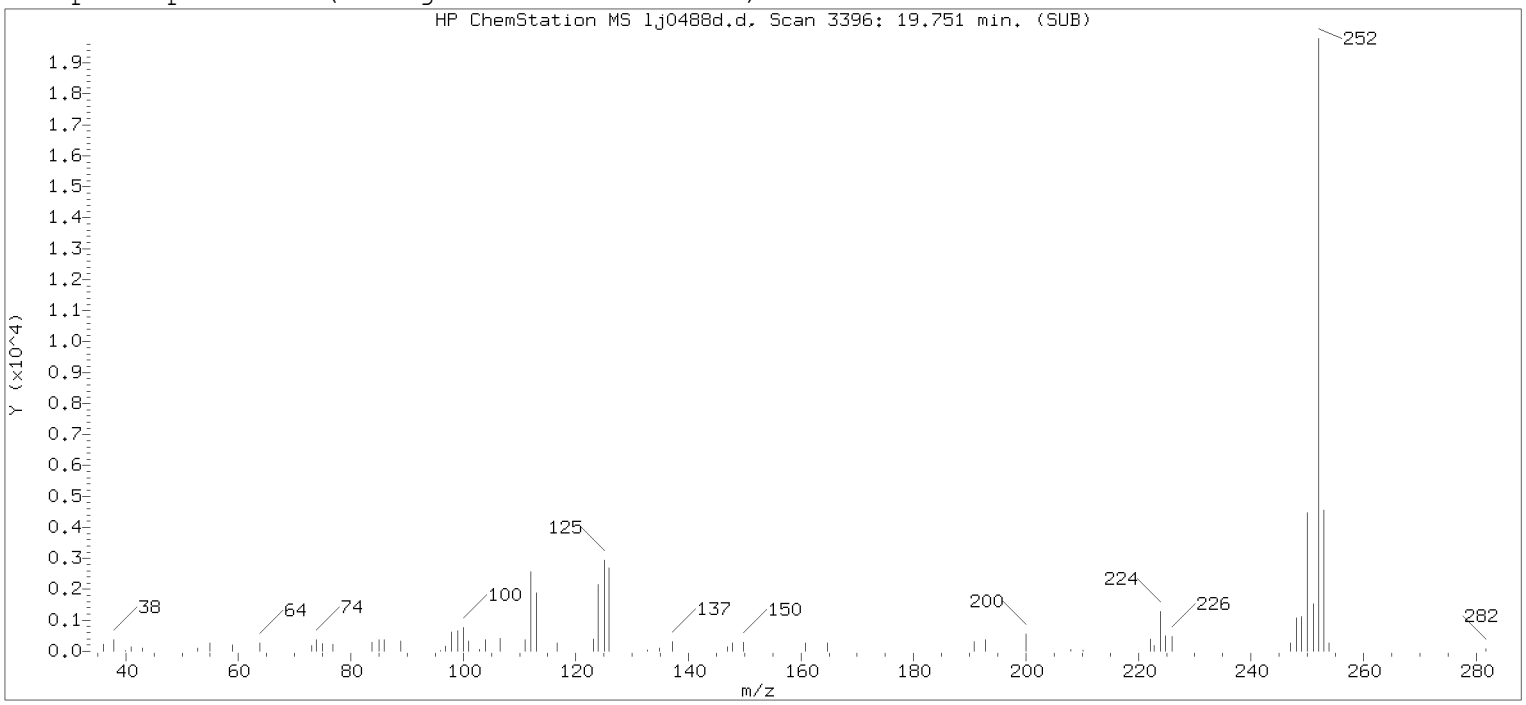
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 3396
Retention Time (minutes) : 19.751
Quant Ion : 252.00
Area (flag) : 33609M
On-Column Amount (ng/ul) : 0.2465
Integration start scan : 3391 Integration stop scan: 3406
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

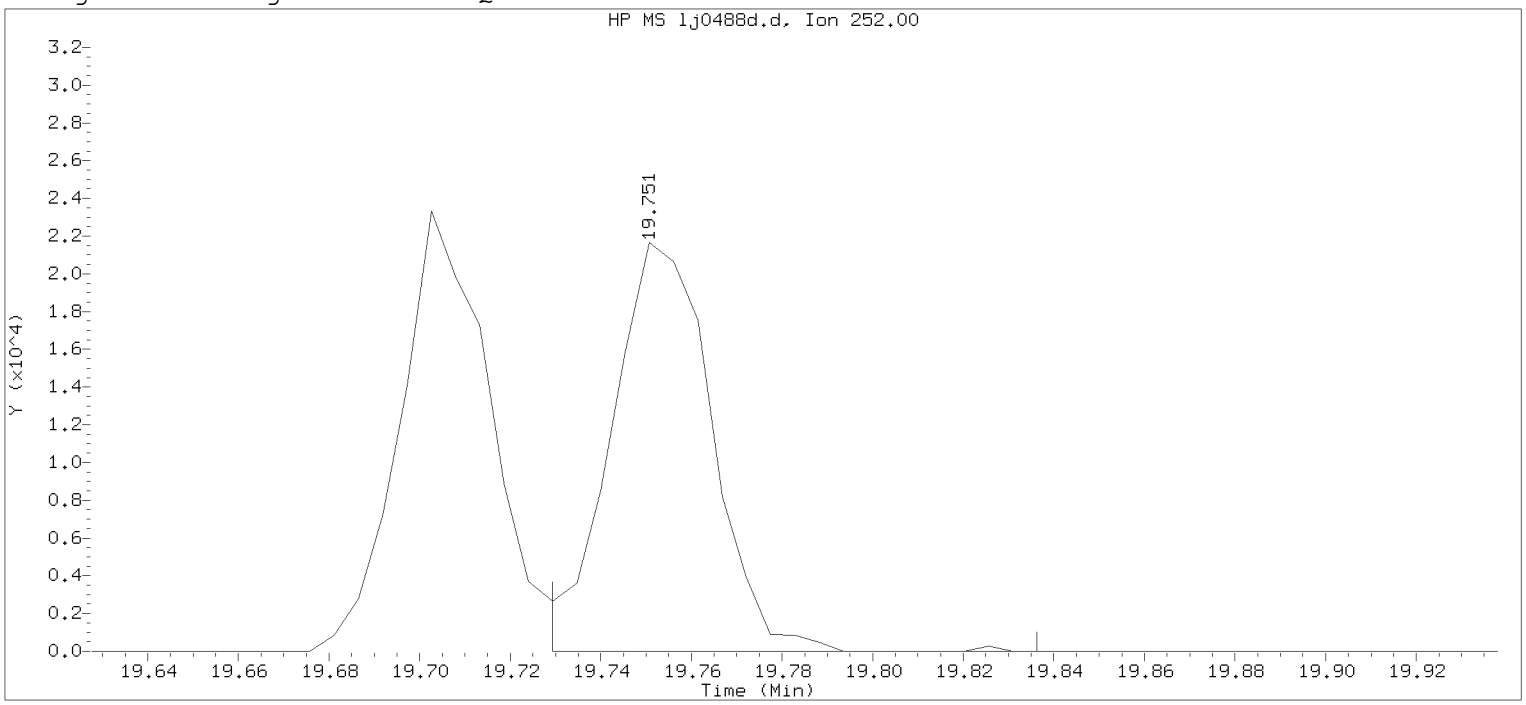
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

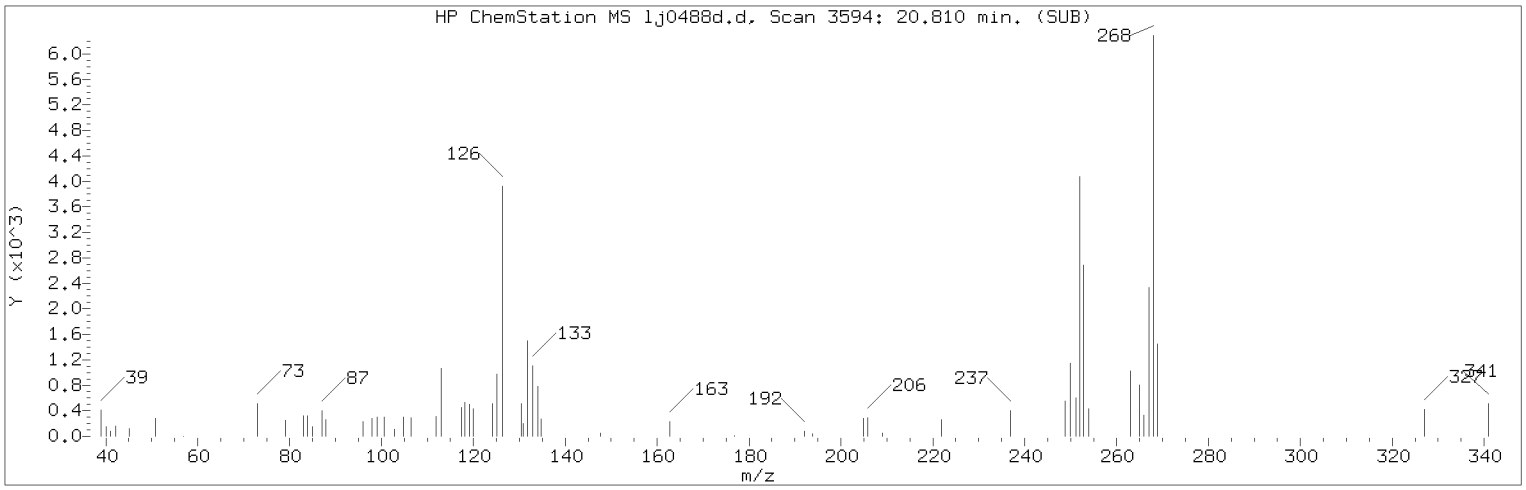
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

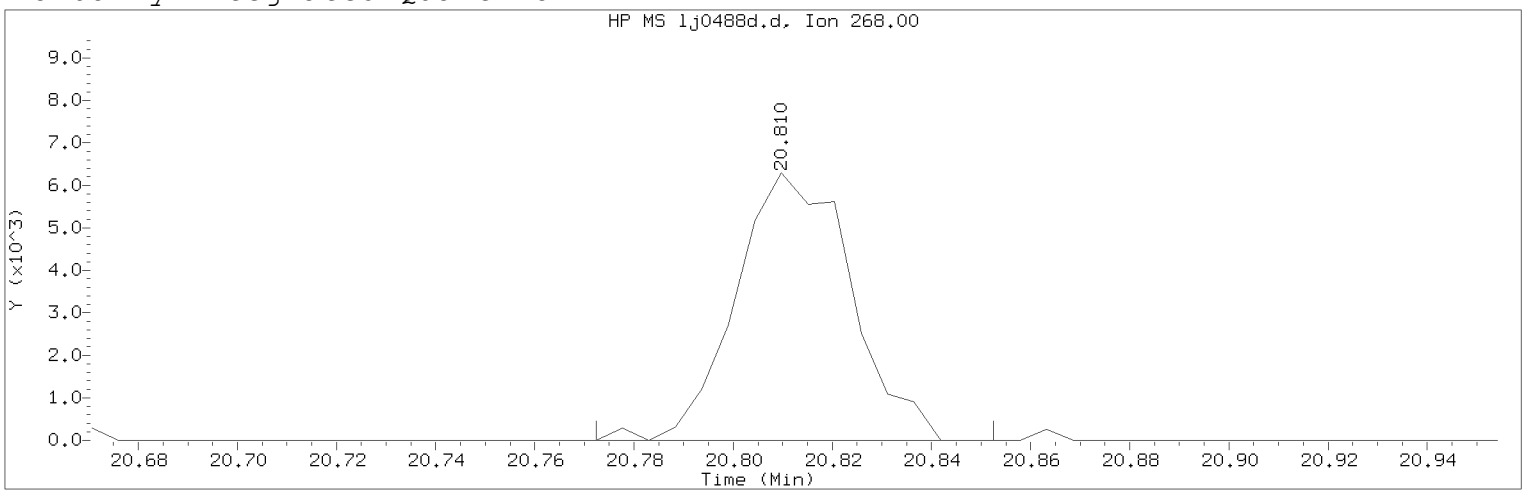
Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3396		
Retention Time (minutes)	: 19.751		
Quant Ion	: 252.00		
Area	: 33267		
On-column Amount (ng/ul)	: 0.2458		
Integration start scan	: 3391	Integration stop scan:	3411
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 17837

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

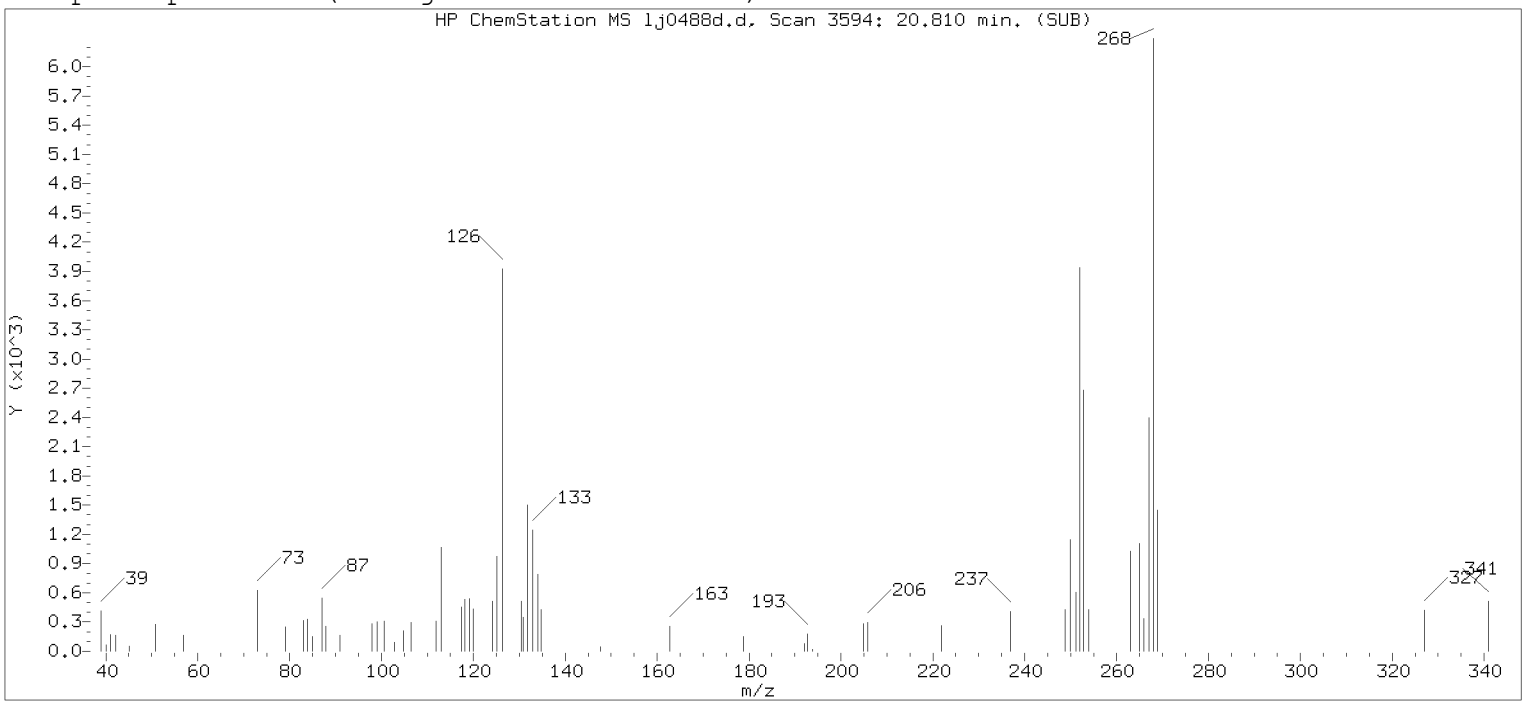
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 3594
Retention Time (minutes) : 20.810
Quant Ion : 268.00
Area (flag) : 10167M
On-Column Amount (ng/ul) : 0.2150
Integration start scan : 3586 Integration stop scan: 3601
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

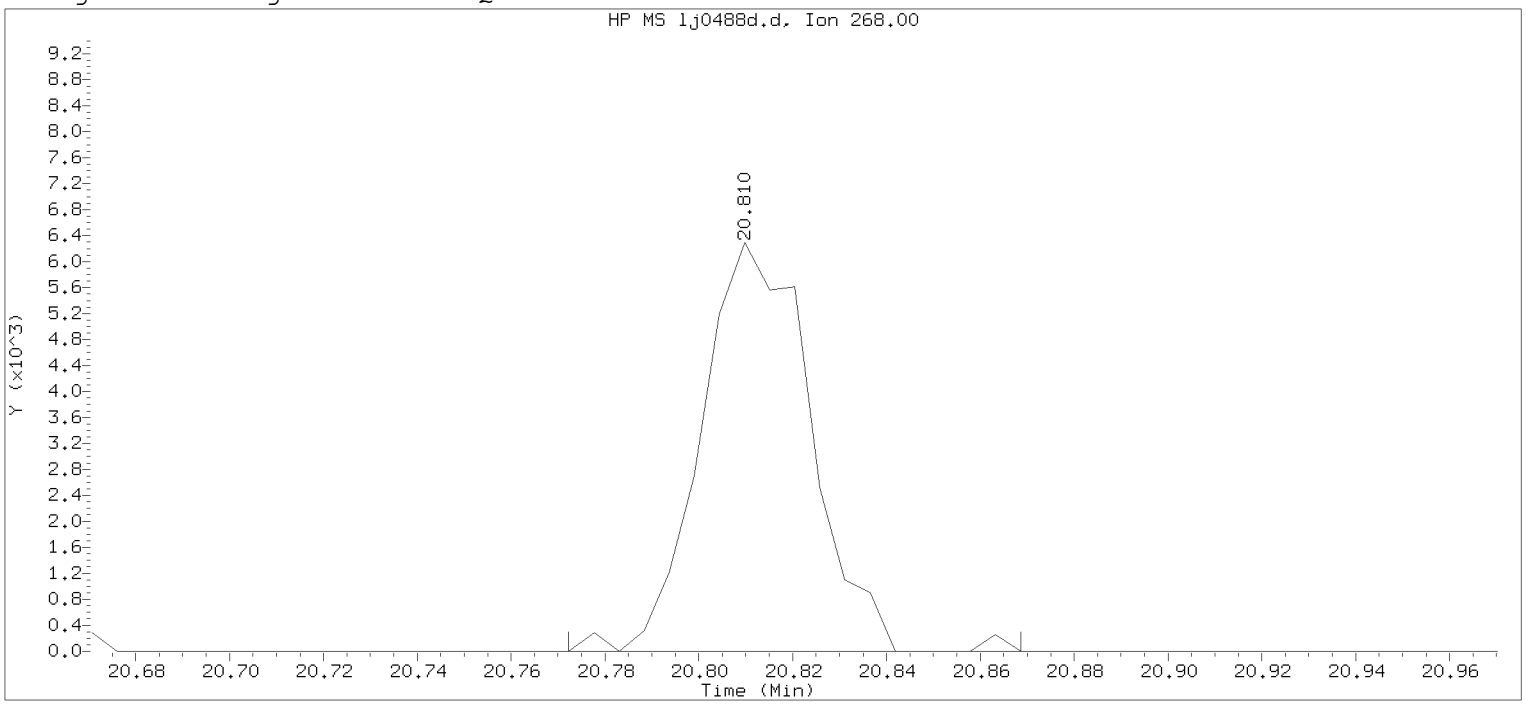
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

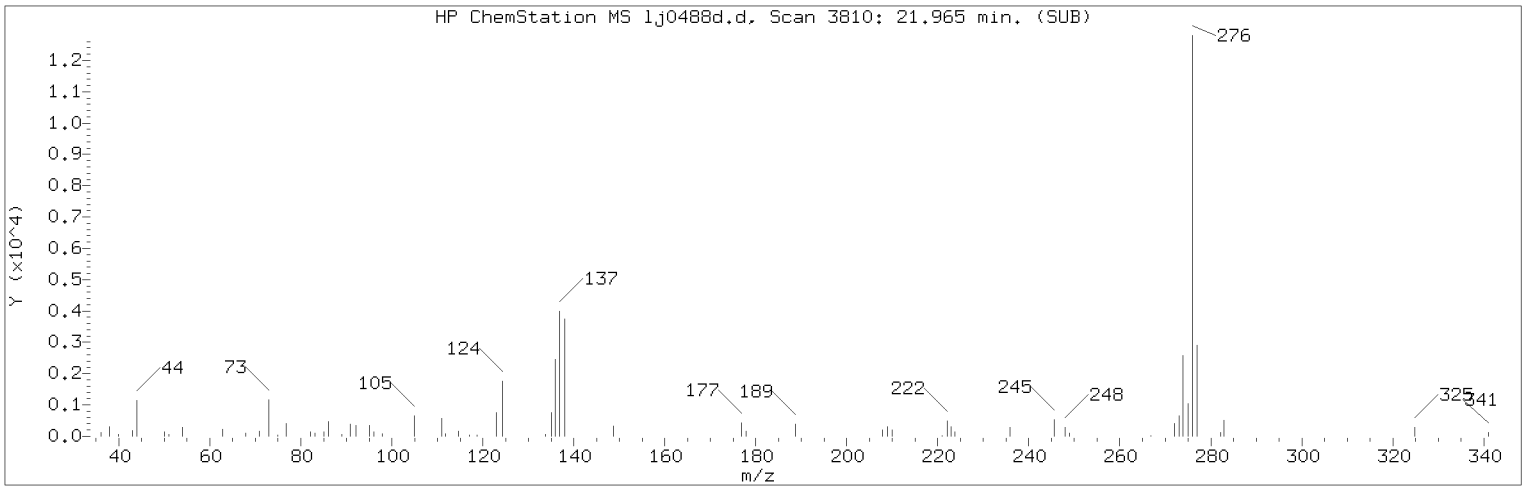
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

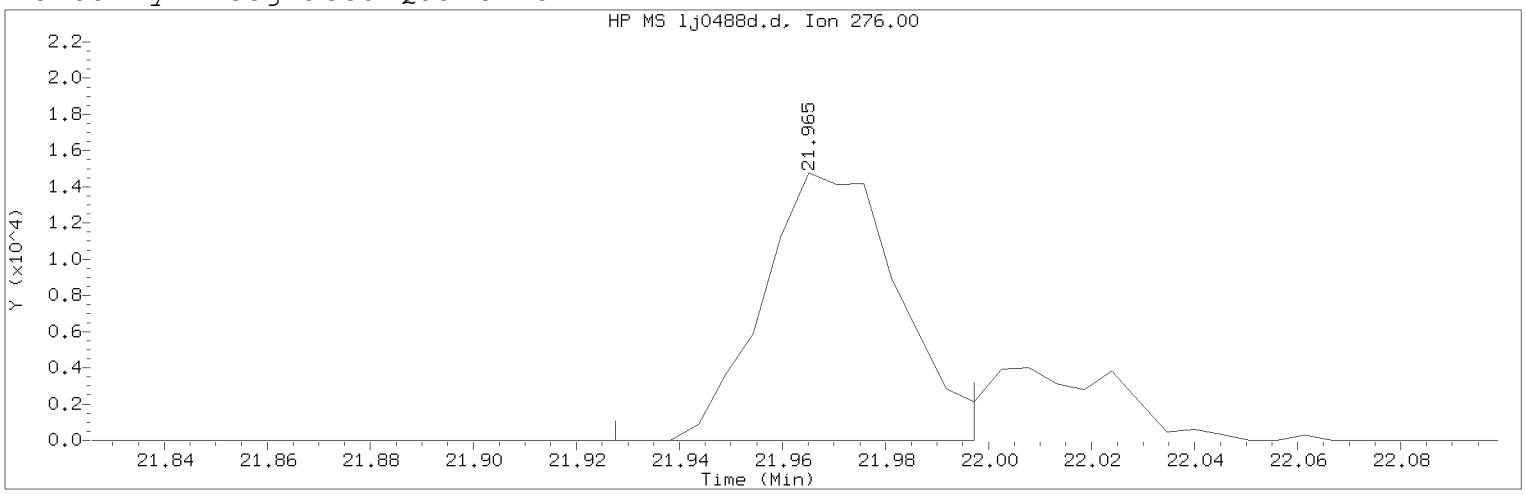
Compound Number	: 215		
Compound Name	: 3-Methylcholanthrene		
Scan Number	: 3594		
Retention Time (minutes)	: 20.810		
Quant Ion	: 268.00		
Area	: 10251		
On-column Amount (ng/ul)	: 0.2124		
Integration start scan	: 3586	Integration stop scan:	3604
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

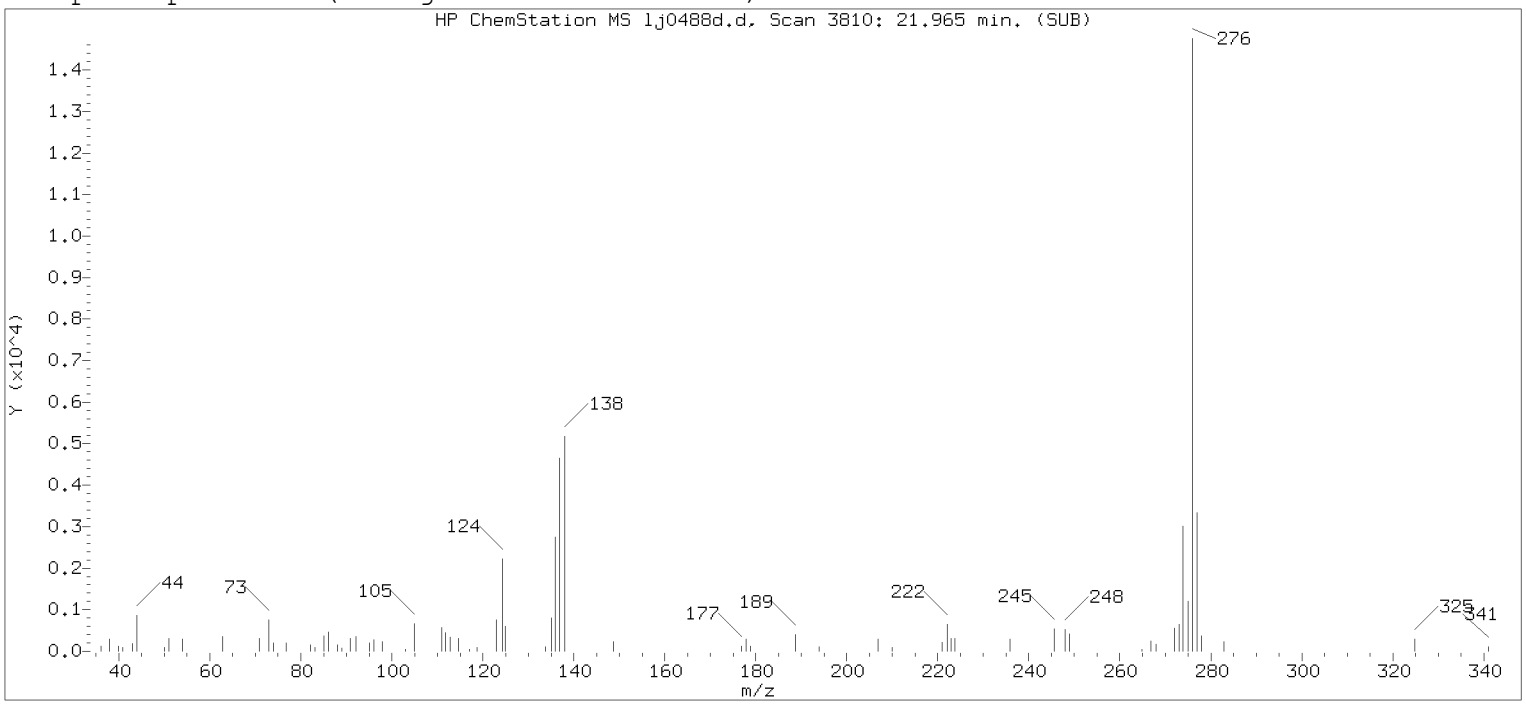
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3810
Retention Time (minutes) : 21.965
Quant Ion : 276.00
Area (flag) : 27121M
On-Column Amount (ng/ul) : 0.2239
Integration start scan : 3802 Integration stop scan: 3815
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

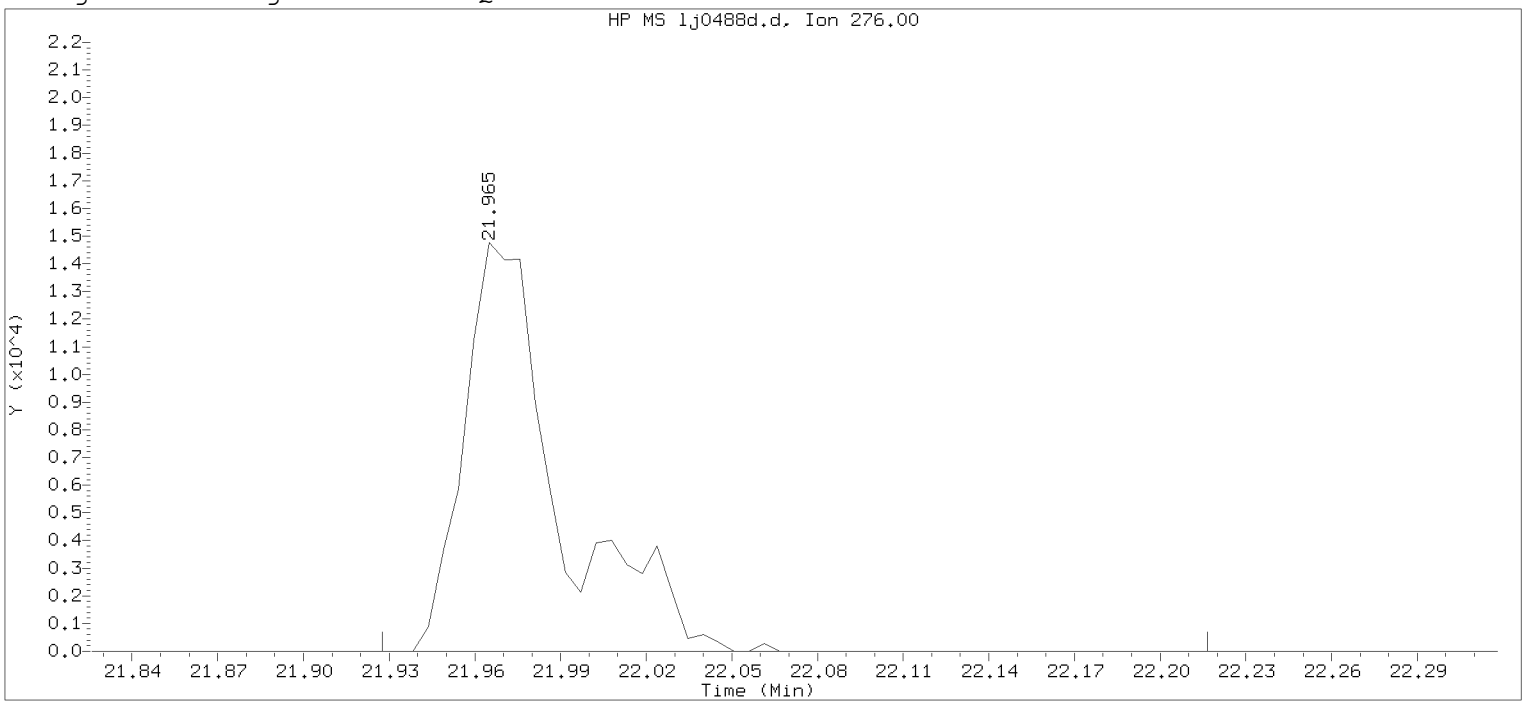
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

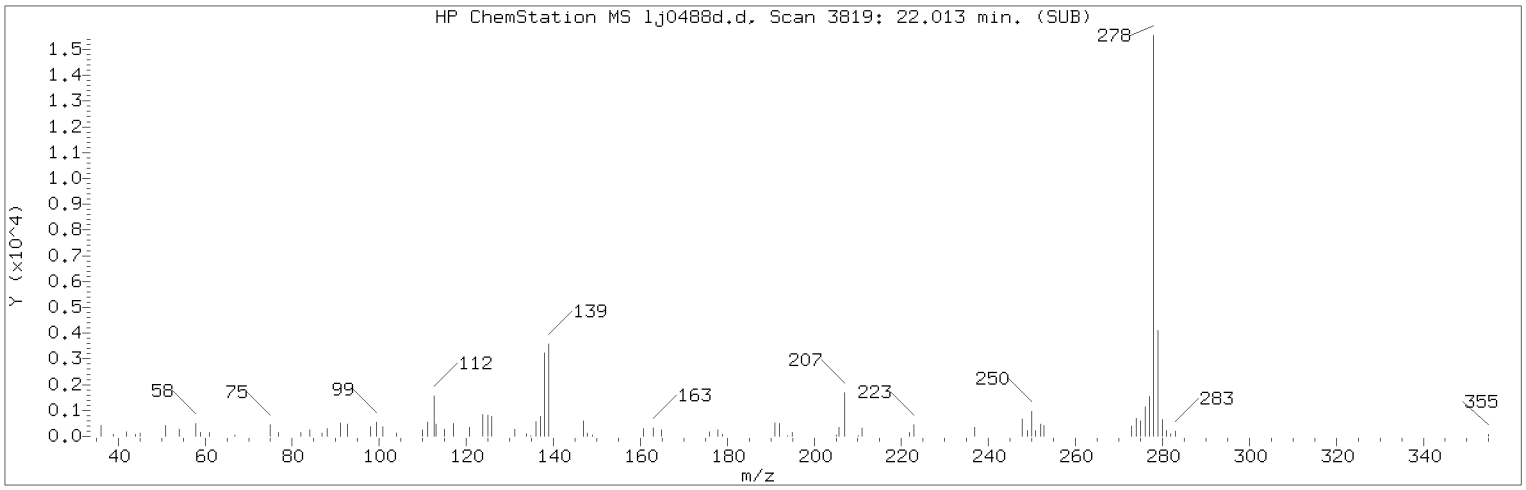
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

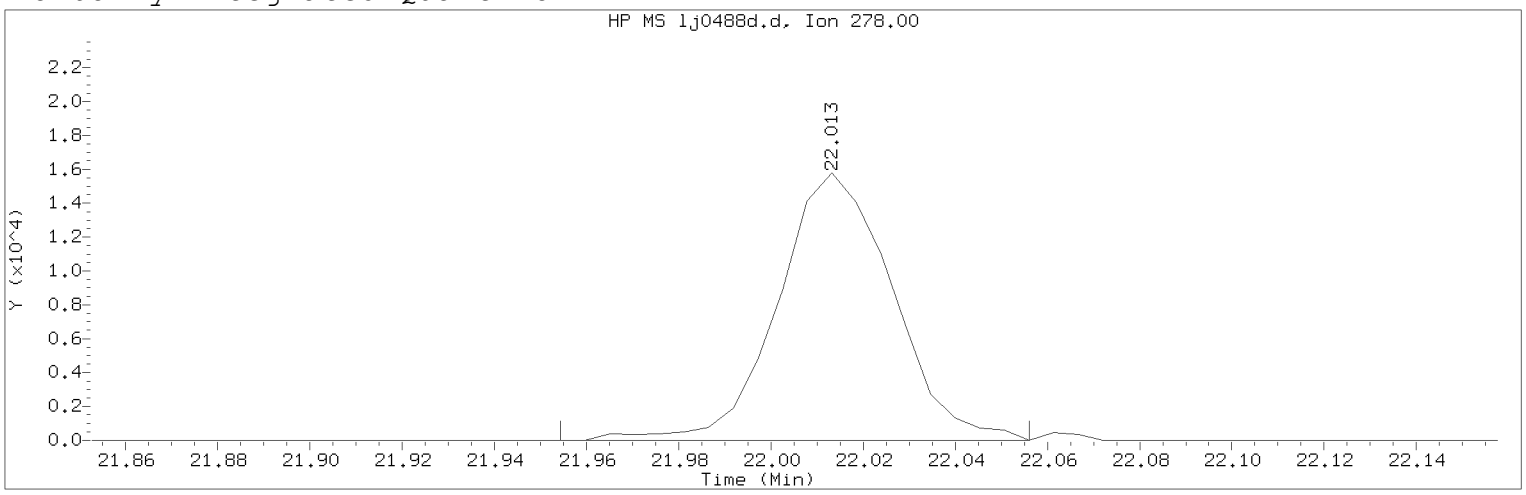
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3810		
Retention Time (minutes)	: 21.965		
Quant Ion	: 276.00		
Area	: 34013		
On-column Amount (ng/ul)	: 0.2308		
Integration start scan	: 3802	Integration stop scan:	3856
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

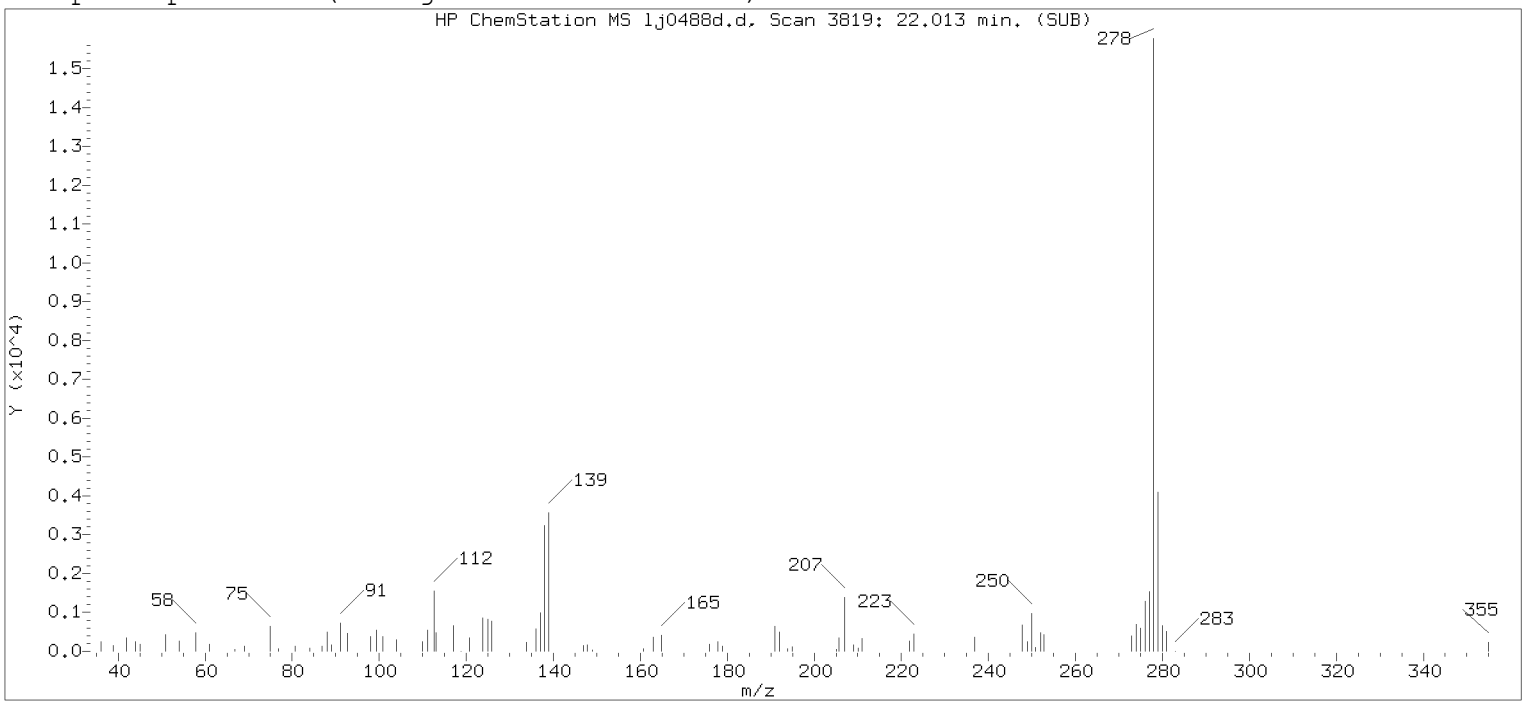
Compound Number : 220
Compound Name : Dibenz(a,h)anthracene
Scan Number : 3819
Retention Time (minutes) : 22.013
Quant Ion : 278.00
Area (flag) : 27264M
On-Column Amount (ng/ul) : 0.2225
Integration start scan : 3807 Integration stop scan: 3826
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

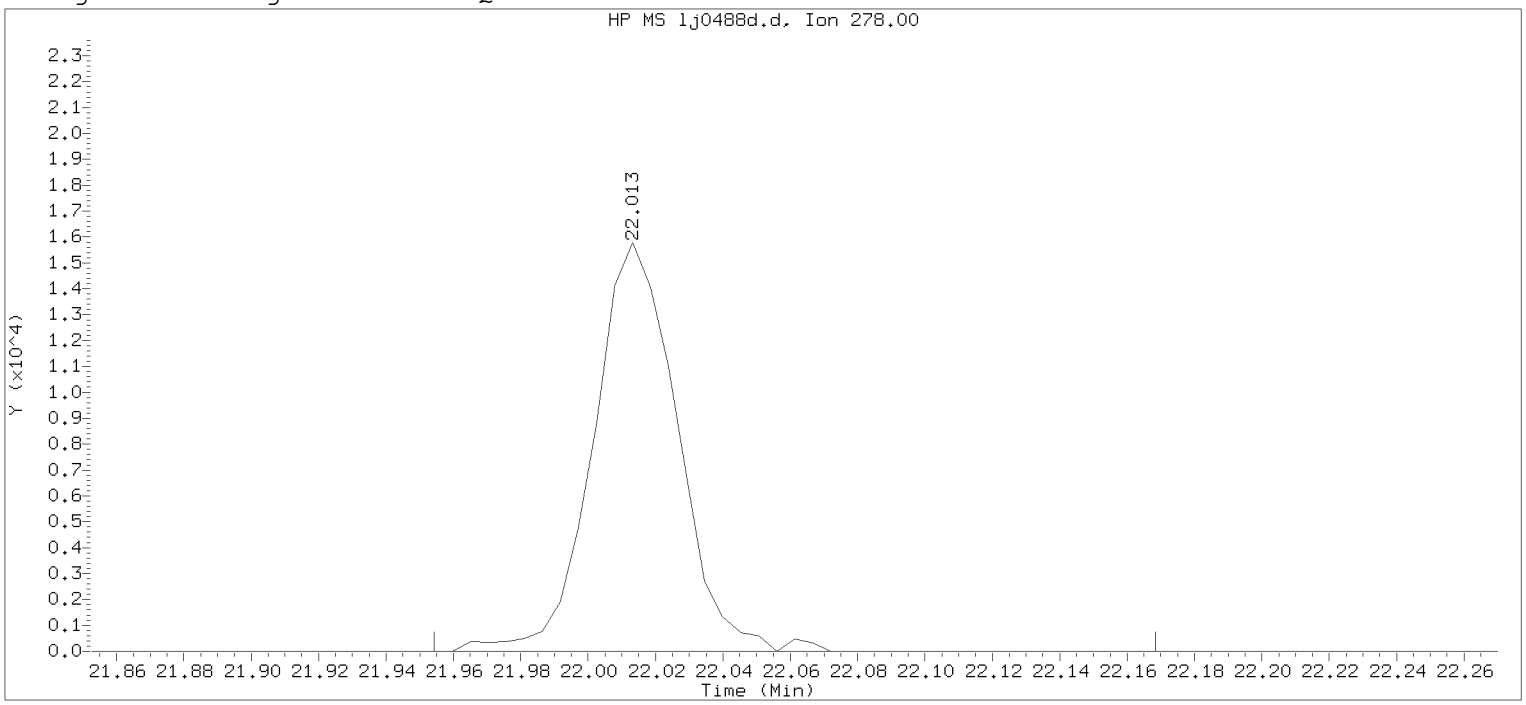
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

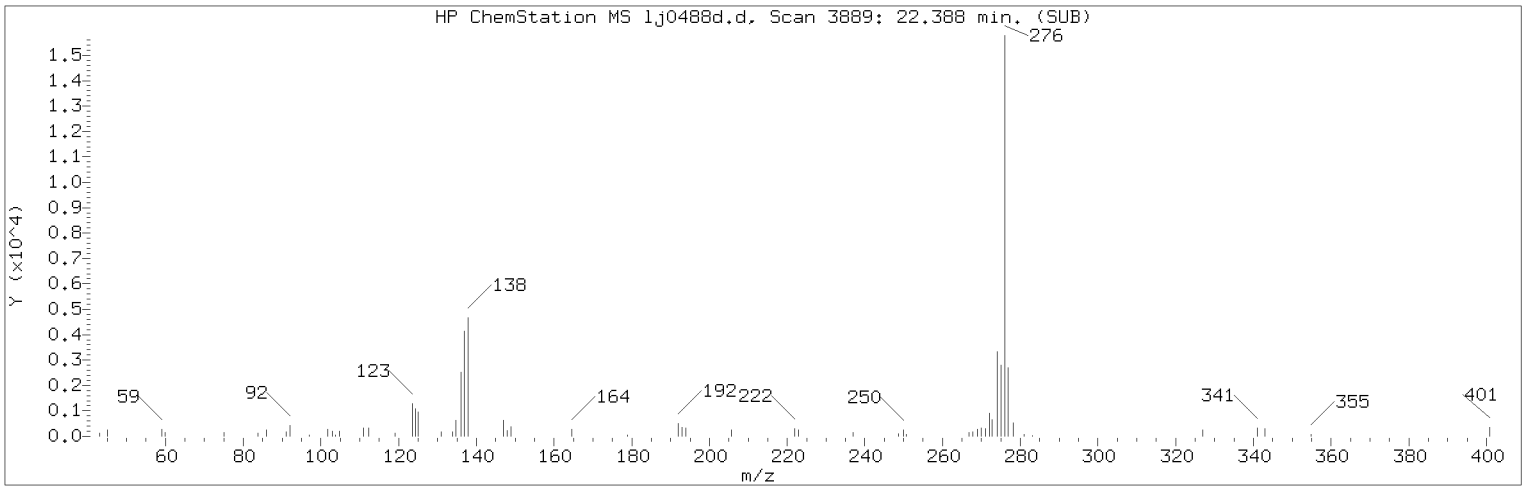
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

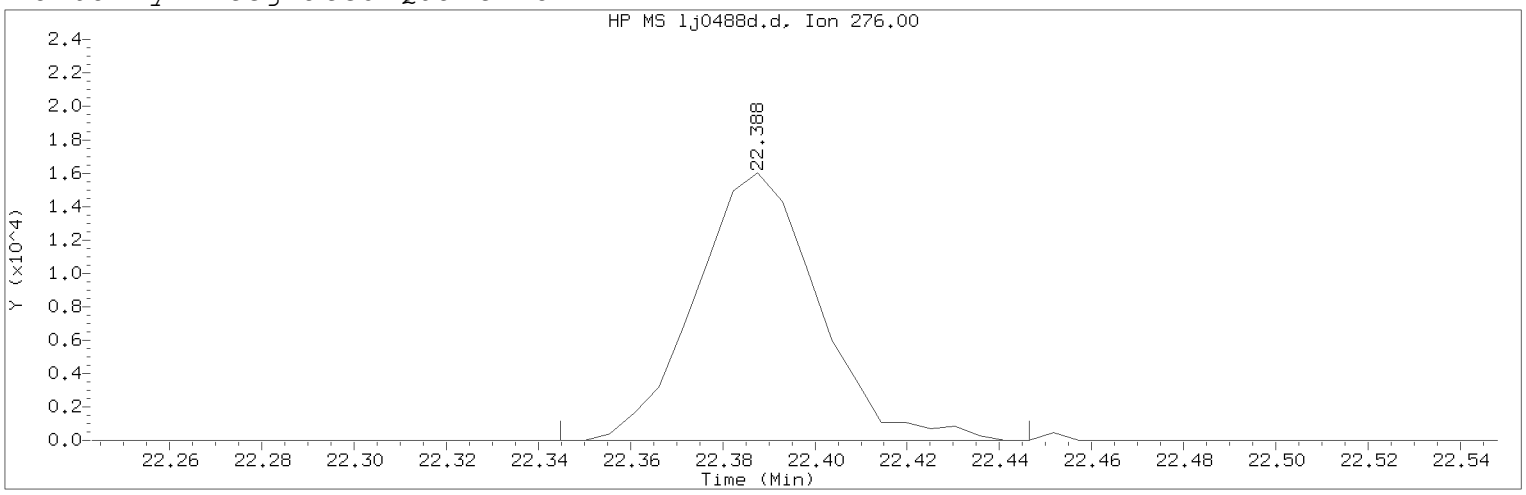
Compound Number	: 220		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3819		
Retention Time (minutes)	: 22.013		
Quant Ion	: 278.00		
Area	: 27520		
On-column Amount (ng/ul)	: 0.2269		
Integration start scan	: 3807	Integration stop scan:	3847
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2017 09:55
Date, time and analyst ID of latest file update: 26-Oct-2017 09:55 ceb05247

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

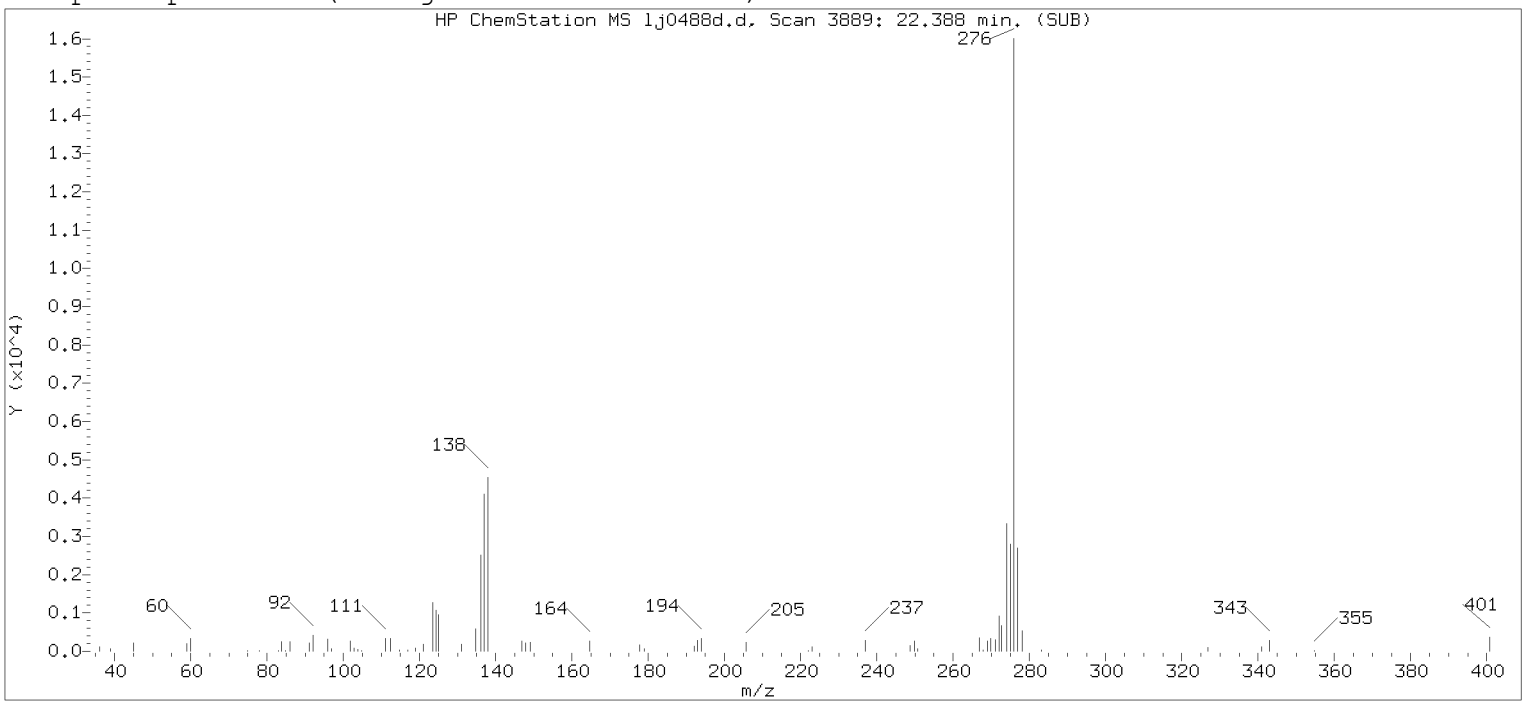
Compound Number : 221
Compound Name : Benzo(g,h,i)perylene
Scan Number : 3889
Retention Time (minutes) : 22.388
Quant Ion : 276.00
Area (flag) : 29526M
On-Column Amount (ng/ul) : 0.2371
Integration start scan : 3880 Integration stop scan: 3899
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

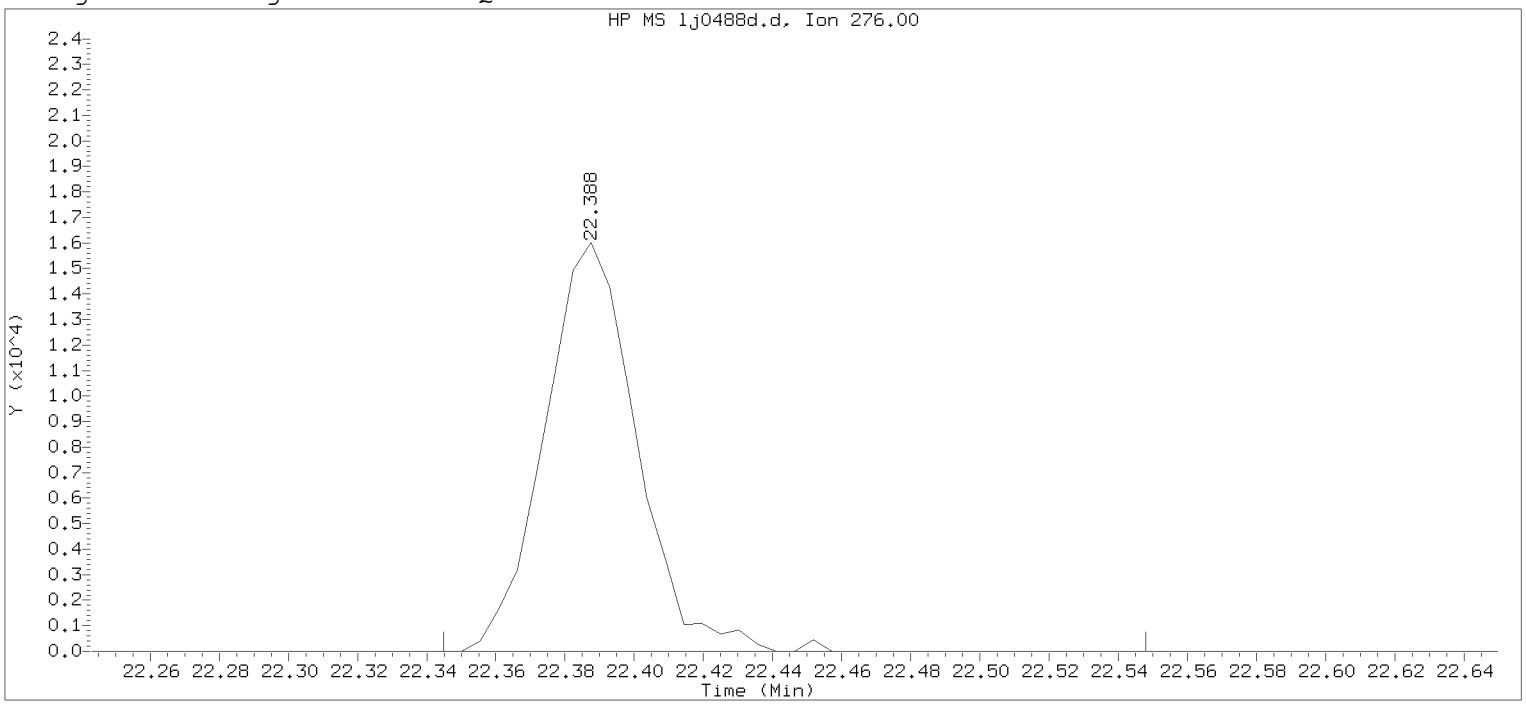
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



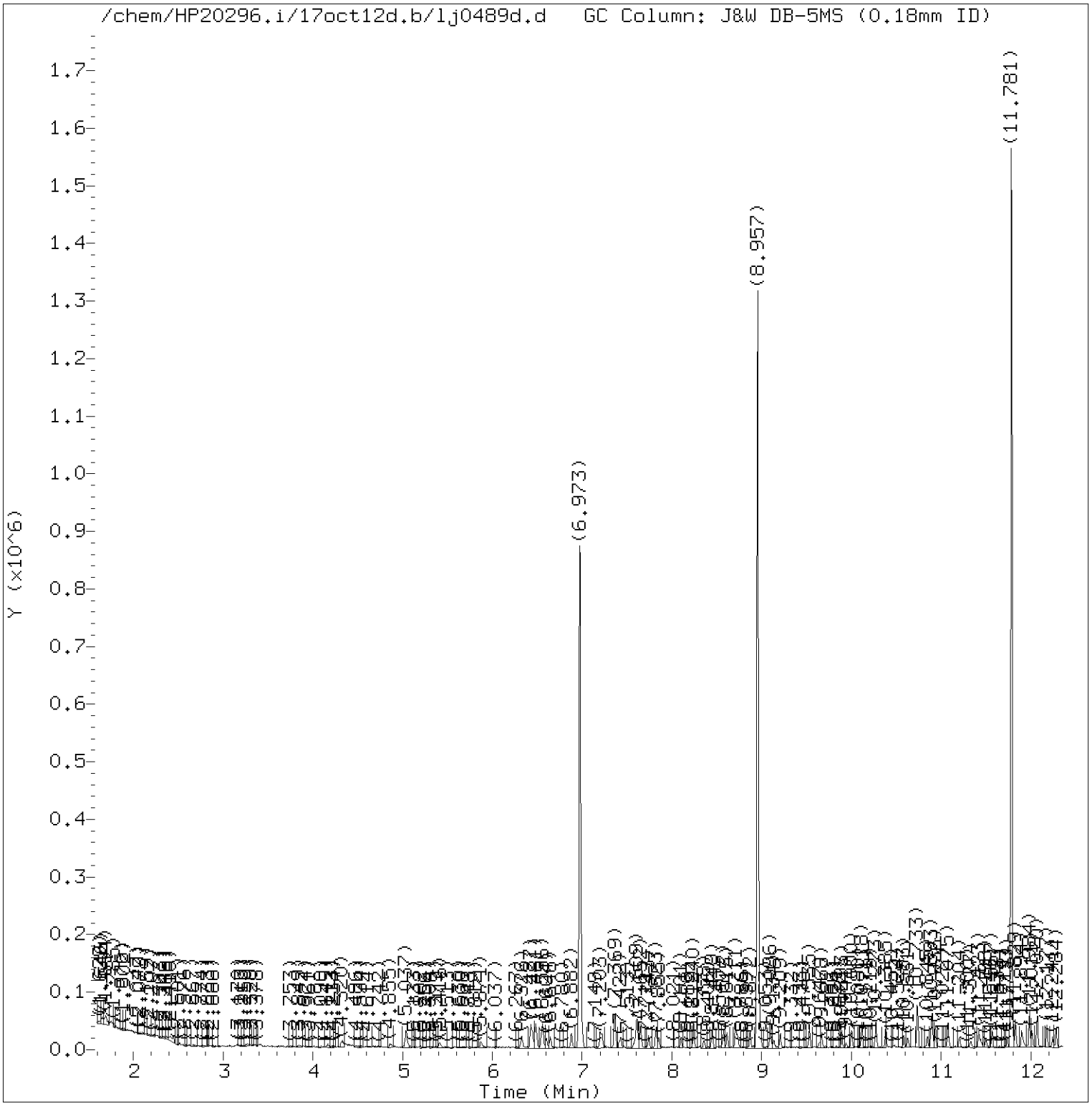
Data File: /chem/HP20296.i/17oct12d.b/lj0488d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.25 Lab Sample ID: RVSTD2857

Compound Number	: 221		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 3889		
Retention Time (minutes)	: 22.388		
Quant Ion	: 276.00		
Area	: 29672		
On-column Amount (ng/ul)	: 0.2403		
Integration start scan	: 3880	Integration stop scan:	3918
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used



Total Ion Chromatogram (TIC)

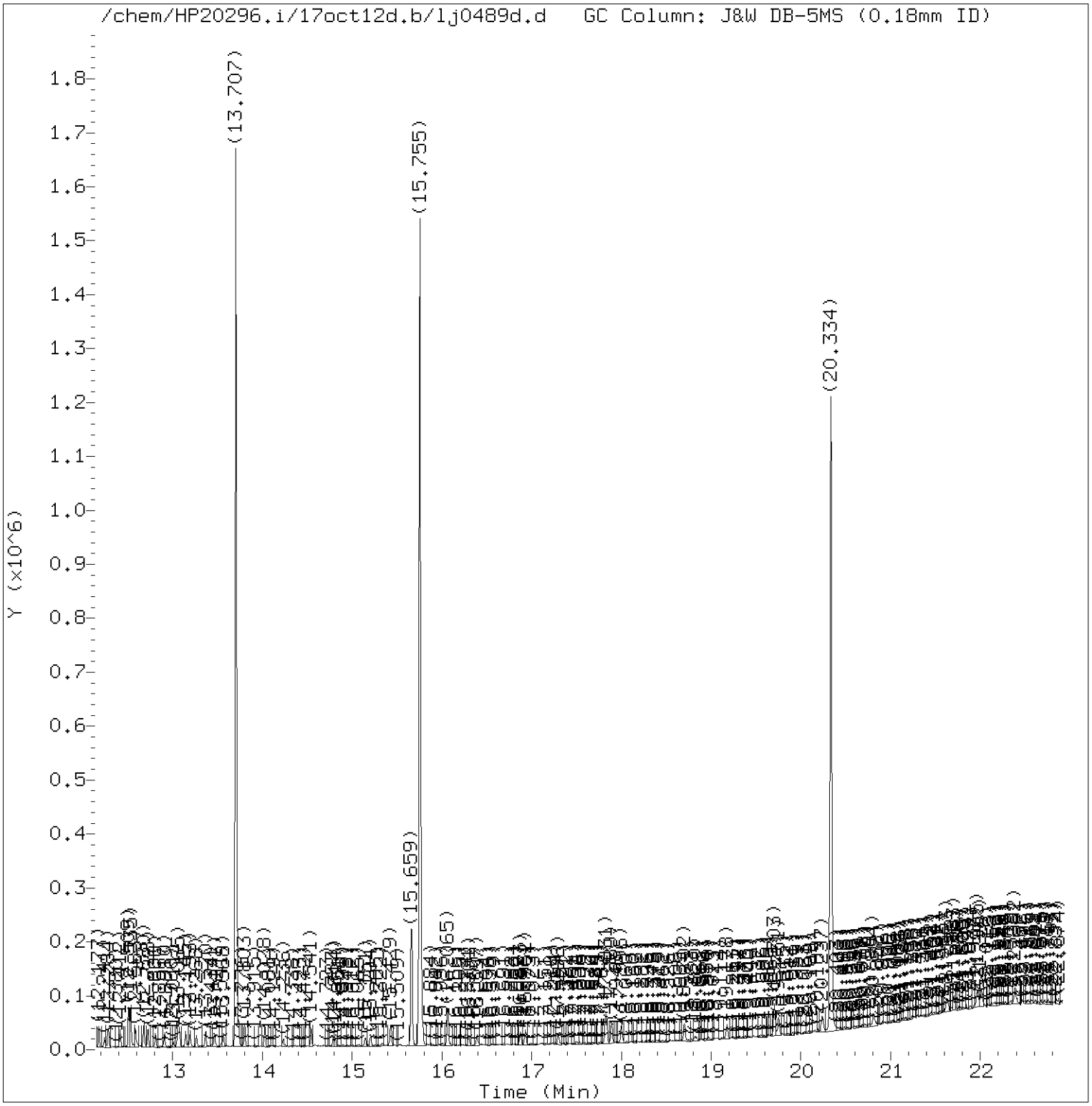
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	3.159	74	2755	0.075
5) Pyridine	(1)	3.255	79	5524M	0.086
7) 2-Picoline	(1)	4.320	93	9024M	0.130
8) N-Nitrosomethylethylamine	(1)	4.438	88	2997M	0.105
9) Methyl methanesulfonate	(1)	4.865	80	3338	0.123
11)$2-Fluorophenol	(1)	5.037	112	14160	0.256
13) N-Nitrosodiethylamine	(1)	5.406	102	3118	0.114
42) Total Cresols	(1)			15697	0.282
15) Ethyl methanesulfonate	(1)	5.871	109	3256M	0.116
16) Benzaldehyde	(1)	6.326	77	6303M	0.118
17)$Phenol-d6	(1)	6.427	99	18595	0.255
18) Phenol	(1)	6.449	94	11508	0.139
19) Aniline	(1)	6.491	93	12593	0.128
20) a-methylstyrene	(1)	6.561	118	8563	0.144
22) bis(2-Chloroethyl)ether	(1)	6.604	93	8049M	0.133
23) 2-Chlorophenol	(1)	6.641	128	7002	0.129
24) 1,3-Dichlorobenzene	(1)	6.882	146	7612	0.128
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	177727	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	7989	0.134
27) Benzyl alcohol	(1)	7.203	108	5033	0.130
28) 1,2-Dichlorobenzene	(1)	7.224	146	7684	0.136
30) Indene	(1)	7.363	115	14882	0.140
31) 2-Methylphenol	(1)	7.369	108	7689	0.142
97) Isosafrole	(3)			4214	0.111
34) bis(2-Chloroisopropyl)ether	(1)	7.427	45	10266	0.142
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.427	45	10266	0.142
35) N-Nitrosopyrrolidine	(1)	7.577	100	3180	0.110
36) Acetophenone	(1)	7.599	105	10291	0.124
37) 4-Methylphenol	(1)	7.609	108	8008	0.140
38) N-Nitroso-di-n-propylamine	(1)	7.615	70	5817	0.133
39) N-Nitrosomorpholine	(1)	7.641	56	4525	0.136
40) o-Toluidine	(1)	7.652	106	11986	0.126
43) Hexachloroethane	(1)	7.743	117	2848	0.118
44)$Nitrobenzene-d5	(2)	7.823	82	16575	0.245
45) Nitrobenzene	(2)	7.855	77	7850	0.115
120) 2,4_2,6-Dinitrotoluenes	(3)			4425	0.166
48) N-Nitrosopiperidine	(2)	8.096	114	3251	0.113
50) Isophorone	(2)	8.246	82	14149	0.118
51) 2-Nitrophenol	(2)	8.358	139	2953	0.112
53) 2,4-Dimethylphenol	(2)	8.449	107	7098	0.118

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	8.545	105	1829M	3.212
57) O,O,O-Triethylphosphorothioate	(2)	8.577	198	3068	0.123
55) bis(2-Chloroethoxy)methane	(2)	8.615	93	9703	0.129
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.711	104	12154	0.137
60) 2,4-Dichlorophenol	(2)	8.732	162	5048	0.114
146) Diallate trans/cis	(4)			6160	0.116
62) 1,2,4-Trichlorobenzene	(2)	8.872	180	5643	0.117
65)*Naphthalene-d8	(2)	8.957	136	720353	5.000
67) 4-Chloroaniline	(2)	9.096	127	8293	0.122
68) 2,6-Dichlorophenol	(2)	9.096	162	5302	0.122
69) Hexachloropropene	(2)	9.134	213	2790	0.118
71) Hexachlorobutadiene	(2)	9.209	225	3280	0.129
75) Quinoline	(2)	9.535	129	11894	0.117
76) Caprolactam	(2)	9.647	113	1578M	0.102
77) N-Nitrosodi-n-butylamine	(2)	9.668	84	6228	0.126
80) 4-Chloro-3-methylphenol	(2)	9.893	107	5877	0.115
82) Safrole	(2)	10.005	162	4435	0.109
85) Hexachlorocyclopentadiene	(3)	10.374	237	1321M	0.059
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.385	216	4910	0.106
88) cis-Isosafrole	(3)	10.487	162	684	0.016
90) 2,4,6-Trichlorophenol	(3)	10.583	196	3413	0.117
92) 2,4,5-Trichlorophenol	(3)	10.631	196	3894	0.122
93)$2-Fluorobiphenyl	(3)	10.733	172	28511	0.254
94) trans-Isosafrole	(3)	10.845	162	3530	0.095
95) 1,1'-Biphenyl	(3)	10.893	154	15645	0.126
96) 2-Chloronaphthalene	(3)	10.904	162	12033	0.122
98) 1-Chloronaphthalene	(3)	10.936	162	11225	0.124
99) Diphenyl ether	(3)	11.075	170	8354	0.130
100) 2-Nitroaniline	(3)	11.086	138	3034	0.103
104) 1,4-Naphthoquinone	(3)	11.204	158	3710	0.094
105) 1,4-Dinitrobenzene	(3)	11.337	168	1553M	0.106
106) Dimethylphthalate	(3)	11.417	163	13053	0.123
107) 1,3-Dinitrobenzene	(3)	11.439	168	1398	0.084
108) 2,6-Dinitrotoluene	(3)	11.498	165	1925	0.086
112) 3-Nitroaniline	(3)	11.738	138	2577	0.098
113)*Acenaphthene-d10	(3)	11.781	164	383666	5.000
115) 2,4-Dinitrophenol	(3)	11.894	184	4834	0.374
116) 4-Nitrophenol	(3)	11.984	109	6249M	0.345
117) Pentachlorobenzene	(3)	12.017	250	4136	0.119
118) 2,4-Dinitrotoluene	(3)	12.070	165	2500	0.080

M = Compound was manually integrated.
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Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Dibenzofuran	(3)	12.075	168	16067	0.120
121) 1-Naphthylamine	(3)	12.177	143	12252	0.117
122) 2,3,4,6-Tetrachlorophenol	(3)	12.241	232	2041	0.092
123) 2-Naphthylamine	(3)	12.284	143	12272	0.121
124) Diethylphthalate	(3)	12.412	149	12008	0.114
125) Thionazin	(3)	12.514	107	2356	0.111
128) 5-Nitro-o-toluidine	(3)	12.535	152	2902M	0.099
129) 4-Nitroaniline	(3)	12.535	138	2379	0.088
127) 4-Chlorophenyl-phenylether	(3)	12.535	204	5523	0.114
130) 4,6-Dinitro-2-methylphenol	(4)	12.583	198	4791	0.290
131) N-Nitrosodiphenylamine	(4)	12.680	169	10934	0.125
132) NDPA as diphenylamine	(4)	12.680	169	10934	0.125
134) 1,2-Diphenylhydrazine	(4)	12.728	77	14615	0.118
135)$2,4,6-Tribromophenol	(3)	12.808	330	1378	0.137
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	2850M	0.139
139) 1,3,5-Trinitrobenzene	(4)	13.011	213	551M	0.054
140) Diallate (peak 1)	(4)	13.054	86	5237	0.095
141) Phorate	(4)	13.065	75	8107M	0.105
142) Phenacetin	(4)	13.076	108	6219	0.104
143) 4-Bromophenyl-phenylether	(4)	13.145	248	3002M	0.125
144) Diallate (peak 2)	(4)	13.166	86	923	0.021
147) Dimethoate	(4)	13.268	87	4724	0.095
148) Atrazine	(4)	13.370	200	3392	0.127
149) Pentachlorophenol	(4)	13.450	266	631	0.042
151) Pentachloronitrobenzene	(4)	13.471	237	710M	0.064
150) 4-Aminobiphenyl	(4)	13.471	169	3401	0.120
152) Pronamide	(4)	13.568	173	4388	0.094
153)*Phenanthrene-d10	(4)	13.707	188	657217	5.000
154) Dinoseb	(4)	13.728	211	1090M	0.047
163) Carbazole	(4)	14.028	167	18051	0.124
164) Methyl parathion	(4)	14.231	109	3306	0.089
165) Di-n-butylphthalate	(4)	14.541	149	19576	0.107
167) Parathion	(4)	14.792	109	1952M	0.083
168) 4-Nitroquinoline-1-oxide	(4)	14.809	190	1123	1.107
169) Octachlorostyrene	(4)	15.140	308	170M	0.020
171) Isodrin	(4)	15.204	193	2575M	0.149
174) Benzidine	(5)	15.664	184	107056	0.859
175)*Pyrene-d10	(5)	15.755	212	736409	5.000
179)$Terphenyl-d14	(5)	16.065	244	25355	0.237
182) p-Dimethylaminoazobenzene	(5)	16.301	225	2188	0.096

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

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

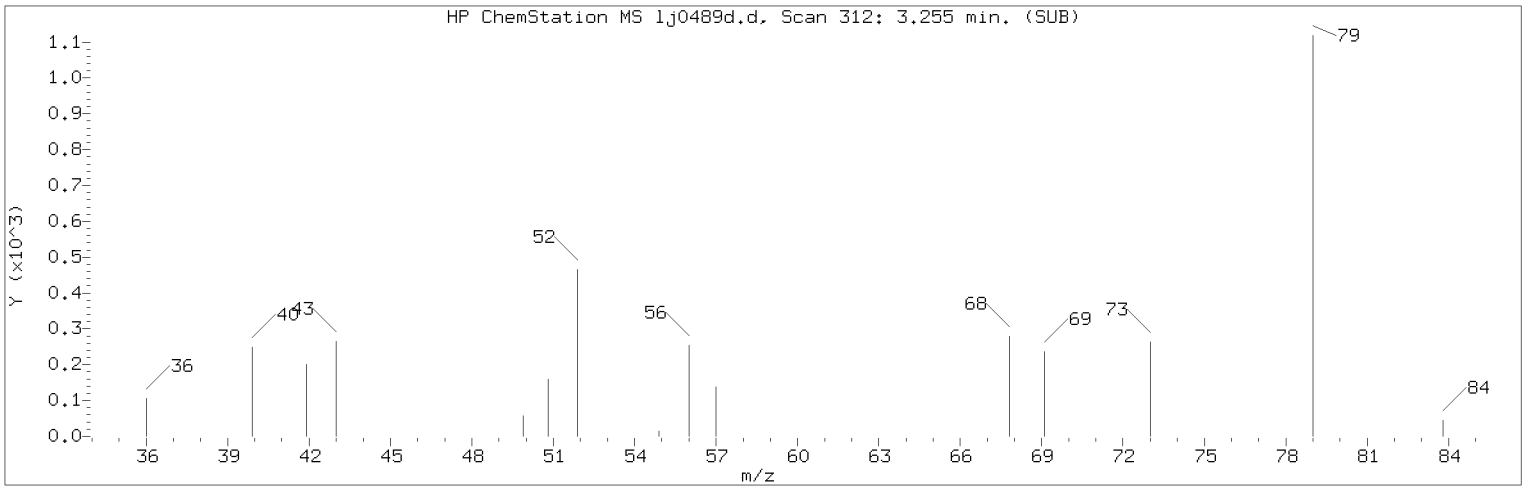
Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
185) Chlorobenzilate	(5)	16.397	139	5235	0.095
187) 3,3'-Dimethylbenzidine	(5)	16.873	212	11223	0.099
188) Butylbenzylphthalate	(5)	16.932	149	7673	0.094
191) 2-Acetylaminofluorene	(5)	17.296	181	5571	0.077
193) 3,3'-Dichlorobenzidine	(5)	17.814	252	5575	0.097
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.841	231	2583	0.087
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	10512	0.088
203) 6-Methylchrysene	(5)	18.702	242	12273	0.118
205) Di-n-octylphthalate	(6)	19.178	149	15970	0.079
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.708	256	6472	0.107
213)*Perylene-d12	(6)	20.334	264	545899	5.000
215) 3-Methylcholanthrene	(6)	20.810	268	5172M	0.110
217) Dibenz(a,h)acridine	(6)	21.628	279	11137	0.103
218) Dibenz(a,j)acridine	(6)	21.703	279	12157M	0.109

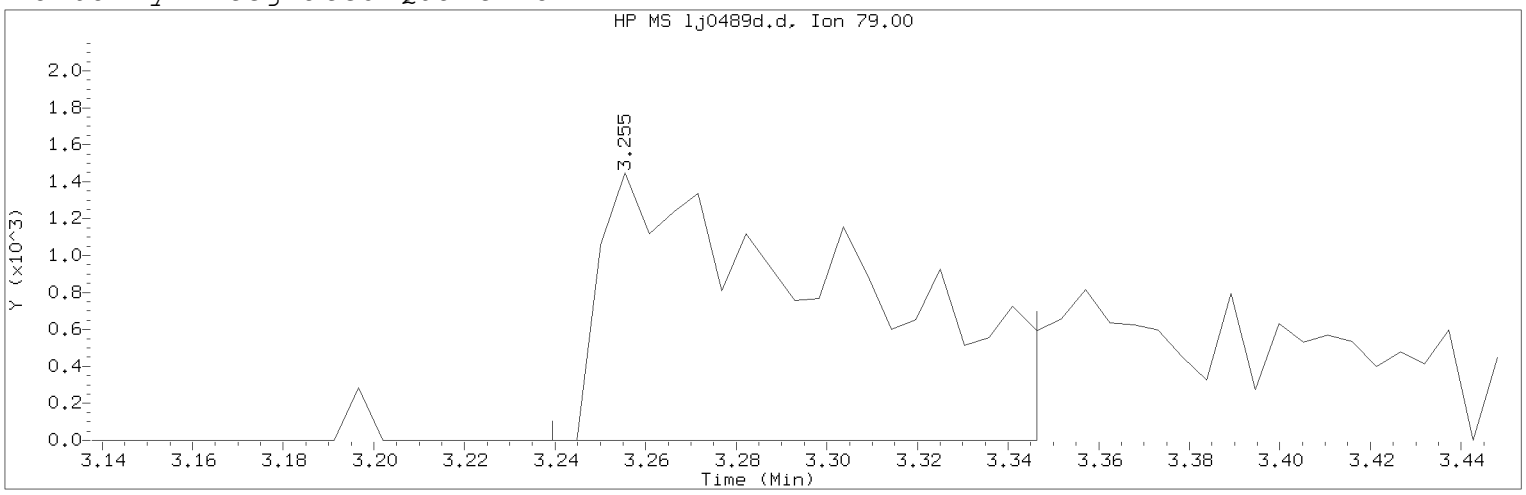
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

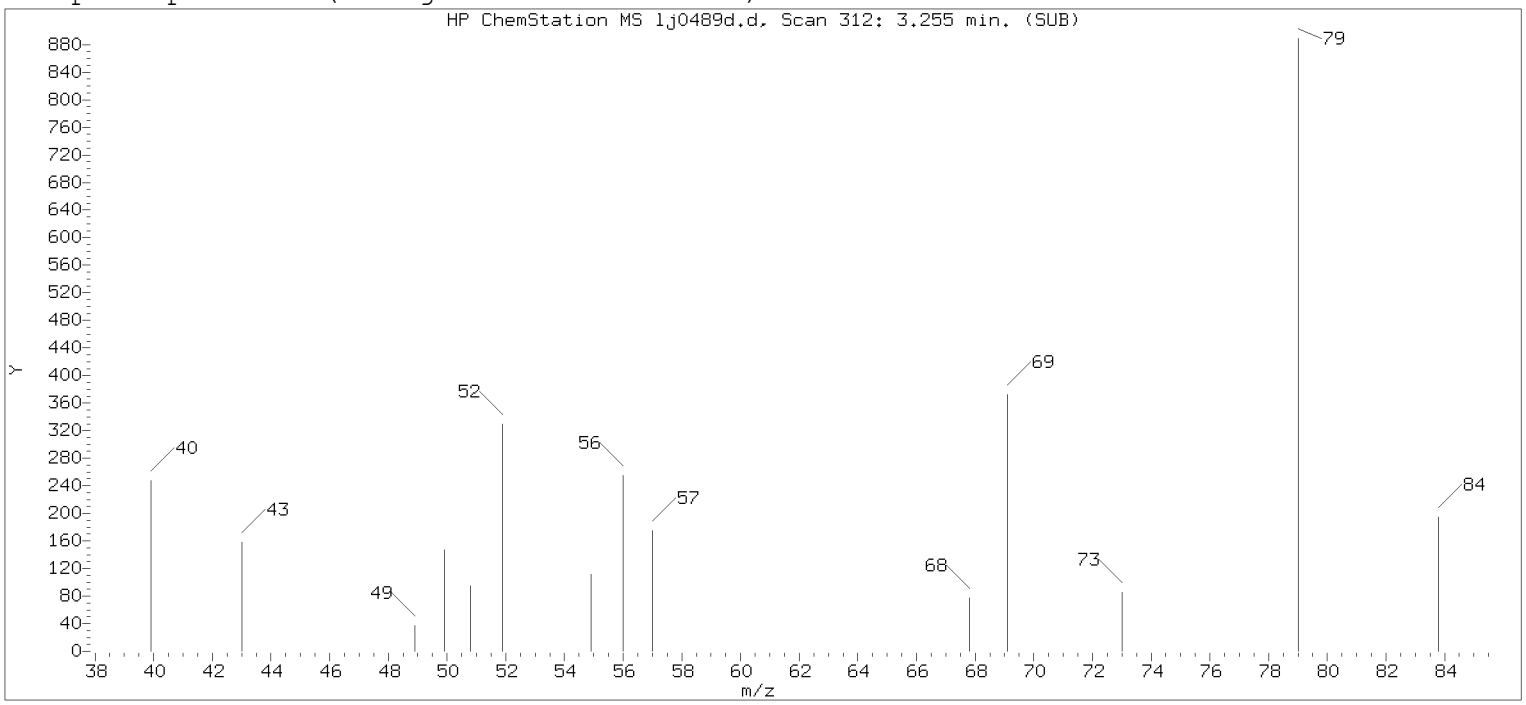
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 312		
Retention Time (minutes)	: 3.255		
Quant Ion	: 79.00		
Area (flag)	: 5524M		
On-Column Amount (ng/ul)	: 0.0859		
Integration start scan	: 308	Integration stop scan:	328
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

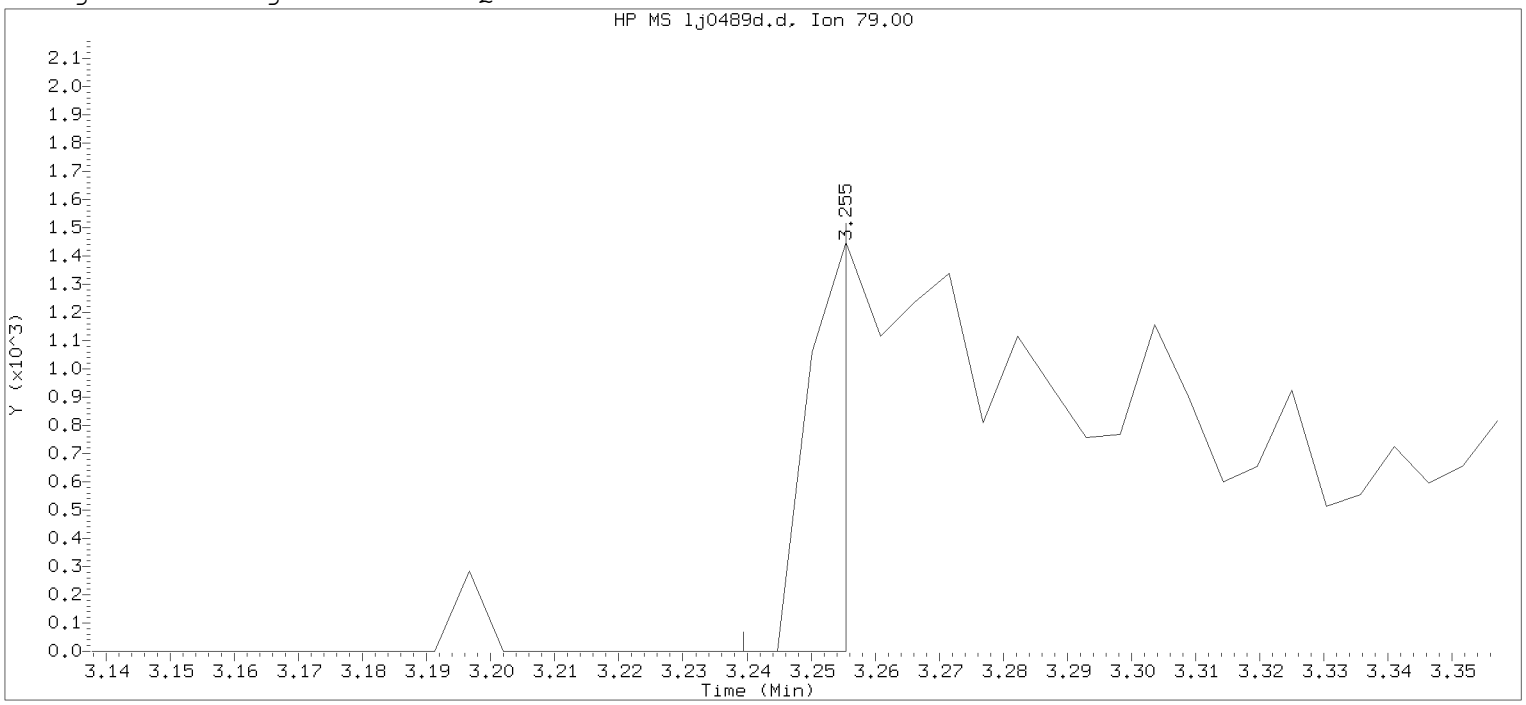
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

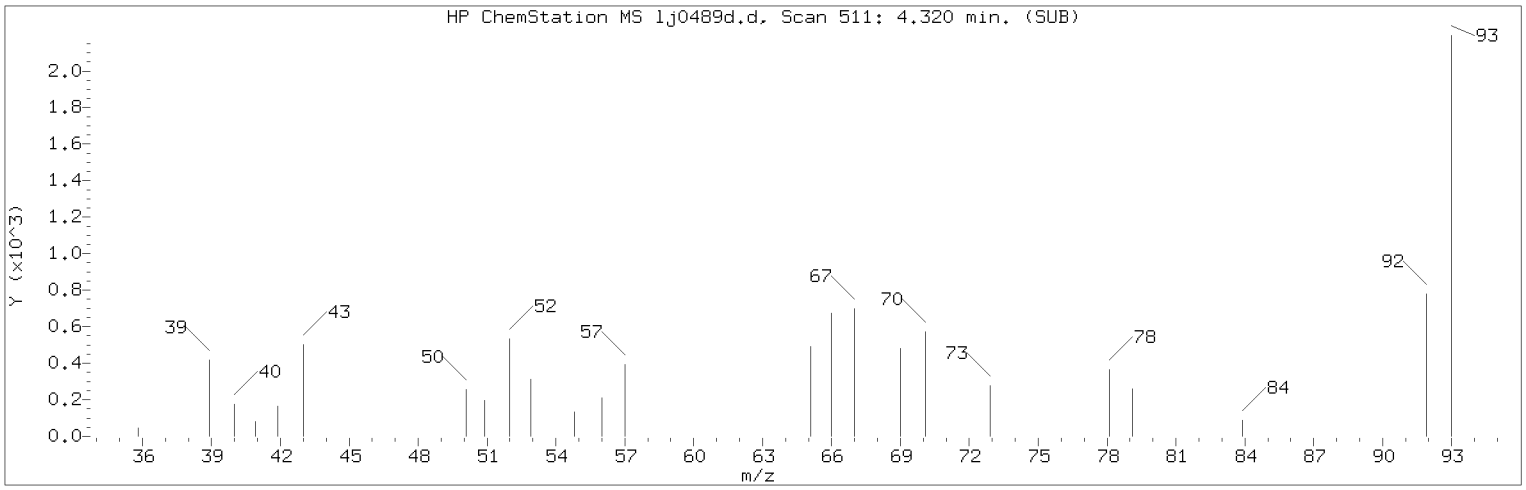
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

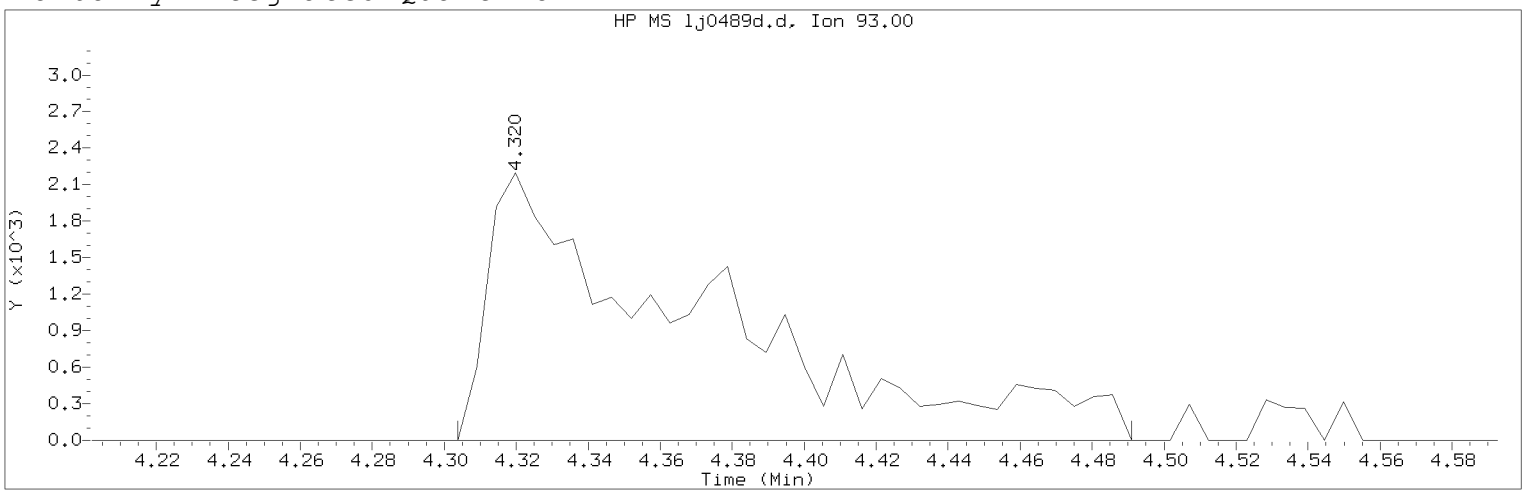
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 312		
Retention Time (minutes)	: 3.255		
Quant Ion	: 79.00		
Area	: 572		
On-column Amount (ng/ul)	: 0.0089		
Integration start scan	: 308	Integration stop scan:	311
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1198

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

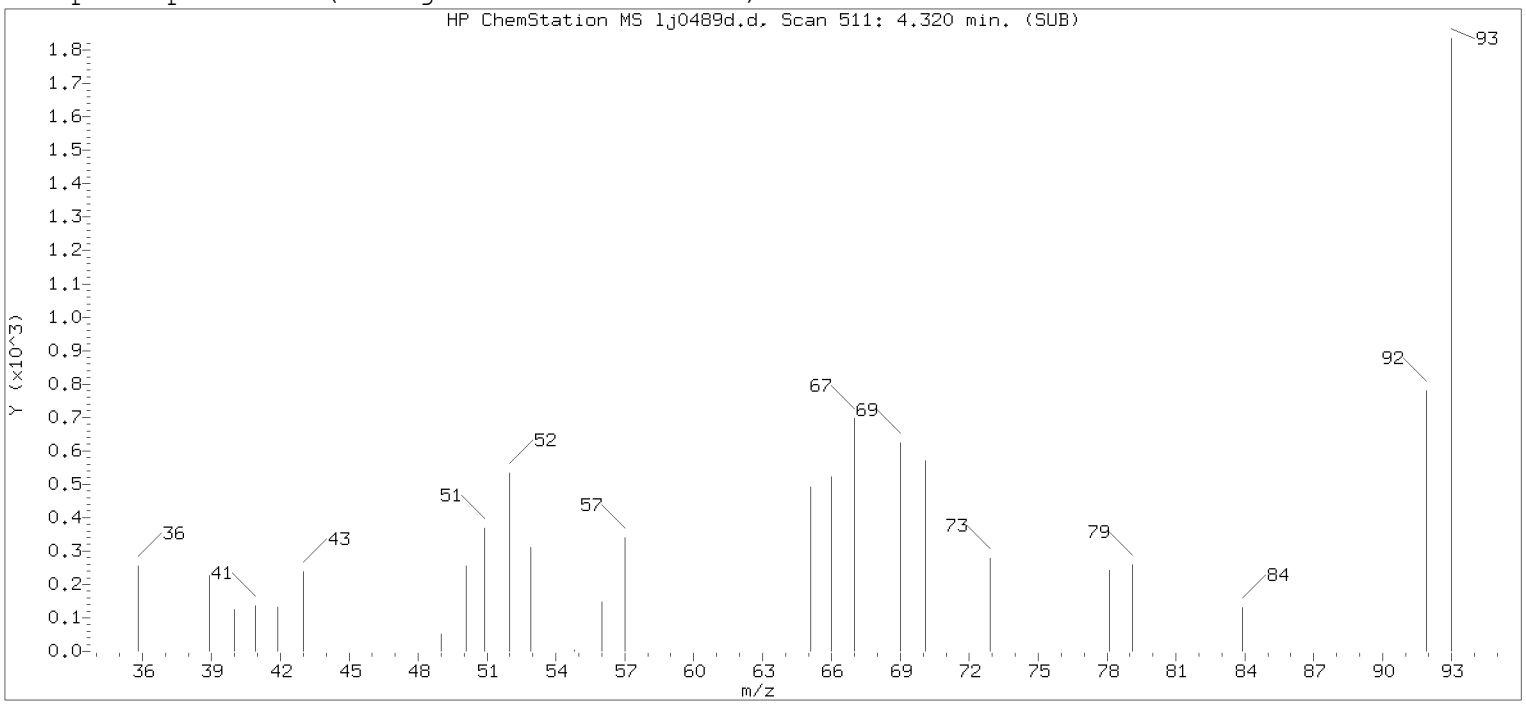
Compound Number : 7
Compound Name : 2-Picoline
Scan Number : 511
Retention Time (minutes) : 4.320
Quant Ion : 93.00
Area (flag) : 9024M
On-Column Amount (ng/ul) : 0.1301
Integration start scan : 507 Integration stop scan: 542
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

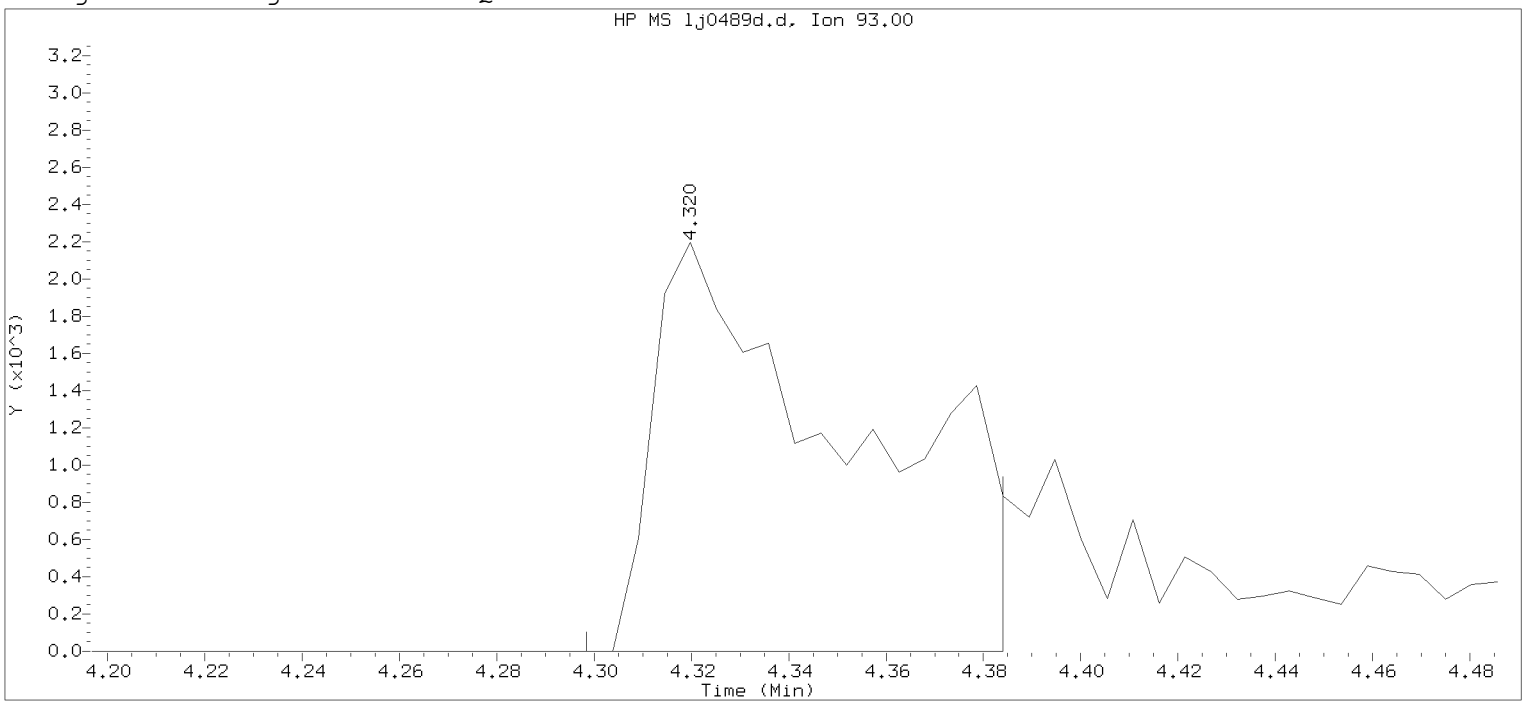
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

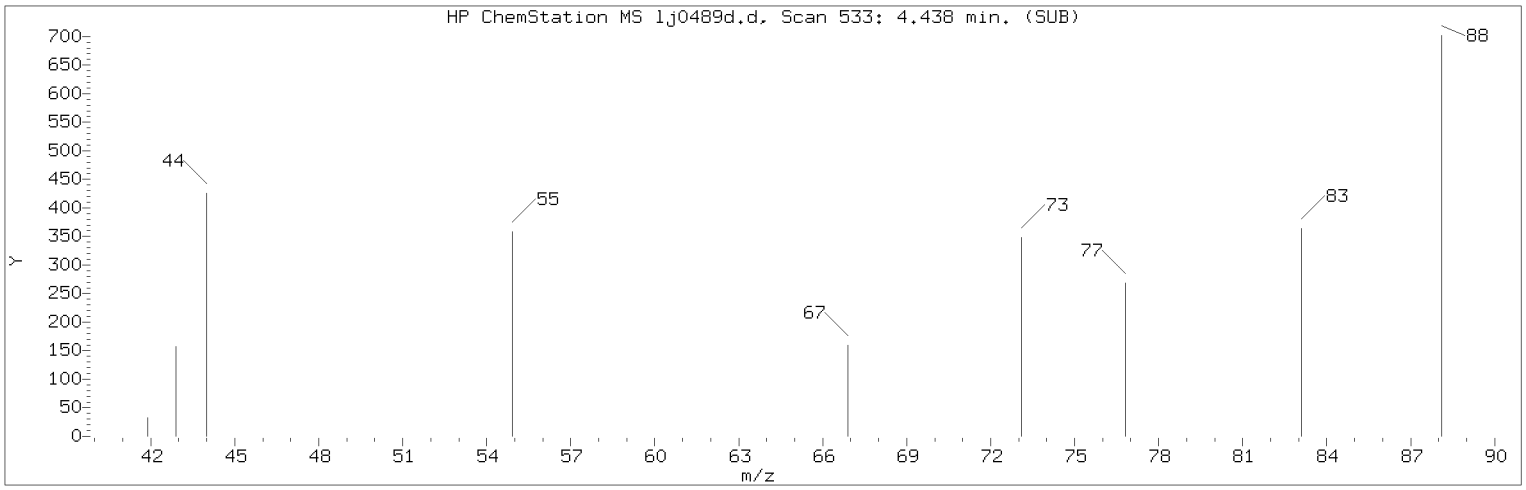
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

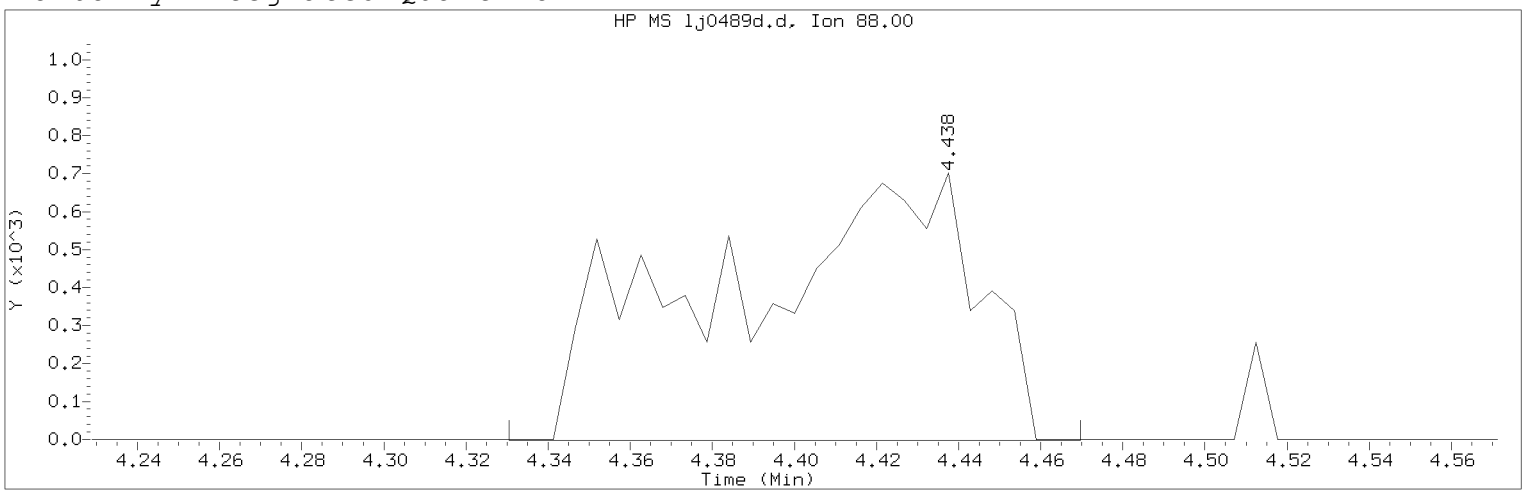
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 511		
Retention Time (minutes)	: 4.320		
Quant Ion	: 93.00		
Area	: 6233		
On-column Amount (ng/ul)	: 0.0897		
Integration start scan	: 506	Integration stop scan:	522
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

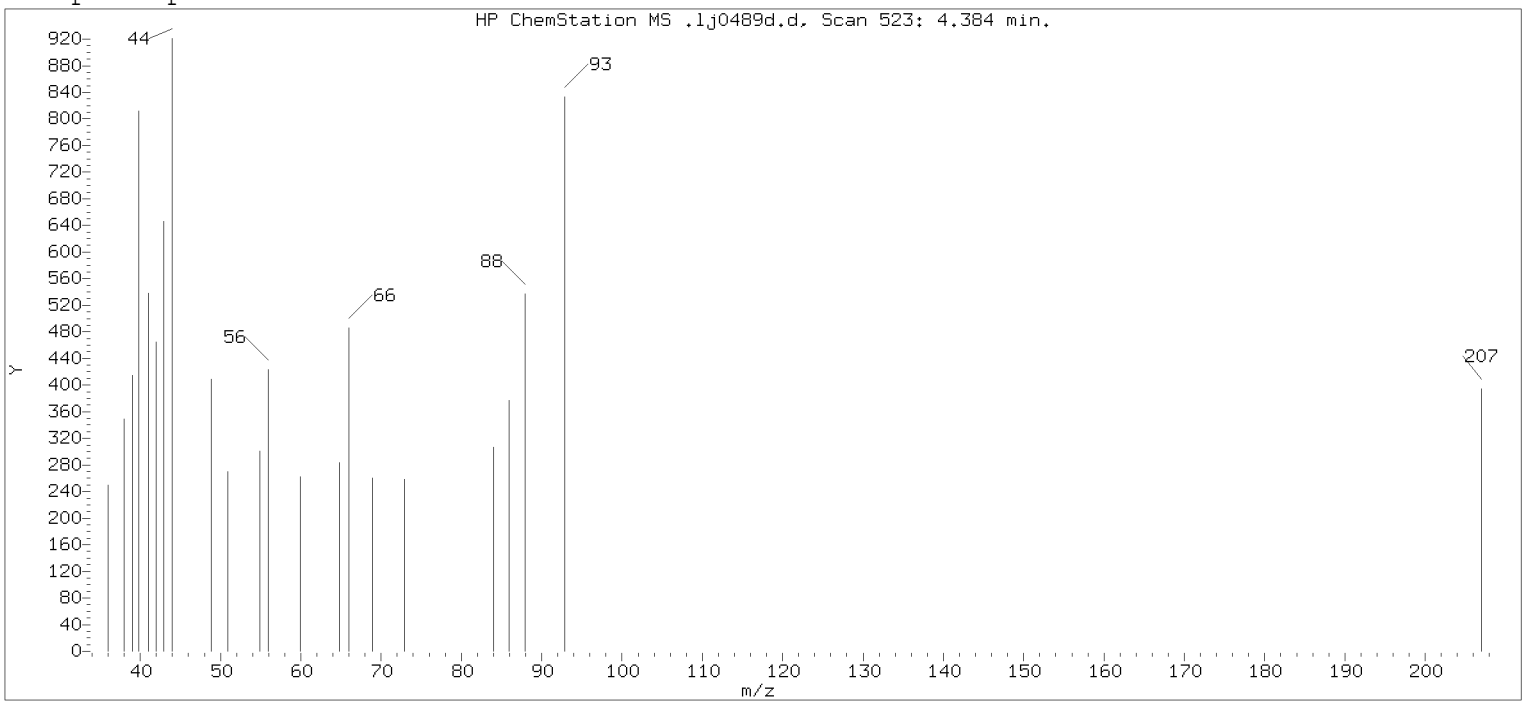
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 533
Retention Time (minutes) : 4.438
Quant Ion : 88.00
Area (flag) : 2997M
On-Column Amount (ng/ul) : 0.1050
Integration start scan : 512 Integration stop scan: 538
Y at integration start : -2 Y at integration end: -2

Reason for manual integration: missed peak

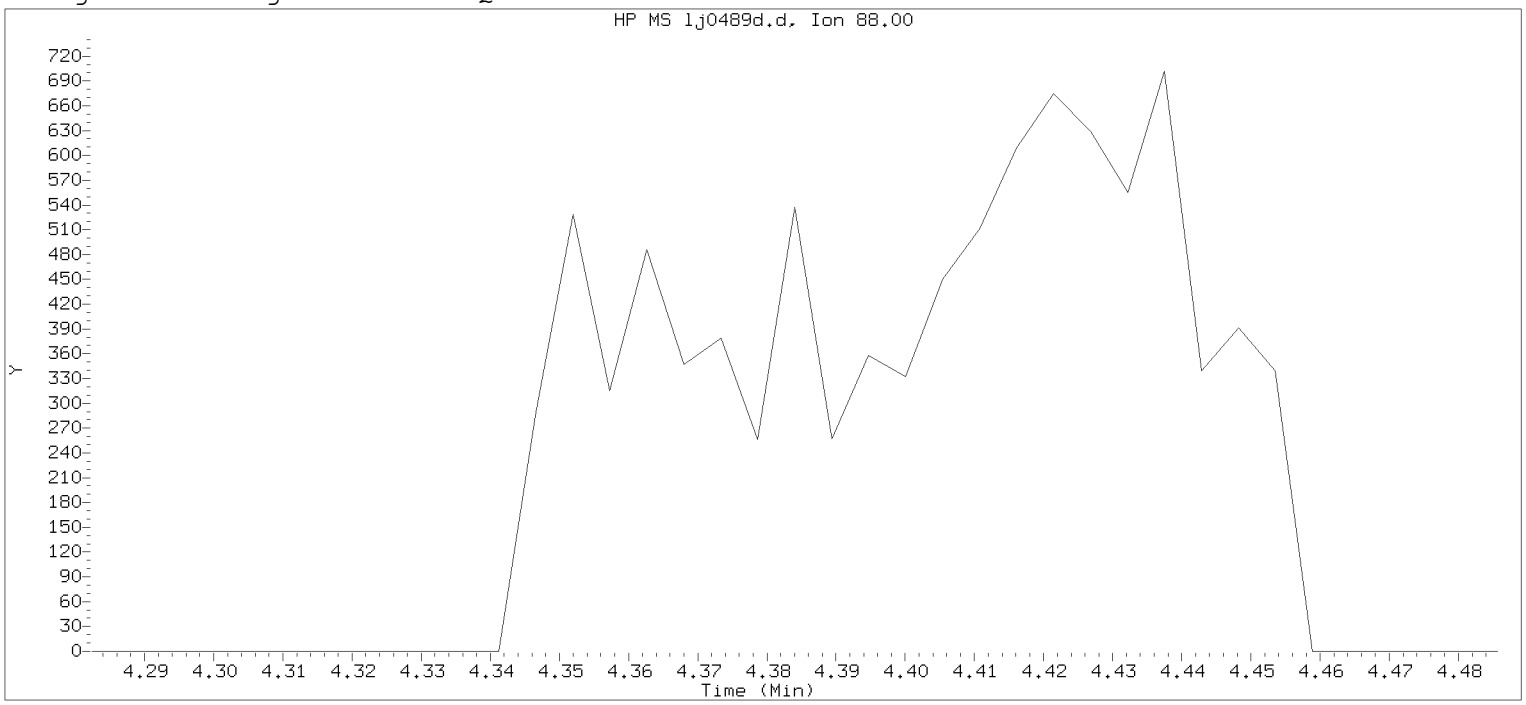
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

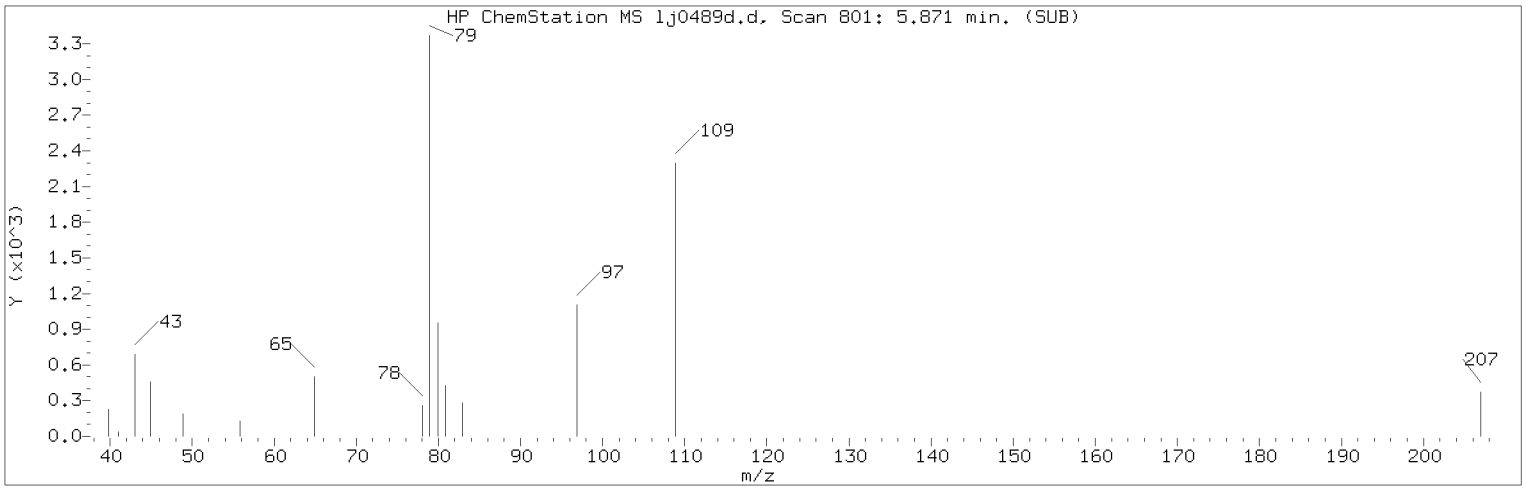
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

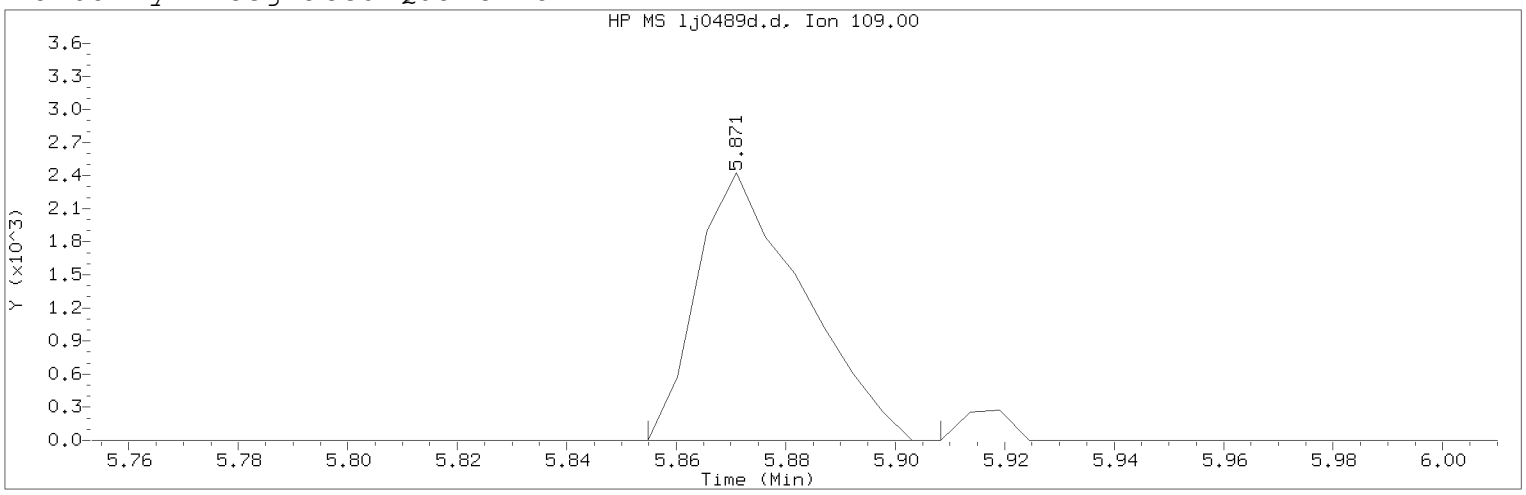
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.384
Quant Ion : 88.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

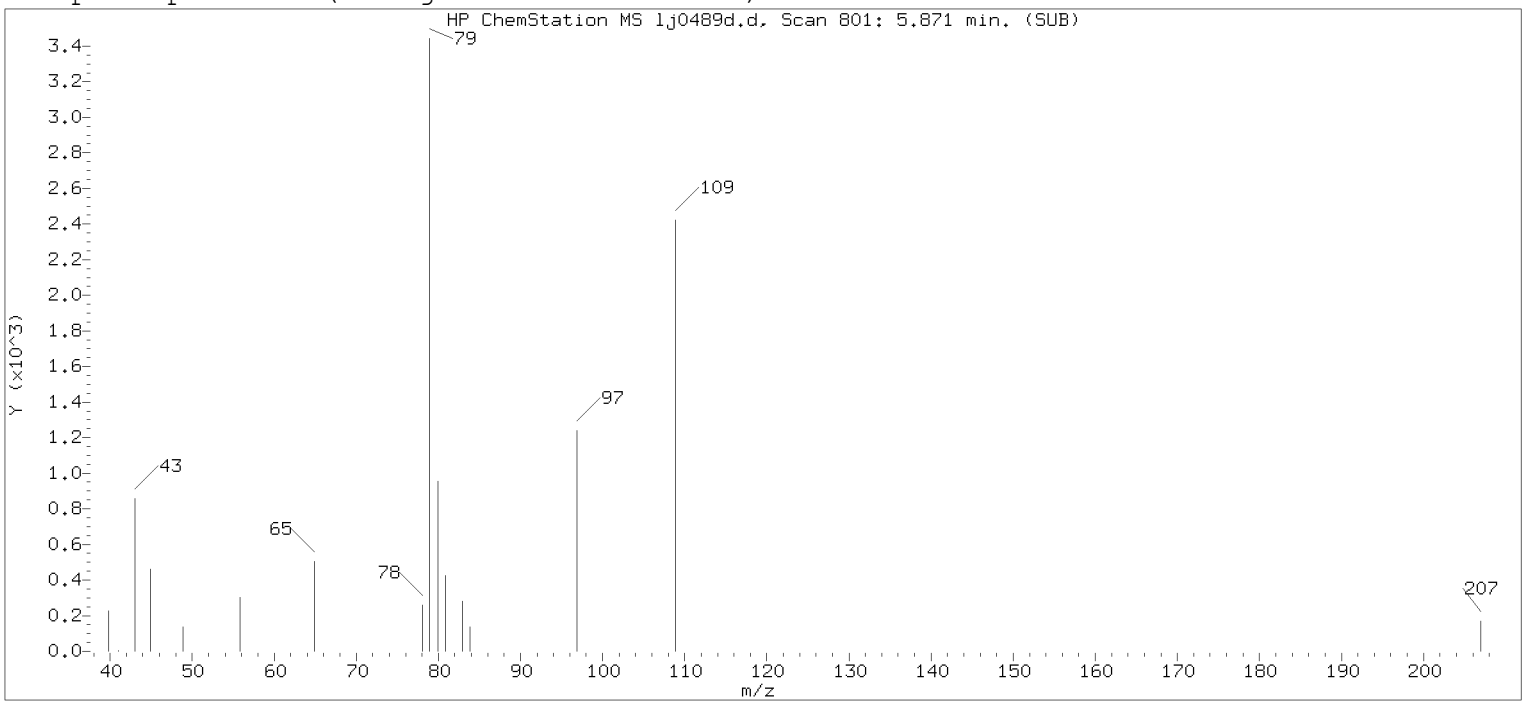
Compound Number : 15
Compound Name : Ethyl methanesulfonate
Scan Number : 801
Retention Time (minutes) : 5.871
Quant Ion : 109.00
Area (flag) : 3256M
On-Column Amount (ng/ul) : 0.1163
Integration start scan : 797 Integration stop scan: 807
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

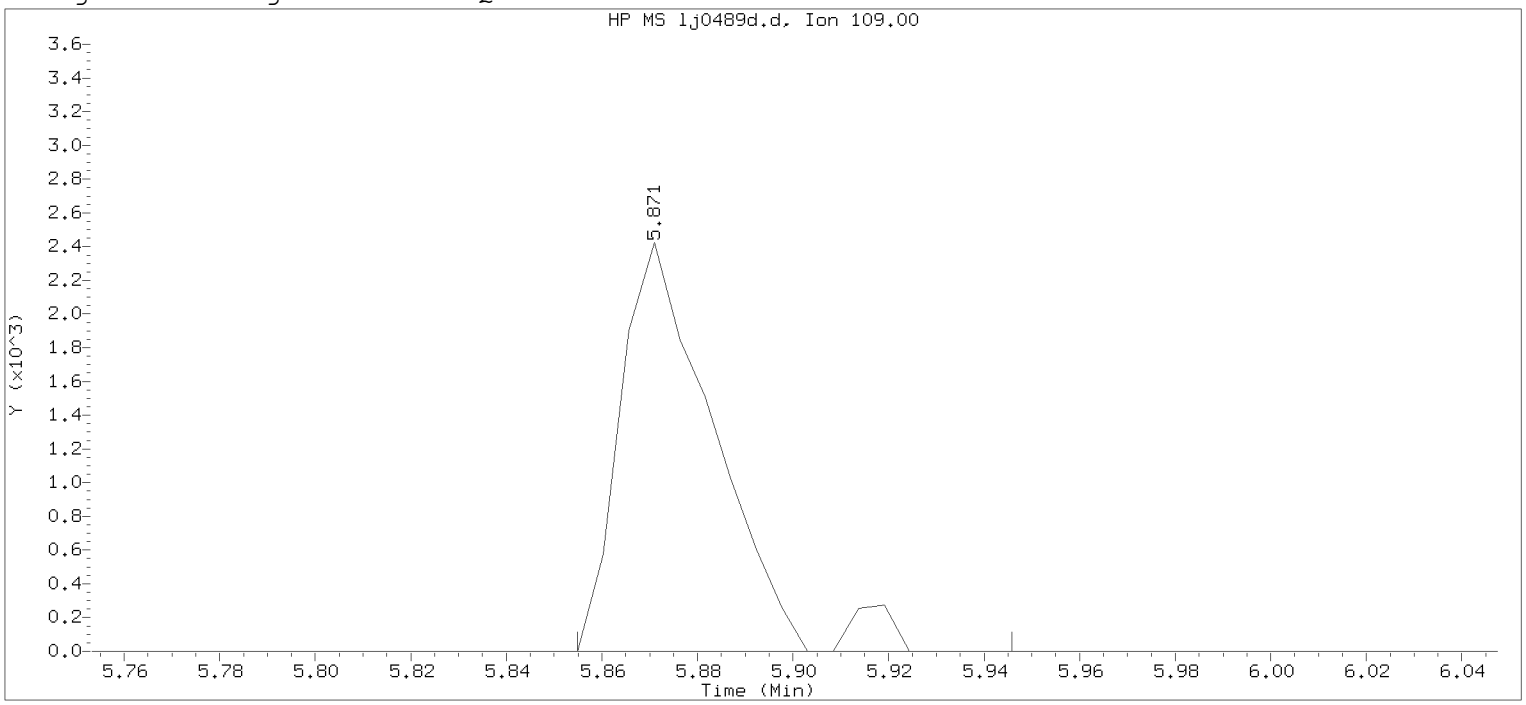
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

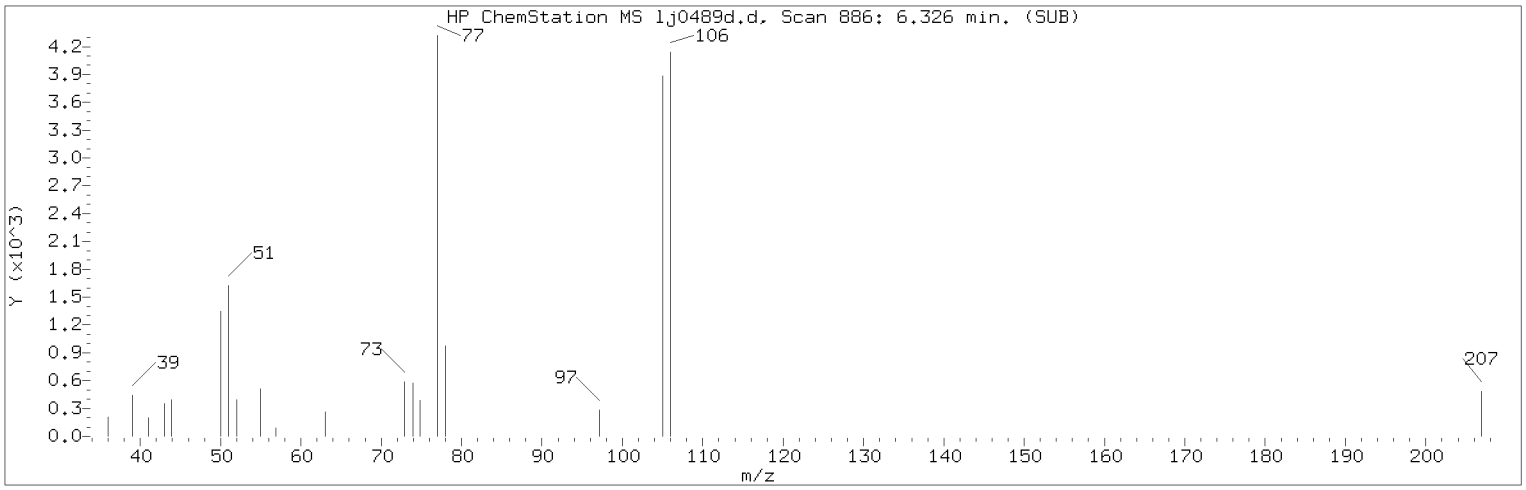
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

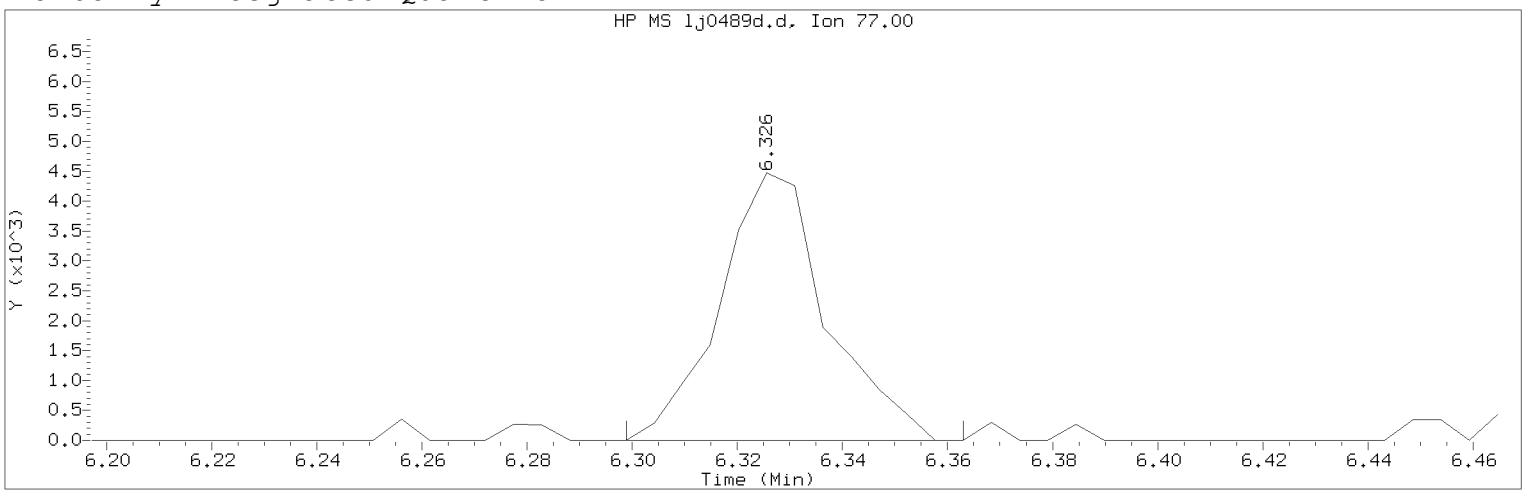
Compound Number	: 15		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 801		
Retention Time (minutes)	: 5.871		
Quant Ion	: 109.00		
Area	: 3425		
On-column Amount (ng/ul)	: 0.1216		
Integration start scan	: 797	Integration stop scan:	814
Y at integration start	: 0	Y at integration end:	0

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Target 3.5 esignature user ID: 1204

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

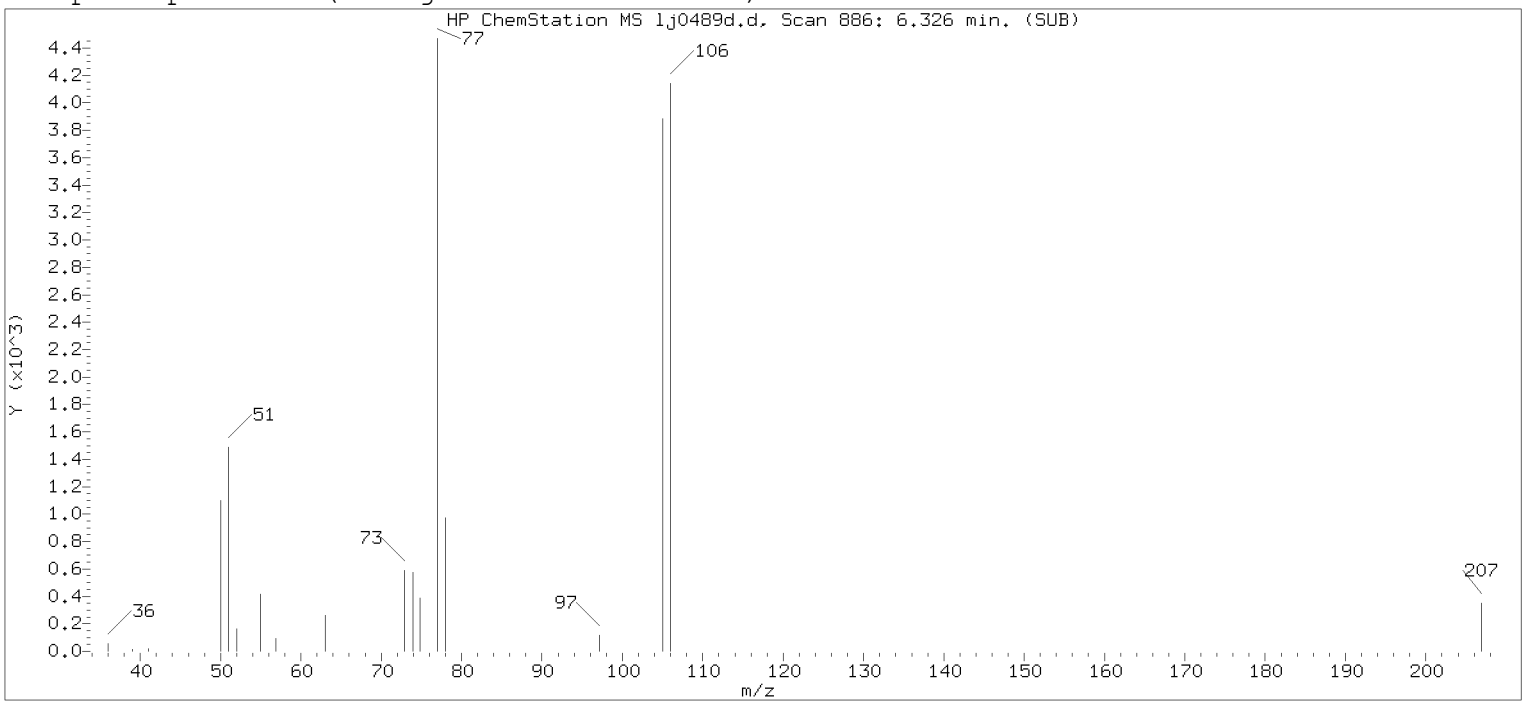
Compound Number	: 16		
Compound Name	: Benzaldehyde		
Scan Number	: 886		
Retention Time (minutes)	: 6.326		
Quant Ion	: 77.00		
Area (flag)	: 6303M		
On-Column Amount (ng/ul)	: 0.1180		
Integration start scan	: 880	Integration stop scan:	892
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

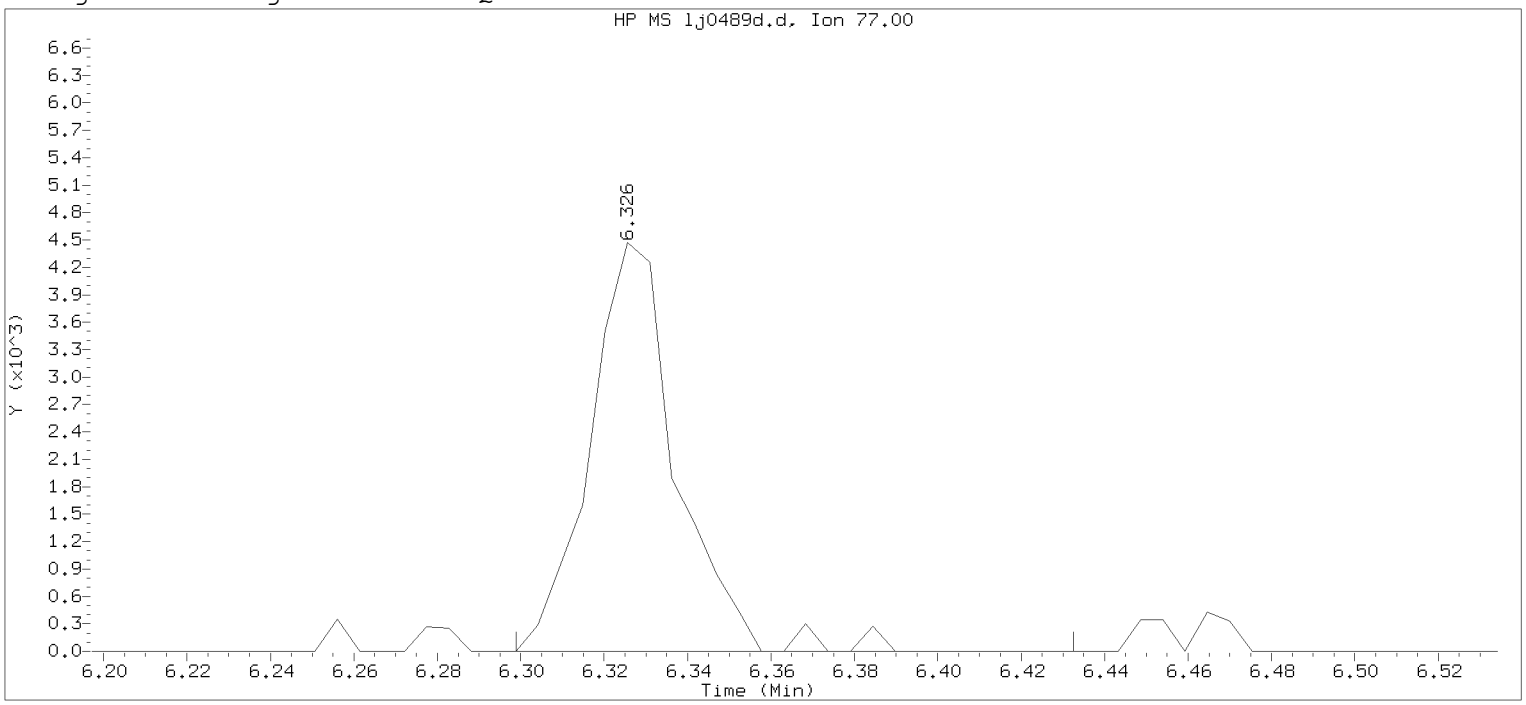
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

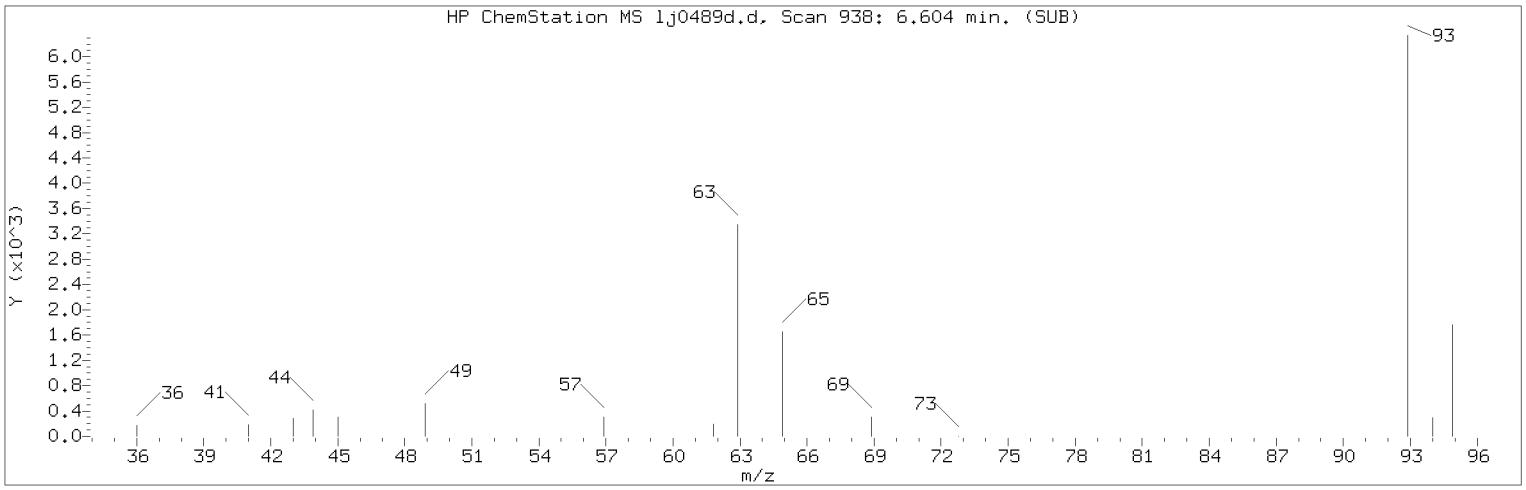
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

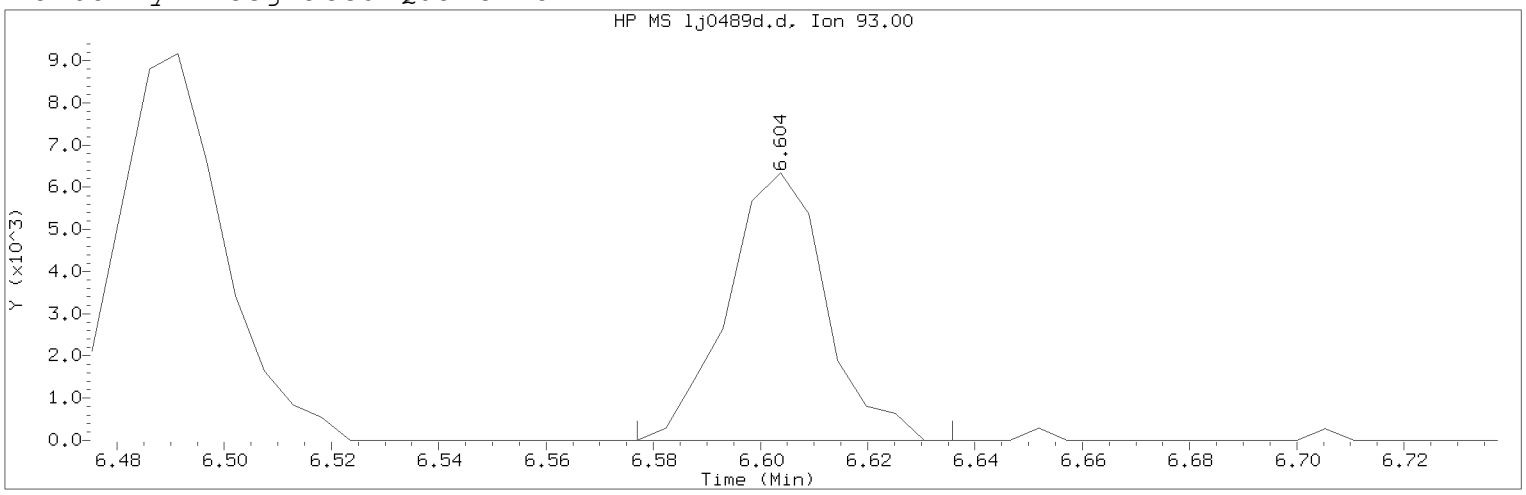
Compound Number	: 16		
Compound Name	: Benzaldehyde		
Scan Number	: 886		
Retention Time (minutes)	: 6.326		
Quant Ion	: 77.00		
Area	: 6486		
On-column Amount (ng/ul)	: 0.1195		
Integration start scan	: 880	Integration stop scan:	905
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1206

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

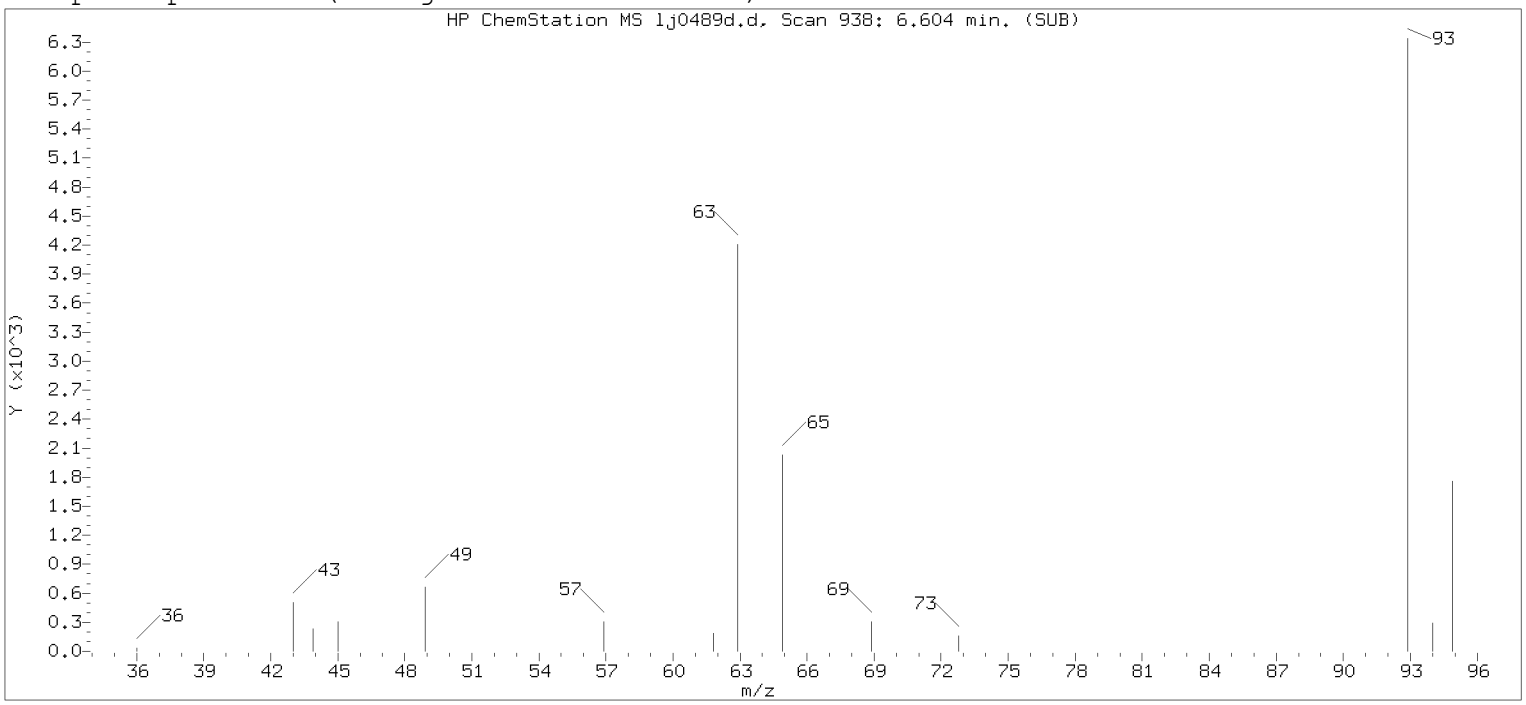
Compound Number : 22
Compound Name : bis(2-Chloroethyl)ether
Scan Number : 938
Retention Time (minutes) : 6.604
Quant Ion : 93.00
Area (flag) : 8049M
On-Column Amount (ng/ul) : 0.1333
Integration start scan : 932 Integration stop scan: 943
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

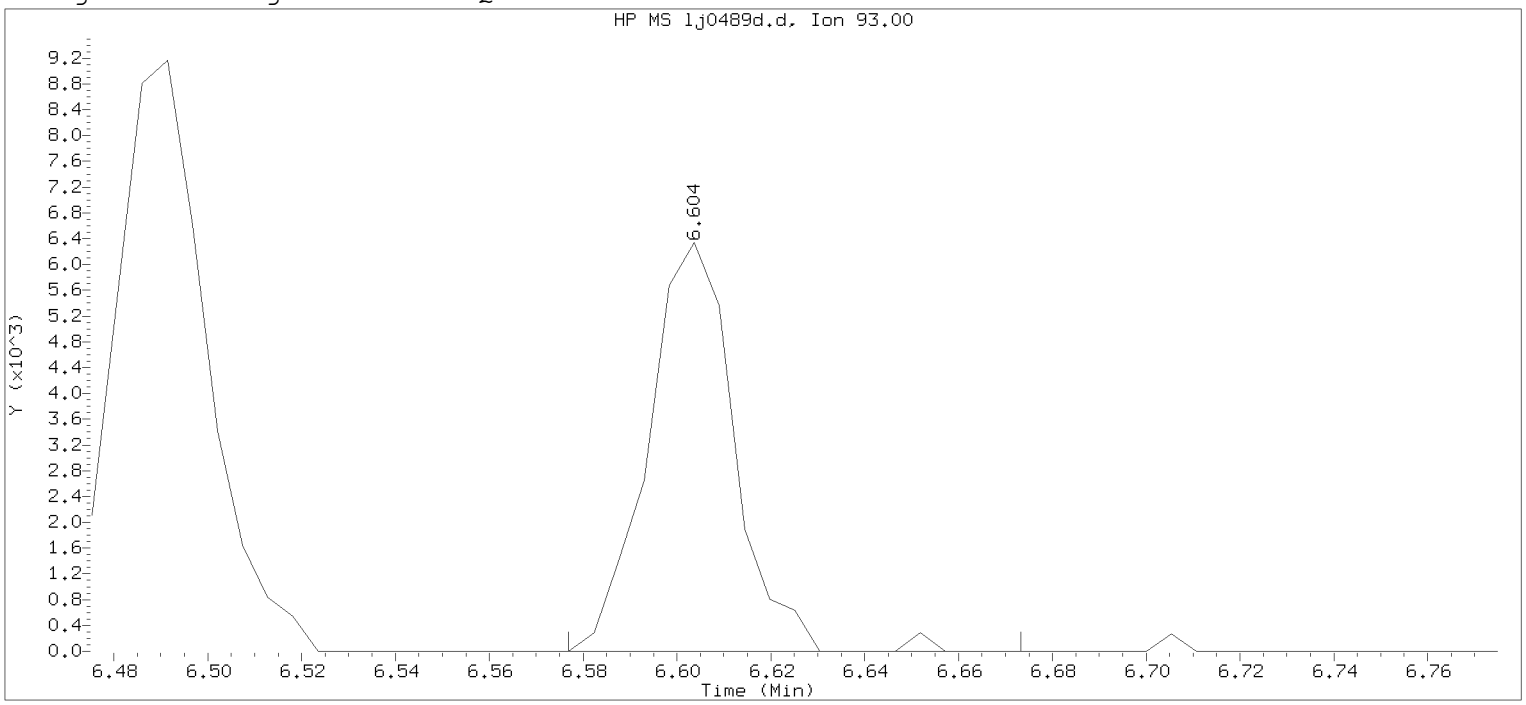
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

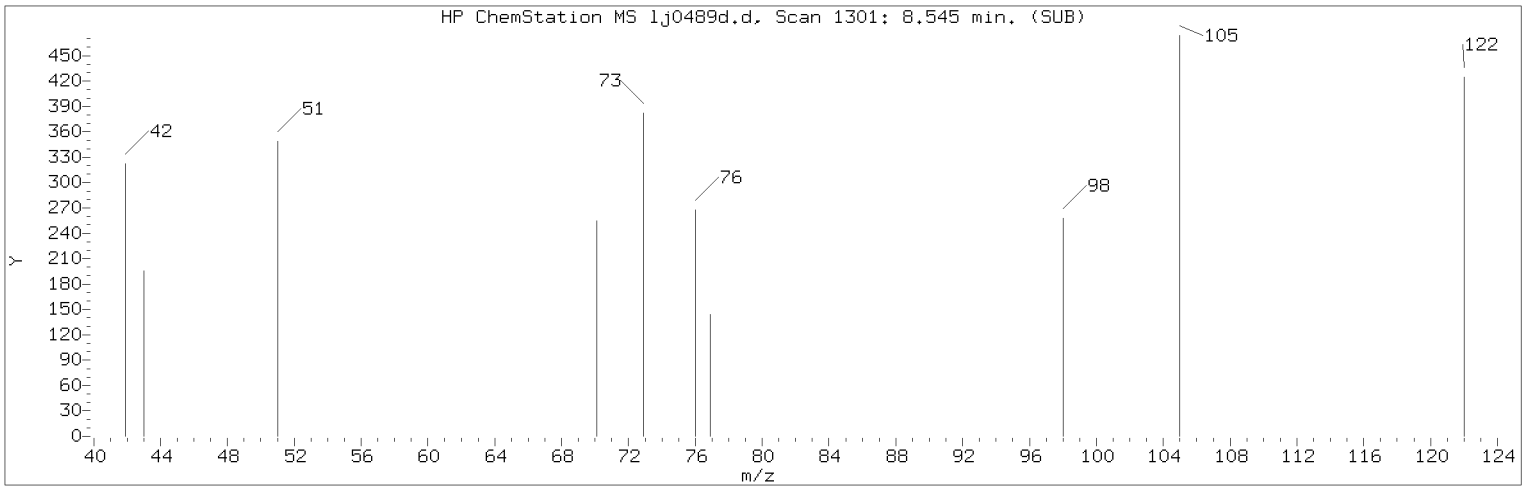
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

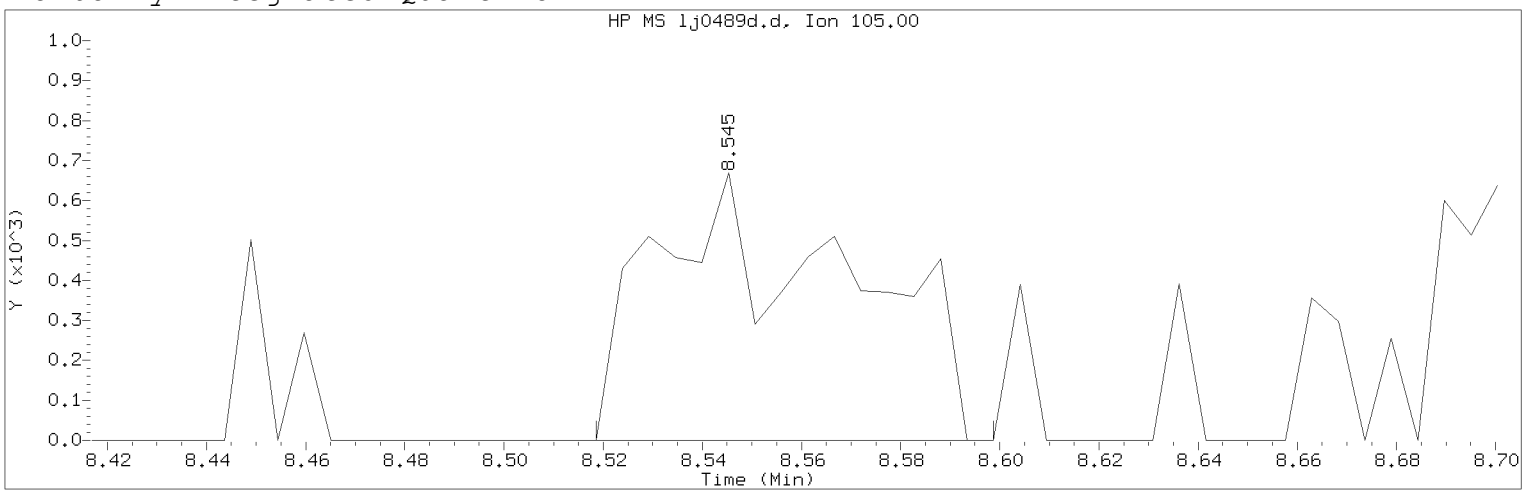
Compound Number	: 22		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 938		
Retention Time (minutes)	: 6.604		
Quant Ion	: 93.00		
Area	: 8141		
On-column Amount (ng/ul)	: 0.1336		
Integration start scan	: 932	Integration stop scan:	950
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

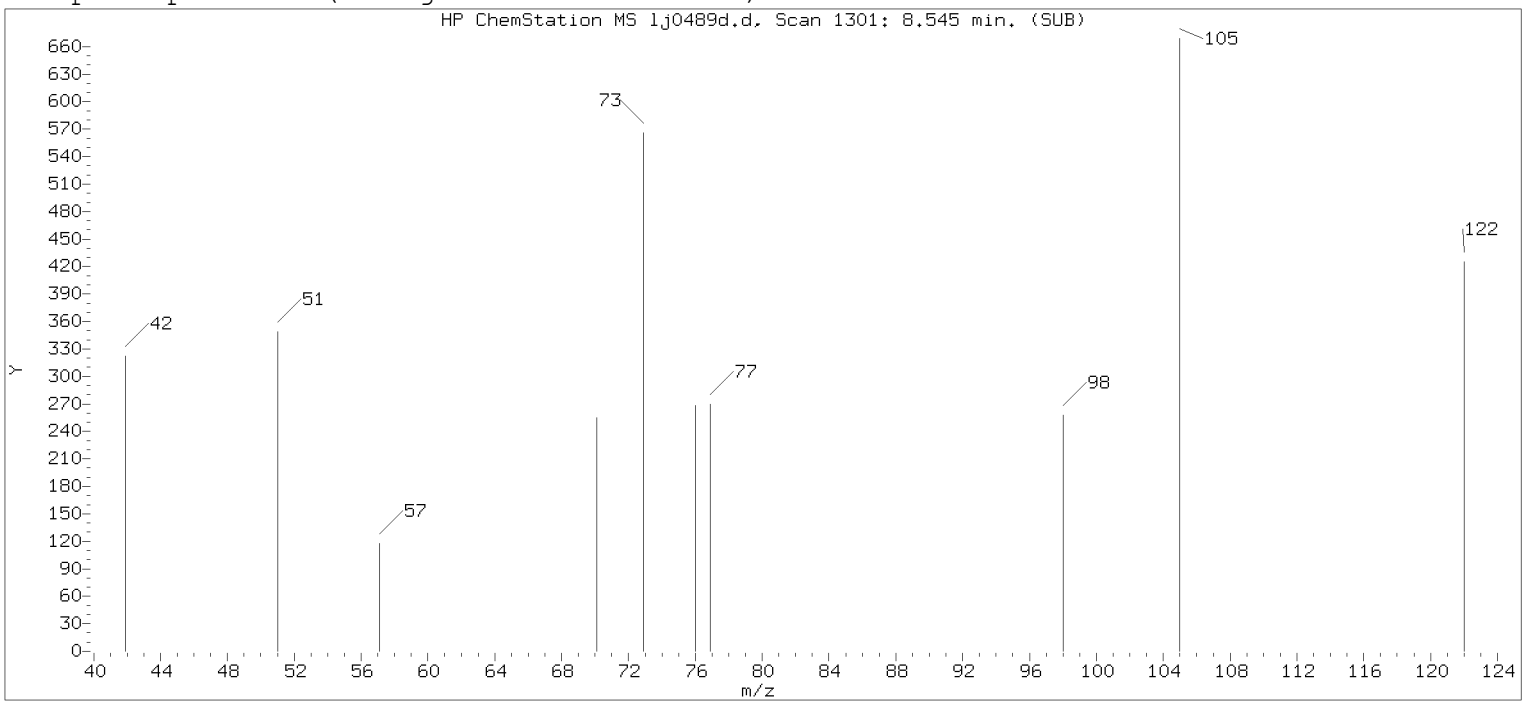
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1301
Retention Time (minutes) : 8.545
Quant Ion : 105.00
Area (flag) : 1829M
On-Column Amount (ng/ul) : 3.2118
Integration start scan : 1295 Integration stop scan: 1310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

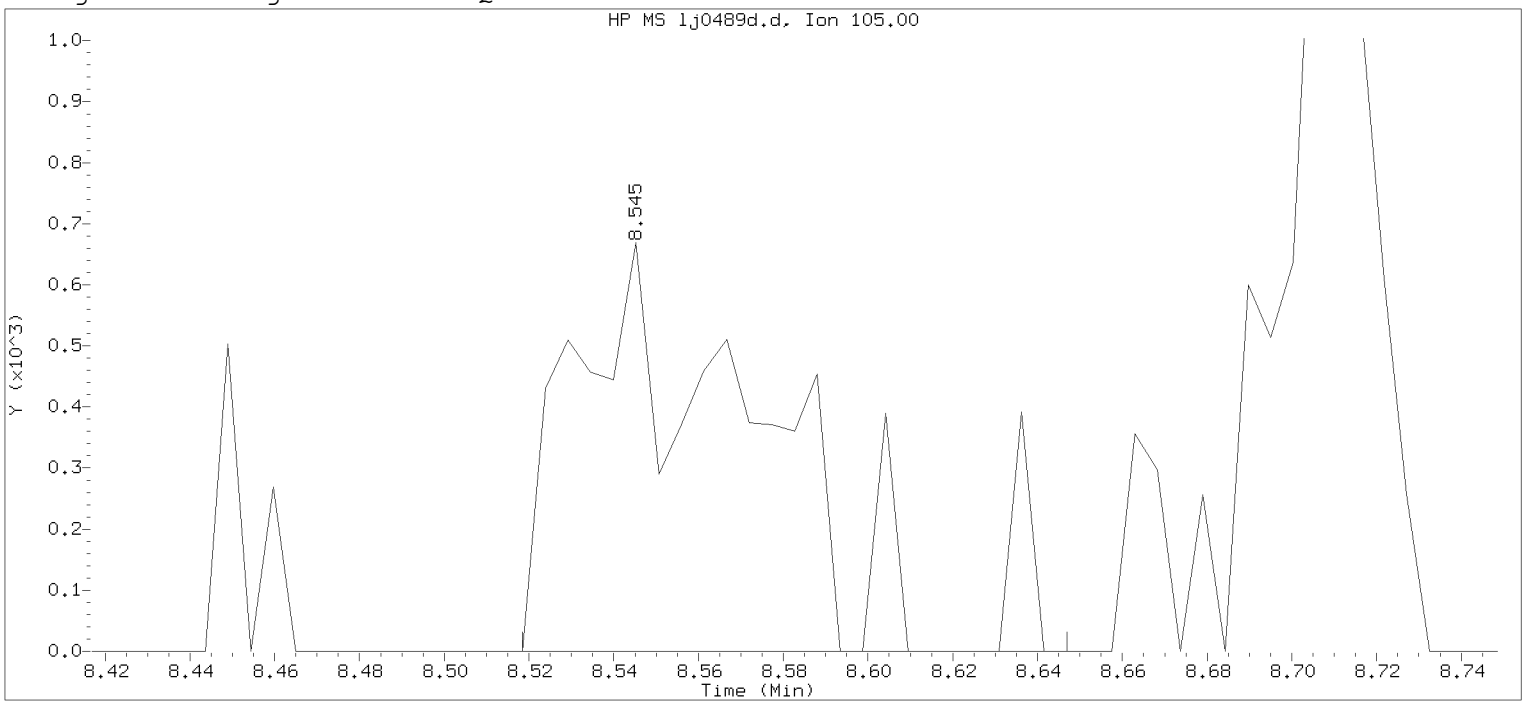
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

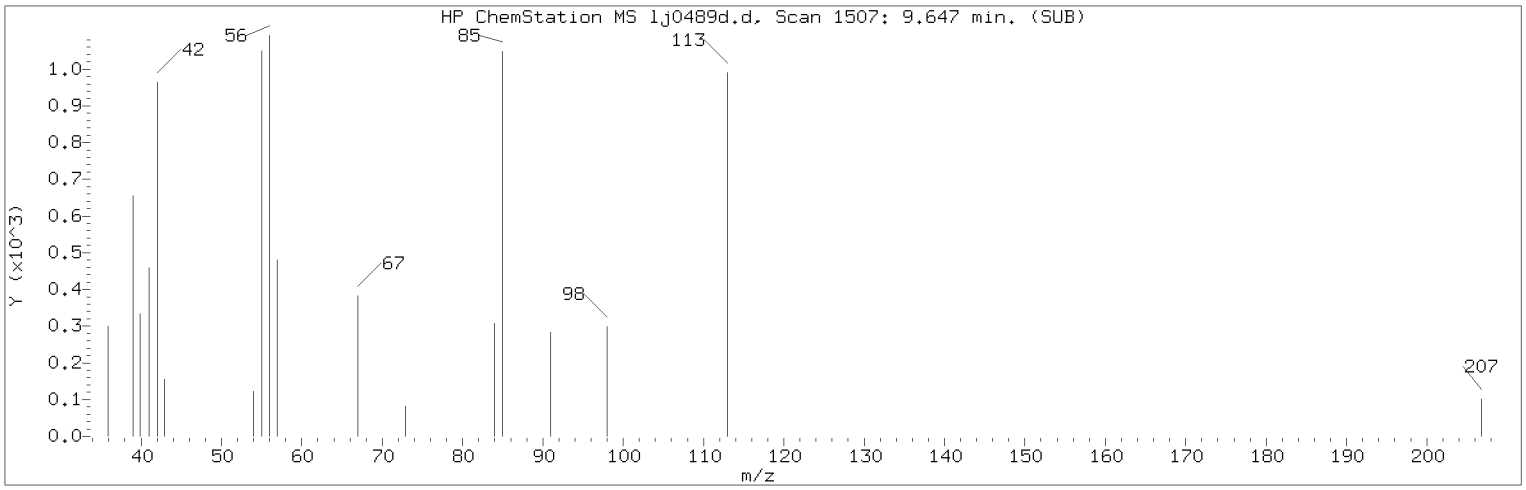
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

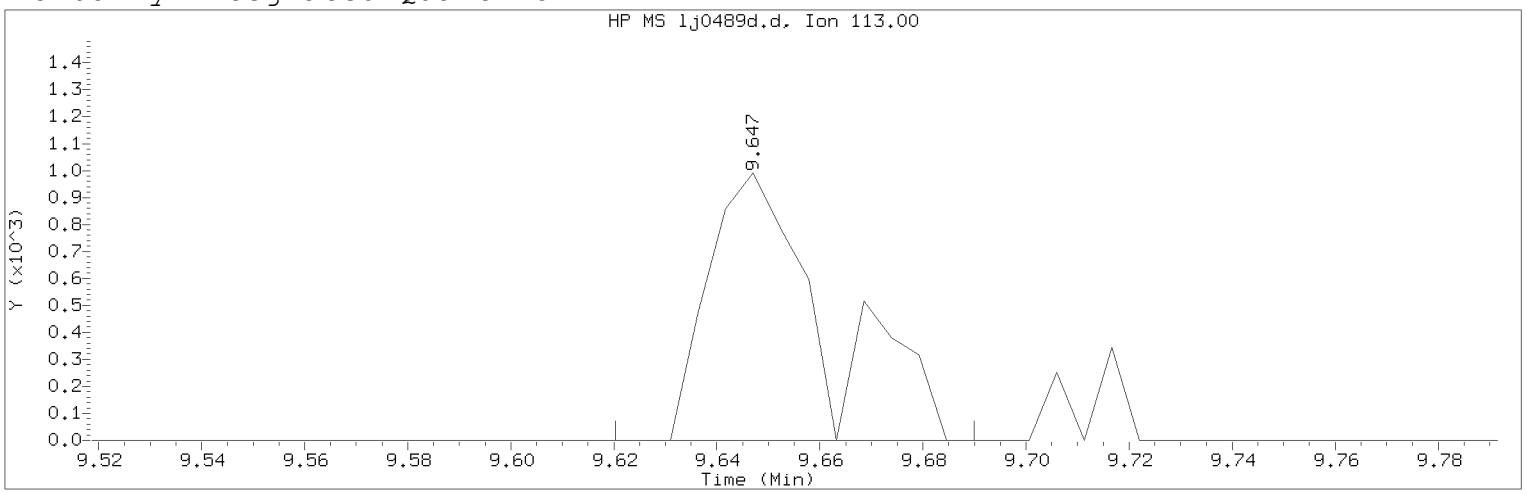
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1301		
Retention Time (minutes)	: 8.545		
Quant Ion	: 105.00		
Area	: 2080		
On-column Amount (ng/ul)	: 0.2940		
Integration start scan	: 1295	Integration stop scan:	1319
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

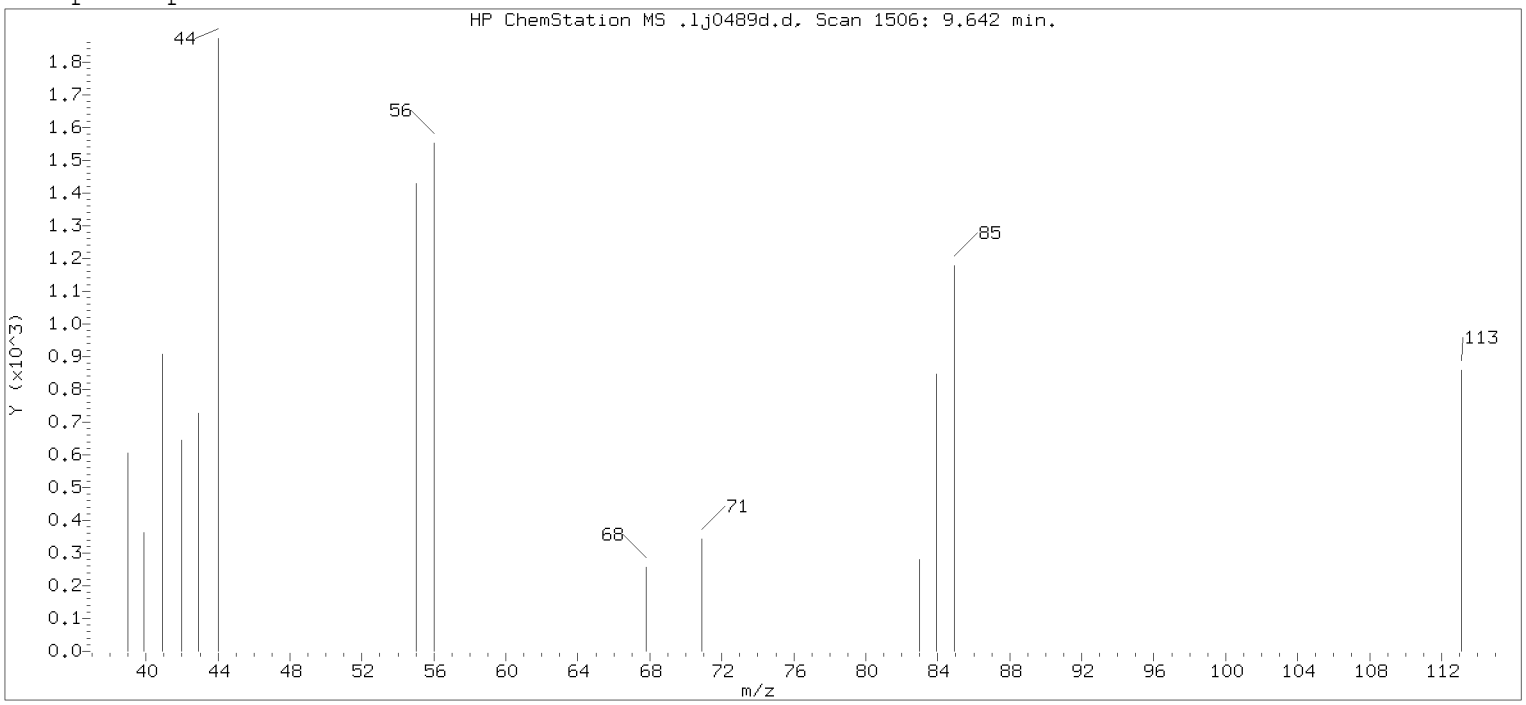
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1507
Retention Time (minutes) : 9.647
Quant Ion : 113.00
Area (flag) : 1578M
On-Column Amount (ng/ul) : 0.1019
Integration start scan : 1501 Integration stop scan: 1514
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

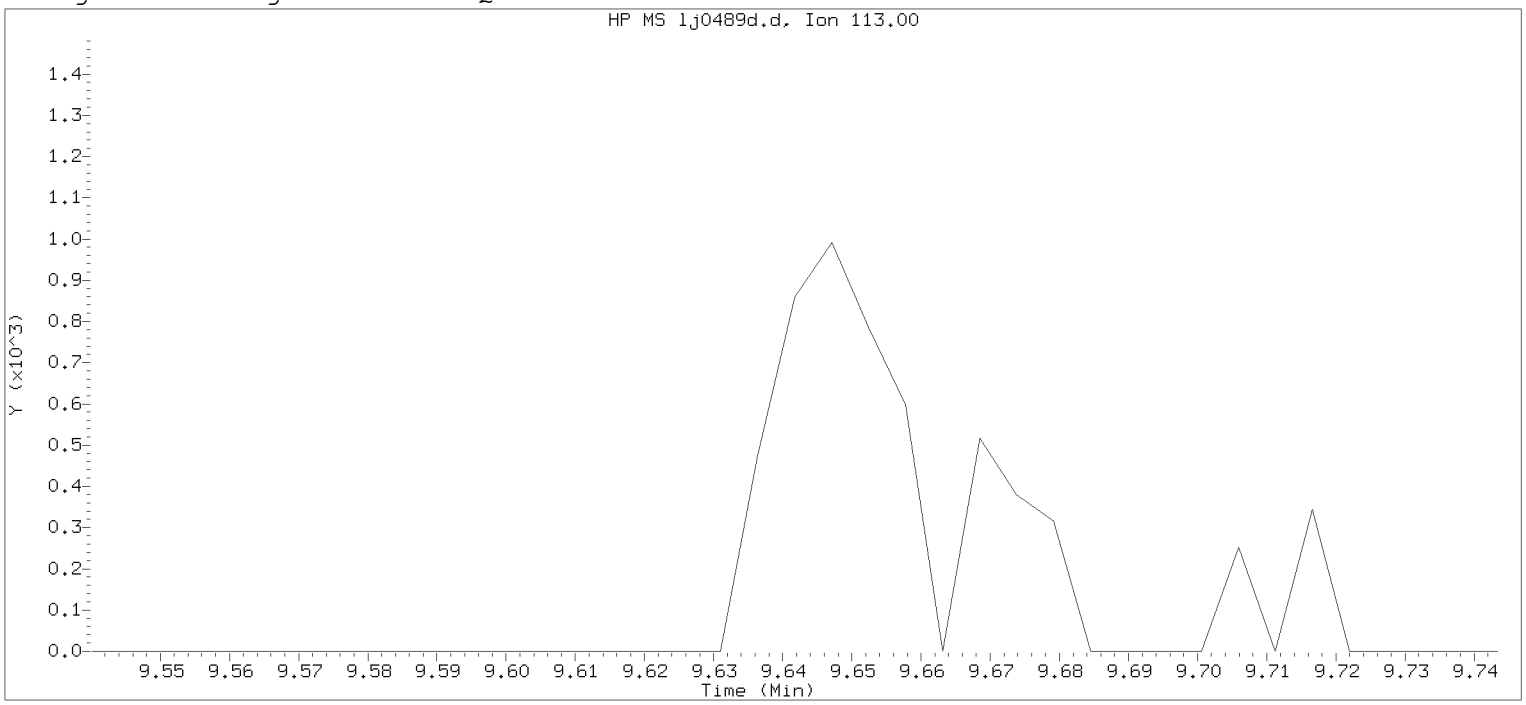
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

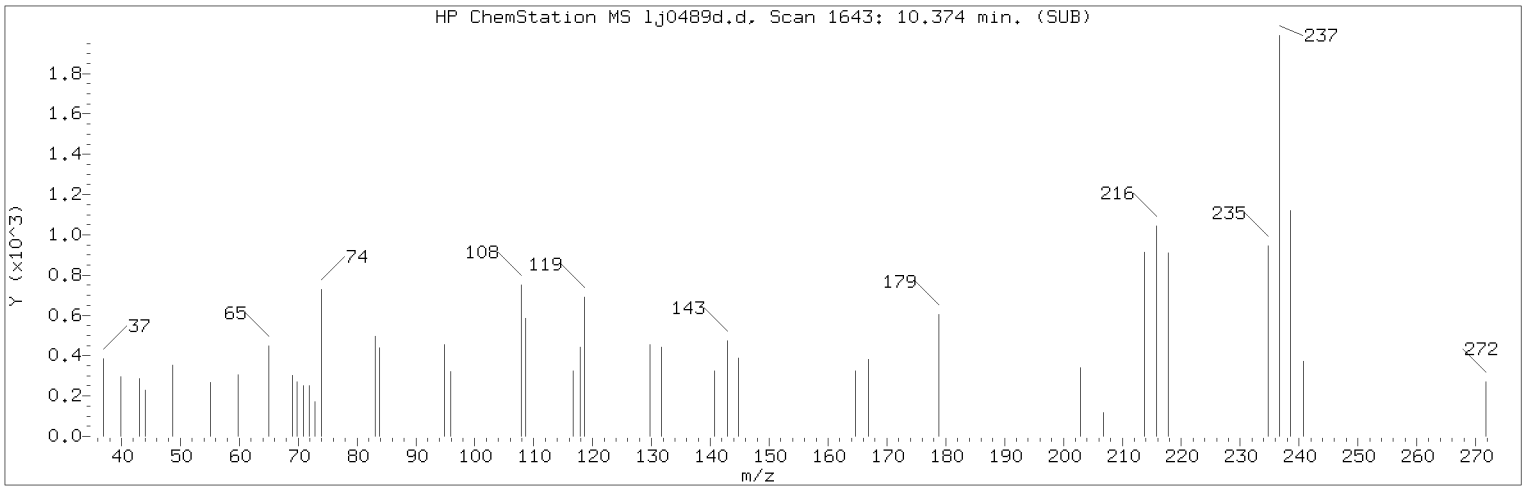
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

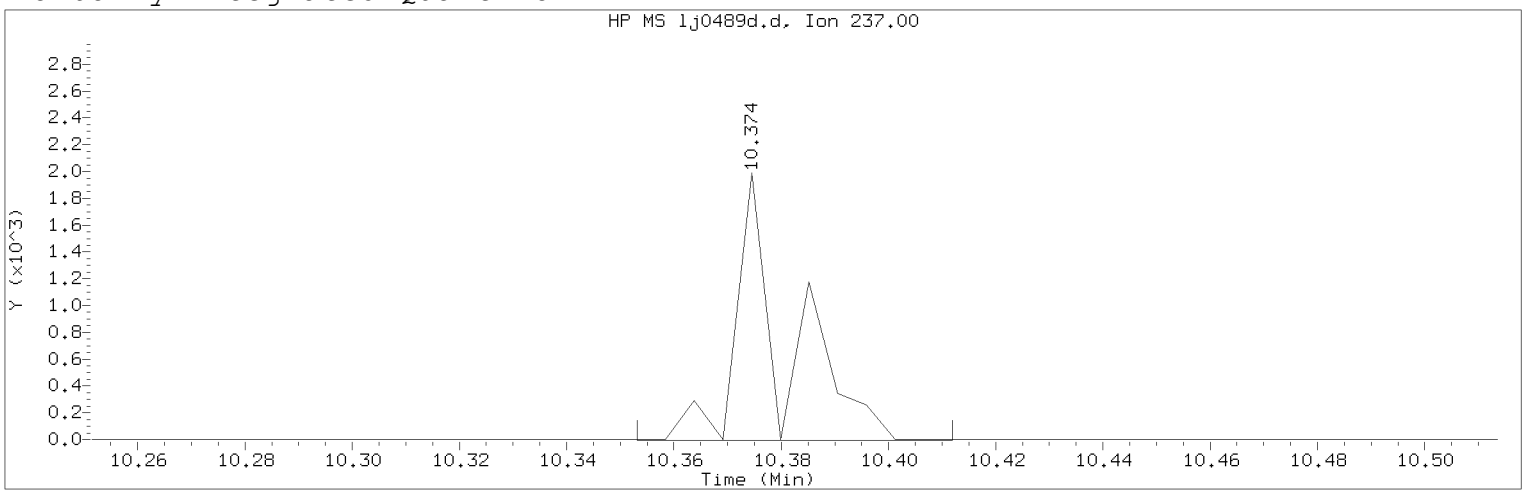
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.642
Quant Ion : 113.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

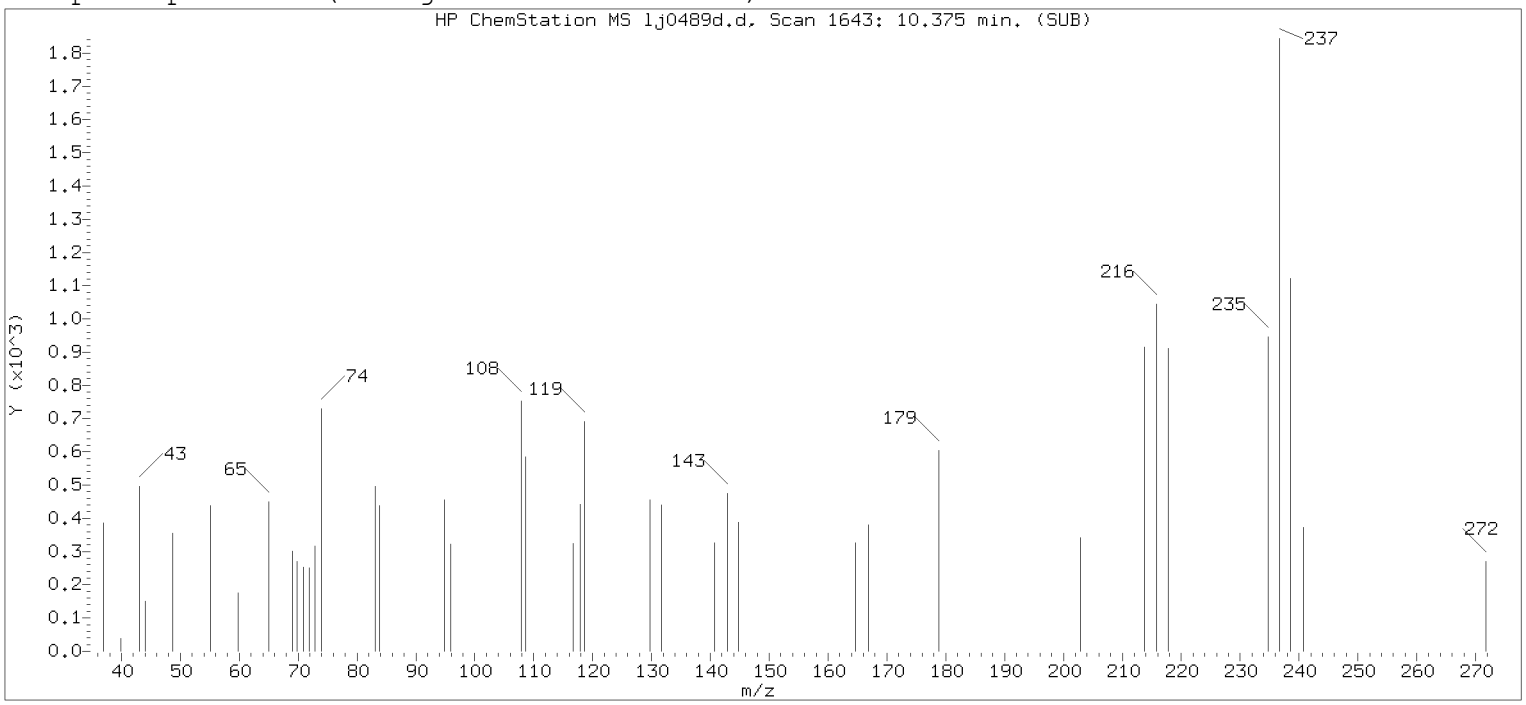
Compound Number : 85
Compound Name : Hexachlorocyclopentadiene
Scan Number : 1643
Retention Time (minutes) : 10.374
Quant Ion : 237.00
Area (flag) : 1321M
On-Column Amount (ng/ul) : 0.0591
Integration start scan : 1638 Integration stop scan: 1649
Y at integration start : -5 Y at integration end: -5

Reason for manual integration: improper integration

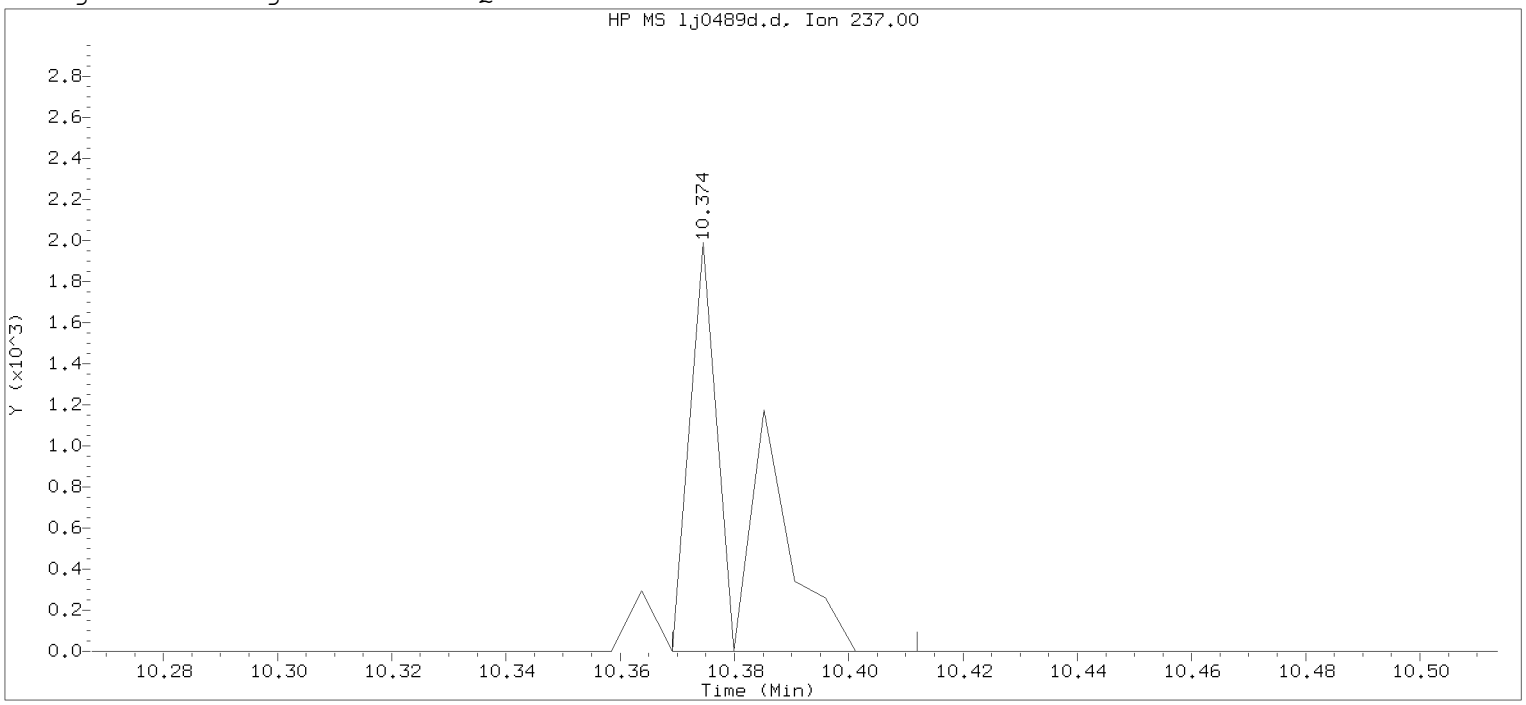
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

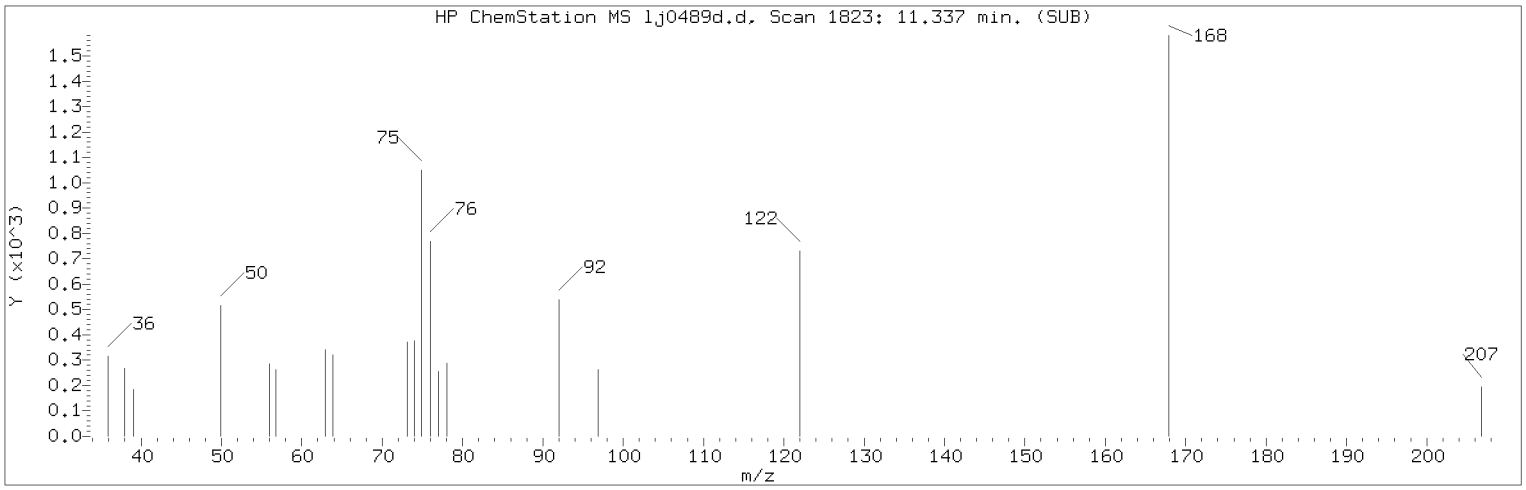
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

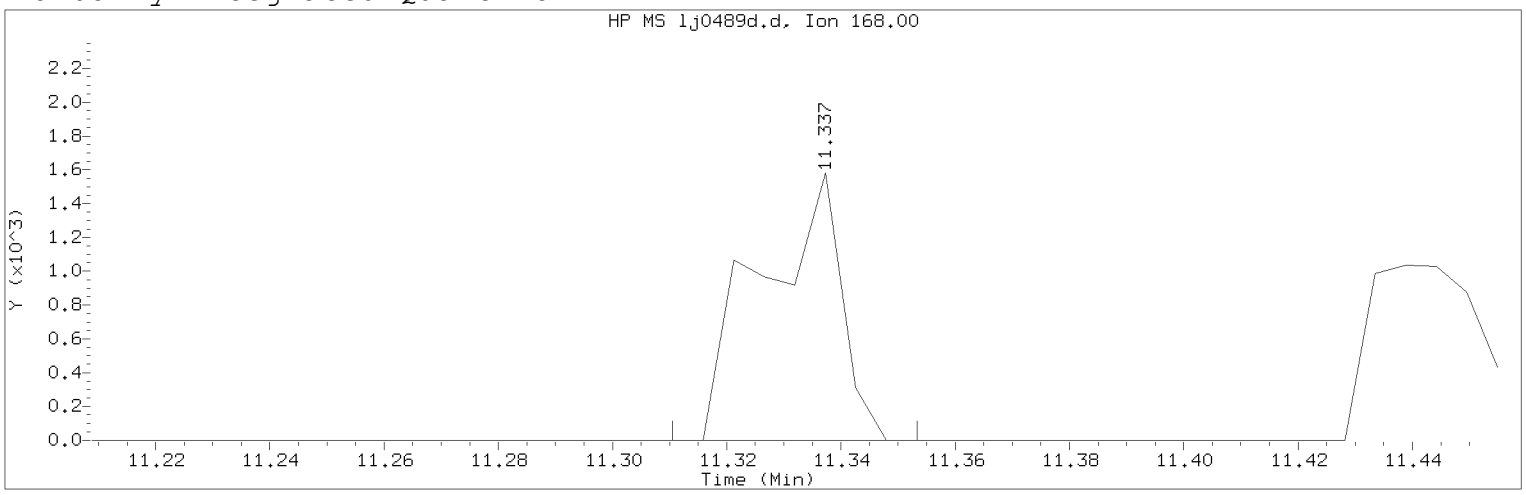
Compound Number	: 85		
Compound Name	: Hexachlorocyclopentadiene		
Scan Number	: 1643		
Retention Time (minutes)	: 10.374		
Quant Ion	: 237.00		
Area	: 1208		
On-column Amount (ng/ul)	: 0.0537		
Integration start scan	: 1641	Integration stop scan:	1649
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1214

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

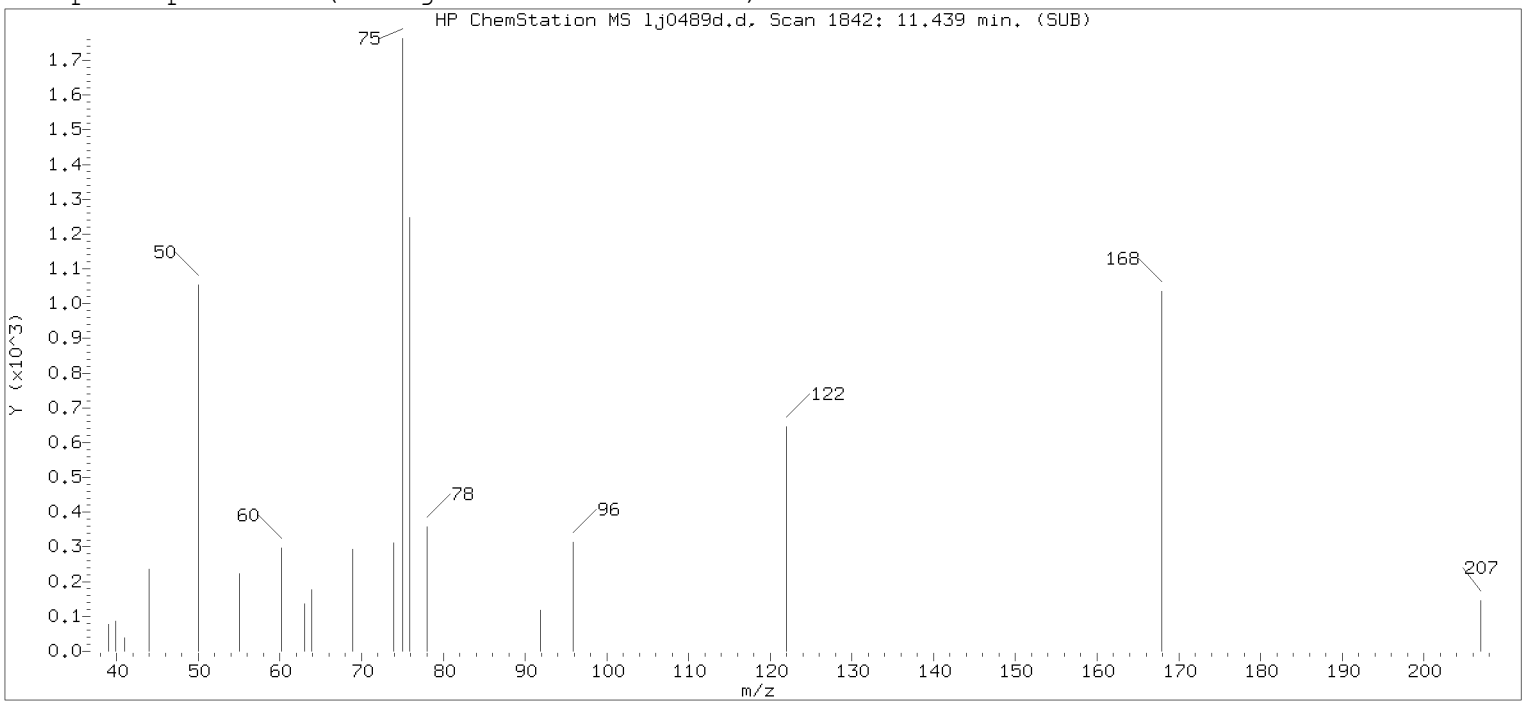
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1823
Retention Time (minutes) : 11.337
Quant Ion : 168.00
Area (flag) : 1553M
On-Column Amount (ng/ul) : 0.1064
Integration start scan : 1817 Integration stop scan: 1825
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: improper integration

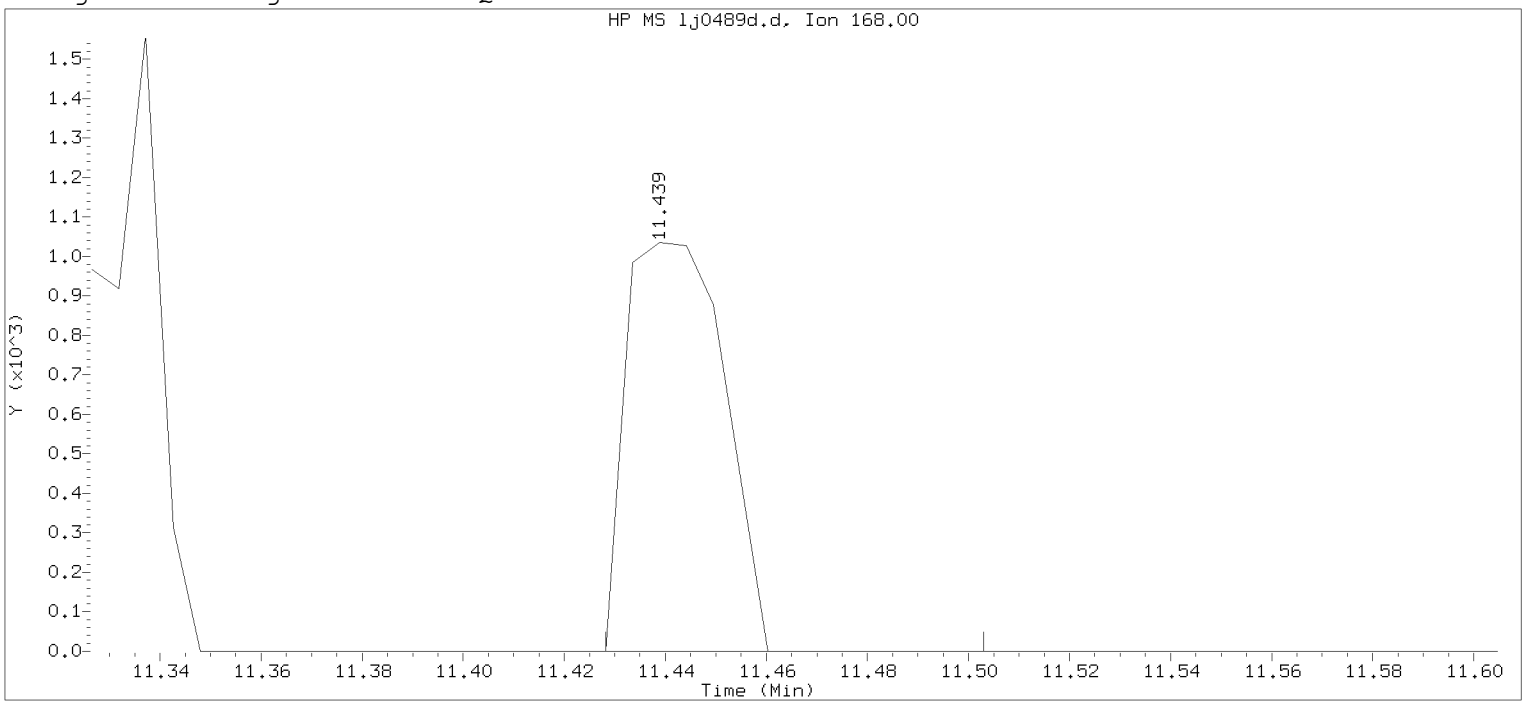
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

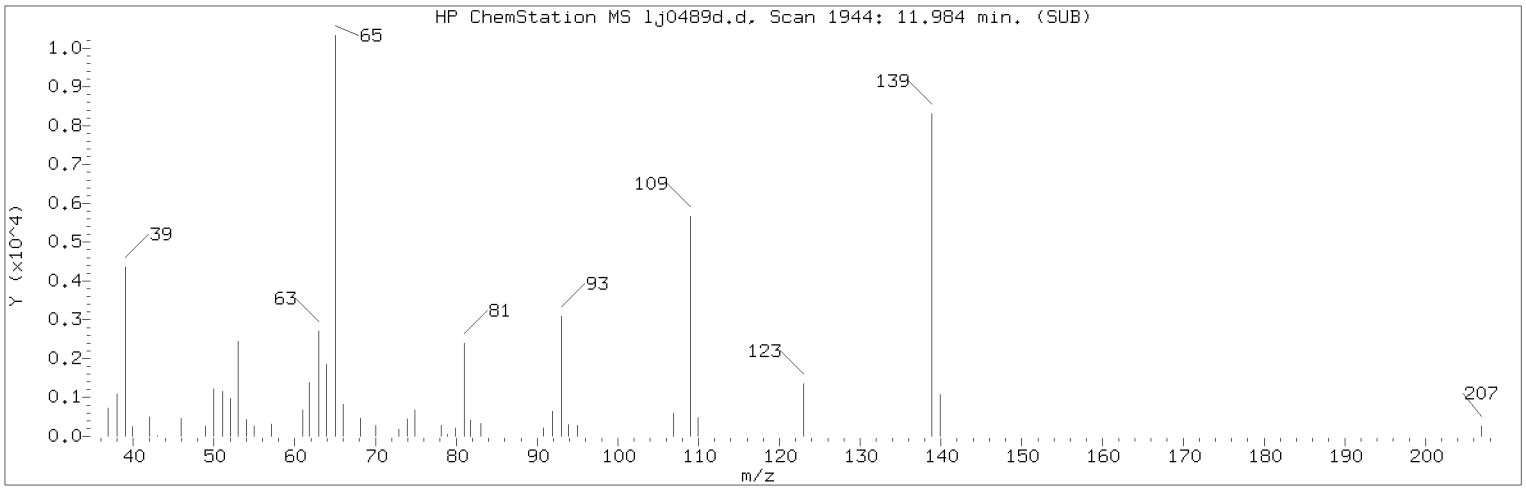
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

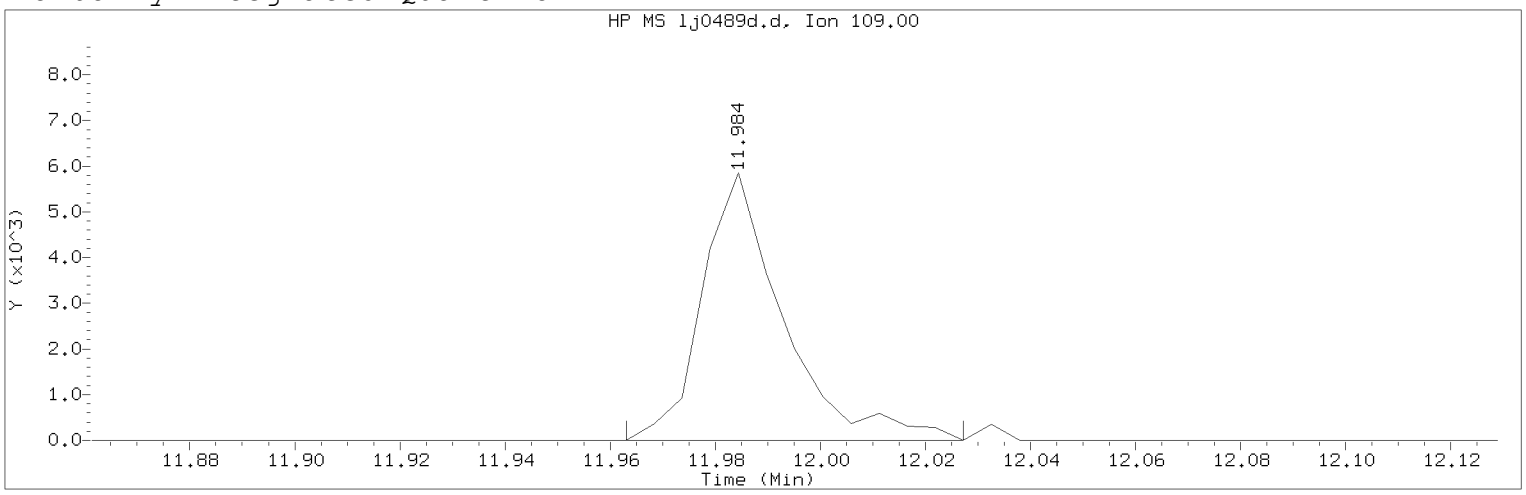
Compound Number	: 105		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1842		
Retention Time (minutes)	: 11.439		
Quant Ion	: 168.00		
Area	: 1398		
On-column Amount (ng/ul)	: 0.0965		
Integration start scan	: 1839	Integration stop scan:	1853
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

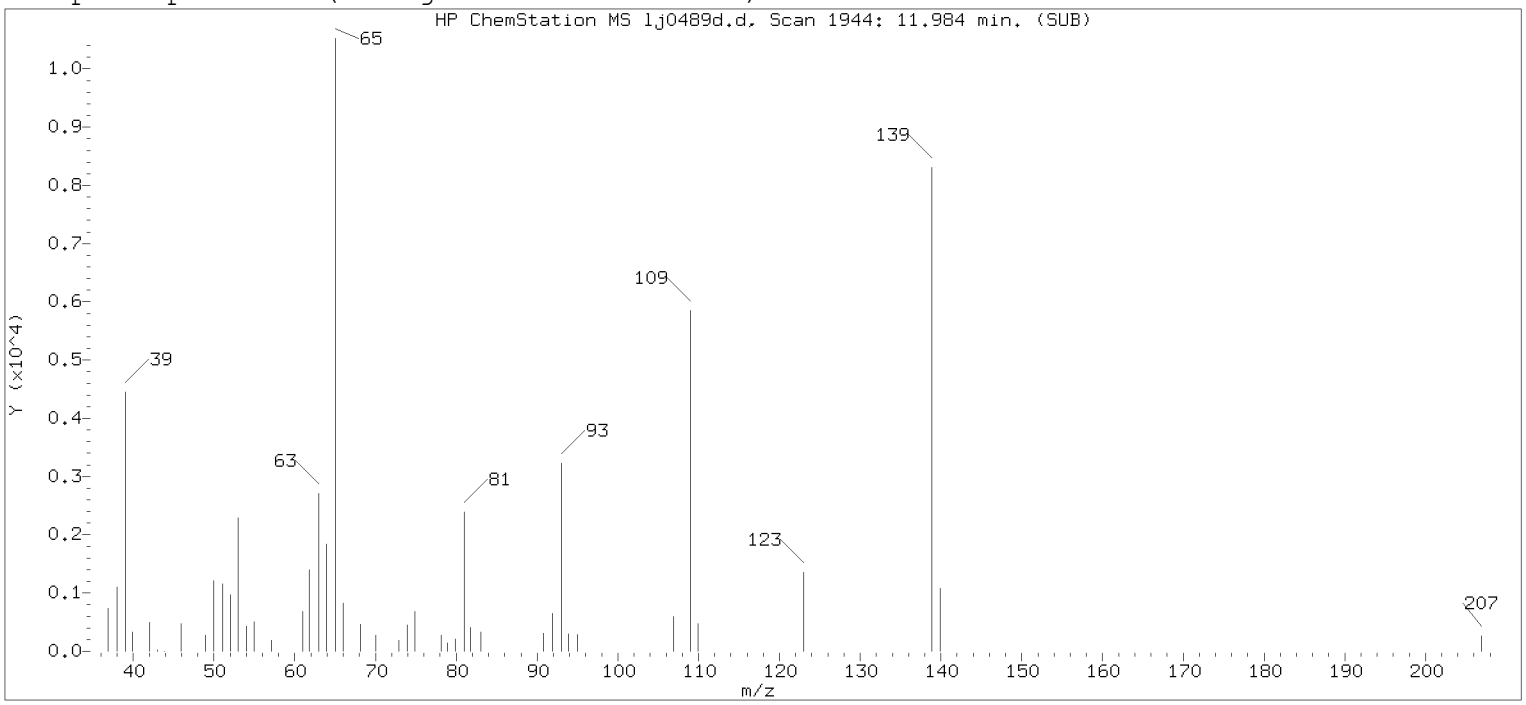
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1944
Retention Time (minutes) : 11.984
Quant Ion : 109.00
Area (flag) : 6249M
On-Column Amount (ng/ul) : 0.3452
Integration start scan : 1939 Integration stop scan: 1951
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

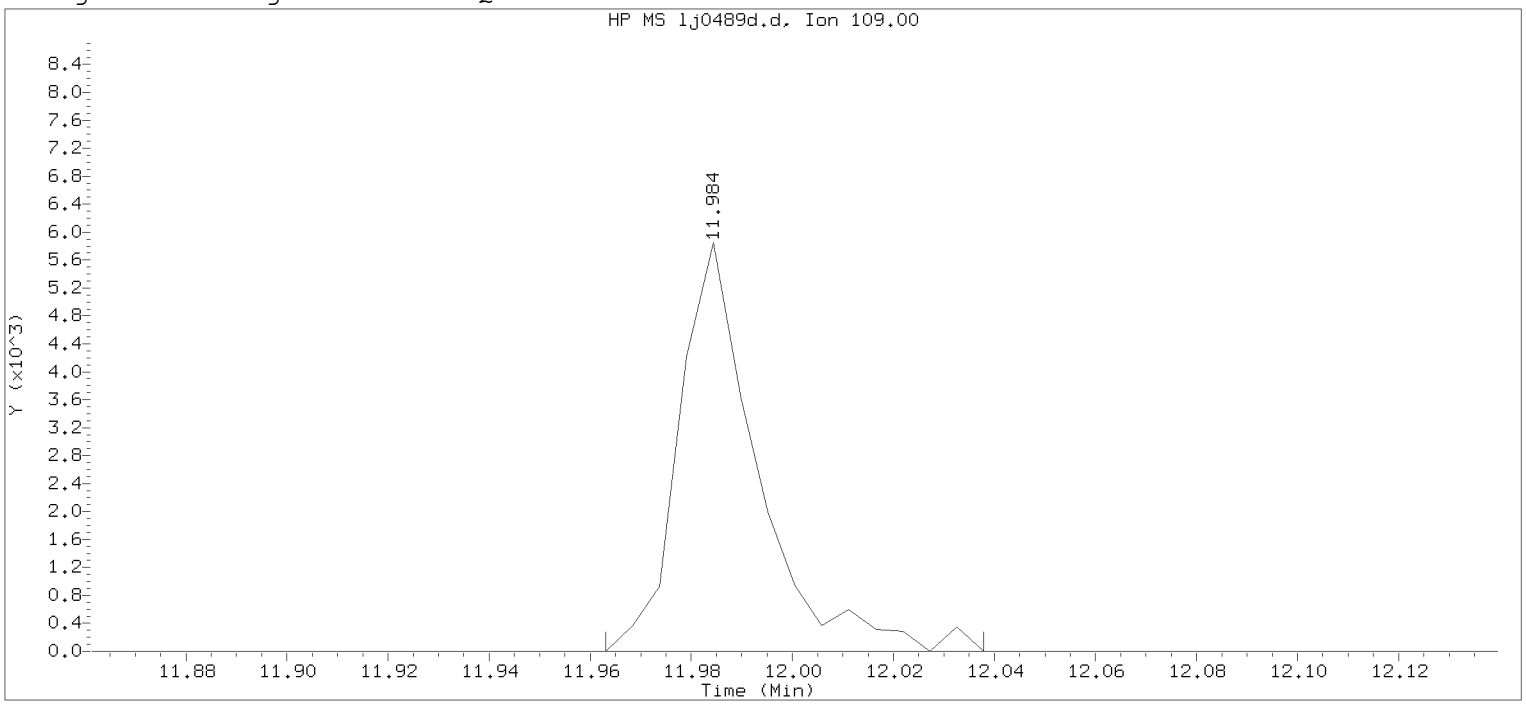
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

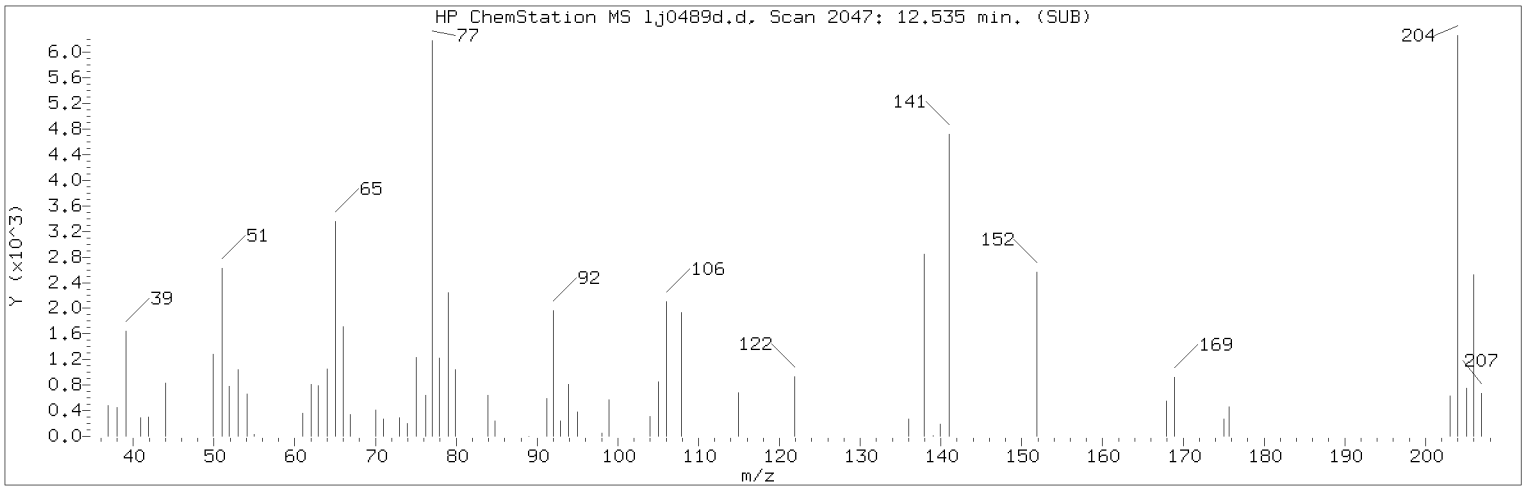
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

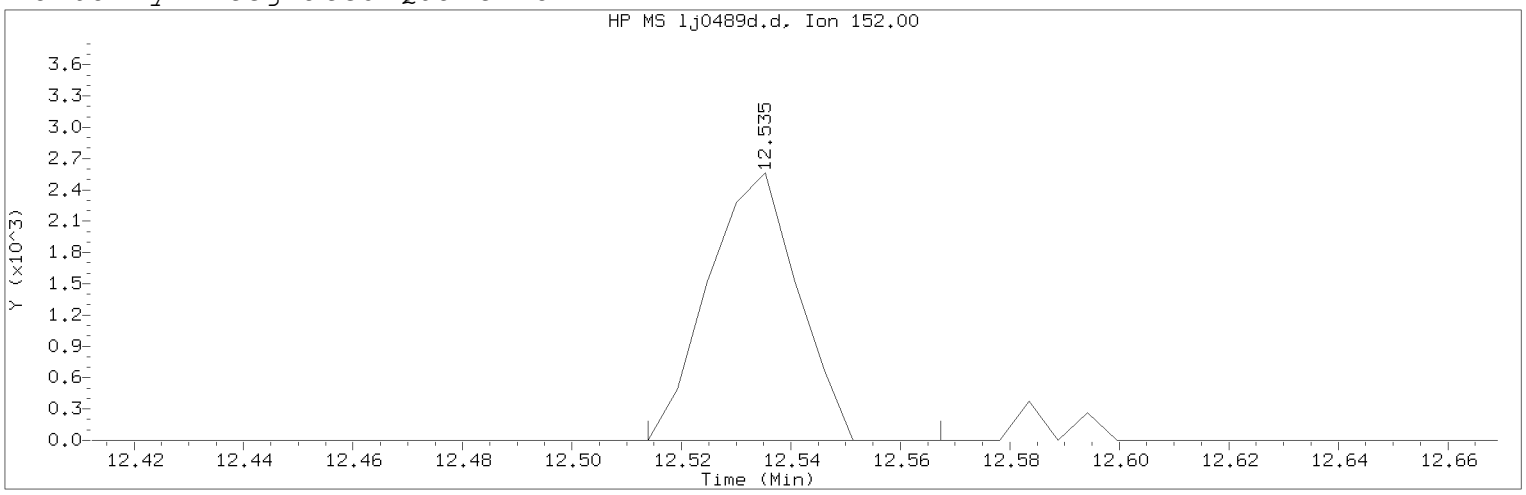
Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1944
Retention Time (minutes) : 11.984
Quant Ion : 109.00
Area : 6361
On-column Amount (ng/ul) : 0.3514
Integration start scan : 1939 Integration stop scan: 1953
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 5148

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

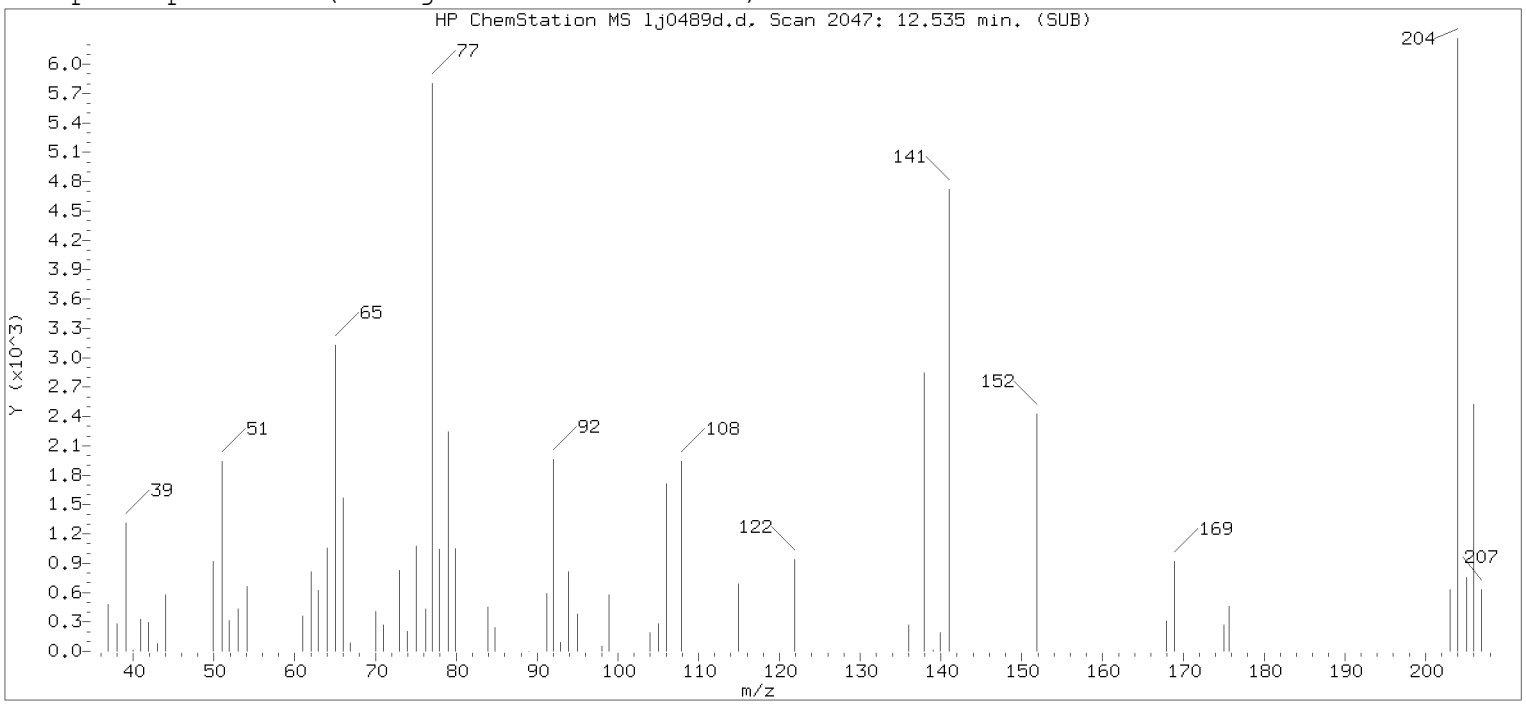
Compound Number : 128
Compound Name : 5-Nitro-o-toluidine
Scan Number : 2047
Retention Time (minutes) : 12.535
Quant Ion : 152.00
Area (flag) : 2902M
On-Column Amount (ng/ul) : 0.0986
Integration start scan : 2042 Integration stop scan: 2052
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

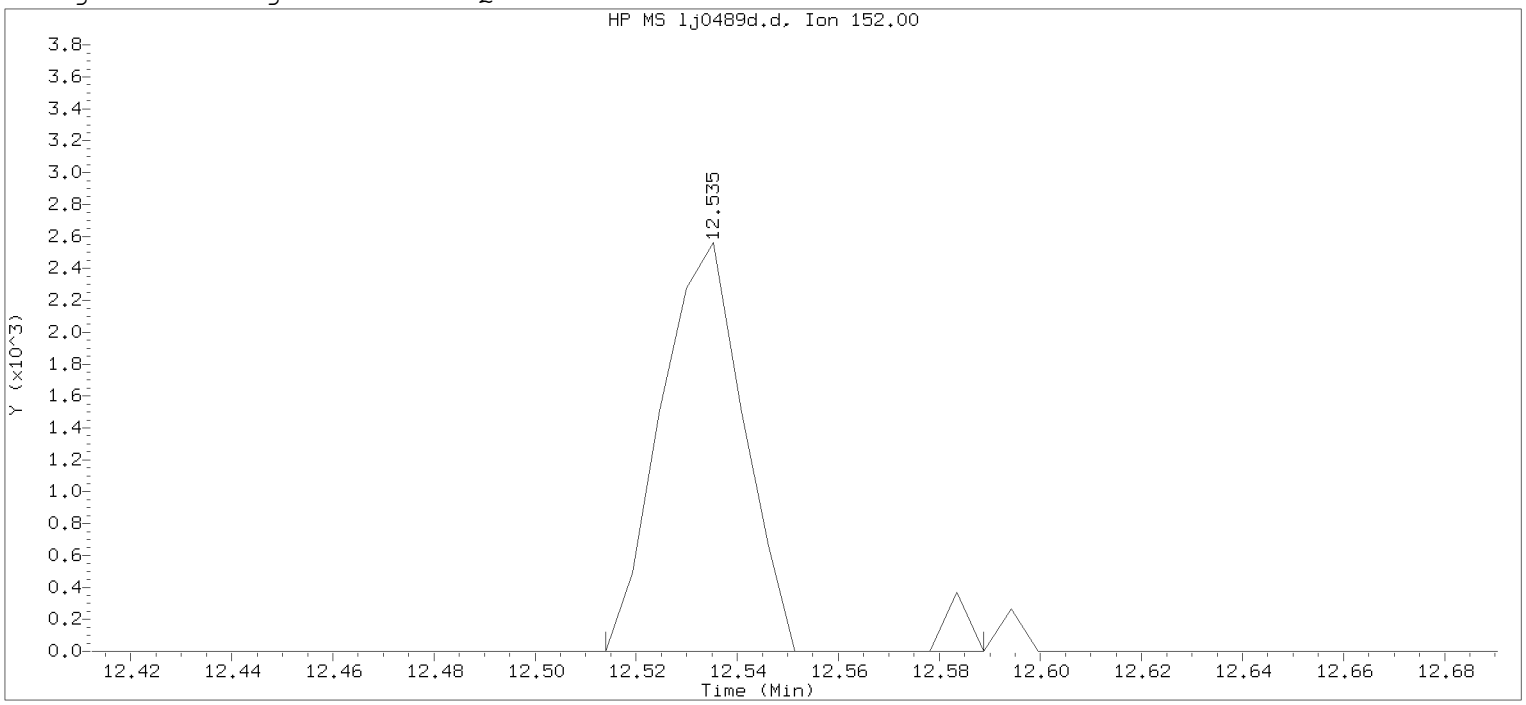
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

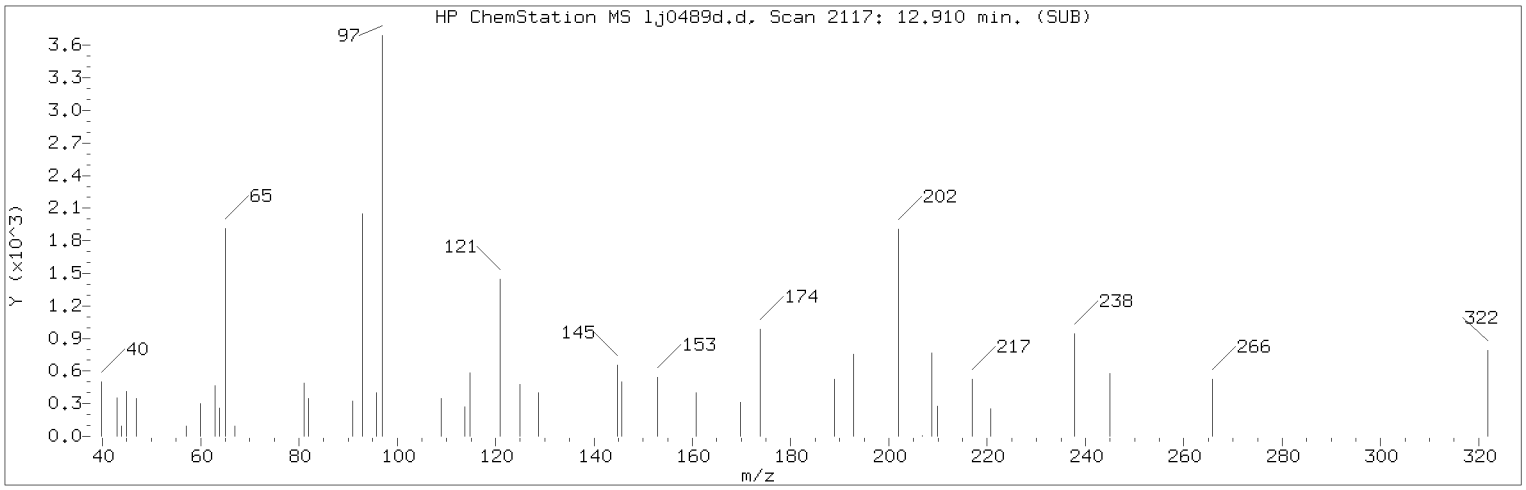
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

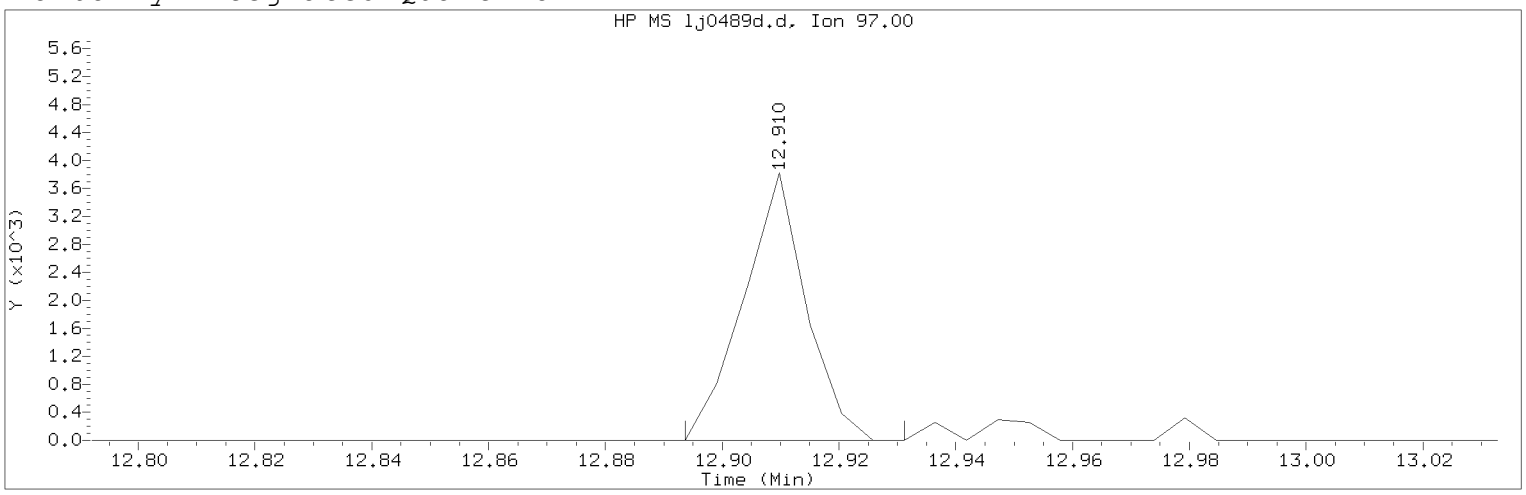
Compound Number : 128
Compound Name : 5-Nitro-o-toluidine
Scan Number : 2047
Retention Time (minutes) : 12.535
Quant Ion : 152.00
Area : 3021
On-column Amount (ng/ul) : 0.1038
Integration start scan : 2042 Integration stop scan: 2056
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1220

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

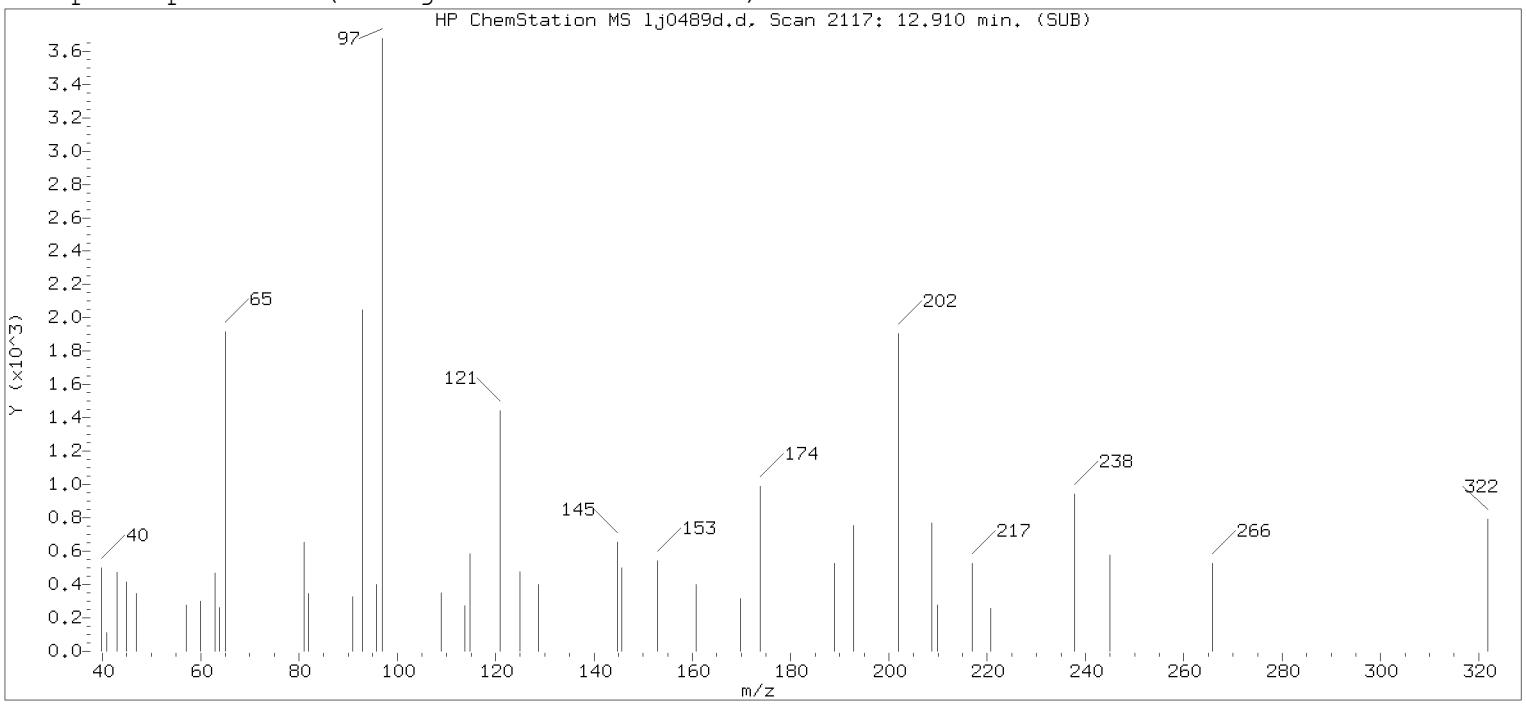
Compound Number : 137
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2117
Retention Time (minutes) : 12.910
Quant Ion : 97.00
Area (flag) : 2850M
On-Column Amount (ng/ul) : 0.1387
Integration start scan : 2113 Integration stop scan: 2120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

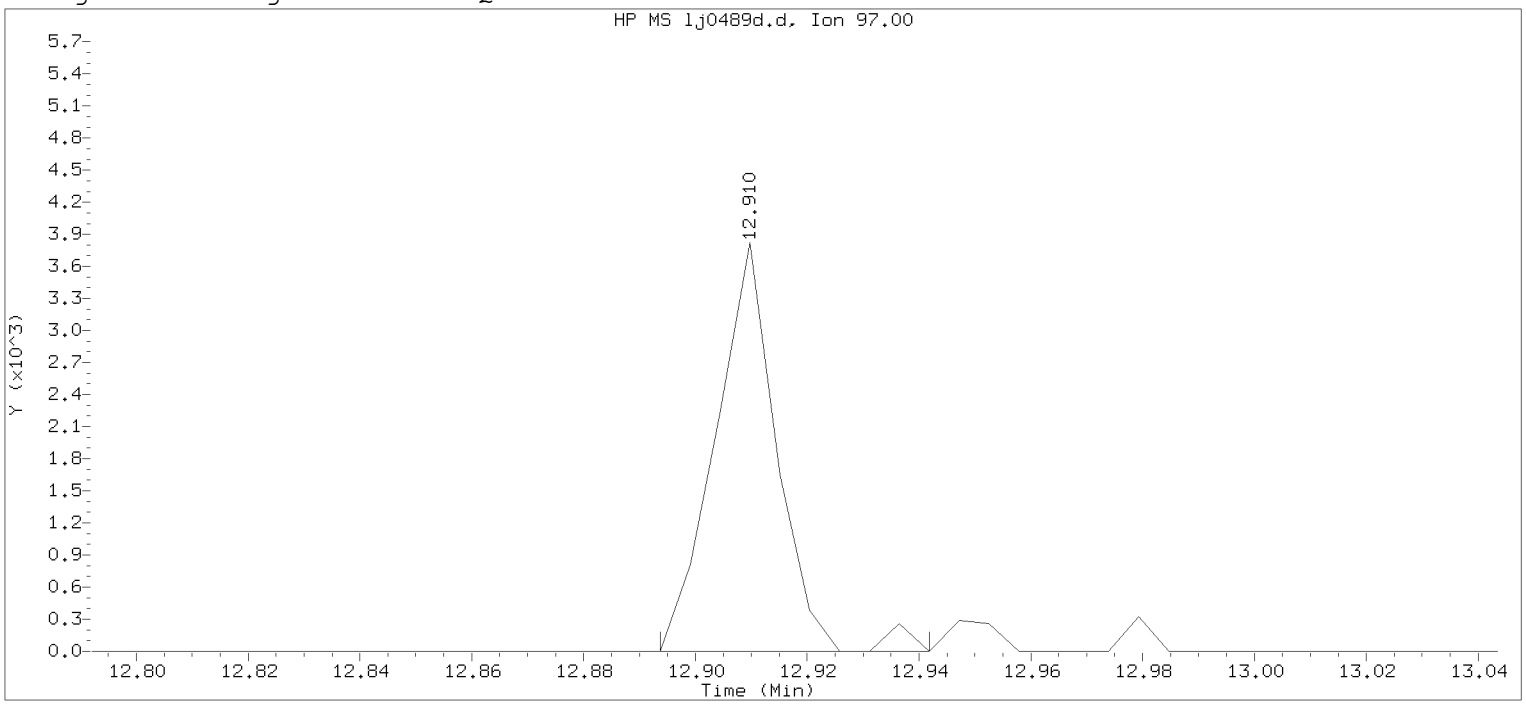
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

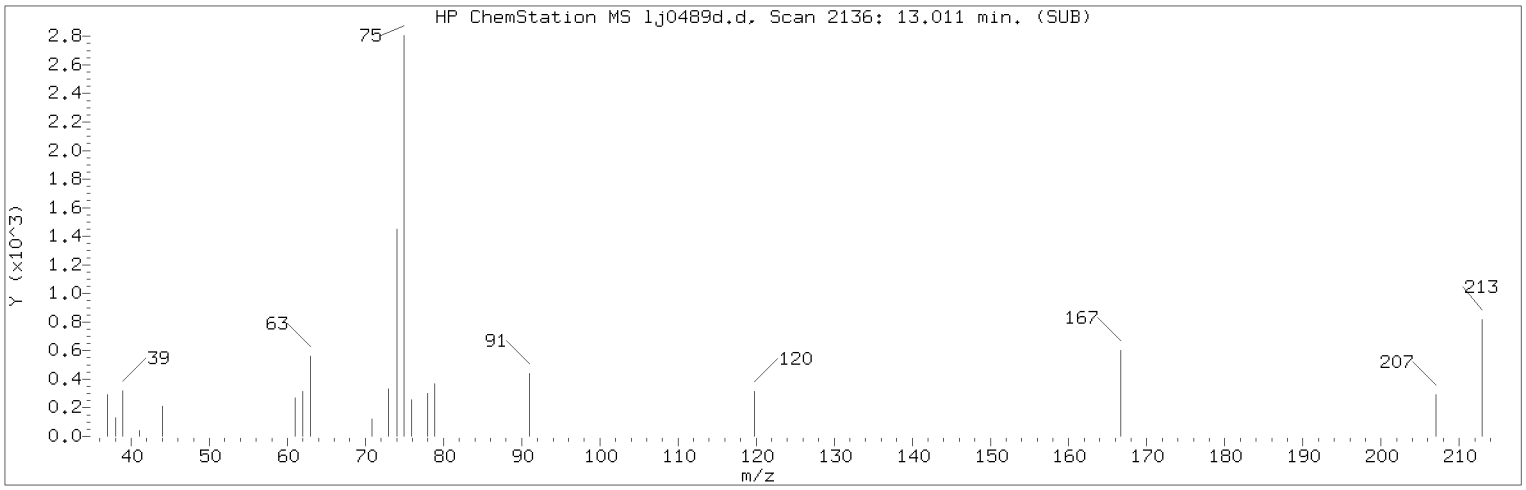
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

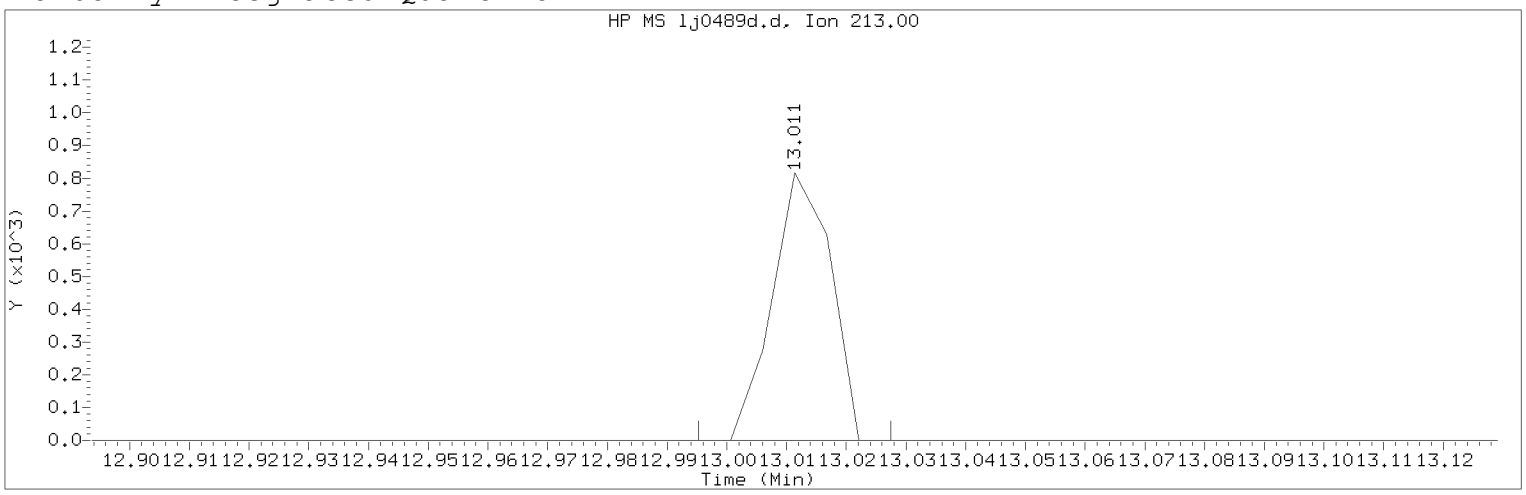
Compound Number : 137
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2117
Retention Time (minutes) : 12.910
Quant Ion : 97.00
Area : 2934
On-column Amount (ng/ul) : 0.1448
Integration start scan : 2113 Integration stop scan: 2122
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

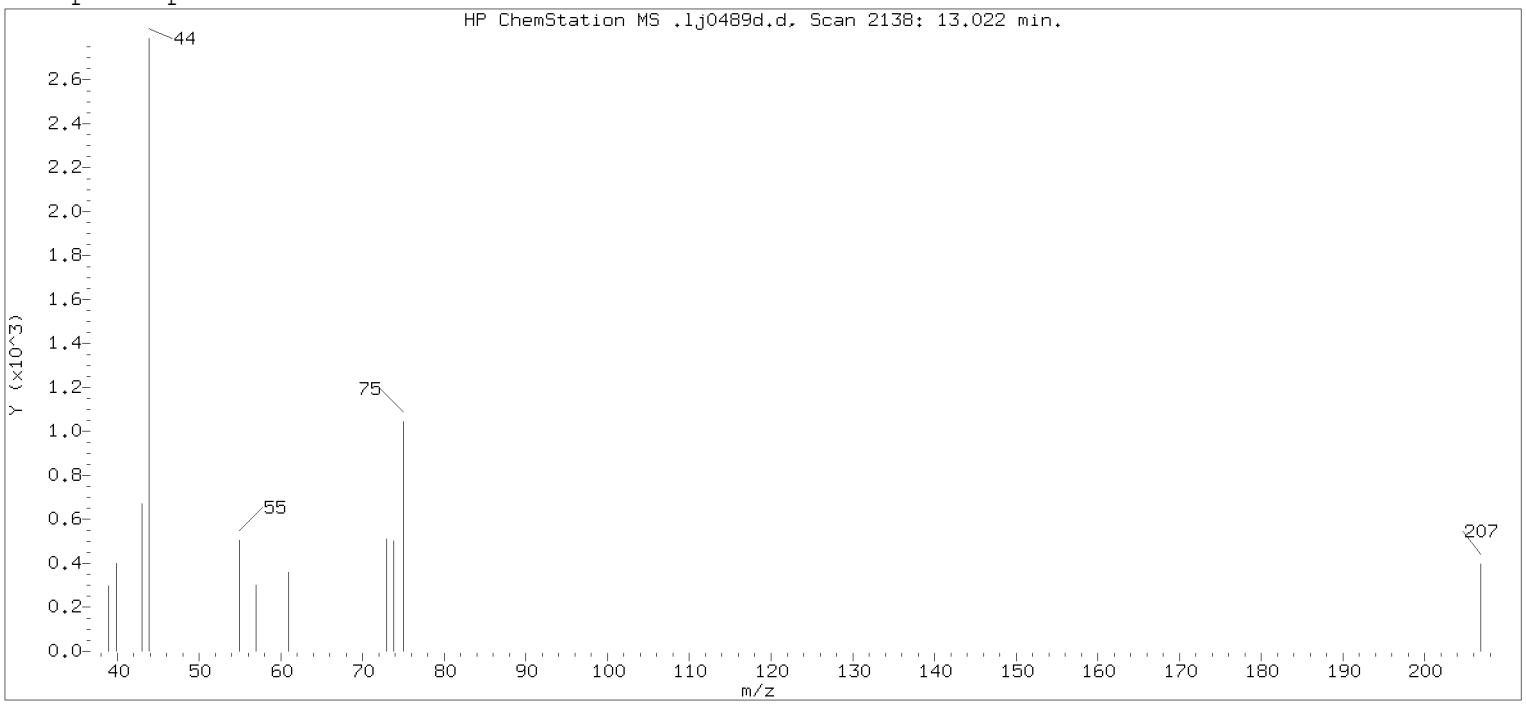
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 2136
Retention Time (minutes) : 13.011
Quant Ion : 213.00
Area (flag) : 551M
On-Column Amount (ng/ul) : 0.0538
Integration start scan : 2132 Integration stop scan: 2138
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

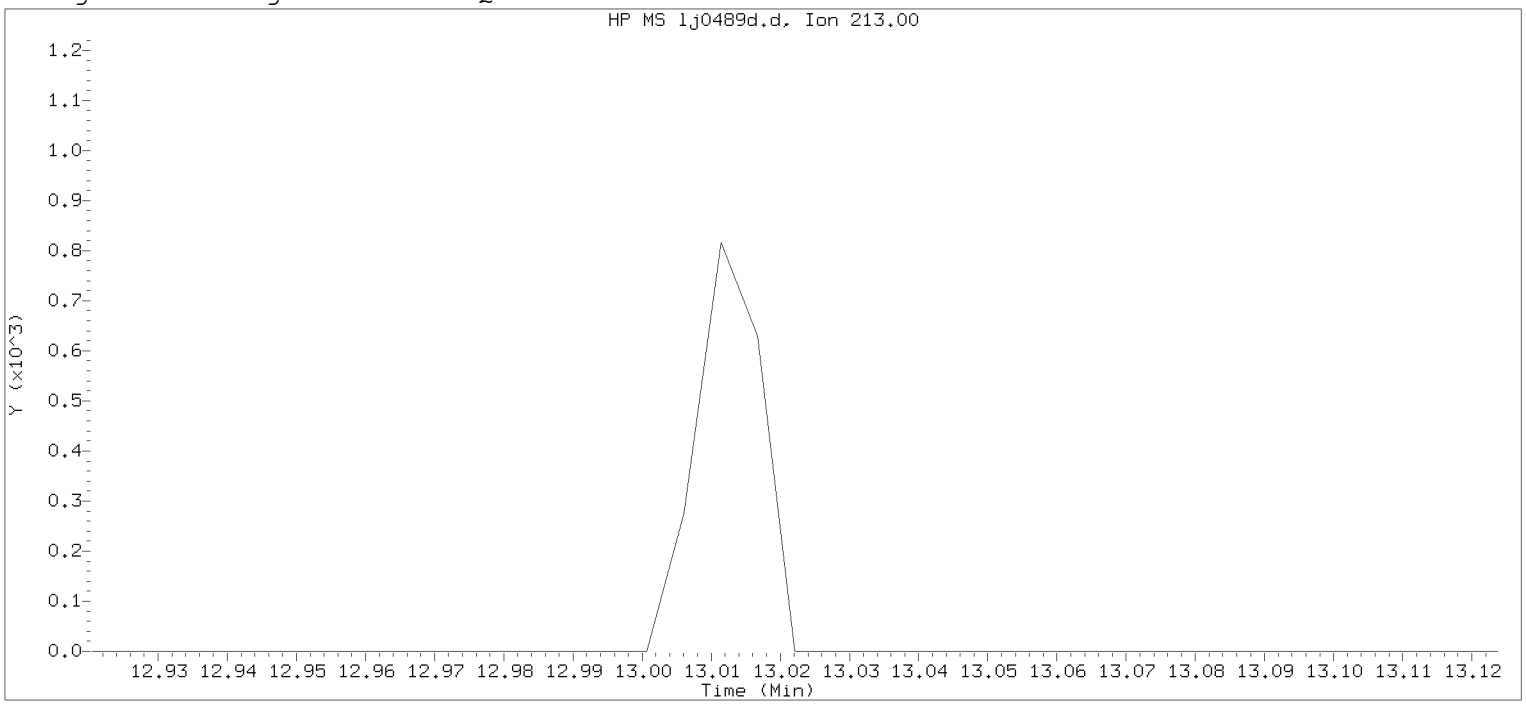
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

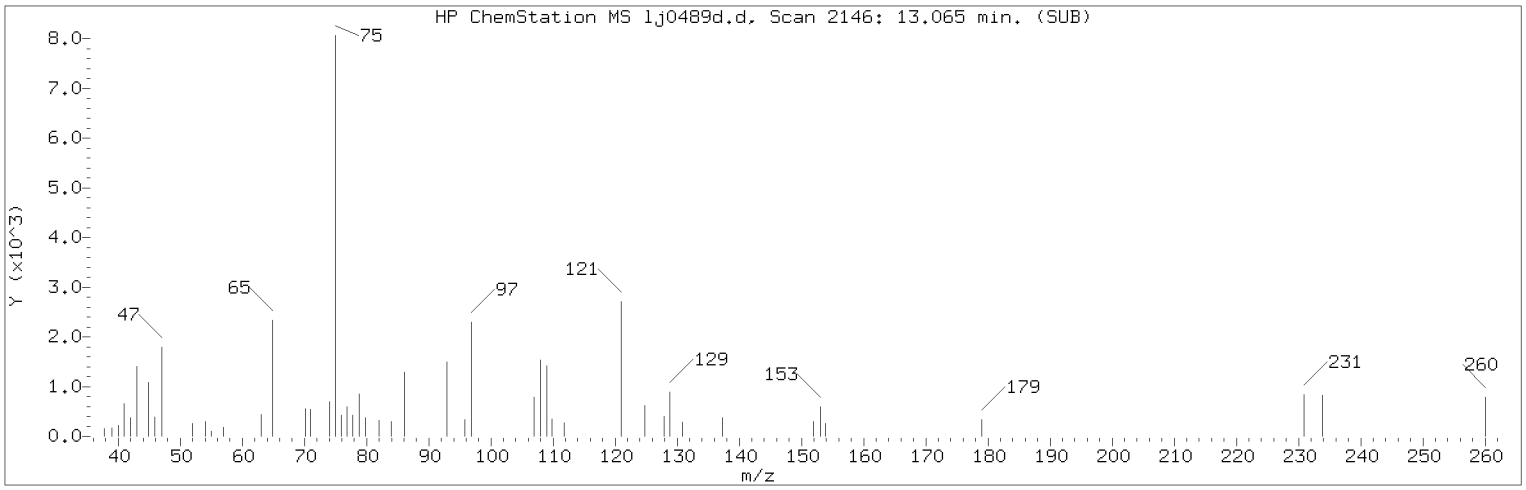
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

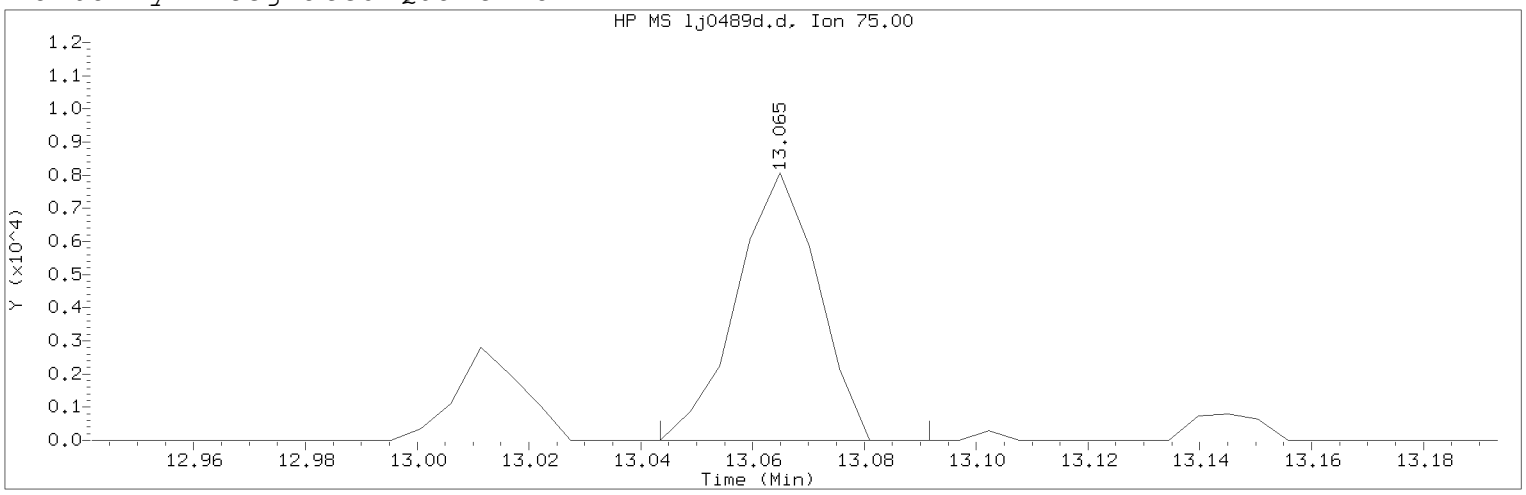
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 13.022
Quant Ion : 213.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

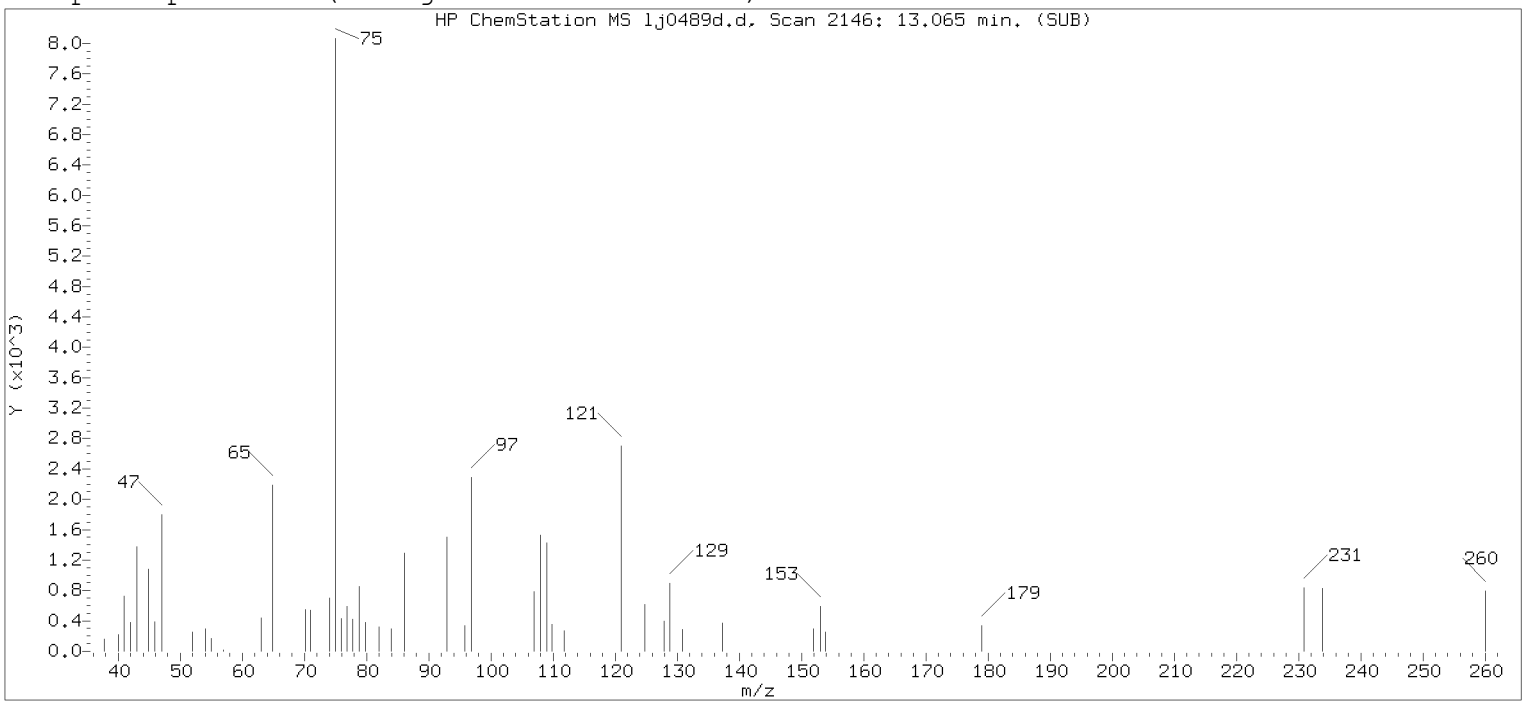
Compound Number	: 141		
Compound Name	: Phorate		
Scan Number	: 2146		
Retention Time (minutes)	: 13.065		
Quant Ion	: 75.00		
Area (flag)	: 8107M		
On-Column Amount (ng/ul)	: 0.1055		
Integration start scan	: 2141	Integration stop scan:	2150
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

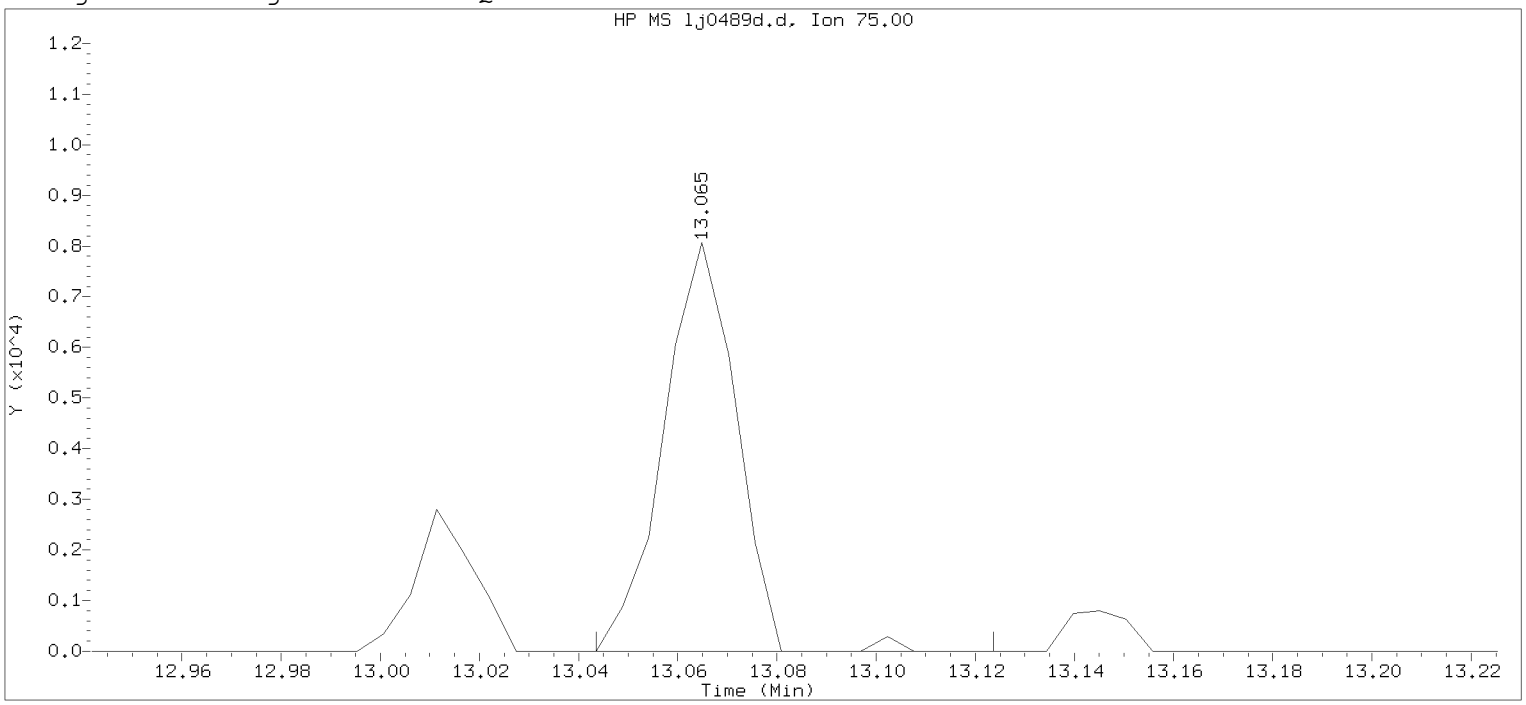
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

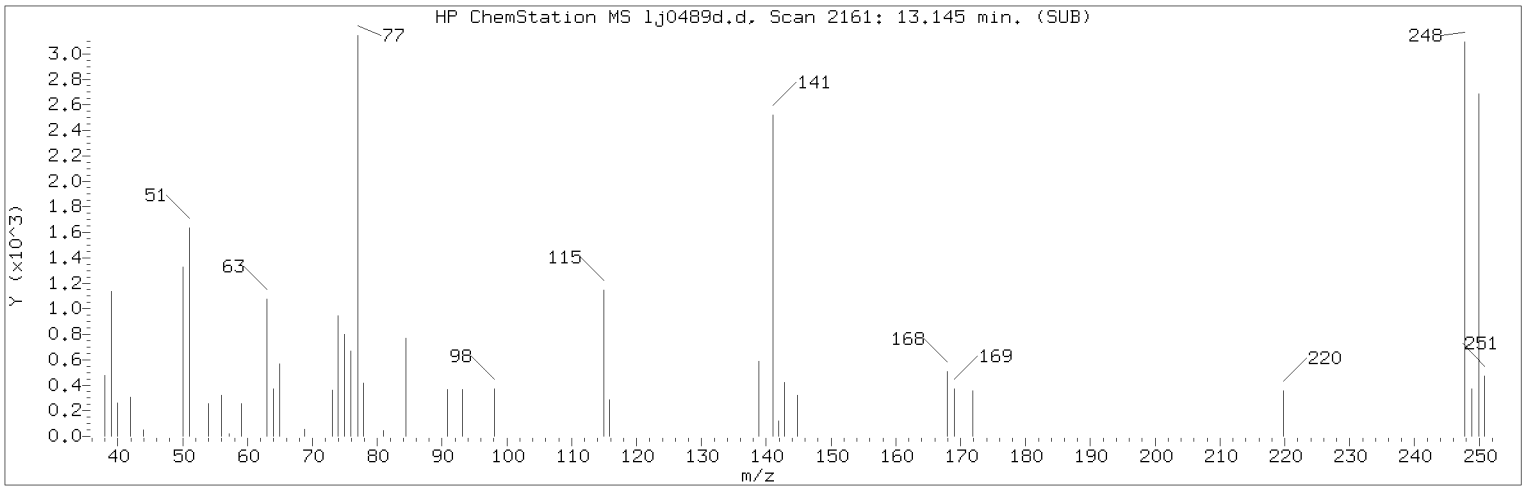
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

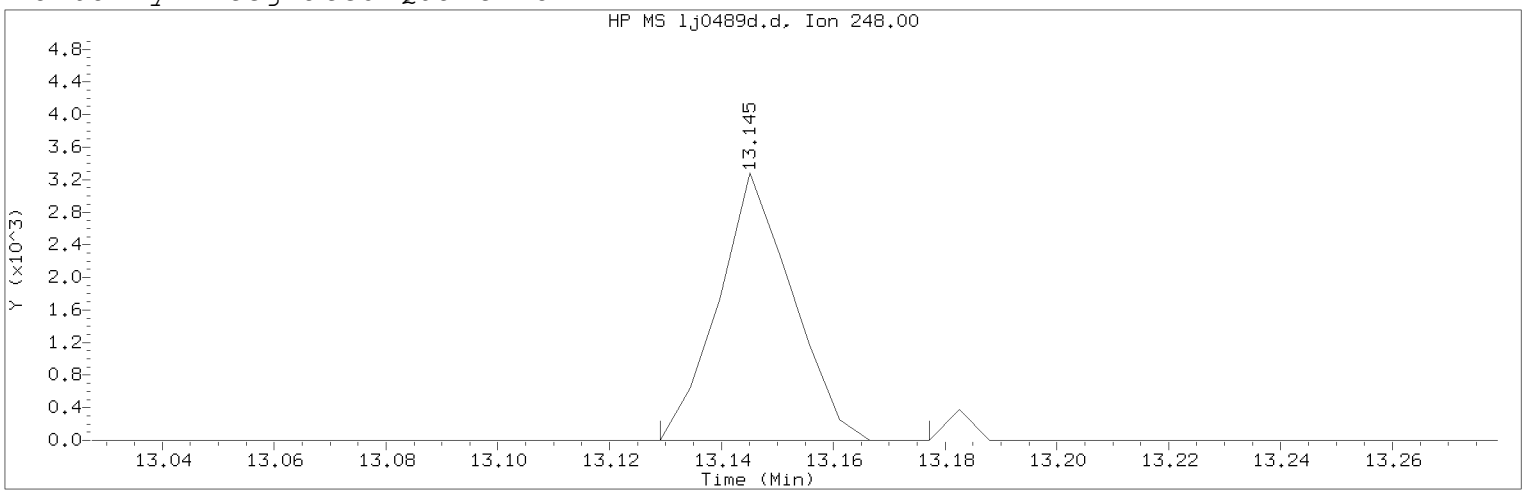
Compound Number	: 141		
Compound Name	: Phorate		
Scan Number	: 2146		
Retention Time (minutes)	: 13.065		
Quant Ion	: 75.00		
Area	: 8200		
On-column Amount (ng/ul)	: 0.1070		
Integration start scan	: 2141	Integration stop scan:	2156
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used. EPA 8270D

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

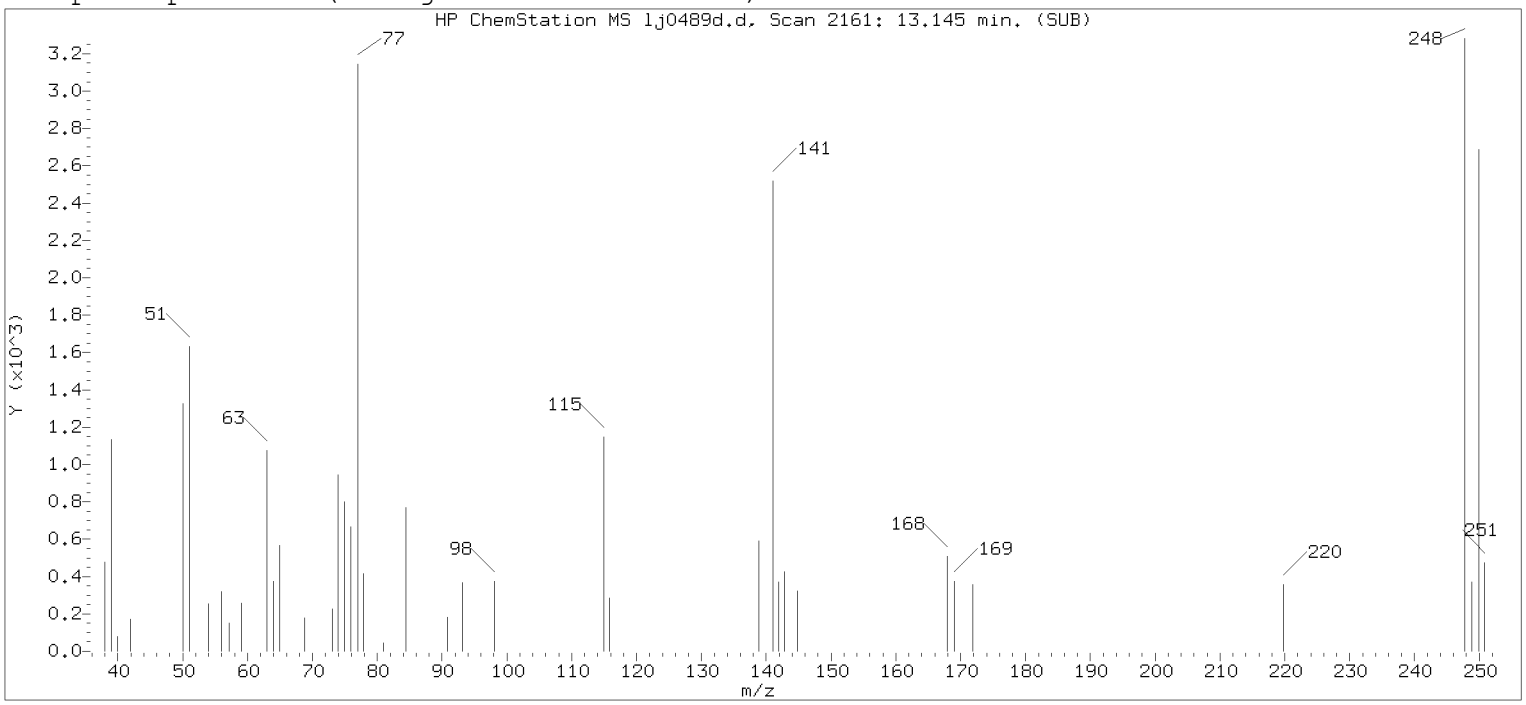
Compound Number : 143
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 2161
Retention Time (minutes) : 13.145
Quant Ion : 248.00
Area (flag) : 3002M
On-Column Amount (ng/ul) : 0.1254
Integration start scan : 2157 Integration stop scan: 2166
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

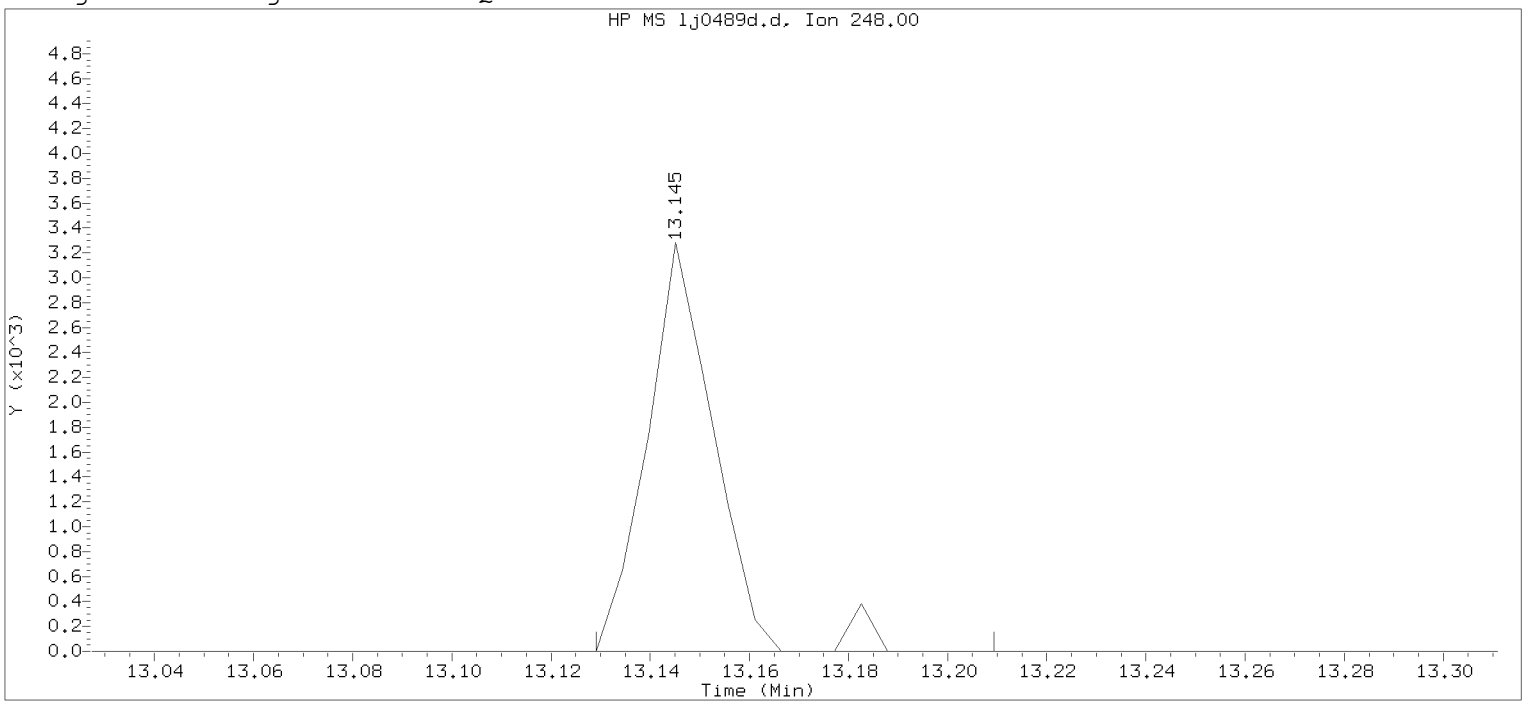
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

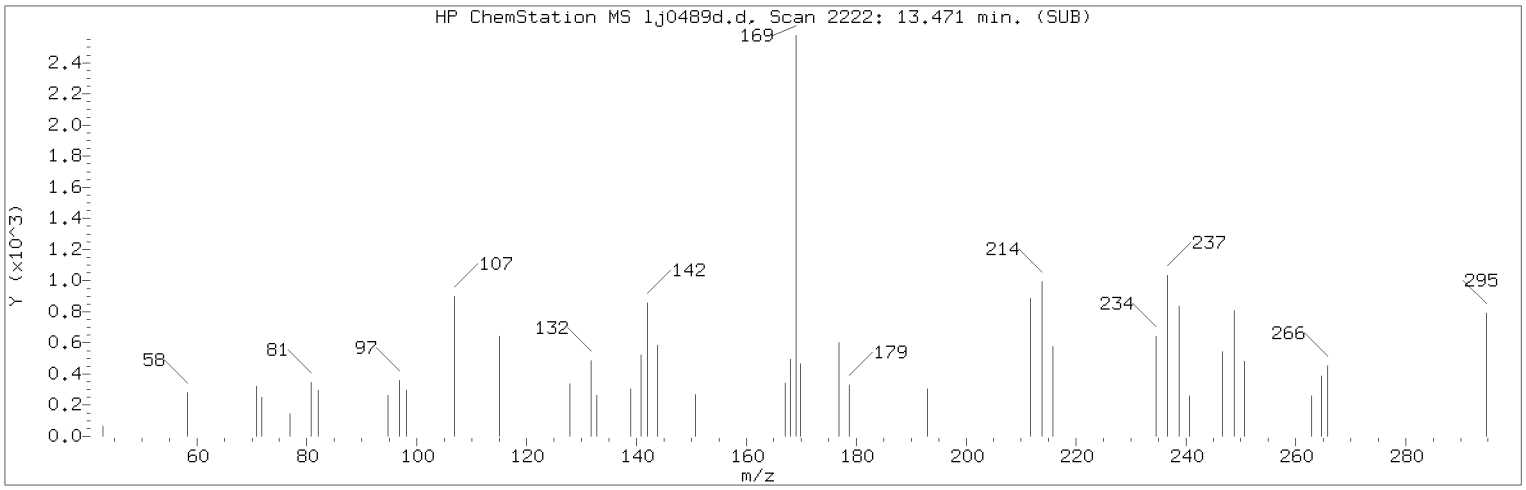
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

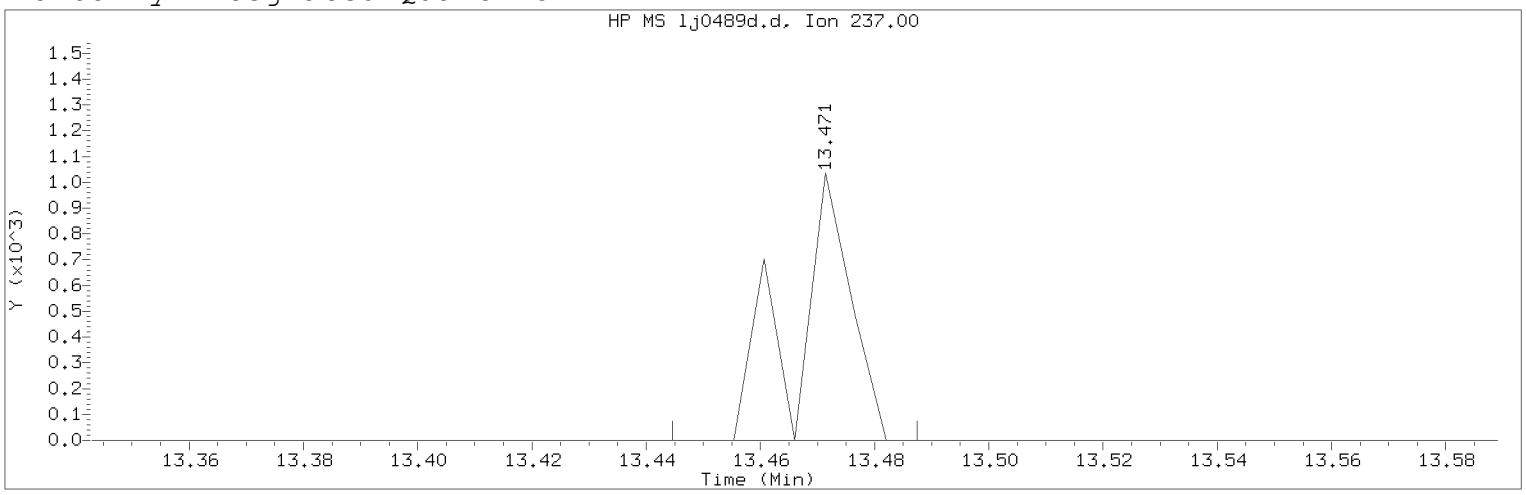
Compound Number	: 143		
Compound Name	: 4-Bromophenyl-phenylether		
Scan Number	: 2161		
Retention Time (minutes)	: 13.145		
Quant Ion	: 248.00		
Area	: 3124		
On-column Amount (ng/ul)	: 0.1297		
Integration start scan	: 2157	Integration stop scan:	2172
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

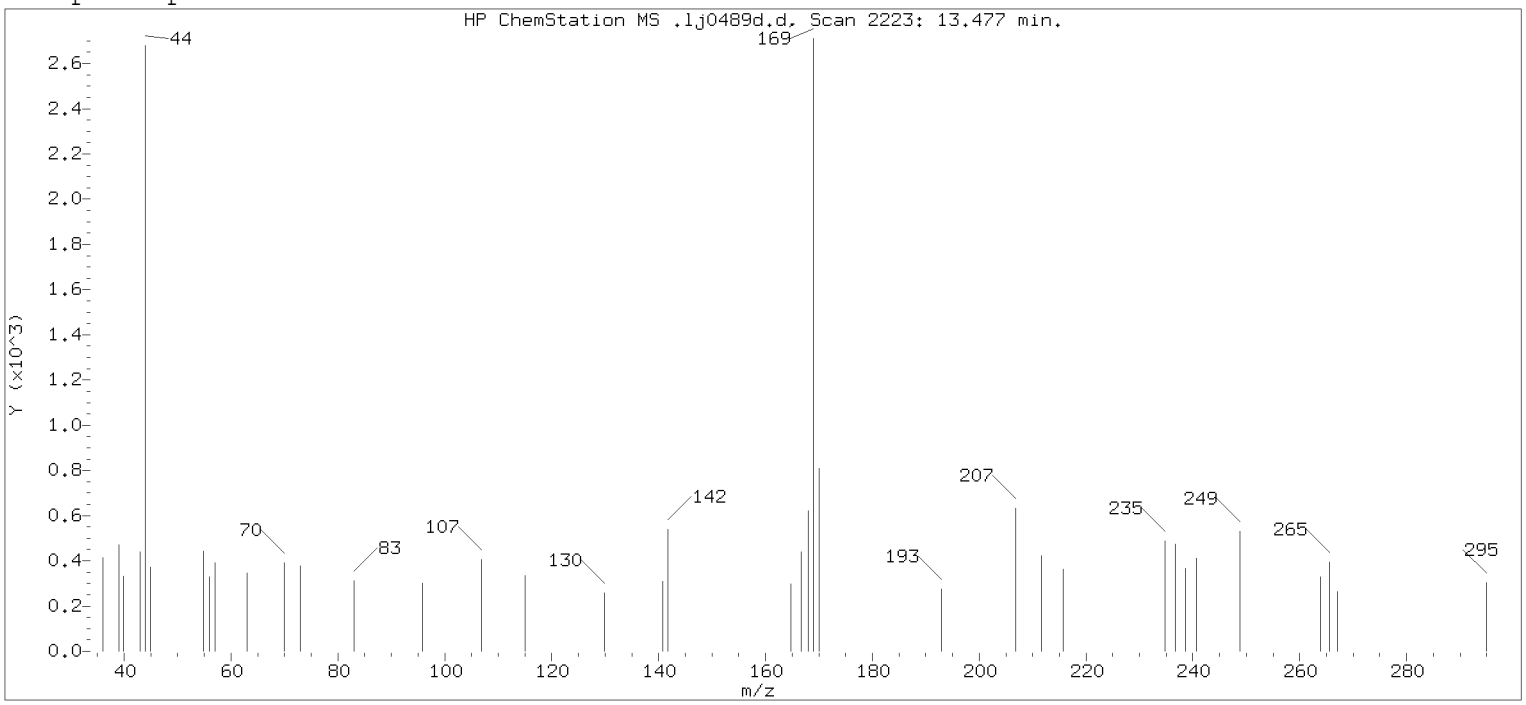
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Scan Number : 2222
Retention Time (minutes) : 13.471
Quant Ion : 237.00
Area (flag) : 710M
On-Column Amount (ng/ul) : 0.0635
Integration start scan : 2216 Integration stop scan: 2224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

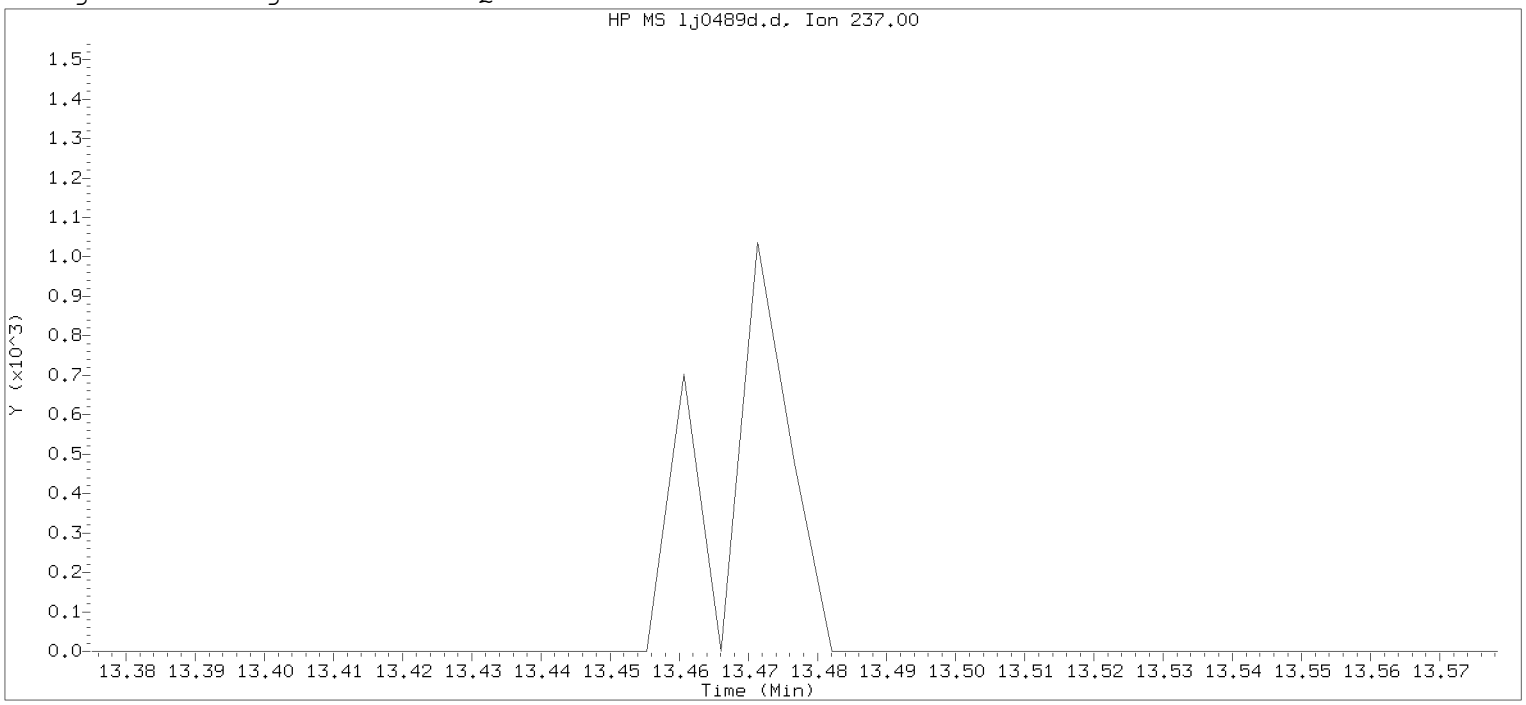
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

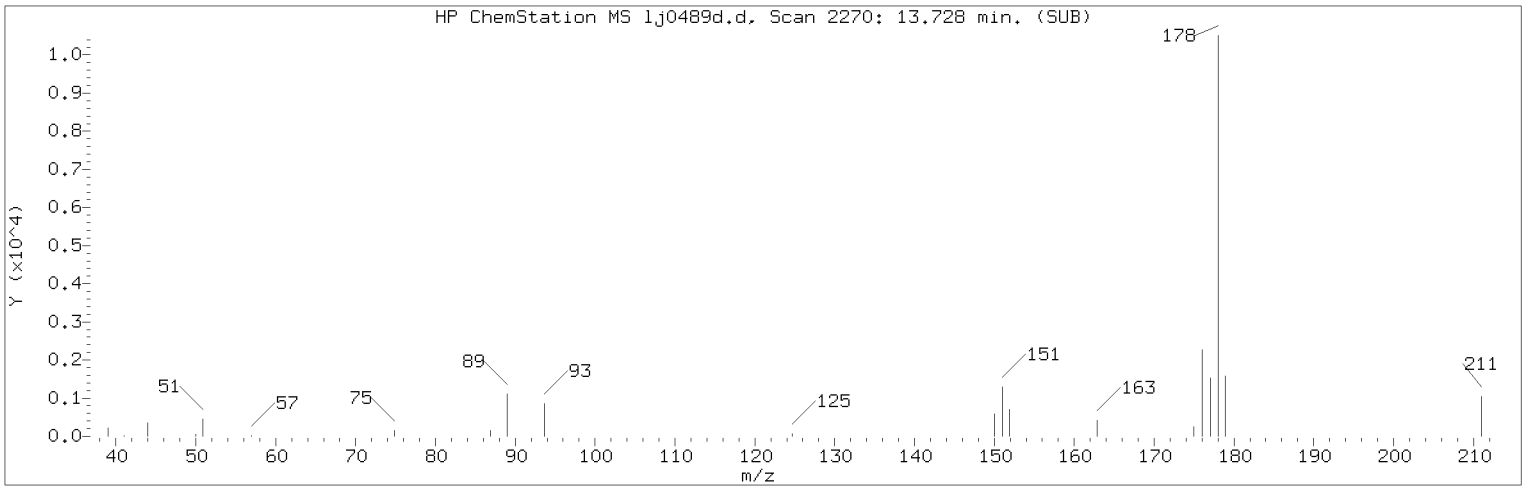
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

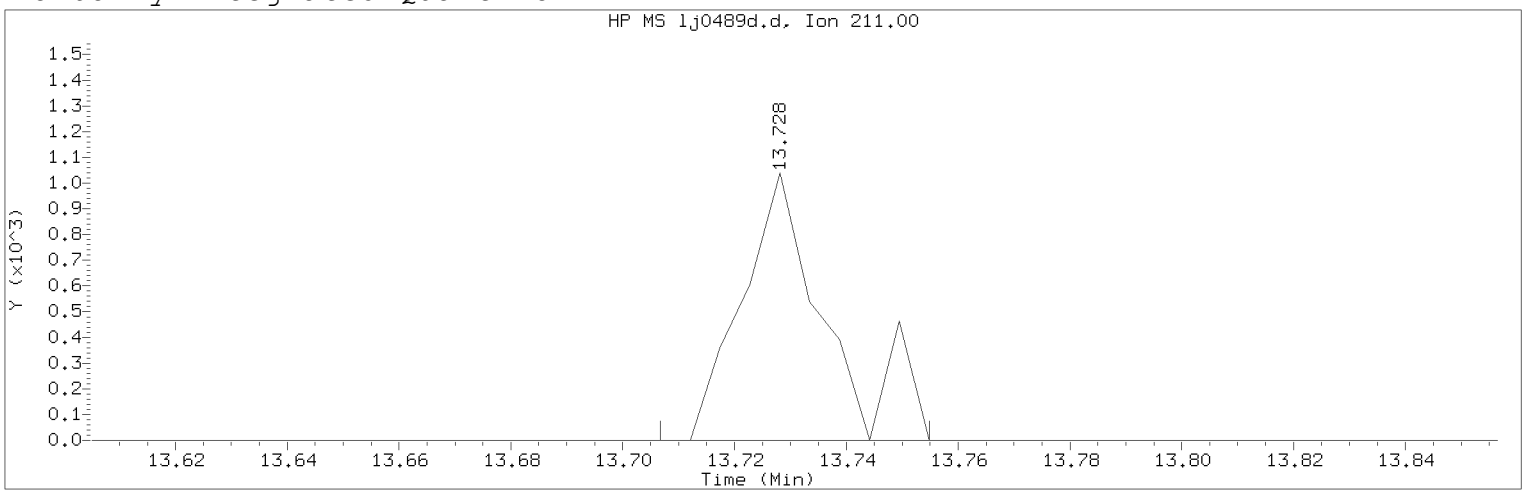
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.477
Quant Ion : 237.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

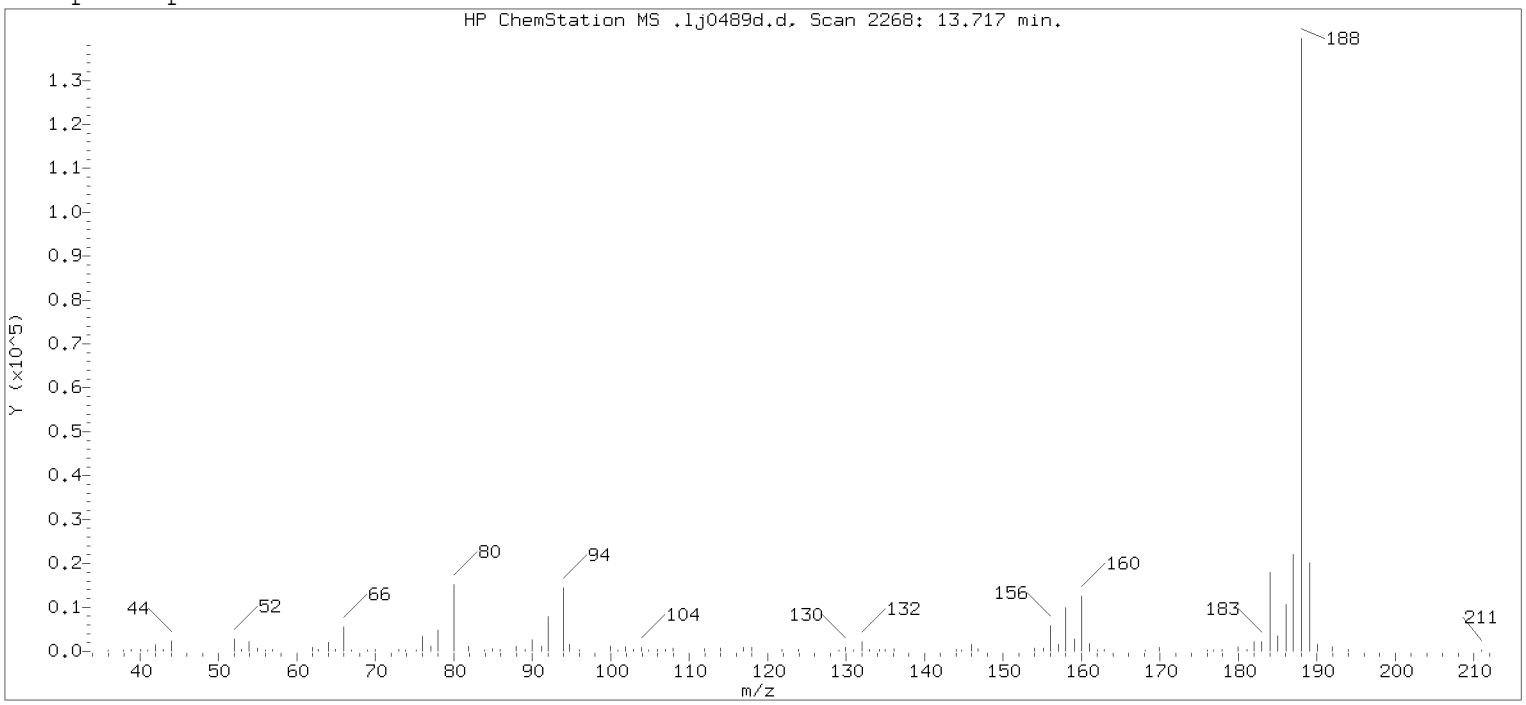
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 2270
Retention Time (minutes) : 13.728
Quant Ion : 211.00
Area (flag) : 1090M
On-Column Amount (ng/ul) : 0.0474
Integration start scan : 2265 Integration stop scan: 2274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

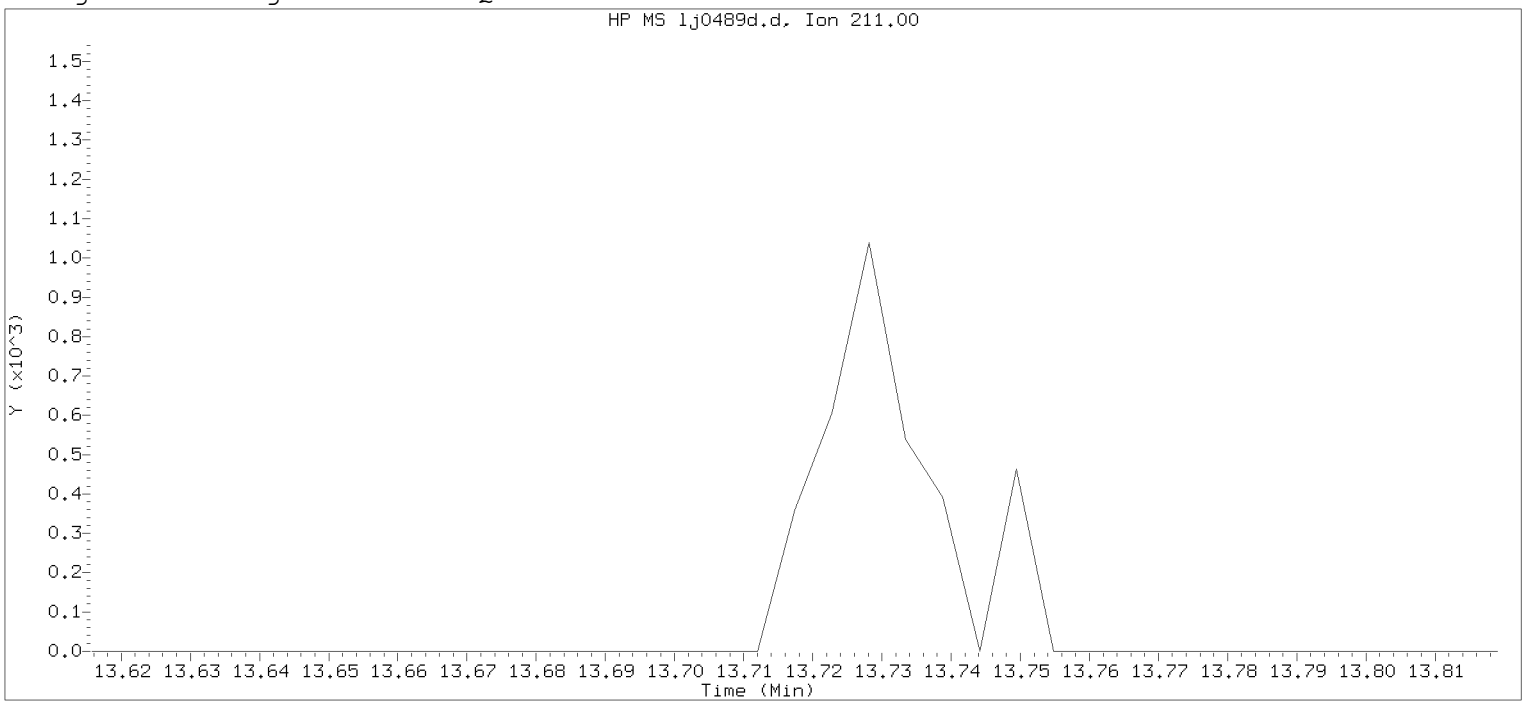
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

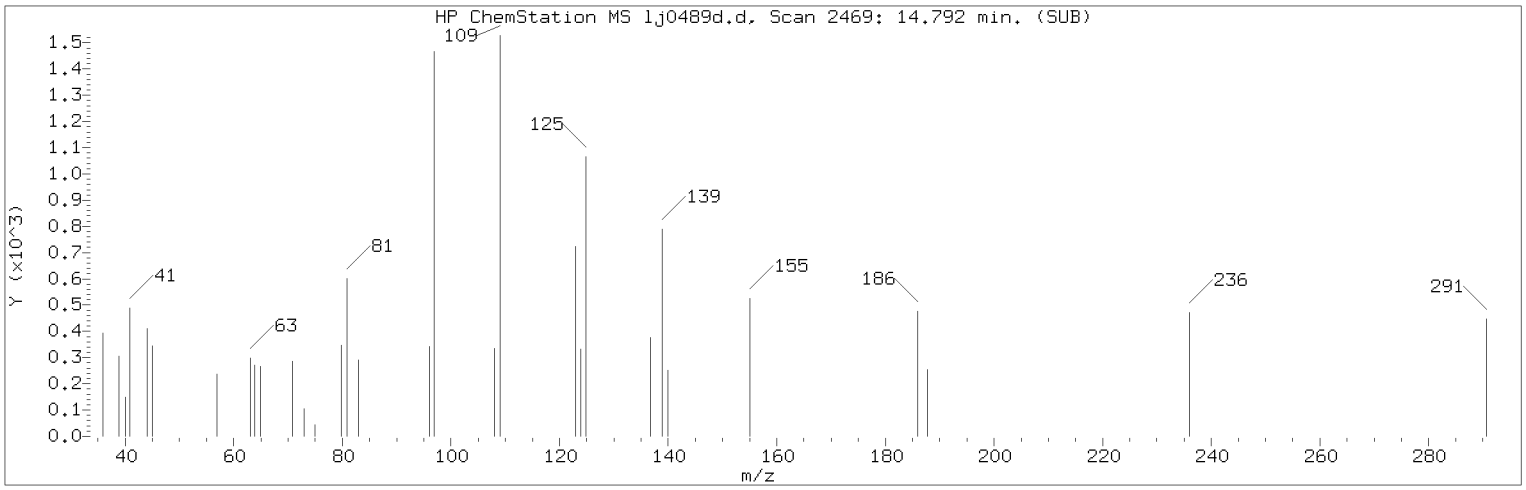
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

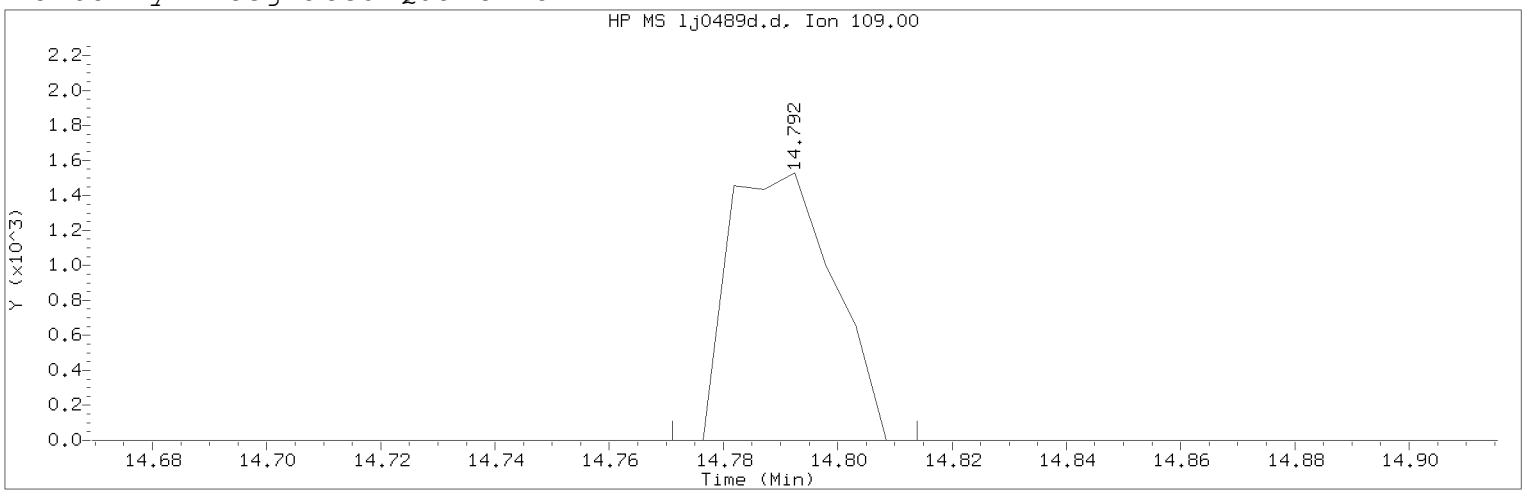
Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.718
Quant Ion : 211.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

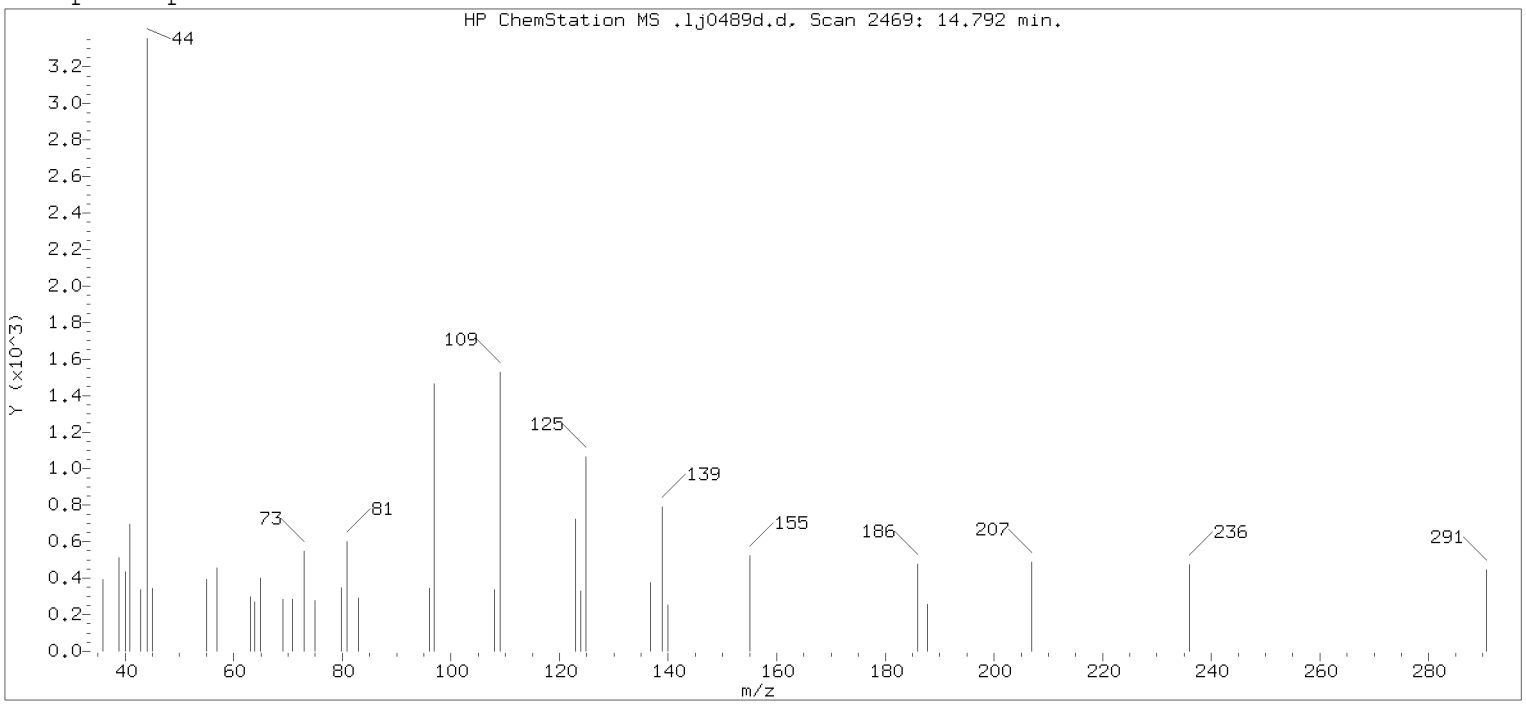
Compound Number	: 167		
Compound Name	: Parathion		
Scan Number	: 2469		
Retention Time (minutes)	: 14.792		
Quant Ion	: 109.00		
Area (flag)	: 1952M		
On-Column Amount (ng/ul)	: 0.0832		
Integration start scan	: 2464	Integration stop scan:	2472
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

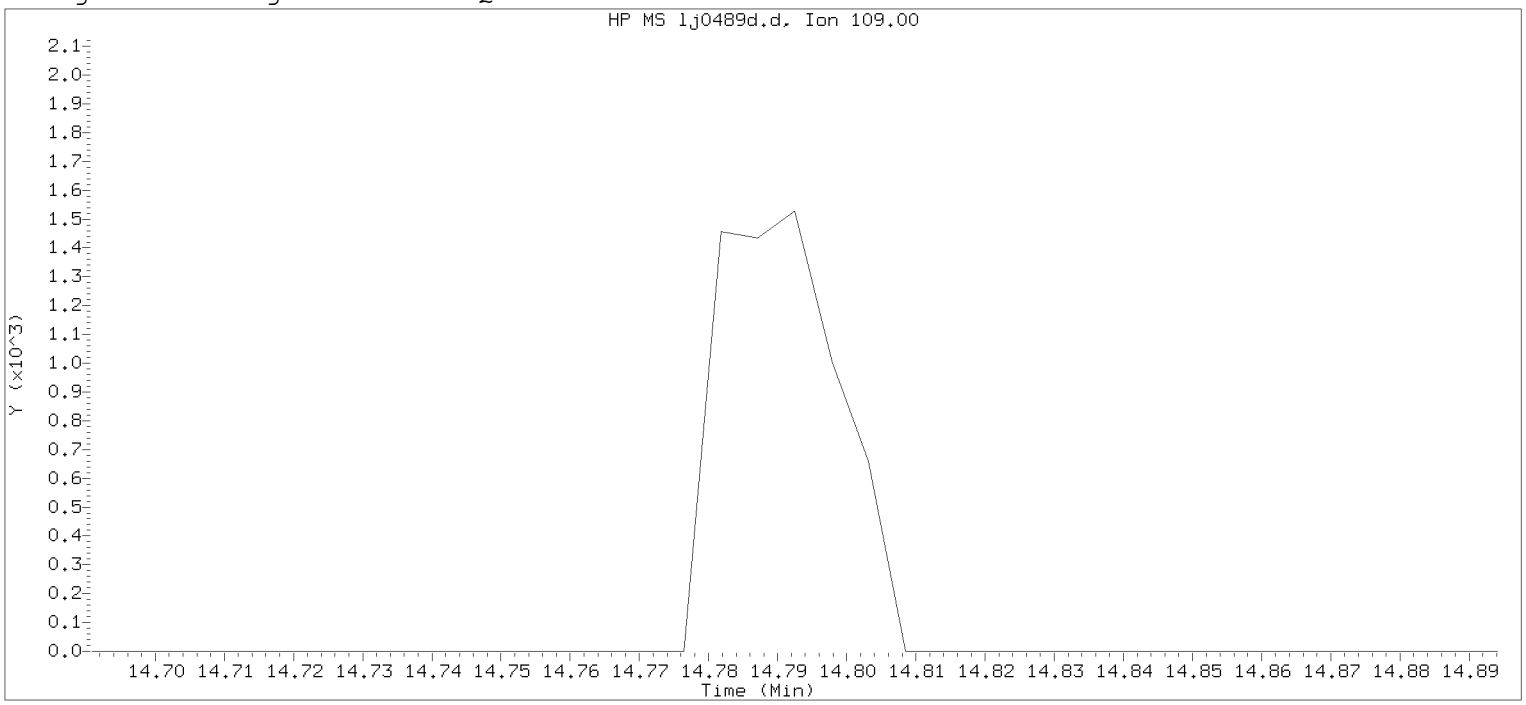
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

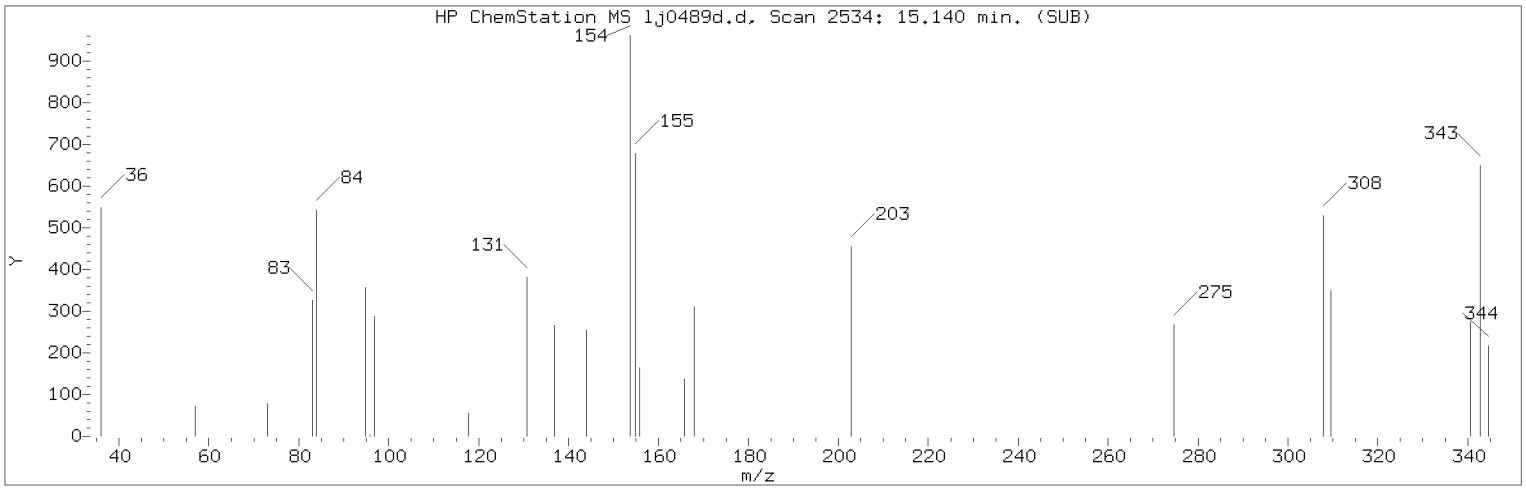
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

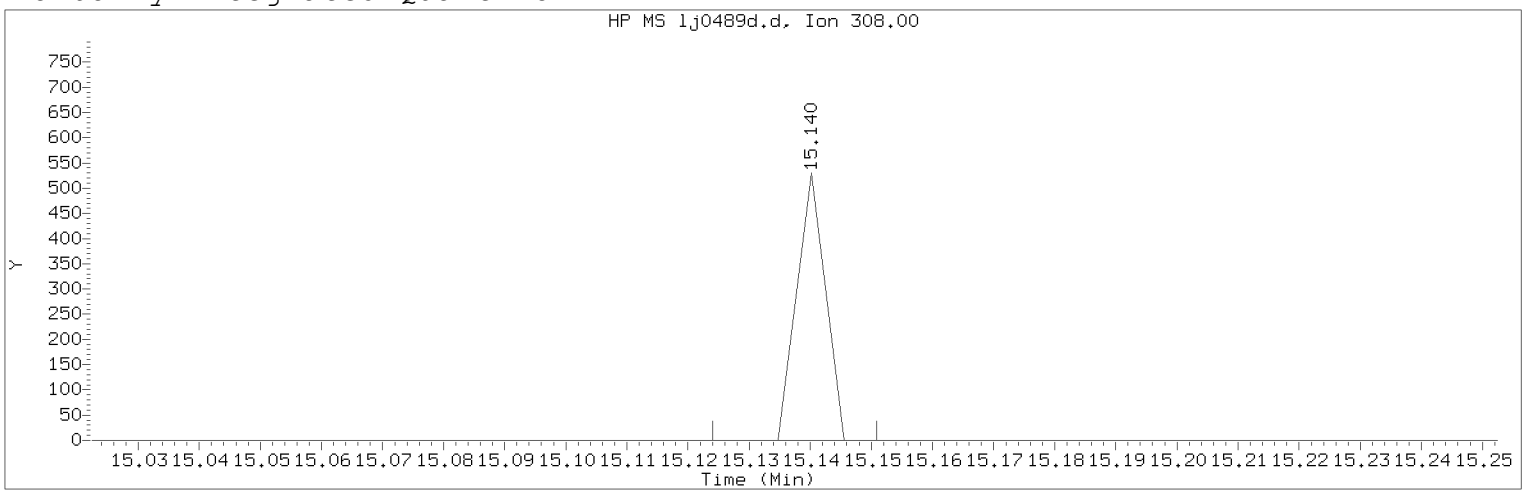
Compound Number : 167
Compound Name : Parathion
Expected RT (minutes) : 14.793
Quant Ion : 109.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

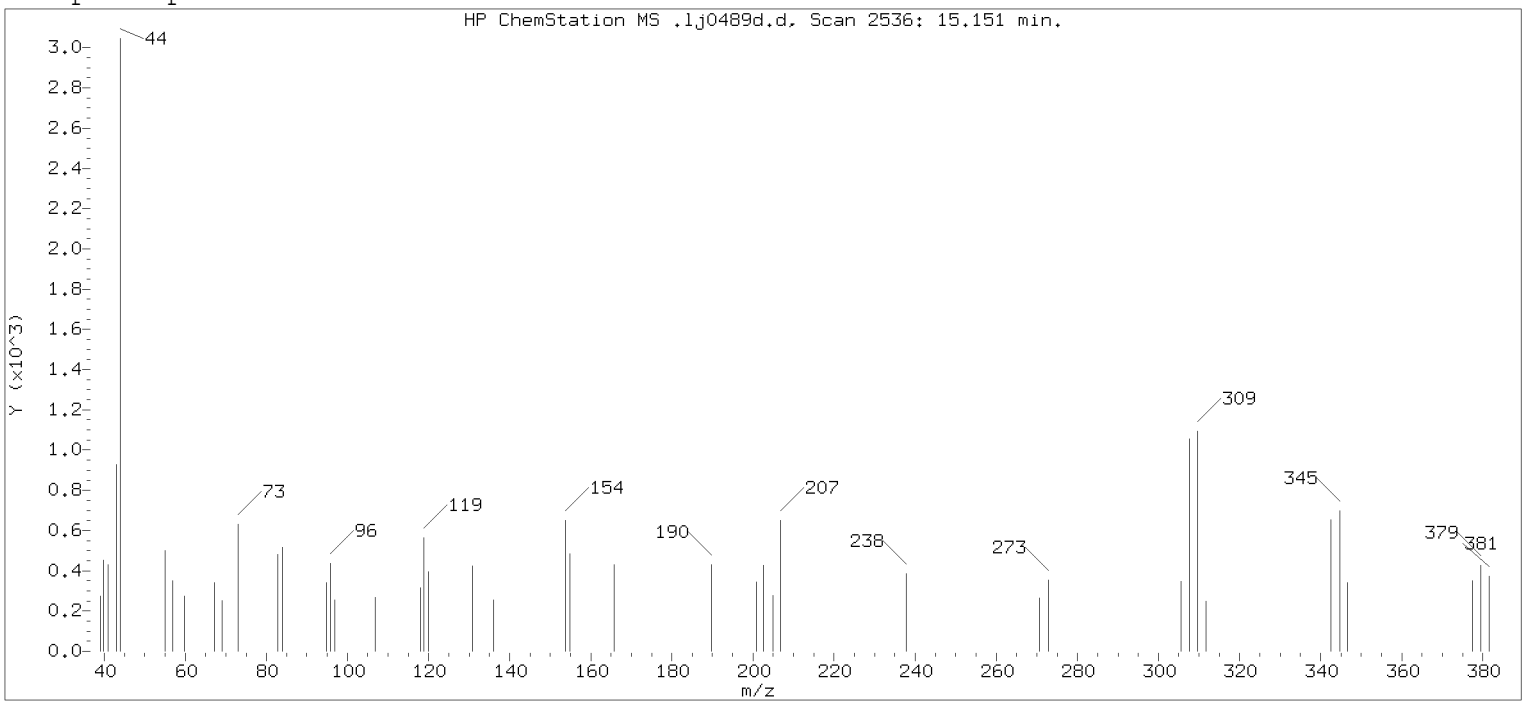
Compound Number : 169
Compound Name : Octachlorostyrene
Scan Number : 2534
Retention Time (minutes) : 15.140
Quant Ion : 308.00
Area (flag) : 170M
On-Column Amount (ng/ul) : 0.0201
Integration start scan : 2530 Integration stop scan: 2535
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

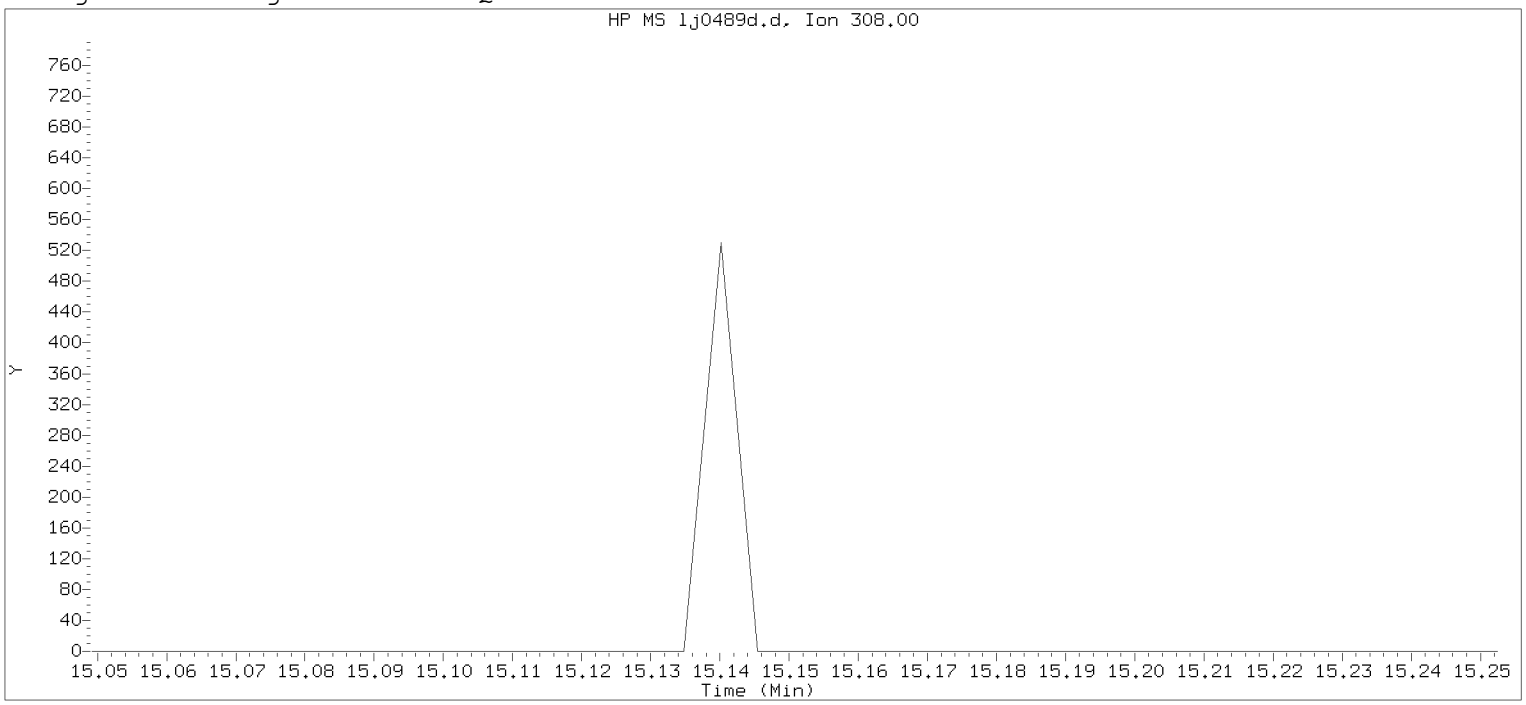
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

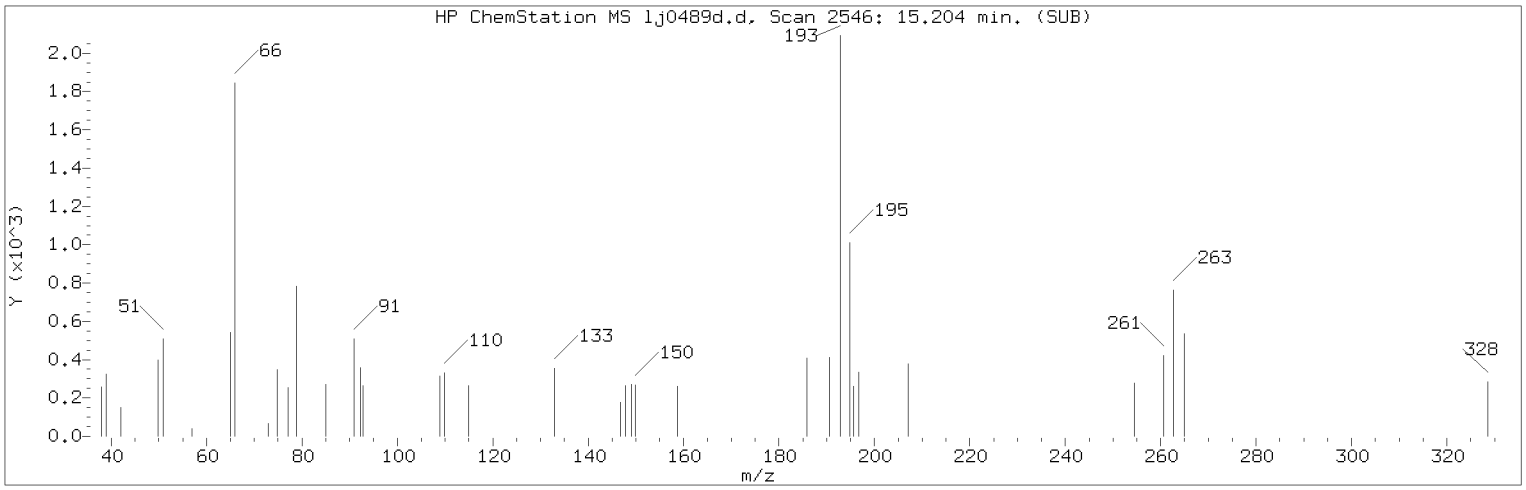
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

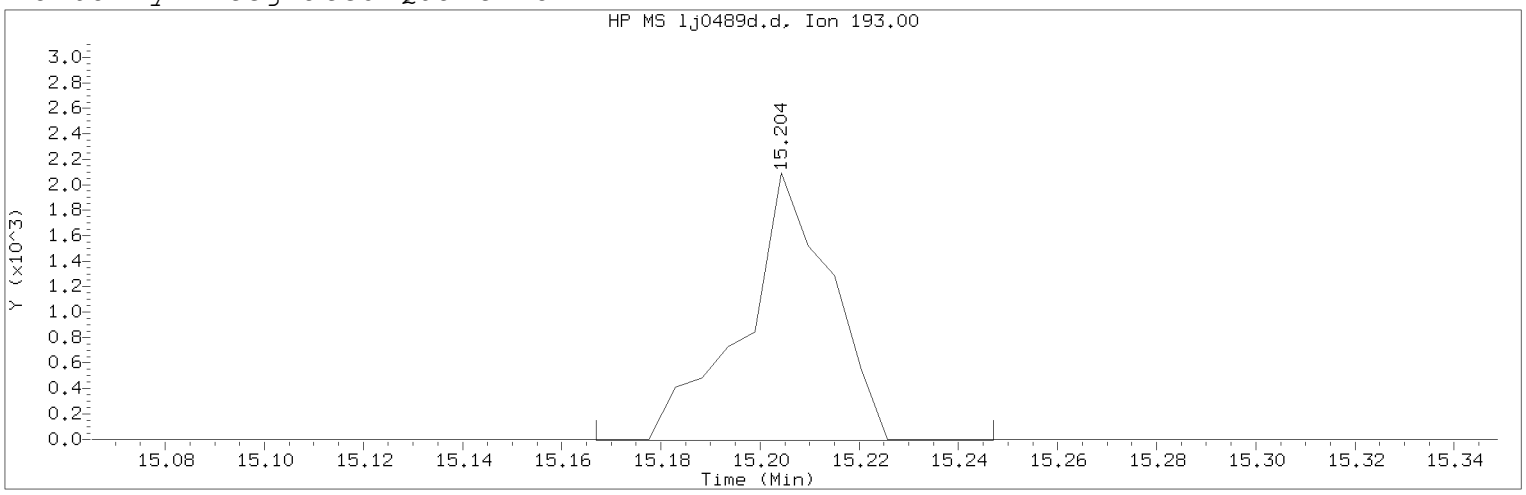
Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 15.151
Quant Ion : 308.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1286

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

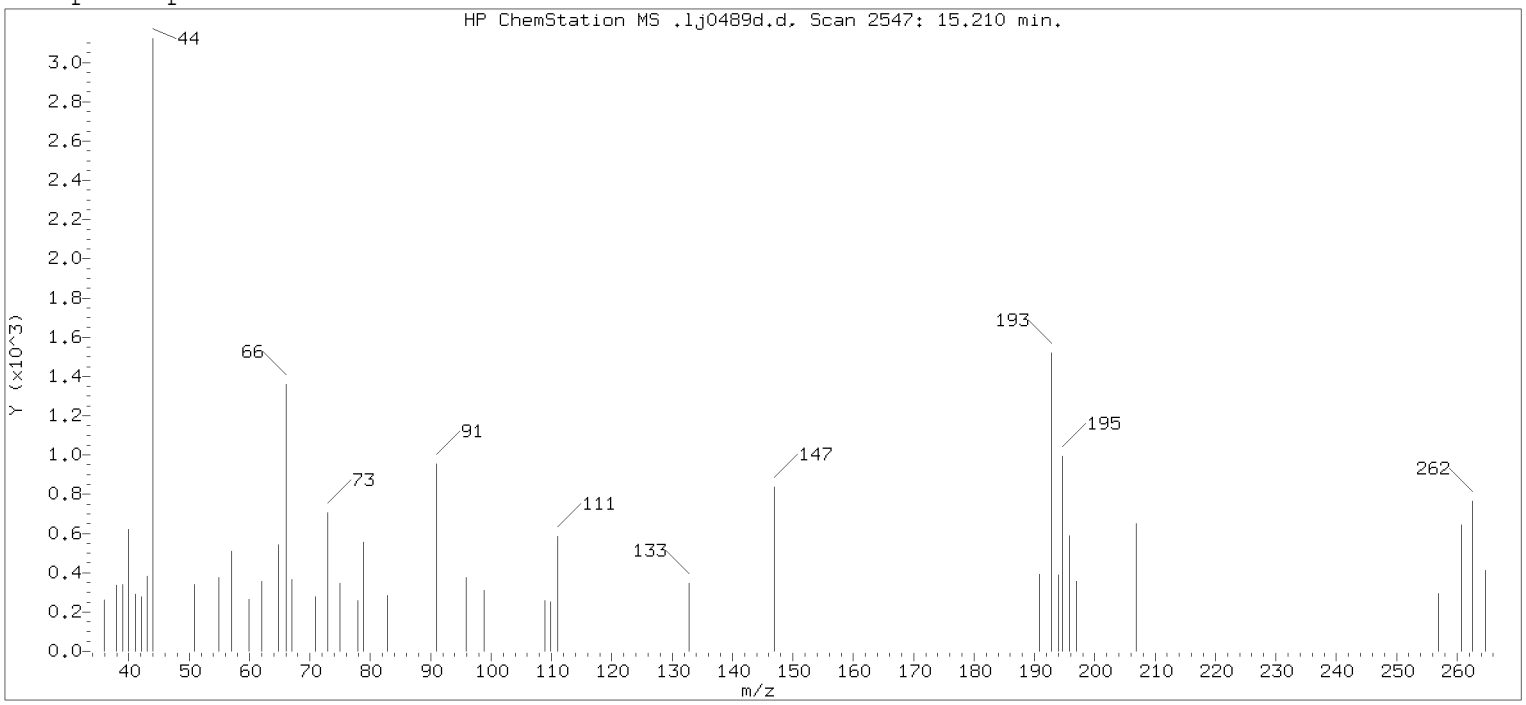
Compound Number : 171
Compound Name : Isodrin
Scan Number : 2546
Retention Time (minutes) : 15.204
Quant Ion : 193.00
Area (flag) : 2575M
On-Column Amount (ng/ul) : 0.1491
Integration start scan : 2538 Integration stop scan: 2553
Y at integration start : -7 Y at integration end: -7

Reason for manual integration: missed peak

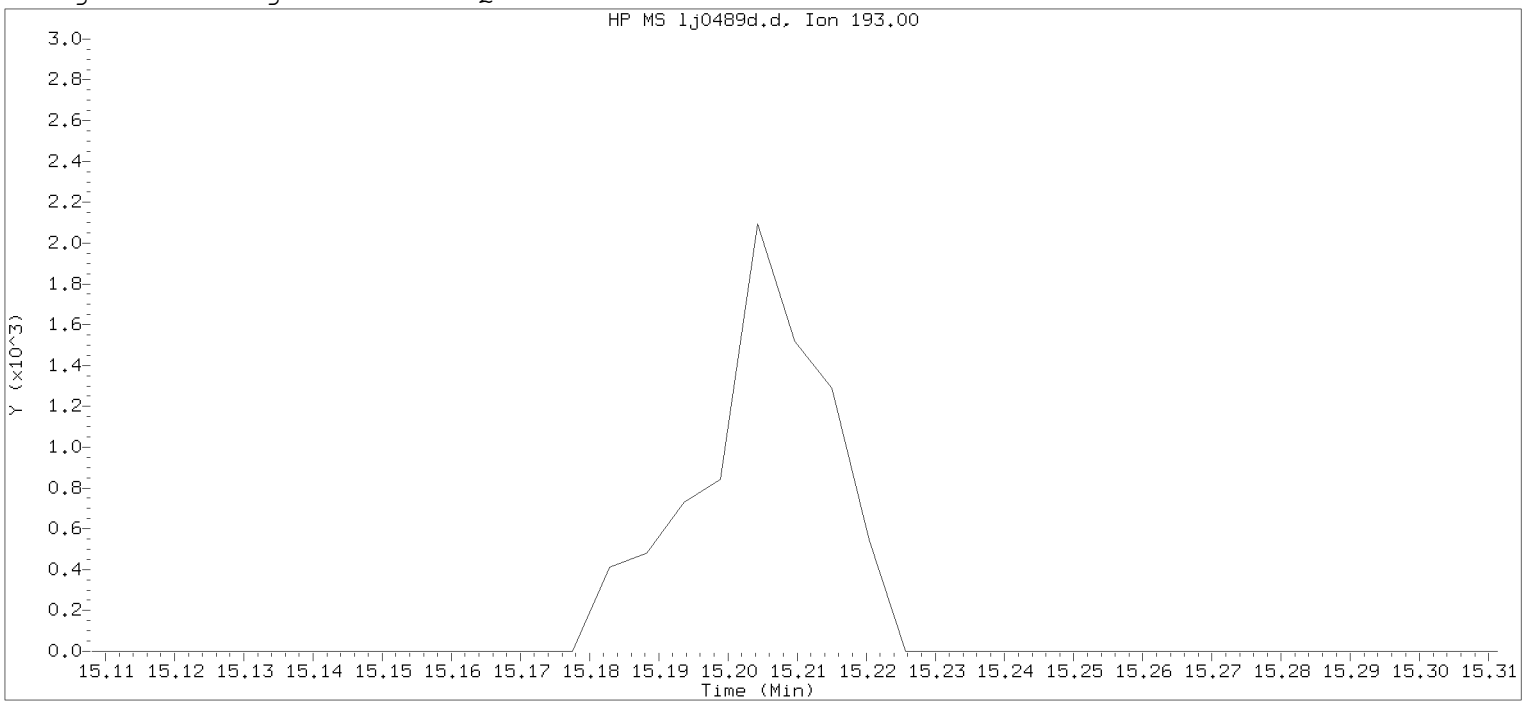
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

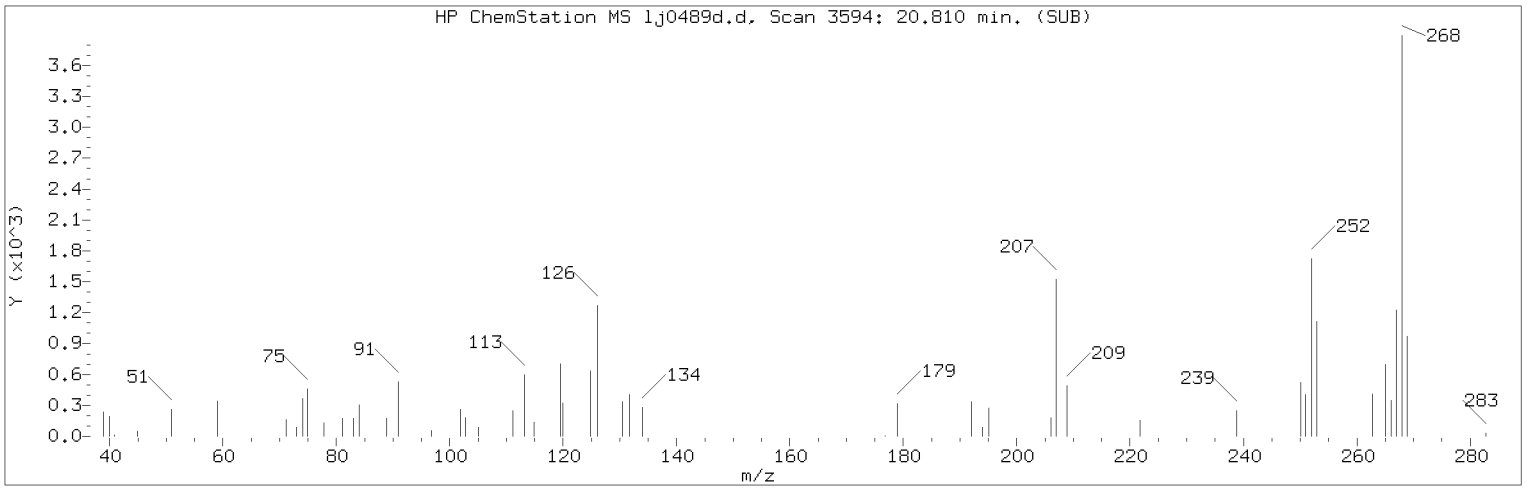
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

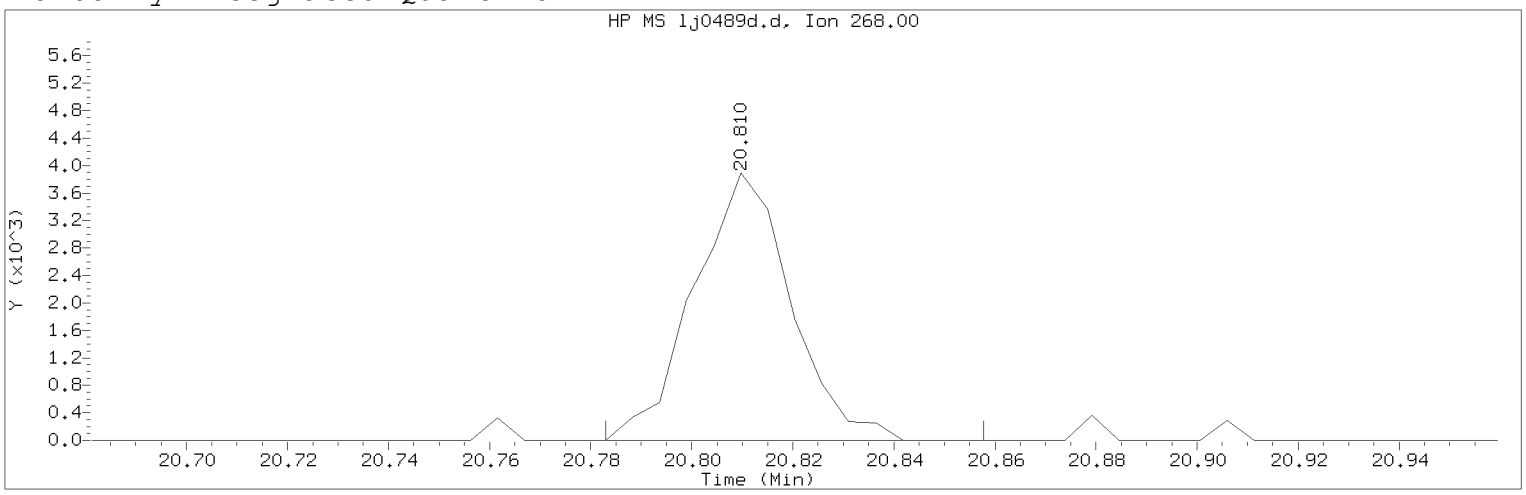
Compound Number : 171
Compound Name : Isodrin
Expected RT (minutes) : 15.210
Quant Ion : 193.00

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 1238

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

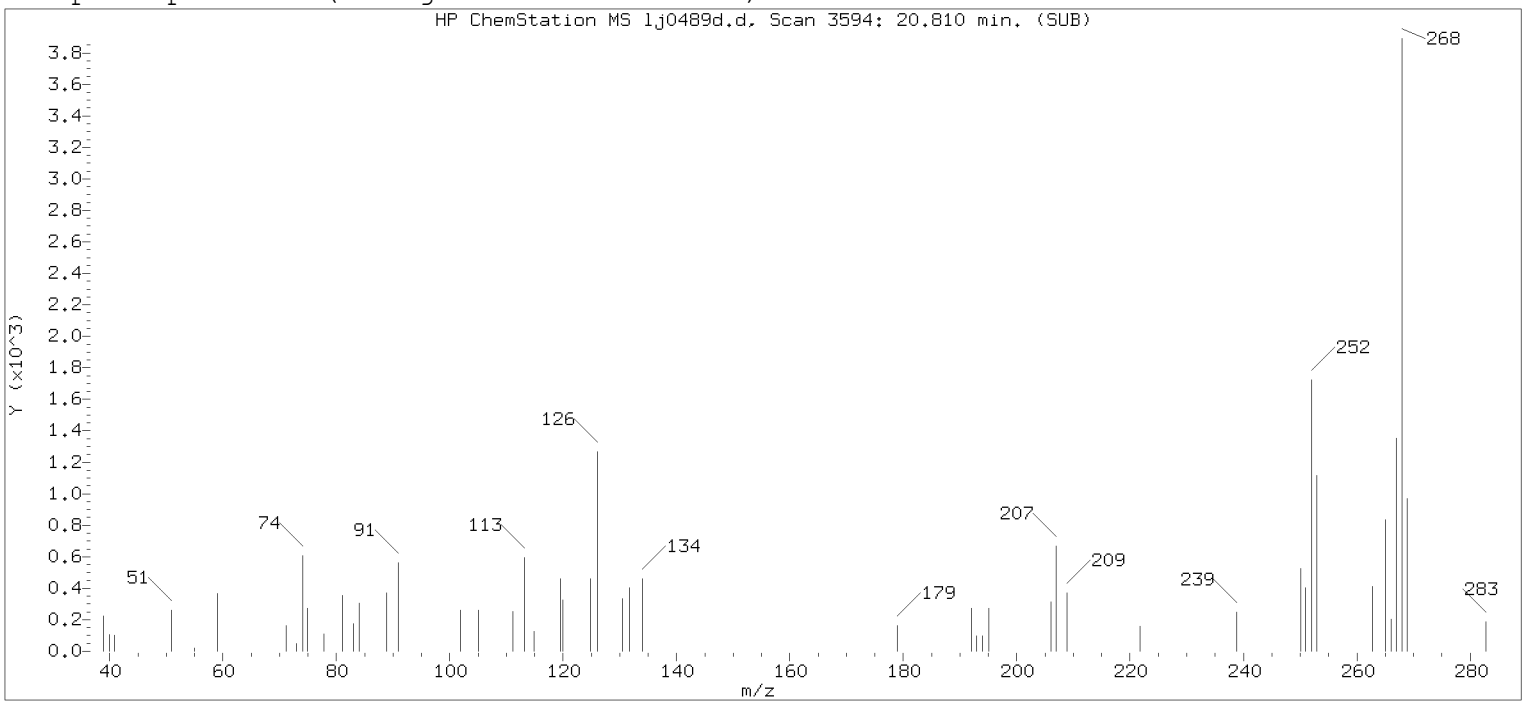
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 3594
Retention Time (minutes) : 20.810
Quant Ion : 268.00
Area (flag) : 5172M
On-Column Amount (ng/ul) : 0.1098
Integration start scan : 3588 Integration stop scan: 3602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

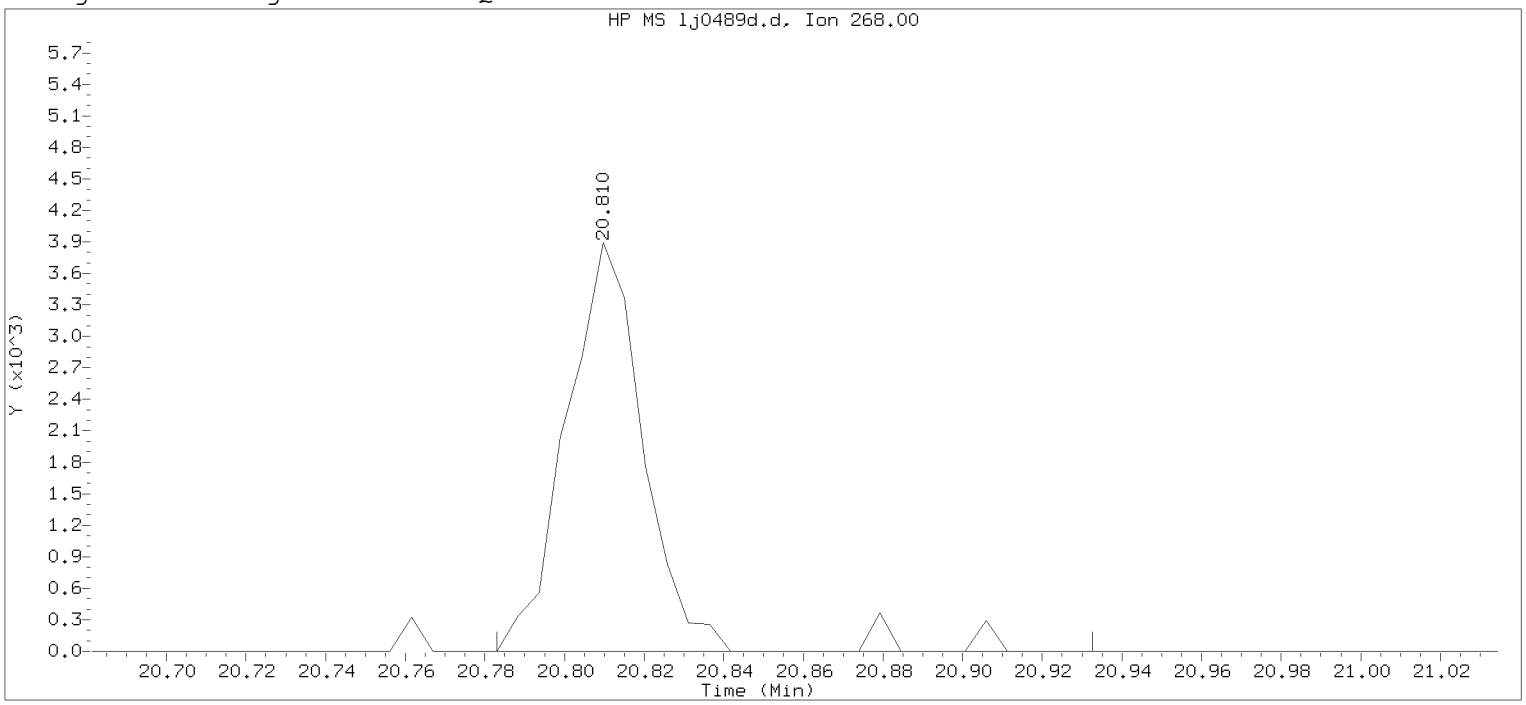
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

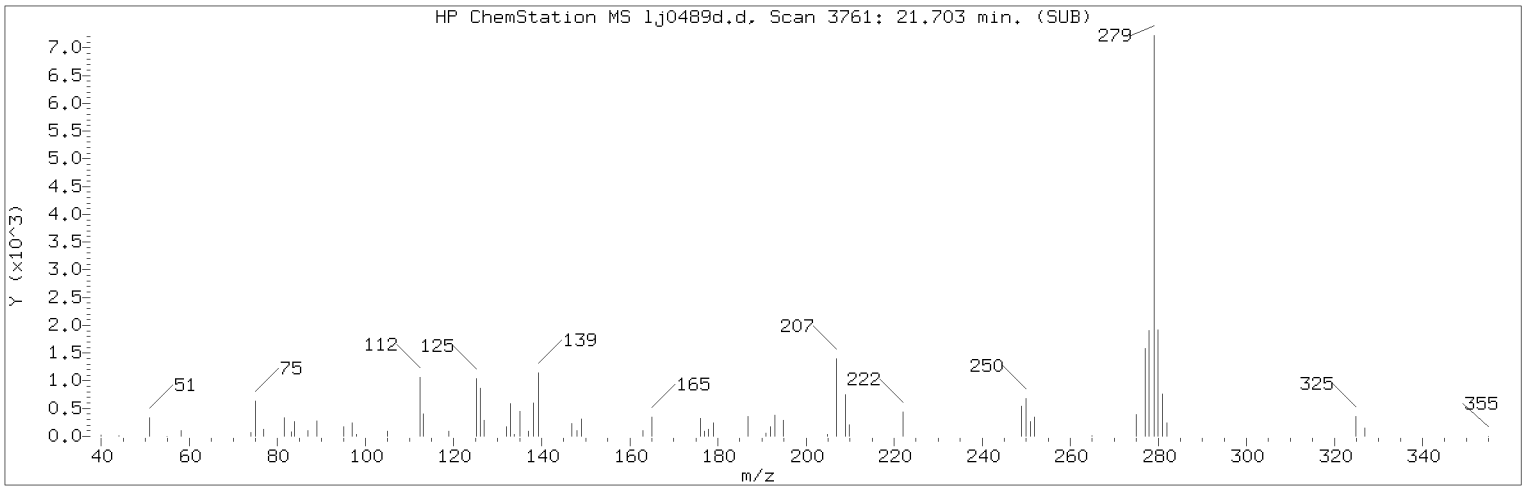
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

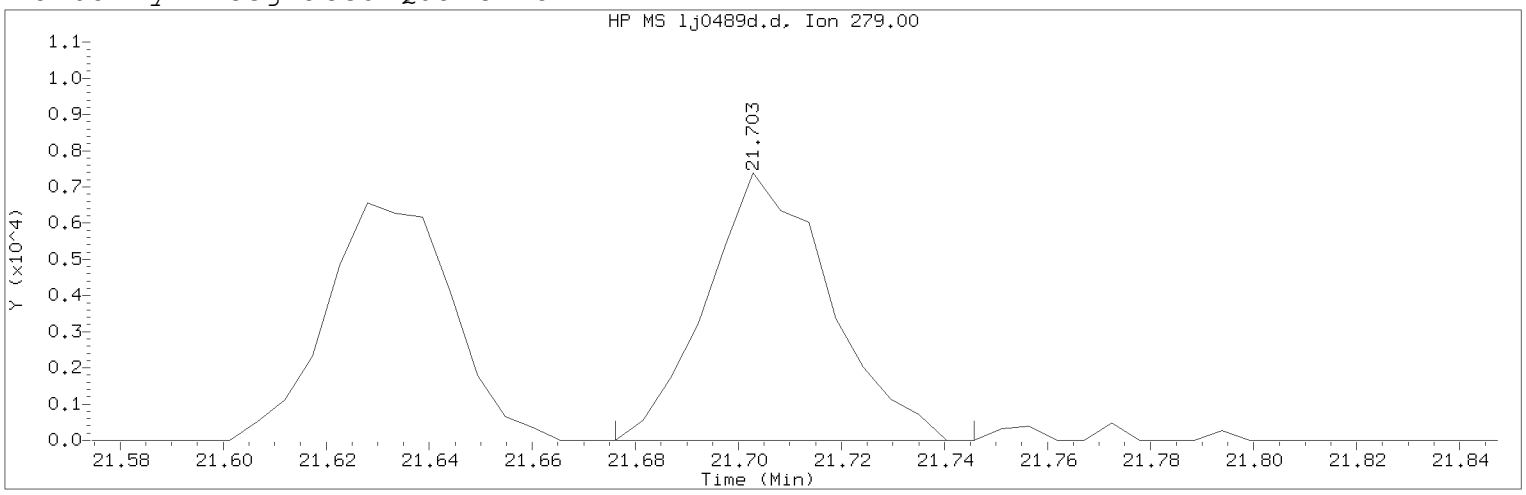
Compound Number	: 215		
Compound Name	: 3-Methylcholanthrene		
Scan Number	: 3594		
Retention Time (minutes)	: 20.810		
Quant Ion	: 268.00		
Area	: 5383		
On-column Amount (ng/ul)	: 0.1120		
Integration start scan	: 3588	Integration stop scan:	3616
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: 5147

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

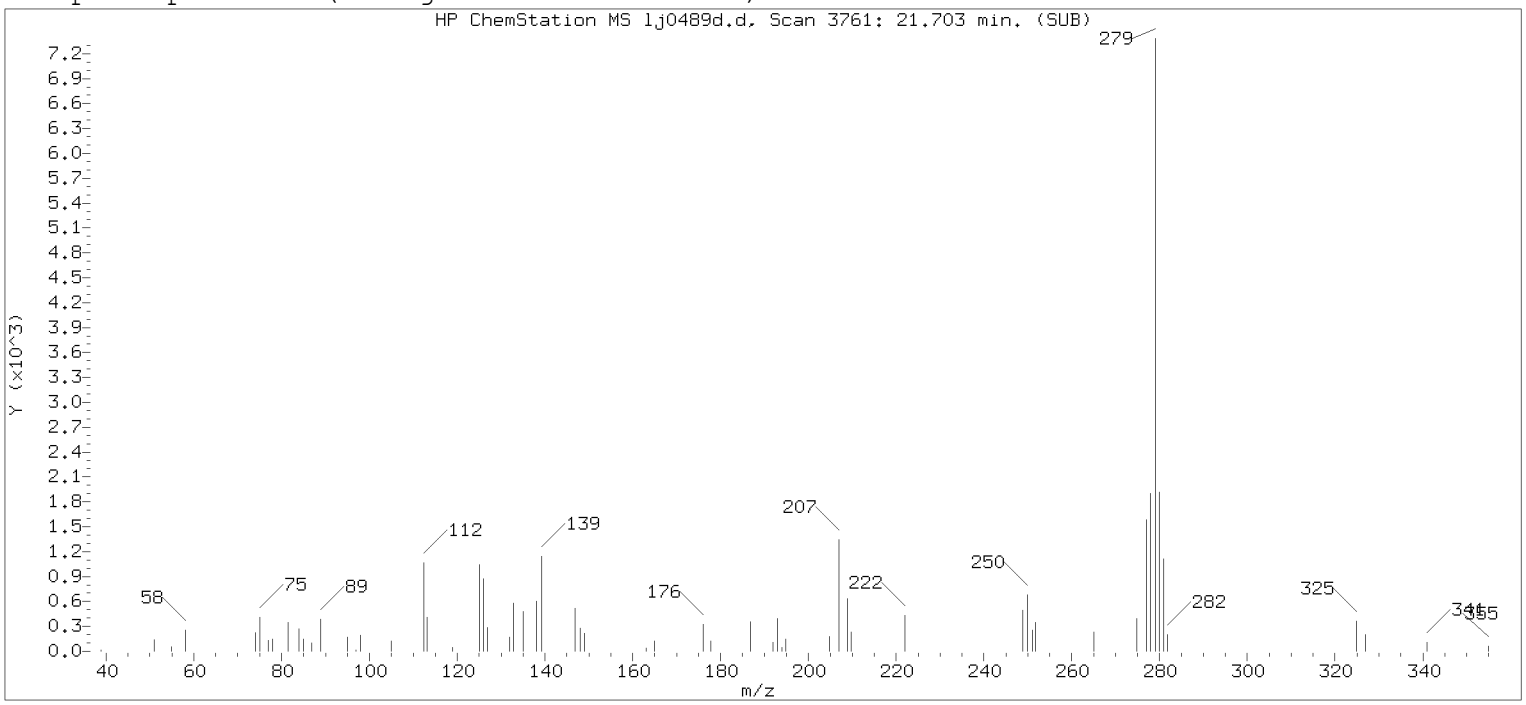
Compound Number : 218
Compound Name : Dibenz(a,j)acridine
Scan Number : 3761
Retention Time (minutes) : 21.703
Quant Ion : 279.00
Area (flag) : 12157M
On-Column Amount (ng/ul) : 0.1089
Integration start scan : 3755 Integration stop scan: 3768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

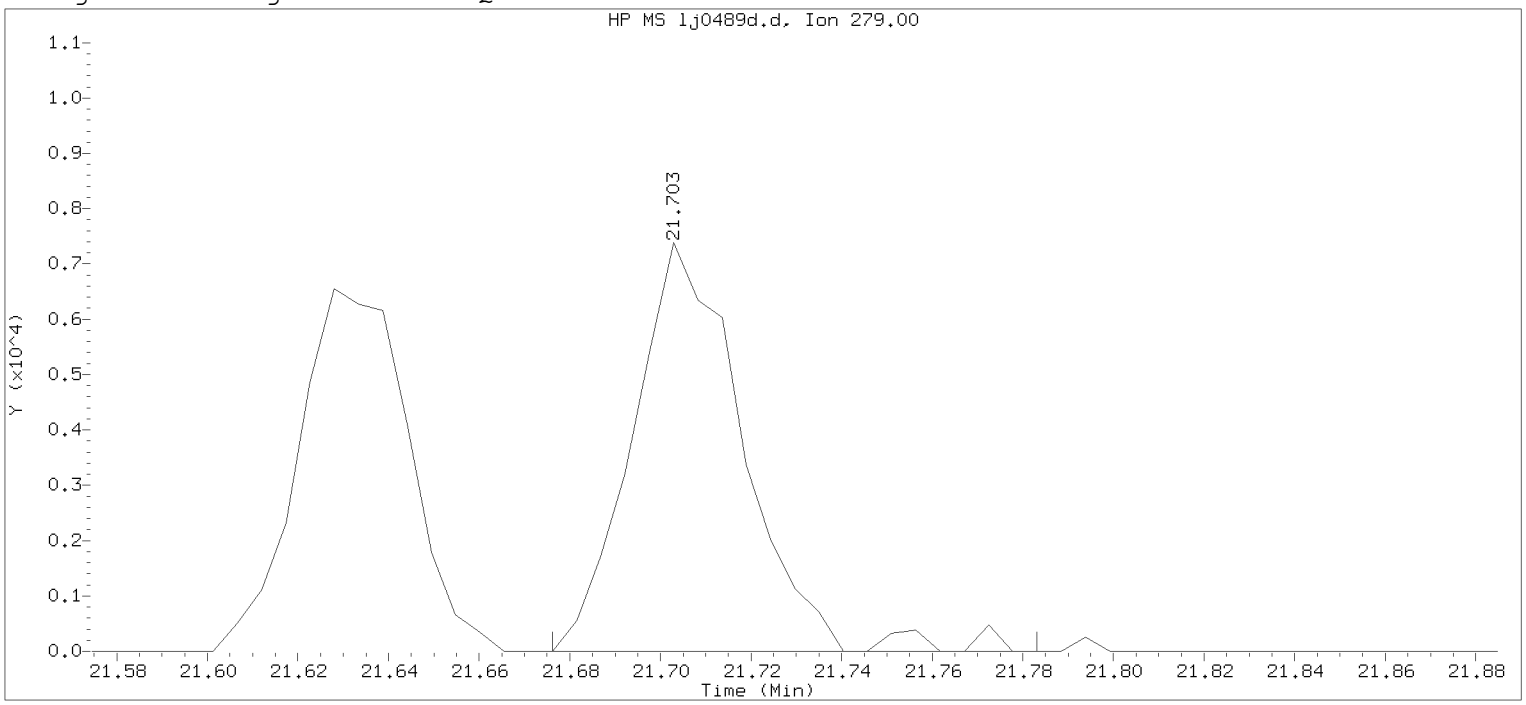
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



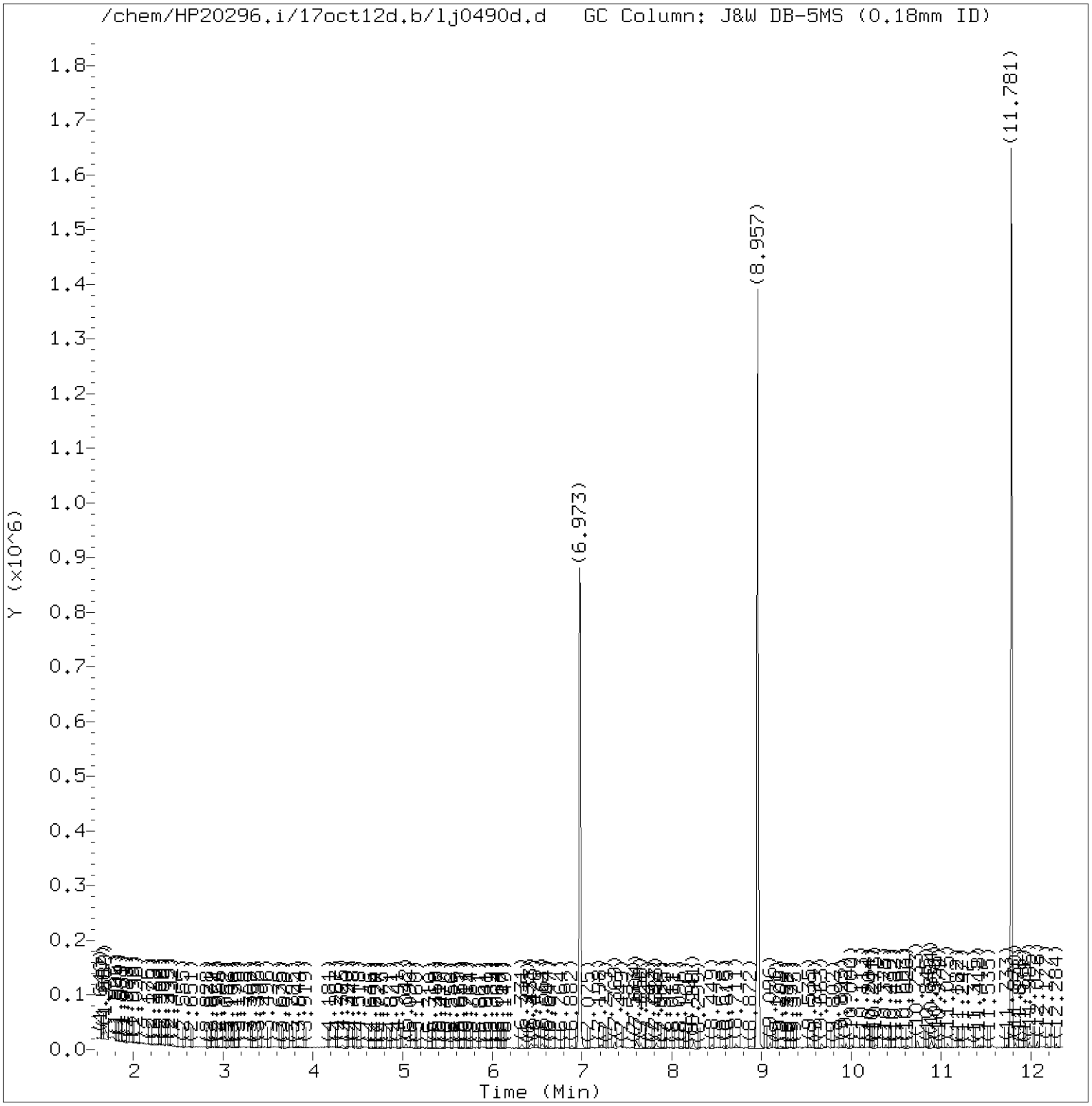
Data File: /chem/HP20296.i/17oct12d.b/lj0489d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:29 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.125 Lab Sample ID: RVMDL2857

Compound Number	: 218		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3761		
Retention Time (minutes)	: 21.703		
Quant Ion	: 279.00		
Area	: 12537		
On-column Amount (ng/ul)	: 0.1138		
Integration start scan	: 3755	Integration stop scan:	3775
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB



Total Ion Chromatogram (TIC)

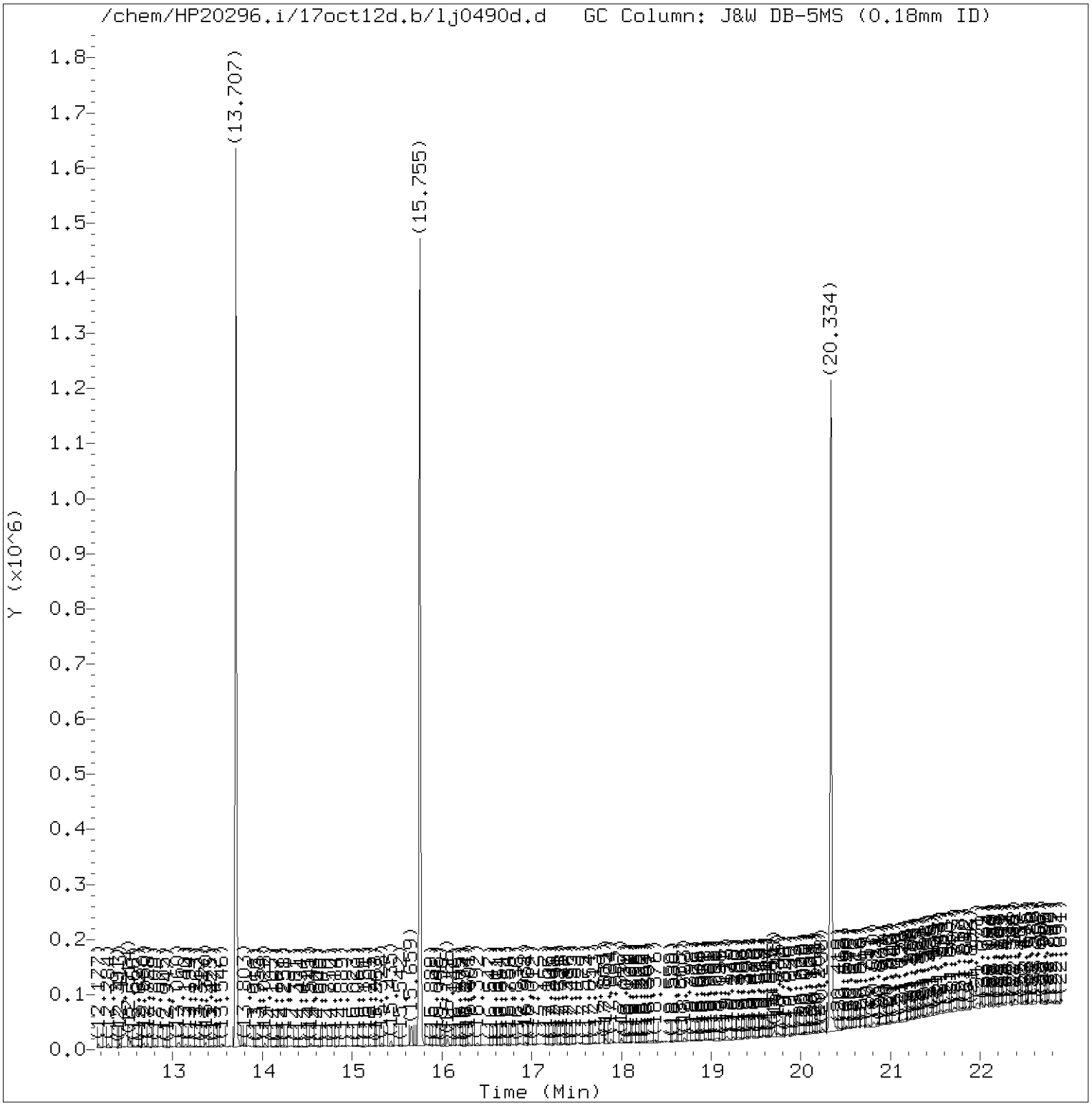
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

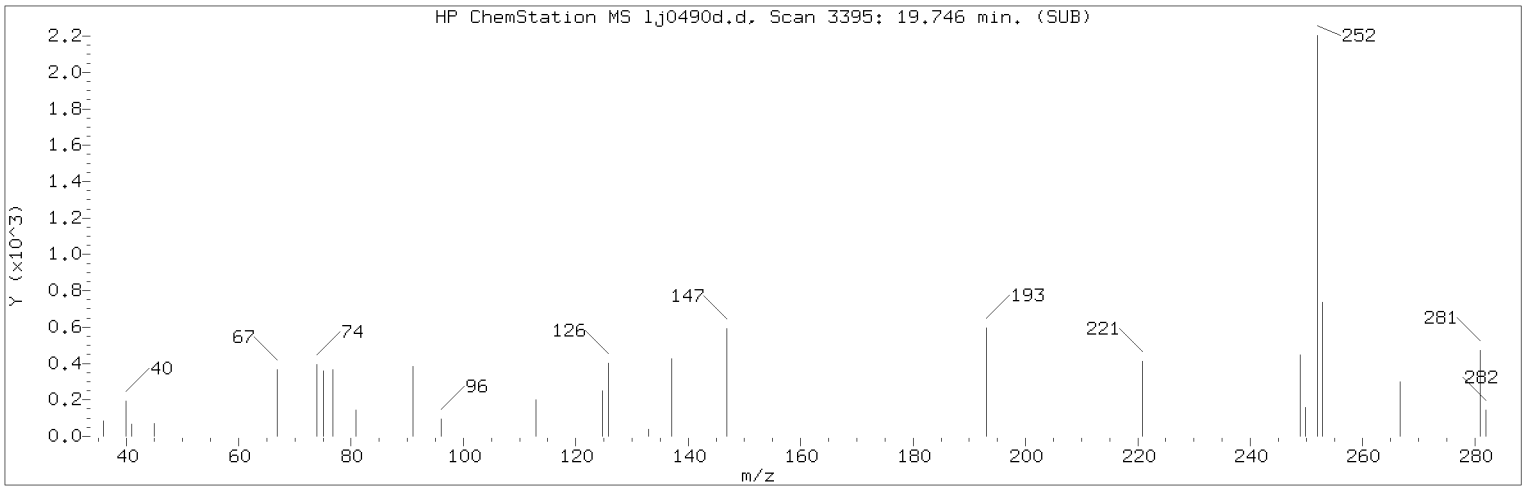
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.973	152	179270	5.000
44)$Nitrobenzene-d5	(2)	7.829	82	3227	0.048
65)*Naphthalene-d8	(2)	8.957	136	720119	5.000
66) Naphthalene	(2)	8.984	128	4242	0.026
83) 2-Methylnaphthalene	(2)	10.113	142	2867	0.027
84) 1-Methylnaphthalene	(2)	10.273	142	2739	0.028
93)$2-Fluorobiphenyl	(3)	10.738	172	5753	0.052
109) Acenaphthylene	(3)	11.568	152	3058	0.023
113)*Acenaphthene-d10	(3)	11.781	164	379631	5.000
114) Acenaphthene	(3)	11.830	153	2791	0.027
126) Fluorene	(3)	12.509	166	2592	0.024
145) Hexachlorobenzene	(4)	13.199	284	490	0.021
153)*Phenanthrene-d10	(4)	13.707	188	666261	5.000
155) Phenanthrene	(4)	13.739	178	3762	0.024
157) Anthracene	(4)	13.803	178	3672	0.024
222) Total PAHs	(6)			52858	0.393
173) Fluoranthene	(4)	15.435	202	4040	0.024
175)*Pyrene-d10	(5)	15.755	212	729557	5.000
177) Pyrene	(5)	15.777	202	4315	0.025
179)$Terphenyl-d14	(5)	16.066	244	5242	0.049
195) Benzo(a)anthracene	(5)	17.831	228	3332	0.021
196) Chrysene	(5)	17.890	228	3434	0.024
206) Benzo(b)fluoranthene	(6)	19.703	252	3322	0.023
208) Benzo(k)fluoranthene	(6)	19.746	252	3416M	0.025
211) Benzo(a)pyrene	(6)	20.238	252	2783M	0.021
213)*Perylene-d12	(6)	20.334	264	546678	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.960	276	3043M	0.025
220) Dibenz(a,h)anthracene	(6)	22.013	278	2740	0.022
221) Benzo(g,h,i)perylene	(6)	22.388	276	3448	0.028

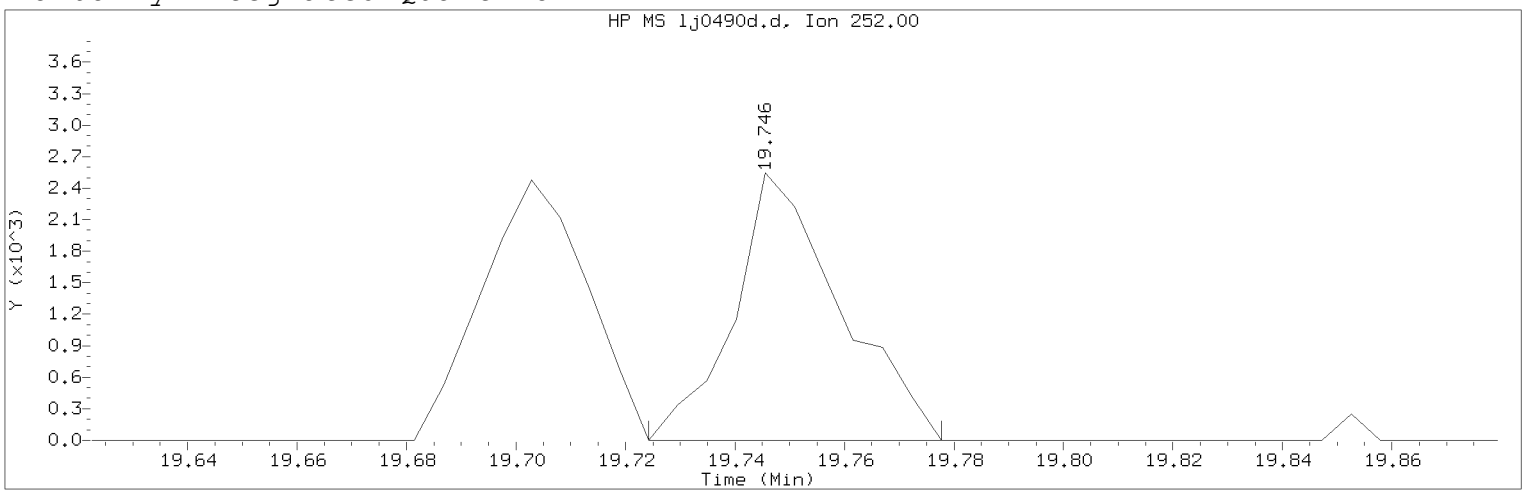
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

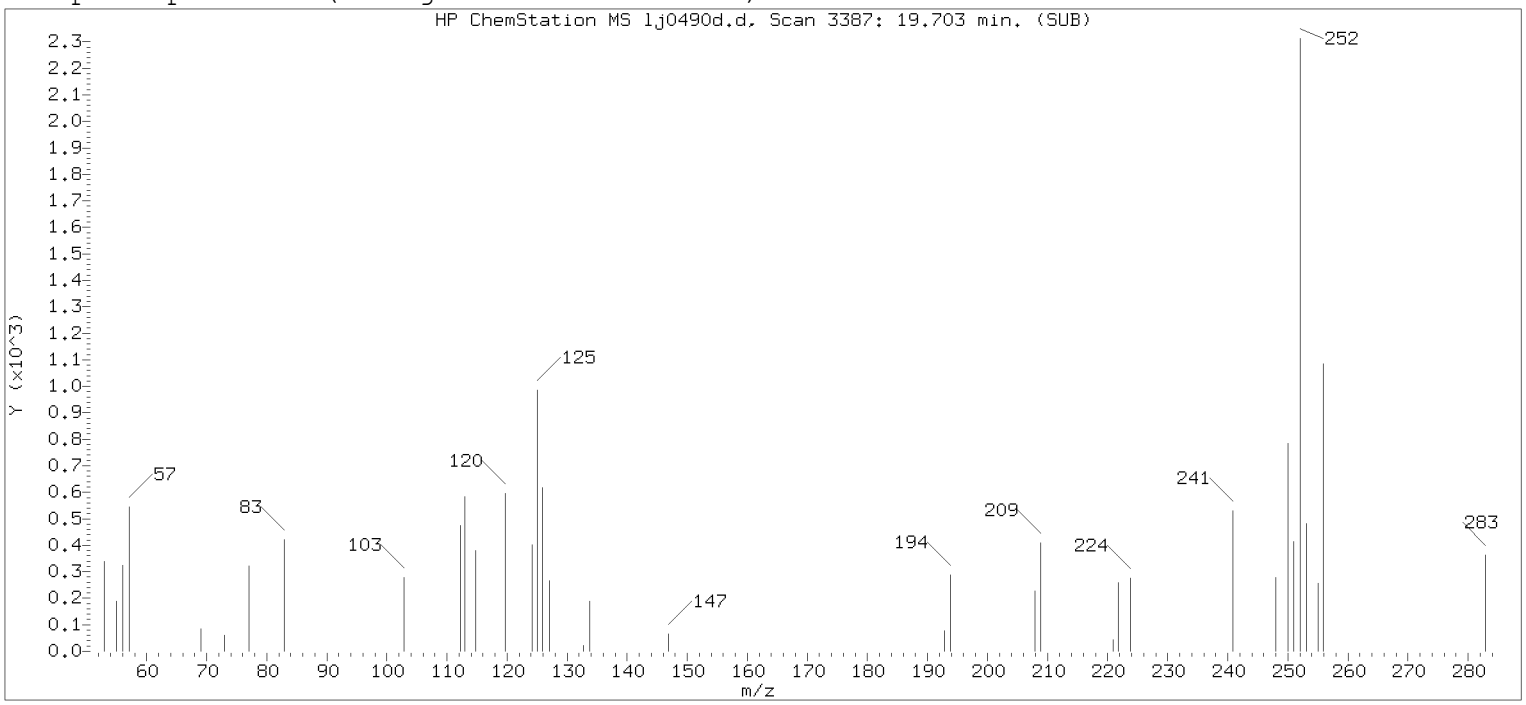
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 3395
Retention Time (minutes) : 19.746
Quant Ion : 252.00
Area (flag) : 3416M
On-Column Amount (ng/ul) : 0.0251
Integration start scan : 3390 Integration stop scan: 3400
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

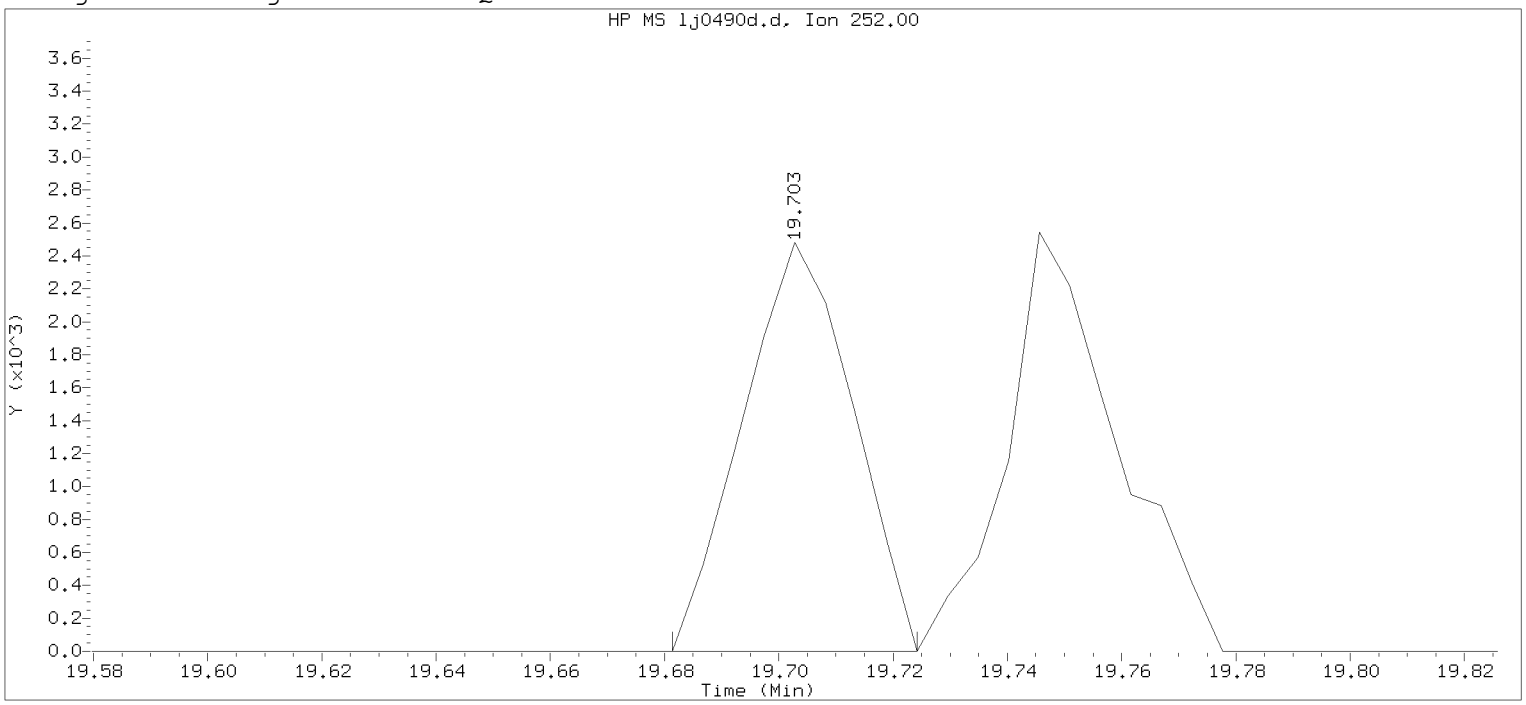
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

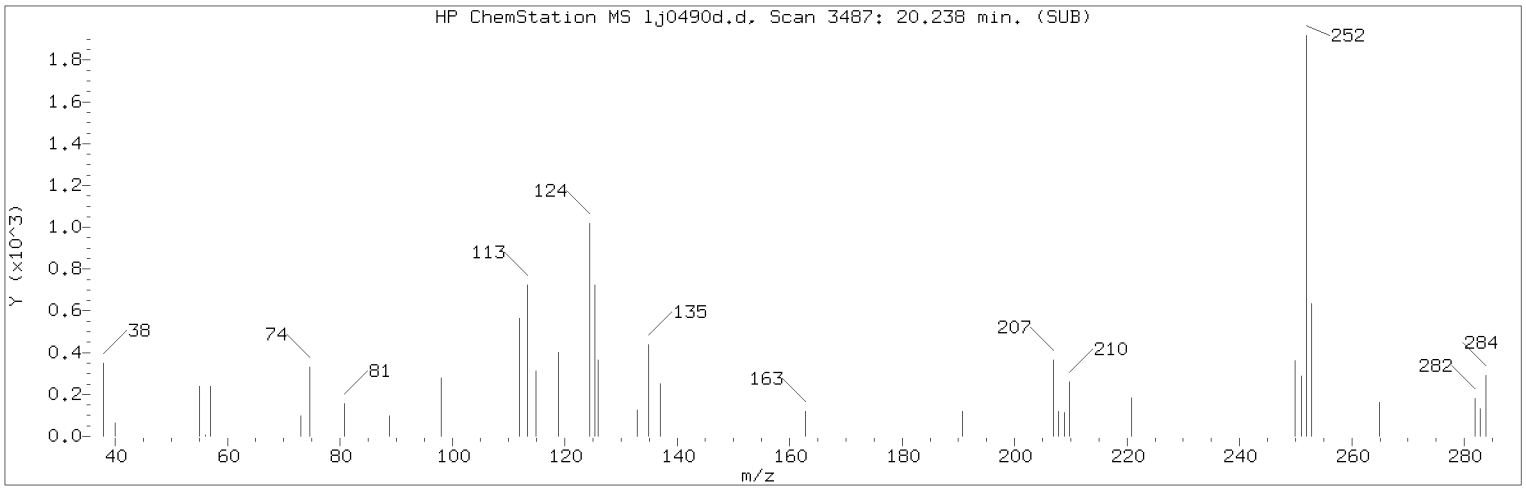
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

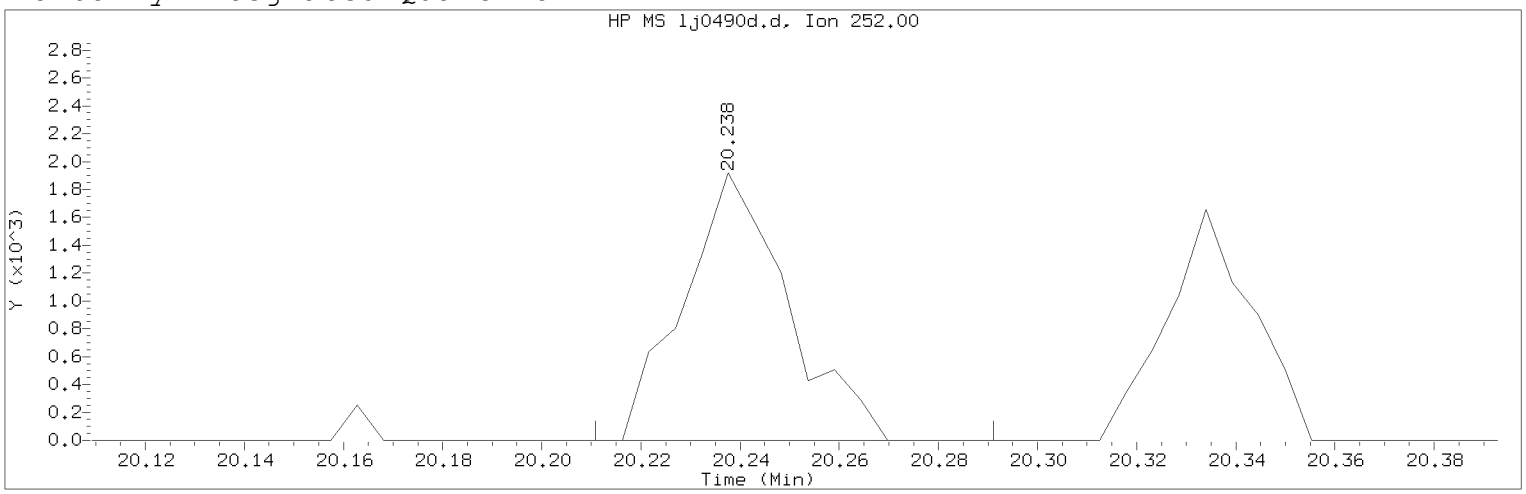
Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3387		
Retention Time (minutes)	: 19.703		
Quant Ion	: 252.00		
Area	: 3322		
On-column Amount (ng/ul)	: 0.0246		
Integration start scan	: 3382	Integration stop scan:	3390
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

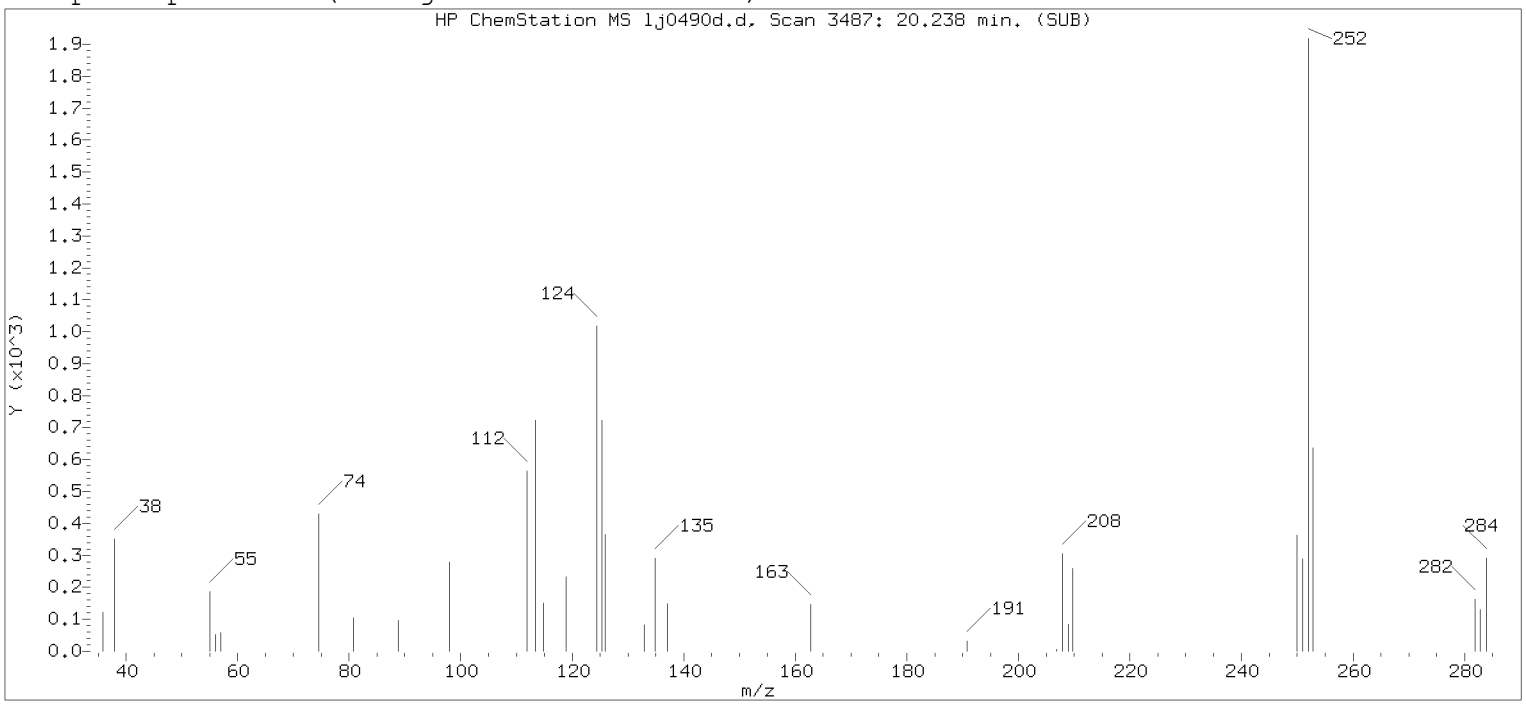
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3487		
Retention Time (minutes)	: 20.238		
Quant Ion	: 252.00		
Area (flag)	: 2783M		
On-Column Amount (ng/ul)	: 0.0209		
Integration start scan	: 3481	Integration stop scan:	3496
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

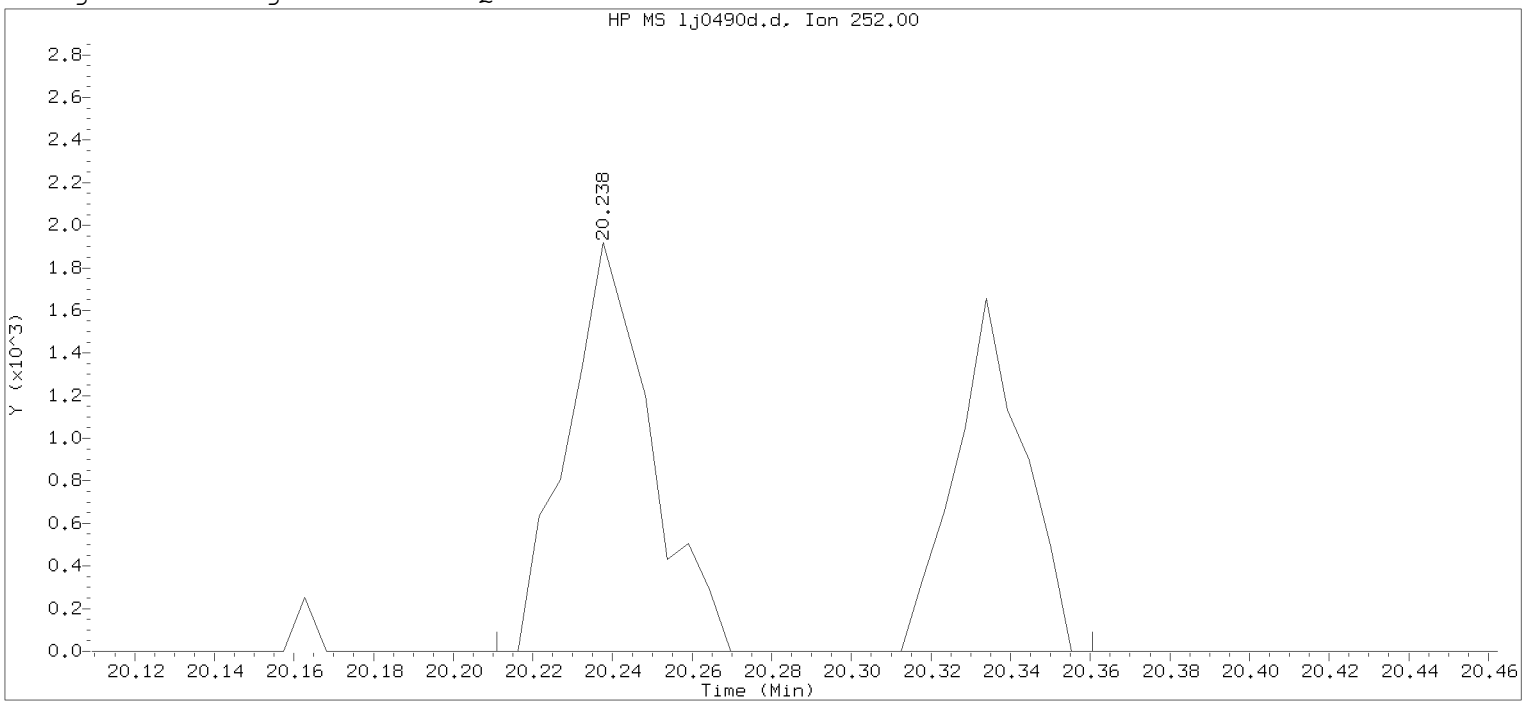
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

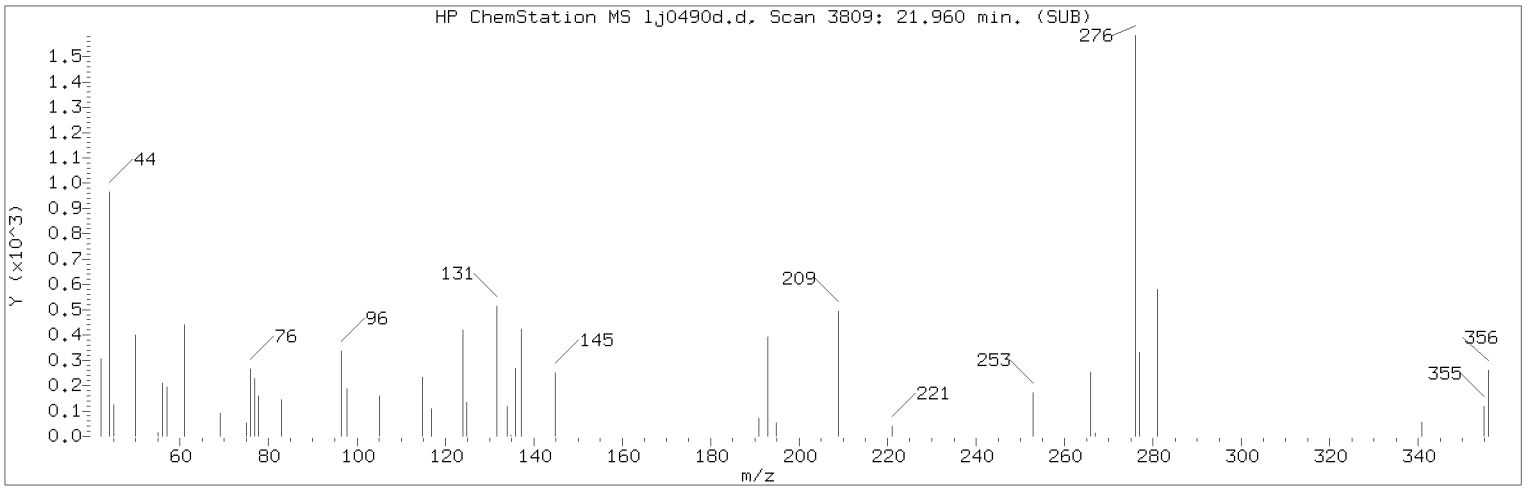
Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

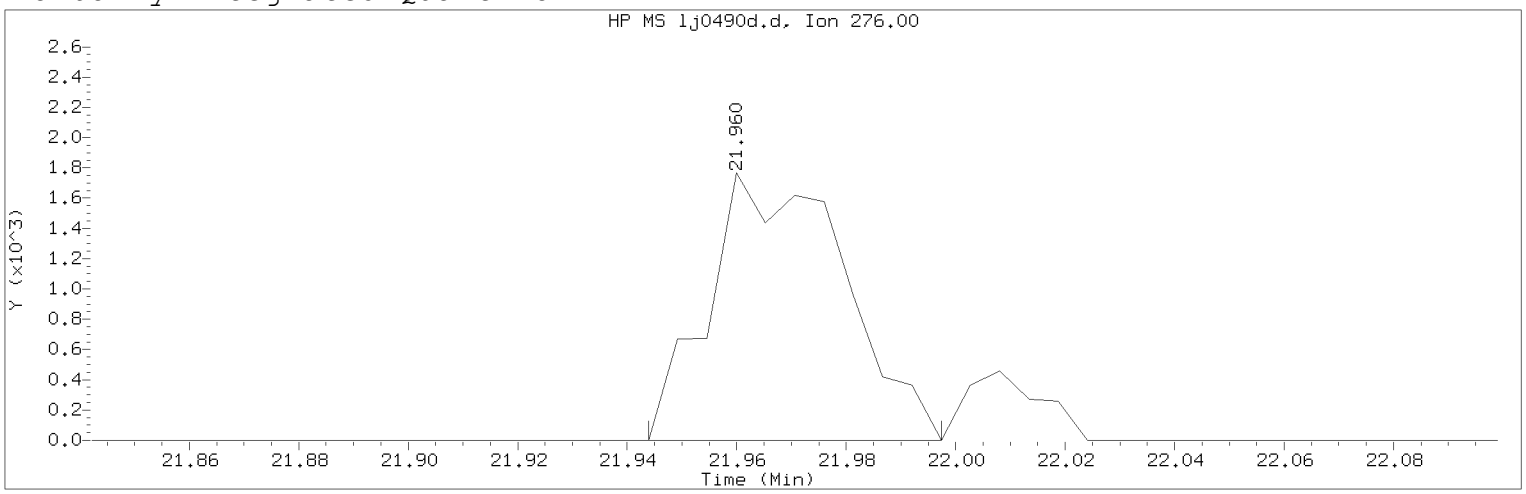
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3487		
Retention Time (minutes)	: 20.238		
Quant Ion	: 252.00		
Area	: 4781		
On-column Amount (ng/ul)	: 0.0364		
Integration start scan	: 3481	Integration stop scan:	3509
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 26-OCT-2017 10:03
Date, time and analyst ID of latest file update: 26-Oct-2017 10:03 ceb05247

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

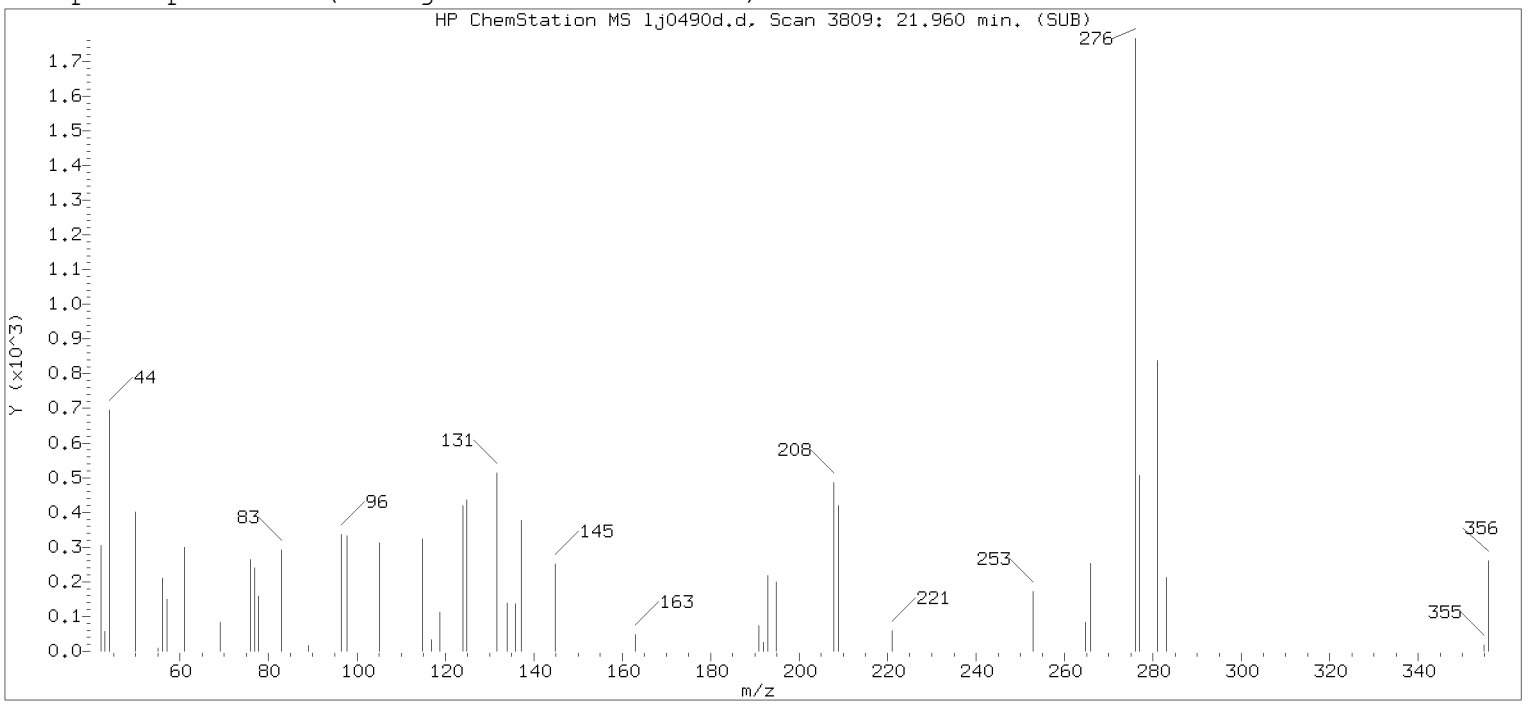
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3809
Retention Time (minutes) : 21.960
Quant Ion : 276.00
Area (flag) : 3043M
On-Column Amount (ng/ul) : 0.0252
Integration start scan : 3805 Integration stop scan: 3815
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

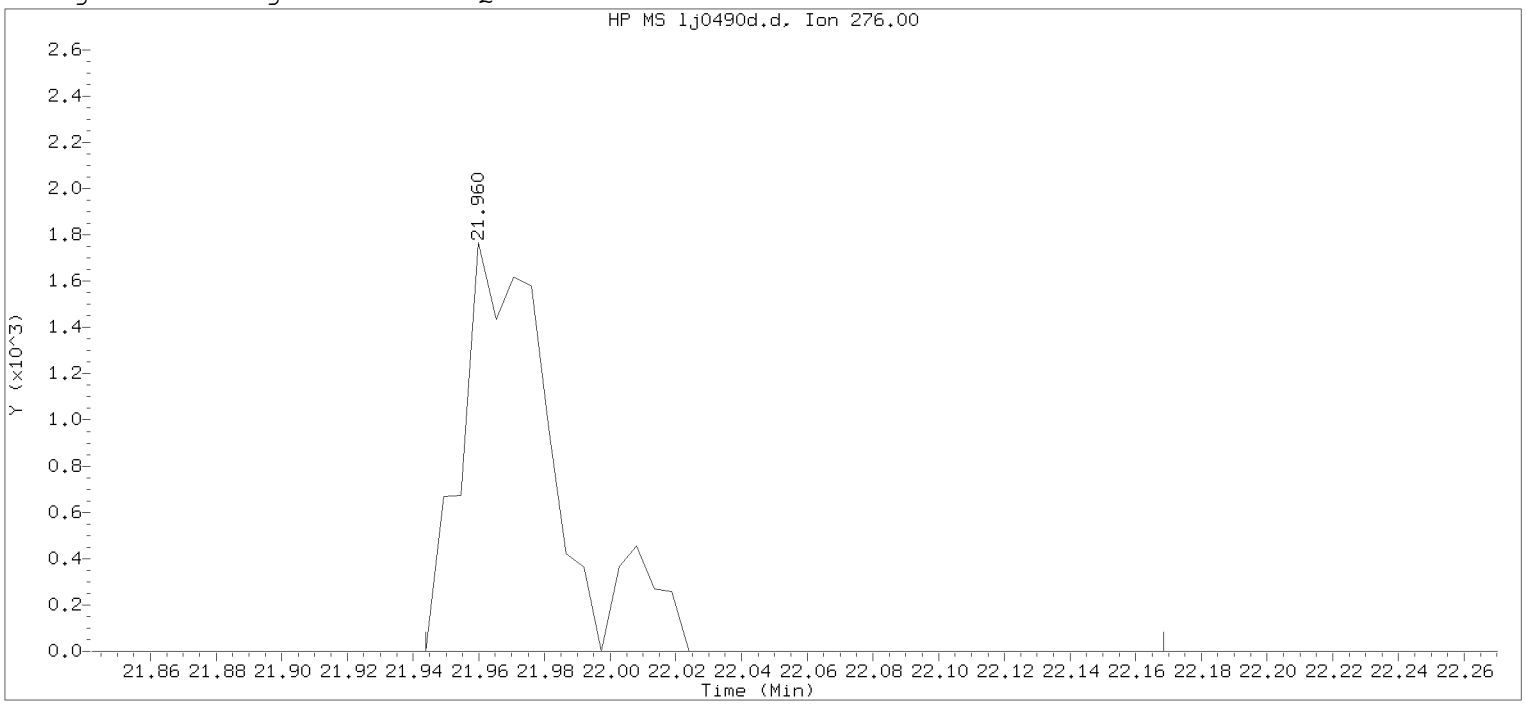
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



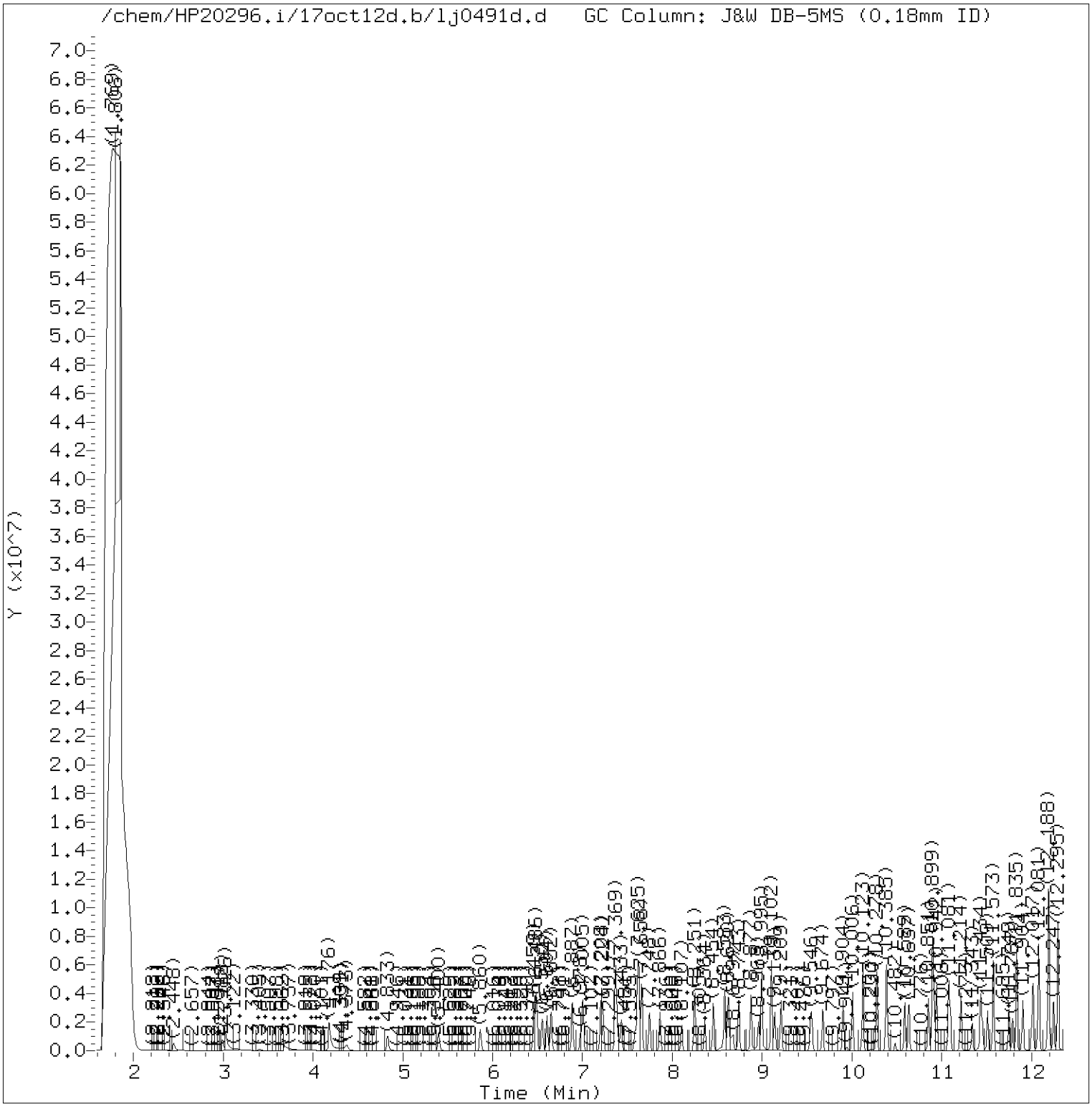
Data File: /chem/HP20296.i/17oct12d.b/lj0490d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 22:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3809		
Retention Time (minutes)	: 21.960		
Quant Ion	: 276.00		
Area	: 3476		
On-column Amount (ng/ul)	: 0.0236		
Integration start scan	: 3805	Integration stop scan:	3847
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 10/26/2017 at 10:05.
Target 3.5 esignature user ID: CEB



Total Ion Chromatogram (TIC)

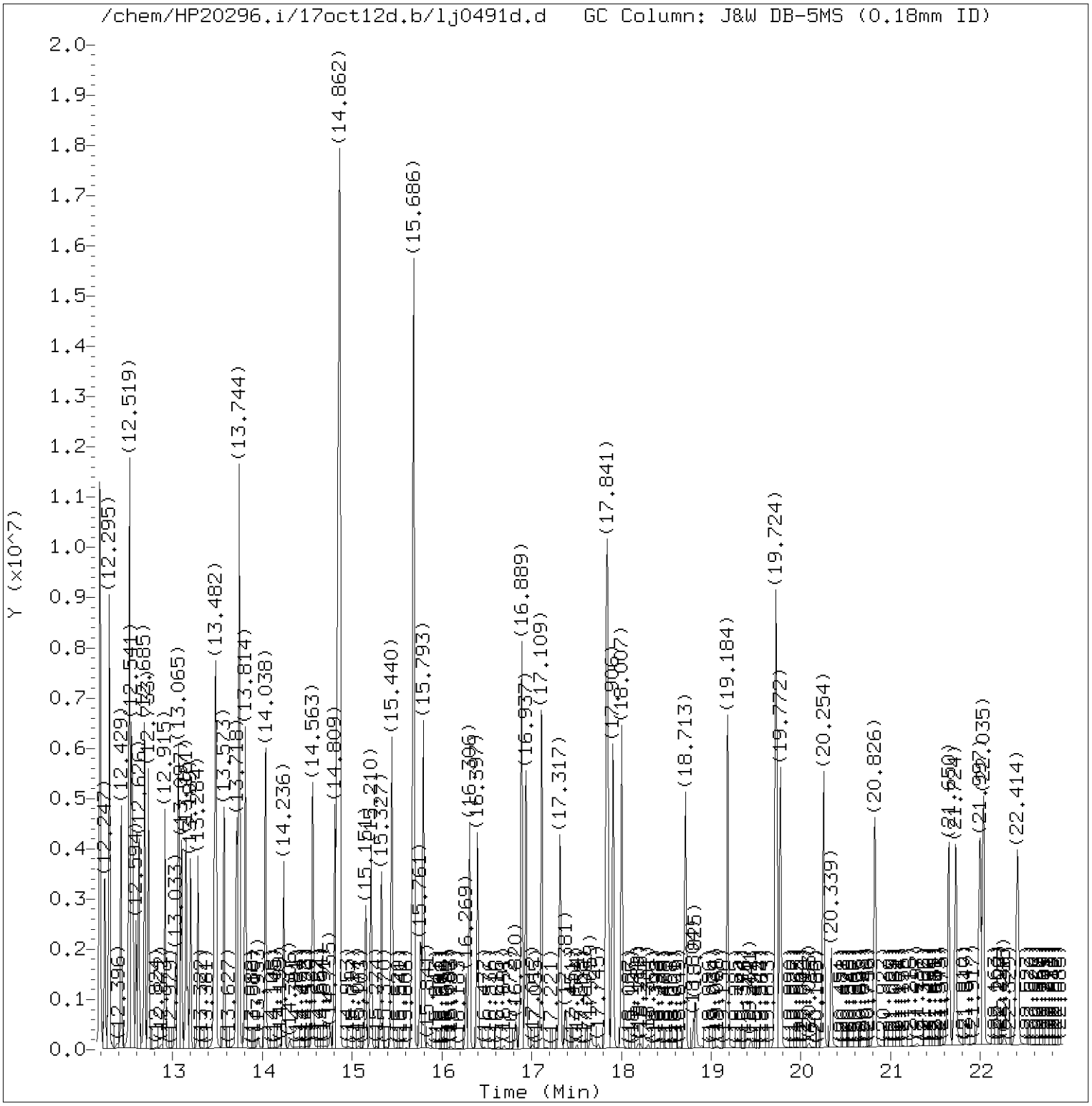
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.448	88	440470	12.272
4) N-Nitrosodimethylamine	(1)	2.988	74	707228	12.748
5) Pyridine	(1)	3.026	79	1170251	12.063
7) 2-Picoline	(1)	4.181	93	1310080	12.522
8) N-Nitrosomethylethylamine	(1)	4.379	88	506947	11.775
9) Methyl methanesulfonate	(1)	4.833	80	565698	13.796
13) N-Nitrosodiethylamine	(1)	5.400	102	502094	12.178
42) Total Cresols	(1)	5.660	100	2101633	25.038
15) Ethyl methanesulfonate	(1)	5.866	109	512748	12.142
18) Phenol	(1)	6.459	94	1619214	12.995
19) Aniline	(1)	6.492	93	1657791	11.143
22) bis(2-Chloroethyl)ether	(1)	6.604	93	1117191	12.268
23) 2-Chlorophenol	(1)	6.652	128	1031394	12.624
24) 1,3-Dichlorobenzene	(1)	6.887	146	1126863	12.605
25)*1,4-Dichlorobenzene-d4	(1)	6.978	152	268097	5.000
26) 1,4-Dichlorobenzene	(1)	7.005	146	1148943	12.767
27) Benzyl alcohol	(1)	7.203	108	763987	13.088
28) 1,2-Dichlorobenzene	(1)	7.224	146	1091870	12.770
30) Indene	(1)	7.363	115	1968359	12.290
31) 2-Methylphenol	(1)	7.379	108	1026501	12.595
97) Isosafrole	(3)	7.383	162	873293	15.807
34) bis(2-Chloroisopropyl)ether	(1)	7.433	45	1306866	12.013
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.433	45	1306866	12.013
35) N-Nitrosopyrrolidine	(1)	7.583	100	535953	12.321
36) Acetophenone	(1)	7.609	105	1583224	12.677
37) 4-Methylphenol	(1)	7.625	108	1075132	12.443
38) N-Nitroso-di-n-propylamine	(1)	7.631	70	825336	12.507
39) N-Nitrosomorpholine	(1)	7.652	56	605318	12.035
40) o-Toluidine	(1)	7.663	106	1737346	12.114
43) Hexachloroethane	(1)	7.748	117	448277	12.287
45) Nitrobenzene	(2)	7.866	77	1214716	12.534
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	1066366	27.178
48) N-Nitrosopiperidine	(2)	8.107	114	490973	11.954
50) Isophorone	(2)	8.251	82	2202011	12.874
51) 2-Nitrophenol	(2)	8.364	139	506771	13.496
53) 2,4-Dimethylphenol	(2)	8.454	107	881623	10.259
57) O,O,O-Triethylphosphorothioate	(2)	8.583	198	443046	12.468
55) bis(2-Chloroethoxy)methane	(2)	8.620	93	1388723	12.992
56) Benzoic acid	(2)	8.679	105	1474365	30.577
60) 2,4-Dichlorophenol	(2)	8.743	162	818230	12.921

* = Compound is an internal standard.

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)	8.775	86	971625	11.984
62) 1,2,4-Trichlorobenzene	(2)	8.877	180	871070	12.701
65)*Naphthalene-d8	(2)	8.963	136	1026204	5.000
66) Naphthalene	(2)	8.995	128	3017349	12.893
67) 4-Chloroaniline	(2)	9.102	127	1203771	12.450
68) 2,6-Dichlorophenol	(2)	9.107	162	779536	12.624
69) Hexachloropropene	(2)	9.139	213	545179	16.232
71) Hexachlorobutadiene	(2)	9.209	225	467498	12.931
75) Quinoline	(2)	9.546	129	1867241	12.893
77) N-Nitrosodi-n-butylamine	(2)	9.674	84	767552	10.900
80) 4-Chloro-3-methylphenol	(2)	9.904	107	971617	13.309
82) Safrole	(2)	10.006	162	720909	12.471
83) 2-Methylnaphthalene	(2)	10.123	142	1984740	12.976
84) 1-Methylnaphthalene	(2)	10.278	142	1854384	13.265
85) Hexachlorocyclopentadiene	(3)	10.380	237	704594	21.558
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.391	216	847913	12.567
88) cis-Isosafrole	(3)	10.482	162	97585	1.590
90) 2,4,6-Trichlorophenol	(3)	10.589	196	572836	13.379
92) 2,4,5-Trichlorophenol	(3)	10.637	196	604167	12.919
94) trans-Isosafrole	(3)	10.856	162	775708	14.217
95) 1,1'-Biphenyl	(3)	10.899	154	2345184	12.896
96) 2-Chloronaphthalene	(3)	10.909	162	1785702	12.420
98) 1-Chloronaphthalene	(3)	10.942	162	1698553	12.833
99) Diphenyl ether	(3)	11.081	170	1204602	12.790
100) 2-Nitroaniline	(3)	11.097	138	589753	13.692
104) 1,4-Naphthoquinone	(3)	11.214	158	900490	15.646
105) 1,4-Dinitrobenzene	(3)	11.343	168	280569	13.133
106) Dimethylphthalate	(3)	11.434	163	1982186	12.754
107) 1,3-Dinitrobenzene	(3)	11.455	168	322628	13.276
108) 2,6-Dinitrotoluene	(3)	11.509	165	450948	13.722
109) Acenaphthylene	(3)	11.573	152	2654842	13.322
112) 3-Nitroaniline	(3)	11.749	138	523192	13.603
113)*Acenaphthene-d10	(3)	11.787	164	561415	5.000
114) Acenaphthene	(3)	11.835	153	1992926	13.117
115) 2,4-Dinitrophenol	(3)	11.904	184	540852	28.627
116) 4-Nitrophenol	(3)	12.006	109	336967	12.721
117) Pentachlorobenzene	(3)	12.017	250	617849	12.183
119) Dibenzofuran	(3)	12.081	168	2507928	12.773
118) 2,4-Dinitrotoluene	(3)	12.086	165	615418	13.456
121) 1-Naphthylamine	(3)	12.193	143	3309676	21.509

* = Compound is an internal standard.

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on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
122) 2,3,4,6-Tetrachlorophenol	(3)	12.247	232	447803	13.837
123) 2-Naphthylamine	(3)	12.295	143	3238620	21.767
124) Diethylphthalate	(3)	12.429	149	1962961	12.722
126) Fluorene	(3)	12.519	166	2032864	12.737
125) Thionazin	(3)	12.519	107	361395	11.603
127) 4-Chlorophenyl-phenylether	(3)	12.541	204	887740	12.549
128) 5-Nitro-o-toluidine	(3)	12.546	152	581921	13.510
129) 4-Nitroaniline	(3)	12.557	138	518045	13.021
130) 4,6-Dinitro-2-methylphenol	(4)	12.594	198	322147	12.490
131) N-Nitrosodiphenylamine	(4)	12.685	169	1737188	12.735
132) NDPA as diphenylamine	(4)	12.685	169	1737188	12.735
134) 1,2-Diphenylhydrazine	(4)	12.733	77	2448114	12.728
137) Tetraethyldithiopyrophosphate	(4)	12.915	97	374025	11.674
139) 1,3,5-Trinitrobenzene	(4)	13.038	213	205027	12.849
140) Diallate (peak 1)	(4)	13.060	86	729752	8.517
141) Phorate	(4)	13.070	75	1483149	12.377
142) Phenacetin	(4)	13.097	108	1178124	12.617
143) 4-Bromophenyl-phenylether	(4)	13.151	248	480403	12.867
144) Diallate (peak 2)	(4)	13.167	86	241873	3.466
145) Hexachlorobenzene	(4)	13.199	284	469491	12.944
147) Dimethoate	(4)	13.284	87	955559	12.329
149) Pentachlorophenol	(4)	13.466	266	338261	14.488
151) Pentachloronitrobenzene	(4)	13.477	237	221809	12.728
150) 4-Aminobiphenyl	(4)	13.482	169	2193605	49.561
152) Pronamide	(4)	13.573	173	934613	12.843
153)*Phenanthrene-d10	(4)	13.712	188	1024868	5.000
154) Dinoseb	(4)	13.718	211	487040	13.591
155) Phenanthrene	(4)	13.744	178	3009530	12.540
157) Anthracene	(4)	13.814	178	2988021	12.685
163) Carbazole	(4)	14.038	167	2916136	12.875
164) Methyl parathion	(4)	14.236	109	786488	13.513
165) Di-n-butylphthalate	(4)	14.563	149	3643091	12.825
167) Parathion	(4)	14.803	109	478289	13.070
168) 4-Nitroquinoline-1-oxide	(4)	14.862	190	4899713	157.949
222) Total PAHs	(6)	15.000	100	43268875	207.856
171) Isodrin	(4)	15.210	193	332119	12.335
173) Fluoranthene	(4)	15.445	202	3295619	12.825
174) Benzidine	(5)	15.686	184	9327617	48.503
175)*Pyrene-d10	(5)	15.761	212	1136491	5.000
177) Pyrene	(5)	15.793	202	3371188	12.541

* = Compound is an internal standard.

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

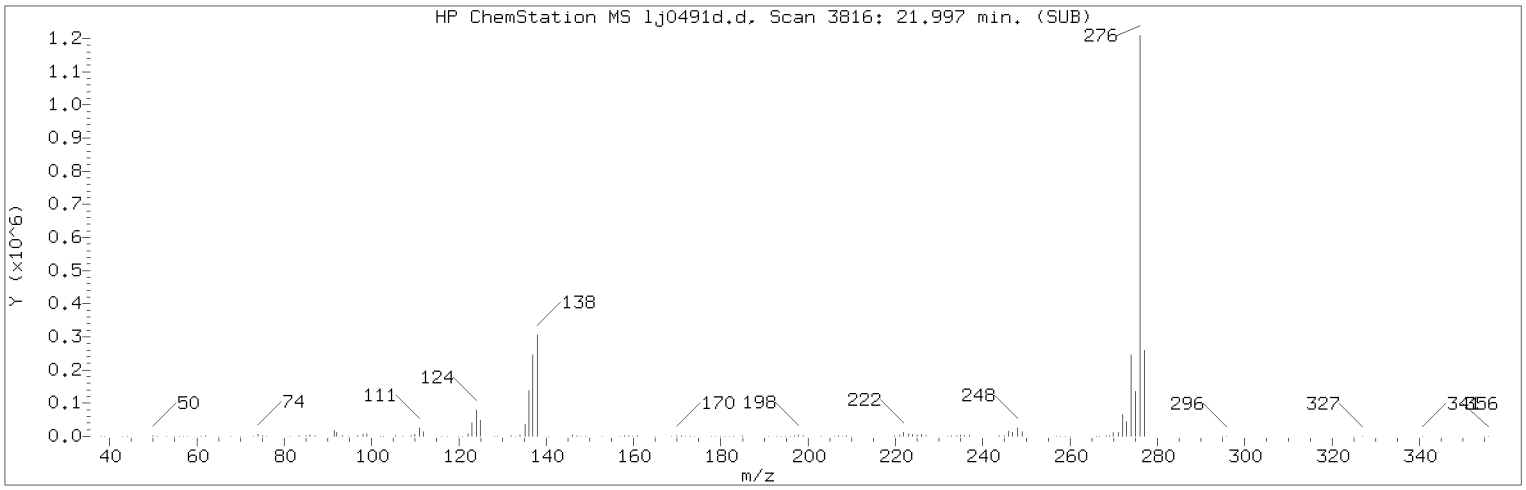
Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.312	225	640852	18.177
185) Chlorobenzilate	(5)	16.397	139	1120685	13.211
187) 3,3'-Dimethylbenzidine	(5)	16.889	212	3879676	22.065
188) Butylbenzylphthalate	(5)	16.937	149	1658476	13.173
191) 2-Acetylaminofluorene	(5)	17.317	181	1433740	12.782
193) 3,3'-Dichlorobenzidine	(5)	17.831	252	1094561	12.374
195) Benzo(a)anthracene	(5)	17.841	228	3269415	13.531
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.852	231	615633	13.465
196) Chrysene	(5)	17.906	228	2991848	13.446
199) bis(2-Ethylhexyl)phthalate	(5)	18.007	149	2460133	13.376
203) 6-Methylchrysene	(5)	18.713	242	2039142	12.748
205) Di-n-octylphthalate	(6)	19.184	149	4411138	13.082
206) Benzo(b)fluoranthene	(6)	19.719	252	3091088	13.066
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.724	256	1294940	12.808
208) Benzo(k)fluoranthene	(6)	19.772	252	2956122	13.072
211) Benzo(a)pyrene	(6)	20.254	252	2804043	12.673
213)*Perylene-d12	(6)	20.339	264	909224	5.000
215) 3-Methylcholanthrene	(6)	20.826	268	1441475	18.380
217) Dibenz(a,h)acridine	(6)	21.650	279	2254646	12.570
218) Dibenz(a,j)acridine	(6)	21.730	279	2275364	12.234
219) Indeno(1,2,3-cd)pyrene	(6)	21.997	276	2641048M	13.144
220) Dibenz(a,h)anthracene	(6)	22.035	278	2726138	13.409
221) Benzo(g,h,i)perylene	(6)	22.414	276	2634920	12.754

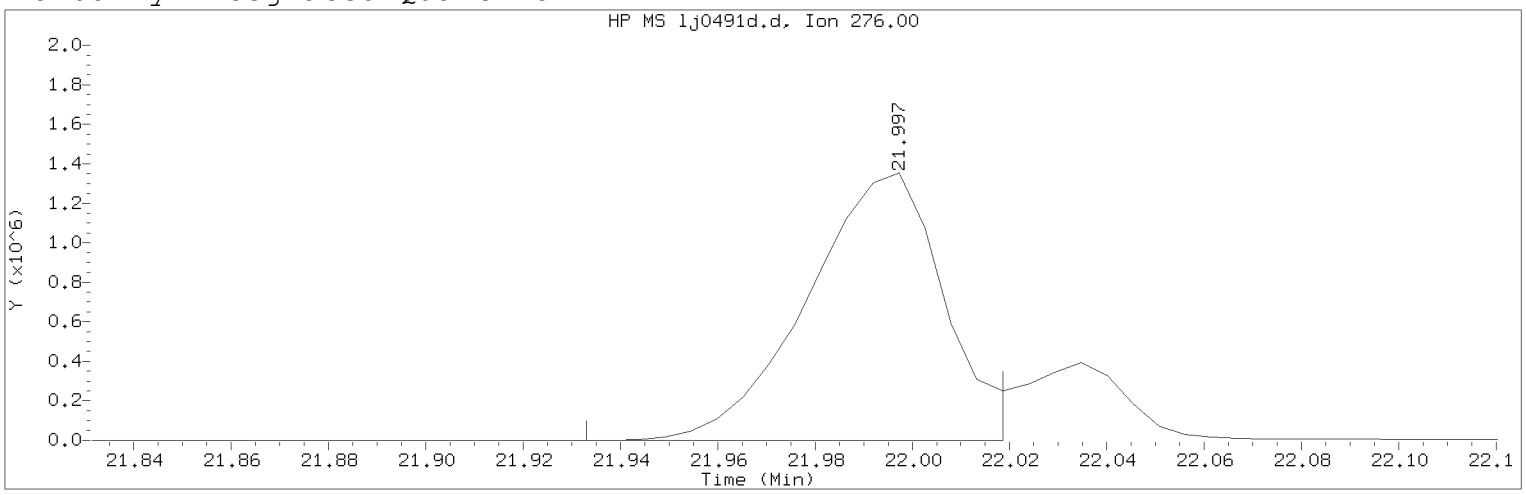
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

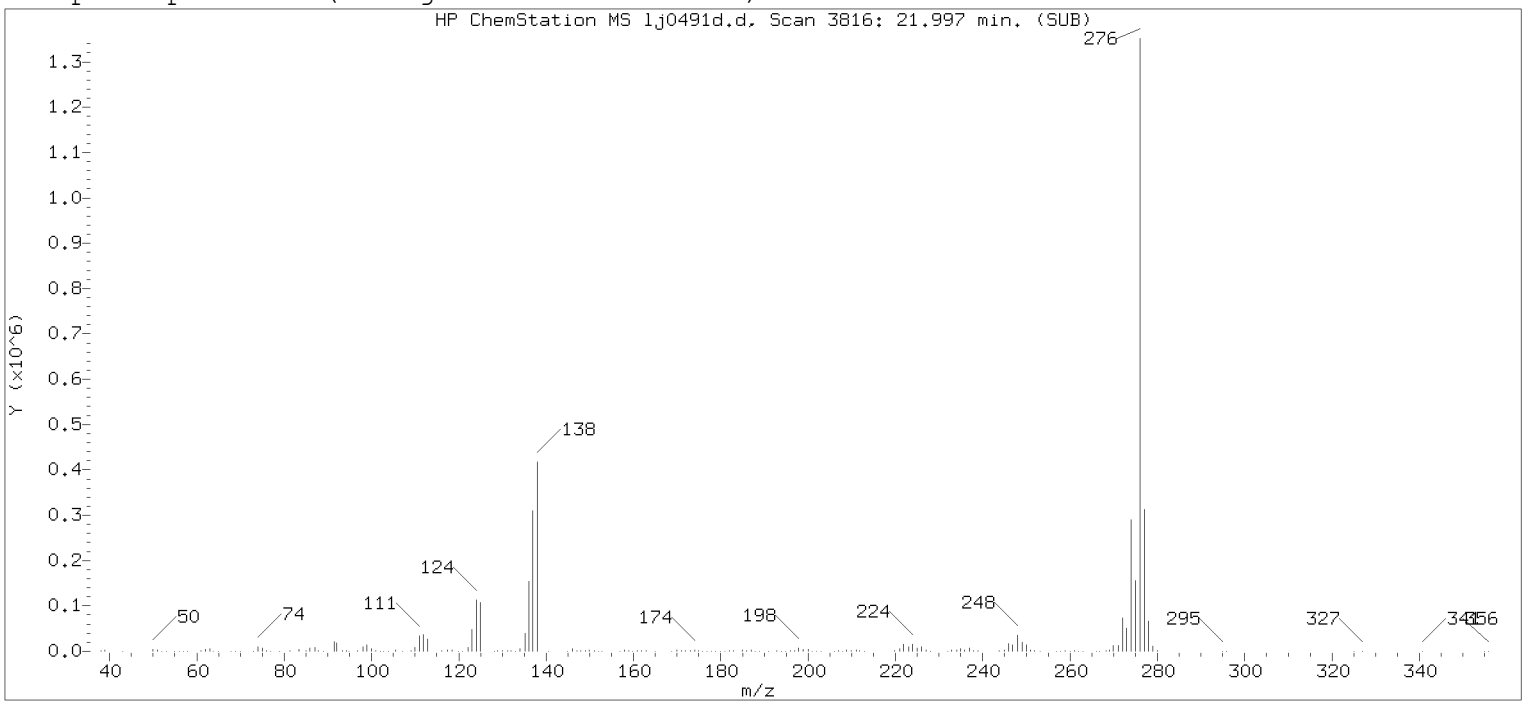
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3816
Retention Time (minutes) : 21.997
Quant Ion : 276.00
Area (flag) : 2641048M
On-Column Amount (ng/ul) : 13.1438
Integration start scan : 3803 Integration stop scan: 3819
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

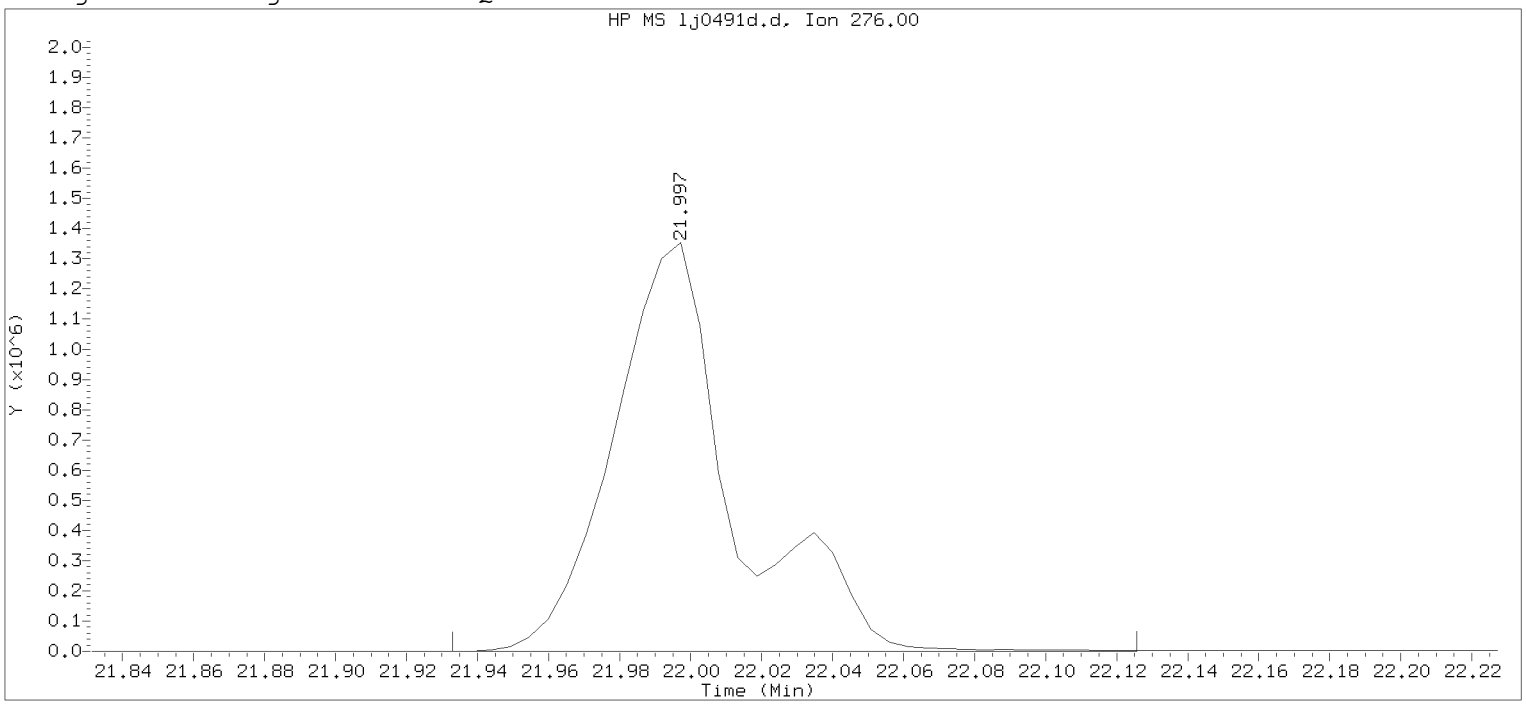
Analyst responsible for change: Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:10.
Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2017 at 11:42.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



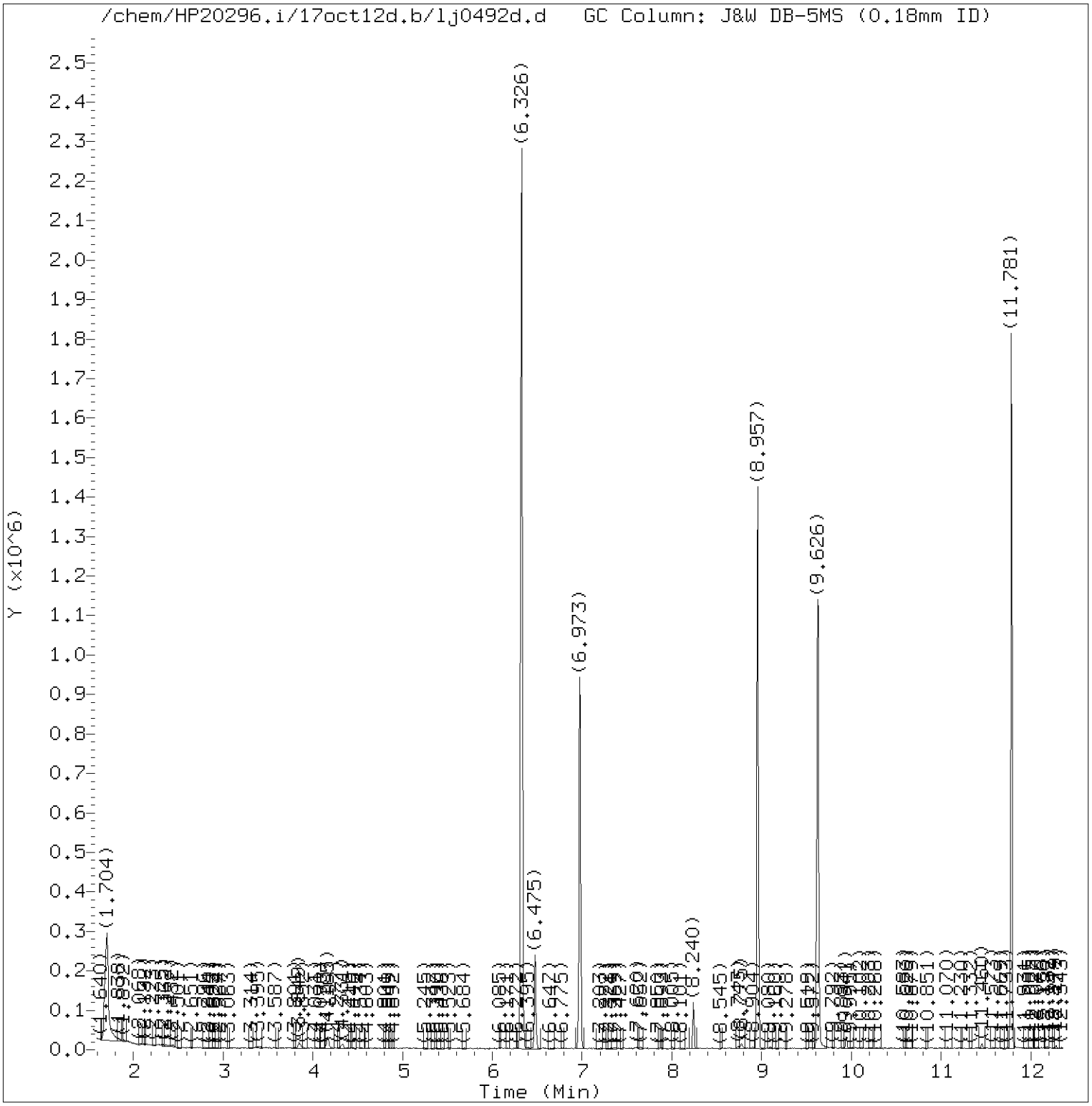
Data File: /chem/HP20296.i/17oct12d.b/lj0491d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-OCT-2017 20:05
Date, time and analyst ID of latest file update: 23-Oct-2017 20:05 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVICV1147

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3816		
Retention Time (minutes)	: 21.997		
Quant Ion	: 276.00		
Area	: 3190198		
On-column Amount (ng/ul)	: 13.0472		
Integration start scan	: 3803	Integration stop scan:	3839
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon K. Cordova on 10/23/2017 at 21:10.
Target 3.5 esignature used. EPA 8270D



Total Ion Chromatogram (TIC)

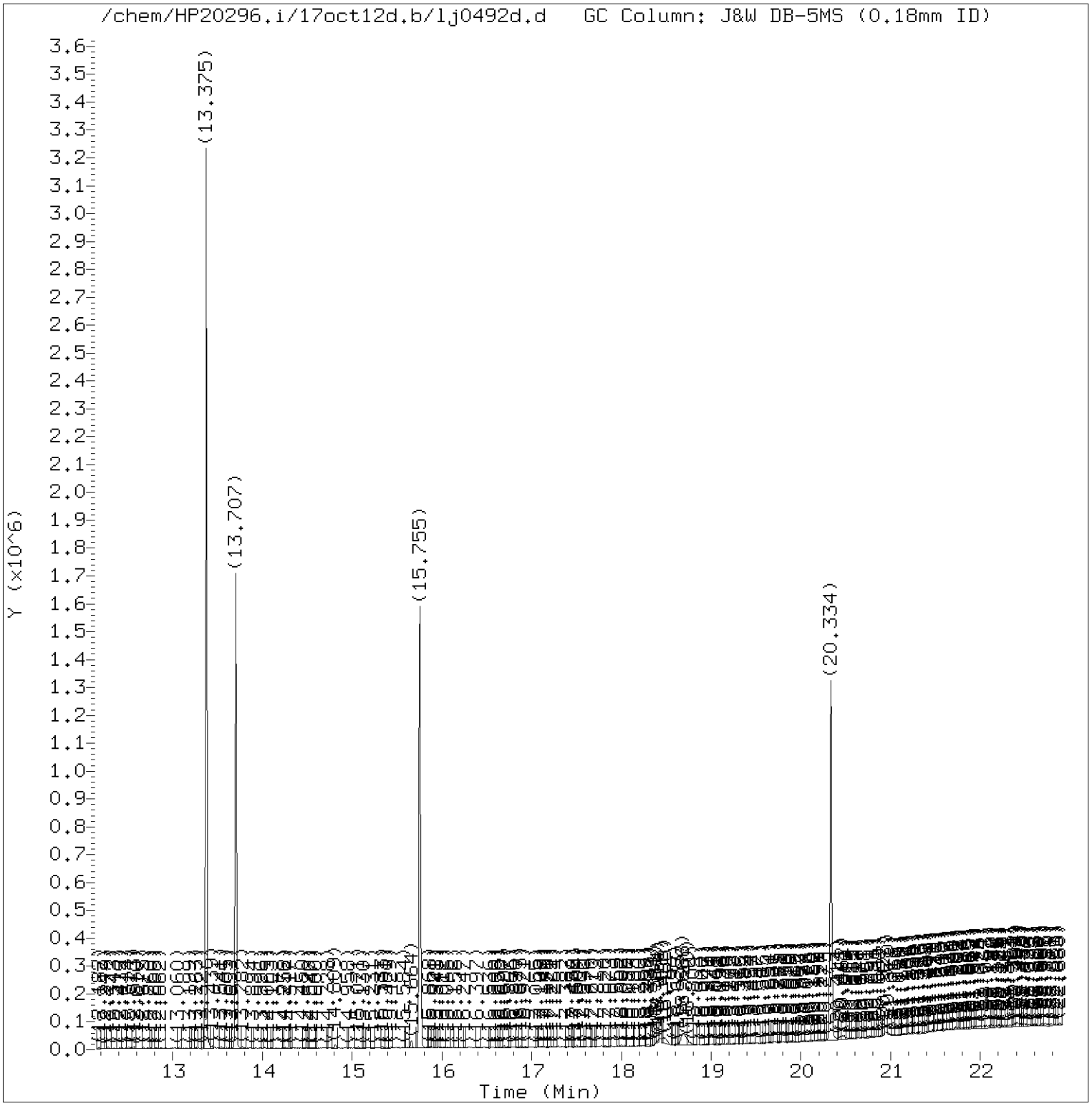
Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0492d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV2487

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:11.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0492d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV2487

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:11.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct12d.b/lj0492d.d Instrument ID: HP20296.i
Injection date and time: 12-OCT-2017 23:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct12d.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-OCT-2017 21:03
Date, time and analyst ID of latest file update: 23-Oct-2017 21:09 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV2487

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.326	77	713896	12.351
25)*1,4-Dichlorobenzene-d4	(1)	6.973	152	192283	5.000
65)*Naphthalene-d8	(2)	8.957	136	760004	5.000
76) Caprolactam	(2)	9.631	113	194235	11.894
113)*Acenaphthene-d10	(3)	11.781	164	406110	5.000
148) Atrazine	(4)	13.375	200	364240	12.535
153)*Phenanthrene-d10	(4)	13.707	188	714089	5.000
175)*Pyrene-d10	(5)	15.755	212	781454	5.000
213)*Perylene-d12	(6)	20.334	264	587613	5.000

* = Compound is an internal standard.

Digitally signed by Brandon K. Cordova
on 10/23/2017 at 21:11.
Target 3.5 esignature user ID: bkc25363

Data File: /chem/HP20296.i/17oct25.b/lj1240z.d

Date : 25-OCT-2017 08:31

Client ID: DFTPP12.5

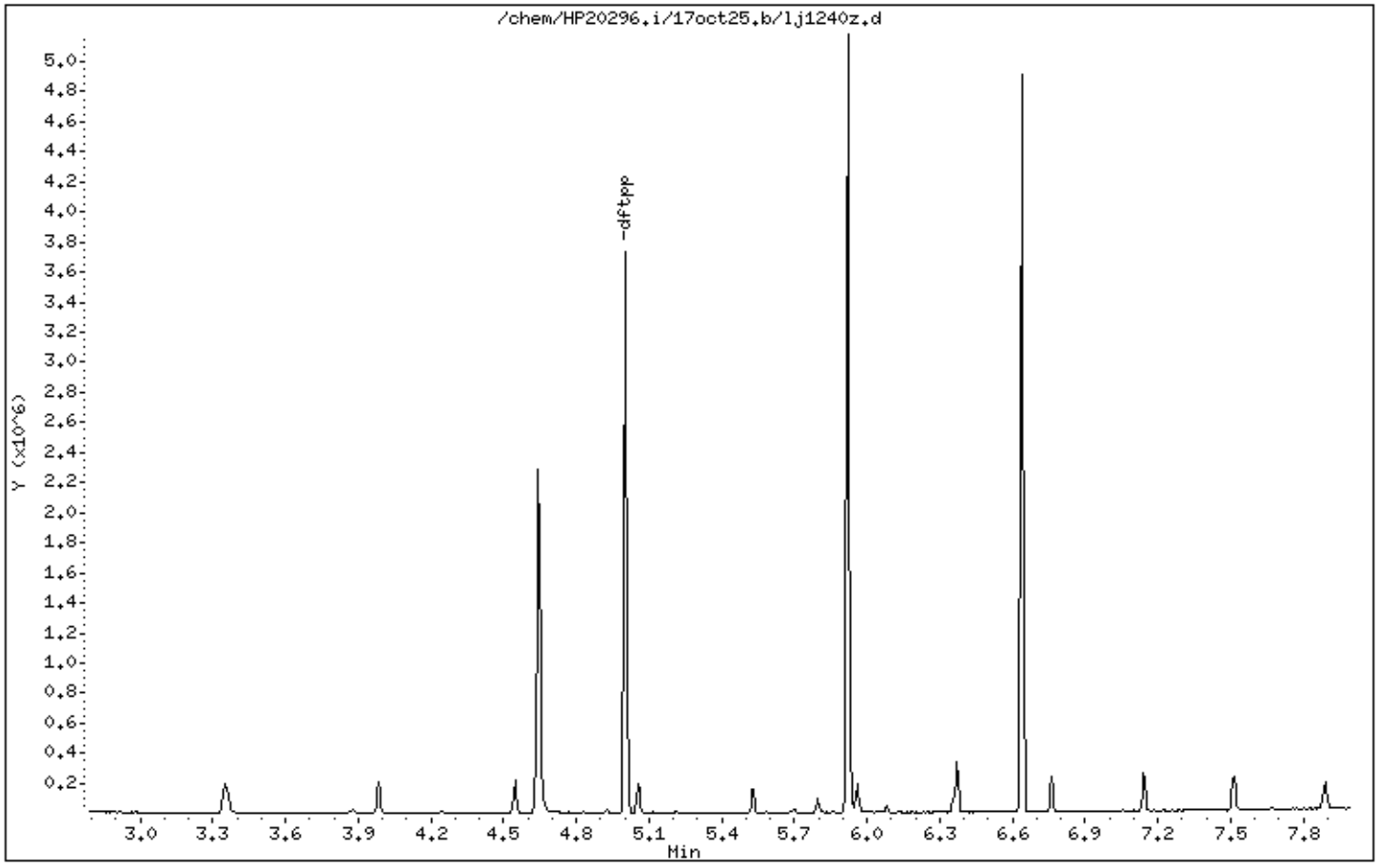
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/17oct25.b/lj1240z.d

Date : 25-OCT-2017 08:31

Client ID: DFTPP12.5

Instrument: HP20296.i

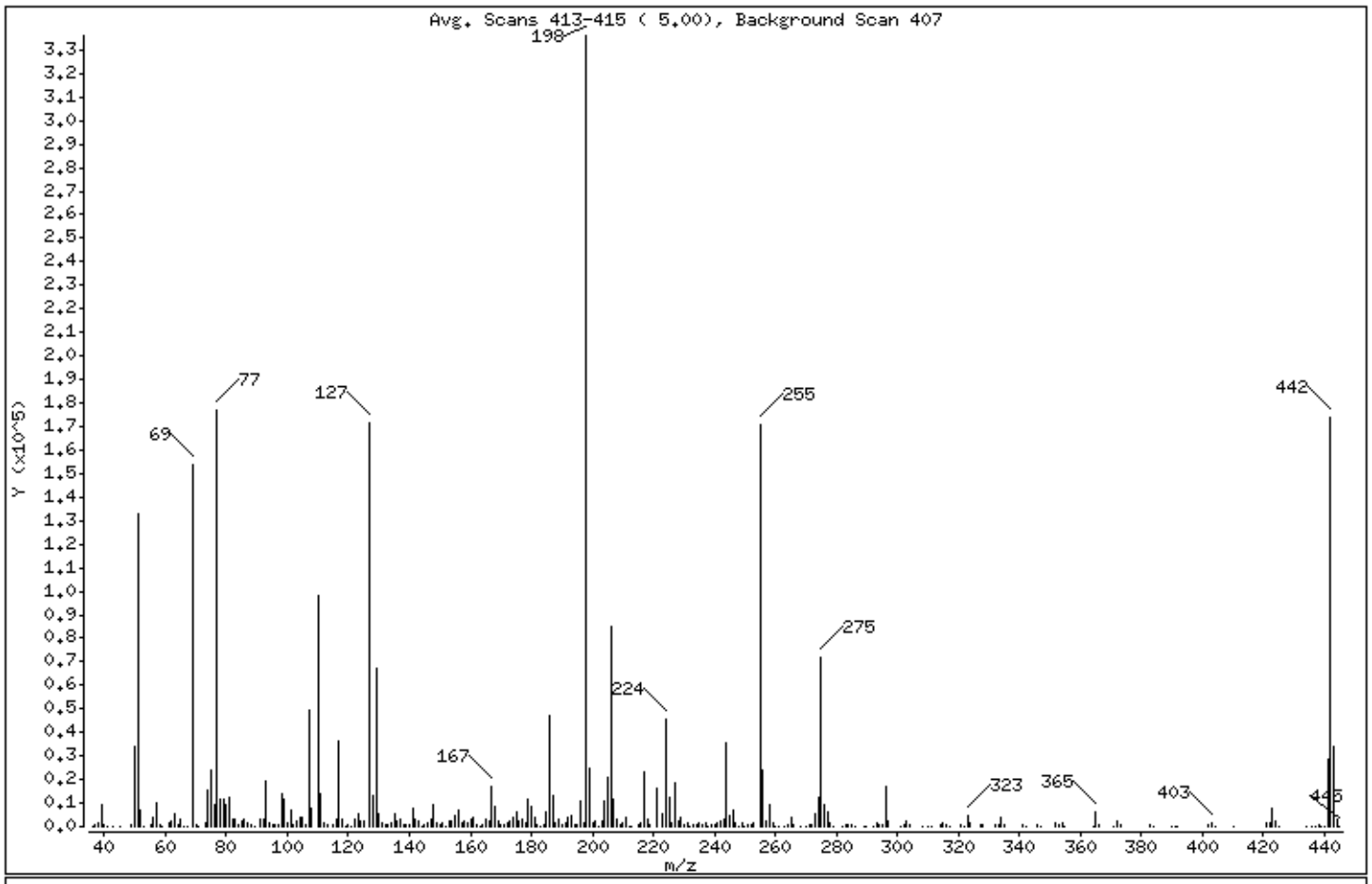
Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

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	39.51
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	45.71
70	Less than 2.00% of mass 69	0.27 (0.59)
127	10.00 - 80.00% of mass 198	51.02
197	Less than 2.00% of mass 198	0.51
199	5.00 - 9.00% of mass 198	7.39
275	10.00 - 60.00% of mass 198	21.49
365	Greater than 1.00% of mass 198	1.90
441	0.01 - 24.00% of mass 442	8.40 (16.24)
442	50.00 - 99.99% of mass 198	51.72
443	15.00 - 24.00% of mass 442	10.14 (19.60)

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/17oct25.b/lj1240z.d

Date : 25-OCT-2017 08:31

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1240z.d
Spectrum: Avg. Scans 413-415 (5.00), Background Scan 407
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	242	123.00	5059	199.00	24832	283.00	843
37.00	596	124.00	2379	200.00	1930	284.00	495
38.00	1493	125.00	1986	201.00	2110	285.00	982
39.00	9639	127.00	171456	202.00	216	286.00	159
40.00	841	128.00	12996	203.00	2513	289.00	346
41.00	262	129.00	66872	204.00	11132	290.00	139
43.00	202	130.00	5104	205.00	21080	292.00	343
45.00	193	131.00	1246	206.00	85200	293.00	1268
49.00	987	132.00	508	207.00	11690	294.00	426
50.00	34176	133.00	444	208.00	2729	295.00	430
51.00	132800	134.00	1780	209.00	881	296.00	16760
52.00	6947	135.00	5158	210.00	1549	297.00	2455
53.00	300	136.00	2500	211.00	3552	301.00	303
55.00	878	137.00	3005	212.00	240	302.00	429
56.00	3873	138.00	674	213.00	241	303.00	2395
57.00	9838	139.00	586	215.00	1003	304.00	559
58.00	593	140.00	885	216.00	1888	308.00	195
59.00	194	141.00	7995	217.00	23496	310.00	106
61.00	1571	142.00	2781	218.00	3151	311.00	104
62.00	2252	143.00	2142	219.00	582	314.00	602
63.00	5042	144.00	341	221.00	16480	315.00	1401
64.00	992	145.00	517	223.00	5079	316.00	883
65.00	2994	146.00	1416	224.00	45880	317.00	119
66.00	134	147.00	3311	225.00	12395	321.00	479
67.00	331	148.00	9509	226.00	1817	322.00	340
69.00	153600	149.00	1821	227.00	18616	323.00	4869
70.00	899	150.00	835	228.00	2663	324.00	1163
71.00	362	151.00	1830	229.00	3802	327.00	888
73.00	1272	152.00	217	230.00	702	328.00	418
74.00	15695	153.00	2544	231.00	1781	332.00	517
75.00	23832	154.00	1976	232.00	102	333.00	639
76.00	9184	155.00	4939	233.00	428	334.00	3657
77.00	177280	156.00	7033	234.00	919	335.00	725
78.00	11734	157.00	1406	235.00	1488	341.00	471
79.00	11390	158.00	1945	236.00	872	342.00	120

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Date : 25-OCT-2017 08:31

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1240z.d
Spectrum: Avg. Scans 413-415 (5.00), Background Scan 407
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	9242	159.00	1413	237.00	1410	346.00	1120
81.00	12335	160.00	3272	238.00	279	347.00	89
82.00	3215	161.00	3810	239.00	675	352.00	1798
83.00	2794	162.00	1050	240.00	587	353.00	859
84.00	950	163.00	234	241.00	1263	354.00	1735
85.00	2502	164.00	516	242.00	2130	355.00	378
86.00	3221	165.00	2844	243.00	2804	364.00	169
87.00	1416	166.00	2610	244.00	35600	365.00	6373
88.00	638	167.00	17336	245.00	4480	366.00	1038
89.00	368	168.00	8575	246.00	7022	371.00	350
91.00	2974	169.00	2000	247.00	1461	372.00	2678
92.00	3314	170.00	587	248.00	173	373.00	504
93.00	19024	171.00	787	249.00	1490	383.00	562
94.00	1266	172.00	1623	250.00	312	384.00	236
95.00	617	173.00	2210	251.00	463	390.00	347
96.00	1030	174.00	3625	252.00	617	391.00	162
97.00	469	175.00	6068	253.00	1229	392.00	84
98.00	13545	176.00	2347	255.00	170560	402.00	809
99.00	11314	177.00	3435	256.00	23808	403.00	1278
100.00	1334	178.00	1427	257.00	2339	404.00	376
101.00	7204	179.00	11793	258.00	9364	410.00	85
102.00	467	180.00	8582	259.00	1511	421.00	1200
103.00	1987	181.00	3769	260.00	247	422.00	1278
104.00	4157	182.00	745	261.00	248	423.00	7475
105.00	3913	183.00	382	263.00	101	424.00	2043
106.00	591	184.00	1100	264.00	639	425.00	235
107.00	49640	185.00	5985	265.00	3783	434.00	232
108.00	7552	186.00	47016	266.00	839	436.00	151
110.00	97840	187.00	13015	268.00	193	437.00	230
111.00	13745	188.00	1380	270.00	104	438.00	762
112.00	1500	189.00	2838	271.00	562	439.00	296
113.00	633	190.00	524	272.00	658	440.00	136
115.00	428	191.00	1259	273.00	5154	441.00	28224
116.00	3228	192.00	4125	274.00	12668	442.00	173760
117.00	36192	193.00	4930	275.00	72224	443.00	34064

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Date : 25-OCT-2017 08:31

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2617;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

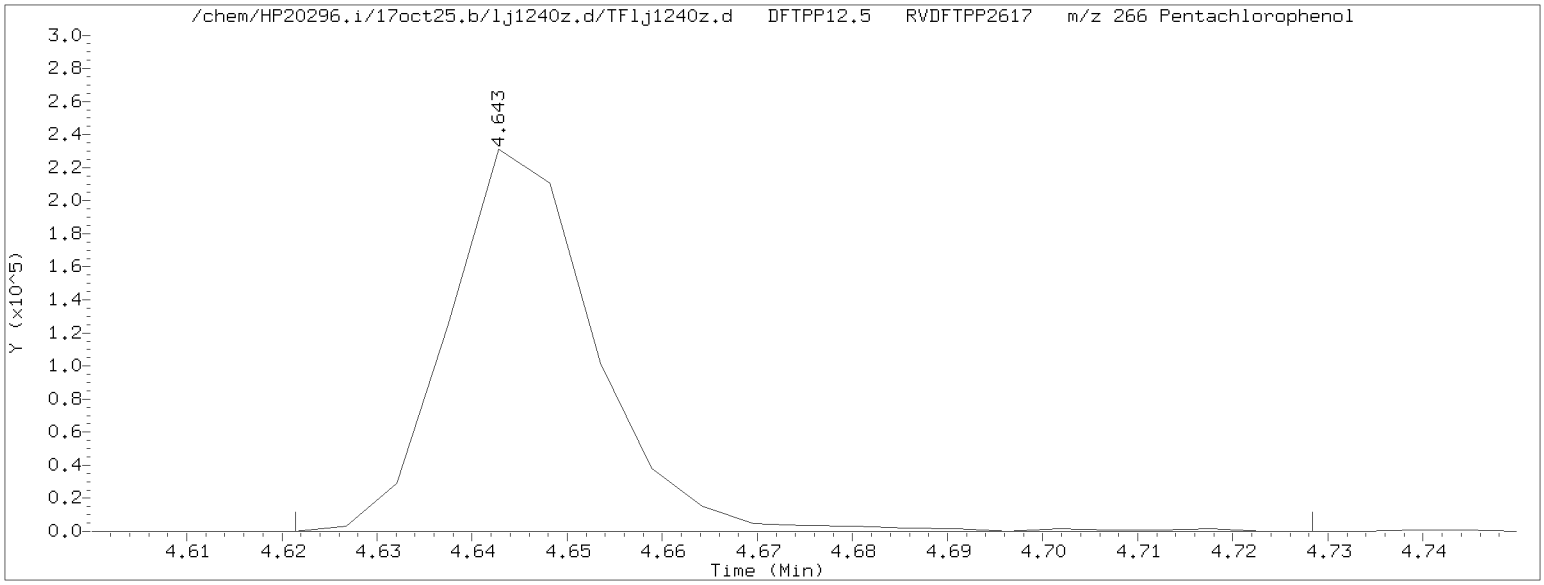
Data File: lj1240z.d
Spectrum: Avg. Scans 413-415 (5.00), Background Scan 407
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	2872	194.00	1116	276.00	9418	444.00	3230
119.00	310	195.00	644	277.00	5833	445.00	104
120.00	574	196.00	10547	278.00	1248		
121.00	142	197.00	1730	279.00	101		
122.00	3102	198.00	336064	282.00	249		

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

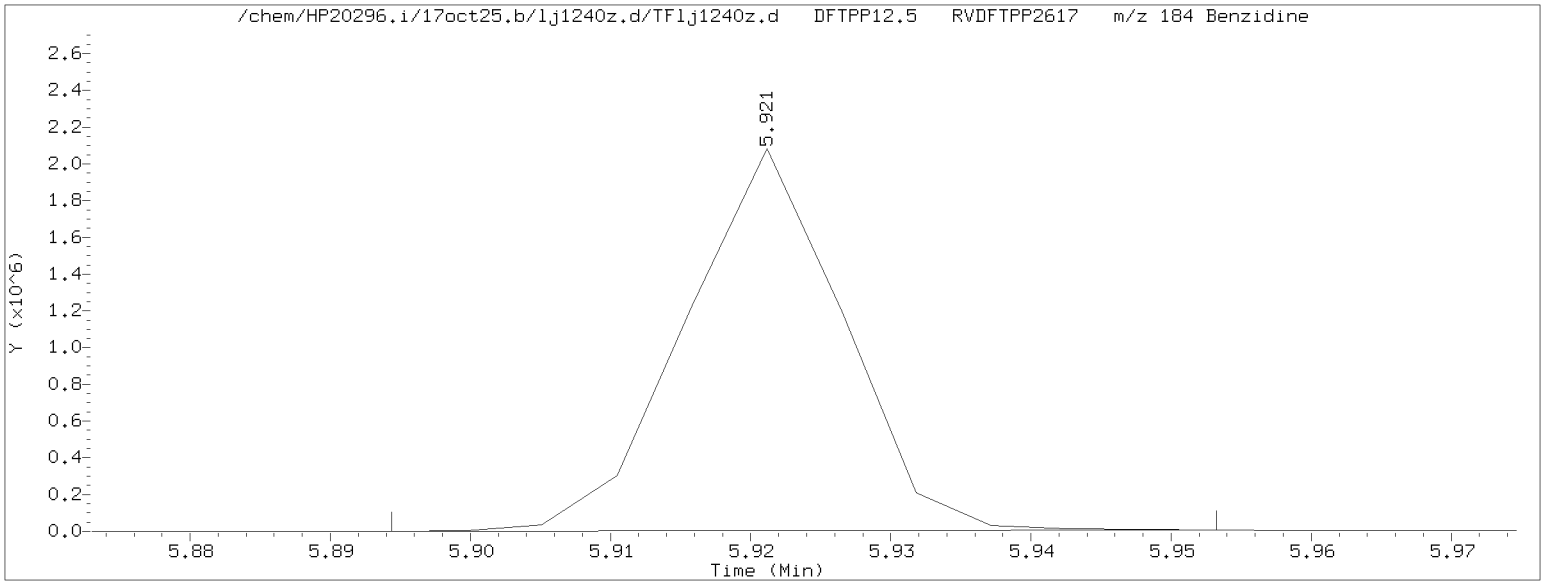
Instrument ID: HP20296.i Injection Date: 25-OCT-2017 08:31 Operator: hbz01996



Pentachlorophenol EICP peak height = 231232 EICP peak height at 10% = 23123 Pentachlorophenol EICP area = 248259

Pentachlorophenol EICP peak apex (min.) = 4.643
RT at 10% of front half of EICP (min.) = 4.631 'Front' peak width (min.) = 0.0119333333
RT at 10% of back half of EICP (min.) = 4.662 'Tailing' peak width (min.) = 0.0195166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0195166667}{0.0119333333} = 1.635$$



Benzidine EICP peak height = 2080661 EICP peak height at 10% = 208066 Benzidine EICP area = 1630073

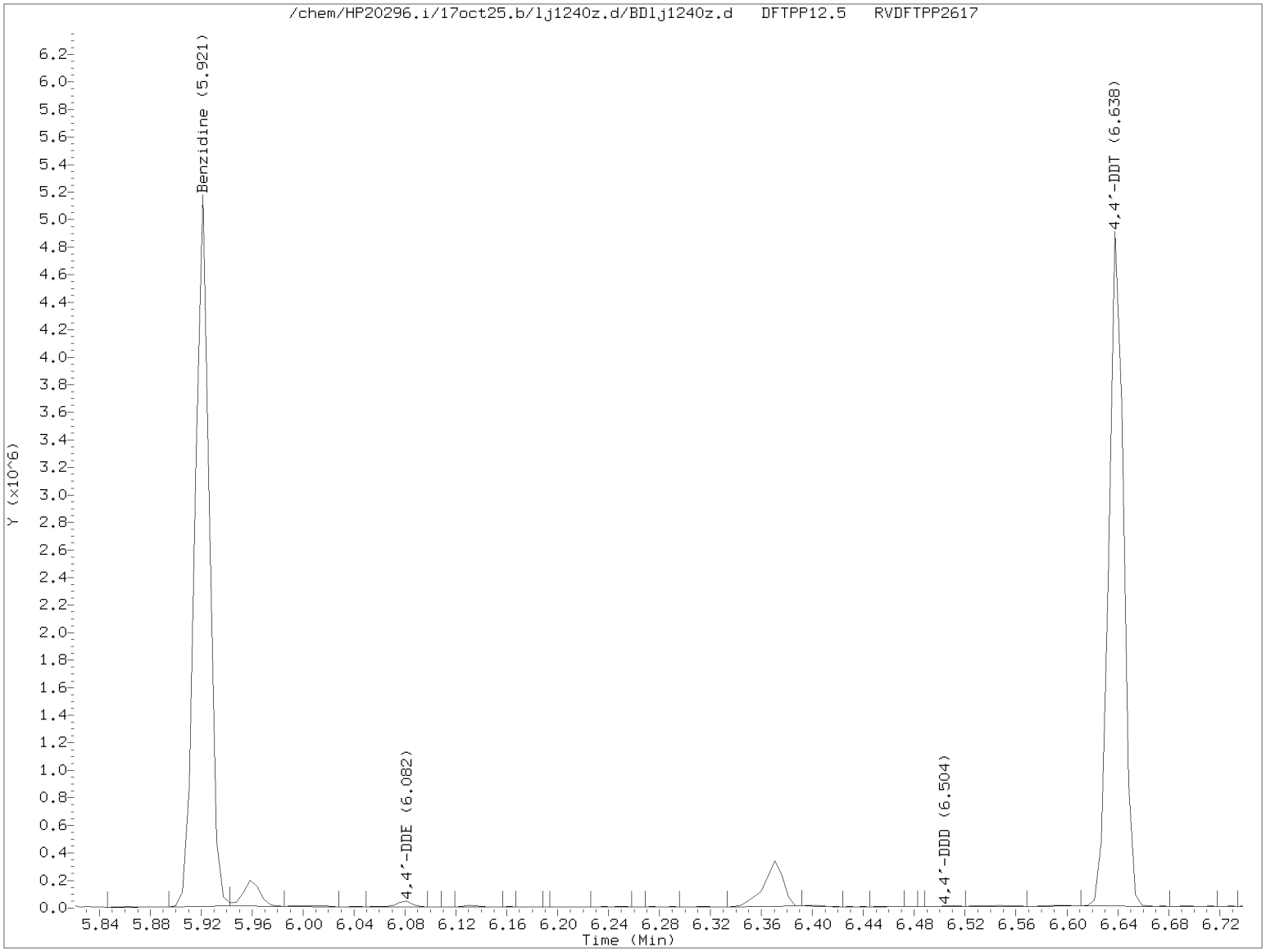
Benzidine EICP peak apex (min.) = 5.921
RT at 10% of front half of EICP (min.) = 5.909 'Front' peak width (min.) = 0.0125333333
RT at 10% of back half of EICP (min.) = 5.932 'Tailing' peak width (min.) = 0.0106666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106666667}{0.0125333333} = 0.851$$

Secondary review performed and digitally signed by Chad A. Moline on 10/27/2017 at 10:25. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

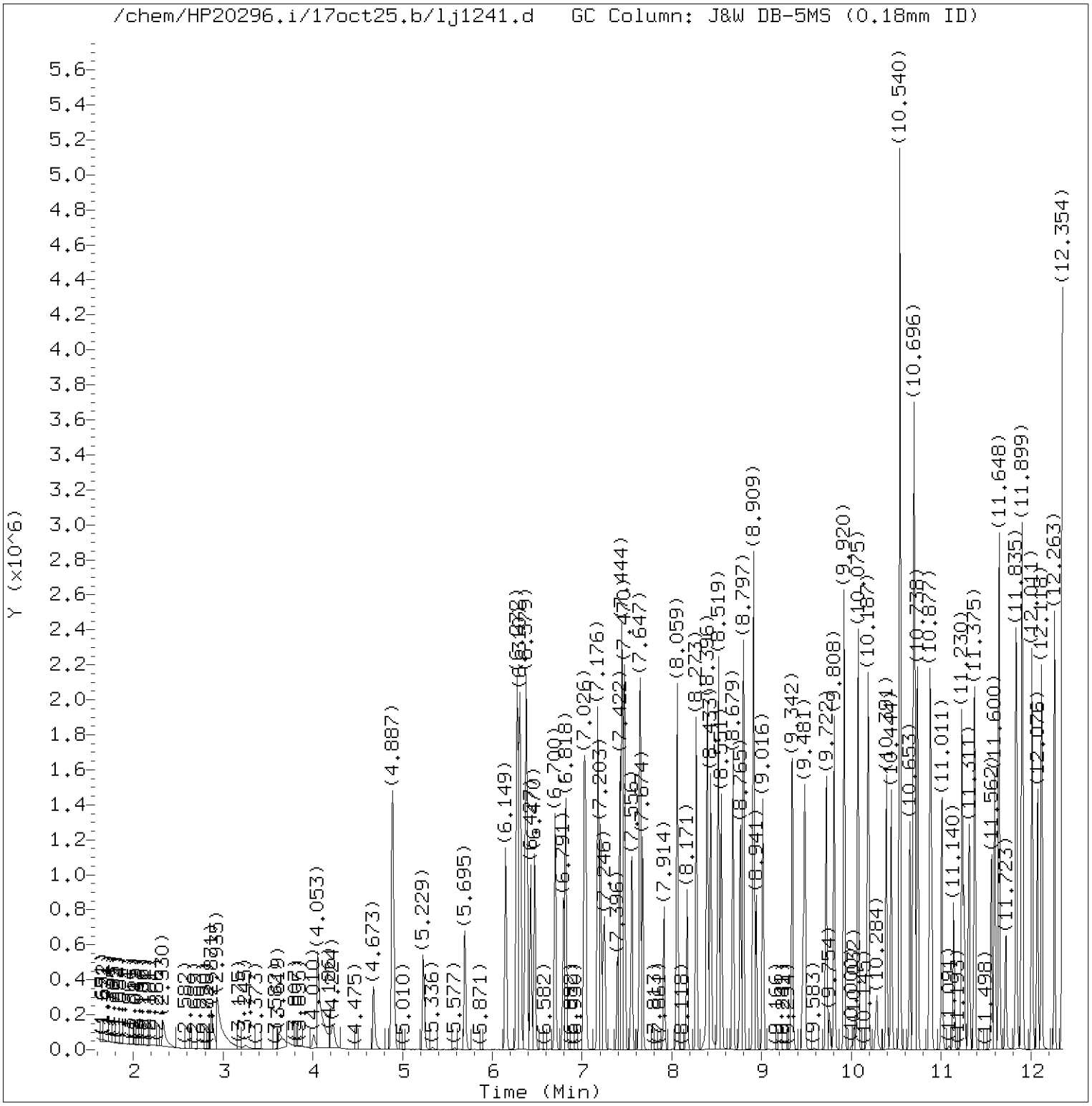
Instrument ID: HP20296.i Injection Date: 25-OCT-2017 08:31 Operator: hbz01996



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{36623 + 3823}{36623 + 3823 + 3973517} \times 100 = 1.0$$

Secondary review performed and digitally signed by Chad A. Moline on 10/27/2017 at 10:25. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

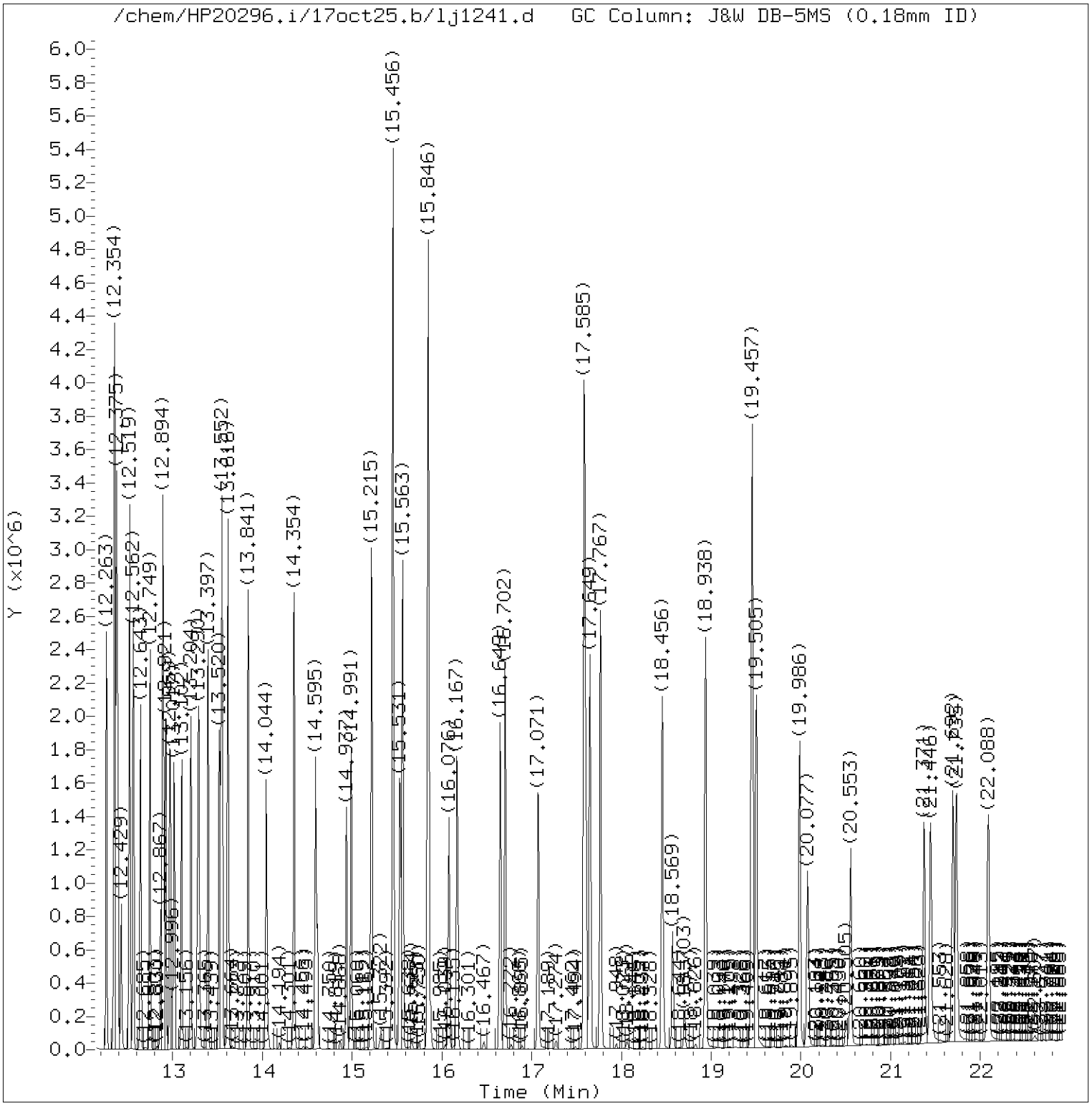
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.330	88	179584	7.355
4) N-Nitrosodimethylamine	(1)	2.871	74	263340	6.978
5) Pyridine	(1)	2.935	79	431212	6.534
7) 2-Picoline	(1)	4.053	93	525063	7.378
8) N-Nitrosomethylethylamine	(1)	4.224	88	204720	6.991
9) Methyl methanesulfonate	(1)	4.673	80	203098	7.281
11)$2-Fluorophenol	(1)	4.887	112	848892	14.967
13) N-Nitrosodiethylamine	(1)	5.229	102	208887	7.448
42) Total Cresols	(1)			914441	15.993
15) Ethyl methanesulfonate	(1)	5.695	109	220223	7.666
16) Benzaldehyde	(1)	6.149	77	353235	6.443
17)$Phenol-d6	(1)	6.272	99	1111347	14.844
18) Phenol	(1)	6.294	94	640903	7.561
19) Aniline	(1)	6.310	93	749020	7.401
20) a-methylstyrene	(1)	6.379	118	465525	7.627
22) bis(2-Chloroethyl)ether	(1)	6.427	93	466403	7.529
23) 2-Chlorophenol	(1)	6.470	128	428742	7.715
24) 1,3-Dichlorobenzene	(1)	6.700	146	479621	7.887
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	182370	5.000
26) 1,4-Dichlorobenzene	(1)	6.818	146	484458	7.914
27) Benzyl alcohol	(1)	7.021	108	289819	7.299
28) 1,2-Dichlorobenzene	(1)	7.037	146	454819	7.820
30) Indene	(1)	7.176	115	830181	7.620
31) 2-Methylphenol	(1)	7.203	108	425027	7.667
34) bis(2-Chloroisopropyl)ether	(1)	7.246	45	515522	6.966
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.246	45	515522	6.966
97) Isosafrole	(3)			316248	7.606
35) N-Nitrosopyrrolidine	(1)	7.396	100	216967	7.333
36) Acetophenone	(1)	7.422	105	637562	7.504
38) N-Nitroso-di-n-propylamine	(1)	7.444	70	330581	7.364
37) 4-Methylphenol	(1)	7.449	108	489414	8.327
39) N-Nitrosomorpholine	(1)	7.465	56	239627	7.004
40) o-Toluidine	(1)	7.470	106	761521	7.806
43) Hexachloroethane	(1)	7.556	117	190813	7.689
44)$Nitrobenzene-d5	(2)	7.647	82	984955	14.241
45) Nitrobenzene	(2)	7.674	77	492345	7.090
48) N-Nitrosopiperidine	(2)	7.914	114	224505	7.629
120) 2,4_2,6-Dinitrotoluenes	(3)			470163	16.126
50) Isophorone	(2)	8.059	82	901118	7.353
51) 2-Nitrophenol	(2)	8.171	139	215760	8.020

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

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.273	107	467300	7.590
57) O,O,O-Triethylphosphorothioate	(2)	8.396	198	211176	8.294
56) Benzoic acid	(2)	8.428	105	267147A	8.951
55) bis(2-Chloroethoxy)methane	(2)	8.433	93	582962	7.612
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.519	104	675721	7.450
60) 2,4-Dichlorophenol	(2)	8.551	162	360191	7.939
62) 1,2,4-Trichlorobenzene	(2)	8.679	180	385433	7.844
65)*Naphthalene-d8	(2)	8.765	136	735261	5.000
146) Diallate trans/cis	(4)			449097	7.294
66) Naphthalene	(2)	8.797	128	1282330	7.647
67) 4-Chloroaniline	(2)	8.909	127	516688	7.458
68) 2,6-Dichlorophenol	(2)	8.915	162	346651	7.835
69) Hexachloropropene	(2)	8.941	213	179876	7.475
71) Hexachlorobutadiene	(2)	9.016	225	214897	8.296
75) Quinoline	(2)	9.342	129	802985	7.738
76) Caprolactam	(2)	9.465	113	109153	6.909
77) N-Nitrosodi-n-butylamine	(2)	9.481	84	408483	8.096
80) 4-Chloro-3-methylphenol	(2)	9.722	107	410561	7.849
82) Safrole	(2)	9.808	162	333985	8.064
83) 2-Methylnaphthalene	(2)	9.920	142	886192	8.087
84) 1-Methylnaphthalene	(2)	10.075	142	794093	7.928
85) Hexachlorocyclopentadiene	(3)	10.177	237	140834	5.775
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.187	216	395439	7.854
88) cis-Isosafrole	(3)	10.284	162	59209	1.292
90) 2,4,6-Trichlorophenol	(3)	10.391	196	247989	7.762
92) 2,4,5-Trichlorophenol	(3)	10.444	196	267214	7.657
93)$2-Fluorobiphenyl	(3)	10.540	172	1931035	15.773
94) trans-Isosafrole	(3)	10.653	162	257039	6.313
95) 1,1'-Biphenyl	(3)	10.696	154	992790	7.316
96) 2-Chloronaphthalene	(3)	10.706	162	811211	7.561
98) 1-Chloronaphthalene	(3)	10.738	162	743112	7.524
99) Diphenyl ether	(3)	10.877	170	561296	7.986
100) 2-Nitroaniline	(3)	10.893	138	255069	7.936
104) 1,4-Naphthoquinone	(3)	11.011	158	323888	7.541
105) 1,4-Dinitrobenzene	(3)	11.140	168	121327	7.611
106) Dimethylphthalate	(3)	11.230	163	910159	7.848
107) 1,3-Dinitrobenzene	(3)	11.252	168	137514	7.584
108) 2,6-Dinitrotoluene	(3)	11.311	165	204675	8.346
109) Acenaphthylene	(3)	11.375	152	1153608	7.758
112) 3-Nitroaniline	(3)	11.562	138	208819	7.276

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.600	164	418929	5.000
114) Acenaphthene	(3)	11.648	153	855321	7.544
115) 2,4-Dinitrophenol	(3)	11.723	184	105345	7.472
117) Pentachlorobenzene	(3)	11.835	250	302375	7.990
116) 4-Nitrophenol	(3)	11.840	109	123003	6.223
119) Dibenzofuran	(3)	11.899	168	1149139	7.843
118) 2,4-Dinitrotoluene	(3)	11.910	165	265488	7.779
121) 1-Naphthylamine	(3)	12.011	143	812655	7.078
122) 2,3,4,6-Tetrachlorophenol	(3)	12.076	232	193873	8.028
123) 2-Naphthylamine	(3)	12.118	143	776371	6.993
124) Diethylphthalate	(3)	12.263	149	909067	7.896
126) Fluorene	(3)	12.348	166	923070	7.751
125) Thionazin	(3)	12.359	107	182869	7.868
127) 4-Chlorophenyl-phenylether	(3)	12.375	204	428349	8.115
128) 5-Nitro-o-toluidine	(3)	12.380	152	248574	7.734
129) 4-Nitroaniline	(3)	12.391	138	214206	7.215
130) 4,6-Dinitro-2-methylphenol	(4)	12.429	198	122987	6.430
131) N-Nitrosodiphenylamine	(4)	12.519	169	773940	7.650
132) NDPA as diphenylamine	(4)	12.519	169	773940	7.650
134) 1,2-Diphenylhydrazine	(4)	12.562	77	994611	6.973
135)$2,4,6-Tribromophenol	(3)	12.643	330	179362	16.308
137) Tetraethyldithiopyrophosphate	(4)	12.749	97	172787	7.272
139) 1,3,5-Trinitrobenzene	(4)	12.867	213	86809	7.336
140) Diallate (peak 1)	(4)	12.889	86	386002	6.075
141) Phorate	(4)	12.894	75	684173	7.698
142) Phenacetin	(4)	12.921	108	490726	7.086
143) 4-Bromophenyl-phenylether	(4)	12.974	248	227147	8.203
144) Diallate (peak 2)	(4)	12.996	86	63095	1.219
145) Hexachlorobenzene	(4)	13.022	284	227594	8.461
147) Dimethoate	(4)	13.102	87	405503	7.055
148) Atrazine	(4)	13.204	200	233145	7.538
149) Pentachlorophenol	(4)	13.279	266	124919	7.214
151) Pentachloronitrobenzene	(4)	13.290	237	103857	8.036
150) 4-Aminobiphenyl	(4)	13.300	169	236585	7.207
152) Pronamide	(4)	13.397	173	436588	8.089
153)*Phenanthrene-d10	(4)	13.520	188	760076	5.000
154) Dinoseb	(4)	13.536	211	187659	7.061
155) Phenanthrene	(4)	13.552	178	1358765	7.634
157) Anthracene	(4)	13.616	178	1363939	7.807
163) Carbazole	(4)	13.841	167	1238538	7.373

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

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

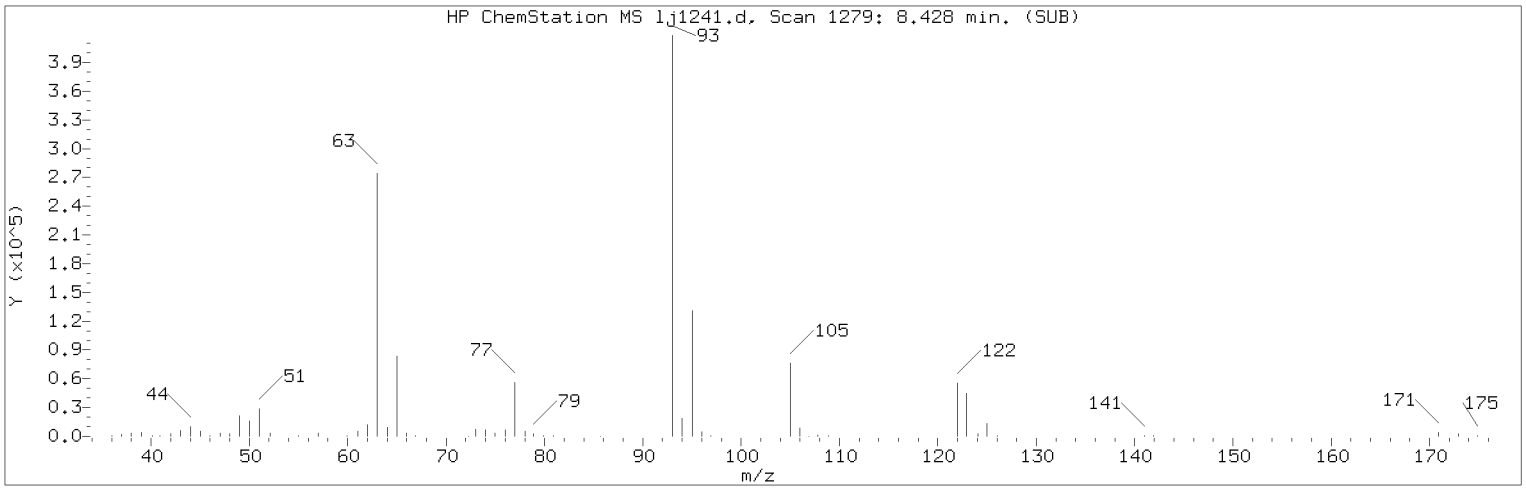
Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.044	109	322491	7.471
165) Di-n-butylphthalate	(4)	14.354	149	1628489	7.730
167) Parathion	(4)	14.595	109	205061	7.556
168) 4-Nitroquinoline-1-oxide	(4)	14.616	190	78730	4.450
169) Octachlorostyrene	(4)	14.937	308	82419	8.435
171) Isodrin	(4)	14.991	193	155283	7.776
222) Total PAHs	(6)			17692517	120.659
173) Fluoranthene	(4)	15.215	202	1476953	7.750
174) Benzidine	(5)	15.456	184	2595270	18.203
175)*Pyrene-d10	(5)	15.531	212	842577	5.000
177) Pyrene	(5)	15.563	202	1530417	7.679
179)$Terphenyl-d14	(5)	15.846	244	1963615	16.037
182) p-Dimethylaminoazobenzene	(5)	16.082	225	210408	8.050
185) Chlorobenzilate	(5)	16.167	139	470998	7.489
187) 3,3'-Dimethylbenzidine	(5)	16.649	212	841394	6.455
188) Butylbenzylphthalate	(5)	16.702	149	702201	7.523
191) 2-Acetylaminofluorene	(5)	17.071	181	501741	6.034
193) 3,3'-Dichlorobenzidine	(5)	17.585	252	430751	6.568
195) Benzo(a)anthracene	(5)	17.590	228	1308157	7.302
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.606	231	230069	6.787
196) Chrysene	(5)	17.649	228	1215214	7.366
199) bis(2-Ethylhexyl)phthalate	(5)	17.767	149	1014858	7.443
203) 6-Methylchrysene	(5)	18.456	242	839338	7.078
205) Di-n-octylphthalate	(6)	18.938	149	1666180	8.256
206) Benzo(b)fluoranthene	(6)	19.457	252	1132533	7.998
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.462	256	502741	8.307
208) Benzo(k)fluoranthene	(6)	19.505	252	1135705	8.390
211) Benzo(a)pyrene	(6)	19.986	252	1037049	7.830
213)*Perylene-d12	(6)	20.077	264	544235	5.000
215) 3-Methylcholanthrene	(6)	20.553	268	356462	7.593
217) Dibenz(a,h)acridine	(6)	21.371	279	721221	6.718
218) Dibenz(a,j)acridine	(6)	21.446	279	751289	6.749
219) Indeno(1,2,3-cd)pyrene	(6)	21.692	276	821582M	6.831
220) Dibenz(a,h)anthracene	(6)	21.735	278	857855	7.049
221) Benzo(g,h,i)perylene	(6)	22.088	276	827972	6.695

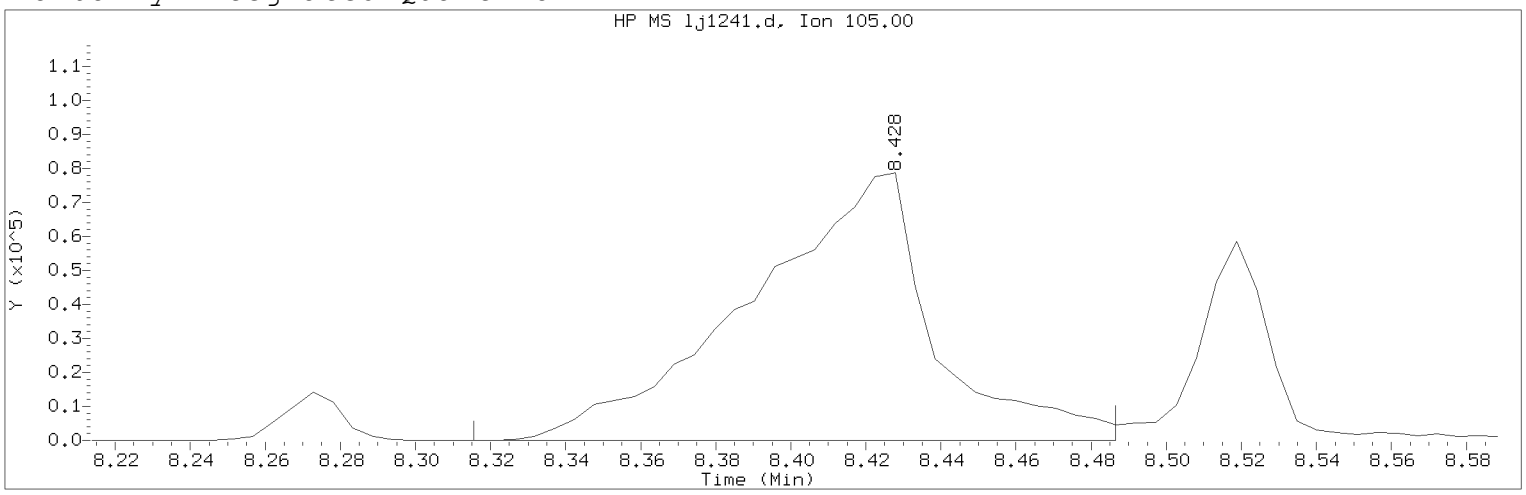
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

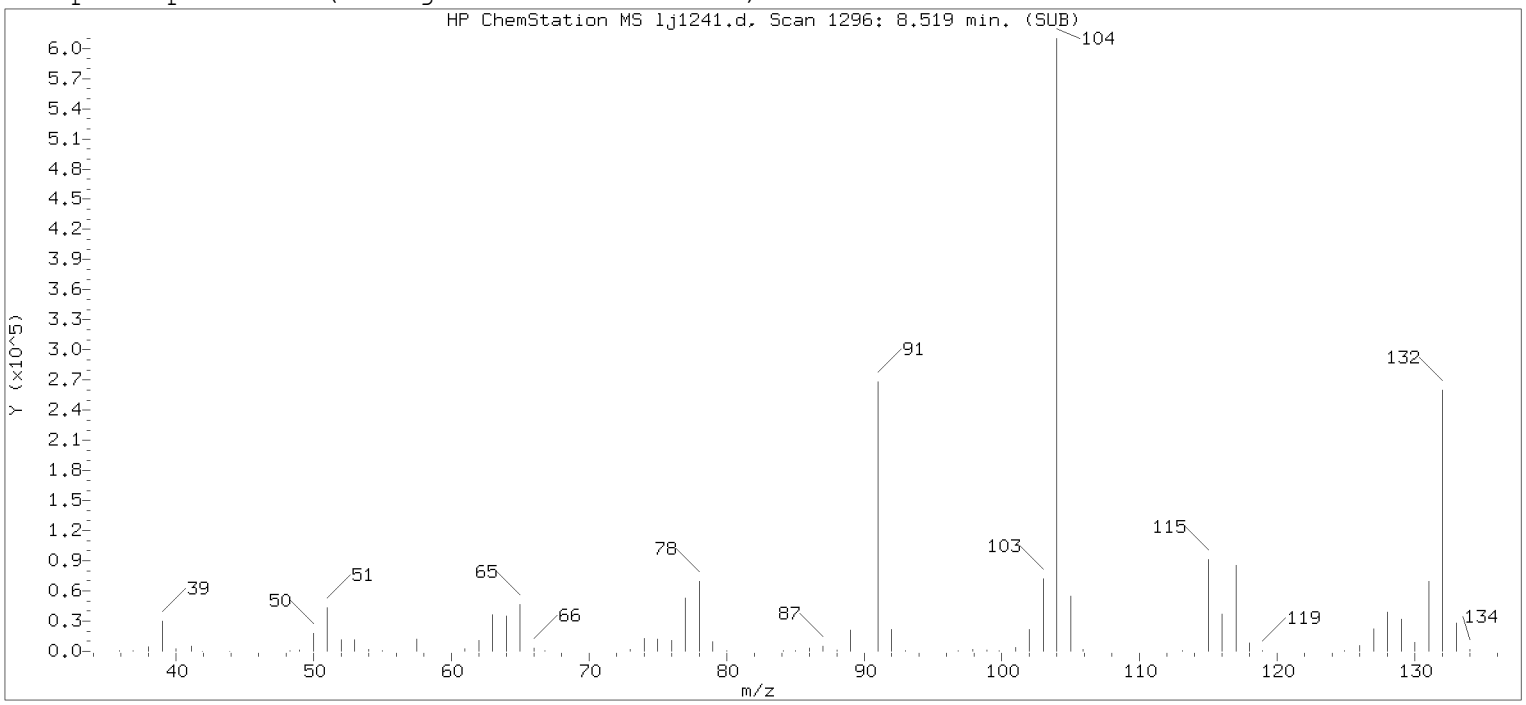
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1279
Retention Time (minutes) : 8.428
Quant Ion : 105.00
Area (flag) : 267147A
On-Column Amount (ng/ul) : 8.9511
Integration start scan : 1257 Integration stop scan: 1289
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

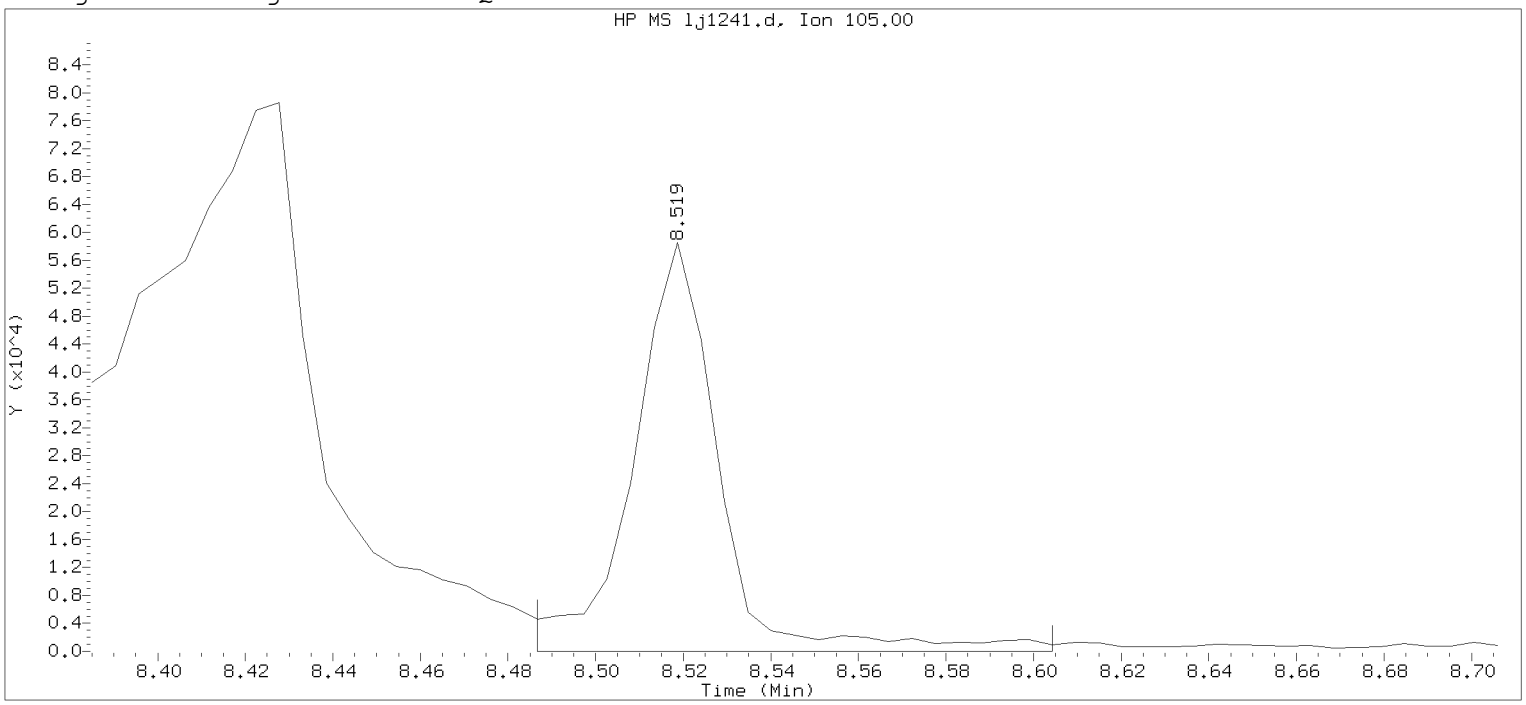
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 10/27/2017 at 10:25.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

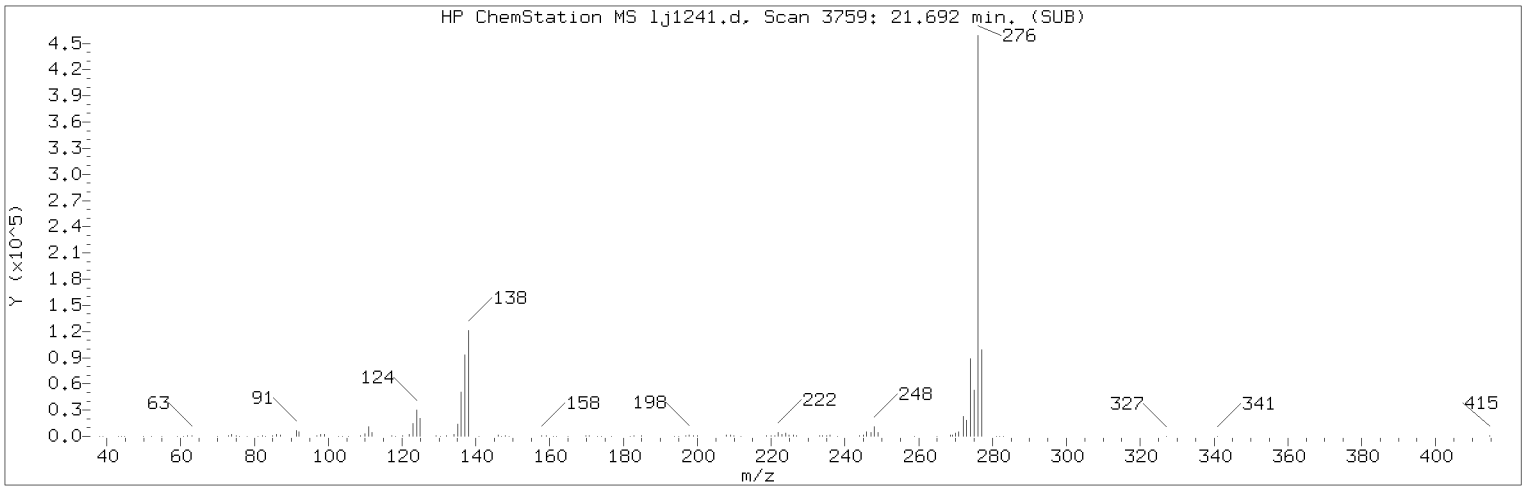
Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:12
Date, time and analyst ID of latest file update: 25-Oct-2017 09:12 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

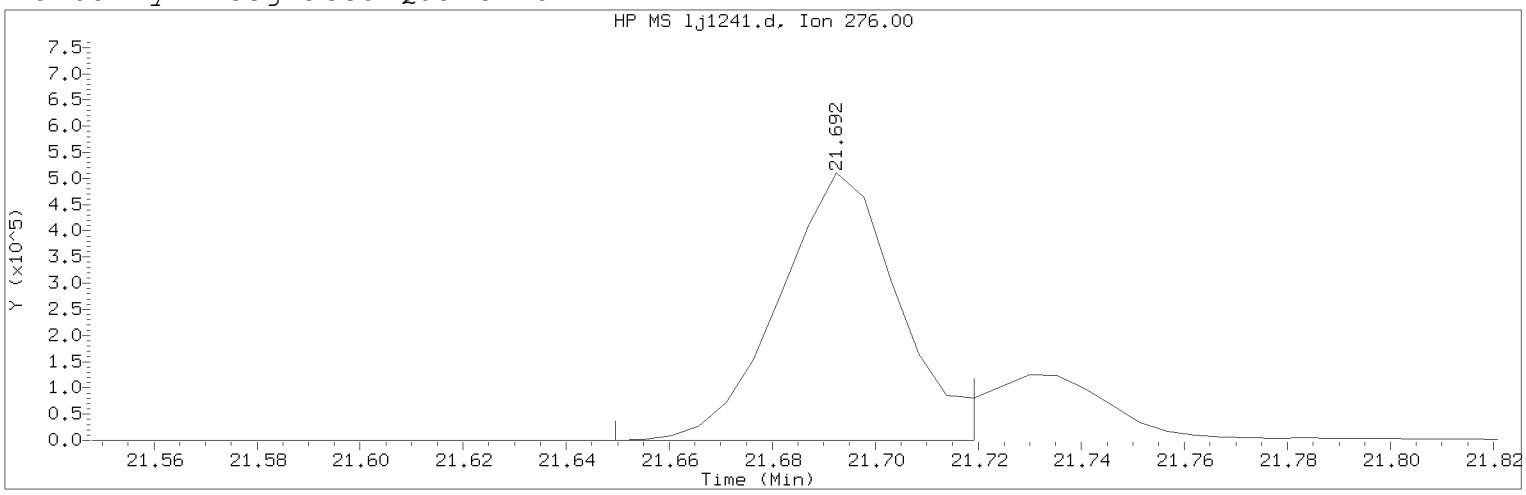
Compound Number	: 56
Compound Name	: Benzoic acid
Scan Number	: 1296
Retention Time (minutes)	: 8.519
Quant Ion	: 105.00
Area	: 78882
On-column Amount (ng/ul)	: 4.7987
Integration start scan	: 1289 Integration stop scan: 1311
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: 1077

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:19
Date, time and analyst ID of latest file update: 25-Oct-2017 09:19 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

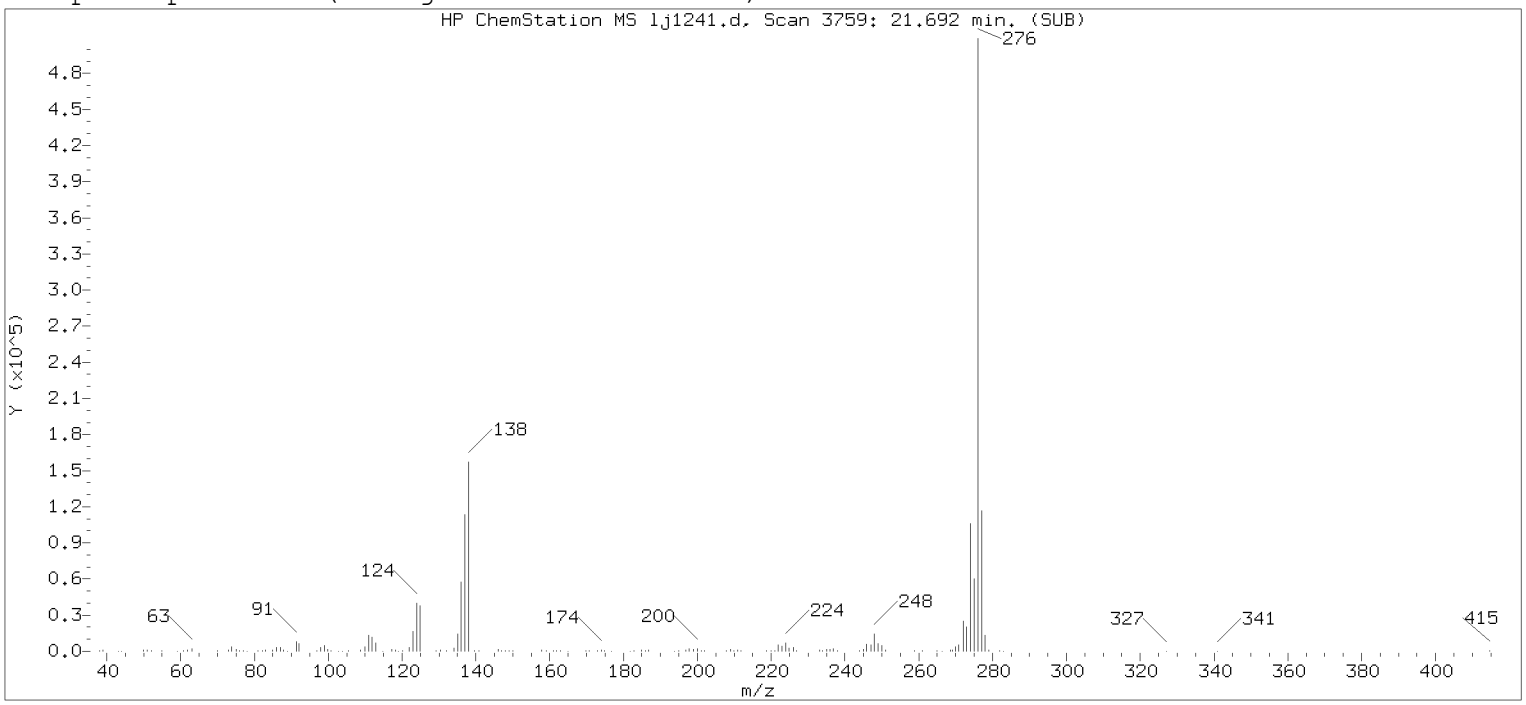
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3759
Retention Time (minutes) : 21.692
Quant Ion : 276.00
Area (flag) : 821582M
On-Column Amount (ng/ul) : 6.8310
Integration start scan : 3750 Integration stop scan: 3763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

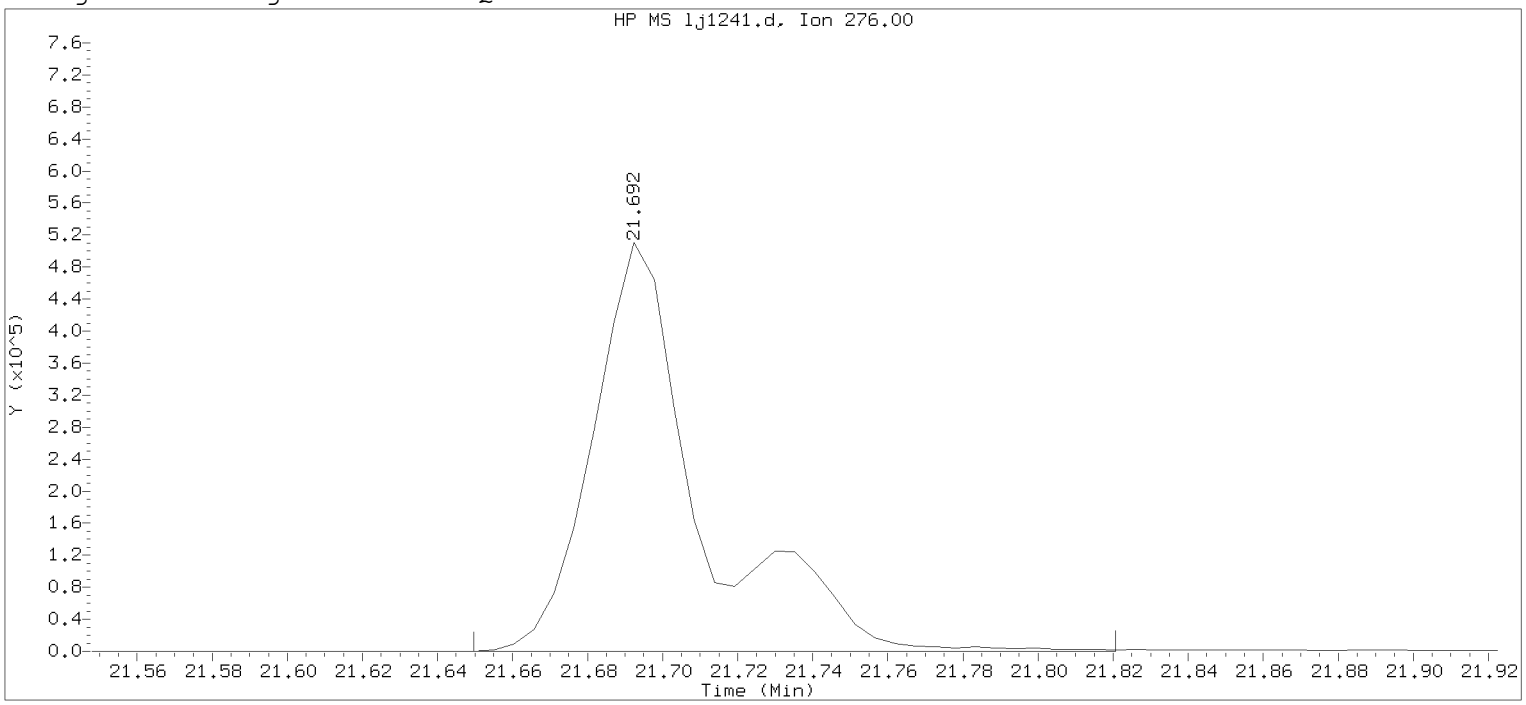
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 10/27/2017 at 10:25.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/17oct25.b/lj1241.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 08:46 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: all1
Calibration date and time: 25-OCT-2017 09:12
Date, time and analyst ID of latest file update: 25-Oct-2017 09:12 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2857

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3759		
Retention Time (minutes)	: 21.692		
Quant Ion	: 276.00		
Area	: 1020209		
On-column Amount (ng/ul)	: 8.4824		
Integration start scan	: 3750	Integration stop scan:	3782
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 10/25/2017 at 09:21.
Target 3.5 esignature user ID: 1279

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP20296.i/17oct25.b/lj1247.d Injection date and time: **25-OCT-2017 12:04**
Data file Sample Info. Line: SBLKWP286;SBLKWP286;1;3;BLANK;;RAAPVA; Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.791	(0.000)	973	152	170564	(-6)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	658550	(-10)	5.00	
113) Acenaphthene-d10	11.594	(0.005)	1871	164	373165	(-11)	5.00	
153) Phenanthrene-d10	13.514	(0.005)	2230	188	680809	(-10)	5.00	
175) Pyrene-d10	15.531	(0.000)	2607	212	727352	(-14)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	444562	(-18)	5.00	

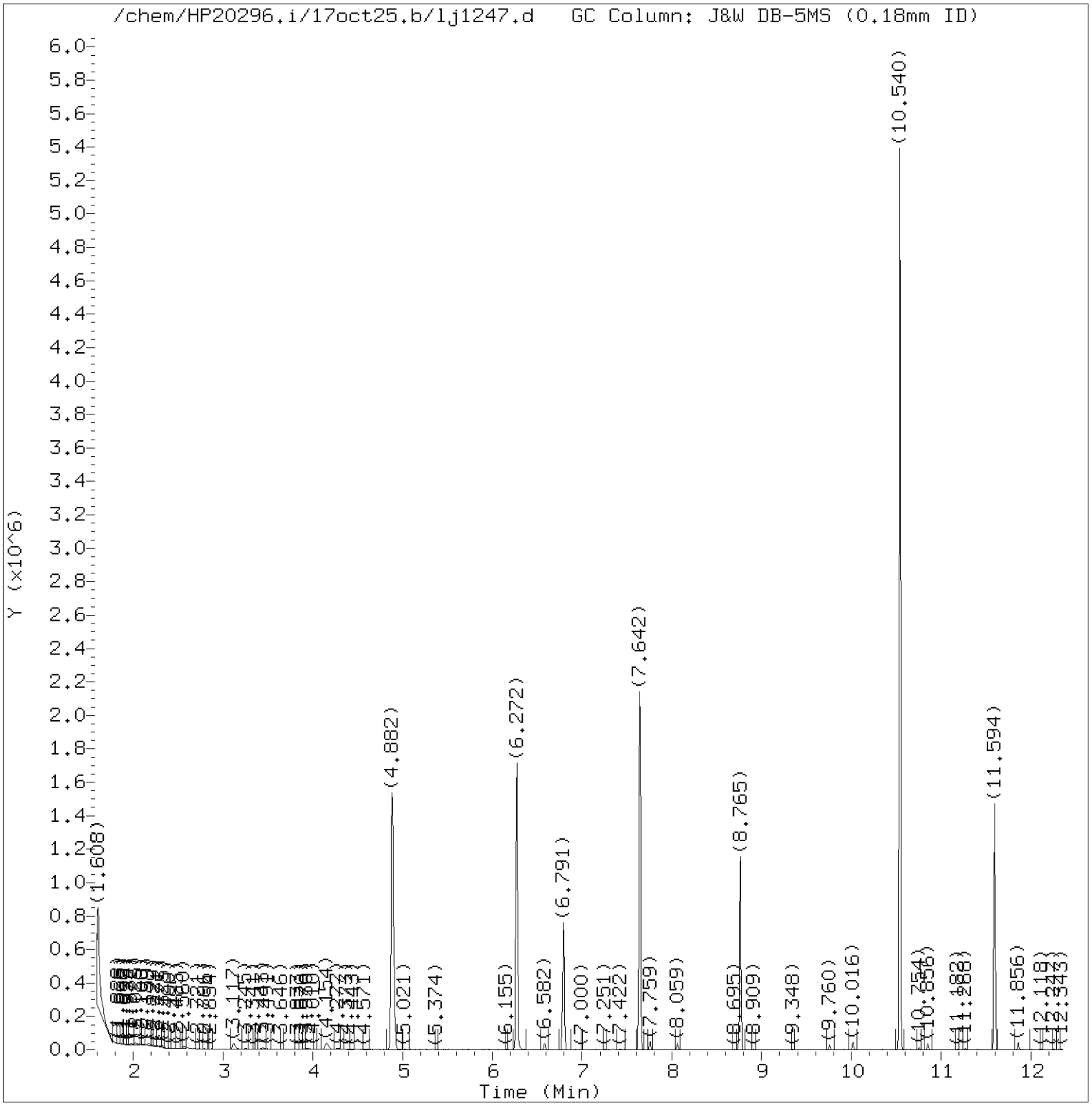
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.882	(0.001)	112	894860	16.870	34%		10 - 83
17) Phenol-d6	(1)	6.272	(0.000)	99	875718	12.507	25%		10 - 69
44) Nitrobenzene-d5	(2)	7.642	(0.001)	82	978906	15.802	63%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.540	(0.000)	172	1982087	18.176	73%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.642	(-0.001)	330	384470	39.243	78%		13 - 149
179) Terphenyl-d14	(5)	15.846	(0.000)	244	1944092	18.392	74%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

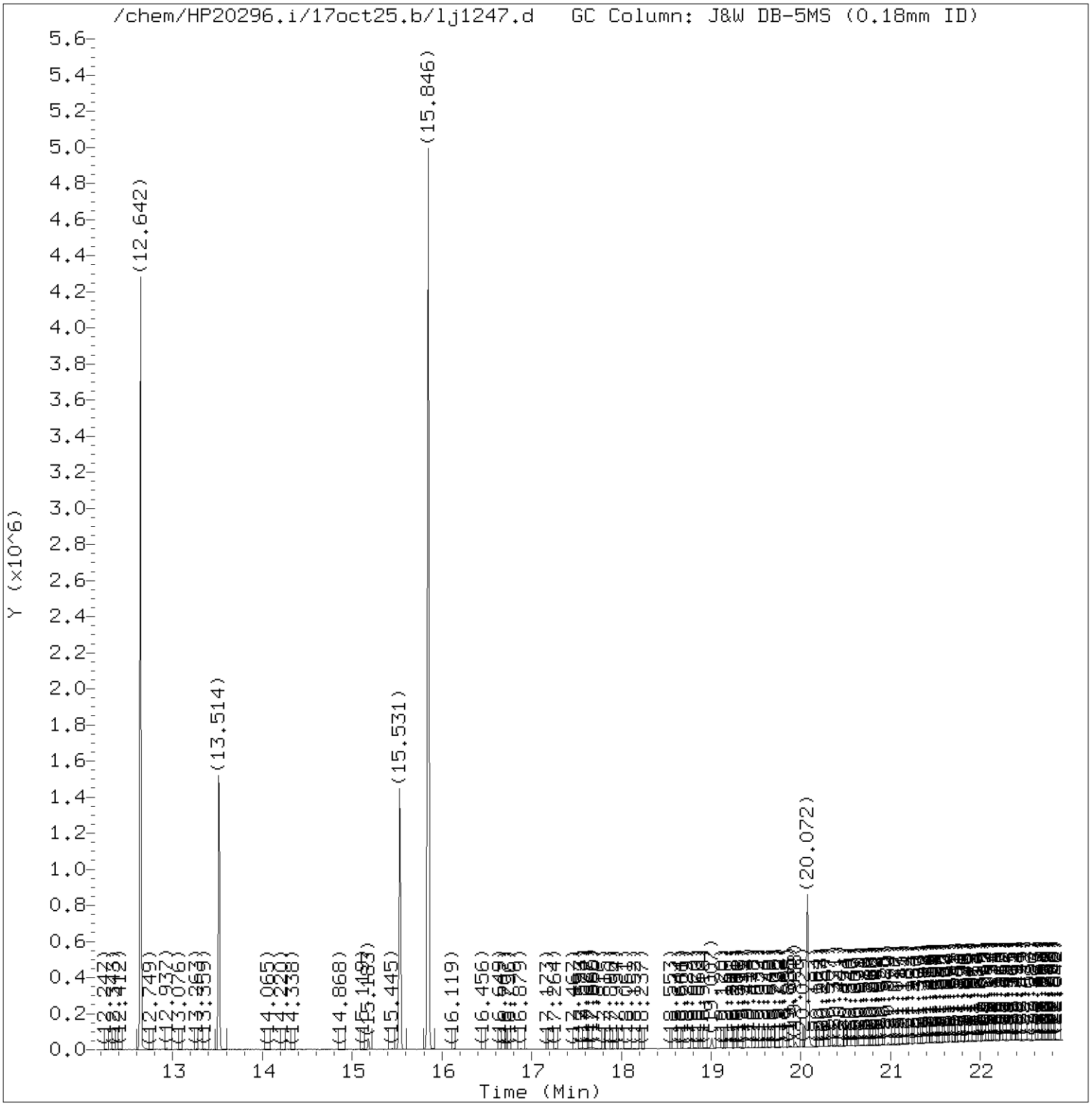
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1247.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: SBLKWP286 Lab Sample ID: SBLKWP286

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1247.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: SBLKWP286 Lab Sample ID: SBLKWP286

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1247.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:04 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: SBLKWP286 Lab Sample ID: SBLKWP286

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.882	112	894860	16.870
17)$Phenol-d6	(1)	6.272	99	875718	12.507
25)*1,4-Dichlorobenzene-d4	(1)	6.791	152	170564	5.000
44)$Nitrobenzene-d5	(2)	7.642	82	978906	15.802
65)*Naphthalene-d8	(2)	8.765	136	658550	5.000
93)$2-Fluorobiphenyl	(3)	10.540	172	1982087	18.176
113)*Acenaphthene-d10	(3)	11.594	164	373165	5.000
135)$2,4,6-Tribromophenol	(3)	12.642	330	384470	39.243
153)*Phenanthrene-d10	(4)	13.514	188	680809	5.000
175)*Pyrene-d10	(5)	15.531	212	727352	5.000
179)$Terphenyl-d14	(5)	15.846	244	1944092	18.392
213)*Perylene-d12	(6)	20.077	264	444562	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/17oct24a.b/dj1213.d Injection date and time: **24-OCT-2017 23:38**
Data file Sample Info. Line: SBLKWE290;SBLKWE290;1;3;BLANK;;RAAPVA; Instrument ID: **HP19760.i** Batch: **17290WAE**
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Blank Data file reference: **/chem/HP19760.i/17oct24a.b/dj1213.d**

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 25-OCT-2017 14:53
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct24a.b/dj1211.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.723	(0.000)	864	152	180002	(-11)	5.00	
65) Naphthalene-d8	8.658	(0.000)	1196	136	680919	(-12)	5.00	
113) Acenaphthene-d10	11.444	(0.006)	1674	164	354016	(-14)	5.00	
153) Phenanthrene-d10	13.338	(0.000)	1999	188	635530	(-15)	5.00	
175) Pyrene-d10	15.291	(0.006)	2334	212	742199	(-18)	5.00	
213) Perylene-d12	19.761	(0.000)	3101	264	621670	(-27)	5.00	

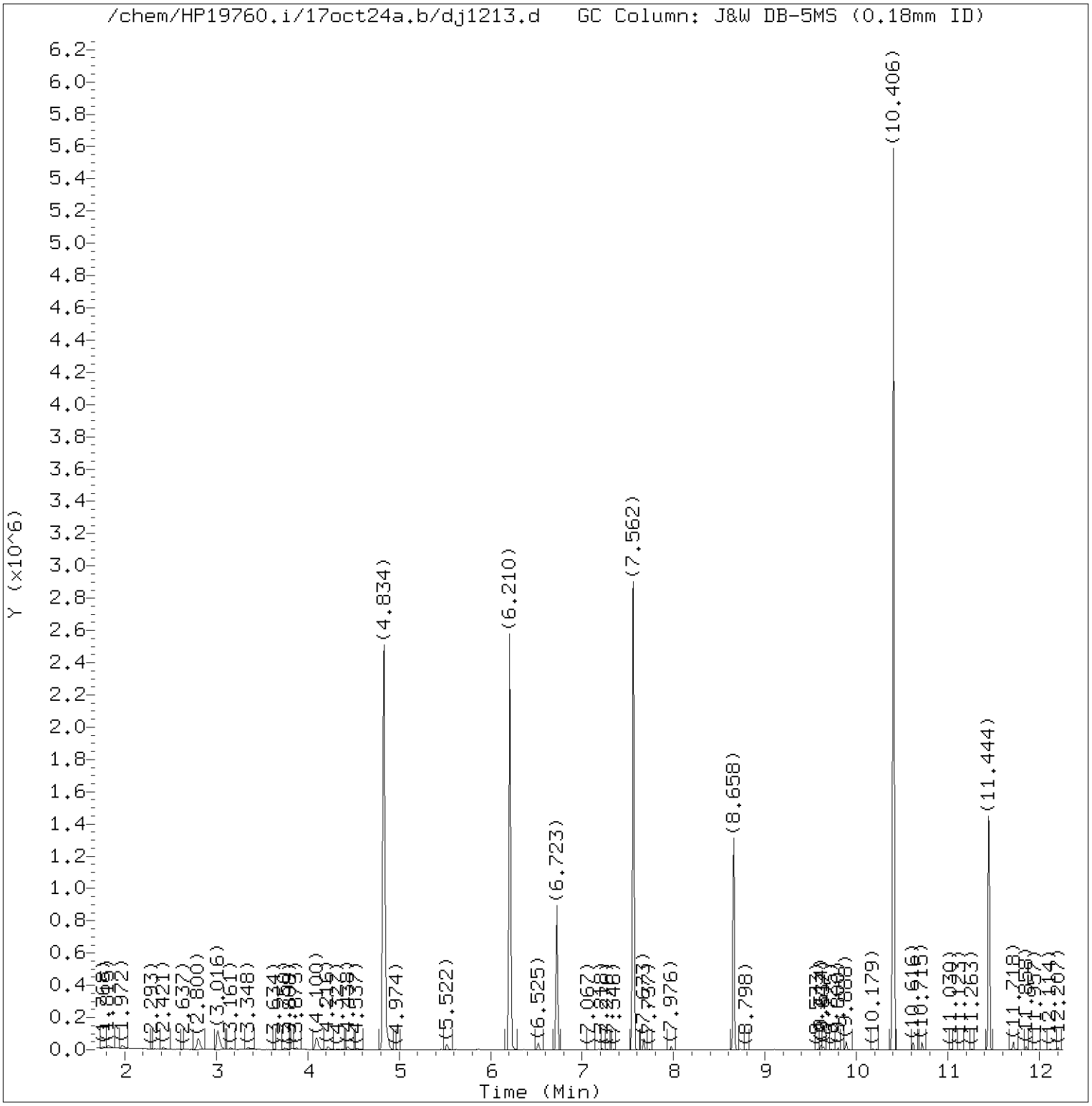
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.562	(0.000)	82	1289155	19.604	78%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.406	(0.000)	172	2111455	19.693	79%		46 - 104
179) Terphenyl-d14	(5)	15.611	(-0.001)	244	2236412	20.035	80%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/02/2017 at 14:16. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

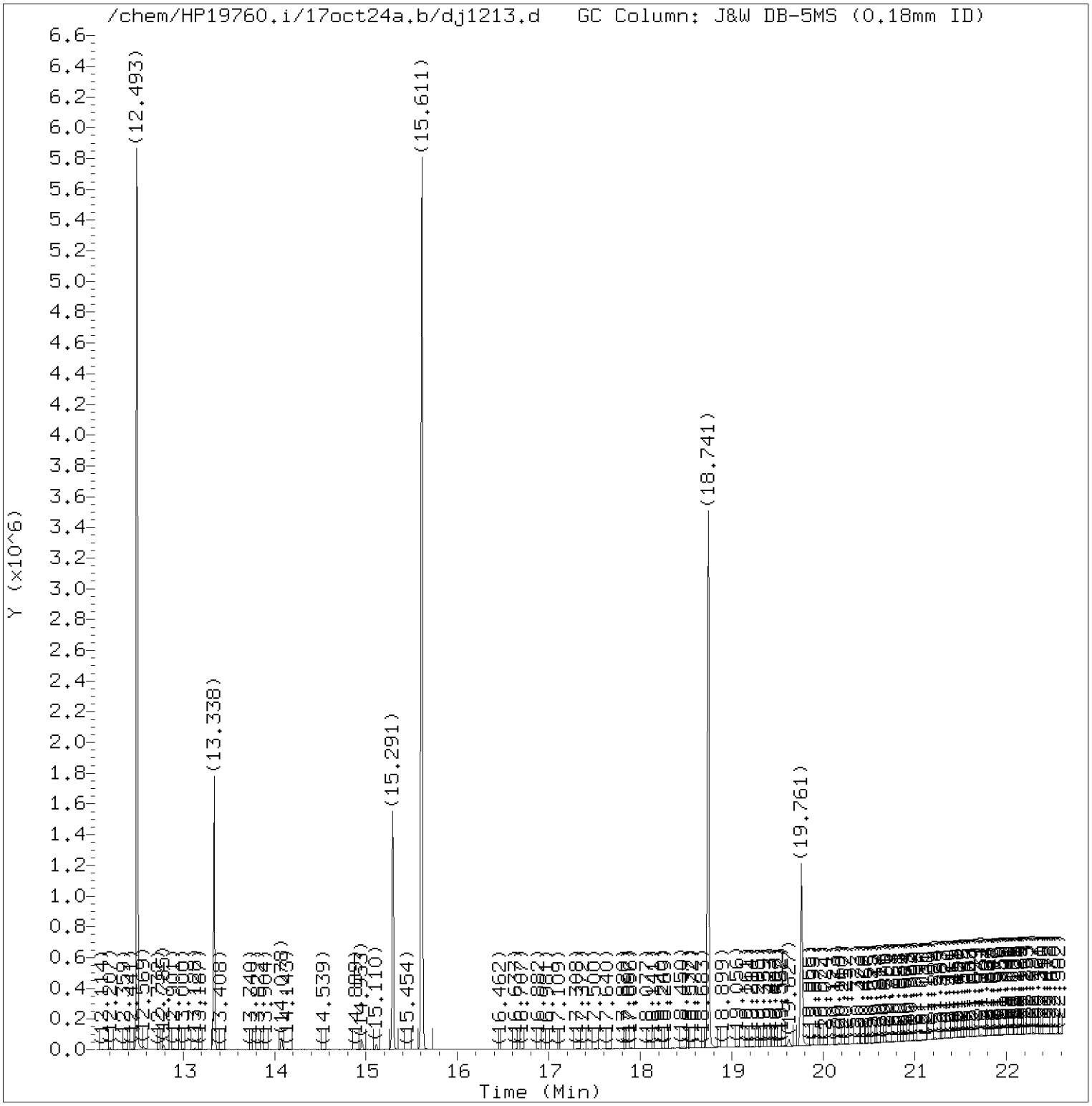
Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1213.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:38 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: SBLKWE290 Lab Sample ID: SBLKWE290

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1213.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:38 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: SBLKWE290 Lab Sample ID: SBLKWE290

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1213.d Instrument ID: HP19760.i
Injection date and time: 24-OCT-2017 23:38 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: SBLKWE290 Lab Sample ID: SBLKWE290

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.723	152	180002	5.000
44)$Nitrobenzene-d5	(2)	7.562	82	1289155	19.604
65)*Naphthalene-d8	(2)	8.658	136	680919	5.000
93)$2-Fluorobiphenyl	(3)	10.406	172	2111455	19.693
113)*Acenaphthene-d10	(3)	11.444	164	354016	5.000
153)*Phenanthrene-d10	(4)	13.338	188	635530	5.000
175)*Pyrene-d10	(5)	15.291	212	742199	5.000
179)$Terphenyl-d14	(5)	15.611	244	2236412	20.035
213)*Perylene-d12	(6)	19.761	264	621670	5.000

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

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

SBLKWZ299

Data file: /chem/HP19760.i/17oct31.b/dj1633z.d Injection date and time: **31-OCT-2017 12:33**
Data file Sample Info. Line: SBLKWZ299;SBLKWZ299;1;3;BLANK;;RAAPVA; Instrument ID: **HP19760.i** Batch: **17299WAZ**
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Blank Data file reference: **/chem/HP19760.i/17oct31.b/dj1633z.d**

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 01-NOV-2017 02:56
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct31.b/dj1631.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.989	(0.000)	841	152	156014	(-19)	5.00	
65) Naphthalene-d8	8.924	(0.006)	1173	136	588548	(-19)	5.00	
113) Acenaphthene-d10	11.704	(0.000)	1650	164	302765	(-23)	5.00	
153) Phenanthrene-d10	13.593	(0.000)	1974	188	547231	(-24)	5.00	
175) Pyrene-d10	15.604	(0.000)	2319	212	643321	(-25)	5.00	
213) Perylene-d12	20.132	(0.000)	3096	264	525118	(-27)	5.00	

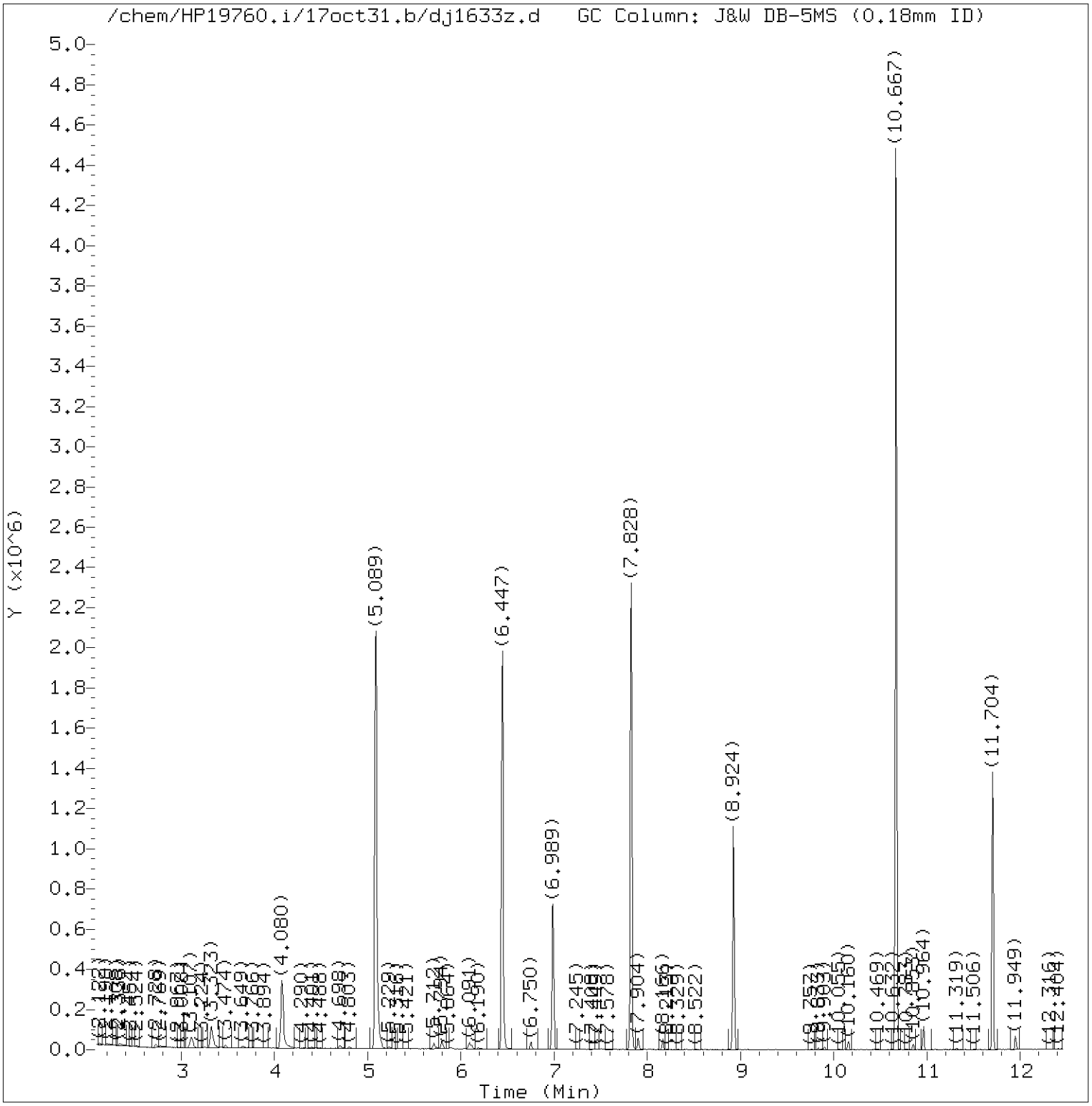
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.828	(-0.001)	82	999964	18.165	73%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.667	(0.000)	172	1697664	18.555	74%		46 - 104
179) Terphenyl-d14	(5)	15.912	(0.000)	244	2022593	21.339	85%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Klaassen on 11/22/2017 at 15:40. Target 3.5 esignature user ID: knk25316

Secondary review performed and digitally signed by Holly B. Ziegler on 11/27/2017 at 12:55. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

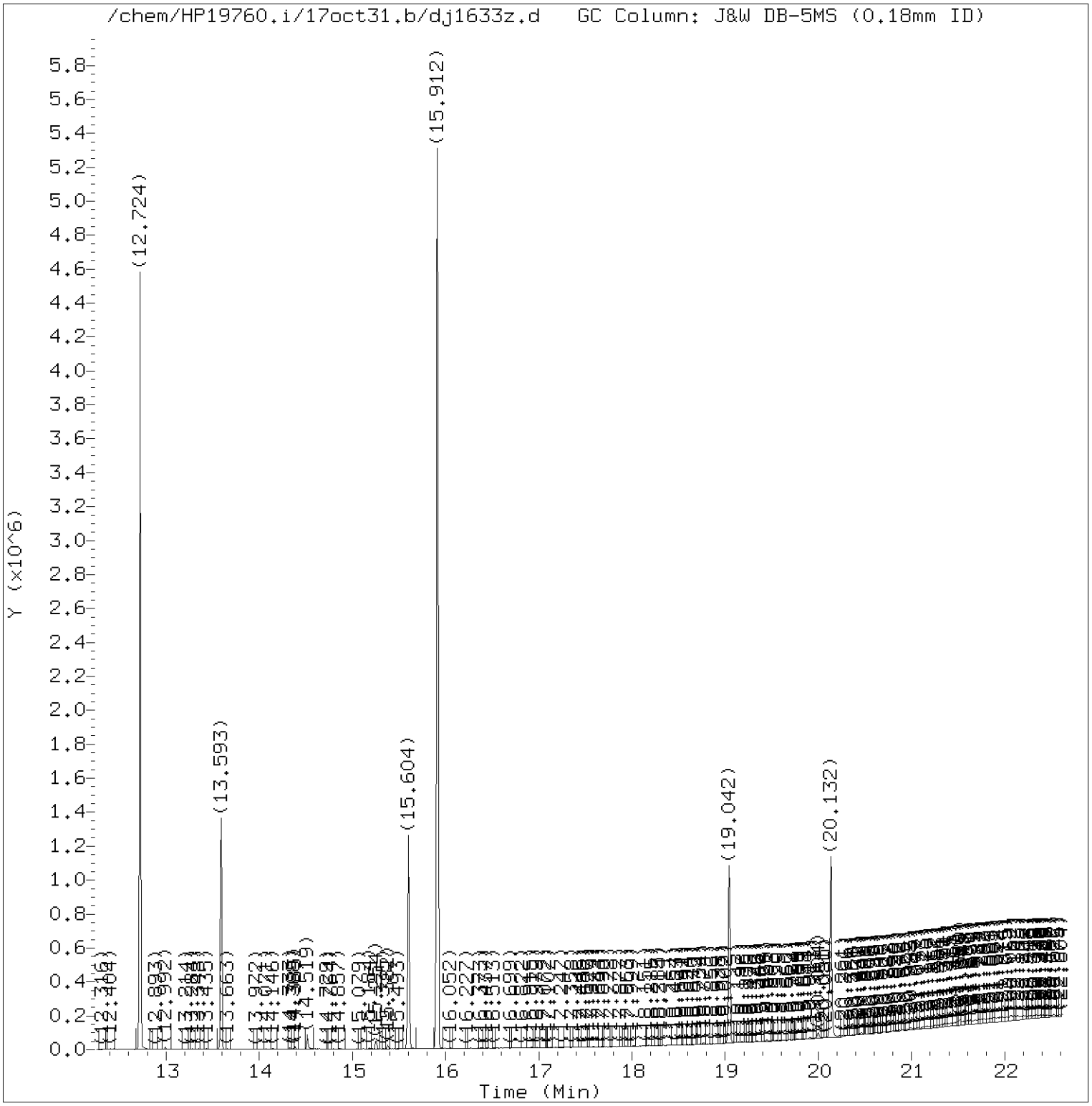
Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1633z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 12:33 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: SBLKWZ299 Lab Sample ID: SBLKWZ299

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1633z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 12:33 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: SBLKWZ299 Lab Sample ID: SBLKWZ299

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1633z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 12:33 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: SBLKWZ299 Lab Sample ID: SBLKWZ299

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	156014	5.000
44)$Nitrobenzene-d5	(2)	7.828	82	999964	18.165
65)*Naphthalene-d8	(2)	8.924	136	588548	5.000
93)$2-Fluorobiphenyl	(3)	10.667	172	1697664	18.555
113)*Acenaphthene-d10	(3)	11.704	164	302765	5.000
153)*Phenanthrene-d10	(4)	13.593	188	547231	5.000
175)*Pyrene-d10	(5)	15.604	212	643321	5.000
179)$Terphenyl-d14	(5)	15.912	244	2022593	21.339
213)*Perylene-d12	(6)	20.132	264	525118	5.000

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

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1250.d
Data file Sample Info. Line: 16WC1MS;9262026;1;3;MS;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Injection date and time: **25-OCT-2017 13:28**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796(-0.005)	974	152	154545 (-15)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	596105 (-19)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	342127 (-18)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	637710 (-16)	5.00	
175) Pyrene-d10	15.536(-0.005)	2608	212	693459 (-18)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	441202 (-19)	5.00	

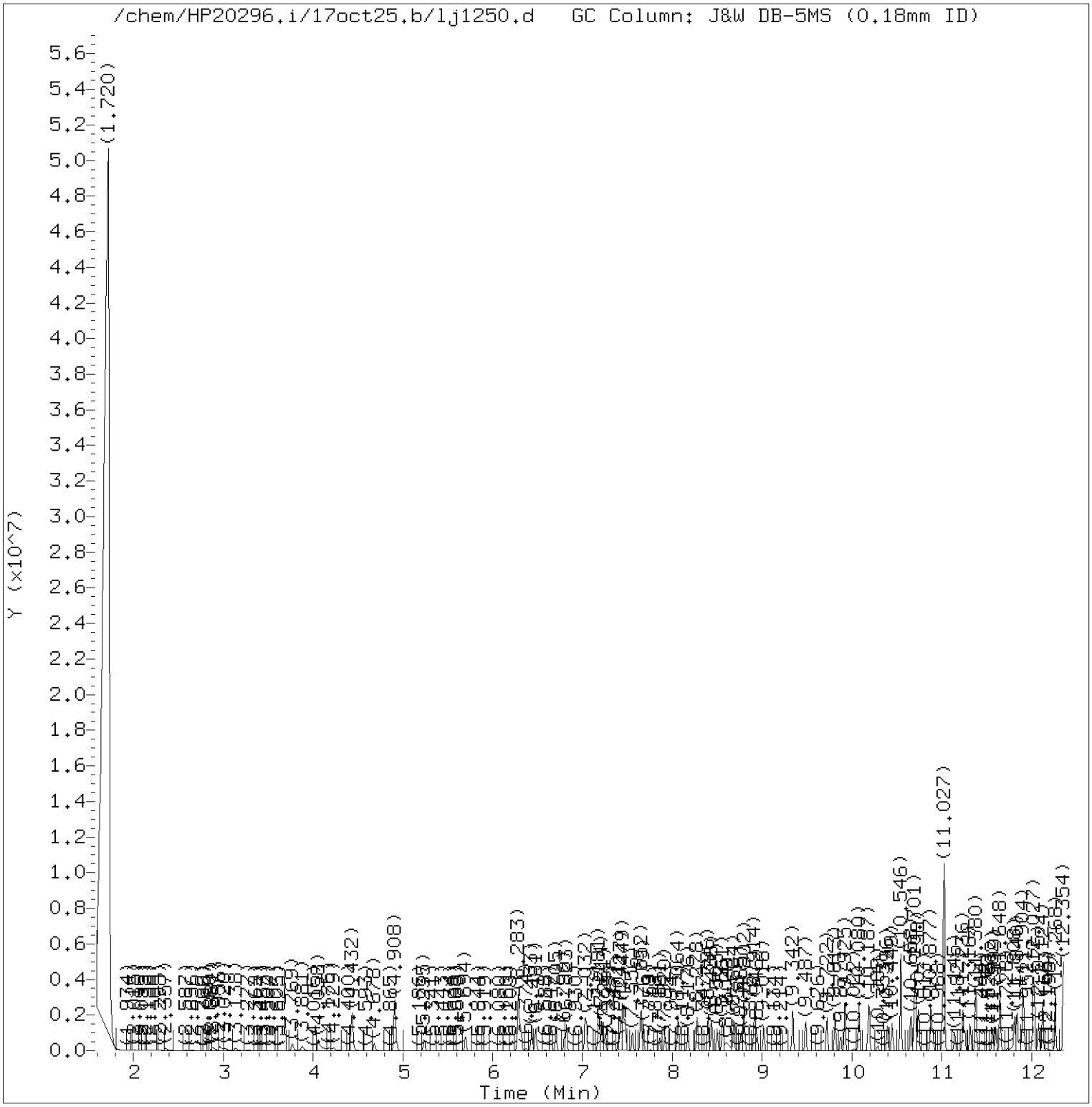
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.908(-0.003)	112	1216453	25.309	51%		10 - 83
17) Phenol-d6	(1)	6.283(-0.001)	99	1594129	25.127	50%		10 - 69
44) Nitrobenzene-d5	(2)	7.652(-0.001)	82	1065763	19.006	76%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.546(0.000)	172	2092232	20.927	84%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.648(0.000)	330	208319	23.192	46%		13 - 149
179) Terphenyl-d14	(5)	15.852(0.000)	244	2102407	20.862	83%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.316(-0.000)	165	247931	12.380	49.72			0.1
118) 2,4-Dinitrotoluene	(3)	11.915(-0.000)	165	342514	12.289	49.35			0.3
124) Diethylphthalate	(3)	12.268(-0.000)	149	1139900	12.123	48.69			0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

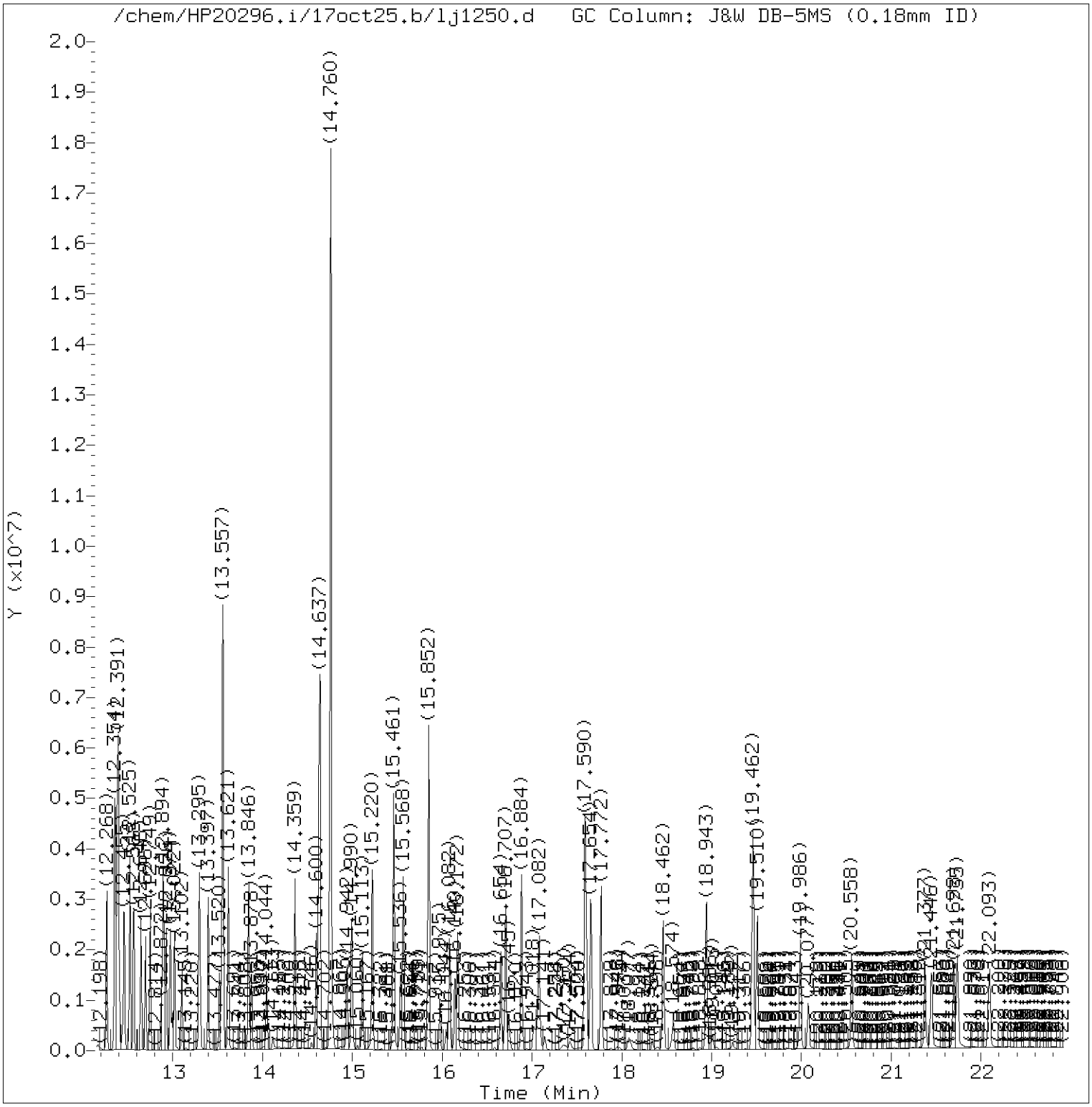
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1250.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MS Lab Sample ID: 9262026

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1250.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MS Lab Sample ID: 9262026

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1250.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MS Lab Sample ID: 9262026

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.908	112	1216453	25.309
17)$Phenol-d6	(1)	6.283	99	1594129	25.127
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	154545	5.000
44)$Nitrobenzene-d5	(2)	7.652	82	1065763	19.006
65)*Naphthalene-d8	(2)	8.765	136	596105	5.000
93)$2-Fluorobiphenyl	(3)	10.546	172	2092232	20.927
108) 2,6-Dinitrotoluene	(3)	11.316	165	247931	12.380
113)*Acenaphthene-d10	(3)	11.599	164	342127	5.000
118) 2,4-Dinitrotoluene	(3)	11.915	165	342514	12.289
124) Diethylphthalate	(3)	12.268	149	1139900	12.123
135)$2,4,6-Tribromophenol	(3)	12.648	330	208319	23.192
153)*Phenanthrene-d10	(4)	13.520	188	637710	5.000
175)*Pyrene-d10	(5)	15.536	212	693459	5.000
179)$Terphenyl-d14	(5)	15.852	244	2102407	20.862
213)*Perylene-d12	(6)	20.077	264	441202	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/17oct25.b/lj1251.d
Data file Sample Info. Line: 16WC1MSD;9262027;1;3;MSD;;RAAPVA;
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Injection date and time: **25-OCT-2017 13:57**
Instrument ID: **HP20296.i** Batch: **17286WAP**

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796	(-0.005)	974	152	152535	(-16)	5.00	
65) Naphthalene-d8	8.765	(0.000)	1342	136	601605	(-18)	5.00	
113) Acenaphthene-d10	11.599	(0.000)	1872	164	343217	(-18)	5.00	
153) Phenanthrene-d10	13.520	(0.000)	2231	188	627313	(-17)	5.00	
175) Pyrene-d10	15.536	(-0.005)	2608	212	697309	(-17)	5.00	
213) Perylene-d12	20.077	(0.000)	3457	264	440675	(-19)	5.00	

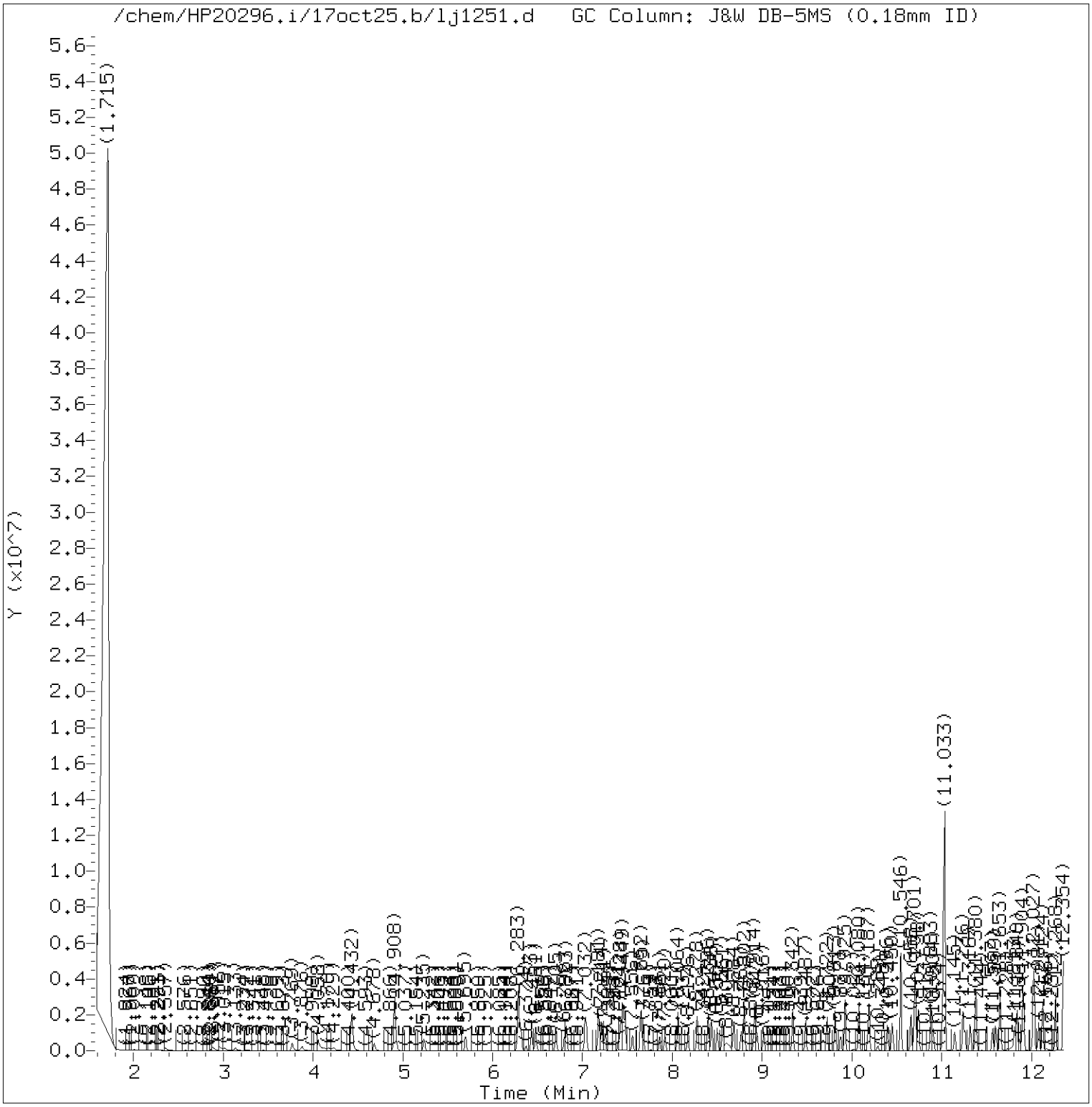
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.908	(-0.003)	112	1216556	25.645	51%		10 - 83
17) Phenol-d6	(1)	6.283	(-0.001)	99	1650732	26.362	53%		10 - 69
44) Nitrobenzene-d5	(2)	7.652	(-0.001)	82	1071564	18.935	76%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.546	(0.000)	172	2111991	21.057	84%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.648	(0.000)	330	258780	28.719	57%		13 - 149
179) Terphenyl-d14	(5)	15.852	(0.000)	244	2175760	21.471	86%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.316	(-0.000)	165	245446	12.217	49.46			0.1
118) 2,4-Dinitrotoluene	(3)	11.915	(-0.000)	165	339781	12.152	49.20			0.3
124) Diethylphthalate	(3)	12.268	(-0.000)	149	1158105	12.278	49.71			0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

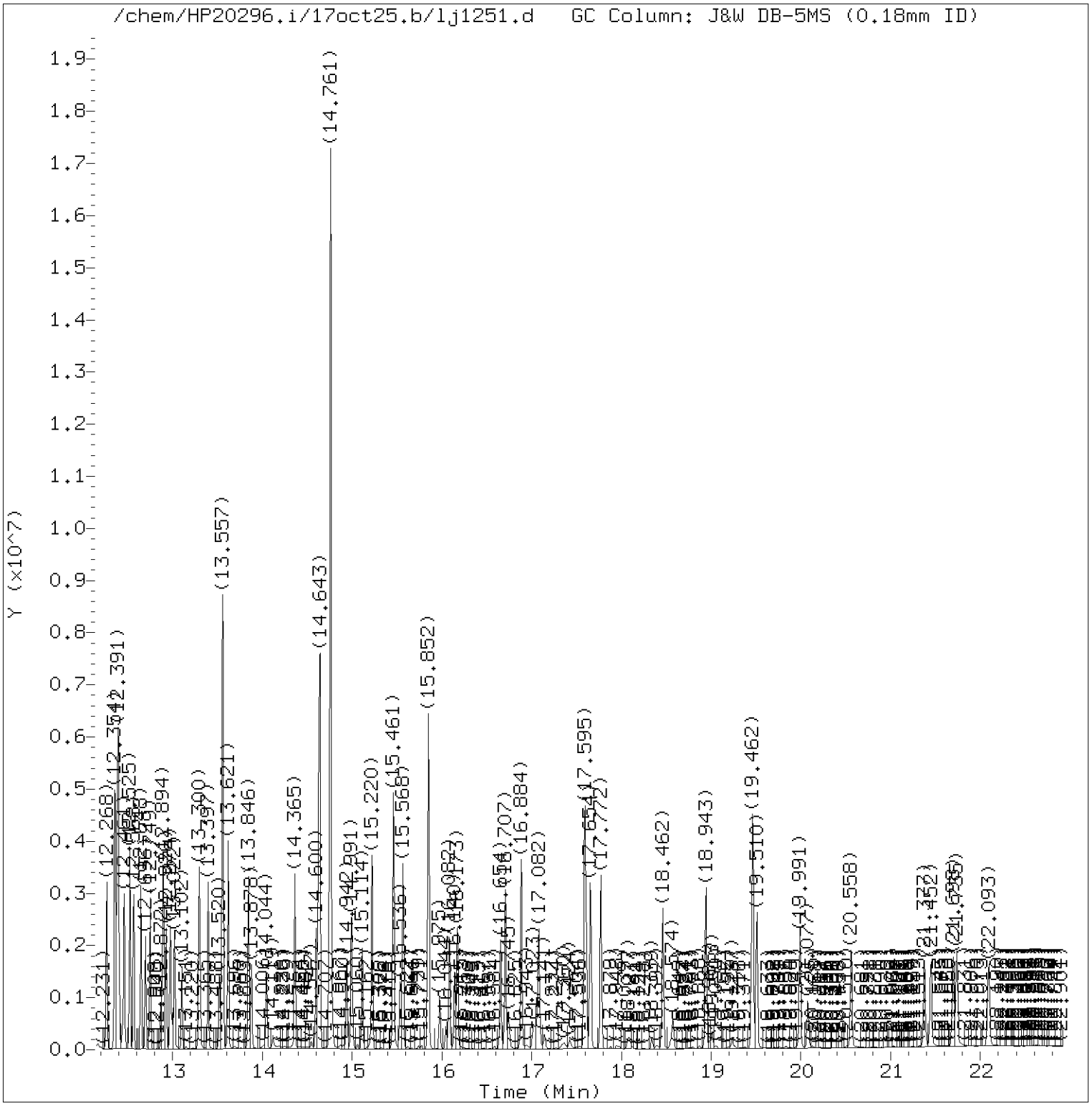
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1251.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MSD Lab Sample ID: 9262027

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1251.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MSD Lab Sample ID: 9262027

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1251.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 13:57 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 16WC1MSD Lab Sample ID: 9262027

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.908	112	1216556	25.645
17)$Phenol-d6	(1)	6.283	99	1650732	26.362
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	152535	5.000
44)$Nitrobenzene-d5	(2)	7.652	82	1071564	18.935
65)*Naphthalene-d8	(2)	8.765	136	601605	5.000
93)$2-Fluorobiphenyl	(3)	10.546	172	2111991	21.057
108) 2,6-Dinitrotoluene	(3)	11.316	165	245446	12.217
113)*Acenaphthene-d10	(3)	11.599	164	343217	5.000
118) 2,4-Dinitrotoluene	(3)	11.915	165	339781	12.152
124) Diethylphthalate	(3)	12.268	149	1158105	12.278
135)$2,4,6-Tribromophenol	(3)	12.648	330	258780	28.719
153)*Phenanthrene-d10	(4)	13.520	188	627313	5.000
175)*Pyrene-d10	(5)	15.536	212	697309	5.000
179)$Terphenyl-d14	(5)	15.852	244	2175760	21.471
213)*Perylene-d12	(6)	20.077	264	440675	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

286WPLCS

Data file: /chem/HP20296.i/17oct25.b/lj1248.d Injection date and time: **25-OCT-2017 12:32**
Data file Sample Info. Line: 286WPLCS;286WPLCS;1;3;LCS;;RAAPVA; Instrument ID: **HP20296.i** Batch: **17286WAP**
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Blank Data file reference: **/chem/HP20296.i/17oct25.b/lj1247.d**

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 26-OCT-2017 10:49
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/17oct25.b/lj1241.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 * 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	6.796(-0.005)	974	152	168326 (-8)	5.00	
65) Naphthalene-d8	8.765(0.000)	1342	136	655474 (-11)	5.00	
113) Acenaphthene-d10	11.599(0.000)	1872	164	381504 (-9)	5.00	
153) Phenanthrene-d10	13.520(0.000)	2231	188	687558 (-10)	5.00	
175) Pyrene-d10	15.536(-0.005)	2608	212	759894 (-10)	5.00	
213) Perylene-d12	20.077(0.000)	3457	264	474321 (-13)	5.00	

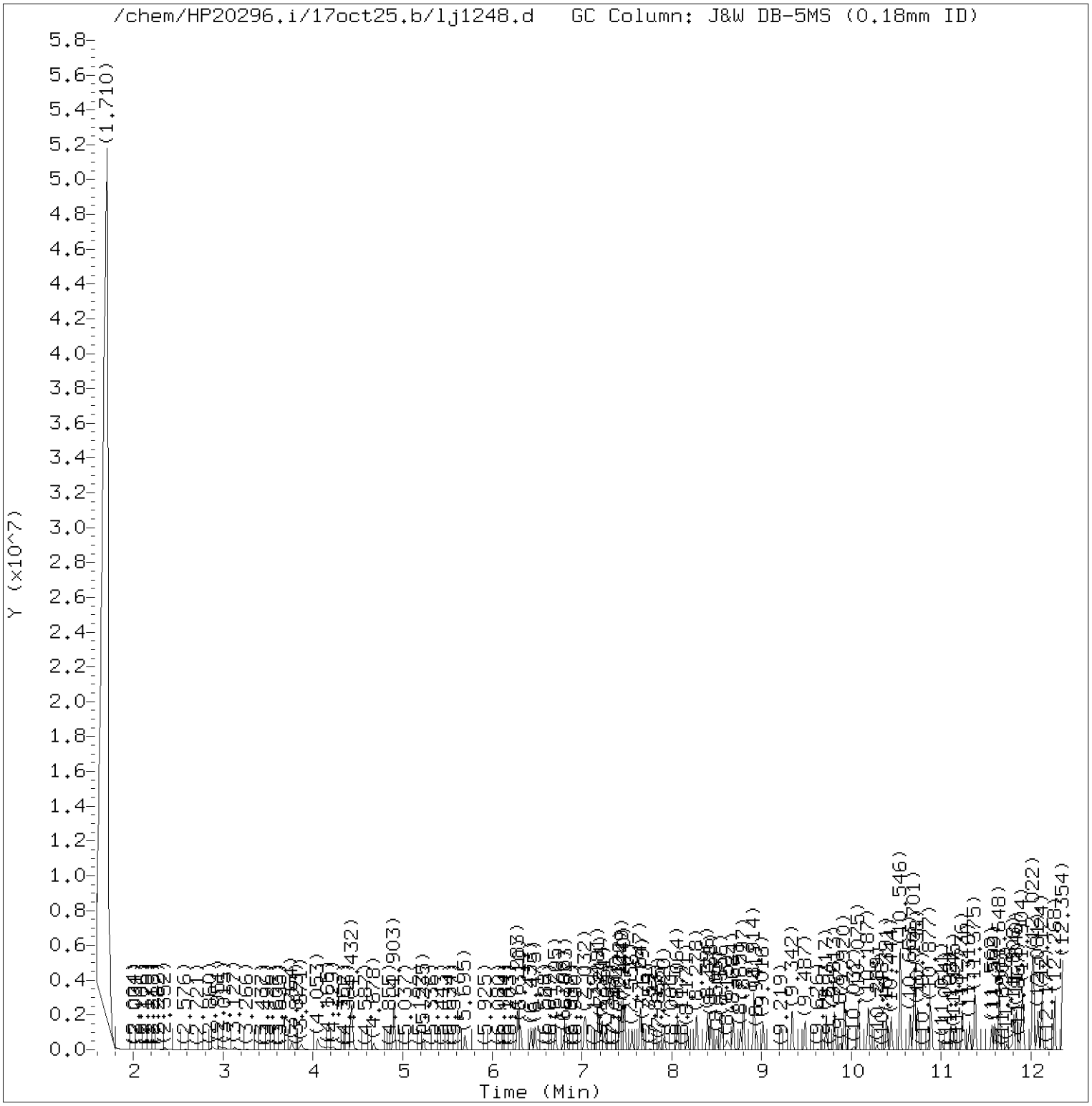
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.903(-0.002)	112	1185422	22.644	45%		10 - 83
17) Phenol-d6	(1)	6.283(-0.001)	99	1111312	16.082	32%		10 - 69
44) Nitrobenzene-d5	(2)	7.647(0.000)	82	1136844	18.438	74%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.546(0.000)	172	2246370	20.149	81%		46 - 104
135) 2,4,6-Tribromophenol	(3)	12.648(0.000)	330	475105	47.434	95%		13 - 149
179) Terphenyl-d14	(5)	15.852(0.000)	244	2262327	20.487	82%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.316(-0.000)	165	263108	11.782	47.13			0.1
118) 2,4-Dinitrotoluene	(3)	11.915(-0.000)	165	362730	11.671	46.68			0.3
124) Diethylphthalate	(3)	12.268(-0.000)	149	1175468	11.211	44.85			0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 10/30/2017 at 12:51. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2017 at 15:26. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

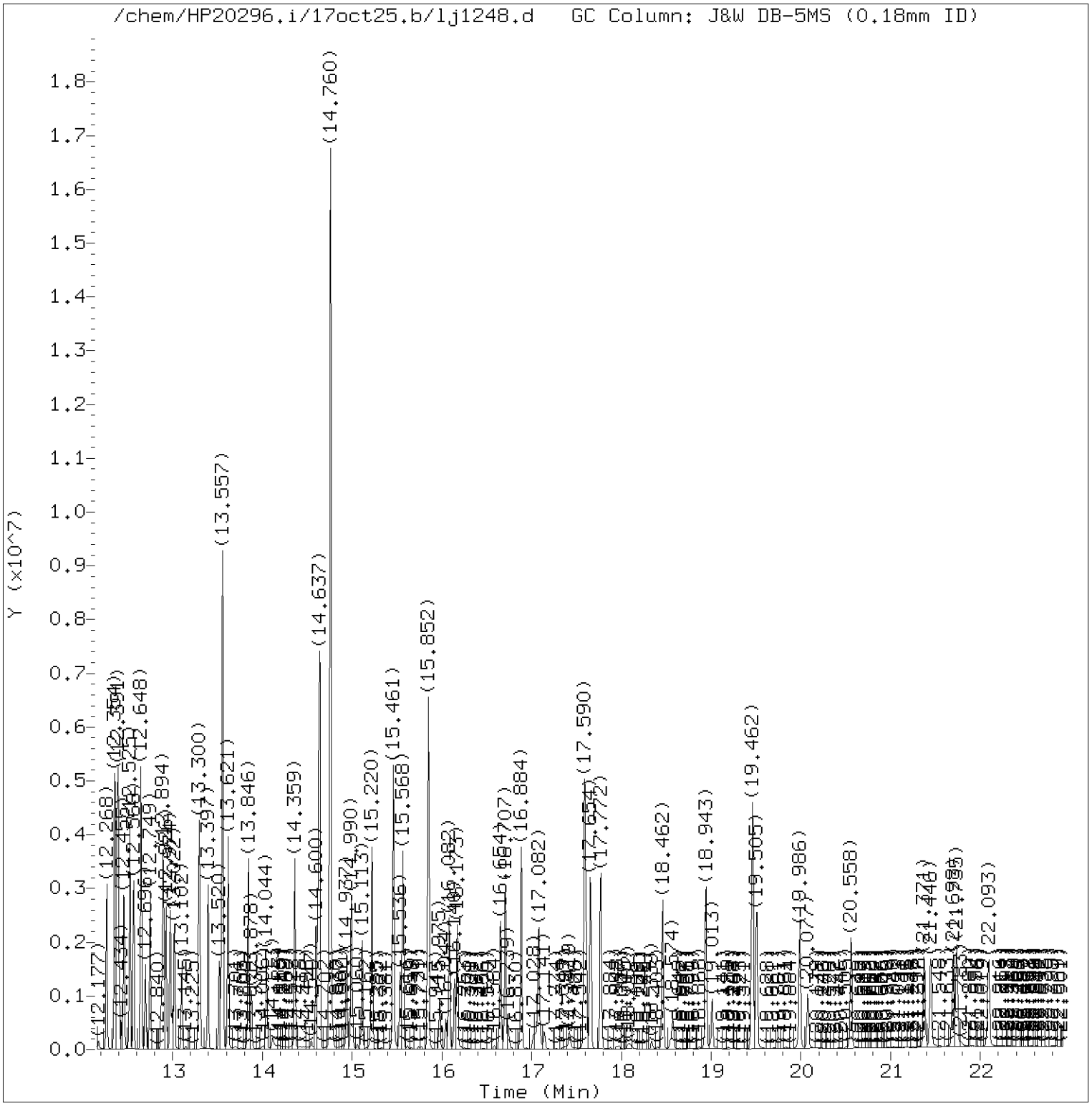
Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1248.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 286WPLCS Lab Sample ID: 286WPLCS

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1248.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 286WPLCS Lab Sample ID: 286WPLCS

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/17oct25.b/lj1248.d Instrument ID: HP20296.i
Injection date and time: 25-OCT-2017 12:32 Analyst ID: hbz01996

Method used: /chem/HP20296.i/17oct25.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 26-OCT-2017 10:49
Date, time and analyst ID of latest file update: 30-Oct-2017 12:49 lmh00956

Sample Name: 286WPLCS Lab Sample ID: 286WPLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.903	112	1185422	22.644
17)$Phenol-d6	(1)	6.283	99	1111312	16.082
25)*1,4-Dichlorobenzene-d4	(1)	6.796	152	168326	5.000
44)$Nitrobenzene-d5	(2)	7.647	82	1136844	18.438
65)*Naphthalene-d8	(2)	8.765	136	655474	5.000
93)$2-Fluorobiphenyl	(3)	10.546	172	2246370	20.149
108) 2,6-Dinitrotoluene	(3)	11.316	165	263108	11.782
113)*Acenaphthene-d10	(3)	11.599	164	381504	5.000
118) 2,4-Dinitrotoluene	(3)	11.915	165	362730	11.671
124) Diethylphthalate	(3)	12.268	149	1175468	11.211
135)$2,4,6-Tribromophenol	(3)	12.648	330	475105	47.434
153)*Phenanthrene-d10	(4)	13.520	188	687558	5.000
175)*Pyrene-d10	(5)	15.536	212	759894	5.000
179)$Terphenyl-d14	(5)	15.852	244	2262327	20.487
213)*Perylene-d12	(6)	20.077	264	474321	5.000

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

Digitally signed by Linda M. Hartenstine
on 10/30/2017 at 12:51.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

290WELCS

Data file: /chem/HP19760.i/17oct24a.b/dj1214.d
Injection date and time: **25-OCT-2017 00:05**
Data file Sample Info. Line: 290WELCS;290WELCS;1;3;LCS;;RAAPVA;
Instrument ID: **HP19760.i** Batch: **17290WAE**
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Blank Data file reference: **/chem/HP19760.i/17oct24a.b/dj1213.d**

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 25-OCT-2017 14:53
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct24a.b/dj1211.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.729 (-0.006)	865	152	187570 (-7)	5.00	
65) Naphthalene-d8	8.658 (0.000)	1196	136	708701 (-9)	5.00	
113) Acenaphthene-d10	11.450 (0.000)	1675	164	375921 (-9)	5.00	
153) Phenanthrene-d10	13.338 (0.000)	1999	188	659797 (-11)	5.00	
175) Pyrene-d10	15.297 (0.000)	2335	212	840838 (-7)	5.00	
213) Perylene-d12	19.767 (-0.006)	3102	264	797800 (-6)	5.00	

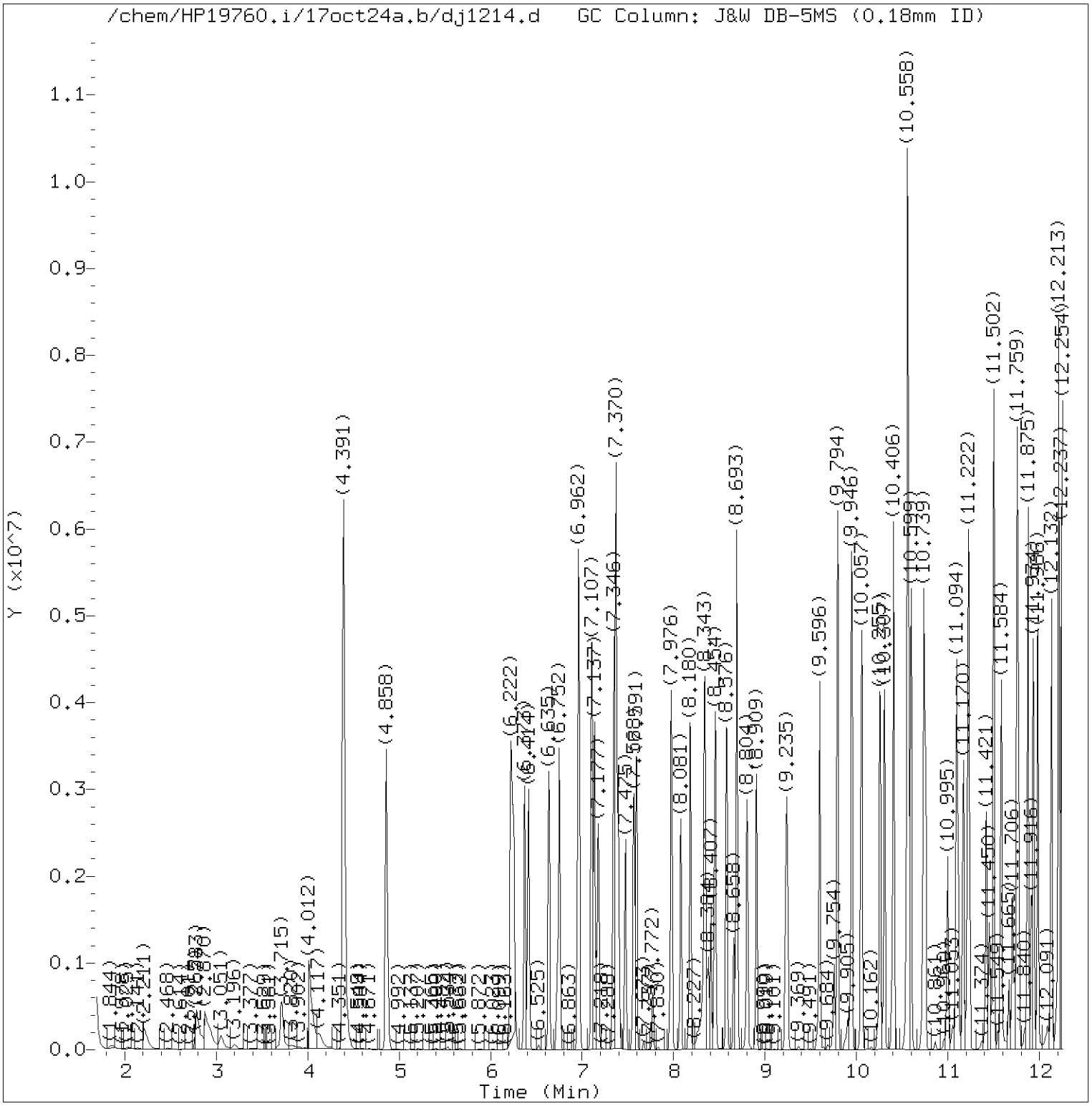
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.568 (-0.001)	82	1448631	21.165	85%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.406 (0.000)	172	2447312	21.495	86%		46 - 104
179) Terphenyl-d14	(5)	15.611 (0.000)	244	2819312	22.294	89%		35 - 119

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.170 (-0.000)	165	527156	23.478	93.91			0.1
118) 2,4-Dinitrotoluene	(3)	11.776 (-0.001)	165	729502	22.664	90.66			0.3
124) Diethylphthalate	(3)	12.132 (-0.000)	149	2193009	20.543	82.17			0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/02/2017 at 14:16. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

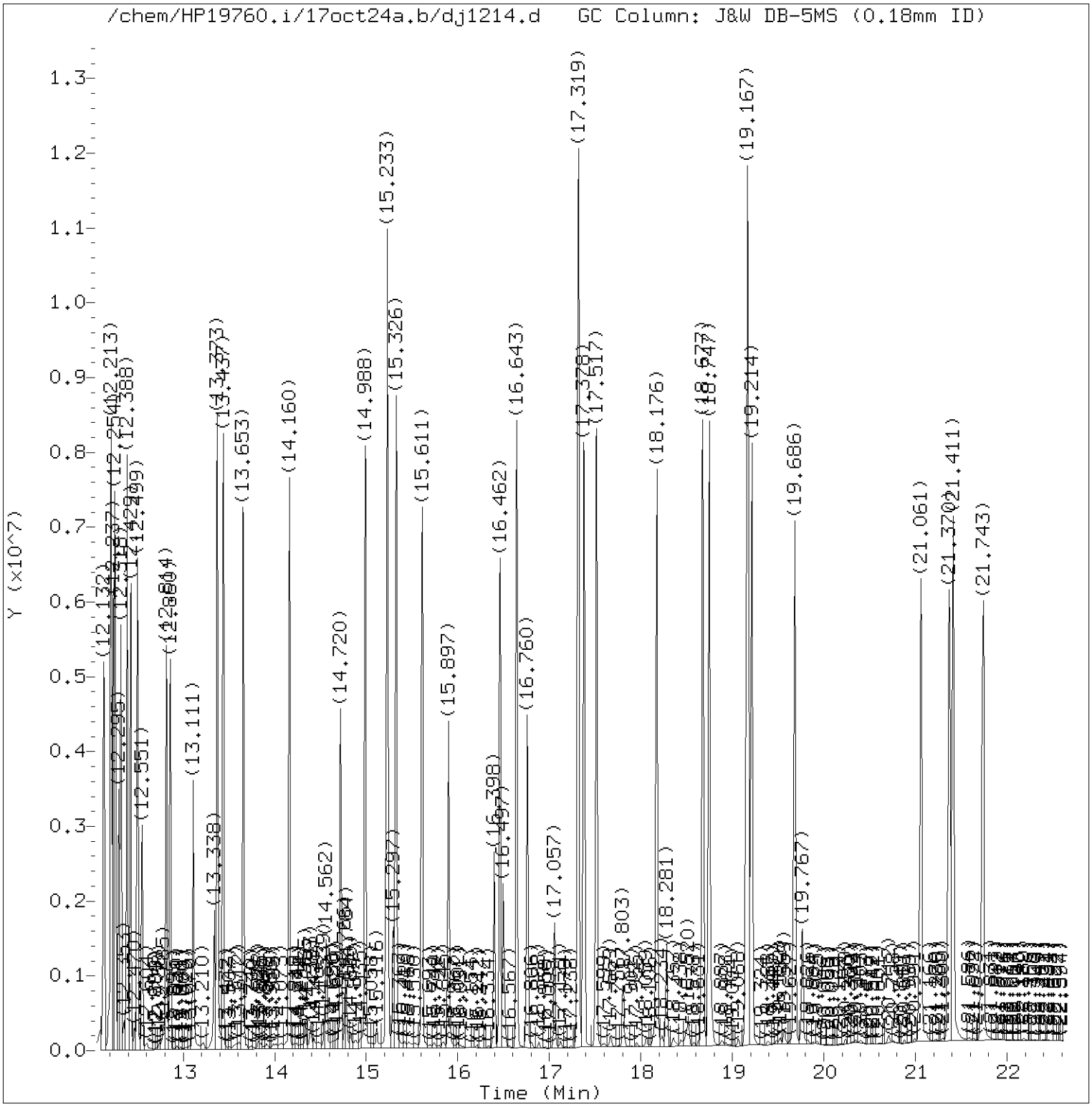
Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1214.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCS Lab Sample ID: 290WELCS

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1214.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCS Lab Sample ID: 290WELCS

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1214.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:05 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCS Lab Sample ID: 290WELCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.729	152	187570	5.000
44)$Nitrobenzene-d5	(2)	7.568	82	1448631	21.165
65)*Naphthalene-d8	(2)	8.658	136	708701	5.000
93)$2-Fluorobiphenyl	(3)	10.406	172	2447312	21.495
108) 2,6-Dinitrotoluene	(3)	11.170	165	527156	23.478
113)*Acenaphthene-d10	(3)	11.450	164	375921	5.000
118) 2,4-Dinitrotoluene	(3)	11.776	165	729502	22.664
124) Diethylphthalate	(3)	12.132	149	2193009	20.543
153)*Phenanthrene-d10	(4)	13.338	188	659797	5.000
175)*Pyrene-d10	(5)	15.297	212	840838	5.000
179)$Terphenyl-d14	(5)	15.611	244	2819312	22.294
213)*Perylene-d12	(6)	19.767	264	797800	5.000

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

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

290WELCSD

Data file: /chem/HP19760.i/17oct24a.b/dj1215.d Injection date and time: **25-OCT-2017 00:33**
Data file Sample Info. Line: 290WELCSD;290WELCSD;1;3;LCSD;;RAAPVA; Instrument ID: **HP19760.i** Batch: **17290WAE**
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Blank Data file reference: **/chem/HP19760.i/17oct24a.b/dj1213.d**

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 25-OCT-2017 14:53
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct24a.b/dj1211.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.729	(-0.006)	865	152	175522	(-13)	5.00	
65) Naphthalene-d8	8.658	(0.000)	1196	136	650934	(-16)	5.00	
113) Acenaphthene-d10	11.450	(0.000)	1675	164	340246	(-17)	5.00	
153) Phenanthrene-d10	13.338	(0.000)	1999	188	616137	(-17)	5.00	
175) Pyrene-d10	15.297	(0.000)	2335	212	784657	(-13)	5.00	
213) Perylene-d12	19.767	(-0.006)	3102	264	765288	(-10)	5.00	

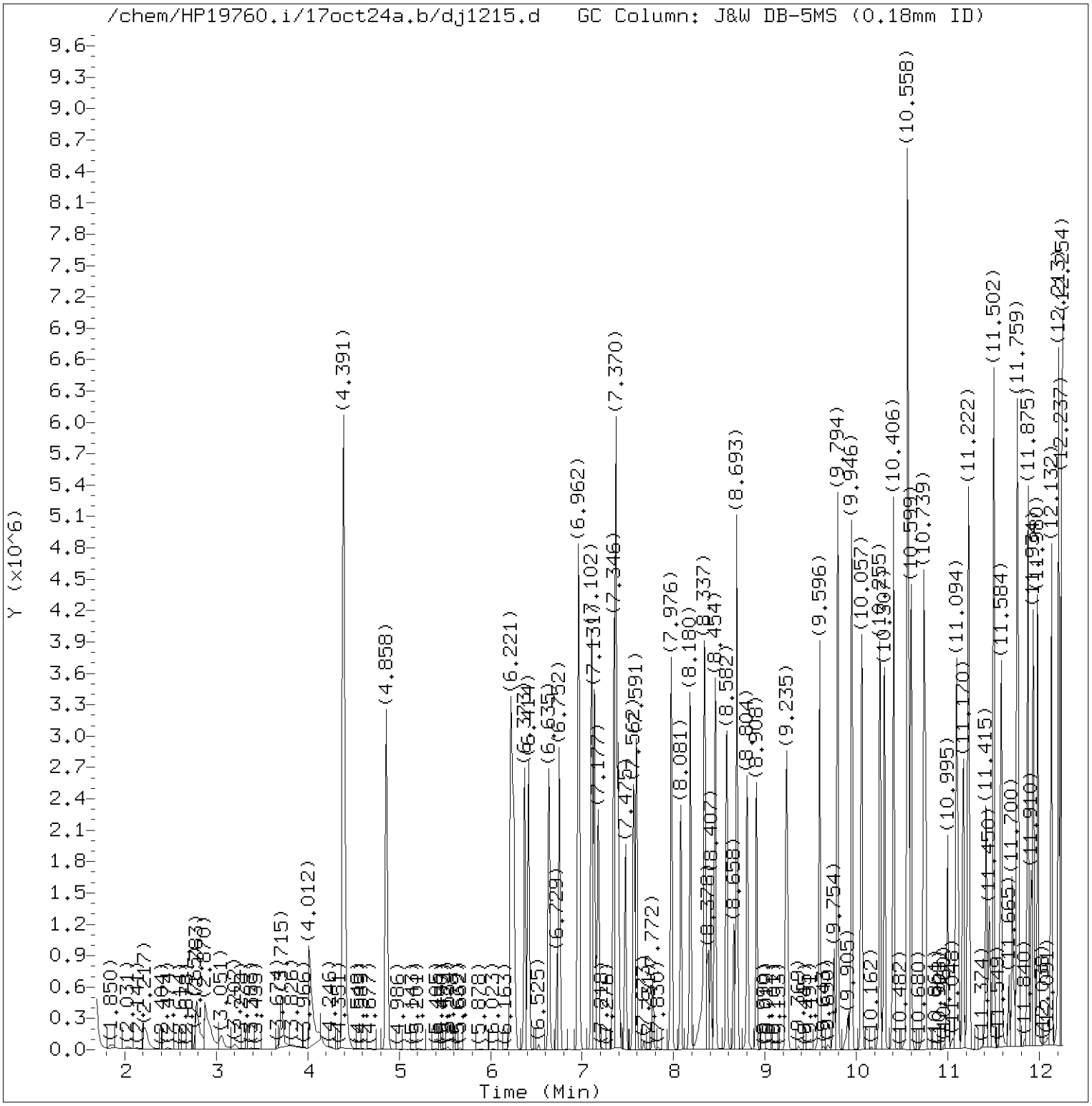
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.562	(0.000)	82	1238081	19.694	79%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.406	(0.000)	172	2018669	19.590	78%		46 - 104
179) Terphenyl-d14	(5)	15.611	(0.000)	244	2454975	20.803	83%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.170	(-0.000)	165	454961	22.387	89.55			0.1
118) 2,4-Dinitrotoluene	(3)	11.776	(-0.001)	165	612380	21.021	84.08			0.3
124) Diethylphthalate	(3)	12.132	(-0.000)	149	1874185	19.398	77.59			0.5

Total number of targets = 3

Digitally signed by Linda M. Hartenstine on 11/02/2017 at 14:15. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Holly B. Ziegler on 11/02/2017 at 14:16. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

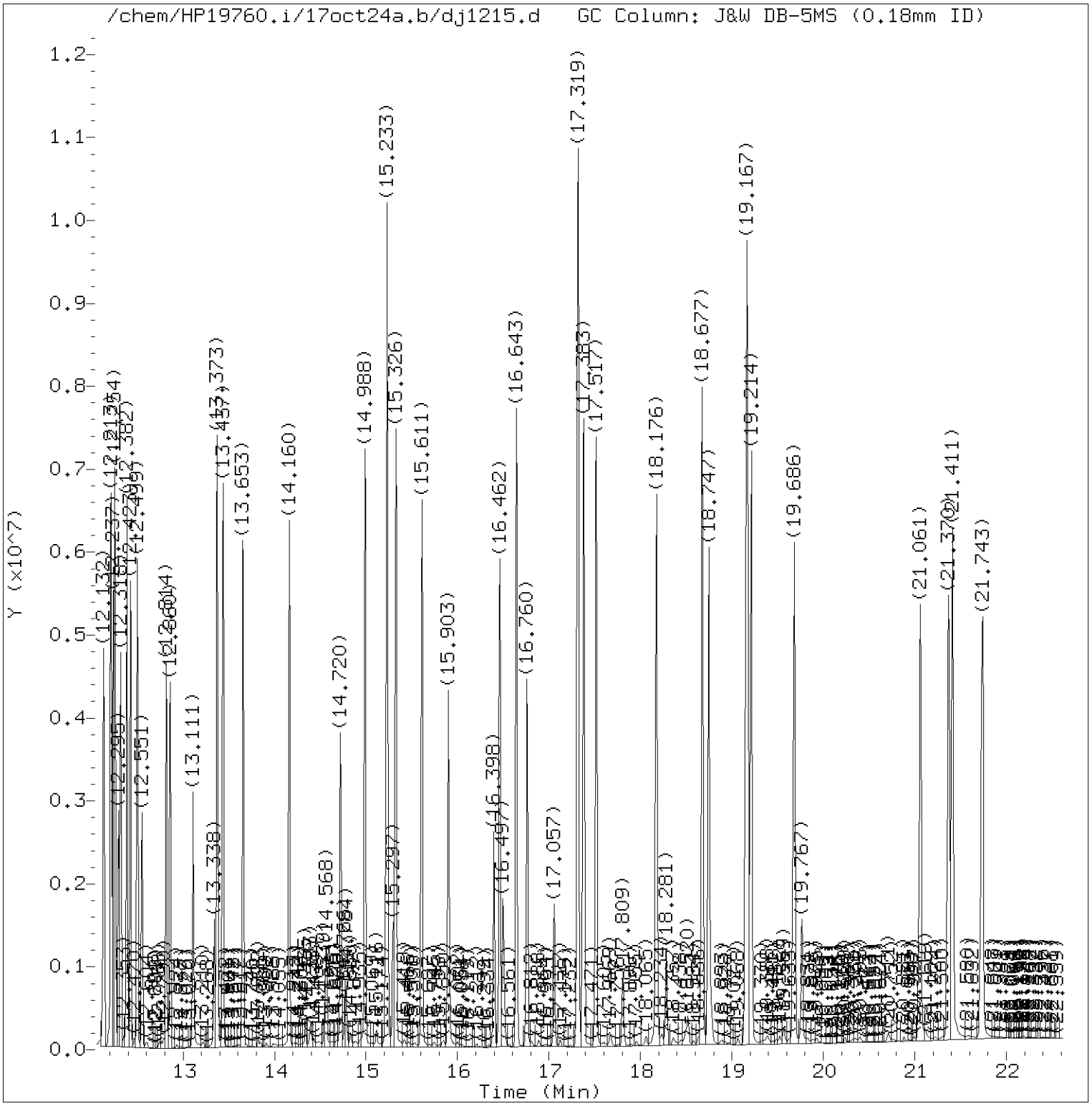
Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1215.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:33 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCSD Lab Sample ID: 290WELCSD

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1215.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:33 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCSD Lab Sample ID: 290WELCSD

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct24a.b/dj1215.d Instrument ID: HP19760.i
Injection date and time: 25-OCT-2017 00:33 Analyst ID: em10340

Method used: /chem/HP19760.i/17oct24a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 25-OCT-2017 14:53
Date, time and analyst ID of latest file update: 02-Nov-2017 14:14 lmh00956

Sample Name: 290WELCSD Lab Sample ID: 290WELCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.729	152	175522	5.000
44)$Nitrobenzene-d5	(2)	7.562	82	1238081	19.694
65)*Naphthalene-d8	(2)	8.658	136	650934	5.000
93)$2-Fluorobiphenyl	(3)	10.406	172	2018669	19.590
108) 2,6-Dinitrotoluene	(3)	11.170	165	454961	22.387
113)*Acenaphthene-d10	(3)	11.450	164	340246	5.000
118) 2,4-Dinitrotoluene	(3)	11.776	165	612380	21.021
124) Diethylphthalate	(3)	12.132	149	1874185	19.398
153)*Phenanthrene-d10	(4)	13.338	188	616137	5.000
175)*Pyrene-d10	(5)	15.297	212	784657	5.000
179)$Terphenyl-d14	(5)	15.611	244	2454975	20.803
213)*Perylene-d12	(6)	19.767	264	765288	5.000

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

Digitally signed by Linda M. Hartenstine
on 11/02/2017 at 14:15.
Target 3.5 esignature user ID: lmh00956

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

299WZLCS

Data file: /chem/HP19760.i/17oct31.b/dj1634z.d
Injection date and time: **31-OCT-2017 13:00**
Data file Sample Info. Line: 299WZLCS;299WZLCS;1;3;LCS;;RAAPVA;
Instrument ID: **HP19760.i** Batch: **17299WAZ**
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Blank Data file reference: **/chem/HP19760.i/17oct31.b/dj1633z.d**

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 01-NOV-2017 02:56
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/17oct31.b/dj1631.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 * 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): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.989	(0.000)	841	152	150237	(-22)	5.00	
65) Naphthalene-d8	8.924	(0.006)	1173	136	583253	(-20)	5.00	
113) Acenaphthene-d10	11.710	(-0.006)	1651	164	307529	(-21)	5.00	
153) Phenanthrene-d10	13.593	(0.000)	1974	188	594780	(-17)	5.00	
175) Pyrene-d10	15.603	(0.000)	2319	212	662596	(-23)	5.00	
213) Perylene-d12	20.138	(-0.006)	3097	264	618974	(-14)	5.00	

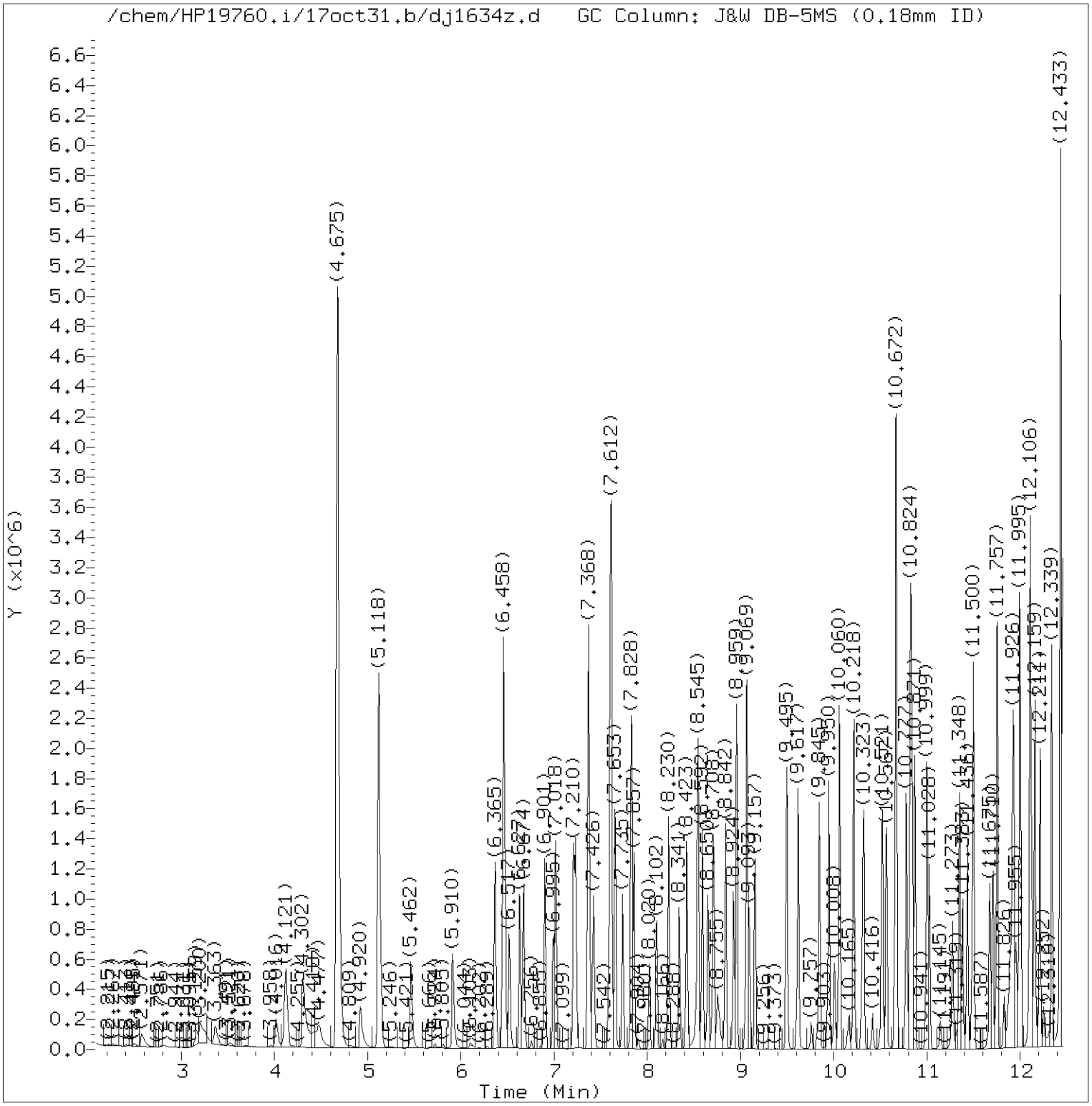
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.828	(-0.001)	82	1046100	19.176	77%		40 - 113
93) 2-Fluorobiphenyl	(3)	10.672	(0.000)	172	1787126	19.231	77%		46 - 104
179) Terphenyl-d14	(5)	15.912	(0.000)	244	1723665	17.656	71%		35 - 119

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.436	(0.000)	165	212914	11.367	45.47			0.1
118) 2,4-Dinitrotoluene	(3)	12.007	(0.000)	165	279180	10.746	42.98			0.3
124) Diethylphthalate	(3)	12.339	(0.000)	149	863576	10.269	41.08			0.5

Total number of targets = 3

Digitally signed by Kira N. Klaassen on 11/22/2017 at 15:40. Target 3.5 esignature user ID: knk25316

Secondary review performed and digitally signed by Holly B. Ziegler on 11/27/2017 at 12:55. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

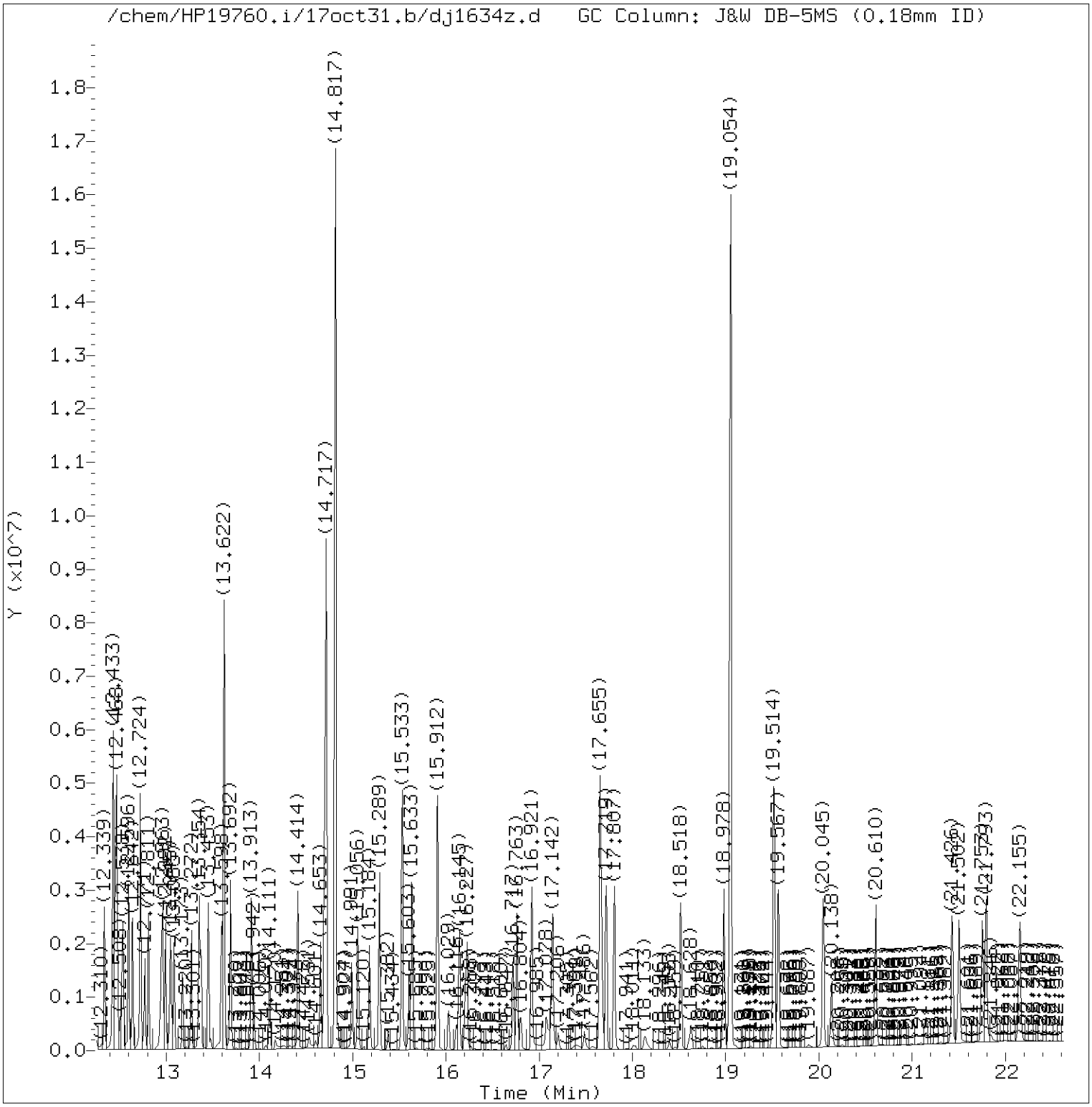
Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1634z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 13:00 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 299WZLCS Lab Sample ID: 299WZLCS

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1634z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 13:00 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 299WZLCS Lab Sample ID: 299WZLCS

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/17oct31.b/dj1634z.d Instrument ID: HP19760.i
Injection date and time: 31-OCT-2017 13:00 Analyst ID: knk25316

Method used: /chem/HP19760.i/17oct31.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 01-NOV-2017 02:56
Date, time and analyst ID of latest file update: 22-Nov-2017 15:40 knk25316

Sample Name: 299WZLCS Lab Sample ID: 299WZLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.989	152	150237	5.000
44)$Nitrobenzene-d5	(2)	7.828	82	1046100	19.176
65)*Naphthalene-d8	(2)	8.924	136	583253	5.000
93)$2-Fluorobiphenyl	(3)	10.672	172	1787126	19.231
108) 2,6-Dinitrotoluene	(3)	11.436	165	212914	11.367
113)*Acenaphthene-d10	(3)	11.710	164	307529	5.000
118) 2,4-Dinitrotoluene	(3)	12.007	165	279180	10.746
124) Diethylphthalate	(3)	12.339	149	863576	10.269
153)*Phenanthrene-d10	(4)	13.593	188	594780	5.000
175)*Pyrene-d10	(5)	15.603	212	662596	5.000
179)$Terphenyl-d14	(5)	15.912	244	1723665	17.656
213)*Perylene-d12	(6)	20.138	264	618974	5.000

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

Digitally signed by Kira N. Klaassen
on 11/22/2017 at 15:40.
Target 3.5 esignature user ID: knk25316

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 11067 Osvaldo Sanchez Reviewed by: ZB 10/08 10/18/17 Start Date: 10/16/17 Start time: 12:00

17286WAP026

Tech 1: OS/10067 Tech 2: BV 9121

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt MQ	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
9262026MS	16WC1	249	SS1728326A	1.0	MS1728326B MS1728426A	1.0	1	v	v	153A	tan tint
9262027MSD	16WC1	247	SS1728326A	↓	MS1728326B MS1728426A	↓	1	v	v	153B	↓
BLANKA	SBLKWP286	250	SS1728326A				1	v	v	7	tap H2O
LCSA	286WPLCS	250	SS1728326A	↓	MS1728326B MS1728426A	1.0	1	v	v	7	↓

Solvent Used	Lot No.
10N NaOH	4610J21
Methylene Chloride	176832
Sodium Sulfate	17286A
Sulfuric Acid	174051

Spike Solutions: Witness: N/A

MS1728326B APPIX #1 MINI SPIKE
MS1728426A MINI SEP. LCS SPIKE #1
SS1728326A MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt MQ	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 9262022	16C1-	248	SS1728326A	1.0	1	v	v	153A	clear	14241	22230	10/24/2017	N
2 9262023	16MW8	247	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
3 9262024	16MW9	249	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
4 9262025BKG	16WC1	248	SS1728326A	↓	1	v	v	153A	tan tint	14241	22230	10/24/2017	N
5 9262028	16WFD	247	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
⑥ ~~6 9262029~~	~~16WCB~~		~~SS1728326A~~							~~14241~~	~~22230~~	~~10/24/2017~~	~~N~~
7 9262030	16-2-	249	SS1728326A	1.0	1	v	v	153A	clear	14241	22230	10/24/2017	N
8 9262031	16--3	248	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
9 9262032	16-5-	247	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
10 9262033	16WC2	249	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N
11 9262034	16SPR	247	SS1728326A	↓	1	v	v	153A	↓	14241	22230	10/24/2017	N

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⑤ Sample could not be found by sample storage. BV 9121 10/16/17

N/A

Bench#	Bench#	Bench#		
Rack ID:		Work Station	Tumblr	Micro Temp 100?
Internal Standard	RVT STD 2847	Balance #	25996	

R-VAP ID 6	89 C	R-VAP ID 1	99 C	R-VAP ID	C			17286WAP026
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 12385 Christine Gleim Reviewed by: EDM 10/30 Start Date: 10/17/17 Start time: 16:19

17290WAE026 Tech 1: KWOZN Tech 2: CG12385

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWE290	250	SS1728326A	1.0	—	—	1	✓	✓	7	TAP H2O
LCSA	290WELCS	250	SS1728326A	↓	~~MS1728326B~~ ③ MS1728426A	1.0 1.0	1	✓	✓	↓	↓
LCSDA	290WELCSD	250	SS1728326A	↓	~~MS1728326B~~ ③ MS1728426A	1.0 1.0	1	✓	✓	↓	↓

Solvent Used	Lot No.
10N NaOH	4610321
Methylene Chloride	176832
Sodium Sulfate	17281A
Sulfuric Acid	174057

③MS1729026C KWOZN 10/17/17

Spike Solutions: Witness:
⑧ ~~MS1728326B~~ APPIX #1 MINI SPIKE
MS1728426A MINI SEP. LCS SPIKE #1
SS1728326A 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
1 9262029	16WCB	248	SS1728326A	1.0	1	✓	✓	153A	Clear	14241	22230	10/24/2017	N

N/A KWOZN 10/17/17

Bench# 5	Bench#	Bench#		
Rack ID:	—	Work Station	humble	Micro Temp 100?
Internal Standard	mISTD2847	Balance #	25996	

R-VAP ID 2	90 C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C

M-vap C

17290WAE026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 9121 Bradley VanLeuven Reviewed by: KVK 10.31.17 Start Date: _____ Start time: _____

17299WAZ026 (8)

Tech 1: _____ Tech 2: _____

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
299WZMSD	299WZMSD		SS1729326A		MS1729226A MS1729326A MS1729326B						
299WZMS	299WZMS		SS1729326A		MS1729226A MS1729326A MS1729326B						
BLANKA	SBLKWZ299		SS1729326A								
LCSA	299WZLCS		SS1729326A		MS1729226A MS1729326A MS1729326B						

Solvent Used	Lot No.
10N NaOH	
Methylene Chloride	
Sodium Sulfate	
Sulfuric Acid	

(8) Split from 17299WAI026, see attached for extraction info -ECM10340 10/31/17

Spike Solutions: Witness: _____

MS1729226A APPIX #1 MINI SPIKE
MS1729326A MINI SEP. LCS SPIKE #1
MS1729326B MINI SEP. LCS SPIKE #2
SS1729326A MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 299WZ	299WZUS		SS1729326A							14241			
2 9262029 R	16WCB		SS1729326A							14241	22230	10/24/2017	N

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Bench#	Bench#	Bench#	
Rack ID:		Work Station	Micro Temp 100?
Internal Standard	mlstd2917	Balance #	

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C		
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C

17299WAZ026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 9121 Bradley VanLeuven Reviewed by:_____ Start Date: 10/27/17 Start time: 1000

17299WAI026

Tech 1: BV 9121 Tech 2: JSR 12366

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
9279656MS	C03-9	242	SS1729326A	1.0	MS1729226A ~~MS1729326A~~ ⑧ MS1729326B	1.0	1	✓	✓	153A	cloudy
9279657MSD	C03-9	243	SS1729326A	↓	MS1729226A ~~MS1729326A~~ ⑧ MS1729326B	↓	1	✓	✓	153A	↓
BLANKA	SBLKWI299	250	SS1729326A				1	✓	✓		tap H2O
LCSA	299WILCS	250	SS1729326A	↓	MS1729226A ~~MS1729326A~~ ⑧ MS1729326B	1.0	1	✓	✓		↓

Solvent Used	Lot No.
10N NaOH	4610J21
Methylene Chloride	177313
Sodium Sulfate	17293A
Sulfuric Acid	174051

Spike Solutions: Witness: N/A

MS1729226A APPIX #1 MINI SPIKE
~~MS1729326A~~ MINI SEP. LCS SPIKE #1
MS1729326B MINI SEP. LCS SPIKE #2
SS1729326A MINI SEP. BNA SURROGATE

⑧ BV 9121 10/27/17 MS1729926A

* Split to 17299WAZ026 ECL00340 10/31/17

Sample #	Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
* 1 9262029 R	16WCB	247	SS1729326A	1.0	1	✓	✓	153B	tan tint	14241	22230	10/24/2017	N
2 9279647	C03-1	238	SS1729326A	↓	1	✓	✓	153A	tan cloudy	14241	22847	11/03/2017	Q
3 9279648	C03-2	242	SS1729326A		1	✓	✓	153A	↓	14241	22847	11/03/2017	Q
4 9279649	C03-3	249	SS1729326A		1	✓	✓	153A	clear	14241	22847	11/03/2017	Q
5 9279650	C03-4	241	SS1729326A		1	✓	✓	153A	tan cloudy	14241	22847	11/03/2017	Q
6 9279651	C03-5	236	SS1729326A		1	✓	✓	153A	clear	14241	22847	11/03/2017	Q
7 9279652	C03-6	247	SS1729326A		1	✓	✓	153A	↓	14241	22847	11/03/2017	Q
8 9279653	C03-7	242	SS1729326A		1	✓	✓	153A		14241	22847	11/03/2017	Q
9 9279654	C03-8	236	SS1729326A		1	✓	✓	153A		14241	22847	11/03/2017	Q
10 9279655BKG	C03-9	236	SS1729326A		1	✓	✓	153A		14241	22847	11/03/2017	Q
11 9279659	C0310	242	SS1729326A	↓	1	✓	✓	153A	cloudy	14241	22847	11/03/2017	Q
									↓				

Bench#	Bench#	Bench#		
Rack ID:		Work Station	Tumble	Micro Temp 100?
Internal Standard		Balance #	25996	

R-VAP ID1	89 C	R-VAP ID2	89 C	R-VAP ID	C			17299WAI026
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	

DF = Dilution Factor FV = Final Volume Page 1 of 1 Documented temps are NIST corrected.

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SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU16

Project Number: B03201-17A

Lot Number:**SJ12043**

Date Completed:10/19/2017



11/07/2017 9:00 PM
Approved and released by:
Project Manager: Cathy S. Dover

The electronic signature above is the equivalent of a handwritten signature.
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Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Draper Aden Associates
Lot Number: SJ12043

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 Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy 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 Shealy Project Manager listed on the cover page.

Sample Summary
Draper Aden Associates
Lot Number: SJ12043
Project Name: RAAP HWMU16
Project Number: B03201-17A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	16C1	Aqueous	10/11/2017 0825	10/12/2017
002	16MW8	Aqueous	10/10/2017 1140	10/12/2017
003	16MW9	Aqueous	10/11/2017 0740	10/12/2017
004	16WC1A	Aqueous	10/10/2017 1350	10/12/2017
005	16WDUP	Aqueous	10/10/2017 1405	10/12/2017
006	16WC1B	Aqueous	10/10/2017 1300	10/12/2017
007	16-2	Aqueous	10/10/2017 1055	10/12/2017
008	16-3	Aqueous	10/09/2017 1400	10/12/2017
009	16-5	Aqueous	10/10/2017 0910	10/12/2017
010	16WC2B	Aqueous	10/10/2017 1010	10/12/2017
011	16SPRING	Aqueous	10/10/2017 0920	10/12/2017

(11 samples)

ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0825** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1406	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0825** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2314	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1140** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1412	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	**7440-50-8**	**6020A**	**49**		**5.0**	**ug/L**	**1**
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	**7440-66-6**	**6020A**	**140**		**30**	**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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1140** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2321	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0740** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1417	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**530**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	**7440-02-0**	**6020A**	**11**		**10**	**ug/L**	**1**
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0740** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2323	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1350** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1423	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**280**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1350** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2325	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1405** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1504	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1405** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2332	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1300** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1510	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**33**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1300** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2338	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1055** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1516	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**190**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1055** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2340	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2017 1400** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1522	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**710**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2017 1400** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2343	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1528	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**160**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2345	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1533	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**110**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2347	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0920** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1551	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**200**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0920** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2349	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

Shealy Environmental Services, Inc.
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QC Summary

ICP-MS - MB

Sample ID: SQ54056-001
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	10/18/2017 1354
Barium	10	U	1	10	ug/L	10/18/2017 1354
Beryllium	1.0	U	1	1.0	ug/L	10/18/2017 1354
Cadmium	1.0	U	1	1.0	ug/L	10/18/2017 1354
Chromium	5.0	U	1	5.0	ug/L	10/18/2017 1354
Cobalt	5.0	U	1	5.0	ug/L	10/18/2017 1354
Copper	5.0	U	1	5.0	ug/L	10/18/2017 1354
Lead	2.0	U	1	2.0	ug/L	10/18/2017 1354
Nickel	10	U	1	10	ug/L	10/18/2017 1354
Vanadium	10	U	1	10	ug/L	10/18/2017 1354
Zinc	30	U	1	30	ug/L	10/18/2017 1354

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: SQ54056-002
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	99		1	99	80-120	10/18/2017 1400
Barium	100	99		1	99	80-120	10/18/2017 1400
Beryllium	100	100		1	101	80-120	10/18/2017 1400
Cadmium	100	98		1	98	80-120	10/18/2017 1400
Chromium	100	100		1	101	80-120	10/18/2017 1400
Cobalt	100	98		1	98	80-120	10/18/2017 1400
Copper	100	100		1	102	80-120	10/18/2017 1400
Lead	100	100		1	101	80-120	10/18/2017 1400
Nickel	100	98		1	98	80-120	10/18/2017 1400
Vanadium	100	96		1	96	80-120	10/18/2017 1400
Zinc	100	110		1	107	80-120	10/18/2017 1400

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: SJ12043-004MS
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	99		1	99	70-130	10/18/2017 1441
Barium	280	100	390		1	103	70-130	10/18/2017 1441
Beryllium	0.0	100	100		1	101	70-130	10/18/2017 1441
Cadmium	0.0	100	96		1	96	70-130	10/18/2017 1441
Chromium	0.0	100	99		1	99	70-130	10/18/2017 1441
Cobalt	5.9	100	98		1	92	70-130	10/18/2017 1441
Copper	0.0	100	95		1	95	70-130	10/18/2017 1441
Lead	0.0	100	100		1	101	70-130	10/18/2017 1441
Nickel	0.0	100	100		1	100	70-130	10/18/2017 1441
Vanadium	0.0	100	97		1	97	70-130	10/18/2017 1441
Zinc	0.0	100	100		1	103	70-130	10/18/2017 1441

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: SJ12043-004MD
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	100		1	102	2.6	70-130	20	10/18/2017 1447
Barium	280	100	390		1	108	1.3	70-130	20	10/18/2017 1447
Beryllium	0.0	100	100		1	102	1.3	70-130	20	10/18/2017 1447
Cadmium	0.0	100	98		1	98	2.0	70-130	20	10/18/2017 1447
Chromium	0.0	100	100		1	101	2.7	70-130	20	10/18/2017 1447
Cobalt	5.9	100	100		1	94	2.5	70-130	20	10/18/2017 1447
Copper	0.0	100	97		1	97	1.8	70-130	20	10/18/2017 1447
Lead	0.0	100	100		1	104	2.8	70-130	20	10/18/2017 1447
Nickel	0.0	100	100		1	101	1.3	70-130	20	10/18/2017 1447
Vanadium	0.0	100	100		1	101	4.2	70-130	20	10/18/2017 1447
Zinc	0.0	100	99		1	99	4.1	70-130	20	10/18/2017 1447

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: SQ54040-001
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	10/13/2017 2310

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: SQ54040-002
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.2		1	108	80-120	10/13/2017 2312

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: SJ12043-004MS
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	96	85-115	10/13/2017 2327

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: SJ12043-004MD
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

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	1.8		1	92	4.3	85-115	20	10/13/2017 2329

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

CHAIN OF CUSTODY RECORD

JK 9/27/17

Laboratory: Shealy Environmental Services- 106 Vantage Point Drive, Columbia, SC 29172 - Cathy Dover, Project Manager, 804-646-4480

Client: 0 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: HWMU15 Event: 2017 - 2nd Semiannual Monitoring Event DAA JN: 803204-17A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES UBS: 17-237-301-01-9033-2201 Carrier: Tracking Number:

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

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice:

GENERAL NOTES:
1. ERIS EDD & DAA EDD required.
2. Level 4 deliverables required.
3. See attached target analyte list
4. Report results at or above QL permit, i

SJ12043

JK 9/27/17

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					1-500 ml P								
Sample ID	Date: 2017	Time	Box 1: Matrix	Number of Bottles	ICP/MS 6020A/3005A (Metals-Total)	7470A (Mercury-Total)							
16C1	10/11	0825	GW	1	X	X							
16MW8	10/10	1140	GW	1	X	X							
16MW9	10/11	0740	GW	1	X	X							
16WC1A	10/10	1350	GW	3	X	X							USE FOR QC
16WDUP	10/10	1405	GW	1	X	X							
16WC1B	10/10	1300	GW	1	X	X							
16-2	10/10	1055	GW	1	X	X							
16-3	10/9	1400	GW	1	X	X							
16-5	10/10	0910	GW	1	X	X							
16WC2B	10/10	1010	GW	1	X	X							
16SPRING	10/10	0920	GW	1	X	X							

Clients Special Instructions:

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: 10/9/17	#1 Relinquished by (Signature):	Date: 10/11/17	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KY-Tran Vo	Date: 10/9/17	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/5 NTHS INORG
Sampler Signature:	Time: 0800	Company Name: SESL / Eleanor Crawford	Time: 12:17	Company Name:	Time:	

1025 12:00 ECL 10/12/17
T = 2.6°C

RWD 10-5-17

JK 1/2 9/27/17

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JLF 9/27/17
1/2

HWMU16
Radford Army Ammunition Plant (RFAAP)
Semiannual Monitoring Event
DAA JN: B03204-17A

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020A/3005A (ICP/MS)

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	2 ✓
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30 ✓

Method SW 7470A/CVAA

12	Mercury	7439-97-6 2/7470A	2

Notes. Antimony, selenium and silver deleted 4-6,2012.
11 Zinc QL increased 11 2016, lead increased to 2 ppb.
10/2016 JCF- rev 102017

QC JLF

X
report to at or above the permit QL.
JLF
9/27/17

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-q as of 10-2017.doc
JCF 11/04/2004

Shealy Environmental Services, Inc.
Document Number: ME0018C-09

Page 1 of 1
Effective Date: 07/28/2017
Expiry Date: 07/28/2022

Sample Receipt Checklist (SRC)

Client: Draper Cooler Inspected by/date: ECL 10/12/17 Lot #: SJ120 43

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: 17-1190 Cl strip ID:

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:

12.6 / 2.6 °C ___ / ___ / ___ °C ___ / ___ / ___ °C ___ / ___ / ___ °C

Method: ☐ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ 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. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any 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 NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes ☐	No ☐	NA ☑	20. Were collection temperatures documented on the COC for NC samples?
Yes ☑	No ☐	NA ☐	21. 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 ☐		22. Was the quote number used taken from the container label? 1684

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) ___ were received incorrectly preserved and were adjusted accordingly in sample receiving with ___ (H_2SO_4, HNO_3, HCl, NaOH) using SR # ___.

Sample(s) ___ were received with bubbles >6 mm in diameter.

Samples(s) ___ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: ___.

SC Drinking Water Project Sample(s) pH verified to be < 2 by ___ Date: ___

Sample(s) ___ were Not received at a pH of < 2 and were adjusted accordingly using SR# ___

Sample labels applied by: ECL Date: 10/12/17

Comments: ___

Metals

ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0825** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1406	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0825** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2314	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1140** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1412	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	**7440-50-8**	**6020A**	**49**		**5.0**	**ug/L**	**1**
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	**7440-66-6**	**6020A**	**140**		**30**	**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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1140** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2321	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0740** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1417	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**530**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	**7440-02-0**	**6020A**	**11**		**10**	**ug/L**	**1**
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2017 0740** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2323	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1350** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1423	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**280**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1350** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2325	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1405** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1504	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**5.9**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1405** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2332	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1300** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1510	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020A**	**33**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1300** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2338	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1055** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1516	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**190**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1055** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2340	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2017 1400** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1522	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**710**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2017 1400** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2343	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1528	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**160**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2345	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1533	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**110**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2017 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2347	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0920** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020A	1	10/18/2017 1551	BNW	10/14/2017 1145	54056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020A	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020A**	**200**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020A	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020A	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020A	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020A	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020A	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020A	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020A	10	U	10	ug/L	1
Vanadium	7440-62-2	6020A	10	U	10	ug/L	1
Zinc	7440-66-6	6020A	30	U	30	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%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **SJ12043-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2017 0920** Project Name: **RAAP HWMU16**

Date Received: **10/12/2017** Project Number: **B03201-17A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/13/2017 2349	SLS	10/13/2017 1946	54040

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	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%
D = Dilution > 1

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QC Summary

ICP-MS - MB

Sample ID: SQ54056-001
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	10/18/2017 1354
Barium	10	U	1	10	ug/L	10/18/2017 1354
Beryllium	1.0	U	1	1.0	ug/L	10/18/2017 1354
Cadmium	1.0	U	1	1.0	ug/L	10/18/2017 1354
Chromium	5.0	U	1	5.0	ug/L	10/18/2017 1354
Cobalt	5.0	U	1	5.0	ug/L	10/18/2017 1354
Copper	5.0	U	1	5.0	ug/L	10/18/2017 1354
Lead	2.0	U	1	2.0	ug/L	10/18/2017 1354
Nickel	10	U	1	10	ug/L	10/18/2017 1354
Vanadium	10	U	1	10	ug/L	10/18/2017 1354
Zinc	30	U	1	30	ug/L	10/18/2017 1354

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: SQ54056-002
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	99		1	99	80-120	10/18/2017 1400
Barium	100	99		1	99	80-120	10/18/2017 1400
Beryllium	100	100		1	101	80-120	10/18/2017 1400
Cadmium	100	98		1	98	80-120	10/18/2017 1400
Chromium	100	100		1	101	80-120	10/18/2017 1400
Cobalt	100	98		1	98	80-120	10/18/2017 1400
Copper	100	100		1	102	80-120	10/18/2017 1400
Lead	100	100		1	101	80-120	10/18/2017 1400
Nickel	100	98		1	98	80-120	10/18/2017 1400
Vanadium	100	96		1	96	80-120	10/18/2017 1400
Zinc	100	110		1	107	80-120	10/18/2017 1400

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: SJ12043-004MS
Batch: 54056
Analytical Method: 6020A
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	99		1	99	70-130	10/18/2017 1441
Barium	280	100	390		1	103	70-130	10/18/2017 1441
Beryllium	0.0	100	100		1	101	70-130	10/18/2017 1441
Cadmium	0.0	100	96		1	96	70-130	10/18/2017 1441
Chromium	0.0	100	99		1	99	70-130	10/18/2017 1441
Cobalt	5.9	100	98		1	92	70-130	10/18/2017 1441
Copper	0.0	100	95		1	95	70-130	10/18/2017 1441
Lead	0.0	100	100		1	101	70-130	10/18/2017 1441
Nickel	0.0	100	100		1	100	70-130	10/18/2017 1441
Vanadium	0.0	100	97		1	97	70-130	10/18/2017 1441
Zinc	0.0	100	100		1	103	70-130	10/18/2017 1441

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: SJ12043-004MD
Batch: 54056
Analytical Method: 6020A

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/14/2017 1145

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	100		1	102	2.6	70-130	20	10/18/2017 1447
Barium	280	100	390		1	108	1.3	70-130	20	10/18/2017 1447
Beryllium	0.0	100	100		1	102	1.3	70-130	20	10/18/2017 1447
Cadmium	0.0	100	98		1	98	2.0	70-130	20	10/18/2017 1447
Chromium	0.0	100	100		1	101	2.7	70-130	20	10/18/2017 1447
Cobalt	5.9	100	100		1	94	2.5	70-130	20	10/18/2017 1447
Copper	0.0	100	97		1	97	1.8	70-130	20	10/18/2017 1447
Lead	0.0	100	100		1	104	2.8	70-130	20	10/18/2017 1447
Nickel	0.0	100	100		1	101	1.3	70-130	20	10/18/2017 1447
Vanadium	0.0	100	100		1	101	4.2	70-130	20	10/18/2017 1447
Zinc	0.0	100	99		1	99	4.1	70-130	20	10/18/2017 1447

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: SQ54040-001
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	10/13/2017 2310

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: SQ54040-002
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.2		1	108	80-120	10/13/2017 2312

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: SJ12043-004MS
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	96	85-115	10/13/2017 2327

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: SJ12043-004MD
Batch: 54040
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/13/2017 1946

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	1.8		1	92	4.3	85-115	20	10/13/2017 2329

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.: SJ12043 **Method Type:** ICP-MS **SOW No.:**

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
SJ12043-001	16C1	
SJ12043-002	16MW8	
SJ12043-003	16MW9	
SJ12043-004	16WC1A	
SJ12043-004S	16WC1AS	Matrix Spike
SJ12043-004SD	16WC1ASD	Matrix Spike Duplicate
SJ12043-005	16WDUP	
SJ12043-006	16WC1B	
SJ12043-007	16-2	
SJ12043-008	16-3	
SJ12043-009	16-5	
SJ12043-010	16WC2B	
SJ12043-011	16SPRING	

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.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: High Purity

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Arsenic	193.47	200.0	97	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Barium	195.10	200.0	98	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Beryllium	199.87	200.0	100	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Cadmium	192.27	200.0	96	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Chromium	196.60	200.0	98	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Cobalt	187.53	200.0	94	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Copper	190.07	200.0	95	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Lead	202.37	200.0	101	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Nickel	187.40	200.0	94	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Vanadium	194.13	200.0	97	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
	Zinc	188.67	200.0	94	90.0 - 110.0	MS	10/18/2017	11:28	MS2101817B 6020 200.8, g
CCV1									
	Arsenic	290.57	300.0	97	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Barium	296.47	300.0	99	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Beryllium	299.07	300.0	100	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Cadmium	284.63	300.0	95	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Chromium	294.43	300.0	98	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Cobalt	274.37	300.0	91	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Copper	271.17	300.0	90	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Lead	295.40	300.0	98	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Nickel	273.07	300.0	91	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Vanadium	293.97	300.0	98	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
	Zinc	275.70	300.0	92	90.0 - 110.0	MS	10/18/2017	12:09	MS2101817B 6020 200.8, g
CCV2									
	Arsenic	294.47	300.0	98	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Barium	298.83	300.0	100	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Beryllium	301.10	300.0	100	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Cadmium	287.93	300.0	96	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Chromium	295.80	300.0	99	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Cobalt	276.30	300.0	92	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Copper	272.50	300.0	91	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Lead	300.50	300.0	100	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Nickel	276.97	300.0	92	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Vanadium	293.27	300.0	98	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g
	Zinc	277.13	300.0	92	90.0 - 110.0	MS	10/18/2017	13:19	MS2101817B 6020 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: High Purity

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Arsenic	292.40	300.0	97	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Barium	294.67	300.0	98	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Beryllium	298.50	300.0	100	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Cadmium	283.70	300.0	95	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Chromium	292.47	300.0	97	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Cobalt	272.47	300.0	91	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Copper	271.13	300.0	90	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Lead	301.77	300.0	101	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Nickel	273.47	300.0	91	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Vanadium	293.67	300.0	98	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
	Zinc	273.40	300.0	91	90.0 - 110.0	MS	10/18/2017	14:29	MS2101817B 6020 200.8, g
CCV4									
	Arsenic	294.93	300.0	98	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Barium	297.73	300.0	99	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Beryllium	304.43	300.0	101	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Cadmium	288.27	300.0	96	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Chromium	298.20	300.0	99	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Cobalt	275.57	300.0	92	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Copper	274.40	300.0	91	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Lead	304.50	300.0	102	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Nickel	275.73	300.0	92	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Vanadium	296.57	300.0	99	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
	Zinc	277.70	300.0	93	90.0 - 110.0	MS	10/18/2017	15:39	MS2101817B 6020 200.8, g
CCV5									
	Arsenic	287.73	300.0	96	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Barium	290.13	300.0	97	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Beryllium	295.00	300.0	98	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Cadmium	280.17	300.0	93	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Chromium	290.10	300.0	97	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Cobalt	272.23	300.0	91	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Copper	270.43	300.0	90	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Lead	297.03	300.0	99	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Nickel	273.70	300.0	91	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Vanadium	288.40	300.0	96	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g
	Zinc	271.83	300.0	91	90.0 - 110.0	MS	10/18/2017	16:26	MS2101817B 6020 200.8, g

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CRDL STANDARD FOR AA & ICP

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **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
LLICV									
	Arsenic	1.97	2.0	99	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Barium	4.85	5.0	97	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Beryllium	0.42	0.4	105	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Cadmium	0.09	0.1	90	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Chromium	4.84	5.0	97	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Cobalt	4.76	5.0	95	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Copper	4.90	5.0	98	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Lead	0.98	1.0	98	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Nickel	5.00	5.0	100	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Vanadium	4.60	5.0	92	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
	Zinc	9.87	10.0	99	70 - 130	MS	10/18/2017	11:40	MS2101817B 6020 200.8, g
LLCCV									
	Arsenic	1.68	2.0	84	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Barium	4.69	5.0	94	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Beryllium	0.41	0.4	101	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Cadmium	0.08	0.1	82	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Chromium	4.81	5.0	96	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Cobalt	4.69	5.0	94	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Copper	4.79	5.0	96	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Lead	0.98	1.0	98	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Nickel	5.00	5.0	100	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Vanadium	4.36	5.0	87	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g
	Zinc	9.81	10.0	98	70 - 130	MS	10/18/2017	16:09	MS2101817B 6020 200.8, g

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Arsenic	0.009	+/-1.000	U	1.000	1.000	MS	10/18/2017	11:34	MS2101817B 6
	Barium	0.013	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Beryllium	0.026	+/-0.200	U	0.200	0.200	MS	10/18/2017	11:34	MS2101817B 6
	Cadmium	0.006	+/-0.250	U	0.250	0.250	MS	10/18/2017	11:34	MS2101817B 6
	Chromium	-0.016	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Cobalt	0.001	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Copper	-0.012	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Lead	0.004	+/-0.500	U	0.500	0.500	MS	10/18/2017	11:34	MS2101817B 6
	Nickel	0.000	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Vanadium	-0.006	+/-2.500	U	2.500	2.500	MS	10/18/2017	11:34	MS2101817B 6
	Zinc	0.007	+/-5.000	U	5.000	5.000	MS	10/18/2017	11:34	MS2101817B 6
CCB1										
	Arsenic	0.039	+/-1.000	U	1.000	1.000	MS	10/18/2017	12:15	MS2101817B 6
	Barium	0.004	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Beryllium	0.041	+/-0.200	U	0.200	0.200	MS	10/18/2017	12:15	MS2101817B 6
	Cadmium	0.008	+/-0.250	U	0.250	0.250	MS	10/18/2017	12:15	MS2101817B 6
	Chromium	-0.012	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Cobalt	0.006	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Copper	0.005	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Lead	0.009	+/-0.500	U	0.500	0.500	MS	10/18/2017	12:15	MS2101817B 6
	Nickel	0.016	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Vanadium	-0.008	+/-2.500	U	2.500	2.500	MS	10/18/2017	12:15	MS2101817B 6
	Zinc	0.045	+/-5.000	U	5.000	5.000	MS	10/18/2017	12:15	MS2101817B 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Arsenic	0.002	+/-1.000	U	1.000	1.000	MS	10/18/2017	13:25	MS2101817B 6
	Barium	0.012	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Beryllium	0.033	+/-0.200	U	0.200	0.200	MS	10/18/2017	13:25	MS2101817B 6
	Cadmium	0.006	+/-0.250	U	0.250	0.250	MS	10/18/2017	13:25	MS2101817B 6
	Chromium	-0.008	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Cobalt	0.005	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Copper	0.005	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Lead	0.011	+/-0.500	U	0.500	0.500	MS	10/18/2017	13:25	MS2101817B 6
	Nickel	0.017	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Vanadium	-0.018	+/-2.500	U	2.500	2.500	MS	10/18/2017	13:25	MS2101817B 6
	Zinc	0.010	+/-5.000	U	5.000	5.000	MS	10/18/2017	13:25	MS2101817B 6
CCB3										
	Arsenic	0.026	+/-1.000	U	1.000	1.000	MS	10/18/2017	14:35	MS2101817B 6
	Barium	0.089	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Beryllium	0.030	+/-0.200	U	0.200	0.200	MS	10/18/2017	14:35	MS2101817B 6
	Cadmium	0.028	+/-0.250	U	0.250	0.250	MS	10/18/2017	14:35	MS2101817B 6
	Chromium	0.011	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Cobalt	0.028	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Copper	0.016	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Lead	0.031	+/-0.500	U	0.500	0.500	MS	10/18/2017	14:35	MS2101817B 6
	Nickel	0.057	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Vanadium	0.029	+/-2.500	U	2.500	2.500	MS	10/18/2017	14:35	MS2101817B 6
	Zinc	0.066	+/-5.000	U	5.000	5.000	MS	10/18/2017	14:35	MS2101817B 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
CCB4										
	Arsenic	-0.002	+/-1.000	U	1.000	1.000	MS	10/18/2017	15:45	MS2101817B 6
	Barium	0.022	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Beryllium	0.023	+/-0.200	U	0.200	0.200	MS	10/18/2017	15:45	MS2101817B 6
	Cadmium	0.015	+/-0.250	U	0.250	0.250	MS	10/18/2017	15:45	MS2101817B 6
	Chromium	-0.003	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Cobalt	0.016	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Copper	0.000	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Lead	0.018	+/-0.500	U	0.500	0.500	MS	10/18/2017	15:45	MS2101817B 6
	Nickel	0.034	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Vanadium	-0.017	+/-2.500	U	2.500	2.500	MS	10/18/2017	15:45	MS2101817B 6
	Zinc	0.069	+/-5.000	U	5.000	5.000	MS	10/18/2017	15:45	MS2101817B 6
CCB5										
	Arsenic	-0.014	+/-1.000	U	1.000	1.000	MS	10/18/2017	16:32	MS2101817B 6
	Barium	0.017	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Beryllium	-0.008	+/-0.200	U	0.200	0.200	MS	10/18/2017	16:32	MS2101817B 6
	Cadmium	0.012	+/-0.250	U	0.250	0.250	MS	10/18/2017	16:32	MS2101817B 6
	Chromium	-0.025	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Cobalt	0.007	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Copper	-0.008	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Lead	0.011	+/-0.500	U	0.500	0.500	MS	10/18/2017	16:32	MS2101817B 6
	Nickel	0.017	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Vanadium	-0.011	+/-2.500	U	2.500	2.500	MS	10/18/2017	16:32	MS2101817B 6
	Zinc	-0.034	+/-5.000	U	5.000	5.000	MS	10/18/2017	16:32	MS2101817B 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

ICS Source: High Purity **Instrument ID:** ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Arsenic	0.0087			-4.0000 to 4.0000	10/18/2017	11:57	MS2101817B 6
	Barium	0.91			-10.00 to 10.00	10/18/2017	11:57	MS2101817B 6
	Beryllium	0.074			-0.800 to 0.800	10/18/2017	11:57	MS2101817B 6
	Cadmium	-0.093			-1.000 to 1.000	10/18/2017	11:57	MS2101817B 6
	Chromium	1.2			-10.0 to 10.0	10/18/2017	11:57	MS2101817B 6
	Cobalt	-0.047			-10.000 to 10.000	10/18/2017	11:57	MS2101817B 6
	Copper	0.046			-10.000 to 10.000	10/18/2017	11:57	MS2101817B 6
	Lead	0.21			-2.00 to 2.00	10/18/2017	11:57	MS2101817B 6
	Nickel	0.78			-10.00 to 10.00	10/18/2017	11:57	MS2101817B 6
	Vanadium	-0.34			-10.00 to 10.00	10/18/2017	11:57	MS2101817B 6
	Zinc	3.2			-20.0 to 20.0	10/18/2017	11:57	MS2101817B 6
ICSAB								
	Arsenic	102	100	102	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Barium	105	100	105	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Beryllium	97.9	100	98	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Cadmium	94.6	100	95	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Chromium	103	100	103	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Cobalt	91.6	100	92	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Copper	91.1	100	91	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Lead	99.9	100	100	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Nickel	91.5	100	92	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Vanadium	98.6	100	99	50 - 150%	10/18/2017	12:03	MS2101817B 6
	Zinc	96.9	100	97	50 - 150%	10/18/2017	12:03	MS2101817B 6

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SERIAL DILUTION SAMPLE SUMMARY

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Matrix: WATER **Level:** **Client ID:** 16WC1AL

Sample ID: SJ12043-004 **Serial Dilution ID:** SJ12043-004L

Batch Number: 54056

Analyte	Initial Result ug/L	C	Serial Result ug/L	C	% Difference	Qual	Acceptance Limits	M
Arsenic	10.00	U	50.00	U			10.00 %	MS
Barium	284.00		284.30		0.1		10.00 %	MS
Beryllium	0.20	U	1.00	U			10.00 %	MS
Cadmium	0.25	U	1.25	U			10.00 %	MS
Chromium	2.50	U	12.50	U			10.00 %	MS
Cobalt	5.90		12.50	U	100.0		10.00 %	MS
Copper	2.50	U	12.50	U			10.00 %	MS
Lead	0.50	U	2.50	U			10.00 %	MS
Nickel	8.21		12.50	U	100.0		10.00 %	MS
Vanadium	2.50	U	12.50	U			10.00 %	MS
Zinc	5.00	U	25.00	U			10.00 %	MS

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LINEAR RANGES

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Instrument ID: ICPMS2 **Date:** 9/28/2017

Analyte	Integration Time (sec)	LDR ug/L
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
Vanadium	0.10	2000
Zinc	0.10	2000

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: ICPMS2 Run Number: MS2101817B 6020 200.8, generate

Start Date: 10/18/2017 End Date: 10/18/2017

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	1036																								
BLANK	1.00	1041				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1047																									
CAL1	1.00	1053				X	X	X	X		X	X	X		X				X						X	X	
CAL2	1.00	1059				X	X	X	X		X	X	X		X				X						X	X	
CAL3	1.00	1105				X	X	X	X		X	X	X		X				X						X	X	
CAL4	1.00	1111				X	X	X	X		X	X	X		X				X						X	X	
CAL5	1.00	1117				X	X	X	X		X	X	X		X				X						X	X	
CAL6	1.00	1122				X	X	X	X		X	X	X		X				X						X	X	
ICV1	1.00	1128				X	X	X	X		X	X	X		X				X						X	X	
ICB1	1.00	1134				X	X	X	X		X	X	X		X				X						X	X	
LLICV	1.00	1140				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1146																									
ZZZZZZ	1.00	1152																									
ICSA	1.00	1157				X	X	X	X		X	X	X		X				X						X	X	
ICSAB	1.00	1203				X	X	X	X		X	X	X		X				X						X	X	
CCV1	1.00	1209				X	X	X	X		X	X	X		X				X						X	X	
CCB1	1.00	1215				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1221																									
ZZZZZZ	1.00	1227																									
ZZZZZZ	1.00	1232																									
ZZZZZZ	1.00	1238																									
ZZZZZZ	1.00	1244																									
ZZZZZZ	1.00	1250																									
ZZZZZZ	1.00	1256																									
ZZZZZZ	1.00	1302																									
ZZZZZZ	1.00	1307																									
ZZZZZZ	1.00	1313																									
CCV2	1.00	1319				X	X	X	X		X	X	X		X				X						X	X	
CCB2	1.00	1325				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1331																									
ZZZZZZ	5.00	1337																									
ZZZZZZ	1.00	1342																									
ZZZZZZ	1.00	1348																									
SO54056-001	1.00	1354				X	X	X	X		X	X	X		X				X						X	X	
SO54056-002	1.00	1400				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-001	1.00	1406				X	X	X	X		X	X	X		X				X						X	X	

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: ICPMS2 Run Number: MS2101817B 6020 200.8, generate

Start Date: 10/18/2017 End Date: 10/18/2017

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
SJ12043-002	1.00	1412				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-003	1.00	1417				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-004	1.00	1423				X	X	X	X		X	X	X		X				X						X	X	
CCV3	1.00	1429				X	X	X	X		X	X	X		X				X						X	X	
CCB3	1.00	1435				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-004S	1.00	1441				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-004SD	1.00	1447				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-004L	5.00	1452				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1458																									
SJ12043-005	1.00	1504				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-006	1.00	1510				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-007	1.00	1516				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-008	1.00	1522				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-009	1.00	1528				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-010	1.00	1533				X	X	X	X		X	X	X		X				X						X	X	
CCV4	1.00	1539				X	X	X	X		X	X	X		X				X						X	X	
CCB4	1.00	1545				X	X	X	X		X	X	X		X				X						X	X	
SJ12043-011	1.00	1551				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	5.00	1557																									
ZZZZZZ	5.00	1603																									
LLCCV	1.00	1609				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1614																									
ZZZZZZ	1.00	1620																									
CCV5	1.00	1626				X	X	X	X		X	X	X		X				X						X	X	
CCB5	1.00	1632				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1638																									
ZZZZZZ	1.00	1644																									
ZZZZZZ	1.00	1650																									
ZZZZZZ	1.00	1655																									
ZZZZZZ	1.00	1701																									
ZZZZZZ	1.00	1707																									
ZZZZZZ	1.00	1713																									
ZZZZZZ	1.00	1719																									
ZZZZZZ	1.00	1725																									
ZZZZZZ	1.00	1731																									
ZZZZZZ	1.00	1736																									
ZZZZZZ	5.00	1742																									

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: ICPMS2 Run Number: MS2101817B 6020 200.8, generate

Start Date: 10/18/2017 End Date: 10/18/2017

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	1748																								
ZZZZZZ	1.00	1754																								
ZZZZZZ	1.00	1800																								
ZZZZZZ	1.00	1806																								
ZZZZZZ	1.00	1811																								
ZZZZZZ	1.00	1817																								
ZZZZZZ	1.00	1823																								
ZZZZZZ	1.00	1829																								
ZZZZZZ	1.00	1835																								
ZZZZZZ	1.00	1841																								
ZZZZZZ	1.00	1846																								
ZZZZZZ	1.00	1852																								
ZZZZZZ	1.00	1858																								
ZZZZZZ	1.00	1904																								
ZZZZZZ	1.00	1910																								
ZZZZZZ	1.00	1916																								
ZZZZZZ	1.00	1922																								
ZZZZZZ	1.00	1927																								
ZZZZZZ	1.00	1933																								
ZZZZZZ	1.00	1939																								
ZZZZZZ	1.00	1945																								
ZZZZZZ	1.00	1951																								
ZZZZZZ	1.00	1957																								
ZZZZZZ	1.00	2002																								
ZZZZZZ	1.00	2008																								
ZZZZZZ	1.00	2014																								
ZZZZZZ	1.00	2020																								
ZZZZZZ	5.00	2026																								
ZZZZZZ	1.00	2032																								
ZZZZZZ	1.00	2037																								
ZZZZZZ	1.00	2043																								
ZZZZZZ	1.00	2049																								
ZZZZZZ	1.00	2055																								
ZZZZZZ	1.00	2101																								
ZZZZZZ	1.00	2107																								
ZZZZZZ	1.00	2112																								
ZZZZZZ	1.00	2118																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: ICPMS2 Run Number: MS2101817B 6020 200.8, generate

Start Date: 10/18/2017 End Date: 10/18/2017

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	2124																								
ZZZZZZ	1.00	2130																								
ZZZZZZ	1.00	2136																								
ZZZZZZ	1.00	2142																								
ZZZZZZ	1.00	2147																								
ZZZZZZ	1.00	2153																								
ZZZZZZ	1.00	2159																								
ZZZZZZ	1.00	2205																								
ZZZZZZ	5.00	2211																								
ZZZZZZ	1.00	2217																								
ZZZZZZ	1.00	2222																								
ZZZZZZ	1.00	2228																								
ZZZZZZ	1.00	2234																								
ZZZZZZ	1.00	2240																								
ZZZZZZ	1.00	2246																								
ZZZZZZ	1.00	2252																								
ZZZZZZ	1.00	2257																								
ZZZZZZ	1.00	2303																								
ZZZZZZ	1.00	2310																								

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: NRAS No.: SDG NO.: SJ12043

ICP-MS Instrument ID: ICPMS2 Start Date: 10/18/2017 End Date: 10/18/2017

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TUNE	ZZZZZZ	1036	0											
BLANK	BLANK IM8211-01	1041	100		100		100		100		100		100	
CO	ZZZZZZ	1047	0											
CAL1	CAL1 MW9753	1053	99		102		103		100		101		101	
CAL2	CAL2 MW9754	1059	97		98		99		97		98		97	
CAL3	CAL3 MW9755	1105	97		96		97		94		97		95	
CAL4	CAL4 MW9756	1111	95		93		94		88		94		91	
CAL5	CAL5 MW9713	1117	83		80		82		79		84		80	
CAL6	CAL6 MW9714	1122	80		82		82		82		85		83	
ICV1	ICV1	1128	87		86		87		85		89		87	
ICB1	ICB1	1134	95		98		99		96		97		98	
LLICV	LLICV	1140	98		103		105		101		101		103	
LLICV2	ZZZZZZ	1146	0											
CO	ZZZZZZ	1152	0											
ICSA	ICSA	1157	83		80		81		75		83		76	
ICSAB	ICSAB	1203	89		85		89		81		89		82	
CCV1	CCV1	1209	88		86		87		82		90		85	
CCB1	CCB1	1215	95		97		99		91		97		95	
SQ54055-001	ZZZZZZ	1221	0											
SQ54055-002	ZZZZZZ	1227	0											
SJ04034-001	ZZZZZZ	1232	0											
SJ04034-002	ZZZZZZ	1238	0											
SJ04034-003	ZZZZZZ	1244	0											
SJ04034-004	ZZZZZZ	1250	0											
SJ04034-005	ZZZZZZ	1256	0											
SJ04034-006	ZZZZZZ	1302	0											
SJ04034-007	ZZZZZZ	1307	0											
SJ04034-007	ZZZZZZ	1313	0											

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: _____ NRAS No.: _____ SDG NO.: SJ12043

ICP-MS Instrument ID: ICPMS2 Start Date: 10/18/2017 End Date: 10/18/2017

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
CCV2	CCV2	1319	82		80		82		76		85		79	
CCB2	CCB2	1325	90		89		93		82		91		87	
SJ04034-007	ZZZZZZ	1331	0											
SJ04034-007	ZZZZZZ	1337	0											
SJ04034-007	ZZZZZZ	1342	0											
SJ04034-008	ZZZZZZ	1348	0											
SQ54056-001	SQ54056-001MB	1354	89		86		91		77		89		82	
SQ54056-002	LCS	1400	90		87		91		78		90		83	
SJ12043-001	16C1	1406	86		84		90		77		88		80	
SJ12043-002	16MW8	1412	86		83		88		74		87		82	
SJ12043-003	16MW9	1417	85		82		90		77		87		80	
SJ12043-004	16WC1A	1423	83		81		88		73		86		78	
CCV3	CCV3	1429	79		76		78		70		81		74	
CCB3	CCB3	1435	87		85		88		76		87		82	
SJ12043-004	16WC1AS	1441	83		79		86		73		84		77	
SJ12043-004	16WC1ASD	1447	82		78		85		72		84		76	
SJ12043-004	16WC1AL	1452	83		84		88		75		86		80	
SJ12043-004	ZZZZZZ	1458	0											
SJ12043-005	16WDUP	1504	82		79		86		72		84		75	
SJ12043-006	16WC1B	1510	81		75		80		67		80		74	
SJ12043-007	16-2	1516	83		79		86		72		84		76	
SJ12043-008	16-3	1522	86		83		90		75		87		79	
SJ12043-009	16-5	1528	84		82		88		73		86		77	
SJ12043-010	16WC2B	1533	86		82		90		74		87		78	
CCV4	CCV4	1539	78		74		77		69		80		73	
CCB4	CCB4	1545	85		84		86		74		86		80	
SJ12043-011	16SPRING	1551	83		79		85		72		84		76	
SJ12043-003	ZZZZZZ	1557	0											
SJ12043-008	ZZZZZZ	1603	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: NRAS No.: SDG NO.: SJ12043

ICP-MS Instrument ID: ICPMS2 Start Date: 10/18/2017 End Date: 10/18/2017

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
LLCCV	LLCCV	1609	85		84		88		75		86		80	
LLCCV2	ZZZZZZ	1614	0											
CO	ZZZZZZ	1620	0											
CCV5	CCV5	1626	79		76		78		70		81		74	
CCB5	CCB5	1632	85		85		87		76		86		81	
SQ54298-001	ZZZZZZ	1638	0											
SQ54298-002	ZZZZZZ	1644	0											
SQ54299-001	ZZZZZZ	1650	0											
SQ54299-002	ZZZZZZ	1655	0											
SQ54305-001	ZZZZZZ	1701	0											
SQ54305-002	ZZZZZZ	1707	0											
CCV	ZZZZZZ	1713	0											
CCB	ZZZZZZ	1719	0											
SJ13066-001	ZZZZZZ	1725	0											
SJ13066-001	ZZZZZZ	1731	0											
SJ13066-001	ZZZZZZ	1736	0											
SJ13066-001	ZZZZZZ	1742	0											
SJ13066-001	ZZZZZZ	1748	0											
SJ13066-002	ZZZZZZ	1754	0											
SJ13066-003	ZZZZZZ	1800	0											
SJ13066-004	ZZZZZZ	1806	0											
SJ13066-005	ZZZZZZ	1811	0											
SJ13066-006	ZZZZZZ	1817	0											
CCV	ZZZZZZ	1823	0											
CCB	ZZZZZZ	1829	0											
SJ13066-007	ZZZZZZ	1835	0											
SJ13066-008	ZZZZZZ	1841	0											
SJ13066-009	ZZZZZZ	1846	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: NRAS No.: SDG NO.: SJ12043

ICP-MS Instrument ID: ICPMS2 Start Date: 10/18/2017 End Date: 10/18/2017

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
SJ13066-010	ZZZZZZ	1852	0											
SJ13066-011	ZZZZZZ	1858	0											
SJ13066-012	ZZZZZZ	1904	0											
SJ13066-013	ZZZZZZ	1910	0											
SJ13066-014	ZZZZZZ	1916	0											
SJ13066-015	ZZZZZZ	1922	0											
SJ13066-016	ZZZZZZ	1927	0											
CCV	ZZZZZZ	1933	0											
CCB	ZZZZZZ	1939	0											
SJ13066-017	ZZZZZZ	1945	0											
SJ13066-018	ZZZZZZ	1951	0											
SJ13066-019	ZZZZZZ	1957	0											
SJ13066-020	ZZZZZZ	2002	0											
SJ13066-021	ZZZZZZ	2008	0											
SJ13066-021	ZZZZZZ	2014	0											
SJ13066-021	ZZZZZZ	2020	0											
SJ13066-021	ZZZZZZ	2026	0											
SJ13066-021	ZZZZZZ	2032	0											
SJ13066-022	ZZZZZZ	2037	0											
CCV	ZZZZZZ	2043	0											
CCB	ZZZZZZ	2049	0											
SJ13066-023	ZZZZZZ	2055	0											
SJ13066-024	ZZZZZZ	2101	0											
SJ13066-025	ZZZZZZ	2107	0											
SJ13066-026	ZZZZZZ	2112	0											
SJ13066-027	ZZZZZZ	2118	0											
SJ13066-028	ZZZZZZ	2124	0											
SJ13066-029	ZZZZZZ	2130	0											
SJ13066-030	ZZZZZZ	2136	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: _____ NRAS No.: _____ SDG NO.: SJ12043

ICP-MS Instrument ID: ICPMS2 Start Date: 10/18/2017 End Date: 10/18/2017

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
CCV	ZZZZZZ	2142	0											
CCB	ZZZZZZ	2147	0											
SJ17002-001	ZZZZZZ	2153	0											
SJ17002-001	ZZZZZZ	2159	0											
SJ17002-001	ZZZZZZ	2205	0											
SJ17002-001	ZZZZZZ	2211	0											
SJ17002-001	ZZZZZZ	2217	0											
SJ17002-002	ZZZZZZ	2222	0											
SJ17002-003	ZZZZZZ	2228	0											
CCV	ZZZZZZ	2234	0											
CCB	ZZZZZZ	2240	0											
LR	ZZZZZZ	2246	0											
IS	ZZZZZZ	2252	0											
RINSE	ZZZZZZ	2257	0											
SAMPLE	ZZZZZZ	2303	0											
RINSE	ZZZZZZ	2310	0											

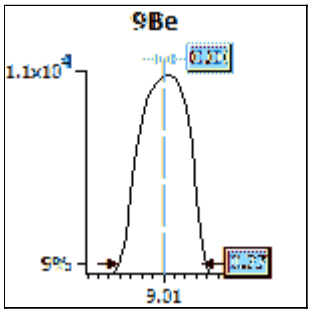
Raw Sample Data

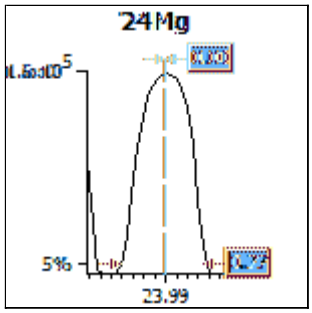
Performance Report

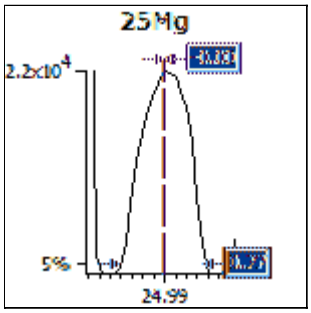
Sample details
Acquired at : 10/18/2017 10:21:39
Report name : Shealy Performance Report ICPMS2 [11/14/2016 11:21:19]

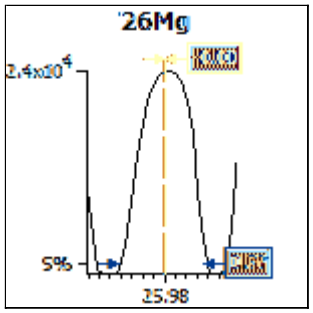
Mass Calibration verification

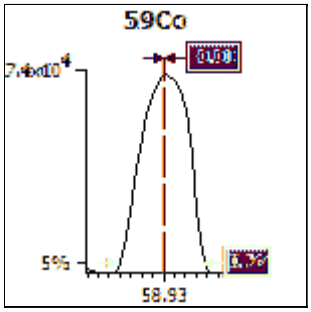
Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum

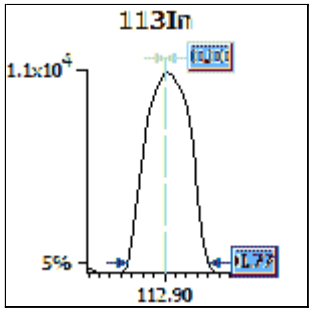


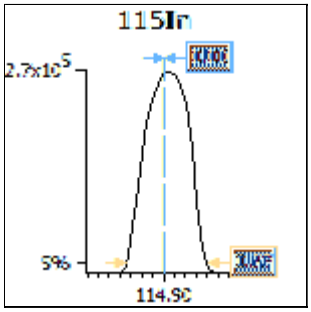


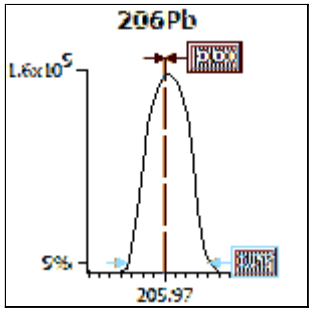


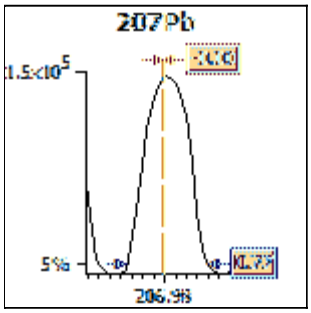


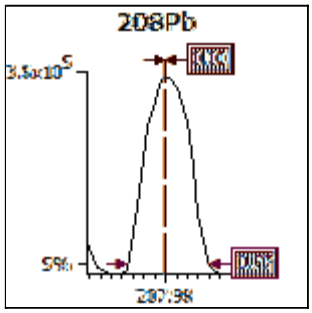












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.77	0.00
24Mg	0.85	0.65	0.10	0.77	0.00
25Mg	0.85	0.65	0.10	0.77	-0.00
26Mg	0.85	0.65	0.10	0.77	-0.00
59Co	0.85	0.65	0.10	0.77	-0.00
113In	0.85	0.65	0.10	0.77	0.00
115In	0.85	0.65	0.10	0.77	0.00
206Pb	0.85	0.65	0.10	0.77	-0.00
207Pb	0.85	0.65	0.10	0.77	-0.00
208Pb	0.85	0.65	0.10	0.77	0.00

Sample details
Acquired at : 10/18/2017 10:21:39
Report name : Shealy Performance Report ICPMS2 [11/14/2016 11:21:19]

Tune conditions

Major	
Extraction	-156.9
Lens 1	-1067
Lens 2	-83.9
Focus	17.1
D1	-38.4
D2	-144
Pole Bias	1.0
Hexapole Bias	-4.0
Nebuliser	0.64

Minor	
Lens 3	-197.6
Forward power	1404
Horizontal	131
Vertical	608
DA	-58.8
Cool	13.0
Auxiliary	0.80
Sampling Depth	170

Global	
Standard resolution	100
High resolution	110
Analogue Detector	1900
PC Detector	3175

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	10:22:17	0.000	11043.794	160707.91	21663.873	25118.073	192762.51	72821.771	2633.555	0.769
2	10:22:49	0.000	11396.647	161661.85	21567.433	25322.630	194745.25	73211.825	2758.217	0.000
3	10:23:20	0.000	11253.347	163338.84	21727.139	25249.297	195563.78	73193.177	2697.425	0.000
4	10:23:52	0.000	11141.636	163966.62	21939.316	25294.841	198777.95	74236.790	2760.526	0.000
5	10:24:23	0.000	11233.316	163924.14	22021.102	25666.143	197959.06	73604.232	2665.875	0.000
x		0.000	11213.748	162719.87	21783.773	25330.197	195961.71	73413.559	2703.120	0.154
σ		0.00	131.80	1462.46	190.33	203.54	2438.93	537.02	56.10	0.34
%RSD		0.000	1.175	0.899	0.874	0.804	1.245	0.731	2.075	223.607

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	10:22:17	11831.189	277528.51	3344.618	334826.20	4663.808	164856.47	143883.66	354925.04	0.000
2	10:22:49	11752.600	276583.39	3239.185	334521.04	4786.195	164119.25	143864.05	353770.60	0.769
3	10:23:20	11774.173	278798.99	3329.226	336861.99	4804.669	165039.81	143791.08	354370.40	1.538
4	10:23:52	11825.796	279630.91	3353.853	336606.68	4914.743	166073.02	144563.14	355606.49	0.000
5	10:24:23	12029.207	280353.42	3242.264	336928.83	4829.301	164624.36	144338.73	355708.23	0.769
x		11842.593	278579.04	3301.829	335948.95	4799.743	164942.58	144088.13	354876.15	0.615
σ		109.56	1532.11	56.48	1175.36	90.53	720.05	342.31	822.52	0.64
%RSD		0.925	0.550	1.711	0.350	1.886	0.437	0.238	0.232	104.583

Ratio results

Run	Time	56Ar O/59Co	136Ba++/138Ba	115In/101Bkg	156Ce O/140Ce
Ratio limits		-	-	-	-
1	10:22:17	2.647	0.787	360787.05	0.014
2	10:22:49	2.660	0.852	INF	0.014
3	10:23:20	2.672	0.810	INF	0.014
4	10:23:52	2.678	0.823	INF	0.015
5	10:24:23	2.690	0.822	INF	0.014
x		2.6692	0.8189	360787.05	0.0143
σ		0.02	0.02	0.00	0.00
%RSD		0.6115	2.8376	0.0000	1.6776

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Shealy Environmental Services, I **Contract:**

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:**

Instrument ID: ICPMS2

Run Batch: MS2101817B 6020 200.8, gen **Date:** 10/18/2017

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	6Li	45Sc
Antimony	115In	159Tb
Arsenic	45Sc	
Barium	115In	159Tb
Beryllium	6Li	45Sc
Boron	6Li	45Sc
Cadmium	115In	
Calcium	6Li	45Sc
Chromium	45Sc	
Cobalt	45Sc	
Copper	45Sc	
Iron	45Sc	89Y
Lead	159Tb	209Bi
Magnesium	6Li	45Sc
Manganese	45Sc	89Y
Molybdenum	89Y	115In
Nickel	45Sc	
Potassium	6Li	45Sc
Selenium	45Sc	
Silicon	6Li	45Sc
Silver	115In	
Sodium	6Li	45Sc
Thallium	159Tb	209Bi
Tin	115In	159Tb
Titanium	45Sc	89Y
Vanadium	45Sc	
Zinc	45Sc	89Y

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\TEMPLATES\KR 080317.tet
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	EQI.IM
Last Edit Timestamp	10/19/2017 09:36:49
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
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590									
5	cal1 MW9753	0.400	25.000	25.000	400.000				40.000	100.000
6	cal2 MW9754	2.000	125.000	125.000	2000.000				200.000	
7	cal3 MW9755	250.000	250.000	250.000		250.000	250.000	250.000	250.000	
8	cal4 MW9756	500.000	500.000	500.000		500.000	500.000	500.000	500.000	500.000
9	cal5 MW9713				50000.000	50000.000	50000.000	50000.000		5000.000
10	cal6 MW9714				100000.000	100000.000	100000.000	100000.000		10000.000
Id	**Label**	**39K**	**43Ca**	**44Ca**	**47Ti**	**51V**	**52Cr**	**55Mn**	**54Fe**	**56Fe**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590									
5	cal1 MW9753	200.000	400.000	400.000	5.000	5.000	5.000	5.000	20.000	20.000
6	cal2 MW9754	1000.000	2000.000	2000.000	25.000	25.000	25.000	25.000	100.000	100.000
7	cal3 MW9755				250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW9756				500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW9713	50000.000	50000.000	50000.000					50000.000	50000.000
10	cal6 MW9714	100000.000	100000.000	100000.000					100000.000	100000.000
Id	**Label**	**57Fe**	**59Co**	**60Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590		1.000							
5	cal1 MW9753	20.000	5.000	5.000	5.000	5.000	5.000	10.000	10.000	10.000
6	cal2 MW9754	100.000	25.000	25.000	25.000	25.000	25.000	50.000	50.000	50.000
7	cal3 MW9755	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW9756	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW9713	50000.000								
10	cal6 MW9714	100000.000								
Id	**Label**	**75As**	**78Se**	**82Se**	**86Sr**	**95Mo**	**97Mo**	**98Mo**	**107Ag**	**109Ag**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590									
5	cal1 MW9753	2.000	5.000	5.000	10.000	10.000	10.000	10.000	1.000	1.000
6	cal2 MW9754	10.000	25.000	25.000	50.000	50.000	50.000	50.000	5.000	5.000
7	cal3 MW9755	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW9756	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW9713									
10	cal6 MW9714									
Id	**Label**	**106Cd**	**111Cd**	**114Cd**	**116Sn**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590									
5	cal1 MW9753	0.100	0.100	0.100	5.000	5.000	2.000	2.000	5.000	5.000

6	cal2 MW9754	0.500	0.500	0.500	25.000	25.000	10.000	10.000	25.000	25.000
7	cal3 MW9755	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW9756	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW9713									
10	cal6 MW9714									

Id	Label	203Tl	205Tl	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	Co 1ppb MW9590							
5	cal1 MW9753	0.500	0.500	1.000	1.000	1.000		50.000
6	cal2 MW9754	2.500	2.500	5.000	5.000	5.000		250.000
7	cal3 MW9755	250.000	250.000	250.000	250.000	250.000		
8	cal4 MW9756	500.000	500.000	500.000	500.000	500.000		500.000
9	cal5 MW9713							
10	cal6 MW9714							

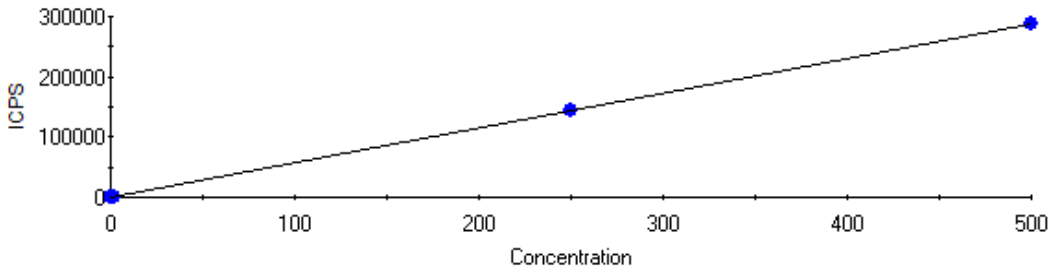
Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	rinse	Unknown	1.000	0	1	10	144
2	TUNE MW9699	Unknown	1.000	0	1	1	144
3	BLANK IM8211-01	Blank	1.000	0	1	1	144
4	Co 1ppb MW9590	Fully Quant Standard	1.000	4	5	1	144
5	cal1 MW9753	Fully Quant Standard	1.000	4	5	2	144
6	cal2 MW9754	Fully Quant Standard	1.000	4	5	3	144
7	cal3 MW9755	Fully Quant Standard	1.000	4	5	4	144
8	cal4 MW9756	Fully Quant Standard	1.000	4	5	5	144
9	cal5 MW9713	Fully Quant Standard	1.000	0	1	6	144
10	cal6 MW9714	Fully Quant Standard	1.000	0	1	7	144
11	ICV MW-9736 PREP 10/18/17	QC Sample	1.000	4	5	11	144
12	ICB IM8211-01	QC Sample	1.000	0	1	1	144
13	LLICV MW9753	QC Sample	1.000	4	5	2	144
14	LLICV2 MW9754	Unknown	1.000	4	5	3	144
15	Co 4 ppb MW9592	Unknown	1.000	4	5	6	144
16	ICSA MW9686	QC Sample	1.000	4	5	12	144
17	ICSAB MW9594	Unknown	1.000	4	5	7	144
18	CCV MW9737	QC Sample	1.000	0	1	8	144
19	CCB IM8211-01	QC Sample	1.000	0	1	1	144
20	SQ54055-001	QC Sample	1.000	4	1	1	144
21	SQ54055-002	Unknown	1.000	4	1	2	144
22	SJ04034-001	Unknown	1.000	4	1	3	144
23	SJ04034-002	Unknown	1.000	4	1	4	144
24	SJ04034-003	Unknown	1.000	4	1	5	144
25	SJ04034-004	Unknown	1.000	4	1	6	144
26	SJ04034-005	Unknown	1.000	4	1	7	144
27	SJ04034-006	Unknown	1.000	4	1	8	144
28	SJ04034-007	Unknown	1.000	4	1	9	144
29	SJ04034-007S	Unknown	1.000	4	1	10	144
30	CCV MW9737	QC Sample	1.000	0	1	8	144
31	CCB IM8211-01	QC Sample	1.000	0	1	1	144
32	SJ04034-007SD	Unknown	1.000	4	2	1	144
33	SJ04034-007L(5)	Unknown	1.000	4	2	2	144
34	SJ04034-007A	Unknown	1.000	4	2	3	144
35	SJ04034-008	Unknown	1.000	4	2	4	144
36	SQ54056-001	QC Sample	1.000	4	2	5	144
37	SQ54056-002	Unknown	1.000	4	2	6	144
38	SJ12043-001	Unknown	1.000	4	2	7	144
39	SJ12043-002	Unknown	1.000	4	2	8	144
40	SJ12043-003	Unknown	1.000	4	2	9	144
41	SJ12043-004	Unknown	1.000	4	2	10	144
42	CCV MW9737	QC Sample	1.000	0	1	8	144
43	CCB IM8211-01	QC Sample	1.000	0	1	1	144
44	SJ12043-004S	Unknown	1.000	4	3	1	144
45	SJ12043-004SD	Unknown	1.000	4	3	2	144
46	SJ12043-004L(5)	Unknown	1.000	4	3	3	144
47	SJ12043-004A	Unknown	1.000	4	3	4	144
48	SJ12043-005	Unknown	1.000	4	3	5	144
49	SJ12043-006	Unknown	1.000	4	3	6	144
50	SJ12043-007	Unknown	1.000	4	3	7	144
51	SJ12043-008	Unknown	1.000	4	3	8	144
52	SJ12043-009	Unknown	1.000	4	3	9	144
53	SJ12043-010	Unknown	1.000	4	3	10	144
54	CCV MW9737	QC Sample	1.000	0	1	8	144
55	CCB IM8211-01	QC Sample	1.000	0	1	1	144
56	SJ12043-011	Unknown	1.000	4	4	1	144
57	SJ12043-003(5)	Unknown	1.000	4	1	12	144

58	SJ12043-008(5)	Unknown	1.000	4	1	11	144
59	LLCCV MW9753	QC Sample	1.000	4	5	2	144
60	LLCCV2 MW9754	Unknown	1.000	4	5	3	144
61	Co 4 ppb MW9592	Unknown	1.000	4	5	6	144
62	CCV MW9737	QC Sample	1.000	0	1	8	144
63	CCB IM8211-01	QC Sample	1.000	0	1	1	144
64	SQ54298-001	QC Sample	1.000	4	4	2	144
65	SQ54298-002	Unknown	1.000	4	4	3	144
66	SQ54299-001	Unknown	1.000	4	4	4	144
67	SQ54299-002	Unknown	1.000	4	4	5	144
68	SQ54305-001	Unknown	1.000	4	4	6	144
69	SQ54305-002	Unknown	1.000	4	4	7	144
70	CCV MW9737	QC Sample	1.000	0	1	8	144
71	CCB IM8211-01	QC Sample	1.000	0	1	1	144
72	SJ13066-001	Unknown	1.000	3	1	1	144
73	SJ13066-001S	Unknown	1.000	3	1	2	144
74	SJ13066-001SD	Unknown	1.000	3	1	3	144
75	SJ13066-001L(5)	Unknown	1.000	3	1	4	144
76	SJ13066-001A	Unknown	1.000	3	1	5	144
77	SJ13066-002	Unknown	1.000	3	1	6	144
78	SJ13066-003	Unknown	1.000	3	1	7	144
79	SJ13066-004	Unknown	1.000	3	1	8	144
80	SJ13066-005	Unknown	1.000	3	1	9	144
81	SJ13066-006	Unknown	1.000	3	1	10	144
82	CCV MW9737	QC Sample	1.000	0	1	8	144
83	CCB IM8211-01	QC Sample	1.000	0	1	1	144
84	SJ13066-007	Unknown	1.000	3	2	1	144
85	SJ13066-008	Unknown	1.000	3	2	2	144
86	SJ13066-009	Unknown	1.000	3	2	3	144
87	SJ13066-010	Unknown	1.000	3	2	4	144
88	SJ13066-011	Unknown	1.000	3	2	5	144
89	SJ13066-012	Unknown	1.000	3	2	6	144
90	SJ13066-013	Unknown	1.000	3	2	7	144
91	SJ13066-014	Unknown	1.000	3	2	8	144
92	SJ13066-015	Unknown	1.000	3	2	9	144
93	SJ13066-016	Unknown	1.000	3	2	10	144
94	CCV MW9737	QC Sample	1.000	0	1	8	144
95	CCB IM8211-01	QC Sample	1.000	0	1	1	144
96	SJ13066-017	Unknown	1.000	3	3	1	144
97	SJ13066-018	Unknown	1.000	3	3	2	144
98	SJ13066-019	Unknown	1.000	3	3	3	144
99	SJ13066-020	Unknown	1.000	3	3	4	144
100	SJ13066-021	Unknown	1.000	3	3	5	144
101	SJ13066-021S	Unknown	1.000	3	3	6	144
102	SJ13066-021SD	Unknown	1.000	3	3	7	144
103	SJ13066-021L(5)	Unknown	1.000	3	3	8	144
104	SJ13066-021A	Unknown	1.000	3	3	9	144
105	SJ13066-022	Unknown	1.000	3	3	10	144
106	CCV MW9737	QC Sample	1.000	0	1	8	144
107	CCB IM8211-01	QC Sample	1.000	0	1	1	144
108	SJ13066-023	Unknown	1.000	3	4	1	144
109	SJ13066-024	Unknown	1.000	3	4	2	144
110	SJ13066-025	Unknown	1.000	3	4	3	144
111	SJ13066-026	Unknown	1.000	3	4	4	144
112	SJ13066-027	Unknown	1.000	3	4	5	144
113	SJ13066-028	Unknown	1.000	3	4	6	144
114	SJ13066-029	Unknown	1.000	3	4	7	144
115	SJ13066-030	Unknown	1.000	3	4	8	144
116	CCV MW9737	QC Sample	1.000	0	1	8	144
117	CCB IM8211-01	QC Sample	1.000	0	1	1	144
118	SJ17002-001	Unknown	1.000	3	5	1	144
119	SJ17002-001S	Unknown	1.000	3	5	2	144
120	SJ17002-001SD	Unknown	1.000	3	5	3	144
121	SJ17002-001L(5)	Unknown	1.000	3	5	4	144
122	SJ17002-001A	Unknown	1.000	3	5	5	144
123	SJ17002-002	Unknown	1.000	3	5	6	144
124	SJ17002-003	Unknown	1.000	3	5	7	144
125	CCV MW9737	QC Sample	1.000	0	1	8	144
126	CCB IM8211-01	QC Sample	1.000	0	1	1	144
127	LR MW9709	QC Sample	1.000	4	5	10	144
128	IS MW9749	Unknown	1.000	2	5	10	144
129	rinse	Unknown	1.000	2	5	11	144
130	Sample	Unknown	1.000	2	5	11	144
131	rinse	Unknown	1.000	2	5	12	144

Fully Quant Calibration

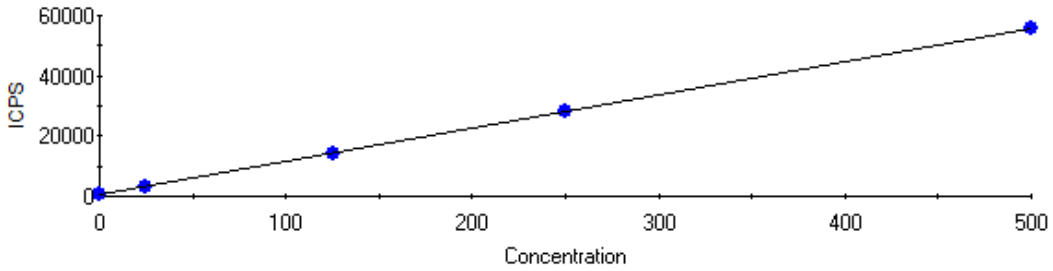
9Be FQ Block 1



Intercept CPS=20.034877 Intercept Conc=0.034894
Sensitivity=574.161697 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	20.03	0.00
cal1 MW9753	0.400	0.363	0.037	228.25	9.34
cal2 MW9754	2.000	2.219	0.219	1294.29	10.97
cal3 MW9755	250.000	249.714	0.286	143396.26	0.11
cal4 MW9756	500.000	500.142	0.142	287182.50	0.03

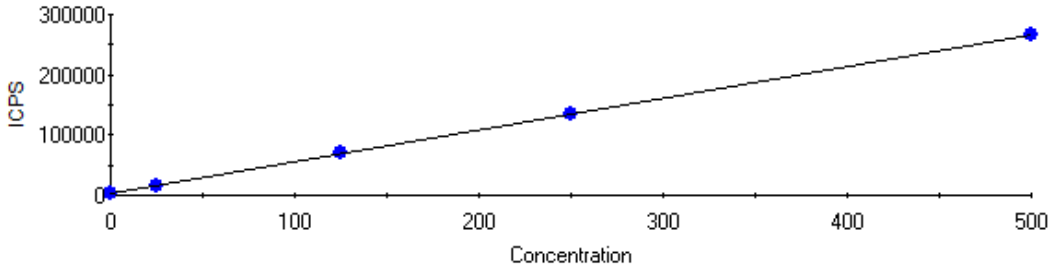
10B FQ Block 1



Intercept CPS=376.149065 Intercept Conc=3.400692
Sensitivity=110.609561 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	376.15	0.00
cal1 MW9753	25.000	23.080	1.920	2929.06	7.68
cal2 MW9754	125.000	126.486	1.486	14366.67	1.19
cal3 MW9755	250.000	250.048	0.048	28033.87	0.02
cal4 MW9756	500.000	499.701	0.299	55647.80	0.06

11B FQ Block 1

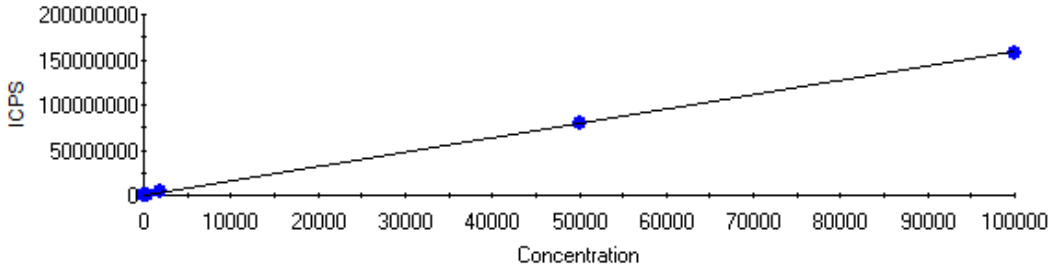


Intercept CPS=1603.255654 Intercept Conc=3.030136
Sensitivity=529.103587 Correlation Coeff=0.999979

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	1603.26	0.00
cal1 MW9753	25.000	24.962	0.038	14810.96	0.15

cal2 MW9754	125.000	127.886	2.886	69268.09	2.31
cal3 MW9755	250.000	250.172	0.172	133970.23	0.07
cal4 MW9756	500.000	499.194	0.806	265728.79	0.16

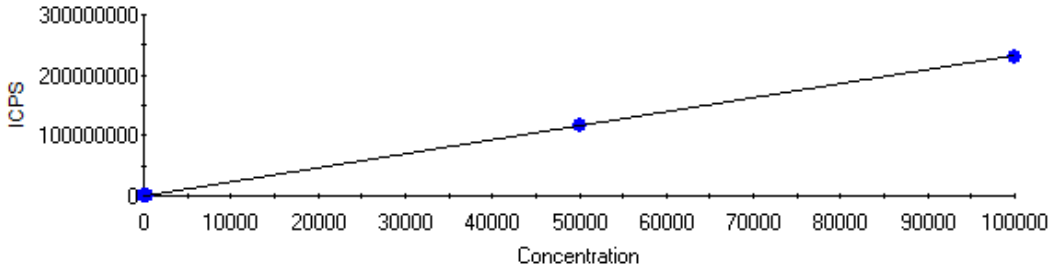
23Na FQ Block 1



Intercept CPS=34103.832249 Intercept Conc=21.539710
Sensitivity=1583.300432 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	34103.83	0.00
cal1 MW9753	400.000	412.169	12.169	686691.63	3.04
cal2 MW9754	2000.000	1988.876	11.124	3183092.10	0.56
cal5 MW9713	50000.000	50275.236	275.236	79634907.52	0.55
cal6 MW9714	100000.000	99862.556	137.444	158146531.22	0.14

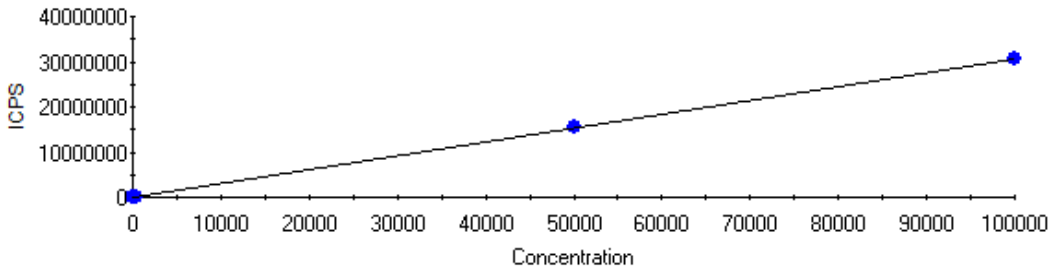
24Mg FQ Block 1



Intercept CPS=927.490647 Intercept Conc=0.400859
Sensitivity=2313.758075 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	927.49	0.00
cal3 MW9755	250.000	262.520	12.520	608335.91	5.01
cal4 MW9756	500.000	531.343	31.343	1230327.59	6.27
cal5 MW9713	50000.000	50238.983	238.983	116241780.04	0.48
cal6 MW9714	100000.000	99880.320	119.680	231099825.62	0.12

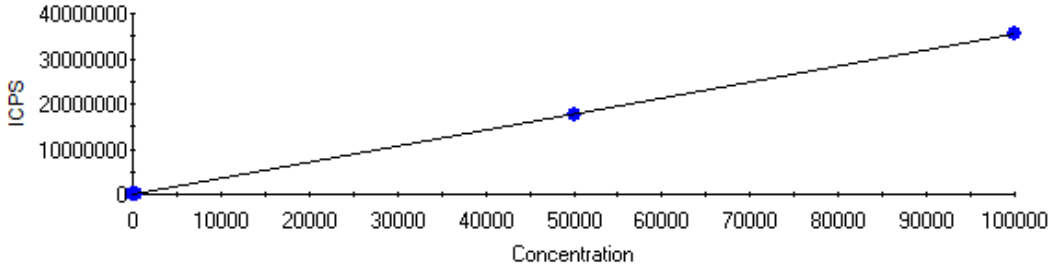
25Mg FQ Block 1



Intercept CPS=108.000386 Intercept Conc=0.353344
Sensitivity=305.652648 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	108.00	0.00
cal3 MW9755	250.000	264.646	14.646	80997.79	5.86
cal4 MW9756	500.000	525.585	25.585	160754.46	5.12
cal5 MW9713	50000.000	50238.739	238.739	15355711.54	0.48
cal6 MW9714	100000.000	99880.466	119.534	30528836.94	0.12

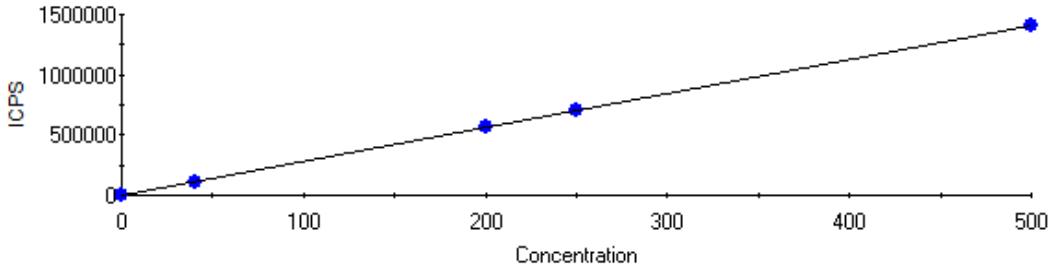
26Mg FQ Block 1



Intercept CPS=157.208866 Intercept Conc=0.442667
Sensitivity=355.140458 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	157.21	0.00
cal3 MW9755	250.000	262.186	12.186	93270.14	4.87
cal4 MW9756	500.000	528.254	28.254	187761.72	5.65
cal5 MW9713	50000.000	49939.231	60.769	17735598.46	0.12
cal6 MW9714	100000.000	100030.213	30.213	35524932.89	0.03

27Al FQ Block 1

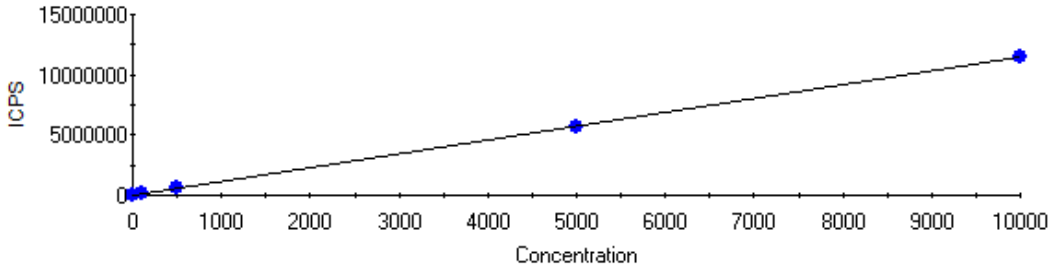


Intercept CPS=754.645181 Intercept Conc=0.267437
Sensitivity=2821.772290 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	754.65	0.00
cal1 MW9753	40.000	40.332	0.332	114562.66	0.83

cal2 MW9754	200.000	200.302	0.302	565961.86	0.15
cal3 MW9755	250.000	246.872	3.128	697371.12	1.25
cal4 MW9756	500.000	499.819	0.181	1411129.62	0.04

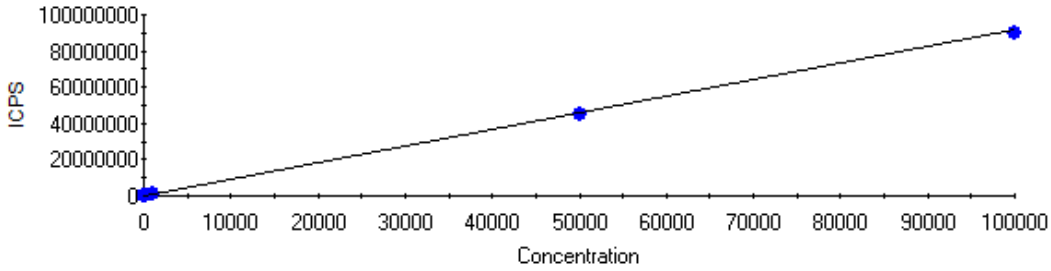
28Si FQ Block 1



Intercept CPS=19133.695491 Intercept Conc=16.704432
Sensitivity=1145.426257 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	19133.70	0.00
cal1 MW9753	100.000	107.831	7.831	142645.92	7.83
cal4 MW9756	500.000	522.008	22.008	617055.13	4.40
cal5 MW9713	5000.000	4951.244	48.756	5690418.30	0.98
cal6 MW9714	10000.000	9947.769	52.231	11413569.05	0.52

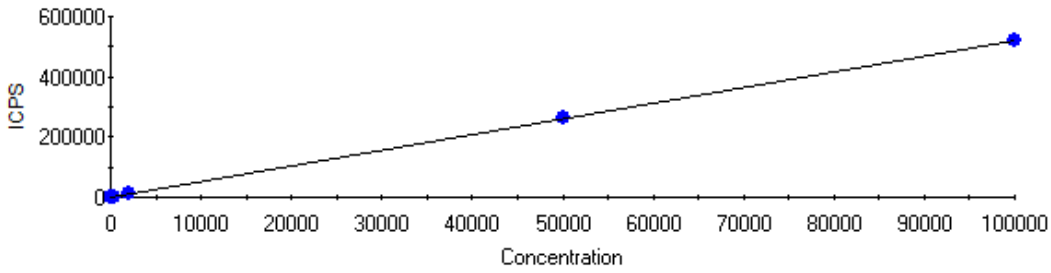
39K FQ Block 1



Intercept CPS=62106.538563 Intercept Conc=67.522079
Sensitivity=919.796005 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	62106.54	0.00
cal1 MW9753	200.000	204.351	4.351	250068.21	2.18
cal2 MW9754	1000.000	1031.226	31.226	1010624.11	3.12
cal5 MW9713	50000.000	48849.787	1150.213	44993945.43	2.30
cal6 MW9714	100000.000	97616.577	2383.423	89849443.94	2.38

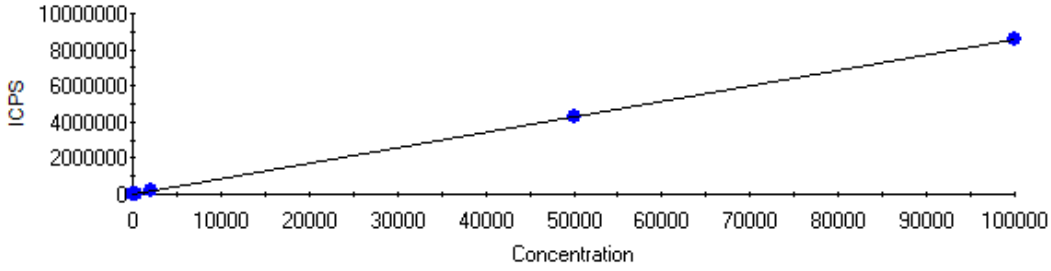
43Ca FQ Block 1



Intercept CPS=30.638266 Intercept Conc=5.860950
Sensitivity=5.227526 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	30.64	0.00
cal1 MW9753	400.000	395.373	4.627	2097.46	1.16
cal2 MW9754	2000.000	1965.102	34.898	10303.26	1.74
cal5 MW9713	50000.000	49808.883	191.117	260407.85	0.38
cal6 MW9714	100000.000	100096.275	96.275	523286.48	0.10

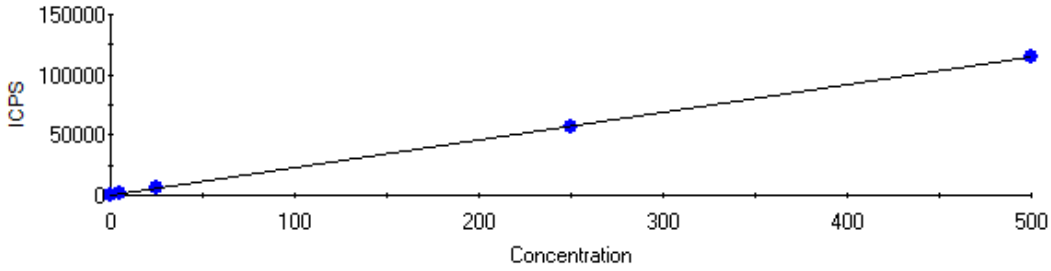
44Ca FQ Block 1



Intercept CPS=2329.832042 Intercept Conc=27.053771
Sensitivity=86.118567 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	2329.83	0.00
cal1 MW9753	400.000	394.906	5.094	36338.61	1.27
cal2 MW9754	2000.000	1966.801	33.199	171707.91	1.66
cal5 MW9713	50000.000	49880.139	119.861	4297935.96	0.24
cal6 MW9714	100000.000	100060.615	60.615	8619406.63	0.06

47Ti FQ Block 1

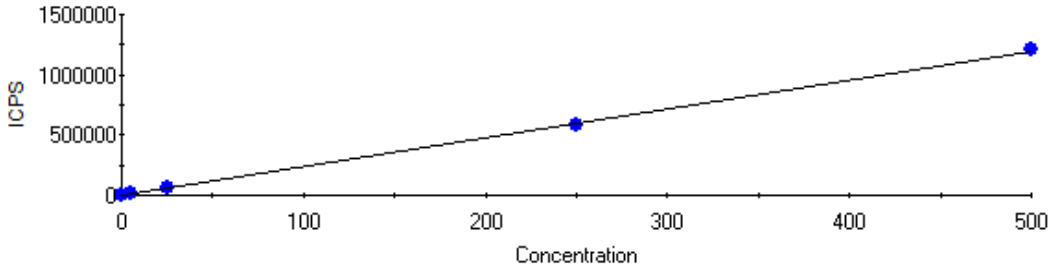


Intercept CPS=11.990527 Intercept Conc=0.052027
Sensitivity=230.467201 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	11.99	0.00
cal1 MW9753	5.000	5.081	0.081	1183.03	1.62

cal2 MW9754	25.000	24.297	0.703	5611.71	2.81
cal3 MW9755	250.000	248.549	1.451	57294.49	0.58
cal4 MW9756	500.000	500.760	0.760	115420.65	0.15

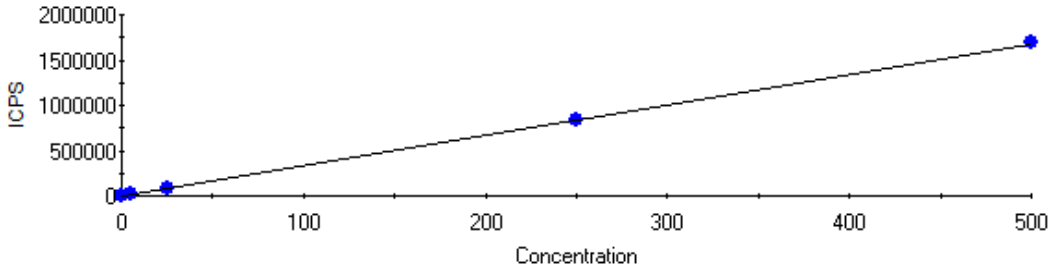
51V FQ Block 1



Intercept CPS=58.180211 Intercept Conc=0.024265
Sensitivity=2397.699410 Correlation Coeff=0.999862

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	58.18	0.00
cal1 MW9753	5.000	4.570	0.430	11015.68	8.60
cal2 MW9754	25.000	23.694	1.306	56870.47	5.22
cal3 MW9755	250.000	242.939	7.061	582553.28	2.82
cal4 MW9756	500.000	503.203	3.203	1206587.86	0.64

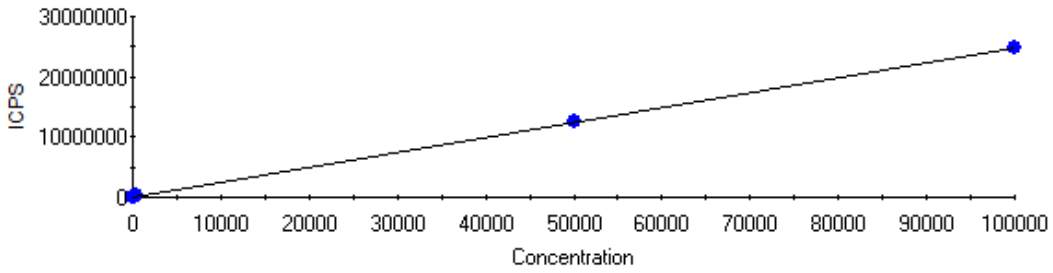
52Cr FQ Block 1



Intercept CPS=468.158638 Intercept Conc=0.140766
Sensitivity=3325.798730 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	468.16	0.00
cal1 MW9753	5.000	4.962	0.038	16970.08	0.76
cal2 MW9754	25.000	24.781	0.219	82883.15	0.88
cal3 MW9755	250.000	252.360	2.360	839767.05	0.94
cal4 MW9756	500.000	512.115	12.115	1703658.29	2.42

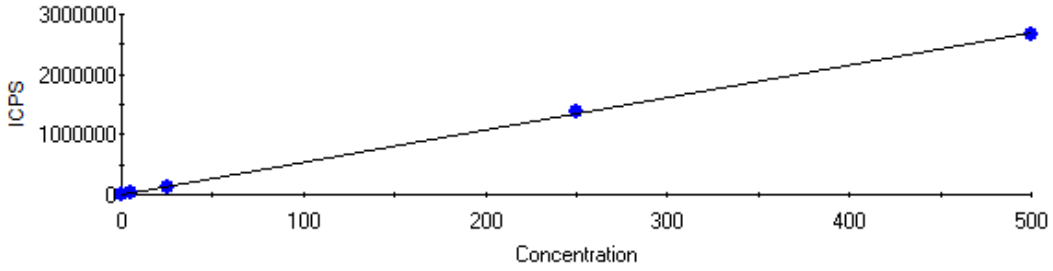
54Fe FQ Block 1



Intercept CPS=2523.631906 Intercept Conc=10.192059
Sensitivity=247.607668 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	2523.63	0.00
cal1 MW9753	20.000	24.095	4.095	8489.84	20.48
cal2 MW9754	100.000	117.252	17.252	31556.15	17.25
cal3 MW9755	250.000	366.254	116.254	93211.03	46.50
cal4 MW9756	500.000	734.168	234.168	184309.20	46.83
cal5 MW9713	50000.000	50128.859	128.859	12414813.51	0.26
cal6 MW9714	100000.000	99934.091	65.909	24746970.85	0.07

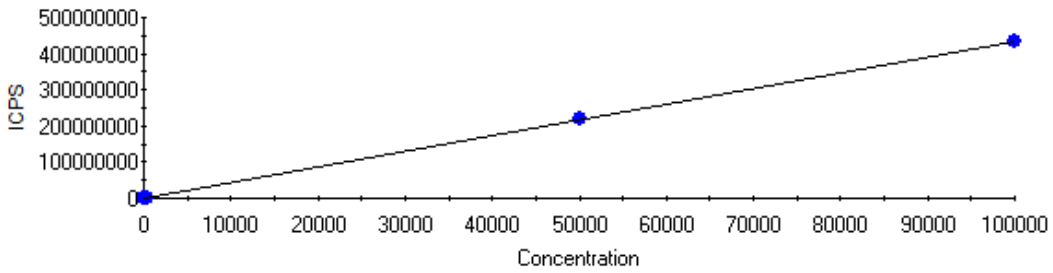
55Mn FQ Block 1



Intercept CPS=262.636339 Intercept Conc=0.048874
Sensitivity=5373.732238 Correlation Coeff=0.999933

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	262.64	0.00
cal1 MW9753	5.000	4.968	0.032	26957.02	0.65
cal2 MW9754	25.000	24.655	0.345	132749.93	1.38
cal3 MW9755	250.000	254.625	4.625	1368547.37	1.85
cal4 MW9756	500.000	497.705	2.295	2674797.46	0.46

56Fe FQ Block 1

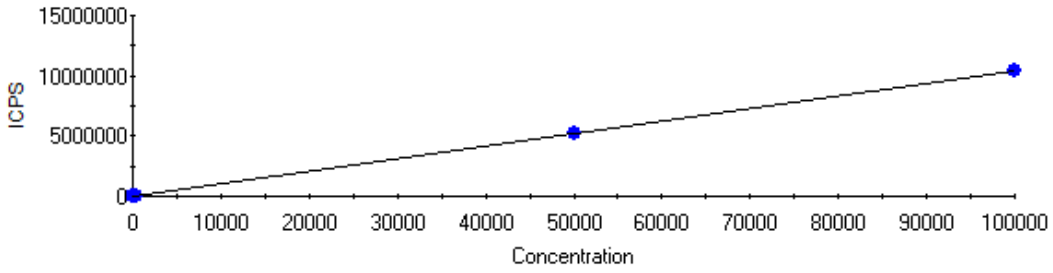


Intercept CPS=103033.207523 Intercept Conc=23.706872
Sensitivity=4346.132538 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error

BLANK IM8211-01	0.000	-0.000	0.000	103033.21	0.00
cal1 MW9753	20.000	21.439	1.439	196208.19	7.19
cal2 MW9754	100.000	105.952	5.952	563515.76	5.95
cal3 MW9755	250.000	265.171	15.171	1255503.48	6.07
cal4 MW9756	500.000	546.999	46.999	2480365.51	9.40
cal5 MW9713	50000.000	50496.521	496.521	219567604.33	0.99
cal6 MW9714	100000.000	99751.461	248.539	433636101.58	0.25

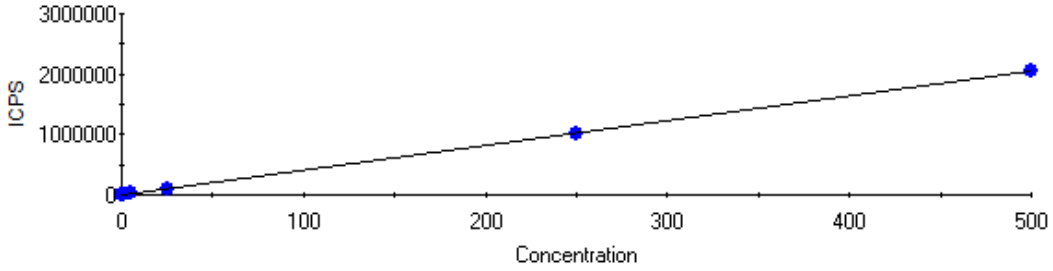
57Fe FQ Block 1



Intercept CPS=720.255036 Intercept Conc=6.918109
Sensitivity=104.111552 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	720.26	0.00
cal1 MW9753	20.000	22.593	2.593	3072.49	12.97
cal2 MW9754	100.000	107.717	7.717	11934.79	7.72
cal3 MW9755	250.000	261.914	11.914	27988.49	4.77
cal4 MW9756	500.000	529.690	29.690	55867.06	5.94
cal5 MW9713	50000.000	50183.020	183.020	5225352.40	0.37
cal6 MW9714	100000.000	99908.303	91.697	10402328.79	0.09

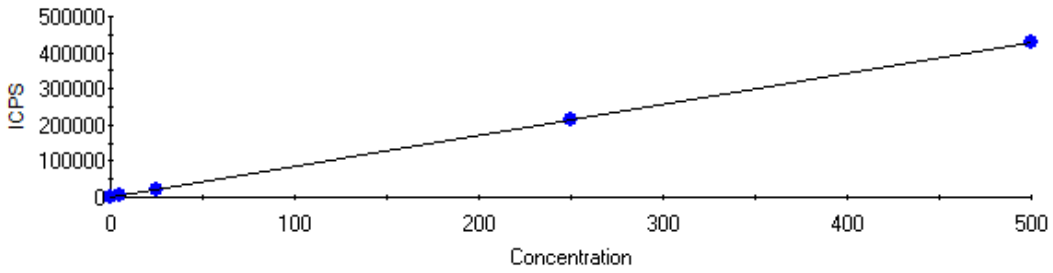
59Co FQ Block 1



Intercept CPS=13.000335 Intercept Conc=0.003180
Sensitivity=4087.769830 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	13.00	0.00
Co 1ppb MW9590	1.000	1.032	0.032	4232.64	3.23
cal1 MW9753	5.000	4.846	0.154	19824.36	3.07
cal2 MW9754	25.000	24.457	0.543	99987.93	2.17
cal3 MW9755	250.000	245.270	4.730	1002622.27	1.89
cal4 MW9756	500.000	502.393	2.393	2053681.49	0.48

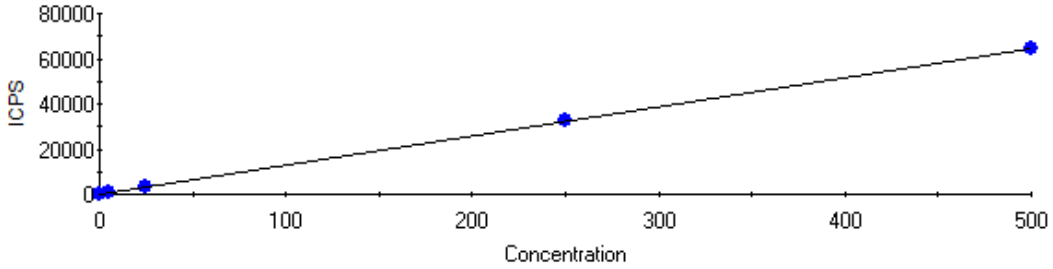
60Ni FQ Block 1



Intercept CPS=36.052341 Intercept Conc=0.042058
Sensitivity=857.210036 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	36.05	0.00
cal1 MW9753	5.000	4.887	0.113	4225.05	2.26
cal2 MW9754	25.000	25.171	0.171	21612.59	0.68
cal3 MW9755	250.000	248.824	1.176	213330.45	0.47
cal4 MW9756	500.000	500.581	0.581	429138.78	0.12

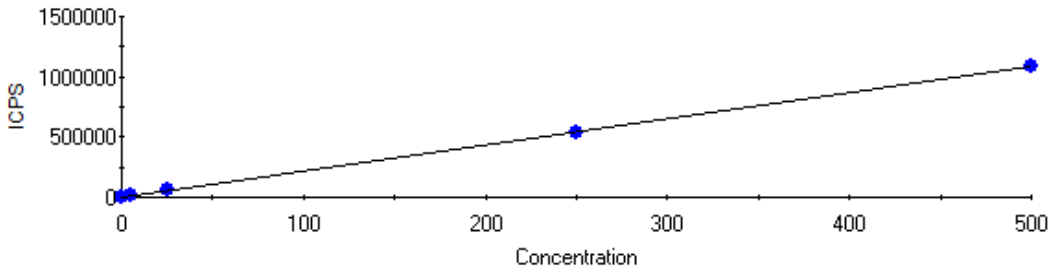
62Ni FQ Block 1



Intercept CPS=284.151443 Intercept Conc=2.212253
Sensitivity=128.444388 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	284.15	0.00
cal1 MW9753	5.000	4.401	0.599	849.43	11.98
cal2 MW9754	25.000	24.295	0.705	3404.76	2.82
cal3 MW9755	250.000	254.163	4.163	32929.90	1.67
cal4 MW9756	500.000	497.960	2.040	64244.31	0.41

63Cu FQ Block 1

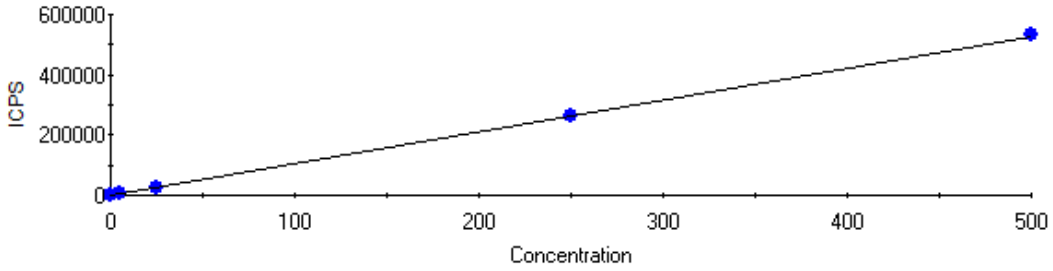


Intercept CPS=406.663600 Intercept Conc=0.187909
Sensitivity=2164.153407 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	406.66	0.00
cal1 MW9753	5.000	4.968	0.032	11157.94	0.64

cal2 MW9754	25.000	25.531	0.531	55660.74	2.13
cal3 MW9755	250.000	248.454	1.546	538100.03	0.62
cal4 MW9756	500.000	499.427	0.573	1081242.67	0.11

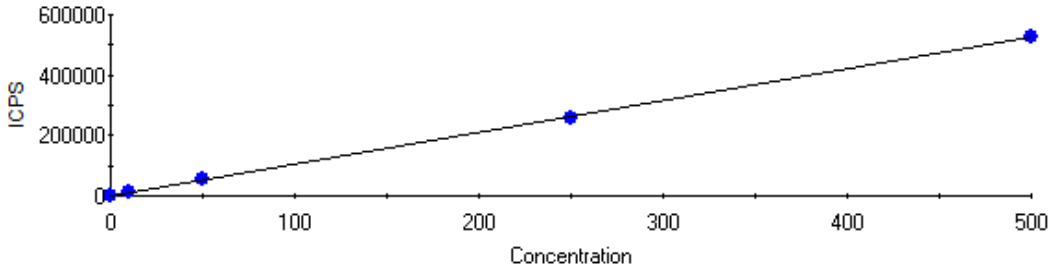
65Cu FQ Block 1



Intercept CPS=123.989291 Intercept Conc=0.117178
Sensitivity=1058.123825 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	123.99	0.00
cal1 MW9753	5.000	5.076	0.076	5495.11	1.52
cal2 MW9754	25.000	25.429	0.429	27030.97	1.72
cal3 MW9755	250.000	248.351	1.649	262909.81	0.66
cal4 MW9756	500.000	500.802	0.802	530034.97	0.16

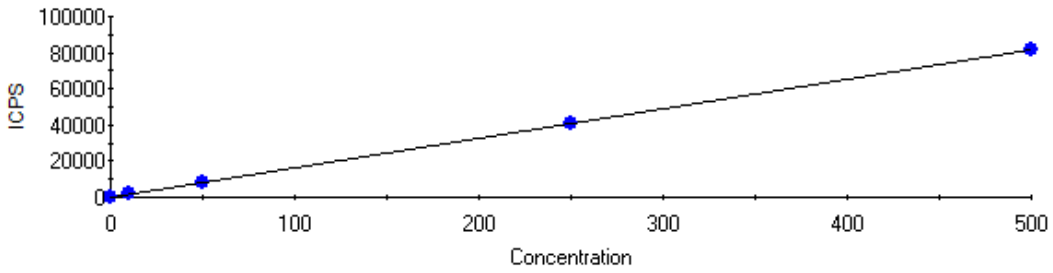
66Zn FQ Block 1



Intercept CPS=246.760081 Intercept Conc=0.234131
Sensitivity=1053.938149 Correlation Coeff=0.999959

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	246.76	0.00
cal1 MW9753	10.000	9.934	0.066	10716.32	0.66
cal2 MW9754	50.000	49.438	0.562	52350.87	1.12
cal3 MW9755	250.000	245.923	4.077	259434.03	1.63
cal4 MW9756	500.000	500.917	0.917	528182.60	0.18

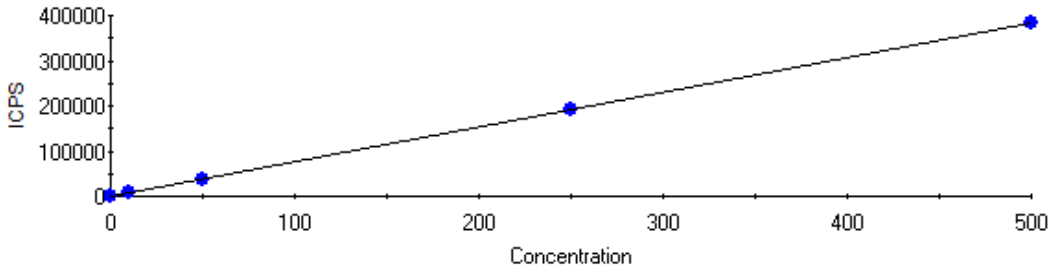
67Zn FQ Block 1



Intercept CPS=30.688228 Intercept Conc=0.188586
Sensitivity=162.728147 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	30.69	0.00
cal1 MW9753	10.000	9.699	0.301	1608.99	3.01
cal2 MW9754	50.000	49.400	0.600	8069.39	1.20
cal3 MW9755	250.000	251.451	1.451	40948.81	0.58
cal4 MW9756	500.000	499.341	0.659	81287.47	0.13

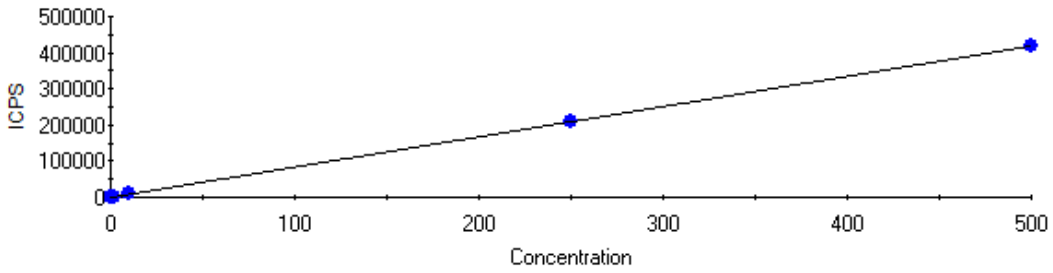
68Zn FQ Block 1



Intercept CPS=204.006295 Intercept Conc=0.266297
Sensitivity=766.084907 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	204.01	0.00
cal1 MW9753	10.000	9.919	0.081	7802.58	0.81
cal2 MW9754	50.000	48.834	1.166	37615.00	2.33
cal3 MW9755	250.000	248.431	1.569	190523.39	0.63
cal4 MW9756	500.000	500.903	0.903	383937.95	0.18

75As FQ Block 1

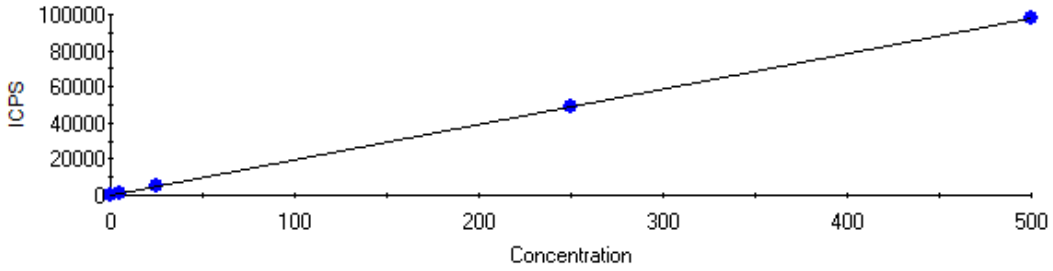


Intercept CPS=191.503717 Intercept Conc=0.228599
Sensitivity=837.727285 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	191.50	0.00
cal1 MW9753	2.000	1.813	0.187	1710.31	9.35

cal2 MW9754	10.000	9.625	0.375	8254.94	3.75
cal3 MW9755	250.000	250.904	0.904	210380.89	0.36
cal4 MW9756	500.000	502.200	2.200	420898.14	0.44

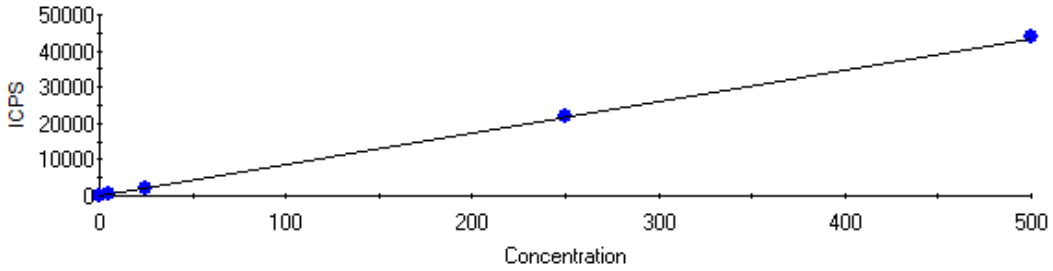
78Se FQ Block 1



Intercept CPS=384.047972 Intercept Conc=1.968438
Sensitivity=195.102878 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	384.05	0.00
cal1 MW9753	5.000	4.894	0.106	1338.87	2.12
cal2 MW9754	25.000	24.621	0.379	5187.70	1.52
cal3 MW9755	250.000	249.927	0.073	49145.53	0.03
cal4 MW9756	500.000	500.056	0.056	97946.51	0.01

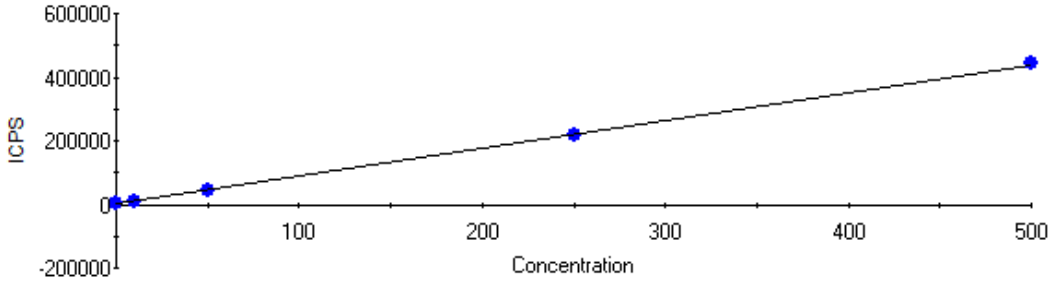
82Se FQ Block 1



Intercept CPS=88.117837 Intercept Conc=1.015269
Sensitivity=86.792578 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	88.12	0.00
cal1 MW9753	5.000	4.350	0.650	465.70	12.99
cal2 MW9754	25.000	24.572	0.428	2220.82	1.71
cal3 MW9755	250.000	250.489	0.489	21828.70	0.20
cal4 MW9756	500.000	501.670	1.670	43629.36	0.33

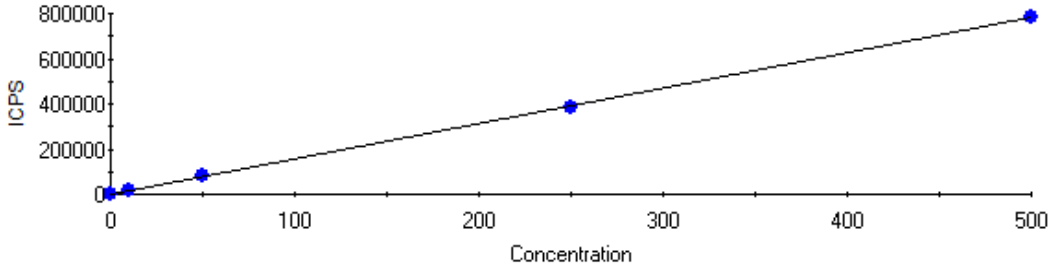
86Sr FQ Block 1



Intercept CPS=36.409476 Intercept Conc=0.041345
Sensitivity=880.626580 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	36.41	0.00
cal1 MW9753	10.000	9.451	0.549	8359.21	5.49
cal2 MW9754	50.000	48.515	1.485	42759.69	2.97
cal3 MW9755	250.000	248.565	1.435	218929.47	0.57
cal4 MW9756	500.000	500.877	0.877	441121.96	0.18

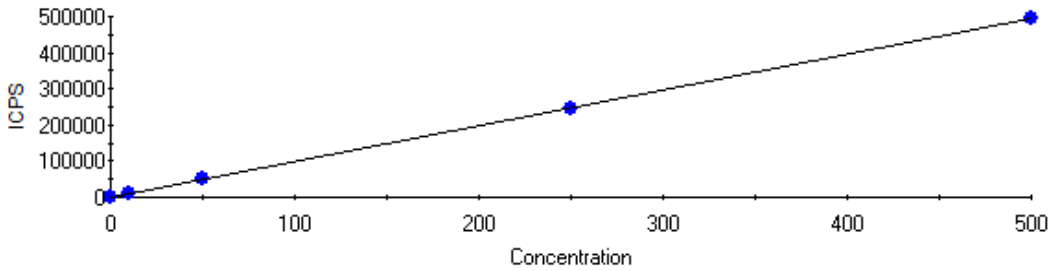
95Mo FQ Block 1



Intercept CPS=360.072506 Intercept Conc=0.230917
Sensitivity=1559.317738 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	360.07	0.00
cal1 MW9753	10.000	9.916	0.084	15822.21	0.84
cal2 MW9754	50.000	51.414	1.414	80530.67	2.83
cal3 MW9755	250.000	245.509	4.491	383187.10	1.80
cal4 MW9756	500.000	502.106	2.106	783302.30	0.42

97Mo FQ Block 1

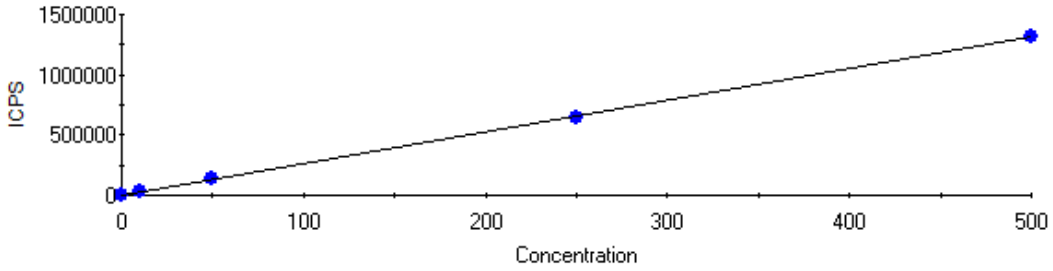


Intercept CPS=205.411490 Intercept Conc=0.207323
Sensitivity=990.781508 Correlation Coeff=0.999981

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	205.41	0.00
cal1 MW9753	10.000	9.762	0.238	9877.18	2.38

cal2 MW9754	50.000	51.512	1.512	51242.30	3.02
cal3 MW9755	250.000	248.050	1.950	245969.06	0.78
cal4 MW9756	500.000	500.828	0.828	496416.97	0.17

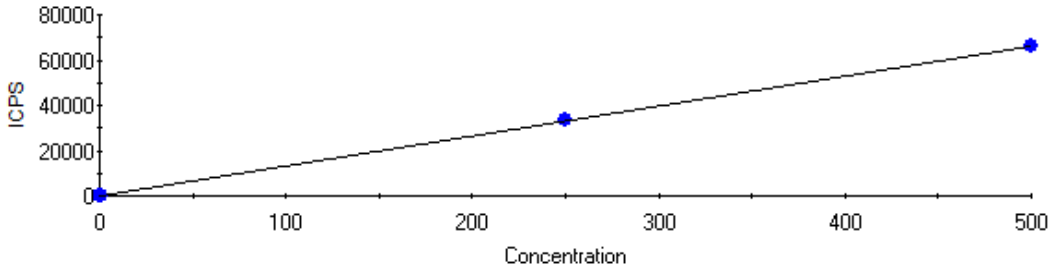
98Mo FQ Block 1



Intercept CPS=563.799675 Intercept Conc=0.214862
Sensitivity=2624.011212 Correlation Coeff=0.999943

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	563.80	0.00
cal1 MW9753	10.000	9.776	0.224	26216.46	2.24
cal2 MW9754	50.000	51.027	1.027	134459.62	2.05
cal3 MW9755	250.000	245.923	4.077	645869.69	1.63
cal4 MW9756	500.000	501.940	1.940	1317660.08	0.39

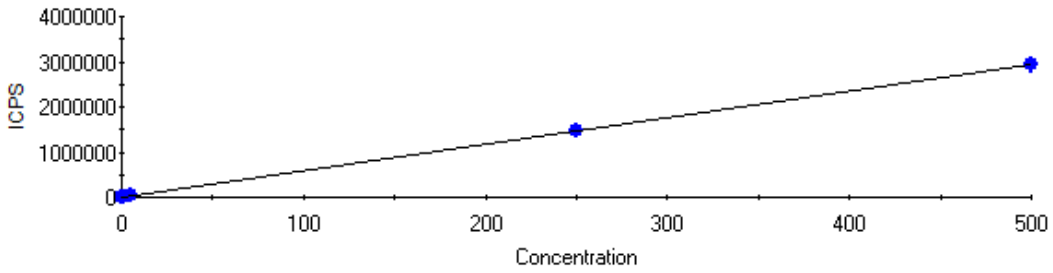
106Cd FQ Block 1



Intercept CPS=189.095346 Intercept Conc=1.438986
Sensitivity=131.408730 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	189.10	0.00
cal1 MW9753	0.100	0.298	0.198	228.27	198.09
cal2 MW9754	0.500	1.318	0.818	362.34	163.68
cal3 MW9755	250.000	251.915	1.915	33292.89	0.77
cal4 MW9756	500.000	499.042	0.958	65767.54	0.19

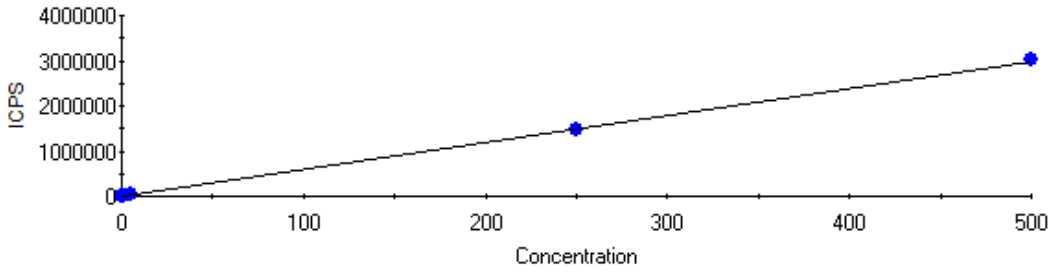
107Ag FQ Block 1



Intercept CPS=54.668659 Intercept Conc=0.009317
Sensitivity=5867.892622 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	54.67	0.00
cal1 MW9753	1.000	1.036	0.036	6136.67	3.65
cal2 MW9754	5.000	5.257	0.257	30903.84	5.15
cal3 MW9755	250.000	250.615	0.615	1470635.33	0.25
cal4 MW9756	500.000	499.690	0.310	2932181.70	0.06

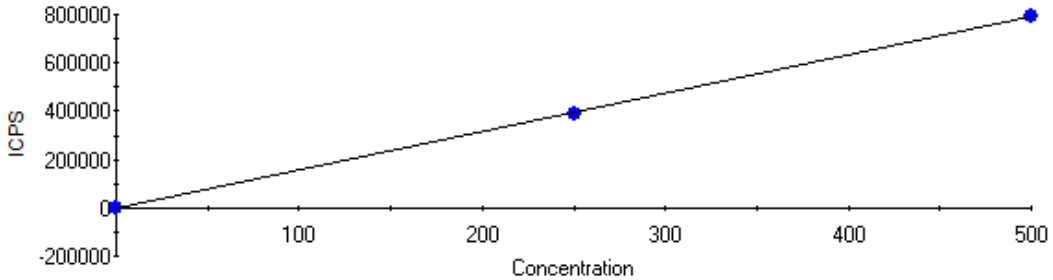
109Ag FQ Block 1



Intercept CPS=49.375086 Intercept Conc=0.008238
Sensitivity=5993.889084 Correlation Coeff=0.999853

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	49.38	0.00
cal1 MW9753	1.000	0.987	0.013	5962.52	1.35
cal2 MW9754	5.000	5.106	0.106	30653.51	2.12
cal3 MW9755	250.000	242.932	7.068	1456156.38	2.83
cal4 MW9756	500.000	503.533	3.533	3018170.36	0.71

111Cd FQ Block 1

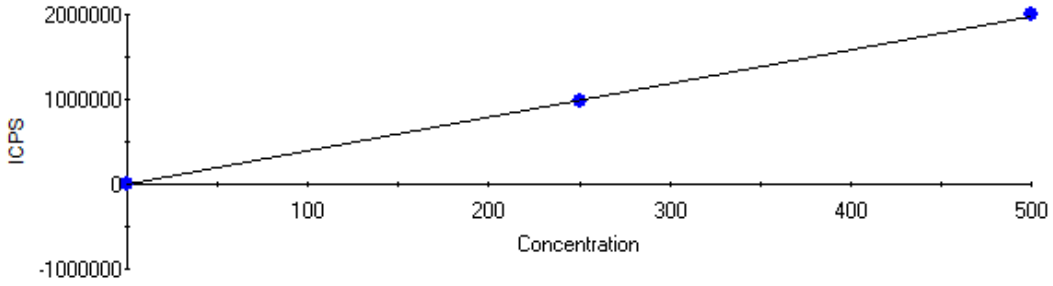


Intercept CPS=4.251086 Intercept Conc=0.002686
Sensitivity=1582.942217 Correlation Coeff=0.999955

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	4.25	0.00
cal1 MW9753	0.100	0.082	0.018	134.73	17.57

cal2 MW9754	0.500	0.380	0.120	606.29	23.93
cal3 MW9755	250.000	246.042	3.958	389474.30	1.58
cal4 MW9756	500.000	501.979	1.979	794608.31	0.40

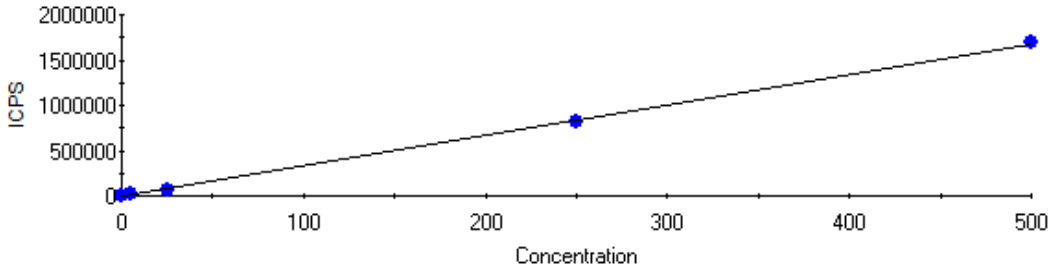
114Cd FQ Block 1



Intercept CPS=-4.310656 Intercept Conc=-0.001086
Sensitivity=3967.764045 Correlation Coeff=0.999917

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	-4.31	0.00
cal1 MW9753	0.100	0.071	0.029	276.99	29.10
cal2 MW9754	0.500	0.432	0.068	1708.78	13.65
cal3 MW9755	250.000	244.643	5.357	970681.74	2.14
cal4 MW9756	500.000	502.679	2.679	1994505.48	0.54

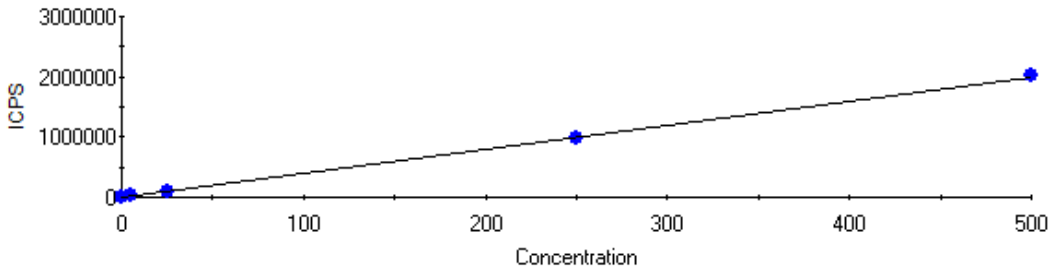
116Sn FQ Block 1



Intercept CPS=609.293327 Intercept Conc=0.181642
Sensitivity=3354.358312 Correlation Coeff=0.999789

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	609.29	0.00
cal1 MW9753	5.000	3.576	1.424	12604.37	28.48
cal2 MW9754	25.000	16.842	8.158	57102.90	32.63
cal3 MW9755	250.000	242.845	7.155	815199.63	2.86
cal4 MW9756	500.000	503.999	3.999	1691204.11	0.80

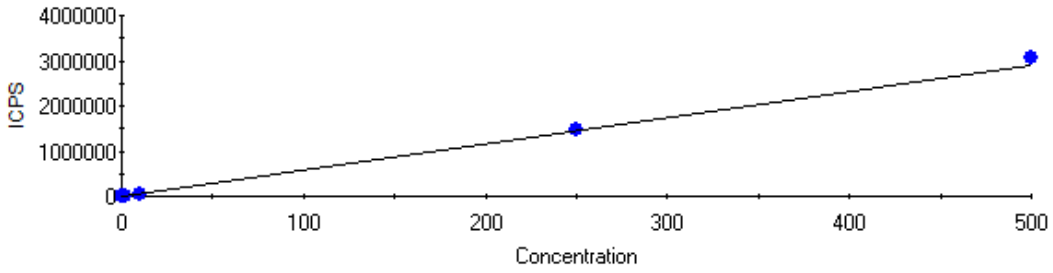
118Sn FQ Block 1



Intercept CPS=982.697634 Intercept Conc=0.247419
Sensitivity=3971.796293 Correlation Coeff=0.999815

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	982.70	0.00
cal1 MW9753	5.000	5.282	0.282	21961.35	5.64
cal2 MW9754	25.000	24.906	0.094	99904.86	0.38
cal3 MW9755	250.000	245.042	4.958	974240.64	1.98
cal4 MW9756	500.000	509.890	9.890	2026161.53	1.98

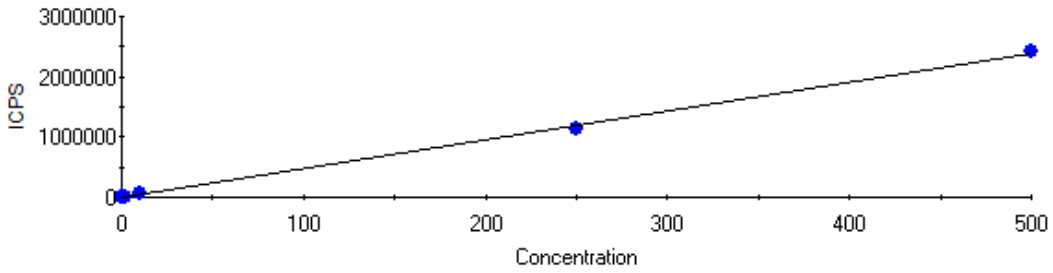
121Sb FQ Block 1



Intercept CPS=1287.132977 Intercept Conc=0.222414
Sensitivity=5787.094409 Correlation Coeff=0.999825

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	1287.13	0.00
cal1 MW9753	2.000	1.904	0.096	12304.40	4.81
cal2 MW9754	10.000	9.904	0.096	58604.77	0.96
cal3 MW9755	250.000	253.540	3.540	1468549.65	1.42
cal4 MW9756	500.000	527.436	27.436	3053610.21	5.49

123Sb FQ Block 1

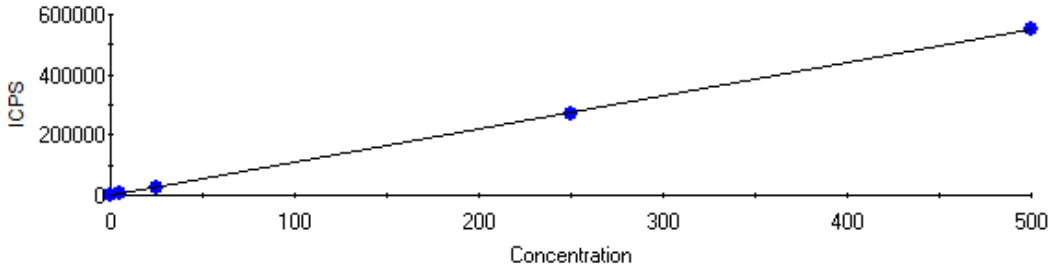


Intercept CPS=929.221269 Intercept Conc=0.194703
Sensitivity=4772.496729 Correlation Coeff=0.999724

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	929.22	0.00
cal1 MW9753	2.000	1.845	0.155	9734.43	7.75

cal2 MW9754	10.000	9.449	0.551	46022.79	5.51
cal3 MW9755	250.000	240.241	9.759	1147480.86	3.90
cal4 MW9756	500.000	504.891	4.891	2410519.44	0.98

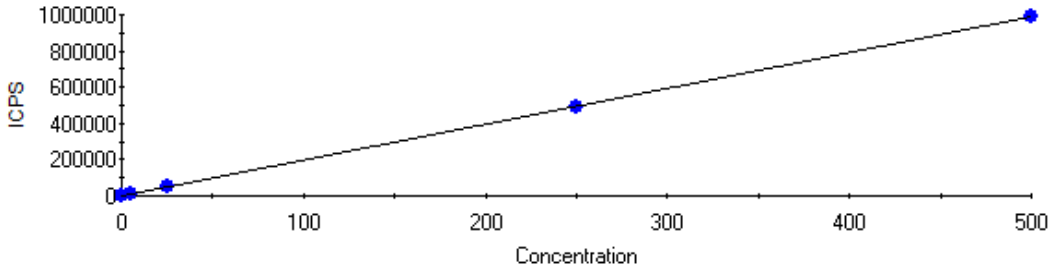
135Ba FQ Block 1



Intercept CPS=35.992610 Intercept Conc=0.032827
Sensitivity=1096.425907 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	35.99	0.00
cal1 MW9753	5.000	4.796	0.204	5294.24	4.08
cal2 MW9754	25.000	24.673	0.327	27088.46	1.31
cal3 MW9755	250.000	247.615	2.385	271527.16	0.95
cal4 MW9756	500.000	501.211	1.211	549576.75	0.24

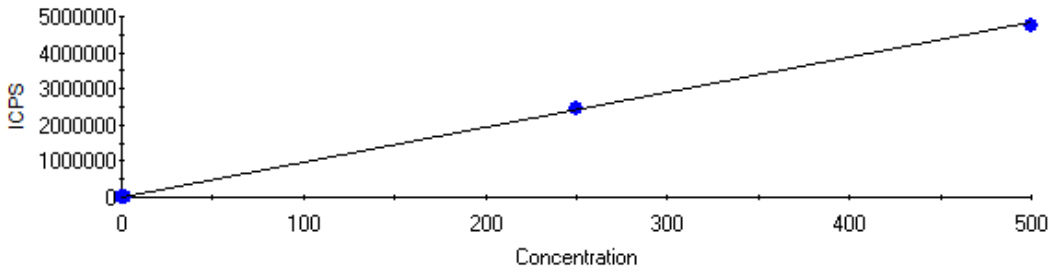
137Ba FQ Block 1



Intercept CPS=43.962401 Intercept Conc=0.022315
Sensitivity=1970.069258 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	43.96	0.00
cal1 MW9753	5.000	4.828	0.172	9555.30	3.44
cal2 MW9754	25.000	24.584	0.416	48476.19	1.66
cal3 MW9755	250.000	247.035	2.965	486720.02	1.19
cal4 MW9756	500.000	501.505	1.505	988043.58	0.30

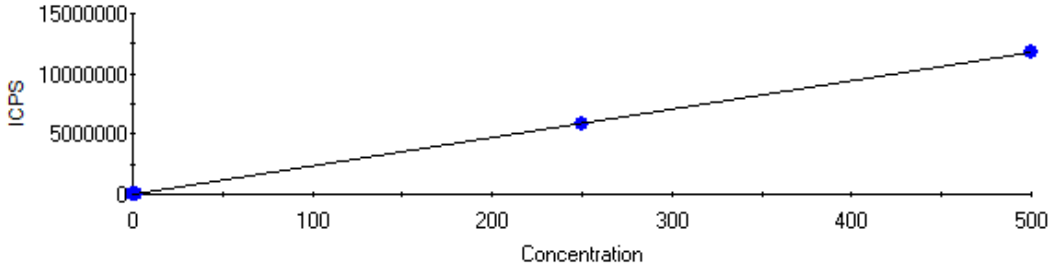
203Tl FQ Block 1



Intercept CPS=86.617518 Intercept Conc=0.008896
Sensitivity=9736.447497 Correlation Coeff=0.999826

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	86.62	0.00
cal1 MW9753	0.500	0.510	0.010	5054.75	2.05
cal2 MW9754	2.500	2.482	0.018	24256.31	0.70
cal3 MW9755	250.000	253.798	3.798	2471180.05	1.52
cal4 MW9756	500.000	488.691	11.309	4758205.72	2.26

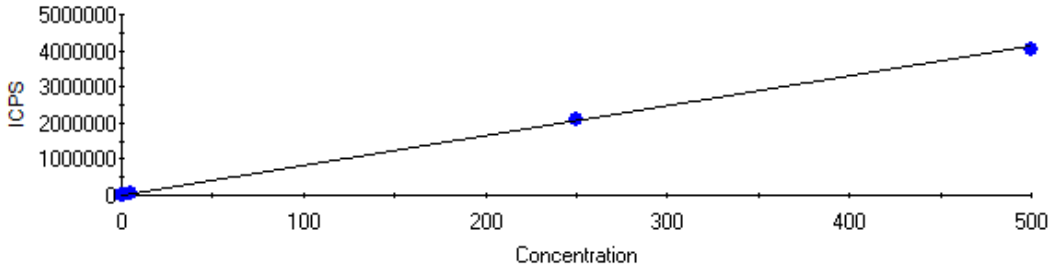
205Tl FQ Block 1



Intercept CPS=201.308139 Intercept Conc=0.008538
Sensitivity=23577.741605 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	201.31	0.00
cal1 MW9753	0.500	0.497	0.003	11910.63	0.67
cal2 MW9754	2.500	2.515	0.015	59492.28	0.59
cal3 MW9755	250.000	247.323	2.677	5831520.97	1.07
cal4 MW9756	500.000	498.847	1.153	11761880.86	0.23

206Pb FQ Block 1

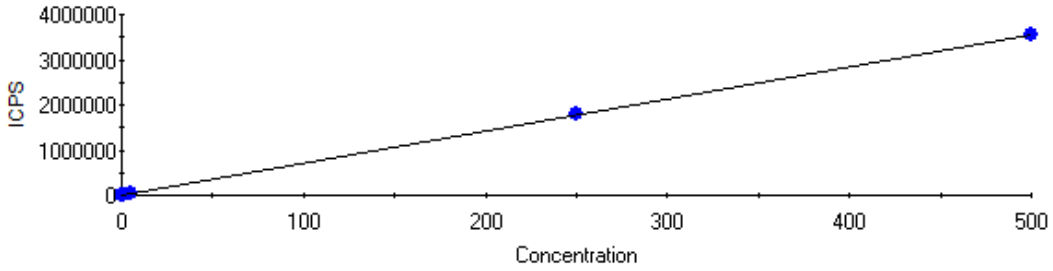


Intercept CPS=70.814223 Intercept Conc=0.008603
Sensitivity=8231.123287 Correlation Coeff=0.999927

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	70.81	0.00
cal1 MW9753	1.000	0.952	0.048	7907.45	4.79

cal2 MW9754	5.000	4.773	0.227	39358.86	4.54
cal3 MW9755	250.000	251.266	1.266	2068273.93	0.51
cal4 MW9756	500.000	490.383	9.617	4036474.49	1.92

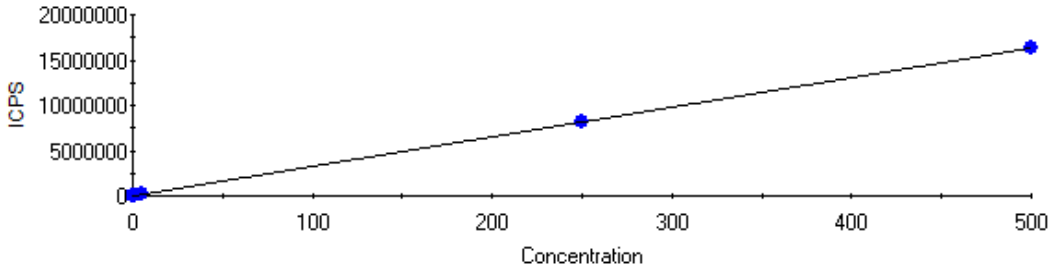
207Pb FQ Block 1



Intercept CPS=47.989499 Intercept Conc=0.006737
Sensitivity=7123.461253 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	0.000	0.000	47.99	0.00
cal1 MW9753	1.000	1.000	0.000	7173.31	0.03
cal2 MW9754	5.000	5.051	0.051	36030.97	1.03
cal3 MW9755	250.000	252.988	2.988	1802197.43	1.20
cal4 MW9756	500.000	498.506	1.494	3551132.89	0.30

208Pb FQ Block 1



Intercept CPS=260.290541 Intercept Conc=0.007967
Sensitivity=32672.896431 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM8211-01	0.000	-0.000	0.000	260.29	0.00
cal1 MW9753	1.000	0.980	0.020	32285.47	1.98
cal2 MW9754	5.000	4.942	0.058	161741.41	1.15
cal3 MW9755	250.000	252.593	2.593	8253191.28	1.04
cal4 MW9756	500.000	498.704	1.296	16294375.20	0.26

Dilution Corrected Concentrations

TUNE MW9699 10/18/2017 10:36:06

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	102.0%	-0.001	0.103	-0.079	131.600	-0.788	-0.011	0.053	-0.126
2	10:37:01	103.2%	0.053	-0.530	-0.139	138.800	-0.847	-0.058	0.140	-0.149
3	10:37:28	103.8%	0.025	-0.616	0.048	133.400	-0.002	0.029	0.011	-0.053
x		103.0%	0.026	-0.348	-0.057	134.600	-0.546	-0.013	0.068	-0.109
σ		0.9%	0.027	0.393	0.096	3.787	0.472	0.044	0.066	0.050
%RSD		0.9	103.700	113.000	167.800	2.813	86.460	325.600	96.320	45.550
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	0.006	-0.944	147.800	-3.231	-0.705	0.032	104.0%	0.015	-0.040
2	10:37:01	-0.024	-1.146	146.500	-4.018	-2.176	0.548	103.9%	0.048	-0.006
3	10:37:28	-0.003	-0.797	150.300	-5.155	2.195	-0.603	104.5%	-0.019	-0.023
x		-0.007	-0.963	148.200	-4.135	-0.229	-0.008	104.1%	0.015	-0.023
σ		0.015	0.176	1.927	0.967	2.224	0.577	0.3%	0.034	0.017
%RSD		219.800	18.250	1.300	23.390	972.700	7685.000	0.3	227.700	72.860
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	-0.007	39.270	-0.286	-0.004	-1.536	-1.036	-0.001	0.007	-0.022
2	10:37:01	-0.024	20.830	-0.688	-0.013	-1.908	-0.357	-0.001	-0.024	-0.198
3	10:37:28	-0.012	22.950	-0.956	-0.002	-1.869	-1.117	0.000	0.016	-0.279
x		-0.014	27.680	-0.643	-0.006	-1.771	-0.837	-0.001	-0.000	-0.166
σ		0.009	10.090	0.337	0.006	0.204	0.418	0.001	0.021	0.131
%RSD		62.550	36.460	52.450	95.530	11.530	49.890	140.000	7899.000	78.820
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	-0.049	0.025	-0.128	0.001	-0.136	0.006	-0.089	2.100	3.324
2	10:37:01	-0.015	-0.019	-0.091	-0.117	-0.145	0.043	-0.043	2.627	3.476
3	10:37:28	-0.038	-0.009	-0.078	-0.071	-0.157	0.095	-0.072	2.644	3.338
x		-0.034	-0.001	-0.099	-0.063	-0.146	0.048	-0.068	2.457	3.379
σ		0.017	0.023	0.026	0.060	0.011	0.045	0.023	0.309	0.084
%RSD		51.350	2112.000	26.050	95.290	7.279	93.140	34.410	12.590	2.477
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	0.000	0.049	4.224	-0.018	103.5%	0.020	0.051	0.058	-0.492
2	10:37:01	0.000	0.140	4.910	-0.002	103.1%	0.016	0.024	0.021	-0.018
3	10:37:28	0.000	0.352	3.732	-0.044	105.0%	0.037	0.079	0.064	-0.240
x		0.000	0.180	4.289	-0.021	103.9%	0.024	0.051	0.048	-0.250
σ		0.000	0.155	0.592	0.021	1.0%	0.011	0.027	0.024	0.237
%RSD		0.000	86.320	13.800	99.670	1.0	46.140	53.630	49.640	94.790
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	-0.005	0.000	-0.001	0.002	102.6%	0.042	0.048	0.057	0.091
2	10:37:01	-0.004	-0.001	-0.001	0.000	102.7%	0.013	0.073	0.069	0.084
3	10:37:28	0.002	0.002	-0.001	0.002	103.0%	0.035	0.034	0.076	0.101
x		-0.002	0.000	-0.001	0.001	102.8%	0.030	0.052	0.067	0.092
σ		0.004	0.002	0.000	0.001	0.2%	0.015	0.020	0.009	0.008
%RSD		161.800	403.400	7.724	77.670	0.2	49.150	38.460	13.870	9.225
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:34	0.010	-0.002	100.9%	-0.001	0.003	-0.002	0.004	0.002	101.2%
2	10:37:01	-0.011	-0.000	101.8%	-0.000	-0.000	-0.001	-0.000	0.001	103.4%
3	10:37:28	-0.001	-0.005	102.5%	0.004	0.002	0.002	-0.000	0.001	104.3%
x		-0.001	-0.002	101.7%	0.001	0.001	-0.001	0.001	0.001	103.0%
σ		0.011	0.002	0.8%	0.003	0.002	0.002	0.002	0.001	1.6%
%RSD		1534.000	82.820	0.8	248.300	124.700	346.800	211.300	63.460	1.6

BLANK IM8211-01 10/18/2017 10:41:53

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	99.2%	0.021	0.425	0.192	2.808	-0.044	-0.067	0.002	-0.102
2	10:42:47	100.1%	-0.021	-0.403	-0.055	2.835	-0.186	-0.006	-0.040	0.040
3	10:43:14	100.7%	-0.000	-0.022	-0.137	-5.644	0.230	0.073	0.038	0.062
x		100.0%	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	0.000
σ		0.7%	0.021	0.414	0.171	4.887	0.212	0.070	0.039	0.089
%RSD		0.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	-0.006	-0.244	-2.304	0.485	-2.010	0.953	99.4%	-0.017	0.003
2	10:42:47	-0.009	-0.005	2.175	-0.146	0.229	0.671	100.5%	-0.000	0.003
3	10:43:14	0.015	0.249	0.129	-0.339	1.782	-1.624	100.1%	0.017	-0.005
x		0.000	0.000	-0.000	0.000	0.000	0.000	100.0%	-0.000	0.000
σ		0.013	0.247	2.242	0.431	1.906	1.413	0.6%	0.017	0.005
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	0.014	-1.487	0.792	-0.004	0.361	0.653	-0.002	0.019	0.479
2	10:42:47	-0.006	0.715	-0.231	-0.004	-0.122	-0.907	0.001	-0.010	-0.007
3	10:43:14	-0.009	0.772	-0.561	0.008	-0.240	0.254	0.002	-0.009	-0.472
x		0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	0.000
σ		0.012	1.288	0.705	0.007	0.318	0.810	0.002	0.016	0.476
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	0.026	0.008	0.037	0.058	-0.004	-0.018	-0.096	-0.250	-0.143
2	10:42:47	-0.017	-0.023	-0.011	-0.017	0.041	0.036	0.369	0.279	0.164
3	10:43:14	-0.009	0.015	-0.026	-0.041	-0.037	-0.018	-0.272	-0.029	-0.022
x		0.000	-0.000	0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000
σ		0.023	0.020	0.033	0.052	0.039	0.031	0.331	0.266	0.155
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	0.000	-0.039	0.019	-0.003	99.8%	0.011	0.024	0.009	0.215
2	10:42:47	0.000	0.084	-2.068	0.077	99.8%	0.005	0.003	-0.015	-0.165
3	10:43:14	0.000	-0.044	2.049	-0.074	100.4%	-0.016	-0.026	0.006	-0.051
x		0.000	0.000	0.000	-0.000	100.0%	-0.000	-0.000	0.000	-0.000
σ		0.000	0.072	2.058	0.075	0.4%	0.015	0.025	0.013	0.195
%RSD		0.000	0.000	0.000	0.000	0.4	0.000	0.000	0.000	0.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	0.000	0.003	-0.003	-0.002	99.2%	-0.004	-0.002	0.013	-0.008
2	10:42:47	-0.001	-0.003	0.007	0.002	100.3%	-0.002	-0.001	-0.005	0.003
3	10:43:14	0.001	0.000	-0.003	-0.001	100.6%	0.006	0.003	-0.008	0.005
x		0.000	-0.000	-0.000	-0.000	100.0%	0.000	0.000	0.000	0.000
σ		0.001	0.003	0.006	0.002	0.8%	0.005	0.002	0.012	0.007
%RSD		0.000	0.000	0.000	0.000	0.8	0.000	0.000	0.000	0.000

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:20	0.000	0.000	99.0%	-0.001	0.000	0.002	0.001	0.001	98.9%
2	10:42:47	-0.004	-0.008	99.9%	0.001	-0.001	0.001	-0.002	-0.000	100.0%
3	10:43:14	0.003	0.008	101.1%	0.000	0.001	-0.003	0.001	-0.001	101.1%
x		0.000	-0.000	100.0%	-0.000	0.000	-0.000	0.000	-0.000	100.0%
σ		0.004	0.008	1.1%	0.001	0.001	0.003	0.001	0.001	1.1%
%RSD		0.000	0.000	1.1	0.000	0.000	0.000	0.000	0.000	1.1

Co 1ppb MW9590 10/18/2017 10:47:43

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	100.8%	-0.000	0.833	0.488	20.210	6.110	1.597	1.428	1.460
2	10:48:37	102.4%	0.013	-0.288	0.366	11.880	6.361	1.613	1.525	1.695
3	10:49:04	102.2%	0.027	0.177	0.274	14.470	6.195	1.689	1.811	1.753
x		101.8%	0.013	0.241	0.376	15.520	6.222	1.633	1.588	1.636
σ		0.8%	0.013	0.563	0.107	4.261	0.128	0.049	0.199	0.156
%RSD		0.8	103.400	233.800	28.540	27.460	2.055	3.008	12.540	9.505
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	1.471	2.510	-5.045	6.944	0.229	0.957	100.5%	-0.000	0.001
2	10:48:37	1.386	2.469	-3.632	5.882	-3.591	-0.676	101.1%	0.085	-0.001
3	10:49:04	1.421	1.724	-1.890	6.644	3.987	0.872	100.9%	-0.000	0.004
x		1.426	2.234	-3.522	6.490	0.208	0.384	100.8%	0.028	0.002
σ		0.043	0.443	1.580	0.548	3.789	0.919	0.3%	0.049	0.003
%RSD		3.015	19.810	44.870	8.441	1818.000	239.400	0.3	175.400	158.500
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	0.027	0.679	1.036	-0.019	1.458	0.108	1.079	-0.000	-0.542
2	10:48:37	0.013	0.535	-0.078	-0.019	0.958	0.246	1.016	-0.005	-0.770
3	10:49:04	0.003	-8.939	0.886	-0.014	0.781	0.060	1.002	-0.000	-0.463
x		0.014	-2.575	0.615	-0.017	1.065	0.138	1.032	-0.002	-0.592
σ		0.012	5.512	0.605	0.003	0.351	0.097	0.041	0.003	0.160
%RSD		82.180	214.100	98.390	18.280	32.960	70.110	3.962	141.100	26.970
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	0.032	0.071	0.128	0.007	0.008	0.005	-0.179	-0.988	-0.722
2	10:48:37	0.078	0.073	0.181	0.077	0.073	0.015	0.164	-0.480	0.065
3	10:49:04	0.102	0.051	0.192	0.029	0.104	0.092	-0.058	-1.066	-0.725
x		0.071	0.065	0.167	0.038	0.062	0.037	-0.024	-0.845	-0.461
σ		0.035	0.012	0.034	0.036	0.049	0.048	0.174	0.318	0.455
%RSD		49.890	18.580	20.560	95.930	78.850	127.900	713.400	37.690	98.820
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	0.000	0.042	-0.044	-0.031	101.0%	-0.050	-0.019	-0.012	0.192
2	10:48:37	0.000	-0.058	-1.683	0.065	102.2%	-0.058	-0.026	-0.018	-0.188
3	10:49:04	0.000	0.219	-1.235	0.043	102.3%	-0.013	0.014	-0.023	-0.161
x		0.000	0.067	-0.987	0.026	101.8%	-0.040	-0.010	-0.018	-0.052
σ		0.000	0.140	0.847	0.050	0.7%	0.024	0.021	0.005	0.212
%RSD		0.000	207.500	85.770	193.900	0.7	59.980	204.100	28.970	405.200
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	-0.005	-0.004	-0.003	0.000	100.7%	0.028	0.079	-0.061	-0.036
2	10:48:37	-0.006	-0.007	-0.001	0.008	102.2%	0.059	0.104	-0.072	-0.012
3	10:49:04	-0.005	-0.004	-0.001	0.001	102.2%	0.048	0.075	-0.073	-0.015
x		-0.005	-0.005	-0.002	0.003	101.7%	0.045	0.086	-0.069	-0.021
σ		0.001	0.002	0.001	0.004	0.8%	0.016	0.016	0.007	0.014
%RSD		15.610	29.480	86.980	137.800	0.8	34.810	18.160	9.633	64.510
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:10	0.043	0.079	100.3%	0.001	-0.001	0.001	0.004	0.000	98.1%
2	10:48:37	0.064	0.095	101.4%	-0.001	-0.000	-0.000	0.002	0.002	101.7%
3	10:49:04	0.057	0.079	101.9%	-0.001	-0.000	0.004	0.004	0.003	101.8%
x		0.055	0.084	101.2%	-0.000	-0.000	0.002	0.004	0.002	100.5%
σ		0.010	0.009	0.8%	0.001	0.000	0.002	0.001	0.001	2.1%
%RSD		19.030	11.240	0.8	287.500	101.900	160.400	34.820	75.110	2.1

cal1 MW9753 10/18/2017 10:53:36

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	101.9%	0.334	22.560	25.120	-0.711	405.000	51.850	53.780	53.220
2	10:54:29	103.6%	0.350	23.610	25.530	-4.672	418.400	53.790	53.530	54.940
3	10:54:56	103.5%	0.404	23.070	24.240	-3.309	413.000	52.270	54.900	53.030
x		103.0%	0.363	23.080	24.960	-2.897	412.200	52.640	54.070	53.730
σ		0.9%	0.036	0.529	0.655	2.012	6.729	1.018	0.728	1.051
%RSD		0.9	10.040	2.290	2.622	69.460	1.633	1.934	1.347	1.956
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	39.680	106.900	-19.340	202.100	395.600	391.400	101.2%	4.802	4.437
2	10:54:29	40.840	109.800	-19.520	208.000	393.200	406.600	99.3%	5.433	4.649
3	10:54:56	40.480	106.700	-17.140	203.000	397.400	386.700	100.4%	5.008	4.624
x		40.330	107.800	-18.660	204.400	395.400	394.900	100.3%	5.081	4.570
σ		0.592	1.741	1.325	3.168	2.108	10.400	0.9%	0.322	0.116
%RSD		1.468	1.614	7.102	1.550	0.533	2.633	0.9	6.333	2.529
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	4.967	1177.000	23.790	4.952	21.000	22.200	4.723	4.709	4.770
2	10:54:29	4.981	1309.000	24.140	5.102	22.610	22.920	4.938	5.169	4.477
3	10:54:56	4.938	1183.000	24.360	4.849	20.700	22.660	4.879	4.782	3.956
x		4.962	1223.000	24.100	4.968	21.440	22.590	4.846	4.887	4.401
σ		0.022	74.540	0.287	0.127	1.028	0.368	0.111	0.247	0.412
%RSD		0.444	6.094	1.192	2.555	4.794	1.630	2.291	5.063	9.368
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	4.701	5.086	9.611	9.351	10.170	1.858	4.447	-0.996	-0.423
2	10:54:29	5.276	5.134	10.170	10.020	9.749	1.968	5.214	-1.271	-0.583
3	10:54:56	4.927	5.008	10.020	9.728	9.833	1.614	5.021	-1.088	-0.854
x		4.968	5.076	9.934	9.699	9.919	1.813	4.894	-1.118	-0.620
σ		0.289	0.063	0.291	0.334	0.225	0.181	0.399	0.140	0.218
%RSD		5.826	1.246	2.926	3.448	2.270	9.999	8.158	12.500	35.220
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	0.000	3.860	-0.522	9.261	101.4%	9.816	9.674	9.420	0.587
2	10:54:29	0.000	4.602	0.233	9.793	100.1%	10.320	9.897	9.975	0.167
3	10:54:56	0.000	4.590	3.088	9.299	101.9%	9.615	9.714	9.933	0.140
x		0.000	4.350	0.933	9.451	101.1%	9.916	9.762	9.776	0.298
σ		0.000	0.425	1.904	0.297	0.9%	0.362	0.119	0.309	0.250
%RSD		0.000	9.768	204.000	3.140	0.9	3.650	1.219	3.162	84.020
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	1.005	0.965	0.056	0.077	102.4%	3.515	5.027	1.846	1.832
2	10:54:29	1.032	1.026	0.127	0.068	100.1%	3.651	5.434	1.933	1.854
3	10:54:56	1.073	0.968	0.064	0.067	102.0%	3.561	5.385	1.933	1.849
x		1.036	0.987	0.082	0.071	101.5%	3.576	5.282	1.904	1.845
σ		0.034	0.034	0.039	0.006	1.2%	0.069	0.222	0.050	0.012
%RSD		3.292	3.460	46.830	8.000	1.2	1.936	4.201	2.636	0.633
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:03	4.521	4.786	100.5%	0.505	0.475	0.968	0.999	0.979	98.5%
2	10:54:29	4.901	4.928	100.2%	0.521	0.503	0.971	1.013	0.995	98.8%
3	10:54:56	4.965	4.770	100.7%	0.505	0.512	0.918	0.988	0.967	99.7%
x		4.796	4.828	100.5%	0.510	0.497	0.952	1.000	0.980	99.0%
σ		0.240	0.087	0.3%	0.009	0.019	0.030	0.013	0.014	0.6%
%RSD		5.009	1.798	0.3	1.833	3.858	3.141	1.270	1.428	0.6

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	98.9%	2.312	126.000	126.000	-2.952	T 1962.000	261.600	260.600	256.800
2	11:00:21	99.7%	2.237	125.600	129.200	0.599	T 1994.000	263.900	258.200	265.000
3	11:00:47	98.9%	2.109	127.800	128.500	-0.733	T 2010.000	263.700	266.300	265.700
x		99.2%	2.219	126.500	127.900	-1.029	T 1989.000	263.100	261.700	262.500
σ		0.4%	0.103	1.188	1.670	1.794	T 24.590	1.287	4.162	4.957
%RSD		0.4	4.625	0.940	1.306	174.400	T 1.236	0.489	1.590	1.888
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	200.600	531.200	-27.660	1026.000	1969.000	1957.000	98.2%	24.350	23.740
2	11:00:21	200.500	527.900	-23.380	1035.000	1921.000	1977.000	95.7%	24.020	23.660
3	11:00:47	199.800	530.800	-24.430	1033.000	2006.000	1967.000	97.0%	24.520	23.680
x		200.300	530.000	-25.160	1031.000	1965.000	1967.000	97.0%	24.300	23.690
σ		0.415	1.781	2.229	5.122	42.650	9.791	1.3%	0.251	0.044
%RSD		0.207	0.336	8.862	0.497	2.170	0.498	1.3	1.031	0.186
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	24.730	6150.000	116.900	24.680	105.700	106.000	24.280	25.060	24.120
2	11:00:21	25.160	6291.000	118.500	24.850	106.100	108.300	24.800	25.410	25.570
3	11:00:47	24.450	6090.000	116.400	24.430	106.000	108.900	24.290	25.050	23.200
x		24.780	6177.000	117.300	24.650	106.000	107.700	24.460	25.170	24.300
σ		0.356	103.100	1.113	0.213	0.241	1.516	0.299	0.204	1.192
%RSD		1.438	1.670	0.949	0.864	0.228	1.407	1.221	0.809	4.905
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	25.400	25.720	48.220	47.800	48.320	9.651	25.270	-1.025	-0.487
2	11:00:21	25.900	25.440	50.580	51.190	48.330	9.375	23.820	-1.408	-0.993
3	11:00:47	25.290	25.120	49.520	49.210	49.850	9.850	24.760	-0.927	-0.861
x		25.530	25.430	49.440	49.400	48.830	9.625	24.620	-1.120	-0.780
σ		0.328	0.297	1.183	1.703	0.883	0.238	0.735	0.254	0.263
%RSD		1.286	1.168	2.392	3.448	1.808	2.474	2.986	22.720	33.680
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	0.000	25.080	0.603	48.630	97.6%	51.390	51.590	51.100	0.750
2	11:00:21	0.000	24.420	0.176	47.980	97.0%	51.140	50.800	51.000	1.933
3	11:00:47	0.000	24.220	1.326	48.940	97.5%	51.710	52.140	50.980	1.273
x		0.000	24.570	0.702	48.510	97.3%	51.410	51.510	51.030	1.318
σ		0.000	0.452	0.582	0.488	0.3%	0.284	0.676	0.064	0.593
%RSD		0.000	1.838	82.890	1.005	0.3	0.552	1.313	0.126	44.960
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	5.239	5.105	0.442	0.429	97.6%	16.810	24.880	9.831	9.528
2	11:00:21	5.254	5.099	0.374	0.442	98.0%	16.910	24.990	9.933	9.371
3	11:00:47	5.279	5.114	0.325	0.425	98.5%	16.800	24.850	9.949	9.447
x		5.257	5.106	0.380	0.432	98.0%	16.840	24.910	9.904	9.449
σ		0.020	0.008	0.058	0.009	0.4%	0.060	0.076	0.064	0.079
%RSD		0.384	0.154	15.340	2.024	0.4	0.356	0.304	0.647	0.834
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:54	24.550	24.520	97.4%	2.498	2.504	4.812	5.044	4.939	96.5%
2	11:00:21	24.710	24.600	97.8%	2.492	2.521	4.707	4.985	4.927	97.8%
3	11:00:47	24.760	24.630	99.1%	2.458	2.518	4.801	5.125	4.961	97.8%
x		24.670	24.580	98.1%	2.482	2.515	4.773	5.051	4.942	97.4%
σ		0.111	0.060	0.9%	0.022	0.009	0.057	0.070	0.017	0.7%
%RSD		0.451	0.245	0.9	0.870	0.360	1.204	1.395	0.344	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	96.9%	253.000	250.700	252.300	-0.824	254.400	263.200	266.900	263.500
2	11:06:11	97.5%	247.400	246.200	248.000	-2.689	253.600	262.100	265.700	264.800
3	11:06:38	97.0%	248.700	253.200	250.200	-3.393	257.200	262.300	261.300	258.200
x		97.1%	249.700	250.000	250.200	-2.302	255.000	262.500	264.600	262.200
σ		0.3%	2.894	3.510	2.178	1.327	1.909	0.598	2.932	3.472
%RSD		0.3	1.159	1.404	0.871	57.670	0.749	0.228	1.108	1.324
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	249.000	264.300	-29.960	252.300	372.500	308.300	94.8%	246.800	241.500
2	11:06:11	246.200	263.400	-29.720	253.500	326.900	305.000	93.2%	249.300	243.700
3	11:06:38	245.500	256.800	-30.050	252.200	348.000	303.300	92.8%	249.500	243.500
x		246.900	261.500	-29.910	252.700	349.100	305.500	93.6%	248.500	242.900
σ		1.840	4.136	0.171	0.700	22.830	2.526	1.0%	1.488	1.221
%RSD		0.745	1.582	0.570	0.277	6.540	0.827	1.1	0.599	0.503
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	253.700	59310.000	364.300	255.100	266.700	256.200	245.100	249.000	255.900
2	11:06:11	252.400	59350.000	369.900	254.100	265.000	269.600	245.900	249.700	252.000
3	11:06:38	251.000	58190.000	364.600	254.600	263.800	260.000	244.800	247.800	254.600
x		252.400	58950.000	366.300	254.600	265.200	261.900	245.300	248.800	254.200
σ		1.364	656.100	3.192	0.527	1.465	6.886	0.567	0.939	1.958
%RSD		0.541	1.113	0.871	0.207	0.552	2.629	0.231	0.377	0.770
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	248.700	249.400	245.600	251.600	247.900	250.500	250.100	-1.021	-0.338
2	11:06:11	250.300	250.300	247.600	252.700	247.400	254.100	248.500	-0.818	-0.101
3	11:06:38	246.400	245.400	244.600	250.100	250.000	248.100	251.200	-0.867	0.137
x		248.500	248.400	245.900	251.500	248.400	250.900	249.900	-0.902	-0.101
σ		1.954	2.561	1.491	1.309	1.373	3.002	1.378	0.106	0.237
%RSD		0.787	1.031	0.606	0.521	0.553	1.196	0.551	11.750	235.500
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	0.000	251.900	-0.487	251.200	96.0%	247.100	247.600	246.800	252.600
2	11:06:11	0.000	250.400	-0.692	249.800	95.4%	244.300	248.700	246.200	253.200
3	11:06:38	0.000	249.200	-0.657	244.800	94.6%	245.100	247.800	244.800	250.000
x		0.000	250.500	-0.612	248.600	95.3%	245.500	248.100	245.900	251.900
σ		0.000	1.377	0.110	3.372	0.7%	1.444	0.616	1.045	1.710
%RSD		0.000	0.550	17.890	1.357	0.7	0.588	0.248	0.425	0.679
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	252.800	244.600	247.900	244.600	96.1%	243.200	245.300	251.500	238.600
2	11:06:11	251.400	243.900	246.200	245.100	96.0%	242.900	247.100	254.900	240.900
3	11:06:38	247.600	240.300	244.000	244.200	96.6%	242.500	242.700	254.200	241.300
x		250.600	242.900	246.000	244.600	96.2%	242.800	245.000	253.500	240.200
σ		2.674	2.321	1.985	0.420	0.3%	0.320	2.259	1.814	1.461
%RSD		1.067	0.955	0.807	0.172	0.3	0.132	0.922	0.716	0.608
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:44	248.500	248.700	96.3%	255.200	T 248.900	252.000	253.800	T 253.100	96.3%
2	11:06:11	248.700	247.900	97.6%	252.700	T 246.900	250.900	254.100	T 252.300	97.5%
3	11:06:38	245.600	244.600	98.2%	253.500	T 246.100	250.900	251.100	T 252.300	97.6%
x		247.600	247.000	97.3%	253.800	T 247.300	251.300	253.000	T 252.600	97.2%
σ		1.716	2.162	1.0%	1.300	T 1.437	0.647	1.675	T 0.471	0.7%
%RSD		0.693	0.875	1.0	0.512	T 0.581	0.258	0.662	T 0.187	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	94.5%	M 500.200	498.200	M 500.800	3.141	509.100	530.900	523.500	532.800
2	11:12:03	94.7%	499.200	499.900	495.400	1.700	515.700	530.200	528.100	523.900
3	11:12:30	94.1%	M 501.000	M 501.000	M 501.300	0.751	518.300	532.800	525.200	528.000
x		94.4%	M 500.100	M 499.700	M 499.200	1.864	514.400	531.300	525.600	528.300
σ		0.3%	M 0.864	M 1.415	M 3.269	1.204	4.765	1.342	2.298	4.447
%RSD		0.3	M 0.173	M 0.283	M 0.655	64.580	0.926	0.253	0.437	0.842
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	M 500.500	526.300	-35.920	503.500	708.200	606.200	89.5%	498.900	M 502.800
2	11:12:03	M 500.000	520.500	-32.240	505.000	667.800	605.700	87.6%	M 503.700	M 505.600
3	11:12:30	499.000	519.200	-32.350	508.000	685.700	605.900	88.0%	499.600	M 501.200
x		M 499.800	522.000	-33.510	505.500	687.200	605.900	88.4%	M 500.800	M 503.200
σ		M 0.757	3.786	2.095	2.297	20.250	0.249	1.0%	M 2.602	M 2.260
%RSD		M 0.151	0.725	6.253	0.454	2.947	0.041	1.1	M 0.520	M 0.449
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	M 516.600	118000.000	745.200	T 499.000	545.800	532.500	M 504.400	M 504.700	M 501.300
2	11:12:03	TM 503.900	118600.000	740.300	T 500.000	552.700	527.300	M 505.500	M 503.600	M 500.400
3	11:12:30	M 515.900	118100.000	717.100	T 494.200	542.500	529.200	497.300	493.500	492.200
x		TM 512.100	118200.000	734.200	T 497.700	547.000	529.700	M 502.400	M 500.600	M 498.000
σ		TM 7.125	306.000	15.010	T 3.080	5.216	2.648	M 4.462	M 6.160	M 5.044
%RSD		TM 1.391	0.259	2.045	T 0.619	0.954	0.500	M 0.888	M 1.230	M 1.013
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	M 501.700	498.300	M 500.300	M 500.100	M 503.100	M 500.500	496.200	-0.647	0.246
2	11:12:03	M 501.600	M 502.800	M 500.500	499.500	M 500.900	M 507.400	499.100	-0.989	-0.321
3	11:12:30	495.100	M 501.400	M 502.000	498.400	498.700	498.700	M 504.800	-0.260	-0.537
x		M 499.400	M 500.800	M 500.900	M 499.300	M 500.900	M 502.200	M 500.100	-0.632	-0.204
σ		M 3.777	M 2.314	M 0.971	M 0.828	M 2.232	M 4.584	M 4.400	0.365	0.405
%RSD		M 0.756	M 0.462	M 0.194	M 0.166	M 0.446	M 0.913	M 0.880	57.690	198.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	0.000	M 503.800	-2.277	M 502.200	91.9%	M 504.000	498.600	M 500.100	M 503.400
2	11:12:03	0.000	M 512.300	-2.251	M 502.100	91.3%	M 505.000	M 502.700	M 504.700	496.100
3	11:12:30	0.000	488.900	-1.989	498.300	91.0%	497.400	M 501.200	M 501.000	497.700
x		0.000	M 501.700	-2.172	M 500.900	91.4%	M 502.100	M 500.800	M 501.900	M 499.000
σ		0.000	M 11.810	0.159	M 2.261	0.5%	M 4.140	M 2.063	M 2.470	M 3.853
%RSD		0.000	M 2.353	7.319	M 0.452	0.5	M 0.825	M 0.412	M 0.492	M 0.772
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	M 522.600	M 506.700	M 503.800	M 503.800	92.5%	M 505.400	M 511.800	M 537.300	M 503.100
2	11:12:03	T 462.900	M 506.300	M 505.000	M 503.300	93.0%	M 504.600	M 511.200	M 538.900	M 507.300
3	11:12:30	M 513.500	497.700	497.200	M 500.900	92.3%	M 502.000	M 506.700	TM 506.100	M 504.300
x		TM 499.700	M 503.500	M 502.000	M 502.700	92.6%	M 504.000	M 509.900	TM 527.400	M 504.900
σ		TM 32.180	M 5.070	M 4.187	M 1.577	0.4%	M 1.750	M 2.819	TM 18.460	M 2.144
%RSD		TM 6.440	M 1.007	M 0.834	M 0.314	0.4	M 0.347	M 0.553	TM 3.500	M 0.425
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:36	M 503.200	M 505.300	93.3%	T 492.500	TM 501.300	T 494.500	TM 503.400	TM 502.400	93.9%
2	11:12:03	M 503.300	499.800	94.7%	T 487.200	T 498.000	T 489.300	T 494.200	T 495.200	95.5%
3	11:12:30	497.100	499.400	94.0%	T 486.400	T 497.200	T 487.400	T 498.000	T 498.400	94.8%
x		M 501.200	M 501.500	94.0%	T 488.700	TM 498.800	T 490.400	TM 498.500	TM 498.700	94.7%
σ		M 3.533	M 3.304	0.7%	T 3.279	TM 2.188	T 3.664	TM 4.629	TM 3.600	0.8%
%RSD		M 0.705	M 0.659	0.7	T 0.671	TM 0.439	T 0.747	TM 0.929	TM 0.722	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	81.1%	0.086	6.498	6.853	24.350	T 49690.000	T 50150.000	T 50180.000	T 49680.000
2	11:17:53	81.4%	0.034	6.363	5.954	14.370	T 50330.000	T 50190.000	T 50160.000	T 50020.000
3	11:18:20	82.8%	0.075	5.854	5.353	11.150	T 50810.000	T 50380.000	T 50380.000	T 50120.000
x		81.8%	0.065	6.239	6.053	16.630	T 50280.000	T 50240.000	T 50240.000	T 49940.000
σ		0.9%	0.027	0.340	0.755	6.884	T 560.400	T 119.400	T 123.800	T 233.500
%RSD		1.1	42.320	5.443	12.470	41.400	T 1.115	T 0.238	T 0.246	T 0.468
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.468	T 4952.000	-39.410	T 48800.000	49570.000	T 49630.000	77.7%	0.819	-0.161
2	11:17:53	0.529	T 4967.000	-40.080	T 48600.000	49760.000	T 49980.000	79.1%	0.628	-0.146
3	11:18:20	0.508	T 4935.000	-36.390	T 49150.000	50100.000	T 50030.000	79.2%	0.364	-0.151
x		0.502	T 4951.000	-38.630	T 48850.000	49810.000	T 49880.000	78.7%	0.604	-0.153
σ		0.031	T 15.650	1.967	T 280.000	265.100	T 220.000	0.9%	0.228	0.008
%RSD		6.156	T 0.316	5.093	T 0.573	0.532	T 0.441	1.1	37.850	5.083
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.610	114.800	T 50330.000	0.344	T 50580.000	T 50410.000	0.170	0.571	1.851
2	11:17:53	0.573	124.600	T 49900.000	0.306	T 50320.000	T 50110.000	0.182	0.330	2.339
3	11:18:20	0.550	109.000	T 50160.000	0.350	T 50590.000	T 50030.000	0.224	0.429	1.336
x		0.578	116.100	T 50130.000	0.333	T 50500.000	T 50180.000	0.192	0.443	1.842
σ		0.030	7.919	T 215.300	0.023	T 155.300	T 202.500	0.028	0.121	0.502
%RSD		5.270	6.820	T 0.429	7.050	T 0.308	T 0.404	14.730	27.330	27.230
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.409	0.271	0.692	1.161	0.753	0.020	0.795	0.177	-0.253
2	11:17:53	0.354	0.217	0.817	1.049	0.594	0.098	0.451	0.590	-0.256
3	11:18:20	0.378	0.235	0.743	1.009	0.829	0.089	0.604	0.926	-0.505
x		0.380	0.241	0.751	1.073	0.726	0.069	0.617	0.565	-0.338
σ		0.028	0.028	0.063	0.079	0.120	0.043	0.172	0.375	0.145
%RSD		7.285	11.480	8.379	7.357	16.500	61.860	27.930	66.390	42.780
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.000	-0.482	-2.371	1.646	79.0%	0.536	0.611	0.550	0.219
2	11:17:53	0.000	0.152	-0.095	1.683	79.8%	0.559	0.560	0.514	0.002
3	11:18:20	0.000	0.147	-2.440	1.938	80.9%	0.510	0.475	0.393	-0.094
x		0.000	-0.061	-1.635	1.756	79.9%	0.535	0.549	0.485	0.042
σ		0.000	0.365	1.334	0.159	1.0%	0.024	0.068	0.082	0.161
%RSD		0.000	598.400	81.600	9.038	1.2	4.531	12.480	16.980	378.400
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.206	0.213	0.027	0.023	78.9%	0.553	0.875	1.454	1.418
2	11:17:53	0.205	0.223	0.042	0.019	80.2%	0.485	0.797	1.415	1.339
3	11:18:20	0.218	0.200	0.033	0.034	81.3%	0.416	0.687	1.279	1.248
x		0.210	0.212	0.034	0.025	80.1%	0.485	0.786	1.383	1.335
σ		0.007	0.011	0.008	0.008	1.2%	0.069	0.095	0.092	0.085
%RSD		3.502	5.393	22.870	30.740	1.5	14.130	12.030	6.671	6.370
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:26	0.239	0.181	82.9%	0.039	0.031	0.131	0.134	0.132	82.3%
2	11:17:53	0.270	0.183	84.1%	0.029	0.027	0.118	0.149	0.129	82.4%
3	11:18:20	0.239	0.216	85.5%	0.030	0.037	0.137	0.135	0.132	83.6%
x		0.249	0.194	84.2%	0.033	0.032	0.129	0.139	0.131	82.7%
σ		0.018	0.020	1.3%	0.006	0.005	0.010	0.008	0.001	0.7%
%RSD		7.209	10.270	1.6	16.820	15.250	7.849	5.759	1.093	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	81.6%	0.042	2.767	2.742	26.660	T 99920.000	TM 100300.000	TM 100100.000	TM 101300.000
2	11:23:41	81.8%	0.033	3.002	2.932	35.120	T 99530.000	T 99340.000	TM 100400.000	T 99240.000
3	11:24:08	83.3%	0.024	3.111	2.634	25.690	TM 100100.000	T 99960.000	T 99130.000	T 99540.000
x		82.2%	0.033	2.960	2.769	29.160	TM 99860.000	TM 99880.000	TM 99880.000	TM 100000.000
σ		0.9%	0.009	0.176	0.151	5.185	TM 310.200	TM 509.200	TM 672.400	TM 1121.000
%RSD		1.2	27.880	5.953	5.442	17.780	TM 0.311	TM 0.510	TM 0.673	TM 1.121
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	1.025	TM 10100.000	-39.420	T 98360.000	M 101000.000	TM 101100.000	80.6%	1.131	-0.377
2	11:23:41	1.161	T 9879.000	-37.710	T 97090.000	99620.000	T 99370.000	82.9%	0.806	-0.359
3	11:24:08	1.096	T 9867.000	-40.280	T 97410.000	99670.000	T 99760.000	83.1%	1.055	-0.319
x		1.094	TM 9948.000	-39.130	T 97620.000	M 100100.000	TM 100100.000	82.2%	0.997	-0.351
σ		0.068	TM 130.000	1.308	T 662.100	M 785.100	TM 881.200	1.4%	0.170	0.030
%RSD		6.205	TM 1.307	3.343	T 0.678	M 0.784	TM 0.881	1.7	17.070	8.462
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	1.101	243.200	TM 101100.000	0.536	TM 100900.000	TM 100500.000	0.316	0.844	3.074
2	11:23:41	1.060	236.400	T 99180.000	0.571	T 98800.000	T 99550.000	0.340	0.650	4.077
3	11:24:08	1.106	221.500	T 99550.000	0.620	T 99560.000	T 99640.000	0.309	0.784	4.248
x		1.089	233.700	TM 99930.000	0.576	TM 99750.000	TM 99910.000	0.322	0.759	3.800
σ		0.025	11.100	TM 994.800	0.042	TM 1054.000	TM 548.200	0.016	0.099	0.634
%RSD		2.312	4.751	TM 0.996	7.277	TM 1.057	TM 0.549	4.937	13.060	16.680
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	0.736	0.318	1.136	1.410	1.027	0.209	0.233	1.297	0.911
2	11:23:41	0.580	0.315	1.234	1.553	1.151	0.261	0.244	2.049	-0.193
3	11:24:08	0.661	0.337	1.139	1.136	1.178	0.156	0.407	2.174	0.275
x		0.659	0.323	1.170	1.366	1.119	0.209	0.294	1.840	0.331
σ		0.078	0.012	0.056	0.212	0.080	0.053	0.097	0.475	0.554
%RSD		11.830	3.676	4.775	15.510	7.176	25.270	33.090	25.800	167.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	0.000	0.470	-1.090	3.235	82.4%	0.307	0.286	0.325	0.128
2	11:23:41	0.000	0.709	-0.053	3.588	83.6%	0.366	0.423	0.393	0.352
3	11:24:08	0.000	0.206	-0.899	3.240	84.0%	0.335	0.352	0.338	0.227
x		0.000	0.462	-0.680	3.354	83.3%	0.336	0.353	0.352	0.236
σ		0.000	0.252	0.551	0.203	0.8%	0.029	0.068	0.036	0.112
%RSD		0.000	54.570	81.040	6.037	1.0	8.757	19.370	10.220	47.540
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	0.359	0.356	0.005	0.020	80.7%	0.217	0.413	0.555	0.568
2	11:23:41	0.342	0.314	0.008	0.013	82.7%	0.229	0.331	0.542	0.556
3	11:24:08	0.353	0.378	0.020	0.029	83.5%	0.230	0.326	0.591	0.503
x		0.352	0.349	0.011	0.021	82.3%	0.225	0.357	0.563	0.542
σ		0.009	0.032	0.008	0.008	1.4%	0.007	0.049	0.025	0.034
%RSD		2.497	9.274	73.320	37.610	1.7	3.134	13.630	4.498	6.341
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:23:14	0.518	0.478	84.1%	0.011	0.014	0.212	0.218	0.219	78.9%
2	11:23:41	0.324	0.425	85.3%	0.009	0.013	0.199	0.196	0.209	80.6%
3	11:24:08	0.449	0.423	86.3%	0.007	0.016	0.228	0.211	0.206	81.6%
x		0.430	0.442	85.2%	0.009	0.014	0.213	0.208	0.211	80.4%
σ		0.098	0.031	1.1%	0.002	0.001	0.014	0.011	0.007	1.3%
%RSD		22.840	7.119	1.3	23.590	10.080	6.662	5.236	3.240	1.7

ICV MW-9736 PREP 10/18/17 10/18/2017 11:28:39 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	87.5%	200.800	208.100	204.800	8.344	T 37880.000	T 38750.000	T 38730.000	T 38500.000
2	11:29:33	86.7%	200.200	213.000	207.800	14.080	T 38270.000	T 39080.000	T 39040.000	T 38790.000
3	11:30:00	88.1%	198.600	204.000	200.400	2.368	T 38280.000	T 38860.000	T 38580.000	T 38460.000
x		87.4%	99.938%	104.185%	102.185%	8.266	T 95.355%	T 38900.000	T 38780.000	T 96.460%
σ		0.7%	n/a	n/a	n/a	5.859	T n/a	T 168.500	T 237.300	T n/a
%RSD		0.8	0.571	2.155	1.820	70.890	T 0.588	T 0.433	T 0.612	T 0.476
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	191.900	2115.000	-57.130	T 37800.000	38790.000	T 38200.000	85.7%	200.600	193.400
2	11:29:33	192.700	2114.000	-58.880	T 37610.000	38330.000	T 38580.000	85.2%	200.400	195.300
3	11:30:00	191.100	T 1891.000	-53.450	T 37630.000	38660.000	T 38700.000	84.8%	201.000	193.700
x		95.963%	T 102.005%	-56.490	T 94.200%	38590.000	T 96.232%	85.2%	100.342%	97.071%
σ		n/a	T n/a	2.770	T n/a	238.200	T n/a	0.4%	n/a	n/a
%RSD		0.416	T 6.340	4.904	T 0.272	0.617	T 0.681	0.5	0.160	0.524
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	197.000	47010.000	T 38390.000	193.000	T 38780.000	T 38410.000	188.400	189.200	193.800
2	11:29:33	196.200	46480.000	T 38540.000	193.500	T 38920.000	T 38540.000	187.300	188.300	195.200
3	11:30:00	196.600	46360.000	T 38180.000	193.300	T 38530.000	T 38400.000	186.900	184.700	192.600
x		98.302%	46620.000	T 38370.000	96.638%	T 96.856%	T 96.125%	93.768%	93.695%	193.900
σ		n/a	348.200	T 179.600	n/a	T n/a	T n/a	n/a	n/a	1.324
%RSD		0.225	0.747	T 0.468	0.126	T 0.508	T 0.200	0.413	1.254	0.683
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	190.200	191.000	189.100	188.700	190.400	194.600	196.600	0.473	0.130
2	11:29:33	187.300	189.800	189.400	192.000	188.700	194.000	191.700	0.143	-0.623
3	11:30:00	187.700	189.400	187.500	191.200	188.400	191.800	189.200	0.673	-0.013
x		188.400	95.025%	94.318%	190.700	189.200	96.736%	192.500	0.430	-0.169
σ		1.578	n/a	n/a	1.746	1.061	n/a	3.777	0.268	0.400
%RSD		0.838	0.437	0.548	0.916	0.561	0.748	1.962	62.270	236.900
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	0.000	190.400	0.568	195.700	86.6%	202.400	204.200	201.400	202.300
2	11:29:33	0.000	199.700	0.784	192.800	87.5%	200.900	200.800	200.700	197.200
3	11:30:00	0.000	188.400	0.547	193.400	87.1%	199.600	200.800	198.500	200.100
x		0.000	96.414%	0.633	194.000	87.0%	100.482%	100.971%	100.098%	199.900
σ		0.000	n/a	0.131	1.549	0.5%	n/a	n/a	n/a	2.529
%RSD		0.000	3.111	20.740	0.798	0.5	0.694	0.962	0.742	1.265
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	185.100	178.100	194.900	192.700	86.0%	197.700	201.600	204.300	192.400
2	11:29:33	184.600	178.300	194.800	192.000	86.0%	196.200	200.300	205.400	195.000
3	11:30:00	185.100	177.300	193.400	192.100	85.5%	195.900	201.100	206.200	195.400
x		92.471%	177.900	97.188%	96.126%	85.9%	98.295%	100.502%	102.644%	97.140%
σ		n/a	0.535	n/a	n/a	0.3%	n/a	n/a	n/a	n/a
%RSD		0.181	0.301	0.436	0.194	0.4	0.476	0.321	0.463	0.837
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:29:06	196.400	194.000	88.1%	200.100	T 198.200	195.800	196.000	202.300	86.3%
2	11:29:33	195.800	196.200	88.8%	198.500	T 197.300	193.600	197.700	201.800	86.9%
3	11:30:00	193.100	194.200	89.4%	198.500	T 199.400	194.600	199.100	203.000	86.8%
x		97.555%	97.399%	88.7%	199.000	T 99.156%	194.700	197.600	101.194%	86.7%
σ		n/a	n/a	0.7%	0.935	T n/a	1.059	1.560	n/a	0.3%
%RSD		0.919	0.610	0.7	0.470	T 0.521	0.544	0.790	0.305	0.4

ICB IM8211-01 10/18/2017 11:34:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	97.9%	0.022	0.342	1.459	-5.212	36.700	0.262	0.298	0.165
2	11:35:23	99.8%	0.063	0.712	1.045	-5.990	36.390	0.356	0.410	0.400
3	11:35:50	100.6%	-0.007	0.284	1.084	-0.086	36.460	0.849	0.886	0.866
x		99.4%	0.026	0.446	1.196	-3.763	36.510	0.489	0.531	0.477
σ		1.4%	0.035	0.232	0.228	3.208	0.161	0.316	0.312	0.357
%RSD		1.4	135.300	52.040	19.100	85.260	0.441	64.560	58.760	74.850

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	0.036	1.729	-65.260	13.490	3.788	-3.311	95.0%	-0.034	-0.015
2	11:35:23	-0.001	1.202	-66.620	13.590	-0.271	-2.789	95.6%	0.057	0.006
3	11:35:50	0.026	0.967	-66.210	13.040	1.306	-3.627	95.9%	0.002	-0.009
x		0.020	1.300	-66.030	13.370	1.607	-3.243	95.5%	0.008	-0.006
σ		0.019	0.391	0.699	0.291	2.046	0.423	0.4%	0.046	0.011
%RSD		95.560	30.050	1.058	2.178	127.300	13.060	0.5	542.400	179.300

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	-0.028	-10.740	2.452	0.013	2.321	3.249	-0.002	-0.013	1.589
2	11:35:23	-0.006	-18.300	1.487	0.004	1.225	3.192	0.002	0.017	2.021
3	11:35:50	-0.013	-10.840	2.609	0.007	1.575	2.784	0.003	-0.003	1.418
x		-0.016	-13.290	2.182	0.008	1.707	3.075	0.001	0.000	1.676
σ		0.011	4.337	0.608	0.005	0.560	0.253	0.003	0.015	0.311
%RSD		71.710	32.640	27.850	58.650	32.810	8.241	334.000	5589.000	18.560

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	0.065	-0.014	-0.021	0.093	-0.049	-0.018	0.068	0.010	0.221
2	11:35:23	0.084	0.001	0.049	0.015	-0.023	-0.015	0.418	-0.033	-0.001
3	11:35:50	0.065	-0.023	-0.008	-0.012	0.061	0.059	0.186	-0.210	-0.035
x		0.071	-0.012	0.007	0.032	-0.004	0.009	0.224	-0.078	0.062
σ		0.011	0.012	0.037	0.054	0.058	0.044	0.178	0.117	0.139
%RSD		15.550	103.300	543.800	169.500	1518.000	498.300	79.540	150.000	224.000

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	0.000	-0.044	0.171	-0.077	97.2%	0.043	0.046	0.080	0.155
2	11:35:23	0.000	0.093	-1.745	0.045	97.6%	0.026	0.048	0.050	0.015
3	11:35:50	0.000	0.139	-1.078	0.060	98.7%	0.068	0.030	0.072	0.099
x		0.000	0.063	-0.884	0.009	97.9%	0.046	0.041	0.067	0.090
σ		0.000	0.095	0.972	0.075	0.8%	0.021	0.010	0.016	0.070
%RSD		0.000	151.500	110.000	817.500	0.8	45.800	24.400	23.060	78.180

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	0.010	0.007	-0.004	0.007	97.5%	-0.034	-0.017	0.291	0.282
2	11:35:23	0.011	0.011	0.004	0.003	98.5%	-0.008	-0.021	0.316	0.275
3	11:35:50	0.010	0.015	0.002	0.009	98.8%	-0.022	0.009	0.269	0.298
x		0.010	0.011	0.001	0.006	98.3%	-0.021	-0.010	0.292	0.285
σ		0.001	0.004	0.004	0.003	0.7%	0.013	0.016	0.023	0.012
%RSD		9.542	39.010	565.300	49.170	0.7	58.650	163.800	7.946	4.231

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:56	-0.003	0.009	95.6%	-0.001	0.001	0.003	-0.000	0.002	92.8%
2	11:35:23	0.023	0.021	96.8%	-0.002	0.000	0.004	0.002	0.006	94.6%
3	11:35:50	0.019	0.007	97.8%	0.003	0.005	0.005	0.004	0.005	97.0%
x		0.013	0.012	96.7%	-0.000	0.002	0.004	0.002	0.004	94.8%
σ		0.014	0.008	1.1%	0.003	0.002	0.001	0.002	0.002	2.1%
%RSD		104.900	63.490	1.1	2030.000	105.100	25.770	98.860	55.730	2.3

LLICV MW9753 10/18/2017 11:40:17 QC Status: PASS (Initial: WARNING)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	103.3%	0.384	25.670	25.300	-5.886	429.300	51.950	53.420	53.580
2	11:41:11	104.8%	0.485	23.770	24.300	-6.409	428.900	52.980	52.670	52.430
3	11:41:38	105.5%	0.396	26.200	24.830	-0.464	426.500	52.790	54.450	52.820
x		104.5%	105.414%	100.857%	99.236%	-4.253	107.062%	52.570	53.510	105.883%
σ		1.1%	n/a	n/a	n/a	3.292	n/a	0.550	0.889	n/a
%RSD		1.0	13.130	5.082	2.018	77.400	0.354	1.047	1.661	1.102
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	39.980	108.000	-74.750	211.600	409.300	382.200	100.3%	4.977	4.811
2	11:41:11	39.550	104.900	-75.620	208.600	418.800	390.200	101.1%	5.301	4.548
3	11:41:38	39.490	105.100	-74.730	209.600	416.200	382.300	101.9%	4.764	4.455
x		99.179%	105.987%	-75.030	104.964%	414.700	96.224%	101.1%	100.282%	92.092%
σ		n/a	n/a	0.506	n/a	4.908	n/a	0.8%	n/a	n/a
%RSD		0.672	1.668	0.674	0.745	1.183	1.200	0.8	5.397	4.009
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	5.015	1127.000	26.710	4.856	24.690	24.590	4.786	5.011	6.274
2	11:41:11	4.739	1126.000	24.980	4.894	24.970	22.940	4.759	5.031	5.423
3	11:41:38	4.778	1165.000	26.220	4.826	24.230	23.380	4.737	4.946	5.337
x		96.881%	1139.000	25.970	97.171%	24.630	118.174%	95.216%	99.923%	5.678
σ		n/a	21.820	0.895	n/a	0.374	n/a	n/a	n/a	0.518
%RSD		3.074	1.915	3.447	0.696	1.520	3.610	0.522	0.892	9.121
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	5.139	4.886	9.856	9.371	9.418	2.296	5.253	-0.866	-0.958
2	11:41:11	4.983	5.022	9.766	9.529	10.080	2.085	5.851	-0.628	-0.782
3	11:41:38	5.082	4.779	10.000	10.100	9.502	1.539	5.144	-0.716	-0.794
x		5.068	97.916%	98.755%	9.668	9.667	98.657%	5.416	-0.737	-0.845
σ		0.079	n/a	n/a	0.385	0.362	n/a	0.381	0.121	0.098
%RSD		1.553	2.494	1.217	3.981	3.741	19.780	7.033	16.350	11.650
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	0.000	4.916	1.222	9.866	102.9%	9.975	9.741	9.918	0.258
2	11:41:11	0.000	4.596	1.697	9.574	102.3%	9.704	9.978	9.714	0.269
3	11:41:38	0.000	4.232	-1.298	9.750	104.0%	9.703	9.935	9.726	1.007
x		0.000	91.627%	0.540	9.730	103.1%	9.794	98.850%	9.786	0.511
σ		0.000	n/a	1.610	0.147	0.9%	0.157	n/a	0.114	0.429
%RSD		0.000	7.464	298.100	1.514	0.9	1.600	1.277	1.167	83.930
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	1.036	0.989	0.097	0.082	101.7%	3.517	5.189	2.074	1.934
2	11:41:11	0.983	0.985	0.096	0.080	103.5%	3.599	5.259	2.063	1.914
3	11:41:38	1.012	0.987	0.053	0.107	104.3%	3.466	5.169	2.047	1.988
x		101.026%	0.987	0.082	89.628%	103.2%	3.527	104.118%	2.061	97.258%
σ		n/a	0.002	0.025	n/a	1.3%	0.068	n/a	0.013	n/a
%RSD		2.657	0.214	30.300	16.950	1.3	1.914	0.905	0.639	1.964
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:44	4.738	4.931	99.8%	0.507	0.493	0.945	0.990	0.988	96.5%
2	11:41:11	4.803	4.802	101.3%	0.478	0.484	0.914	0.987	0.971	99.6%
3	11:41:38	4.997	4.813	101.5%	0.485	0.509	0.931	0.967	0.970	98.7%
x		96.915%	4.848	100.9%	0.490	98.983%	0.930	0.981	97.633%	98.3%
σ		n/a	0.072	0.9%	0.015	n/a	0.016	0.012	n/a	1.6%
%RSD		2.782	1.475	0.9	3.160	2.552	1.668	1.241	1.027	1.6

LLICV2 MW9754 10/18/2017 11:46:10

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	102.7%	1.952	129.000	124.700	-5.644	T 1908.000	259.700	260.500	258.700
2	11:47:04	102.2%	2.255	124.200	125.100	-5.141	T 1963.000	259.800	260.600	260.800
3	11:47:31	102.5%	2.101	130.700	125.100	-3.066	T 1980.000	258.600	261.100	259.800
x		102.5%	2.103	128.000	125.000	-4.617	T 1951.000	259.400	260.700	259.800
σ		0.2%	0.152	3.397	0.261	1.366	T 37.540	0.661	0.290	1.059
%RSD		0.2	7.221	2.654	0.209	29.600	T 1.925	0.255	0.111	0.407
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	196.700	528.600	-77.930	1024.000	1984.000	1951.000	99.5%	24.940	24.180
2	11:47:04	199.600	523.800	-70.320	1040.000	1886.000	1978.000	98.5%	24.790	23.580
3	11:47:31	197.700	524.800	-72.930	1039.000	1974.000	1977.000	97.8%	24.270	23.360
x		198.000	525.700	-73.720	1034.000	1948.000	1969.000	98.6%	24.670	23.710
σ		1.445	2.499	3.867	9.172	54.060	15.460	0.9%	0.352	0.423
%RSD		0.730	0.475	5.245	0.887	2.775	0.786	0.9	1.427	1.785
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	24.550	5845.000	115.900	24.280	108.300	105.800	23.970	24.870	25.870
2	11:47:04	24.560	6067.000	117.900	24.470	109.500	110.500	24.450	24.410	26.930
3	11:47:31	24.530	6237.000	117.700	24.570	109.000	105.800	24.030	24.670	25.730
x		24.550	6050.000	117.200	24.440	108.900	107.400	24.150	24.650	26.180
σ		0.017	196.600	1.096	0.147	0.596	2.706	0.264	0.233	0.657
%RSD		0.070	3.249	0.935	0.602	0.547	2.520	1.092	0.944	2.508
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	25.230	25.140	48.340	47.340	48.730	11.160	25.940	-0.573	-0.579
2	11:47:04	25.480	26.020	48.190	48.210	48.370	9.844	24.810	-0.894	-1.144
3	11:47:31	25.330	25.460	48.980	50.840	48.160	9.780	24.190	-0.490	-0.550
x		25.350	25.540	48.500	48.800	48.420	10.260	24.980	-0.652	-0.758
σ		0.126	0.446	0.418	1.825	0.289	0.778	0.891	0.213	0.335
%RSD		0.497	1.745	0.862	3.739	0.597	7.585	3.566	32.690	44.210
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	0.000	26.540	0.868	48.820	101.1%	50.230	51.220	50.110	1.851
2	11:47:04	0.000	24.910	-0.953	48.530	101.2%	50.020	51.200	49.840	1.482
3	11:47:31	0.000	23.630	0.467	48.810	100.3%	50.200	50.880	50.760	1.154
x		0.000	25.030	0.127	48.720	100.9%	50.150	51.100	50.240	1.496
σ		0.000	1.458	0.957	0.164	0.5%	0.112	0.192	0.472	0.349
%RSD		0.000	5.824	751.600	0.336	0.5	0.224	0.375	0.939	23.300
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	5.157	4.935	0.376	0.444	101.3%	16.770	24.560	9.787	9.324
2	11:47:04	5.171	5.017	0.392	0.471	101.2%	16.860	24.790	9.828	9.458
3	11:47:31	5.074	4.899	0.370	0.356	101.9%	16.750	24.970	9.924	9.548
x		5.134	4.950	0.379	0.424	101.4%	16.790	24.770	9.846	9.444
σ		0.052	0.060	0.011	0.061	0.4%	0.060	0.206	0.071	0.113
%RSD		1.014	1.219	2.955	14.290	0.4	0.359	0.832	0.718	1.194
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:37	24.170	24.560	98.8%	2.454	2.480	4.760	4.954	4.855	97.6%
2	11:47:04	24.760	24.240	98.5%	2.466	2.445	4.779	5.012	4.899	98.3%
3	11:47:31	25.100	24.120	100.2%	2.454	2.453	4.795	4.919	4.857	98.3%
x		24.680	24.310	99.1%	2.458	2.459	4.778	4.962	4.870	98.1%
σ		0.470	0.232	0.9%	0.007	0.018	0.018	0.047	0.025	0.4%
%RSD		1.906	0.954	0.9	0.284	0.739	0.367	0.948	0.505	0.4

Co 4 ppb MW9592 10/18/2017 11:52:02

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	104.1%	-0.015	1.061	1.412	12.100	20.100	1.460	1.871	1.242
2	11:52:55	104.4%	0.045	2.265	1.749	6.807	20.200	1.412	1.798	1.498
3	11:53:21	105.5%	0.011	0.897	1.746	7.775	18.390	1.601	1.824	1.367
x		104.7%	0.014	1.408	1.636	8.894	19.570	1.491	1.831	1.369
σ		0.7%	0.030	0.747	0.194	2.818	1.020	0.098	0.037	0.128
%RSD		0.7	215.200	53.100	11.850	31.680	5.212	6.591	2.021	9.344
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	0.837	2.880	-68.190	7.194	5.526	-0.715	100.6%	0.051	-0.027
2	11:52:55	0.813	3.358	-74.960	5.790	0.176	-2.022	101.3%	-0.001	-0.061
3	11:53:21	0.802	2.936	-69.800	4.574	0.852	-1.541	102.4%	-0.018	-0.042
x		0.817	3.058	-70.980	5.852	2.184	-1.426	101.4%	0.011	-0.043
σ		0.018	0.261	3.538	1.311	2.914	0.661	0.9%	0.036	0.017
%RSD		2.195	8.550	4.984	22.400	133.400	46.360	0.9	333.700	38.840
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	0.098	0.535	2.085	0.030	7.207	1.214	3.976	-0.010	0.261
2	11:52:55	0.072	14.630	1.550	0.041	6.818	0.288	3.937	0.004	0.289
3	11:53:21	0.057	14.220	1.465	0.034	5.845	0.954	3.931	0.017	0.322
x		0.076	9.795	1.700	0.035	6.623	0.819	3.948	0.004	0.291
σ		0.021	8.022	0.336	0.006	0.702	0.478	0.024	0.013	0.031
%RSD		27.990	81.900	19.770	16.740	10.590	58.330	0.610	346.200	10.490
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	0.002	-0.005	0.300	0.244	0.248	-0.059	0.056	-0.742	-0.931
2	11:52:55	0.033	0.010	0.293	0.436	0.137	-0.176	0.124	-0.675	-0.110
3	11:53:21	0.007	0.019	0.342	0.168	0.304	-0.057	0.516	-1.356	-0.999
x		0.014	0.008	0.312	0.282	0.230	-0.097	0.232	-0.924	-0.680
σ		0.016	0.012	0.027	0.138	0.085	0.068	0.248	0.375	0.495
%RSD		117.500	147.900	8.544	48.950	37.090	70.240	107.100	40.570	72.770
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	0.000	-0.280	-0.410	0.024	104.2%	-0.031	0.073	0.007	0.361
2	11:52:55	0.000	-0.377	-0.158	0.009	103.4%	-0.035	-0.001	0.009	0.230
3	11:53:21	0.000	-0.204	-1.095	0.008	104.5%	0.020	0.009	-0.021	0.311
x		0.000	-0.287	-0.554	0.014	104.1%	-0.015	0.027	-0.002	0.300
σ		0.000	0.087	0.485	0.009	0.6%	0.030	0.040	0.017	0.066
%RSD		0.000	30.190	87.520	64.190	0.5	196.800	147.400	1034.000	22.010
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	-0.004	-0.007	0.002	0.003	102.4%	-0.024	-0.027	-0.089	-0.030
2	11:52:55	-0.005	-0.006	-0.003	0.002	103.8%	-0.036	-0.018	-0.061	-0.053
3	11:53:21	-0.008	-0.005	-0.001	0.005	104.3%	-0.047	-0.005	-0.070	-0.042
x		-0.006	-0.006	-0.001	0.003	103.5%	-0.036	-0.017	-0.073	-0.042
σ		0.002	0.001	0.002	0.002	1.0%	0.011	0.011	0.014	0.011
%RSD		35.230	15.870	269.800	55.290	1.0	31.390	66.960	19.610	27.350
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:28	-0.008	0.028	99.4%	-0.002	-0.004	0.007	0.011	0.007	95.8%
2	11:52:55	-0.004	0.017	101.8%	-0.002	-0.003	0.004	0.007	0.005	98.6%
3	11:53:21	-0.001	0.013	102.0%	-0.005	-0.002	0.007	0.002	0.004	99.3%
x		-0.004	0.019	101.1%	-0.003	-0.003	0.006	0.007	0.006	97.9%
σ		0.003	0.008	1.5%	0.002	0.001	0.002	0.005	0.002	1.8%
%RSD		75.010	39.610	1.5	55.910	27.640	31.510	72.360	29.710	1.9

ICSA MW9686 10/18/2017 11:57:53 QC Status: PASS (Initial: WARNING)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	80.2%	0.114	4.522	4.947	782.600	TM 100300.000	T 99680.000	T 99060.000	T 99100.000
2	11:58:46	81.2%	0.051	5.036	5.319	808.700	TM 102400.000	T 99420.000	T 99410.000	T 98810.000
3	11:59:13	82.6%	0.058	4.063	4.438	817.900	TM 103600.000	TM 100500.000	T 99760.000	T 99260.000
x		81.3%	1.#IO%	4.540	1.#IO%	803.000	TM 102.121%	TM 99860.000	T 99410.000	T 99.054%
σ		1.2%	n/a	0.487	n/a	18.290	TM n/a	TM 559.500	T 350.100	T n/a
%RSD		1.5	45.870	10.720	9.024	2.278	TM 1.625	TM 0.560	T 0.352	T 0.228
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	TM 93690.000	36.760	T 23090.000	T 97990.000	M 100400.000	TM 100400.000	73.5%	M 2229.000	-0.396
2	11:58:46	TM 93190.000	38.200	T 23110.000	T 98050.000	M 101100.000	TM 100900.000	75.2%	M 2241.000	-0.213
3	11:59:13	TM 94160.000	37.170	T 23310.000	T 99090.000	M 101300.000	TM 100500.000	76.2%	M 2239.000	-0.421
x		TM 93.679%	1.#IO%	T 23170.000	T 98.377%	M 101000.000	TM 100.611%	75.0%	M 111.828%	-1.#IO%
σ		TM n/a	n/a	T 122.100	T n/a	M 461.500	TM n/a	1.4%	M n/a	n/a
%RSD		TM 0.521	1.987	T 0.527	T 0.627	M 0.457	TM 0.263	1.8	M 0.280	33.020
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	1.264	1001.000	T 98210.000	0.652	T 98920.000	T 99130.000	-0.076	0.784	9.181
2	11:58:46	1.130	1010.000	T 97930.000	0.697	T 98710.000	T 98460.000	-0.034	0.795	11.090
3	11:59:13	1.274	1208.000	T 98500.000	0.674	T 98330.000	T 97850.000	-0.031	0.754	14.190
x		1.#IO%	1073.000	T 98210.000	1.#IO%	T 98650.000	T 98.480%	-1.#IO%	1.#IO%	11.490
σ		n/a	116.500	T 286.800	n/a	T 296.500	T n/a	n/a	n/a	2.531
%RSD		6.563	10.860	T 0.292	3.326	T 0.300	T 0.651	53.130	2.719	22.030
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	-0.516	-0.010	3.223	3.486	2.236	-0.010	0.448	3.283	2.102
2	11:58:46	-0.432	0.232	3.154	3.185	2.324	0.186	0.809	4.391	1.175
3	11:59:13	-0.161	-0.083	3.255	2.914	2.274	-0.150	1.538	4.363	2.035
x		-1.#IO%	1.#IO%	1.#IO%	3.195	2.278	1.#IO%	0.932	4.013	1.771
σ		n/a	n/a	n/a	0.286	0.044	n/a	0.555	0.632	0.517
%RSD		50.180	357.000	1.612	8.943	1.947	1943.000	59.620	15.740	29.180
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	0.000	0.216	32.860	0.162	75.1%	TM 2220.000	M 2168.000	TM 2006.000	-0.265
2	11:58:46	0.000	-0.057	32.810	0.385	76.3%	TM 2233.000	M 2172.000	TM 2006.000	0.524
3	11:59:13	0.000	-0.199	25.680	0.531	77.5%	TM 2216.000	M 2164.000	TM 2004.000	1.091
x		0.000	-1.#IO%	30.450	0.359	76.3%	TM 2223.000	M 108.406%	TM 2005.000	0.450
σ		0.000	n/a	4.131	0.186	1.2%	TM 8.569	M n/a	TM 0.938	0.681
%RSD		0.000	1585.000	13.570	51.800	1.6	TM 0.386	M 0.186	TM 0.047	151.500
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	0.206	0.179	-4.872	-0.085	77.9%	0.383	0.008	-0.026	0.005
2	11:58:46	0.210	0.184	-4.952	-0.106	80.1%	0.425	-0.005	-0.012	-0.031
3	11:59:13	0.198	0.227	-4.805	-0.089	81.0%	0.427	-0.027	-0.027	0.009
x		1.#IO%	0.197	-4.876	-1.#IO%	79.7%	1.#IO%	-1.#IO%	-0.022	-1.#IO%
σ		n/a	0.027	0.074	n/a	1.6%	n/a	n/a	0.008	n/a
%RSD		3.127	13.470	1.512	11.630	2.0	6.130	212.100	38.490	397.100
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:58:19	0.929	0.950	81.7%	0.000	0.003	0.203	0.203	0.202	81.1%
2	11:58:46	0.852	0.941	83.5%	0.000	0.002	0.230	0.190	0.223	83.0%
3	11:59:13	0.950	0.964	85.1%	0.003	-0.000	0.223	0.181	0.209	84.3%
x		0.911	1.#IO%	83.4%	0.001	1.#IO%	0.219	0.191	1.#IO%	82.8%
σ		0.051	n/a	1.7%	0.002	n/a	0.014	0.011	n/a	1.6%
%RSD		5.649	1.196	2.0	157.300	101.000	6.516	5.733	4.988	1.9

ICSAB MW9594 10/18/2017 12:03:44

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	87.0%	98.850	107.400	108.900	829.400	TM 104800.000	TM 102200.000	TM 101900.000	TM 101800.000
2	12:04:38	88.9%	97.100	109.500	108.600	800.000	TM 104800.000	TM 101000.000	TM 100600.000	TM 100600.000
3	12:05:05	89.8%	97.730	108.900	108.500	817.100	TM 105600.000	TM 101100.000	TM 100700.000	TM 101200.000
x		88.6%	97.890	108.600	108.700	815.500	TM 105000.000	TM 101400.000	TM 101100.000	TM 101200.000
σ		1.4%	0.891	1.070	0.168	14.770	TM 469.900	TM 640.500	TM 718.300	TM 578.400
%RSD		1.6	0.910	0.985	0.154	1.811	TM 0.447	TM 0.632	TM 0.711	TM 0.571
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	TM 96070.000	46.490	T 37760.000	T 99830.000	M 103100.000	TM 101900.000	80.5%	M 2316.000	98.100
2	12:04:38	TM 95100.000	45.180	T 37810.000	TM 100300.000	M 102800.000	TM 102600.000	81.0%	M 2300.000	97.370
3	12:05:05	TM 95610.000	45.750	T 37820.000	TM 100700.000	M 104900.000	TM 103400.000	80.7%	M 2300.000	100.400
x		TM 95590.000	45.810	T 37790.000	TM 100300.000	M 103600.000	TM 102600.000	80.7%	M 2305.000	98.640
σ		TM 484.700	0.658	T 32.440	TM 455.000	M 1147.000	TM 757.600	0.2%	M 9.197	1.604
%RSD		TM 0.507	1.436	T 0.086	TM 0.454	M 1.107	TM 0.738	0.3	M 0.399	1.626
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	102.800	26600.000	TM 100800.000	102.800	TM 101100.000	TM 101100.000	92.920	92.370	118.600
2	12:04:38	103.000	27130.000	TM 100300.000	102.800	T 100000.000	TM 100000.000	90.600	91.020	115.500
3	12:05:05	102.200	26930.000	TM 100400.000	102.400	T 99900.000	TM 100100.000	91.140	91.250	120.000
x		102.600	26880.000	TM 100500.000	102.700	TM 100300.000	TM 100400.000	91.550	91.540	118.000
σ		0.436	267.700	TM 265.200	0.263	TM 685.000	TM 622.600	1.215	0.725	2.252
%RSD		0.424	0.996	TM 0.264	0.256	TM 0.683	TM 0.620	1.327	0.792	1.908
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	92.370	92.340	96.840	98.790	96.610	104.100	100.700	13.830	10.380
2	12:04:38	90.570	89.750	96.950	98.260	95.630	100.900	97.920	15.430	8.066
3	12:05:05	90.440	91.060	97.010	97.540	95.070	102.100	97.860	13.960	8.070
x		91.120	91.050	96.930	98.200	95.770	102.400	98.810	14.410	8.837
σ		1.077	1.291	0.084	0.629	0.779	1.645	1.598	0.888	1.333
%RSD		1.182	1.417	0.086	0.641	0.814	1.607	1.618	6.160	15.080
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	0.000	97.180	29.340	0.297	82.0%	TM 2282.000	M 2239.000	TM 2060.000	100.900
2	12:04:38	0.000	99.430	31.510	0.296	82.2%	TM 2261.000	M 2232.000	TM 2053.000	91.580
3	12:05:05	0.000	99.430	26.840	0.423	81.9%	TM 2240.000	M 2222.000	TM 2043.000	97.950
x		0.000	98.680	29.230	0.339	82.0%	TM 2261.000	M 2231.000	TM 2052.000	96.790
σ		0.000	1.300	2.334	0.073	0.1%	TM 20.760	M 8.359	TM 8.189	4.744
%RSD		0.000	1.317	7.986	21.500	0.2	TM 0.918	M 0.375	TM 0.399	4.901
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	79.040	76.550	92.970	95.080	84.5%	100.100	103.000	108.000	103.900
2	12:04:38	78.000	75.750	91.830	94.130	85.5%	100.700	104.200	108.600	103.400
3	12:05:05	78.060	75.610	91.830	94.720	85.7%	100.100	102.500	108.700	103.900
x		78.360	75.970	92.210	94.640	85.3%	100.300	103.200	108.400	103.800
σ		0.581	0.506	0.659	0.478	0.7%	0.346	0.859	0.401	0.305
%RSD		0.742	0.666	0.714	0.505	0.8	0.345	0.832	0.370	0.294
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:11	104.300	103.500	88.0%	99.010	101.900	96.150	98.630	99.260	87.8%
2	12:04:38	104.200	103.200	89.0%	99.040	102.700	97.250	99.270	100.300	88.8%
3	12:05:05	105.500	104.300	89.3%	99.950	102.700	97.730	98.980	100.200	89.5%
x		104.600	103.600	88.8%	99.330	102.400	97.040	98.960	99.910	88.7%
σ		0.711	0.557	0.7%	0.535	0.510	0.811	0.323	0.571	0.9%
%RSD		0.679	0.537	0.7	0.539	0.498	0.835	0.326	0.571	1.0

CCV MW9737 10/18/2017 12:09:35 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	87.0%	298.800	294.800	299.000	30.190	T 59840.000	T 57930.000	T 57630.000	T 57500.000
2	12:10:30	85.9%	301.700	302.100	302.200	30.120	T 60590.000	T 58010.000	T 58210.000	T 57740.000
3	12:10:56	86.8%	296.700	300.000	304.300	21.480	T 60110.000	T 57990.000	T 57960.000	T 57590.000
x		86.6%	99.698%	99.651%	100.609%	27.260	T 100.301%	T 57980.000	T 57930.000	T 96.013%
σ		0.6%	n/a	n/a	n/a	5.007	T n/a	T 39.260	T 291.100	T n/a
%RSD		0.7	0.836	1.269	0.870	18.360	T 0.636	T 0.068	T 0.503	T 0.213

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	291.400	T 2891.000	195.600	T 56900.000	58510.000	T 57630.000	83.2%	296.900	292.200
2	12:10:30	296.100	T 2905.000	193.200	T 57310.000	59340.000	T 58600.000	81.3%	302.400	293.300
3	12:10:56	299.700	T 2881.000	191.000	T 57630.000	59280.000	T 58560.000	80.3%	300.200	296.400
x		98.577%	T 96.416%	193.300	T 95.465%	59040.000	T 97.100%	81.6%	99.944%	97.985%
σ		n/a	T n/a	2.296	T n/a	460.000	T n/a	1.5%	n/a	n/a
%RSD		1.398	T 0.424	1.188	T 0.643	0.779	T 0.944	1.8	0.916	0.732

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	293.000	68360.000	T 56930.000	296.100	T 57400.000	T 57040.000	274.200	271.900	291.000
2	12:10:30	293.300	69040.000	T 57520.000	296.300	T 57110.000	T 57340.000	275.600	273.800	288.400
3	12:10:56	297.000	69200.000	T 57670.000	297.400	T 57840.000	T 57480.000	273.300	273.500	293.600
x		98.154%	68860.000	T 57370.000	98.869%	T 57450.000	T 95.482%	91.452%	91.024%	291.000
σ		n/a	447.600	T 388.900	n/a	T 369.800	T n/a	n/a	n/a	2.601
%RSD		0.755	0.650	T 0.678	0.229	T 0.644	T 0.390	0.427	0.375	0.894

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	269.700	271.500	275.900	282.500	277.000	291.800	281.600	4.594	0.319
2	12:10:30	267.100	272.700	275.500	279.700	278.100	290.000	285.700	4.887	-0.119
3	12:10:56	265.200	269.300	275.700	279.200	278.500	289.900	282.100	4.086	-0.028
x		267.300	90.391%	91.906%	280.500	277.900	96.851%	283.100	4.522	0.057
σ		2.238	n/a	n/a	1.762	0.794	n/a	2.234	0.406	0.231
%RSD		0.837	0.641	0.080	0.628	0.286	0.380	0.789	8.970	403.900

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	0.000	278.700	1.193	296.900	85.5%	303.300	302.700	301.200	291.300
2	12:10:30	0.000	285.400	-2.019	296.800	84.9%	301.200	304.000	298.800	284.700
3	12:10:56	0.000	283.200	-0.624	293.600	84.4%	299.400	303.300	301.700	296.700
x		0.000	94.143%	-0.484	98.598%	85.0%	100.428%	101.112%	300.600	290.900
σ		0.000	n/a	1.611	n/a	0.6%	n/a	n/a	1.567	6.005
%RSD		0.000	1.205	333.200	0.633	0.7	0.655	0.224	0.521	2.064

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	283.200	275.100	288.600	285.500	86.1%	293.100	300.600	310.300	293.800
2	12:10:30	282.100	270.500	285.700	285.700	85.7%	295.600	302.500	314.000	297.500
3	12:10:56	278.300	270.900	285.000	282.700	85.6%	293.200	297.500	313.400	295.700
x		93.733%	272.200	286.400	94.876%	85.8%	97.999%	100.072%	104.205%	98.544%
σ		n/a	2.520	1.902	n/a	0.3%	n/a	n/a	n/a	n/a
%RSD		0.927	0.926	0.664	0.587	0.3	0.480	0.845	0.636	0.626

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:03	295.600	295.000	89.9%	300.900	T 287.100	293.700	296.700	T 293.000	88.0%
2	12:10:30	296.400	297.200	89.5%	303.200	T 291.900	297.200	298.600	T 296.100	87.7%
3	12:10:56	297.400	292.400	90.3%	304.100	T 292.300	298.400	302.200	T 297.100	86.9%
x		98.825%	98.287%	89.9%	100.912%	T 96.800%	98.805%	99.720%	T 98.465%	87.5%
σ		n/a	n/a	0.4%	n/a	T n/a	n/a	n/a	T n/a	0.5%
%RSD		0.306	0.820	0.4	0.550	T 0.996	0.833	0.927	T 0.725	0.6

CCB IM8211-01 10/18/2017 12:15:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	97.8%	0.030	3.762	3.145	-2.132	31.630	1.555	1.388	1.744
2	12:16:19	98.8%	0.043	2.693	3.044	1.906	30.490	2.205	2.283	2.259
3	12:16:46	99.9%	0.049	2.123	2.453	-7.551	32.200	4.515	4.319	4.466
x		98.8%	0.041	2.859	2.881	-2.592	31.440	2.759	2.663	2.823
σ		1.0%	0.010	0.832	0.374	4.745	0.868	1.556	1.502	1.446
%RSD		1.1	24.840	29.090	12.980	183.000	2.762	56.390	56.400	51.210

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	0.768	0.461	29.850	23.400	0.052	-2.083	90.2%	0.006	-0.015
2	12:16:19	1.077	0.295	34.440	23.360	0.840	-4.072	91.0%	0.081	-0.036
3	12:16:46	2.348	-0.126	35.740	23.830	1.687	-1.231	90.8%	0.120	0.028
x		1.397	0.210	33.350	23.530	0.860	-2.462	90.7%	0.069	-0.008
σ		0.838	0.303	3.092	0.258	0.818	1.458	0.4%	0.058	0.033
%RSD		59.950	144.300	9.272	1.096	95.130	59.230	0.4	84.340	420.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	-0.017	-2.327	3.632	0.034	3.366	2.926	0.003	0.015	2.809
2	12:16:19	-0.015	5.402	4.540	0.028	3.369	5.536	0.010	0.030	2.037
3	12:16:46	-0.003	-15.550	6.617	0.042	4.951	6.045	0.004	0.004	2.779
x		-0.012	-4.160	4.930	0.035	3.896	4.836	0.006	0.016	2.542
σ		0.008	10.600	1.530	0.007	0.914	1.673	0.003	0.013	0.437
%RSD		64.510	254.700	31.040	19.900	23.470	34.600	60.050	79.000	17.210

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	0.092	0.000	0.046	0.158	-0.012	-0.024	0.360	0.106	-0.022
2	12:16:19	0.082	-0.043	0.032	-0.003	-0.024	0.080	0.461	-0.254	-1.042
3	12:16:46	0.090	0.057	0.057	-0.056	-0.041	0.060	-0.155	0.059	-0.070
x		0.088	0.005	0.045	0.033	-0.026	0.039	0.222	-0.030	-0.378
σ		0.005	0.050	0.012	0.111	0.015	0.055	0.330	0.196	0.575
%RSD		5.895	1008.000	27.370	339.100	57.190	142.700	148.600	655.100	152.300

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	0.000	-0.146	-0.138	0.023	94.4%	0.326	0.375	0.396	0.344
2	12:16:19	0.000	0.254	-0.399	0.006	94.6%	0.327	0.322	0.380	0.494
3	12:16:46	0.000	0.154	-0.165	0.038	94.9%	0.363	0.316	0.331	0.453
x		0.000	0.087	-0.234	0.022	94.6%	0.339	0.338	0.369	0.430
σ		0.000	0.208	0.143	0.016	0.2%	0.021	0.032	0.034	0.078
%RSD		0.000	238.000	61.270	69.350	0.2	6.164	9.595	9.151	18.050

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	0.014	0.020	0.006	0.011	96.3%	-0.002	0.074	0.540	0.591
2	12:16:19	0.018	0.019	0.001	0.010	96.9%	0.056	0.032	0.579	0.554
3	12:16:46	0.030	0.025	0.006	0.003	97.4%	0.023	0.033	0.524	0.515
x		0.021	0.021	0.004	0.008	96.9%	0.026	0.046	0.548	0.553
σ		0.008	0.003	0.003	0.005	0.6%	0.029	0.024	0.029	0.038
%RSD		39.700	15.590	72.250	58.570	0.6	113.900	51.580	5.224	6.820

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:52	-0.006	0.018	96.3%	0.015	0.015	0.009	0.001	0.006	93.5%
2	12:16:19	0.024	0.005	97.5%	0.013	0.020	0.002	0.013	0.008	95.4%
3	12:16:46	-0.007	0.021	97.3%	0.020	0.026	0.011	0.017	0.012	96.4%
x		0.004	0.015	97.0%	0.016	0.020	0.007	0.010	0.009	95.1%
σ		0.017	0.009	0.7%	0.004	0.005	0.005	0.008	0.003	1.5%
%RSD		489.500	59.390	0.7	25.050	27.450	63.710	79.850	34.810	1.5

SQ54055-001 10/18/2017 12:21:13 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	101.1%	0.014	1.003	0.895	35.300	19.490	4.249	4.467	4.088
2	12:22:07	102.1%	0.006	0.570	0.981	19.900	17.610	4.768	4.937	5.454
3	12:22:34	102.7%	0.027	0.406	1.079	27.700	20.720	9.263	9.605	9.371
x		102.0%	0.016	0.660	0.985	27.630	19.270	6.093	6.336	6.304
σ		0.8%	0.010	0.308	0.092	7.697	1.568	2.757	2.840	2.742
%RSD		0.8	66.040	46.720	9.323	27.850	8.134	45.240	44.820	43.500

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	3.628	6.833	T 46270.000	38.120	26.130	27.460	92.9%	0.172	0.117
2	12:22:07	4.111	6.368	T 46580.000	37.960	29.350	29.900	93.0%	0.209	0.112
3	12:22:34	6.860	6.604	T 47030.000	41.290	34.920	33.610	93.4%	0.134	0.231
x		4.866	6.602	T 46630.000	39.130	30.130	30.320	93.1%	0.171	0.154
σ		1.743	0.233	T 378.100	1.880	4.448	3.101	0.2%	0.038	0.067
%RSD		35.820	3.524	T 0.811	4.805	14.760	10.230	0.3	21.910	43.780

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	0.142	1972.000	9.048	0.079	8.299	7.748	0.005	0.104	1.326
2	12:22:07	0.119	1932.000	8.348	0.083	8.259	8.037	0.006	0.083	0.623
3	12:22:34	0.172	1816.000	12.380	0.073	11.210	11.980	0.013	0.068	0.591
x		0.144	1906.000	9.925	0.078	9.254	9.256	0.008	0.085	0.847
σ		0.027	81.260	2.154	0.005	1.690	2.366	0.004	0.018	0.416
%RSD		18.500	4.262	21.700	6.247	18.260	25.560	56.750	21.100	49.080

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	0.218	0.143	1.027	1.007	0.964	0.097	0.244	3.165	3.235
2	12:22:07	0.240	0.228	1.135	1.081	1.004	-0.002	-0.343	3.606	2.966
3	12:22:34	0.174	0.211	1.257	1.186	1.154	0.091	-0.036	3.195	3.655
x		0.210	0.194	1.140	1.091	1.041	0.062	-0.045	3.322	3.286
σ		0.034	0.045	0.115	0.090	0.100	0.056	0.294	0.247	0.347
%RSD		16.020	23.140	10.080	8.249	9.650	90.150	655.700	7.420	10.570

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	0.000	0.270	-1.449	0.006	96.3%	0.162	0.105	0.140	0.017
2	12:22:07	0.000	-0.174	1.164	0.022	96.8%	0.156	0.157	0.186	0.478
3	12:22:34	0.000	0.018	-0.006	0.062	96.2%	0.198	0.250	0.231	0.426
x		0.000	0.038	-0.097	0.030	96.4%	0.172	0.171	0.186	0.307
σ		0.000	0.223	1.309	0.029	0.3%	0.023	0.074	0.046	0.252
%RSD		0.000	589.700	1351.000	97.840	0.3	13.340	43.140	24.530	82.110

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	0.012	0.012	0.050	0.061	98.3%	0.265	0.025	0.068	0.111
2	12:22:07	0.020	0.018	0.065	0.049	99.4%	0.018	0.030	0.081	0.113
3	12:22:34	0.025	0.037	0.058	0.072	98.9%	0.019	0.027	0.099	0.101
x		0.019	0.022	0.058	0.061	98.8%	0.100	0.027	0.083	0.108
σ		0.007	0.013	0.007	0.011	0.6%	0.143	0.002	0.016	0.007
%RSD		36.480	59.890	12.690	18.690	0.6	142.000	7.516	18.920	6.012

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:40	0.001	0.017	97.5%	0.014	0.013	0.014	0.018	0.018	96.5%
2	12:22:07	0.011	0.048	98.2%	0.008	0.011	0.022	0.021	0.018	97.4%
3	12:22:34	0.052	0.029	99.3%	0.019	0.018	0.023	0.024	0.023	98.0%
x		0.021	0.031	98.3%	0.014	0.014	0.020	0.021	0.020	97.3%
σ		0.027	0.015	0.9%	0.006	0.003	0.005	0.003	0.003	0.8%
%RSD		126.400	49.230	0.9	40.570	23.150	25.320	12.730	13.280	0.8

SQ54055-002 10/18/2017 12:27:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	100.8%	104.900	106.400	104.800	29.240	T 1073.000	T 1043.000	1086.000	1101.000
2	12:27:57	99.3%	105.400	104.900	105.000	30.200	T 1095.000	T 1049.000	1100.000	1101.000
3	12:28:24	99.3%	104.600	107.300	106.200	27.280	T 1117.000	T 1061.000	1111.000	1106.000
x		99.8%	105.000	106.200	105.300	28.910	T 1095.000	T 1051.000	1099.000	1103.000
σ		0.9%	0.411	1.242	0.765	1.490	T 22.150	T 8.831	12.480	3.087
%RSD		0.9	0.391	1.170	0.726	5.155	T 2.023	T 0.840	1.135	0.280
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	106.300	1048.000	T 47390.000	1123.000	1107.000	1089.000	90.5%	108.300	100.000
2	12:27:57	106.200	1046.000	T 47620.000	1122.000	1106.000	1085.000	90.3%	105.900	98.820
3	12:28:24	109.800	1040.000	T 47970.000	1129.000	1097.000	1085.000	88.8%	105.700	100.700
x		107.500	1044.000	T 47660.000	1125.000	1103.000	1086.000	89.9%	106.600	99.850
σ		2.056	4.319	T 290.600	3.737	5.206	2.553	0.9%	1.443	0.952
%RSD		1.913	0.414	T 0.610	0.332	0.472	0.235	1.0	1.353	0.953
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	106.100	28580.000	1190.000	104.300	T 1076.000	1149.000	102.700	102.600	105.300
2	12:27:57	105.300	28700.000	1179.000	104.800	T 1072.000	1130.000	101.300	102.400	101.800
3	12:28:24	104.200	28650.000	1187.000	104.100	T 1084.000	1129.000	101.200	101.600	104.700
x		105.200	28640.000	1185.000	104.400	T 1077.000	1136.000	101.700	102.200	103.900
σ		0.968	62.670	6.100	0.353	T 5.991	10.960	0.875	0.530	1.899
%RSD		0.920	0.219	0.515	0.338	T 0.556	0.965	0.860	0.519	1.827
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	105.100	106.100	103.700	104.400	104.200	103.900	105.100	2.420	3.345
2	12:27:57	105.000	107.600	103.800	102.400	102.000	102.400	105.000	3.170	2.775
3	12:28:24	104.500	107.400	103.300	104.300	103.300	103.100	106.300	2.417	2.404
x		104.800	107.000	103.600	103.700	103.200	103.100	105.500	2.669	2.841
σ		0.325	0.824	0.234	1.132	1.126	0.735	0.699	0.434	0.474
%RSD		0.310	0.770	0.226	1.092	1.091	0.712	0.663	16.260	16.670
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	0.000	106.300	-1.351	102.900	93.9%	102.700	102.300	102.500	105.200
2	12:27:57	0.000	105.900	0.636	104.100	93.7%	102.900	103.800	102.700	108.700
3	12:28:24	0.000	102.200	-0.274	104.200	92.2%	104.200	105.100	103.200	106.300
x		0.000	104.800	-0.329	103.700	93.3%	103.300	103.700	102.800	106.700
σ		0.000	2.266	0.994	0.716	0.9%	0.832	1.405	0.362	1.827
%RSD		0.000	2.162	301.800	0.691	1.0	0.805	1.354	0.352	1.712
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	92.660	90.350	103.100	100.700	97.0%	102.800	103.900	102.500	98.380
2	12:27:57	92.420	90.140	103.700	101.600	96.2%	103.200	104.500	104.400	99.460
3	12:28:24	91.350	90.120	103.500	100.400	95.7%	103.300	103.500	104.700	99.480
x		92.140	90.200	103.400	100.900	96.3%	103.100	104.000	103.900	99.110
σ		0.700	0.131	0.321	0.655	0.6%	0.267	0.506	1.217	0.629
%RSD		0.760	0.145	0.310	0.649	0.7	0.259	0.487	1.171	0.634
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:30	102.900	102.800	97.5%	103.900	107.400	102.500	103.200	105.100	96.9%
2	12:27:57	104.800	104.100	97.3%	102.600	106.900	102.100	102.300	104.500	97.7%
3	12:28:24	104.400	103.200	96.9%	103.600	107.800	101.900	103.300	105.300	96.5%
x		104.000	103.400	97.2%	103.400	107.400	102.200	102.900	105.000	97.0%
σ		0.969	0.638	0.3%	0.718	0.464	0.311	0.561	0.451	0.6%
%RSD		0.931	0.618	0.3	0.694	0.432	0.304	0.545	0.430	0.6

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	97.8%	0.195	12.540	13.500	24.430	T 10930.000	T 5041.000	5428.000	T 5051.000
2	12:33:47	97.4%	0.167	11.870	12.750	26.020	T 11080.000	T 5031.000	5442.000	T 5041.000
3	12:34:14	98.1%	0.187	11.740	12.290	24.350	T 11140.000	T 5034.000	5438.000	5525.000
x		97.7%	0.183	12.050	12.850	24.930	T 11050.000	T 5036.000	5436.000	T 5206.000
σ		0.4%	0.015	0.427	0.610	0.939	T 107.400	T 4.909	7.388	T 276.400
%RSD		0.4	7.931	3.546	4.748	3.766	T 0.972	T 0.097	0.136	T 5.310
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	TM 667.300	TM 11490.000	T 49740.000	T 3139.000	20610.000	21620.000	88.1%	83.200	2.091
2	12:33:47	TM 678.100	TM 11430.000	T 49590.000	T 3116.000	20880.000	21560.000	88.7%	78.380	3.047
3	12:34:14	TM 681.900	TM 11400.000	T 49750.000	T 3164.000	20950.000	21680.000	88.1%	81.100	3.217
x		TM 675.800	TM 11440.000	T 49690.000	T 3140.000	20810.000	21620.000	88.3%	80.900	2.785
σ		TM 7.557	TM 42.210	T 89.580	T 24.450	180.900	62.620	0.4%	2.416	0.607
%RSD		TM 1.118	TM 0.369	T 0.180	T 0.779	0.869	0.290	0.4	2.987	21.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	1.422	11850.000	835.600	365.000	T 783.000	837.300	0.144	1.929	2.355
2	12:33:47	1.480	12120.000	834.100	360.100	T 781.300	825.600	0.185	1.689	2.557
3	12:34:14	1.357	12530.000	840.600	361.200	T 784.900	843.800	0.214	1.764	1.579
x		1.420	12170.000	836.800	362.100	T 783.100	835.600	0.181	1.794	2.164
σ		0.062	346.100	3.398	2.559	T 1.822	9.227	0.035	0.123	0.517
%RSD		4.340	2.845	0.406	0.707	T 0.233	1.104	19.350	6.856	23.880
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	0.730	0.832	5.357	8.114	6.606	0.323	0.229	12.190	12.890
2	12:33:47	0.798	0.745	5.245	7.909	6.566	0.322	0.595	12.700	12.500
3	12:34:14	0.867	0.898	5.517	7.479	6.705	0.161	0.113	11.990	12.590
x		0.798	0.825	5.373	7.834	6.626	0.269	0.312	12.300	12.660
σ		0.068	0.077	0.136	0.324	0.071	0.093	0.252	0.365	0.200
%RSD		8.579	9.300	2.539	4.135	1.076	34.590	80.510	2.972	1.575
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	0.000	0.693	-0.891	188.600	95.2%	0.295	0.318	0.316	2.584
2	12:33:47	0.000	-0.199	1.362	188.800	94.2%	0.344	0.340	0.383	1.686
3	12:34:14	0.000	-0.196	-0.357	188.600	94.2%	0.374	0.471	0.391	2.358
x		0.000	0.099	0.038	188.700	94.5%	0.338	0.376	0.364	2.209
σ		0.000	0.514	1.177	0.152	0.6%	0.040	0.082	0.041	0.467
%RSD		0.000	517.100	3126.000	0.080	0.6	11.870	21.900	11.290	21.140
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	0.030	0.032	0.107	0.114	93.0%	0.107	0.152	0.181	0.175
2	12:33:47	0.032	0.043	0.118	0.103	92.3%	0.154	0.159	0.152	0.185
3	12:34:14	0.044	0.056	0.119	0.127	93.8%	0.113	0.173	0.170	0.173
x		0.035	0.044	0.115	0.115	93.0%	0.125	0.161	0.167	0.177
σ		0.008	0.012	0.007	0.012	0.8%	0.026	0.010	0.015	0.006
%RSD		21.550	26.670	6.062	10.310	0.8	20.510	6.505	8.667	3.581
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:20	109.400	107.800	94.2%	0.063	0.063	0.309	0.277	0.302	93.2%
2	12:33:47	109.900	108.900	95.1%	0.065	0.070	0.388	0.308	0.325	93.7%
3	12:34:14	108.100	107.600	96.2%	0.083	0.078	0.347	0.277	0.330	94.1%
x		109.100	108.100	95.2%	0.070	0.071	0.348	0.287	0.319	93.7%
σ		0.932	0.679	1.0%	0.011	0.008	0.039	0.018	0.015	0.5%
%RSD		0.854	0.629	1.1	15.450	10.840	11.270	6.221	4.621	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	94.9%	0.343	2.699	2.897	30.000	T 10000.000	T 5821.000	T 5868.000	T 5863.000
2	12:39:38	93.4%	0.371	2.630	3.268	36.290	T 10150.000	T 5856.000	6385.000	T 5869.000
3	12:40:05	94.8%	0.418	2.401	3.087	32.710	T 10110.000	T 5834.000	6335.000	T 5875.000
x		94.4%	0.378	2.577	3.084	33.000	T 10090.000	T 5837.000	T 6196.000	T 5869.000
σ		0.8%	0.038	0.156	0.185	3.159	T 76.440	T 17.420	T 285.300	T 6.210
%RSD		0.9	10.020	6.066	6.001	9.571	T 0.758	T 0.298	T 4.605	T 0.106
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	TM 1485.000	TM 11100.000	T 50810.000	T 6082.000	27710.000	T 27900.000	84.2%	187.600	4.091
2	12:39:38	TM 1521.000	TM 11220.000	T 50940.000	T 6100.000	27480.000	T 27920.000	84.1%	184.000	3.398
3	12:40:05	TM 1495.000	TM 11110.000	T 51040.000	T 6105.000	27630.000	T 27720.000	83.7%	191.300	3.333
x		TM 1500.000	TM 11150.000	T 50930.000	T 6096.000	27610.000	T 27850.000	84.0%	187.600	3.607
σ		TM 18.280	TM 67.430	T 119.600	T 12.110	115.800	T 113.200	0.3%	3.660	0.420
%RSD		TM 1.219	TM 0.605	T 0.235	T 0.199	0.419	T 0.407	0.3	1.951	11.650
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	3.222	10080.000	2270.000	219.000	T 2117.000	2249.000	0.403	1.692	2.079
2	12:39:38	2.992	9714.000	2272.000	215.900	T 2101.000	2219.000	0.470	1.411	2.068
3	12:40:05	3.041	9491.000	2252.000	215.600	T 2099.000	2252.000	0.453	1.458	1.657
x		3.085	9761.000	2265.000	216.800	T 2105.000	2240.000	0.442	1.520	1.934
σ		0.121	296.900	10.950	1.921	T 9.767	18.240	0.035	0.151	0.241
%RSD		3.926	3.041	0.484	0.886	T 0.464	0.814	7.869	9.914	12.440
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	3.157	3.089	10.620	13.480	12.930	0.220	0.150	25.900	26.440
2	12:39:38	3.124	3.218	10.470	13.850	12.000	0.463	0.410	25.330	25.620
3	12:40:05	3.178	3.091	10.640	12.560	12.630	-0.087	0.100	24.410	26.470
x		3.153	3.133	10.570	13.290	12.520	0.199	0.220	25.210	26.180
σ		0.028	0.074	0.093	0.662	0.475	0.276	0.166	0.754	0.486
%RSD		0.873	2.365	0.881	4.977	3.793	138.500	75.590	2.991	1.855
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	0.000	-0.015	-1.495	324.200	92.1%	0.158	0.115	0.157	2.803
2	12:39:38	0.000	-0.231	-0.013	318.600	92.9%	0.181	0.205	0.188	3.016
3	12:40:05	0.000	-0.173	0.257	321.600	92.6%	0.204	0.272	0.257	3.400
x		0.000	-0.140	-0.417	321.500	92.5%	0.181	0.197	0.201	3.073
σ		0.000	0.111	0.944	2.792	0.4%	0.023	0.079	0.051	0.302
%RSD		0.000	79.780	226.100	0.869	0.4	12.710	40.020	25.510	9.841
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	0.014	0.011	0.127	0.149	90.2%	0.155	0.175	0.010	0.058
2	12:39:38	0.007	0.023	0.155	0.146	90.0%	0.141	0.188	0.032	0.032
3	12:40:05	0.016	0.012	0.113	0.175	90.0%	0.201	0.139	0.047	0.032
x		0.012	0.016	0.132	0.157	90.1%	0.166	0.168	0.030	0.041
σ		0.004	0.007	0.021	0.016	0.1%	0.031	0.025	0.019	0.015
%RSD		35.810	43.870	16.200	10.250	0.1	18.820	15.220	62.380	36.500
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	158.000	155.700	91.9%	0.072	0.068	0.504	0.426	0.475	91.0%
2	12:39:38	156.200	155.900	92.2%	0.072	0.070	0.506	0.468	0.481	91.1%
3	12:40:05	156.300	155.200	93.0%	0.065	0.079	0.498	0.440	0.478	91.2%
x		156.900	155.600	92.4%	0.070	0.072	0.502	0.445	0.478	91.1%
σ		0.998	0.348	0.6%	0.004	0.006	0.004	0.021	0.003	0.1%
%RSD		0.636	0.224	0.6	6.152	8.553	0.880	4.832	0.644	0.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	99.7%	0.135	1.678	1.834	20.740	T 1565.000	T 993.700	1035.000	1046.000
2	12:45:29	100.6%	0.168	2.076	2.073	22.210	T 1568.000	T 982.700	1021.000	1029.000
3	12:45:56	100.8%	0.126	1.736	1.924	24.030	T 1594.000	T 996.400	1037.000	1047.000
x		100.3%	0.143	1.830	1.944	22.330	T 1576.000	T 991.000	1031.000	1041.000
σ		0.6%	0.022	0.215	0.121	1.648	T 16.000	T 7.245	8.808	10.410
%RSD		0.6	15.670	11.770	6.220	7.381	T 1.016	T 0.731	0.854	1.001

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	TM 952.100	T 4445.000	T 48600.000	T 934.900	1137.000	1179.000	87.6%	30.280	2.524
2	12:45:29	TM 934.300	T 4436.000	T 48470.000	970.500	1096.000	1170.000	87.5%	29.950	2.868
3	12:45:56	TM 942.200	T 4422.000	T 48940.000	T 947.000	1186.000	1188.000	87.7%	28.070	3.099
x		TM 942.800	T 4434.000	T 48670.000	T 950.800	1140.000	1179.000	87.6%	29.430	2.830
σ		TM 8.907	T 12.010	T 246.300	T 18.100	45.020	9.363	0.1%	1.194	0.290
%RSD		TM 0.945	T 0.271	T 0.506	T 1.904	3.950	0.794	0.1	4.056	10.230

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	1.121	13490.000	1661.000	130.100	T 1565.000	1642.000	2.070	2.469	2.218
2	12:45:29	1.181	13130.000	1652.000	130.200	T 1553.000	1638.000	1.915	2.535	1.672
3	12:45:56	1.162	13050.000	1660.000	131.400	T 1569.000	1642.000	2.039	2.422	2.150
x		1.155	13220.000	1658.000	130.600	T 1562.000	1641.000	2.008	2.475	2.013
σ		0.031	235.500	5.230	0.692	T 8.314	2.636	0.082	0.057	0.298
%RSD		2.683	1.781	0.316	0.530	T 0.532	0.161	4.092	2.302	14.790

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	2.912	2.832	35.550	37.640	36.320	-0.153	-0.162	2.944	2.968
2	12:45:29	2.709	2.913	36.430	35.620	35.560	-0.087	0.222	3.277	2.866
3	12:45:56	2.781	3.076	36.240	35.820	36.430	0.401	0.186	2.766	3.101
x		2.801	2.940	36.070	36.360	36.100	0.054	0.082	2.996	2.978
σ		0.103	0.124	0.466	1.111	0.471	0.303	0.212	0.259	0.117
%RSD		3.662	4.222	1.291	3.054	1.306	565.600	257.500	8.650	3.942

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	0.000	0.456	0.189	12.770	98.2%	0.060	0.056	0.073	0.034
2	12:45:29	0.000	-0.333	-0.298	13.110	98.5%	0.130	0.076	0.141	0.245
3	12:45:56	0.000	0.138	-0.038	13.490	97.9%	0.155	0.064	0.130	-0.067
x		0.000	0.087	-0.049	13.130	98.2%	0.115	0.065	0.115	0.071
σ		0.000	0.397	0.244	0.362	0.3%	0.049	0.010	0.036	0.159
%RSD		0.000	457.100	497.000	2.759	0.3	42.830	14.910	31.660	224.500

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	0.022	0.017	0.034	0.062	92.9%	0.011	0.005	-0.049	-0.038
2	12:45:29	0.013	0.014	0.047	0.052	94.0%	-0.000	0.017	-0.043	-0.046
3	12:45:56	0.031	0.016	0.034	0.055	93.8%	0.005	0.084	-0.022	-0.020
x		0.022	0.016	0.038	0.056	93.6%	0.005	0.035	-0.038	-0.035
σ		0.009	0.001	0.008	0.005	0.6%	0.006	0.042	0.014	0.014
%RSD		39.740	8.293	19.620	9.693	0.6	105.900	120.500	37.230	39.080

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:02	34.470	34.390	93.6%	0.066	0.068	1.244	1.266	1.266	93.5%
2	12:45:29	33.530	33.460	95.4%	0.066	0.070	1.243	1.272	1.299	95.5%
3	12:45:56	34.060	33.780	97.1%	0.075	0.074	1.244	1.237	1.281	96.2%
x		34.020	33.880	95.4%	0.069	0.071	1.244	1.258	1.282	95.1%
σ		0.473	0.475	1.7%	0.005	0.003	0.001	0.019	0.016	1.4%
%RSD		1.391	1.401	1.8	7.629	4.770	0.051	1.503	1.253	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	90.6%	0.182	190.600	204.300	42.320	T 24880.000	T 25610.000	T 25330.000	T 25160.000
2	12:51:19	89.6%	0.279	198.700	207.300	40.970	T 25490.000	T 25820.000	T 25720.000	T 25450.000
3	12:51:46	91.7%	0.226	193.800	205.200	36.590	T 25490.000	T 25680.000	T 25240.000	T 25420.000
x		90.6%	0.229	194.400	205.600	39.960	T 25290.000	T 25710.000	T 25430.000	T 25340.000
σ		1.1%	0.048	4.064	1.521	2.997	T 353.300	T 108.000	T 255.900	T 157.100
%RSD		1.2	21.080	2.091	0.740	7.501	T 1.397	T 0.420	T 1.006	T 0.620
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	TM 4829.000	TM 14690.000	T 50380.000	T 4524.000	52760.000	T 52230.000	81.3%	283.600	5.614
2	12:51:19	TM 4903.000	TM 14810.000	T 51140.000	T 4545.000	52800.000	T 52620.000	80.7%	281.700	5.586
3	12:51:46	TM 4836.000	TM 14560.000	T 50630.000	T 4527.000	52620.000	T 52570.000	81.1%	278.400	5.255
x		TM 4856.000	TM 14690.000	T 50720.000	T 4532.000	52720.000	T 52480.000	81.0%	281.300	5.485
σ		TM 40.690	TM 125.300	T 384.200	T 11.420	93.540	T 215.200	0.3%	2.626	0.200
%RSD		TM 0.838	TM 0.853	T 0.758	T 0.252	0.177	T 0.410	0.4	0.934	3.637
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	3.630	3876.000	6644.000	128.600	T 6048.000	6432.000	4.296	6.304	5.881
2	12:51:19	3.521	3966.000	6687.000	130.600	T 6060.000	6383.000	4.235	6.463	5.438
3	12:51:46	3.656	3911.000	T 6163.000	127.800	T 6010.000	6385.000	4.275	6.684	6.171
x		3.602	3918.000	T 6498.000	129.000	T 6039.000	6400.000	4.268	6.484	5.830
σ		0.071	45.630	T 291.000	1.440	T 26.030	27.920	0.031	0.191	0.369
%RSD		1.979	1.165	T 4.478	1.116	T 0.431	0.436	0.721	2.938	6.327
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	6.134	6.837	22.350	23.550	22.910	0.251	-0.421	169.600	170.500
2	12:51:19	5.699	7.299	22.910	23.970	23.130	0.437	-0.298	165.300	167.400
3	12:51:46	6.035	7.035	22.340	24.350	23.200	0.568	-0.079	168.500	163.500
x		5.956	7.057	22.530	23.960	23.080	0.418	-0.266	167.800	167.100
σ		0.228	0.232	0.329	0.400	0.153	0.159	0.173	2.266	3.523
%RSD		3.832	3.287	1.458	1.670	0.663	37.990	65.040	1.350	2.108
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	0.000	0.126	-1.727	236.500	124.7%	0.106	0.226	0.178	2.789
2	12:51:19	0.000	-0.370	-0.906	234.800	123.9%	0.120	0.210	0.189	3.254
3	12:51:46	0.000	0.540	-2.709	237.500	124.2%	0.105	0.111	0.158	2.430
x		0.000	0.098	-1.781	236.300	124.3%	0.110	0.182	0.175	2.825
σ		0.000	0.456	0.903	1.350	0.4%	0.008	0.062	0.015	0.413
%RSD		0.000	463.600	50.690	0.571	0.3	7.627	34.090	8.775	14.630
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	0.048	0.044	0.035	0.040	85.0%	0.275	0.271	-0.033	-0.040
2	12:51:19	0.033	0.042	0.029	0.045	86.4%	0.217	0.274	-0.032	-0.016
3	12:51:46	0.029	0.046	0.058	0.055	85.5%	0.297	0.270	-0.027	-0.017
x		0.036	0.044	0.041	0.047	85.6%	0.263	0.272	-0.031	-0.024
σ		0.010	0.002	0.015	0.008	0.7%	0.042	0.002	0.003	0.014
%RSD		27.240	4.577	36.810	16.460	0.8	15.800	0.853	10.390	56.170
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:52	118.900	119.200	91.5%	0.196	0.203	2.896	2.650	2.829	85.3%
2	12:51:19	118.700	119.200	91.5%	0.196	0.194	2.933	2.599	2.749	86.8%
3	12:51:46	121.500	121.800	92.4%	0.185	0.196	2.801	2.592	2.781	87.1%
x		119.700	120.100	91.8%	0.192	0.198	2.877	2.614	2.786	86.4%
σ		1.543	1.517	0.5%	0.006	0.005	0.068	0.031	0.040	0.9%
%RSD		1.289	1.264	0.5	3.263	2.449	2.364	1.204	1.448	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	94.4%	0.002	10.180	12.260	25.950	T 8874.000	T 8031.000	T 7976.000	T 7873.000
2	12:57:10	93.2%	0.003	11.550	12.920	32.240	T 8995.000	T 7985.000	T 8007.000	T 7903.000
3	12:57:36	94.9%	-0.005	11.080	12.770	29.000	T 9060.000	T 8078.000	T 8029.000	T 7941.000
x		94.1%	0.000	10.940	12.650	29.060	T 8976.000	T 8031.000	T 8004.000	T 7905.000
σ		0.9%	0.005	0.698	0.344	3.145	T 94.320	T 46.330	T 27.090	T 34.150
%RSD		0.9	9437.000	6.384	2.716	10.820	T 1.051	T 0.577	T 0.339	T 0.432

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	T 107.000	T 6300.000	T 44310.000	1460.000	15090.000	15490.000	81.8%	16.260	1.638
2	12:57:10	T 103.800	T 6268.000	T 44560.000	1466.000	15260.000	15610.000	82.1%	16.700	1.358
3	12:57:36	T 104.000	T 6262.000	T 44810.000	1484.000	14970.000	15640.000	82.4%	17.270	2.001
x		T 104.900	T 6277.000	T 44560.000	1470.000	15110.000	15580.000	82.1%	16.740	1.666
σ		T 1.795	T 20.530	T 250.000	12.070	143.900	78.070	0.3%	0.503	0.322
%RSD		T 1.711	T 0.327	T 0.561	0.821	0.952	0.501	0.3	3.004	19.350

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	1.212	7426.000	384.700	22.490	T 387.500	402.100	0.071	0.808	-0.162
2	12:57:10	1.205	8073.000	396.300	22.400	T 383.100	395.300	0.046	0.543	0.435
3	12:57:36	1.286	8023.000	392.100	22.470	403.400	387.900	0.075	0.672	0.433
x		1.234	7841.000	391.100	22.450	T 391.300	395.100	0.064	0.674	0.235
σ		0.045	359.700	5.853	0.051	T 10.720	7.074	0.016	0.132	0.344
%RSD		3.648	4.588	1.497	0.226	T 2.739	1.790	24.720	19.600	146.300

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	1.128	1.294	2.818	3.057	3.487	-0.102	-0.333	39.830	42.160
2	12:57:10	1.092	1.256	3.124	4.554	3.281	0.477	0.084	40.910	40.300
3	12:57:36	1.188	1.224	2.875	3.823	3.152	0.148	0.305	38.000	41.340
x		1.136	1.258	2.939	3.811	3.307	0.174	0.019	39.580	41.270
σ		0.049	0.035	0.163	0.749	0.169	0.291	0.324	1.469	0.933
%RSD		4.270	2.783	5.541	19.640	5.113	166.600	1720.000	3.711	2.260

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	0.000	-0.119	-0.998	54.480	86.4%	0.002	-0.003	-0.023	0.988
2	12:57:10	0.000	-0.117	0.912	54.930	85.9%	-0.026	-0.031	-0.039	0.957
3	12:57:36	0.000	0.550	0.116	54.690	85.6%	-0.003	0.020	0.018	-0.321
x		0.000	0.105	0.010	54.700	86.0%	-0.009	-0.005	-0.015	0.541
σ		0.000	0.386	0.959	0.224	0.4%	0.015	0.026	0.029	0.747
%RSD		0.000	368.600	9473.000	0.410	0.5	170.200	563.200	196.300	138.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	0.004	0.004	0.020	0.006	88.9%	0.022	0.069	-0.122	-0.095
2	12:57:10	0.006	0.002	0.020	0.021	88.9%	0.033	-0.011	-0.098	-0.093
3	12:57:36	0.005	0.008	0.028	0.018	89.8%	-0.020	-0.008	-0.092	-0.074
x		0.005	0.005	0.022	0.015	89.2%	0.012	0.017	-0.104	-0.087
σ		0.001	0.003	0.005	0.008	0.5%	0.028	0.046	0.016	0.012
%RSD		23.280	58.260	21.180	52.350	0.6	236.300	272.700	15.450	13.190

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:43	19.730	19.650	91.3%	0.003	0.004	0.055	0.071	0.063	89.8%
2	12:57:10	19.810	20.080	92.0%	0.003	0.004	0.060	0.077	0.065	91.7%
3	12:57:36	20.190	19.950	92.9%	0.009	0.009	0.063	0.061	0.068	92.0%
x		19.910	19.890	92.1%	0.005	0.006	0.059	0.069	0.066	91.2%
σ		0.241	0.221	0.8%	0.004	0.003	0.004	0.008	0.002	1.2%
%RSD		1.212	1.108	0.9	70.280	50.770	7.320	11.310	3.644	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	95.7%	0.046	1.734	2.509	25.200	T 5186.000	T 2343.000	2490.000	2491.000
2	13:02:59	97.5%	0.030	2.662	2.335	23.280	T 5193.000	T 2322.000	2474.000	2490.000
3	13:03:26	97.4%	0.037	1.765	2.240	25.310	T 5264.000	T 2341.000	2499.000	2495.000
x		96.9%	0.038	2.054	2.361	24.600	T 5214.000	T 2335.000	2488.000	2492.000
σ		1.0%	0.008	0.527	0.136	1.140	T 43.040	T 11.800	12.780	2.839
%RSD		1.0	20.970	25.660	5.767	4.635	T 0.825	T 0.505	0.514	0.114

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	TM 730.200	TM 13370.000	T 45760.000	T 1898.000	8896.000	9142.000	84.2%	93.380	3.145
2	13:02:59	TM 717.800	TM 13210.000	T 46270.000	T 1906.000	9225.000	9036.000	85.1%	92.410	3.705
3	13:03:26	TM 718.900	TM 13310.000	T 46460.000	T 1908.000	9035.000	9149.000	84.8%	93.750	3.800
x		TM 722.300	TM 13300.000	T 46160.000	T 1904.000	9052.000	9109.000	84.7%	93.180	3.550
σ		TM 6.850	TM 82.270	T 361.500	T 4.904	165.100	63.440	0.5%	0.692	0.354
%RSD		TM 0.948	TM 0.619	T 0.783	T 0.258	1.823	0.697	0.5	0.743	9.983

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	4.600	17150.000	1085.000	56.790	T 1038.000	1072.000	0.352	2.264	2.098
2	13:02:59	4.561	16810.000	1092.000	56.460	T 1016.000	1077.000	0.406	2.294	2.220
3	13:03:26	4.647	16320.000	1090.000	56.250	T 1026.000	1063.000	0.397	2.254	2.444
x		4.603	16760.000	1089.000	56.500	T 1027.000	1071.000	0.385	2.271	2.254
σ		0.043	419.000	3.502	0.273	T 10.810	7.510	0.029	0.021	0.175
%RSD		0.939	2.500	0.322	0.483	T 1.053	0.701	7.488	0.927	7.776

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	2.107	2.147	8.198	9.142	8.747	0.160	0.215	2.334	3.838
2	13:02:59	2.048	1.985	8.404	9.349	8.601	0.077	0.092	3.211	3.538
3	13:03:26	1.986	1.970	8.296	9.617	8.634	0.463	-0.065	3.478	3.100
x		2.047	2.034	8.299	9.369	8.661	0.233	0.080	3.008	3.492
σ		0.060	0.098	0.103	0.238	0.076	0.203	0.140	0.599	0.371
%RSD		2.951	4.840	1.239	2.542	0.882	87.190	174.800	19.910	10.620

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	0.000	-0.034	-0.179	67.620	91.0%	0.572	0.567	0.569	0.634
2	13:02:59	0.000	-0.207	-0.258	66.500	92.6%	0.555	0.492	0.528	0.057
3	13:03:26	0.000	0.340	-1.012	68.540	92.6%	0.580	0.548	0.577	0.961
x		0.000	0.033	-0.483	67.550	92.1%	0.569	0.536	0.558	0.551
σ		0.000	0.279	0.460	1.025	0.9%	0.012	0.039	0.026	0.458
%RSD		0.000	846.000	95.290	1.517	1.0	2.179	7.343	4.705	83.190

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	0.059	0.046	0.040	0.034	89.9%	0.024	0.009	-0.116	-0.091
2	13:02:59	0.050	0.062	0.017	0.038	90.3%	0.023	0.026	-0.085	-0.092
3	13:03:26	0.057	0.030	0.050	0.038	90.6%	0.024	0.050	-0.112	-0.076
x		0.055	0.046	0.036	0.037	90.3%	0.023	0.028	-0.105	-0.086
σ		0.005	0.016	0.017	0.002	0.4%	0.001	0.021	0.017	0.009
%RSD		8.940	34.640	47.280	6.249	0.4	2.146	72.690	16.020	10.230

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:32	27.040	26.820	92.2%	0.022	0.024	0.390	0.321	0.367	91.4%
2	13:02:59	27.410	26.760	93.7%	0.032	0.022	0.400	0.327	0.361	92.9%
3	13:03:26	27.960	27.340	94.7%	0.030	0.025	0.405	0.330	0.372	93.1%
x		27.470	26.970	93.6%	0.028	0.024	0.399	0.326	0.367	92.5%
σ		0.463	0.317	1.3%	0.005	0.002	0.008	0.005	0.006	1.0%
%RSD		1.686	1.175	1.4	18.550	7.130	1.937	1.379	1.544	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	87.6%	0.070	5.528	6.578	24.230	T 5222.000	T 6984.000	T 7046.000	T 6921.000
2	13:08:50	87.6%	0.054	4.908	5.779	26.760	T 5231.000	T 6910.000	T 6960.000	T 6946.000
3	13:09:17	87.3%	0.014	6.334	5.783	21.020	T 5238.000	T 6927.000	7508.000	T 6973.000
x		87.5%	0.046	5.590	6.047	24.010	T 5230.000	T 6940.000	T 7171.000	T 6946.000
σ		0.2%	0.029	0.715	0.461	2.876	T 7.650	T 38.410	T 294.600	T 26.020
%RSD		0.2	63.260	12.800	7.615	11.980	T 0.146	T 0.553	T 4.108	T 0.375
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	17.140	TM 11710.000	T 44900.000	T 2284.000	38060.000	T 38150.000	76.1%	1.744	0.369
2	13:08:50	17.780	TM 11650.000	T 44650.000	T 2277.000	37990.000	T 38150.000	75.5%	1.506	-0.103
3	13:09:17	17.470	TM 11650.000	T 44750.000	T 2292.000	38070.000	T 38250.000	75.0%	1.309	-0.667
x		17.460	TM 11670.000	T 44770.000	T 2285.000	38040.000	T 38180.000	75.5%	1.520	-0.133
σ		0.322	TM 35.830	T 123.600	T 7.536	43.010	T 58.380	0.6%	0.218	0.519
%RSD		1.841	TM 0.307	T 0.276	T 0.330	0.113	T 0.153	0.7	14.330	389.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	1.908	4451.000	T 12410.000	TM 2609.000	T 12430.000	13340.000	-0.210	1.816	1.164
2	13:08:50	1.850	3443.000	T 12340.000	TM 2585.000	T 12290.000	13090.000	-0.187	1.776	1.737
3	13:09:17	1.906	3126.000	T 12470.000	TM 2624.000	T 12380.000	13280.000	-0.210	1.720	1.210
x		1.888	3674.000	T 12410.000	TM 2606.000	T 12370.000	13240.000	-0.202	1.771	1.371
σ		0.033	692.000	T 62.810	TM 19.770	T 69.640	129.300	0.014	0.049	0.318
%RSD		1.731	18.840	T 0.506	TM 0.759	T 0.563	0.977	6.789	2.741	23.220
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	1.290	1.361	17.600	16.220	18.430	-0.533	0.191	30.340	31.500
2	13:08:50	1.285	1.324	18.260	18.270	18.300	-0.310	-0.113	30.340	29.360
3	13:09:17	1.278	1.263	17.800	18.900	18.430	-0.112	-0.065	29.590	30.200
x		1.284	1.316	17.890	17.790	18.390	-0.319	0.004	30.090	30.350
σ		0.006	0.050	0.342	1.398	0.075	0.211	0.164	0.435	1.079
%RSD		0.497	3.768	1.914	7.857	0.408	66.110	3964.000	1.444	3.556
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	0.000	-0.513	2.058	168.700	82.4%	0.151	0.149	0.151	1.001
2	13:08:50	0.000	-0.142	-0.210	166.700	82.6%	0.117	0.174	0.159	0.662
3	13:09:17	0.000	-0.012	1.573	167.000	81.4%	0.158	0.201	0.168	0.845
x		0.000	-0.222	1.141	167.500	82.1%	0.142	0.174	0.159	0.836
σ		0.000	0.260	1.194	1.067	0.6%	0.022	0.026	0.008	0.169
%RSD		0.000	117.100	104.700	0.637	0.7	15.450	15.120	5.289	20.250
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	0.017	0.024	-0.001	0.021	83.9%	-0.017	-0.064	-0.122	-0.102
2	13:08:50	0.021	0.029	0.017	0.020	82.9%	-0.012	-0.054	-0.121	-0.095
3	13:09:17	0.023	0.030	0.014	0.025	83.4%	-0.034	-0.027	-0.129	-0.093
x		0.020	0.027	0.010	0.022	83.4%	-0.021	-0.048	-0.124	-0.097
σ		0.003	0.003	0.010	0.003	0.5%	0.012	0.019	0.004	0.005
%RSD		15.230	11.660	94.550	12.280	0.6	55.780	39.560	3.410	5.006
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:23	14.230	14.130	87.1%	-0.002	-0.000	0.138	0.141	0.141	87.3%
2	13:08:50	14.710	14.350	86.6%	0.001	-0.002	0.142	0.159	0.149	87.2%
3	13:09:17	14.400	14.370	87.8%	-0.004	-0.000	0.163	0.134	0.148	87.8%
x		14.450	14.290	87.2%	-0.002	-0.001	0.148	0.145	0.146	87.4%
σ		0.244	0.132	0.6%	0.003	0.001	0.013	0.013	0.004	0.4%
%RSD		1.688	0.922	0.7	143.800	84.280	9.106	8.922	2.799	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	86.6%	101.800	108.600	109.700	33.980	T 6257.000	T 7952.000	T 7985.000	T 7910.000
2	13:14:39	86.3%	102.100	111.500	111.200	38.280	T 6383.000	T 8019.000	T 8009.000	T 7989.000
3	13:15:06	85.8%	104.500	104.600	112.400	40.300	T 6430.000	T 8074.000	T 8091.000	T 7988.000
x		86.2%	102.800	108.200	111.100	37.520	T 6357.000	T 8015.000	T 8029.000	T 7963.000
σ		0.4%	1.503	3.421	1.338	3.227	T 89.320	T 60.660	T 55.520	T 45.530
%RSD		0.5	1.462	3.161	1.204	8.601	T 1.405	T 0.757	T 0.692	T 0.572

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	124.800	TM 12700.000	T 48150.000	T 3271.000	39280.000	T 39270.000	75.2%	102.700	96.920
2	13:14:39	125.200	TM 12680.000	T 48120.000	T 3300.000	38850.000	T 39040.000	74.8%	99.000	94.850
3	13:15:06	124.100	TM 12650.000	T 48840.000	T 3310.000	39560.000	T 39650.000	74.4%	102.100	95.230
x		124.700	TM 12680.000	T 48370.000	T 3294.000	39230.000	T 39320.000	74.8%	101.300	95.670
σ		0.556	TM 24.330	T 408.300	T 20.350	355.700	T 309.200	0.4%	1.972	1.102
%RSD		0.446	TM 0.192	T 0.844	T 0.618	0.907	T 0.786	0.5	1.947	1.152

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	102.700	26400.000	T 13570.000	TM 2718.000	T 13500.000	14520.000	95.210	94.930	97.390
2	13:14:39	100.500	25880.000	T 13530.000	TM 2741.000	T 13460.000	14580.000	93.850	95.940	99.620
3	13:15:06	102.500	26120.000	T 13490.000	TM 2718.000	T 13510.000	14540.000	94.690	94.040	99.080
x		101.900	26140.000	T 13530.000	TM 2726.000	T 13490.000	14550.000	94.580	94.970	98.700
σ		1.215	259.200	T 40.570	TM 13.170	T 28.260	28.200	0.687	0.953	1.163
%RSD		1.193	0.992	T 0.300	TM 0.483	T 0.210	0.194	0.727	1.003	1.179

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	96.510	100.700	113.900	118.300	113.300	100.200	96.400	41.210	40.720
2	13:14:39	96.690	99.120	114.300	112.300	114.900	100.800	95.950	38.760	38.490
3	13:15:06	95.670	101.000	114.700	116.900	112.600	101.100	97.530	40.560	40.540
x		96.290	100.300	114.300	115.800	113.600	100.700	96.620	40.180	39.920
σ		0.547	1.032	0.437	3.159	1.137	0.427	0.815	1.273	1.241
%RSD		0.568	1.029	0.383	2.727	1.001	0.424	0.844	3.168	3.108

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	0.000	100.700	-0.409	269.700	81.0%	98.220	98.850	99.350	101.100
2	13:14:39	0.000	97.180	-0.133	272.800	81.3%	97.330	97.710	96.780	103.100
3	13:15:06	0.000	101.500	-0.735	268.700	81.9%	97.420	99.710	97.400	100.500
x		0.000	99.800	-0.426	270.400	81.4%	97.660	98.760	97.840	101.600
σ		0.000	2.305	0.301	2.127	0.5%	0.488	1.002	1.342	1.387
%RSD		0.000	2.310	70.770	0.787	0.6	0.499	1.015	1.372	1.365

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	93.690	90.290	99.710	97.270	82.3%	99.970	102.400	106.100	99.450
2	13:14:39	92.050	89.320	99.280	96.600	83.2%	100.600	101.500	104.700	100.000
3	13:15:06	91.820	89.250	100.000	97.290	83.4%	99.590	102.200	105.700	100.200
x		92.520	89.620	99.670	97.050	82.9%	100.000	102.000	105.500	99.900
σ		1.017	0.582	0.371	0.390	0.6%	0.500	0.506	0.707	0.398
%RSD		1.099	0.649	0.373	0.402	0.7	0.500	0.496	0.670	0.398

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:12	116.000	116.600	85.9%	100.400	103.600	98.640	99.560	101.300	86.8%
2	13:14:39	115.300	114.500	87.3%	99.720	104.200	97.210	99.910	100.700	87.7%
3	13:15:06	116.200	115.600	87.6%	100.900	104.700	98.930	99.830	101.600	87.9%
x		115.800	115.600	86.9%	100.300	104.200	98.260	99.770	101.200	87.5%
σ		0.496	1.063	0.9%	0.597	0.554	0.922	0.182	0.447	0.6%
%RSD		0.428	0.920	1.0	0.595	0.532	0.938	0.183	0.441	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	82.8%	302.200	303.600	301.500	10.730	T 60390.000	T 57690.000	T 57580.000	T 57380.000
2	13:20:30	82.4%	299.900	292.900	306.400	13.880	T 61070.000	T 58410.000	T 58190.000	T 57930.000
3	13:20:57	81.9%	301.200	300.500	301.200	11.320	T 60970.000	T 57870.000	T 57720.000	T 57470.000
x		82.4%	100.373%	99.673%	101.005%	11.980	T 101.344%	T 57990.000	T 57830.000	T 95.993%
σ		0.5%	n/a	n/a	n/a	1.676	T n/a	T 374.500	T 320.300	T n/a
%RSD		0.6	0.378	1.843	0.960	13.990	T 0.602	T 0.646	T 0.554	T 0.510
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	288.900	T 2925.000	640.700	T 57310.000	59250.000	T 58160.000	76.3%	297.300	292.000
2	13:20:30	288.400	T 2916.000	648.500	T 57880.000	59030.000	T 58650.000	75.4%	300.300	296.900
3	13:20:57	286.900	T 2891.000	650.600	T 57690.000	59650.000	T 58780.000	74.9%	300.300	290.900
x		96.017%	T 97.020%	646.600	T 96.045%	59310.000	T 97.548%	75.5%	99.770%	97.755%
σ		n/a	T n/a	5.247	T n/a	314.000	T n/a	0.7%	n/a	n/a
%RSD		0.365	T 0.613	0.811	T 0.506	0.529	T 0.563	0.9	0.581	1.090
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	295.200	69800.000	T 57340.000	296.300	T 57790.000	T 57420.000	276.800	277.200	277.200
2	13:20:30	298.500	70550.000	T 58070.000	297.800	T 58020.000	T 57760.000	278.000	279.400	291.700
3	13:20:57	293.700	69850.000	T 57790.000	298.600	T 57720.000	T 57580.000	274.100	274.300	284.900
x		98.605%	70070.000	T 57730.000	99.190%	T 57840.000	T 95.980%	92.103%	92.317%	284.600
σ		n/a	420.000	T 367.200	n/a	T 152.400	T n/a	n/a	n/a	7.255
%RSD		0.832	0.599	T 0.636	0.398	T 0.264	T 0.298	0.727	0.927	2.549
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	271.500	273.700	277.300	288.400	282.200	295.900	285.100	2.084	1.140
2	13:20:30	270.800	272.900	276.900	283.400	280.100	291.900	285.000	3.905	0.710
3	13:20:57	270.400	270.900	277.200	282.700	279.300	295.600	291.200	3.463	-0.389
x		270.900	90.835%	92.387%	284.800	280.500	98.146%	287.100	3.151	0.487
σ		0.545	n/a	n/a	3.078	1.488	n/a	3.545	0.950	0.788
%RSD		0.201	0.519	0.080	1.081	0.530	0.760	1.235	30.140	161.900
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	0.000	287.000	0.264	297.400	79.1%	304.200	306.400	305.100	299.900
2	13:20:30	0.000	269.000	0.917	300.100	78.3%	304.300	306.500	305.700	294.600
3	13:20:57	0.000	288.900	0.637	300.700	78.1%	302.900	302.600	301.200	293.700
x		0.000	93.882%	0.606	99.808%	78.5%	101.271%	101.716%	304.000	296.000
σ		0.000	n/a	0.328	n/a	0.5%	n/a	n/a	2.420	3.326
%RSD		0.000	3.909	54.070	0.586	0.7	0.261	0.734	0.796	1.123
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	285.200	275.500	291.500	288.200	80.6%	297.000	302.100	311.500	292.000
2	13:20:30	285.700	277.500	295.100	288.500	80.0%	298.700	303.300	316.900	299.000
3	13:20:57	280.800	274.000	288.600	287.100	79.9%	293.400	301.600	318.000	298.200
x		94.632%	275.700	291.700	95.978%	80.2%	98.789%	100.776%	105.154%	98.791%
σ		n/a	1.769	3.248	n/a	0.4%	n/a	n/a	n/a	n/a
%RSD		0.960	0.642	1.113	0.258	0.5	0.906	0.296	1.111	1.290
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:03	296.300	298.300	84.7%	304.500	T 295.400	299.500	303.100	T 300.900	82.0%
2	13:20:30	301.400	297.100	85.7%	305.500	T 295.700	300.800	303.400	T 300.900	82.2%
3	13:20:57	298.800	295.600	85.2%	302.200	T 293.600	297.700	302.500	T 299.700	82.5%
x		99.613%	98.991%	85.2%	101.356%	T 98.305%	99.783%	100.997%	T 100.165%	82.2%
σ		n/a	n/a	0.5%	n/a	T n/a	n/a	n/a	T n/a	0.3%
%RSD		0.843	0.464	0.6	0.567	T 0.397	0.530	0.147	T 0.236	0.3

CCB IM8211-01 10/18/2017 13:25:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	92.4%	0.034	2.078	3.434	-7.306	14.290	1.701	1.946	1.909
2	13:26:19	92.4%	0.049	2.912	2.626	-7.411	14.230	1.929	2.622	2.140
3	13:26:46	93.8%	0.018	2.036	2.041	-15.780	12.710	2.433	2.239	2.298
x		92.8%	0.033	2.342	2.700	-10.170	13.740	2.021	2.269	2.116
σ		0.8%	0.016	0.494	0.699	4.865	0.893	0.375	0.339	0.196
%RSD		0.9	46.800	21.100	25.900	47.850	6.499	18.540	14.940	9.251
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	0.714	0.743	340.300	11.860	4.457	-7.004	81.1%	0.012	-0.039
2	13:26:19	0.727	0.498	356.900	10.620	1.618	-6.560	81.4%	0.012	0.002
3	13:26:46	0.722	0.620	381.100	8.142	6.146	-8.211	82.3%	-0.010	-0.016
x		0.721	0.620	359.400	10.210	4.074	-7.259	81.6%	0.005	-0.018
σ		0.007	0.123	20.520	1.894	2.288	0.854	0.7%	0.013	0.020
%RSD		0.913	19.760	5.709	18.550	56.180	11.770	0.8	273.500	115.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	-0.025	26.060	3.471	0.073	4.516	3.852	0.000	0.004	-0.298
2	13:26:19	-0.014	-0.407	3.807	0.066	4.034	3.785	0.004	0.021	0.507
3	13:26:46	0.016	13.870	4.318	0.083	3.173	3.577	0.010	0.026	0.458
x		-0.008	13.170	3.865	0.074	3.908	3.738	0.005	0.017	0.222
σ		0.021	13.250	0.426	0.009	0.680	0.144	0.005	0.012	0.452
%RSD		271.800	100.600	11.030	11.490	17.410	3.839	102.000	67.820	203.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	0.052	-0.019	-0.011	0.017	-0.004	-0.017	-0.036	0.278	0.413
2	13:26:19	0.042	0.022	0.041	-0.101	-0.019	0.018	0.158	0.002	-0.297
3	13:26:46	-0.001	0.011	-0.000	-0.043	-0.013	0.004	-0.099	0.047	0.252
x		0.031	0.005	0.010	-0.042	-0.012	0.002	0.007	0.109	0.123
σ		0.028	0.022	0.028	0.059	0.007	0.018	0.134	0.148	0.373
%RSD		91.200	456.100	279.600	140.000	61.030	1033.000	1814.000	136.100	303.800
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	0.000	0.012	2.519	-0.082	86.2%	0.210	0.234	0.157	0.191
2	13:26:19	0.000	0.064	0.826	-0.044	87.4%	0.096	0.128	0.128	0.109
3	13:26:46	0.000	0.104	-1.013	0.027	86.7%	0.124	0.106	0.098	-0.001
x		0.000	0.060	0.777	-0.033	86.8%	0.143	0.156	0.128	0.100
σ		0.000	0.046	1.766	0.055	0.6%	0.059	0.069	0.030	0.096
%RSD		0.000	76.470	227.200	166.100	0.7	41.290	44.050	23.240	96.270
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	0.018	0.018	0.002	0.013	88.3%	0.032	0.065	0.540	0.526
2	13:26:19	0.020	0.017	0.002	0.001	89.1%	0.012	0.027	0.516	0.503
3	13:26:46	0.029	0.028	0.005	0.004	90.1%	-0.000	0.048	0.489	0.470
x		0.022	0.021	0.003	0.006	89.2%	0.015	0.047	0.515	0.500
σ		0.005	0.006	0.002	0.006	0.9%	0.016	0.019	0.026	0.028
%RSD		24.580	26.890	58.030	98.120	1.0	110.500	40.380	5.009	5.612
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:52	0.004	0.023	89.8%	0.010	0.014	0.008	0.013	0.010	88.6%
2	13:26:19	0.020	0.041	90.8%	0.018	0.010	0.012	0.010	0.012	89.4%
3	13:26:46	0.011	0.020	92.5%	0.018	0.015	0.017	0.019	0.012	90.8%
x		0.012	0.028	91.0%	0.015	0.013	0.012	0.014	0.011	89.6%
σ		0.008	0.011	1.3%	0.005	0.003	0.004	0.004	0.001	1.1%
%RSD		67.820	40.140	1.5	31.720	22.030	34.800	30.740	9.527	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	86.6%	103.200	112.200	110.800	30.500	T 6213.000	T 7904.000	T 7976.000	T 7774.000
2	13:32:07	87.2%	103.200	112.200	112.200	30.330	T 6246.000	T 7884.000	T 7905.000	T 7843.000
3	13:32:34	87.2%	101.300	111.000	111.100	24.250	T 6312.000	T 7890.000	T 7928.000	T 7826.000
x		87.0%	102.600	111.800	111.400	28.360	T 6257.000	T 7893.000	T 7937.000	T 7814.000
σ		0.3%	1.120	0.687	0.753	3.560	T 50.300	T 10.610	T 36.210	T 35.950
%RSD		0.4	1.092	0.614	0.676	12.550	T 0.804	T 0.134	T 0.456	T 0.460

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	123.000	TM 12520.000	T 48170.000	T 3273.000	38770.000	T 38730.000	76.6%	101.500	94.870
2	13:32:07	122.200	TM 12430.000	T 48360.000	T 3250.000	38580.000	T 38930.000	76.3%	103.000	94.870
3	13:32:34	124.400	TM 12460.000	T 48850.000	T 3298.000	38820.000	T 38960.000	75.6%	102.500	96.170
x		123.200	TM 12470.000	T 48460.000	T 3274.000	38720.000	T 38870.000	76.2%	102.300	95.300
σ		1.130	TM 46.360	T 354.800	T 24.310	127.800	T 125.200	0.5%	0.785	0.753
%RSD		0.917	TM 0.372	T 0.732	T 0.743	0.330	T 0.322	0.7	0.767	0.790

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	102.000	26320.000	T 13320.000	TM 2664.000	T 13330.000	14350.000	96.390	96.230	100.800
2	13:32:07	100.600	25840.000	T 13220.000	TM 2660.000	T 13120.000	14270.000	95.330	94.800	92.910
3	13:32:34	101.400	25960.000	T 13390.000	TM 2664.000	T 13240.000	14260.000	94.660	95.470	96.390
x		101.300	26040.000	T 13310.000	TM 2663.000	T 13230.000	14290.000	95.460	95.500	96.690
σ		0.704	252.100	T 81.840	TM 2.529	T 104.000	46.990	0.872	0.718	3.932
%RSD		0.695	0.968	T 0.615	TM 0.095	T 0.786	0.329	0.913	0.751	4.066

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	96.200	99.950	111.900	115.800	112.100	99.850	94.860	82.540	80.550
2	13:32:07	94.960	98.500	112.200	114.900	111.800	100.100	96.840	78.270	76.990
3	13:32:34	96.340	98.700	111.000	114.000	111.900	100.700	96.470	80.380	79.070
x		95.830	99.050	111.700	114.900	111.900	100.200	96.060	80.400	78.870
σ		0.759	0.784	0.624	0.919	0.178	0.429	1.050	2.136	1.788
%RSD		0.792	0.791	0.558	0.800	0.159	0.428	1.093	2.657	2.267

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	0.000	98.180	-1.615	268.700	82.2%	99.610	100.200	99.140	100.300
2	13:32:07	0.000	99.130	0.642	264.300	82.3%	98.140	100.200	97.940	102.300
3	13:32:34	0.000	100.200	1.545	269.800	81.7%	98.030	99.580	98.270	103.600
x		0.000	99.180	0.191	267.600	82.1%	98.590	99.980	98.450	102.100
σ		0.000	1.032	1.627	2.887	0.3%	0.886	0.350	0.621	1.651
%RSD		0.000	1.040	853.000	1.079	0.4	0.898	0.350	0.631	1.618

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	91.710	89.410	98.970	96.880	83.4%	99.550	101.600	105.000	99.400
2	13:32:07	90.750	88.510	99.150	96.670	83.8%	99.970	101.200	104.800	100.500
3	13:32:34	90.580	88.620	100.400	97.500	83.7%	100.000	102.400	105.600	101.200
x		91.010	88.850	99.510	97.020	83.6%	99.850	101.700	105.100	100.400
σ		0.613	0.492	0.790	0.434	0.2%	0.262	0.572	0.417	0.900
%RSD		0.674	0.554	0.794	0.447	0.3	0.262	0.562	0.396	0.897

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:40	115.900	114.100	86.8%	101.100	104.500	98.530	99.810	101.300	86.7%
2	13:32:07	115.500	114.600	87.0%	101.900	104.500	99.560	100.100	101.700	86.6%
3	13:32:34	115.100	114.400	88.2%	100.400	104.400	98.550	99.800	101.800	87.8%
x		115.500	114.300	87.3%	101.100	104.500	98.880	99.900	101.600	87.0%
σ		0.429	0.259	0.8%	0.746	0.081	0.590	0.159	0.297	0.6%
%RSD		0.372	0.226	0.9	0.738	0.078	0.597	0.159	0.292	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	89.3%	0.060	1.488	2.253	12.060	T 1059.000	T 1412.000	1481.000	1487.000
2	13:37:57	89.9%	0.012	0.920	1.853	18.500	T 1071.000	T 1405.000	1484.000	1490.000
3	13:38:24	89.6%	0.075	1.263	2.085	15.470	T 1078.000	T 1414.000	1497.000	1506.000
x		89.6%	0.049	1.224	2.063	15.340	T 1070.000	T 1410.000	1487.000	1494.000
σ		0.3%	0.033	0.286	0.201	3.222	T 9.713	T 4.343	8.290	10.570
%RSD		0.4	67.110	23.350	9.727	21.000	T 0.908	T 0.308	0.558	0.707

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	3.984	T 2399.000	8969.000	482.000	7713.000	7714.000	78.6%	0.168	-0.167
2	13:37:57	4.117	T 2389.000	9092.000	491.100	7610.000	7774.000	79.3%	0.297	0.028
3	13:38:24	4.217	T 2393.000	9149.000	488.000	7692.000	7755.000	78.9%	0.387	0.090
x		4.106	T 2394.000	9070.000	487.000	7672.000	7748.000	78.9%	0.284	-0.016
σ		0.117	T 5.066	91.970	4.594	54.290	30.930	0.3%	0.110	0.134
%RSD		2.839	T 0.212	1.014	0.943	0.708	0.399	0.4	38.690	819.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	0.392	637.600	2672.000	TM 540.800	T 2531.000	2668.000	-0.005	0.361	0.614
2	13:37:57	0.371	554.600	2695.000	TM 542.500	T 2525.000	2630.000	0.020	0.388	0.285
3	13:38:24	0.402	484.600	2686.000	TM 543.800	T 2534.000	2651.000	-0.002	0.336	0.022
x		0.388	558.900	2684.000	TM 542.400	T 2530.000	2650.000	0.004	0.362	0.307
σ		0.016	76.630	11.550	TM 1.521	T 4.755	18.920	0.014	0.026	0.296
%RSD		4.106	13.710	0.430	TM 0.281	T 0.188	0.714	324.700	7.085	96.580

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	0.259	0.209	3.962	3.423	3.906	0.136	0.201	6.024	6.310
2	13:37:57	0.183	0.269	4.149	3.636	4.104	0.148	-0.088	6.568	7.029
3	13:38:24	0.298	0.237	4.015	3.434	3.596	0.195	0.361	6.184	5.762
x		0.247	0.238	4.042	3.498	3.869	0.159	0.158	6.259	6.367
σ		0.059	0.030	0.096	0.120	0.256	0.031	0.227	0.280	0.636
%RSD		23.750	12.450	2.380	3.430	6.628	19.690	143.900	4.471	9.984

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	0.000	0.737	1.661	35.240	83.5%	0.067	0.117	0.078	0.565
2	13:37:57	0.000	0.255	-0.601	34.360	84.1%	0.007	0.039	0.010	0.615
3	13:38:24	0.000	0.556	0.784	34.660	84.1%	0.035	0.072	0.026	-0.245
x		0.000	0.516	0.615	34.750	83.9%	0.036	0.076	0.038	0.312
σ		0.000	0.244	1.140	0.447	0.4%	0.030	0.039	0.036	0.483
%RSD		0.000	47.270	185.600	1.285	0.4	82.060	51.800	94.400	155.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	0.046	0.033	0.034	0.036	87.3%	-0.040	-0.060	-0.041	-0.020
2	13:37:57	0.024	0.032	0.040	0.039	88.1%	-0.006	-0.040	-0.049	-0.047
3	13:38:24	0.026	0.029	0.046	0.039	88.2%	-0.010	-0.061	-0.045	-0.051
x		0.032	0.032	0.040	0.038	87.9%	-0.018	-0.053	-0.045	-0.039
σ		0.012	0.002	0.006	0.002	0.5%	0.018	0.012	0.004	0.017
%RSD		37.960	6.865	14.210	4.354	0.5	100.300	22.570	8.816	42.510

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:31	2.922	3.078	88.1%	0.041	0.046	0.071	0.063	0.066	87.1%
2	13:37:57	3.035	2.877	89.2%	0.045	0.037	0.062	0.070	0.066	88.2%
3	13:38:24	3.213	3.028	89.1%	0.041	0.041	0.067	0.068	0.068	88.9%
x		3.057	2.995	88.8%	0.042	0.041	0.067	0.067	0.067	88.1%
σ		0.147	0.105	0.6%	0.002	0.004	0.004	0.003	0.001	0.9%
%RSD		4.808	3.489	0.7	5.897	10.370	6.100	4.714	1.952	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	86.5%	100.900	112.900	112.300	26.050	T 6153.000	T 7736.000	T 7792.000	T 7660.000
2	13:43:49	87.3%	98.630	109.900	113.300	26.850	T 6162.000	T 7765.000	T 7798.000	T 7710.000
3	13:44:16	88.0%	98.660	110.800	113.100	22.140	T 6202.000	T 7777.000	T 7784.000	T 7698.000
x		87.2%	99.390	111.200	112.900	25.020	T 6172.000	T 7759.000	T 7791.000	T 7689.000
σ		0.8%	1.290	1.512	0.535	2.522	T 26.100	T 21.020	T 6.734	T 26.240
%RSD		0.9	1.298	1.359	0.474	10.080	T 0.423	T 0.271	T 0.086	T 0.341

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	109.400	TM 12320.000	T 44090.000	T 3213.000	37460.000	T 37860.000	77.0%	101.800	94.560
2	13:43:49	109.700	TM 12310.000	T 44860.000	T 3241.000	38470.000	T 38290.000	75.9%	101.200	92.780
3	13:44:16	108.200	TM 12180.000	T 44590.000	T 3246.000	38060.000	T 38370.000	76.2%	98.770	92.190
x		109.100	TM 12270.000	T 44510.000	T 3233.000	38000.000	T 38170.000	76.4%	100.600	93.170
σ		0.760	TM 77.390	T 387.900	T 17.880	505.500	T 273.200	0.6%	1.623	1.234
%RSD		0.697	TM 0.631	T 0.872	T 0.553	1.330	T 0.716	0.7	1.613	1.324

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	98.640	24960.000	T 12970.000	TM 2600.000	T 12910.000	14100.000	93.160	94.980	90.600
2	13:43:49	98.470	24810.000	T 13150.000	TM 2649.000	T 13040.000	14070.000	92.080	93.740	89.490
3	13:44:16	98.530	24720.000	T 12950.000	TM 2618.000	T 12960.000	14000.000	91.680	92.130	93.450
x		98.550	24830.000	T 13020.000	TM 2623.000	T 12970.000	14060.000	92.310	93.620	91.180
σ		0.087	120.000	T 112.800	TM 24.800	T 70.410	55.780	0.764	1.429	2.042
%RSD		0.089	0.483	T 0.866	TM 0.946	T 0.543	0.397	0.827	1.527	2.240

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	93.400	96.930	109.000	108.700	108.300	97.410	92.570	30.850	29.080
2	13:43:49	93.590	97.550	109.200	109.600	110.000	96.070	94.710	27.670	30.810
3	13:44:16	93.000	96.250	109.600	112.300	108.200	96.240	90.790	28.740	31.220
x		93.330	96.910	109.300	110.200	108.900	96.570	92.690	29.090	30.370
σ		0.300	0.649	0.296	1.899	1.025	0.730	1.965	1.620	1.135
%RSD		0.322	0.670	0.271	1.723	0.941	0.756	2.120	5.570	3.737

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	0.000	97.710	1.130	260.700	83.4%	95.410	96.180	95.480	96.850
2	13:43:49	0.000	93.330	-0.743	261.400	81.8%	95.350	95.970	94.400	100.300
3	13:44:16	0.000	97.460	-2.771	258.700	83.2%	93.810	94.980	93.880	99.960
x		0.000	96.170	-0.795	260.300	82.8%	94.860	95.710	94.590	99.030
σ		0.000	2.459	1.951	1.383	0.8%	0.908	0.644	0.820	1.899
%RSD		0.000	2.557	245.500	0.531	1.0	0.957	0.673	0.867	1.918

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	92.110	89.360	95.990	94.430	84.7%	96.170	98.190	92.950	88.450
2	13:43:49	91.240	90.100	94.900	93.090	84.4%	96.890	97.990	93.610	90.040
3	13:44:16	91.200	89.380	96.340	93.860	84.5%	96.670	98.760	94.690	90.490
x		91.520	89.610	95.740	93.800	84.5%	96.580	98.310	93.750	89.660
σ		0.513	0.422	0.753	0.671	0.2%	0.370	0.399	0.878	1.075
%RSD		0.560	0.471	0.787	0.716	0.2	0.383	0.406	0.937	1.199

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:21	112.700	111.500	87.2%	96.380	99.850	93.450	95.050	96.310	89.2%
2	13:43:49	111.900	111.000	88.7%	96.420	99.400	94.440	95.580	96.640	90.0%
3	13:44:16	112.200	111.600	89.1%	96.820	99.200	94.160	95.530	96.800	90.1%
x		112.200	111.400	88.3%	96.540	99.480	94.020	95.390	96.580	89.8%
σ		0.424	0.338	1.0%	0.243	0.333	0.507	0.296	0.251	0.5%
%RSD		0.378	0.303	1.2	0.251	0.334	0.539	0.310	0.260	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	89.6%	-0.019	1.398	1.981	20.310	592.200	21.150	21.840	22.760
2	13:49:39	90.2%	0.012	1.335	1.316	13.170	605.900	22.530	22.440	22.650
3	13:50:06	90.1%	0.028	1.057	1.523	11.420	603.100	21.920	21.860	22.390
x		89.9%	0.007	1.264	1.607	14.970	600.400	21.870	22.050	22.600
σ		0.3%	0.024	0.181	0.340	4.709	7.253	0.695	0.344	0.194
%RSD		0.3	345.300	14.350	21.160	31.460	1.208	3.178	1.558	0.857
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	3.712	272.100	T 47140.000	13.430	102.000	93.460	77.5%	0.015	0.610
2	13:49:39	3.659	276.500	T 47740.000	13.450	82.060	98.160	76.9%	0.083	0.475
3	13:50:06	3.696	271.700	T 47990.000	14.250	106.700	94.250	76.2%	0.061	0.434
x		3.689	273.400	T 47620.000	13.710	96.930	95.290	76.9%	0.053	0.506
σ		0.027	2.650	T 440.900	0.465	13.090	2.517	0.6%	0.035	0.092
%RSD		0.736	0.969	T 0.926	3.389	13.510	2.642	0.8	65.370	18.170
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	0.213	3258.000	6.749	0.811	1.732	2.567	-0.001	0.048	-0.085
2	13:49:39	0.204	3416.000	6.926	0.846	2.561	2.219	0.011	0.061	-0.434
3	13:50:06	0.252	3530.000	6.353	0.919	1.770	2.671	0.008	0.080	-0.067
x		0.223	3401.000	6.676	0.858	2.021	2.485	0.006	0.063	-0.195
σ		0.026	136.800	0.293	0.055	0.468	0.236	0.006	0.016	0.207
%RSD		11.580	4.022	4.395	6.437	23.160	9.511	100.200	25.550	105.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	4.045	4.139	3.039	3.489	3.111	-0.325	-0.265	1.212	1.364
2	13:49:39	3.986	4.000	3.258	3.094	3.301	-0.073	0.065	1.024	0.825
3	13:50:06	3.994	4.125	3.310	3.822	3.301	-0.014	-0.238	1.249	0.898
x		4.008	4.088	3.202	3.468	3.238	-0.137	-0.146	1.162	1.029
σ		0.032	0.077	0.144	0.364	0.110	0.165	0.183	0.121	0.292
%RSD		0.797	1.875	4.498	10.500	3.396	120.300	125.200	10.400	28.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	0.000	0.053	-1.887	0.193	81.7%	0.045	0.124	0.029	-0.002
2	13:49:39	0.000	0.245	0.656	0.195	82.0%	0.032	0.118	0.041	-0.143
3	13:50:06	0.000	0.495	-1.328	0.247	82.1%	-0.014	-0.042	0.045	-0.219
x		0.000	0.264	-0.853	0.212	82.0%	0.021	0.066	0.038	-0.122
σ		0.000	0.222	1.336	0.031	0.2%	0.031	0.094	0.008	0.110
%RSD		0.000	83.940	156.700	14.680	0.3	148.700	141.700	22.090	90.590
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	0.002	0.002	-0.000	0.012	85.9%	-0.008	-0.001	0.536	0.493
2	13:49:39	0.001	0.008	0.005	0.004	86.0%	-0.011	-0.010	0.534	0.479
3	13:50:06	0.000	0.003	0.011	0.011	85.4%	-0.010	-0.001	0.503	0.428
x		0.001	0.004	0.005	0.009	85.8%	-0.010	-0.004	0.524	0.467
σ		0.001	0.003	0.006	0.004	0.3%	0.001	0.006	0.019	0.034
%RSD		75.620	78.390	109.000	48.740	0.4	15.180	146.400	3.547	7.365
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:13	0.847	0.823	88.6%	-0.001	-0.002	0.010	0.007	0.011	88.3%
2	13:49:39	0.806	0.914	89.2%	0.004	0.002	0.017	0.014	0.017	90.0%
3	13:50:06	0.728	0.785	89.6%	0.001	0.001	0.022	0.014	0.017	89.9%
x		0.793	0.841	89.2%	0.001	0.000	0.016	0.012	0.015	89.4%
σ		0.060	0.066	0.5%	0.002	0.002	0.006	0.004	0.003	1.0%
%RSD		7.607	7.897	0.6	168.000	791.600	37.890	37.530	21.190	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	90.5%	-0.011	-0.715	-0.783	9.544	4.582	2.193	2.774	2.288
2	13:55:29	89.7%	-0.011	-0.286	-0.432	12.910	5.982	2.614	2.657	2.172
3	13:55:56	91.3%	0.058	-0.817	-0.486	10.940	5.526	2.660	2.604	2.100
x		90.5%	0.012	-0.606	-0.567	11.130	5.364	2.489	2.679	2.187
σ		0.8%	0.040	0.282	0.189	1.692	0.714	0.258	0.087	0.095
%RSD		0.9	341.400	46.510	33.360	15.200	13.310	10.350	3.255	4.325

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	2.209	5.334	T 45450.000	9.852	30.720	17.530	76.8%	0.151	0.540
2	13:55:29	2.134	5.042	T 45630.000	10.400	29.670	21.540	77.0%	0.083	0.169
3	13:55:56	2.214	5.686	T 45830.000	11.790	27.710	18.760	76.9%	0.016	0.123
x		2.186	5.354	T 45640.000	10.680	29.370	19.280	76.9%	0.083	0.278
σ		0.045	0.322	T 189.000	0.999	1.523	2.052	0.1%	0.068	0.229
%RSD		2.060	6.021	T 0.414	9.356	5.186	10.640	0.1	81.390	82.390

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	0.166	3403.000	9.719	0.127	7.594	6.923	0.005	0.049	-0.437
2	13:55:29	0.128	3441.000	8.864	0.141	7.273	5.683	0.000	0.031	-0.792
3	13:55:56	0.169	3581.000	9.690	0.151	7.173	7.007	0.010	0.049	-0.271
x		0.154	3475.000	9.424	0.139	7.347	6.537	0.005	0.043	-0.500
σ		0.023	93.700	0.485	0.012	0.220	0.741	0.005	0.011	0.266
%RSD		14.850	2.697	5.150	8.731	2.996	11.340	96.770	24.680	53.260

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	0.170	0.143	1.309	1.356	1.110	-0.025	0.005	3.358	5.282
2	13:55:29	0.095	0.177	1.347	1.202	1.084	-0.335	0.236	4.396	4.271
3	13:55:56	0.120	0.129	1.283	1.116	1.407	-0.015	-0.539	2.929	3.690
x		0.128	0.150	1.313	1.225	1.200	-0.125	-0.100	3.561	4.414
σ		0.038	0.025	0.032	0.122	0.180	0.182	0.398	0.754	0.805
%RSD		29.790	16.660	2.451	9.946	14.980	145.600	399.800	21.170	18.250

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	0.000	0.360	0.907	-0.047	82.5%	-0.083	-0.038	-0.080	-0.368
2	13:55:29	0.000	0.597	0.353	0.003	82.3%	-0.089	-0.072	-0.077	0.025
3	13:55:56	0.000	-0.002	-1.594	0.090	81.6%	-0.113	-0.105	-0.092	0.182
x		0.000	0.319	-0.111	0.015	82.2%	-0.095	-0.072	-0.083	-0.054
σ		0.000	0.302	1.314	0.069	0.5%	0.016	0.033	0.008	0.283
%RSD		0.000	94.680	1182.000	463.200	0.6	16.560	46.530	9.614	527.500

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	0.001	0.000	0.003	0.012	86.1%	-0.046	-0.073	0.001	0.023
2	13:55:29	0.002	0.000	-0.003	0.013	86.1%	-0.061	-0.044	0.014	0.025
3	13:55:56	0.002	0.000	0.006	0.005	86.1%	-0.053	-0.042	0.060	0.048
x		0.002	0.000	0.002	0.010	86.1%	-0.053	-0.053	0.025	0.032
σ		0.000	0.000	0.005	0.004	0.0%	0.008	0.017	0.031	0.014
%RSD		30.370	3.224	247.100	44.690	0.0	14.330	32.650	124.500	42.890

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:02	0.051	0.020	88.0%	-0.004	-0.003	0.021	0.017	0.016	88.3%
2	13:55:29	0.013	0.019	89.6%	0.000	0.001	0.013	0.020	0.015	89.9%
3	13:55:56	0.030	0.017	89.7%	0.001	-0.000	0.023	0.021	0.023	89.6%
x		0.031	0.019	89.1%	-0.001	-0.001	0.019	0.019	0.018	89.3%
σ		0.019	0.001	1.0%	0.003	0.002	0.005	0.002	0.004	0.8%
%RSD		61.300	7.879	1.1	338.200	239.400	27.670	11.250	22.060	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	90.9%	99.090	99.910	98.500	22.510	1108.000	T 996.200	1032.000	1024.000
2	14:01:18	91.7%	101.500	97.550	102.900	23.520	T 1057.000	T 998.300	1028.000	1035.000
3	14:01:45	89.8%	101.000	99.950	104.300	22.970	T 1064.000	T 997.100	1031.000	1037.000
x		90.8%	100.500	99.140	101.900	23.000	T 1076.000	T 997.200	1031.000	1032.000
σ		1.0%	1.278	1.378	3.028	0.509	T 27.400	T 1.065	1.963	7.173
%RSD		1.1	1.271	1.390	2.972	2.213	T 2.546	T 0.107	0.191	0.695
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	97.790	989.700	T 51720.000	1067.000	1062.000	1038.000	78.3%	103.000	95.260
2	14:01:18	97.890	988.600	T 52250.000	1072.000	1117.000	1052.000	77.9%	98.750	95.010
3	14:01:45	97.420	979.200	T 52060.000	1071.000	1089.000	1036.000	77.7%	99.430	96.350
x		97.700	985.800	T 52010.000	1070.000	1089.000	1042.000	78.0%	100.400	95.540
σ		0.246	5.795	T 267.500	2.288	27.270	8.647	0.3%	2.288	0.710
%RSD		0.252	0.588	T 0.514	0.214	2.504	0.830	0.4	2.279	0.743
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	101.900	29630.000	1101.000	101.000	T 998.100	1059.000	99.180	98.040	98.430
2	14:01:18	101.300	29450.000	1112.000	100.400	T 1011.000	1055.000	98.170	99.660	97.680
3	14:01:45	99.350	29160.000	1100.000	99.620	T 990.800	1050.000	96.880	96.150	95.600
x		100.800	29410.000	1104.000	100.300	T 999.900	1054.000	98.080	97.950	97.240
σ		1.315	235.900	6.814	0.677	T 10.070	4.598	1.151	1.754	1.467
%RSD		1.305	0.802	0.617	0.675	T 1.008	0.436	1.174	1.791	1.509
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	100.300	104.100	106.600	108.000	106.100	99.150	99.640	6.973	6.914
2	14:01:18	99.630	102.100	107.500	107.400	108.100	99.250	99.000	7.422	5.735
3	14:01:45	98.470	100.300	106.000	111.500	107.900	98.710	100.400	8.454	7.326
x		99.470	102.200	106.700	109.000	107.400	99.040	99.680	7.617	6.658
σ		0.919	1.920	0.723	2.256	1.070	0.289	0.696	0.759	0.826
%RSD		0.924	1.879	0.677	2.070	0.997	0.292	0.699	9.970	12.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	0.000	103.600	1.413	100.000	83.1%	98.620	98.010	97.850	104.200
2	14:01:18	0.000	109.600	1.446	99.430	82.7%	98.150	98.770	97.090	101.900
3	14:01:45	0.000	102.100	-1.332	101.000	82.0%	99.030	100.100	96.870	100.500
x		0.000	105.100	0.509	100.100	82.6%	98.600	98.950	97.270	102.200
σ		0.000	3.936	1.594	0.782	0.6%	0.442	1.039	0.513	1.863
%RSD		0.000	3.745	313.200	0.781	0.7	0.448	1.050	0.528	1.822
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	93.960	92.380	101.200	97.990	86.6%	98.960	99.880	98.800	93.890
2	14:01:18	93.470	91.360	100.600	97.010	87.1%	98.270	99.290	100.500	95.930
3	14:01:45	93.180	92.120	99.710	98.360	85.7%	99.110	100.200	102.200	96.900
x		93.540	91.950	100.500	97.780	86.5%	98.780	99.790	100.500	95.570
σ		0.392	0.527	0.748	0.699	0.7%	0.448	0.467	1.686	1.535
%RSD		0.419	0.573	0.744	0.715	0.8	0.454	0.468	1.677	1.606
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:51	99.580	99.260	89.0%	100.200	102.400	97.900	99.480	100.500	89.6%
2	14:01:18	99.360	98.490	89.6%	99.130	102.400	97.730	98.970	100.200	90.7%
3	14:01:45	99.440	98.850	90.2%	98.900	102.100	98.660	99.370	101.200	90.1%
x		99.460	98.860	89.6%	99.420	102.300	98.090	99.270	100.600	90.1%
σ		0.110	0.388	0.6%	0.718	0.128	0.495	0.266	0.519	0.6%
%RSD		0.110	0.392	0.6	0.722	0.125	0.504	0.268	0.516	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	89.3%	0.044	8.774	9.162	18.970	T 5457.000	T 37440.000	T 37080.000	T 36920.000
2	14:07:09	90.7%	0.027	8.202	9.026	21.040	T 5467.000	T 37090.000	T 36840.000	T 36820.000
3	14:07:36	90.7%	0.027	6.275	8.280	16.520	T 5534.000	T 37380.000	T 37140.000	T 36770.000
x		90.2%	0.033	7.751	8.823	18.840	T 5486.000	T 37300.000	T 37020.000	T 36840.000
σ		0.8%	0.010	1.309	0.475	2.262	T 41.920	T 186.200	T 160.900	T 81.140
%RSD		0.9	29.120	16.890	5.386	12.010	T 0.764	T 0.499	T 0.435	T 0.220

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	2.431	T 7522.000	T 49290.000	T 2853.000	99780.000	T 99190.000	77.3%	0.464	0.321
2	14:07:09	2.350	T 7505.000	T 49420.000	T 2833.000	M 100200.000	TM 100100.000	77.5%	0.619	0.792
3	14:07:36	2.558	T 7485.000	T 49380.000	T 2864.000	M 101100.000	TM 100300.000	76.3%	0.652	0.150
x		2.446	T 7504.000	T 49360.000	T 2850.000	M 100400.000	TM 99870.000	77.0%	0.578	0.421
σ		0.105	T 18.300	T 66.560	T 16.100	M 704.600	TM 604.900	0.6%	0.101	0.333
%RSD		4.296	T 0.244	T 0.135	T 0.565	M 0.702	TM 0.606	0.8	17.400	79.000

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	0.446	3978.000	1812.000	TM 1218.000	T 1746.000	1890.000	6.025	8.124	7.912
2	14:07:09	0.390	3950.000	1828.000	TM 1227.000	T 1732.000	1906.000	5.886	8.708	7.830
3	14:07:36	0.369	4484.000	1799.000	TM 1212.000	T 1724.000	1877.000	5.669	8.226	7.465
x		0.402	4137.000	1813.000	TM 1219.000	T 1734.000	1891.000	5.860	8.353	7.736
σ		0.040	300.400	14.620	TM 7.144	T 11.350	14.830	0.179	0.312	0.238
%RSD		9.941	7.260	0.806	TM 0.586	T 0.655	0.784	3.062	3.734	3.079

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	0.129	0.225	5.104	11.230	9.596	0.726	0.067	13.810	14.640
2	14:07:09	0.191	0.321	5.397	9.873	8.982	0.727	-0.303	13.930	12.270
3	14:07:36	0.149	0.348	5.143	10.790	9.233	0.696	0.503	15.250	14.190
x		0.157	0.298	5.215	10.630	9.270	0.716	0.089	14.330	13.700
σ		0.032	0.065	0.159	0.692	0.309	0.018	0.404	0.798	1.256
%RSD		20.130	21.770	3.047	6.513	3.332	2.485	454.600	5.571	9.168

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	0.000	0.157	-0.396	89.590	80.4%	0.165	0.305	0.259	2.354
2	14:07:09	0.000	0.159	0.145	88.510	80.9%	0.296	0.250	0.269	1.197
3	14:07:36	0.000	-0.125	2.556	90.590	79.7%	0.195	0.211	0.168	1.351
x		0.000	0.064	0.768	89.560	80.3%	0.219	0.255	0.232	1.634
σ		0.000	0.163	1.571	1.039	0.6%	0.069	0.047	0.056	0.628
%RSD		0.000	255.700	204.500	1.160	0.8	31.400	18.410	24.100	38.450

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	0.016	0.014	0.023	0.006	83.2%	-0.024	0.022	0.177	0.187
2	14:07:09	0.007	0.016	0.014	0.023	84.8%	0.002	0.023	0.155	0.192
3	14:07:36	0.018	0.024	0.026	0.030	84.3%	-0.016	0.035	0.167	0.186
x		0.014	0.018	0.021	0.020	84.1%	-0.013	0.026	0.166	0.188
σ		0.006	0.005	0.007	0.013	0.8%	0.014	0.007	0.011	0.003
%RSD		44.440	29.530	30.890	64.270	0.9	108.100	28.200	6.435	1.522

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:06:42	291.800	290.700	86.7%	0.076	0.071	0.026	0.025	0.027	84.7%
2	14:07:09	289.000	288.700	88.9%	0.063	0.070	0.024	0.023	0.026	86.0%
3	14:07:36	287.700	289.900	88.2%	0.072	0.071	0.027	0.025	0.031	86.1%
x		289.500	289.700	88.0%	0.070	0.071	0.026	0.024	0.028	85.6%
σ		2.066	1.008	1.1%	0.007	0.000	0.002	0.001	0.003	0.8%
%RSD		0.714	0.348	1.3	9.454	0.415	6.615	5.381	9.060	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	87.6%	0.352	0.679	1.254	24.470	T 4633.000	T 5500.000	5896.000	5916.000
2	14:13:00	88.9%	0.371	1.084	0.923	22.490	T 4670.000	T 5470.000	5889.000	5961.000
3	14:13:27	88.4%	0.405	1.235	1.428	14.320	T 4773.000	T 5531.000	5950.000	5976.000
x		88.3%	0.376	0.999	1.202	20.430	T 4692.000	T 5501.000	5912.000	5951.000
σ		0.7%	0.027	0.287	0.257	5.381	T 72.410	T 30.700	33.110	30.990
%RSD		0.8	7.141	28.730	21.380	26.340	T 1.543	T 0.558	0.560	0.521

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	T 82.920	T 6097.000	T 49820.000	T 3653.000	8508.000	8751.000	74.3%	2.599	0.659
2	14:13:00	83.210	T 6050.000	T 50000.000	T 3649.000	8930.000	8824.000	73.9%	2.470	0.977
3	14:13:27	T 80.460	T 6066.000	T 50350.000	T 3667.000	8773.000	8951.000	73.3%	2.446	1.483
x		T 82.200	T 6071.000	T 50060.000	T 3656.000	8737.000	8842.000	73.8%	2.505	1.040
σ		T 1.511	T 23.880	T 272.100	T 9.448	213.100	101.400	0.5%	0.082	0.416
%RSD		T 1.839	T 0.393	T 0.544	T 0.258	2.439	1.147	0.7	3.286	39.970

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	1.354	11660.000	162.600	248.900	163.700	170.000	0.396	4.444	3.714
2	14:13:00	1.320	11730.000	162.600	250.100	163.400	165.100	0.447	4.553	3.277
3	14:13:27	1.308	11650.000	167.100	249.700	164.000	167.900	0.423	4.357	4.442
x		1.327	11680.000	164.100	249.600	163.700	167.600	0.422	4.451	3.811
σ		0.024	42.450	2.565	0.636	0.318	2.484	0.026	0.098	0.589
%RSD		1.782	0.363	1.563	0.255	0.194	1.482	6.062	2.200	15.450

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	46.950	48.400	137.600	137.700	137.000	0.703	-0.104	7.376	8.503
2	14:13:00	46.670	48.890	136.900	135.100	134.400	-0.371	0.147	7.055	8.823
3	14:13:27	47.180	49.020	138.900	137.800	136.700	-0.039	0.410	7.908	8.249
x		46.930	48.770	137.800	136.900	136.100	0.097	0.151	7.446	8.525
σ		0.252	0.325	1.001	1.504	1.423	0.550	0.257	0.431	0.287
%RSD		0.537	0.665	0.726	1.099	1.046	564.300	170.200	5.787	3.371

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	0.000	0.336	-1.610	38.800	82.5%	0.809	0.047	0.076	1.178
2	14:13:00	0.000	0.217	-2.187	38.370	82.9%	-0.002	-0.007	0.069	0.355
3	14:13:27	0.000	0.169	0.154	38.450	81.5%	0.057	0.073	0.088	0.427
x		0.000	0.241	-1.214	38.540	82.3%	0.288	0.038	0.078	0.653
σ		0.000	0.086	1.220	0.227	0.7%	0.452	0.041	0.009	0.456
%RSD		0.000	35.900	100.500	0.588	0.8	156.800	109.200	12.200	69.810

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	0.240	0.235	0.301	0.254	83.1%	0.054	-0.003	-0.006	0.015
2	14:13:00	0.250	0.253	0.214	0.245	82.4%	0.063	0.010	0.018	0.028
3	14:13:27	0.273	0.267	0.289	0.270	83.2%	0.059	0.002	0.022	0.034
x		0.254	0.251	0.268	0.256	82.9%	0.058	0.003	0.011	0.026
σ		0.017	0.016	0.047	0.013	0.4%	0.005	0.006	0.015	0.010
%RSD		6.533	6.327	17.590	5.056	0.5	7.713	214.600	133.500	37.180

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:33	133.600	133.200	85.5%	0.056	0.052	1.864	1.899	1.894	86.0%
2	14:13:00	135.300	135.400	86.4%	0.060	0.059	1.868	1.888	1.865	86.3%
3	14:13:27	134.100	133.800	87.9%	0.069	0.061	1.834	1.866	1.877	86.9%
x		134.400	134.100	86.6%	0.062	0.057	1.856	1.884	1.879	86.4%
σ		0.873	1.109	1.2%	0.006	0.004	0.019	0.017	0.014	0.5%
%RSD		0.650	0.827	1.4	10.290	7.808	0.999	0.878	0.767	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	89.8%	0.020	5.045	7.415	25.590	T 4623.000	T 41180.000	T 41310.000	T 41180.000
2	14:18:49	90.0%	0.012	5.678	7.354	19.230	T 4678.000	T 41360.000	T 41050.000	T 40940.000
3	14:19:16	90.3%	-0.004	6.344	7.316	29.250	T 4712.000	T 41400.000	T 41240.000	T 40950.000
x		90.0%	0.010	5.689	7.361	24.690	T 4671.000	T 41310.000	T 41200.000	T 41020.000
σ		0.3%	0.012	0.650	0.050	5.069	T 45.230	T 113.800	T 133.900	T 138.200
%RSD		0.3	126.400	11.420	0.678	20.530	T 0.968	T 0.275	T 0.325	T 0.337

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	2.940	T 8961.000	T 48660.000	T 3625.000	M 120800.000	TM 120000.000	76.4%	0.856	0.370
2	14:18:49	3.050	T 8905.000	T 48580.000	T 3615.000	M 120700.000	TM 120300.000	76.8%	0.738	0.189
3	14:19:16	3.400	T 8951.000	T 49130.000	T 3620.000	M 121400.000	TM 120300.000	76.5%	0.650	0.499
x		3.130	T 8939.000	T 48790.000	T 3620.000	M 121000.000	TM 120200.000	76.6%	0.748	0.353
σ		0.240	T 30.220	T 300.400	T 5.217	M 396.400	TM 187.200	0.2%	0.103	0.156
%RSD		7.671	T 0.338	T 0.616	T 0.144	M 0.328	TM 0.156	0.3	13.820	44.160

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	0.360	5609.000	1241.000	258.000	T 1187.000	1351.000	2.433	11.170	9.392
2	14:18:49	0.309	5901.000	1229.000	254.200	T 1179.000	1363.000	2.523	11.230	9.590
3	14:19:16	0.359	5883.000	1230.000	255.000	T 1185.000	1353.000	2.501	10.850	9.434
x		0.343	5797.000	1233.000	255.700	T 1184.000	1356.000	2.486	11.080	9.472
σ		0.029	163.900	6.454	1.991	T 4.275	6.755	0.047	0.201	0.105
%RSD		8.586	2.827	0.523	0.779	T 0.361	0.498	1.888	1.811	1.104

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	0.147	0.322	1.331	9.938	7.843	1.328	0.271	26.050	26.940
2	14:18:49	0.179	0.280	1.360	10.600	7.988	1.704	0.138	27.830	26.660
3	14:19:16	0.132	0.287	1.437	11.160	8.094	1.952	0.236	26.790	26.400
x		0.152	0.297	1.376	10.570	7.975	1.661	0.215	26.890	26.670
σ		0.024	0.023	0.055	0.611	0.126	0.314	0.069	0.894	0.267
%RSD		15.870	7.593	3.986	5.784	1.577	18.890	32.060	3.326	1.001

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	0.000	-0.263	4.314	78.760	79.6%	-0.087	0.029	-0.021	0.978
2	14:18:49	0.000	0.087	-0.930	78.170	79.5%	-0.029	0.039	-0.024	0.933
3	14:19:16	0.000	0.091	-0.658	78.640	80.0%	0.005	0.053	0.014	1.811
x		0.000	-0.028	0.909	78.520	79.7%	-0.037	0.040	-0.010	1.241
σ		0.000	0.203	2.952	0.313	0.2%	0.046	0.012	0.021	0.494
%RSD		0.000	723.200	324.800	0.398	0.3	125.500	29.920	202.700	39.850

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	0.027	0.018	0.012	0.021	81.8%	-0.010	-0.034	-0.065	-0.055
2	14:18:49	0.023	0.024	0.015	0.023	82.4%	-0.053	-0.034	-0.047	-0.046
3	14:19:16	0.008	0.029	0.018	0.016	82.0%	-0.055	-0.015	-0.037	-0.039
x		0.019	0.024	0.015	0.020	82.1%	-0.039	-0.028	-0.049	-0.046
σ		0.010	0.005	0.003	0.004	0.3%	0.026	0.011	0.014	0.008
%RSD		51.700	22.420	19.760	20.050	0.4	65.260	39.340	28.380	16.650

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:18:22	M 530.200	M 532.000	86.1%	0.038	0.042	0.010	0.013	0.017	83.6%
2	14:18:49	M 531.400	M 532.600	86.9%	0.044	0.040	0.027	0.031	0.027	84.9%
3	14:19:16	M 533.800	M 536.800	87.5%	0.051	0.044	0.036	0.030	0.031	85.0%
x		M 531.800	M 533.800	86.8%	0.044	0.042	0.024	0.024	0.025	84.5%
σ		M 1.824	M 2.604	0.7%	0.007	0.002	0.013	0.010	0.007	0.8%
%RSD		M 0.343	M 0.488	0.9	15.400	5.358	54.130	41.550	28.350	0.9

SJ12043-004 10/18/2017 14:23:45

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	89.0%	0.021	6.145	7.351	19.990	T 5214.000	T 35770.000	T 35520.000	T 35710.000
2	14:24:39	87.4%	0.006	5.496	7.184	29.150	T 5325.000	T 36200.000	T 35960.000	T 35950.000
3	14:25:07	87.7%	0.014	6.746	7.040	27.040	T 5398.000	T 36780.000	T 36350.000	T 36270.000
x		88.0%	0.013	6.129	7.191	25.400	T 5312.000	T 36250.000	T 35940.000	T 35980.000
σ		0.8%	0.008	0.625	0.156	4.796	T 92.450	T 506.800	T 414.300	T 285.000
%RSD		0.9	57.480	10.200	2.165	18.880	T 1.740	T 1.398	T 1.153	T 0.792

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	1.485	T 7252.000	T 48800.000	T 2770.000	98130.000	T 97530.000	73.8%	0.699	0.540
2	14:24:39	1.563	T 7294.000	T 49310.000	T 2767.000	98180.000	T 97200.000	73.6%	0.395	0.793
3	14:25:07	1.578	T 7341.000	T 50050.000	T 2787.000	98280.000	T 98490.000	72.9%	0.494	0.910
x		1.542	T 7296.000	T 49380.000	T 2775.000	98200.000	T 97740.000	73.4%	0.529	0.748
σ		0.050	T 44.550	T 629.000	T 11.190	75.100	T 670.400	0.5%	0.155	0.189
%RSD		3.246	T 0.611	T 1.274	T 0.403	0.076	T 0.686	0.6	29.270	25.330

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	0.337	6227.000	1764.000	TM 1199.000	T 1670.000	1847.000	5.853	8.213	7.693
2	14:24:39	0.389	5934.000	1754.000	TM 1197.000	T 1663.000	1830.000	5.955	8.356	7.221
3	14:25:07	0.356	6014.000	1761.000	TM 1204.000	T 1681.000	1863.000	5.884	8.058	8.044
x		0.361	6059.000	1760.000	TM 1200.000	T 1671.000	1847.000	5.897	8.209	7.653
σ		0.026	151.800	4.998	TM 3.782	T 9.403	16.420	0.052	0.149	0.413
%RSD		7.291	2.505	0.284	TM 0.315	T 0.563	0.889	0.885	1.816	5.392

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	0.073	0.225	3.939	9.616	7.341	0.950	-0.001	17.800	19.530
2	14:24:39	0.091	0.191	3.789	8.797	7.401	1.017	-0.449	19.320	18.500
3	14:25:07	0.105	0.271	4.222	8.828	7.732	1.265	-0.226	18.670	18.320
x		0.090	0.229	3.983	9.080	7.491	1.078	-0.225	18.600	18.790
σ		0.016	0.040	0.220	0.464	0.210	0.166	0.224	0.763	0.649
%RSD		18.180	17.660	5.521	5.111	2.809	15.400	99.470	4.104	3.453

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	0.000	0.020	0.342	85.950	78.3%	0.042	0.058	0.081	1.716
2	14:24:39	0.000	-0.293	-2.618	88.160	78.1%	0.095	0.136	0.061	0.492
3	14:25:07	0.000	-0.031	-1.409	87.130	77.8%	0.060	0.106	0.122	1.836
x		0.000	-0.101	-1.228	87.080	78.0%	0.066	0.100	0.088	1.348
σ		0.000	0.168	1.488	1.105	0.3%	0.027	0.039	0.031	0.744
%RSD		0.000	165.800	121.200	1.269	0.3	40.830	39.150	35.070	55.180

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	0.003	0.000	0.003	0.016	80.9%	-0.061	-0.063	-0.090	-0.078
2	14:24:39	0.001	0.004	0.003	0.009	80.6%	-0.032	-0.099	-0.073	-0.047
3	14:25:07	0.005	0.003	-0.001	0.001	80.7%	-0.022	-0.051	-0.096	-0.056
x		0.003	0.003	0.002	0.009	80.7%	-0.039	-0.071	-0.086	-0.060
σ		0.002	0.002	0.002	0.008	0.2%	0.020	0.025	0.012	0.016
%RSD		69.080	85.660	117.500	88.840	0.2	51.900	35.470	13.970	26.330

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:11	285.700	282.500	84.9%	0.058	0.055	0.004	0.008	0.008	82.4%
2	14:24:39	283.100	282.100	86.0%	0.053	0.057	0.011	0.010	0.008	82.9%
3	14:25:07	283.100	283.700	86.6%	0.052	0.049	0.002	0.007	0.006	83.6%
x		284.000	282.800	85.8%	0.054	0.053	0.006	0.008	0.007	83.0%
σ		1.482	0.821	0.9%	0.003	0.004	0.005	0.002	0.001	0.6%
%RSD		0.522	0.290	1.0	6.145	8.293	81.060	18.760	17.070	0.7

CCV MW9737 10/18/2017 14:29:38 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	77.2%	301.100	304.000	300.900	8.732	T 60900.000	T 56890.000	T 57020.000	T 56340.000
2	14:30:31	78.0%	295.800	300.300	307.600	11.190	T 60960.000	T 57130.000	T 57000.000	T 56640.000
3	14:30:58	79.0%	298.600	298.600	304.500	-4.844	T 61020.000	T 57070.000	T 57120.000	T 56750.000
x		78.0%	99.507%	100.331%	101.444%	5.026	T 101.602%	T 57030.000	T 57050.000	T 94.291%
σ		0.9%	n/a	n/a	n/a	8.635	T n/a	T 122.100	T 66.080	T n/a
%RSD		1.2	0.902	0.918	1.109	171.800	T 0.103	T 0.214	T 0.116	T 0.370
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	282.700	T 2873.000	706.800	T 57610.000	57760.000	T 57140.000	70.6%	297.900	294.600
2	14:30:31	283.600	T 2852.000	735.300	T 57600.000	58290.000	T 57910.000	70.2%	297.500	293.700
3	14:30:58	283.000	T 2858.000	746.600	T 58390.000	58470.000	T 58100.000	70.4%	297.800	292.700
x		94.359%	T 95.363%	729.500	T 96.442%	58170.000	T 96.196%	70.4%	99.246%	97.885%
σ		n/a	T n/a	20.500	T n/a	368.000	T n/a	0.2%	n/a	n/a
%RSD		0.160	T 0.374	2.810	T 0.788	0.633	T 0.886	0.2	0.076	0.310
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	293.400	69260.000	T 56820.000	291.400	T 57390.000	T 56480.000	271.600	273.300	278.900
2	14:30:31	293.100	69020.000	T 57340.000	294.100	T 57780.000	T 57380.000	273.200	274.400	274.900
3	14:30:58	290.900	68350.000	T 57240.000	296.700	T 57520.000	T 57010.000	272.600	272.700	265.900
x		97.488%	68880.000	T 57130.000	98.023%	T 57560.000	T 94.929%	90.825%	91.160%	273.200
σ		n/a	473.800	T 278.300	n/a	T 198.200	T n/a	n/a	n/a	6.665
%RSD		0.452	0.688	T 0.487	0.903	T 0.344	T 0.799	0.298	0.313	2.440
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	267.100	269.300	273.200	275.000	275.400	291.200	280.300	0.420	-0.114
2	14:30:31	266.800	270.500	275.600	279.000	280.600	292.000	284.600	0.732	-0.440
3	14:30:58	266.700	273.600	271.400	281.200	277.600	294.000	277.600	2.013	-0.146
x		266.900	90.376%	91.135%	278.400	277.900	97.457%	280.800	1.055	-0.233
σ		0.181	n/a	n/a	3.163	2.634	n/a	3.552	0.844	0.180
%RSD		0.068	0.809	0.773	1.136	0.948	0.491	1.265	79.990	76.990
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	0.000	288.300	-1.241	294.600	74.4%	301.600	305.600	301.000	292.000
2	14:30:31	0.000	286.300	-0.892	297.100	73.7%	300.800	302.500	302.900	295.000
3	14:30:58	0.000	284.400	-2.795	297.400	74.3%	302.000	303.700	303.300	287.300
x		0.000	95.443%	-1.643	98.797%	74.1%	100.499%	101.302%	302.400	291.400
σ		0.000	n/a	1.013	n/a	0.4%	n/a	n/a	1.202	3.904
%RSD		0.000	0.684	61.670	0.513	0.5	0.208	0.508	0.397	1.339
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	280.500	274.400	289.000	283.900	75.8%	295.200	300.400	310.900	293.300
2	14:30:31	279.300	271.800	286.700	284.900	76.1%	293.700	301.200	314.100	294.900
3	14:30:58	276.000	272.900	287.400	282.300	76.6%	293.300	301.400	317.000	297.400
x		92.869%	273.000	287.700	94.574%	76.2%	98.024%	100.333%	104.660%	98.395%
σ		n/a	1.288	1.192	n/a	0.4%	n/a	n/a	n/a	n/a
%RSD		0.822	0.472	0.414	0.464	0.6	0.344	0.172	0.972	0.711
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:04	292.500	294.300	80.0%	304.900	T 295.100	297.300	303.100	T 302.300	78.2%
2	14:30:31	295.300	291.800	81.7%	306.700	T 297.300	301.300	303.000	T 302.700	78.5%
3	14:30:58	296.200	291.500	82.0%	301.300	T 294.400	298.100	301.000	T 300.300	80.0%
x		98.225%	97.508%	81.2%	101.438%	T 98.534%	99.626%	100.789%	T 100.592%	78.9%
σ		n/a	n/a	1.1%	n/a	T n/a	n/a	n/a	T n/a	1.0%
%RSD		0.643	0.528	1.3	0.902	T 0.523	0.710	0.395	T 0.429	1.3

CCB IM8211-01 10/18/2017 14:35:26 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	87.4%	0.038	1.310	2.399	-7.793	5.806	6.855	6.756	6.576
2	14:36:20	87.5%	0.021	1.593	1.858	-12.880	6.095	7.666	8.618	8.526
3	14:36:47	87.7%	0.029	1.587	1.440	-12.520	8.886	12.560	12.950	12.890
x		87.5%	0.030	1.497	1.899	-11.060	6.929	9.027	9.440	9.330
σ		0.2%	0.008	0.162	0.481	2.839	1.701	3.087	3.176	3.231
%RSD		0.2	27.510	10.800	25.330	25.660	24.550	34.200	33.640	34.630
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	0.730	1.170	407.100	10.990	18.270	-0.834	75.6%	-0.006	0.007
2	14:36:20	0.748	1.133	409.700	8.677	4.125	3.969	76.1%	0.062	0.030
3	14:36:47	0.739	1.439	442.500	12.920	27.430	9.711	75.3%	0.109	0.050
x		0.739	1.247	419.800	10.860	16.610	4.282	75.7%	0.055	0.029
σ		0.009	0.167	19.770	2.126	11.740	5.280	0.4%	0.058	0.021
%RSD		1.215	13.400	4.710	19.560	70.700	123.300	0.6	105.600	73.450
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	0.010	7.468	6.318	0.147	5.028	8.329	0.011	0.026	-0.161
2	14:36:20	0.011	0.993	6.128	0.131	4.769	6.054	0.024	0.050	-0.381
3	14:36:47	0.011	10.610	8.805	0.183	7.979	8.654	0.048	0.094	-0.489
x		0.011	6.359	7.084	0.154	5.925	7.679	0.028	0.057	-0.344
σ		0.000	4.906	1.494	0.027	1.783	1.417	0.019	0.035	0.167
%RSD		2.832	77.150	21.090	17.300	30.090	18.450	69.250	61.240	48.710
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	-0.023	-0.012	0.034	0.064	0.055	-0.029	0.075	-0.186	-0.504
2	14:36:20	-0.049	-0.013	0.084	0.185	0.137	0.033	-0.259	-0.370	0.235
3	14:36:47	0.002	0.073	0.081	0.187	0.086	0.075	-0.203	-0.624	-0.114
x		-0.024	0.016	0.066	0.145	0.092	0.026	-0.129	-0.393	-0.128
σ		0.025	0.050	0.028	0.071	0.041	0.052	0.179	0.220	0.370
%RSD		107.700	309.000	42.280	48.730	44.870	200.400	138.900	55.930	289.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	0.000	-0.282	-0.390	-0.039	80.6%	0.136	0.180	0.218	0.078
2	14:36:20	0.000	0.137	0.389	0.025	81.9%	0.070	0.158	0.125	0.156
3	14:36:47	0.000	0.269	-2.165	0.045	81.9%	0.114	0.139	0.149	0.153
x		0.000	0.042	-0.722	0.010	81.5%	0.107	0.159	0.164	0.129
σ		0.000	0.288	1.309	0.044	0.8%	0.033	0.021	0.048	0.044
%RSD		0.000	690.500	181.300	422.500	1.0	31.280	12.980	29.330	34.070
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	0.046	0.044	0.020	0.026	83.2%	0.050	0.051	0.572	0.502
2	14:36:20	0.050	0.048	0.026	0.028	85.1%	0.044	-0.010	0.570	0.539
3	14:36:47	0.054	0.060	0.062	0.032	85.1%	-0.004	0.049	0.450	0.561
x		0.050	0.050	0.036	0.028	84.5%	0.030	0.030	0.531	0.534
σ		0.004	0.008	0.023	0.003	1.1%	0.030	0.035	0.070	0.030
%RSD		7.551	16.740	62.240	11.600	1.3	98.060	115.600	13.180	5.569
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:53	0.075	0.042	86.4%	0.027	0.037	0.022	0.024	0.023	85.3%
2	14:36:20	0.077	0.041	87.4%	0.030	0.027	0.035	0.032	0.030	86.5%
3	14:36:47	0.115	0.090	87.8%	0.043	0.042	0.036	0.043	0.041	87.5%
x		0.089	0.058	87.2%	0.033	0.035	0.031	0.033	0.031	86.5%
σ		0.023	0.028	0.7%	0.008	0.008	0.008	0.009	0.009	1.1%
%RSD		25.330	48.450	0.8	24.480	21.260	26.110	28.350	29.470	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	85.1%	101.400	115.300	111.200	22.120	T 6306.000	T 36910.000	T 36560.000	T 36510.000
2	14:42:09	85.7%	103.300	110.400	112.400	26.900	T 6357.000	T 37320.000	T 36940.000	T 37050.000
3	14:42:36	86.8%	97.830	110.300	109.300	24.550	T 6335.000	T 36830.000	T 36900.000	T 36640.000
x		85.8%	100.900	112.000	110.900	24.520	T 6333.000	T 37020.000	T 36800.000	T 36730.000
σ		0.9%	2.791	2.849	1.586	2.389	T 25.340	T 260.100	T 205.700	T 284.000
%RSD		1.0	2.768	2.544	1.429	9.743	T 0.400	T 0.703	T 0.559	T 0.773
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	95.750	T 8068.000	T 47400.000	T 3727.000	98230.000	T 97040.000	73.6%	101.800	96.440
2	14:42:09	95.610	T 8066.000	T 48040.000	T 3768.000	98770.000	T 98000.000	72.6%	100.900	96.890
3	14:42:36	94.460	T 8010.000	T 48390.000	T 3773.000	99300.000	T 98950.000	72.5%	100.800	96.750
x		95.270	T 8048.000	T 47940.000	T 3756.000	98770.000	T 97990.000	72.9%	101.200	96.690
σ		0.706	T 33.000	T 501.300	T 25.030	534.000	T 956.200	0.6%	0.520	0.229
%RSD		0.741	T 0.410	T 1.046	T 0.666	0.541	T 0.976	0.9	0.514	0.237
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	98.390	26600.000	2831.000	TM 1283.000	T 2650.000	2898.000	97.920	98.680	96.400
2	14:42:09	98.910	27070.000	2851.000	TM 1288.000	T 2638.000	2871.000	97.910	100.400	96.280
3	14:42:36	98.310	27250.000	2837.000	TM 1280.000	T 2631.000	2886.000	97.120	99.520	93.960
x		98.540	26980.000	2840.000	TM 1284.000	T 2640.000	2885.000	97.650	99.530	95.540
σ		0.329	335.300	10.620	TM 4.184	T 9.195	13.260	0.461	0.855	1.373
%RSD		0.334	1.243	0.374	TM 0.326	T 0.348	0.460	0.472	0.859	1.437
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	92.730	95.610	103.500	107.800	107.600	98.560	97.930	27.740	27.230
2	14:42:09	92.110	94.320	102.400	106.700	107.500	99.710	96.470	28.220	30.830
3	14:42:36	92.940	96.300	103.900	110.700	107.700	98.890	96.930	29.190	28.720
x		92.590	95.410	103.300	108.400	107.600	99.050	97.110	28.380	28.930
σ		0.430	1.003	0.789	2.052	0.109	0.590	0.747	0.736	1.807
%RSD		0.465	1.052	0.764	1.893	0.101	0.596	0.770	2.592	6.247
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	0.000	100.000	-0.464	187.100	76.7%	101.600	102.200	100.000	103.100
2	14:42:09	0.000	99.640	-0.134	188.500	76.4%	99.620	101.100	101.000	98.530
3	14:42:36	0.000	97.920	0.781	184.200	76.4%	101.000	100.800	100.800	97.360
x		0.000	99.190	0.061	186.600	76.5%	100.700	101.300	100.600	99.670
σ		0.000	1.108	0.645	2.204	0.2%	1.027	0.725	0.516	3.041
%RSD		0.000	1.117	1056.000	1.181	0.2	1.019	0.715	0.513	3.051
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	93.410	91.050	98.230	95.990	79.4%	99.020	102.000	103.400	98.800
2	14:42:09	92.300	91.100	96.890	95.630	79.6%	99.110	100.400	104.000	98.980
3	14:42:36	93.090	91.470	97.470	95.700	79.2%	98.760	101.500	104.000	99.670
x		92.930	91.210	97.530	95.770	79.4%	98.960	101.300	103.800	99.150
σ		0.575	0.227	0.674	0.191	0.2%	0.183	0.805	0.306	0.460
%RSD		0.619	0.249	0.691	0.199	0.2	0.185	0.795	0.295	0.464
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:41:42	385.500	387.000	84.1%	100.600	104.300	97.400	98.460	100.100	82.5%
2	14:42:09	386.800	385.300	84.3%	100.600	103.700	98.210	99.850	101.200	82.7%
3	14:42:36	388.900	387.500	84.8%	101.500	104.700	97.980	99.540	100.900	82.9%
x		387.000	386.600	84.4%	100.900	104.200	97.860	99.280	100.700	82.7%
σ		1.736	1.154	0.4%	0.515	0.513	0.418	0.727	0.555	0.2%
%RSD		0.449	0.299	0.5	0.510	0.492	0.427	0.732	0.551	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	84.5%	102.400	115.100	115.300	28.990	T 6404.000	T 37750.000	T 37620.000	T 37500.000
2	14:48:00	84.8%	102.100	113.800	114.400	25.870	T 6513.000	T 37920.000	T 37430.000	T 37420.000
3	14:48:27	85.8%	102.000	114.100	115.200	34.480	T 6453.000	T 37680.000	T 37370.000	T 37300.000
x		85.1%	102.200	114.300	115.000	29.780	T 6457.000	T 37780.000	T 37470.000	T 37410.000
σ		0.7%	0.188	0.660	0.482	4.361	T 54.250	T 126.100	T 131.100	T 99.700
%RSD		0.8	0.184	0.577	0.419	14.650	T 0.840	T 0.334	T 0.350	T 0.267
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	97.080	T 8169.000	T 51960.000	T 3843.000	M 100500.000	TM 100300.000	71.8%	100.900	100.600
2	14:48:00	96.260	T 8169.000	T 52410.000	T 3832.000	M 100900.000	T 99700.000	71.7%	101.500	100.900
3	14:48:27	95.650	T 8134.000	T 52240.000	T 3848.000	M 100800.000	TM 100400.000	71.3%	104.800	100.800
x		96.330	T 8157.000	T 52200.000	T 3841.000	M 100700.000	TM 100200.000	71.6%	102.400	100.800
σ		0.720	T 20.350	T 225.200	T 7.872	M 173.800	TM 394.700	0.3%	2.094	0.163
%RSD		0.748	T 0.250	T 0.431	T 0.205	M 0.173	TM 0.394	0.4	2.046	0.162
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	101.500	28310.000	2933.000	TM 1317.000	T 2691.000	2921.000	100.900	101.100	99.640
2	14:48:00	101.700	27700.000	2920.000	TM 1317.000	T 2710.000	2944.000	100.100	100.300	100.700
3	14:48:27	100.500	28390.000	2955.000	TM 1317.000	T 2692.000	2946.000	99.350	100.900	100.100
x		101.200	28130.000	2936.000	TM 1317.000	T 2698.000	2937.000	100.100	100.800	100.100
σ		0.628	378.900	17.880	TM 0.086	T 10.620	13.950	0.764	0.395	0.547
%RSD		0.621	1.347	0.609	TM 0.006	T 0.394	0.475	0.763	0.392	0.547
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	94.650	97.310	97.830	103.400	102.100	102.600	95.620	42.560	45.040
2	14:48:00	95.250	96.020	99.720	107.000	101.700	100.800	99.960	39.060	43.890
3	14:48:27	95.510	98.130	99.880	106.300	103.000	101.700	97.010	44.270	40.780
x		95.140	97.150	99.140	105.600	102.300	101.700	97.530	41.970	43.240
σ		0.441	1.064	1.136	1.885	0.625	0.885	2.217	2.656	2.202
%RSD		0.464	1.095	1.145	1.785	0.611	0.870	2.273	6.329	5.093
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	0.000	104.800	-0.438	189.500	76.6%	100.700	102.400	101.000	104.700
2	14:48:00	0.000	101.700	1.780	187.100	75.4%	103.500	103.900	102.300	106.000
3	14:48:27	0.000	105.500	-0.319	193.500	74.5%	103.000	104.000	102.900	106.000
x		0.000	104.000	0.341	190.000	75.5%	102.400	103.400	102.100	105.600
σ		0.000	2.010	1.248	3.259	1.0%	1.500	0.908	0.974	0.741
%RSD		0.000	1.933	366.000	1.715	1.4	1.465	0.878	0.954	0.702
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	95.090	92.380	99.710	96.850	78.8%	100.200	102.700	106.500	100.300
2	14:48:00	95.210	92.950	101.200	97.730	78.1%	101.600	104.500	107.000	101.600
3	14:48:27	95.190	92.960	99.850	98.510	78.4%	101.500	104.400	107.300	102.500
x		95.160	92.770	100.300	97.690	78.4%	101.100	103.800	106.900	101.500
σ		0.062	0.331	0.826	0.833	0.4%	0.787	1.025	0.430	1.094
%RSD		0.066	0.356	0.824	0.852	0.5	0.778	0.987	0.402	1.079
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:33	389.700	391.000	83.1%	103.700	107.200	100.100	101.700	103.100	81.2%
2	14:48:00	391.900	394.900	84.2%	103.600	107.200	100.800	101.500	103.500	82.1%
3	14:48:27	394.000	395.100	84.6%	103.300	107.300	101.100	102.900	104.200	82.2%
x		391.900	393.700	84.0%	103.500	107.300	100.700	102.000	103.600	81.8%
σ		2.131	2.329	0.8%	0.193	0.078	0.523	0.775	0.587	0.6%
%RSD		0.544	0.592	0.9	0.186	0.073	0.519	0.760	0.566	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	88.5%	0.061	1.430	2.201	12.820	T 1071.000	T 7404.000	T 7482.000	T 7395.000
2	14:53:51	88.4%	0.045	1.560	2.346	6.368	1134.000	T 7429.000	T 7463.000	T 7372.000
3	14:54:18	88.1%	0.021	1.529	1.796	3.776	T 1080.000	T 7434.000	T 7445.000	T 7376.000
x		88.4%	0.042	1.506	2.114	7.655	T 1095.000	T 7422.000	T 7463.000	T 7381.000
σ		0.2%	0.020	0.068	0.285	4.658	T 34.030	T 16.100	T 18.390	T 12.540
%RSD		0.2	47.180	4.505	13.500	60.850	T 3.108	T 0.217	T 0.246	T 0.170
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	0.878	1629.000	9803.000	582.100	19790.000	20480.000	74.5%	0.157	0.073
2	14:53:51	0.857	1637.000	9937.000	585.300	19810.000	20360.000	74.5%	0.134	0.131
3	14:54:18	0.787	1630.000	10060.000	585.300	19870.000	20380.000	74.8%	0.156	0.128
x		0.840	1632.000	9933.000	584.200	19820.000	20410.000	74.6%	0.149	0.110
σ		0.048	4.452	128.300	1.874	43.620	66.280	0.2%	0.013	0.033
%RSD		5.676	0.273	1.291	0.321	0.220	0.325	0.3	8.856	29.590
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	0.087	1278.000	353.700	254.100	369.300	378.100	1.277	1.769	0.965
2	14:53:51	0.089	1350.000	363.100	255.800	374.900	375.300	1.220	1.668	1.203
3	14:54:18	0.124	1346.000	356.100	255.300	372.700	382.500	1.258	1.698	0.955
x		0.100	1325.000	357.600	255.000	372.300	378.600	1.251	1.712	1.041
σ		0.021	40.380	4.916	0.887	2.799	3.618	0.029	0.052	0.141
%RSD		21.210	3.048	1.375	0.348	0.752	0.956	2.330	3.026	13.510
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	0.022	0.081	0.792	1.980	1.743	0.151	-0.296	3.330	3.821
2	14:53:51	0.041	0.086	0.809	1.594	1.819	0.195	0.298	3.765	3.507
3	14:54:18	-0.032	0.075	0.883	2.070	1.488	0.127	0.094	2.869	3.742
x		0.010	0.080	0.828	1.881	1.683	0.158	0.032	3.321	3.690
σ		0.038	0.006	0.048	0.253	0.173	0.034	0.302	0.448	0.164
%RSD		367.000	6.899	5.817	13.460	10.290	21.760	939.500	13.500	4.438
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	0.000	-0.093	-1.217	17.920	79.9%	0.065	0.047	0.096	0.375
2	14:53:51	0.000	-0.274	1.961	17.850	80.2%	0.038	-0.004	0.038	0.067
3	14:54:18	0.000	0.089	-0.056	17.110	79.9%	0.068	0.032	0.048	0.358
x		0.000	-0.092	0.229	17.630	80.0%	0.057	0.025	0.061	0.267
σ		0.000	0.182	1.608	0.452	0.2%	0.016	0.026	0.031	0.173
%RSD		0.000	196.700	701.300	2.561	0.2	28.690	103.500	50.580	64.920
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	0.042	0.037	0.021	0.048	83.3%	-0.041	-0.046	-0.070	-0.080
2	14:53:51	0.030	0.035	0.054	0.046	83.8%	-0.008	-0.042	-0.074	-0.082
3	14:54:18	0.036	0.031	0.058	0.042	83.4%	-0.002	-0.052	-0.075	-0.061
x		0.036	0.035	0.044	0.045	83.5%	-0.017	-0.047	-0.073	-0.074
σ		0.006	0.003	0.020	0.003	0.3%	0.021	0.005	0.002	0.012
%RSD		17.420	8.375	46.020	6.762	0.3	125.200	10.590	3.193	15.750
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:24	56.760	56.730	85.5%	0.065	0.058	0.031	0.040	0.037	82.9%
2	14:53:51	56.470	56.180	86.7%	0.049	0.053	0.043	0.042	0.041	83.1%
3	14:54:18	57.350	56.830	86.5%	0.050	0.053	0.048	0.046	0.050	83.9%
x		56.860	56.580	86.2%	0.055	0.055	0.041	0.043	0.043	83.3%
σ		0.445	0.349	0.7%	0.009	0.003	0.008	0.003	0.007	0.5%
%RSD		0.783	0.617	0.8	16.660	5.038	20.810	7.361	15.670	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	85.7%	97.450	113.600	112.300	29.440	T 6121.000	T 36050.000	T 35950.000	T 35580.000
2	14:59:42	84.2%	100.200	112.900	115.100	24.740	T 6220.000	T 36270.000	T 36320.000	T 36030.000
3	15:00:09	85.2%	97.890	113.500	113.700	24.830	T 6234.000	T 36440.000	T 36040.000	T 35930.000
x		85.0%	98.530	113.300	113.700	26.340	T 6192.000	T 36250.000	T 36100.000	T 35840.000
σ		0.8%	1.499	0.382	1.400	2.687	T 61.370	T 196.800	T 194.100	T 233.800
%RSD		0.9	1.522	0.337	1.231	10.200	T 0.991	T 0.543	T 0.538	T 0.652

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	92.250	T 7930.000	T 48490.000	T 3707.000	96530.000	T 96140.000	71.1%	100.200	95.150
2	14:59:42	94.000	T 7995.000	T 48830.000	T 3690.000	97150.000	T 96680.000	70.8%	98.370	93.720
3	15:00:09	92.820	T 7863.000	T 49160.000	T 3735.000	98960.000	T 96910.000	70.7%	98.050	94.190
x		93.020	T 7929.000	T 48820.000	T 3711.000	97550.000	T 96580.000	70.9%	98.880	94.360
σ		0.895	T 66.030	T 334.200	T 22.950	1264.000	T 394.400	0.2%	1.171	0.729
%RSD		0.963	T 0.833	T 0.685	T 0.618	1.295	T 0.408	0.3	1.184	0.773

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	98.040	27460.000	2804.000	TM 1270.000	T 2610.000	2845.000	96.330	97.770	99.210
2	14:59:42	96.550	27980.000	2805.000	TM 1264.000	T 2586.000	2816.000	96.830	97.350	96.830
3	15:00:09	96.460	27630.000	2792.000	TM 1261.000	T 2610.000	2853.000	96.990	95.900	98.580
x		97.020	27690.000	2801.000	TM 1265.000	T 2602.000	2838.000	96.720	97.000	98.210
σ		0.888	263.900	7.390	TM 4.621	T 13.820	19.290	0.343	0.981	1.231
%RSD		0.915	0.953	0.264	TM 0.365	T 0.531	0.680	0.355	1.011	1.254

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	91.390	94.520	94.000	98.340	100.400	99.330	94.970	17.920	18.600
2	14:59:42	91.110	93.320	95.430	103.400	97.800	96.600	91.810	18.670	18.180
3	15:00:09	90.180	92.750	94.050	102.000	97.230	94.580	93.310	16.300	17.720
x		90.900	93.530	94.500	101.300	98.490	96.840	93.360	17.630	18.170
σ		0.637	0.902	0.811	2.609	1.703	2.387	1.579	1.213	0.442
%RSD		0.701	0.965	0.858	2.577	1.729	2.465	1.692	6.881	2.430

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	0.000	96.270	1.779	182.900	75.5%	98.240	99.160	97.360	98.340
2	14:59:42	0.000	94.880	0.273	183.600	75.1%	98.130	99.740	98.270	99.200
3	15:00:09	0.000	93.570	-0.347	182.400	75.1%	98.850	98.540	97.400	100.500
x		0.000	94.910	0.568	183.000	75.2%	98.410	99.150	97.680	99.360
σ		0.000	1.351	1.093	0.569	0.2%	0.390	0.600	0.515	1.105
%RSD		0.000	1.424	192.300	0.311	0.3	0.397	0.605	0.528	1.113

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	91.030	89.330	96.730	94.610	78.2%	97.160	98.850	90.410	87.070
2	14:59:42	90.850	88.980	94.680	93.350	78.0%	97.460	98.700	91.870	87.420
3	15:00:09	90.690	89.380	96.610	94.270	78.3%	96.870	98.370	92.660	88.020
x		90.850	89.230	96.010	94.080	78.1%	97.160	98.640	91.640	87.510
σ		0.169	0.219	1.148	0.651	0.2%	0.293	0.248	1.142	0.480
%RSD		0.186	0.245	1.196	0.692	0.3	0.302	0.251	1.246	0.549

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:15	379.400	374.300	82.7%	98.150	100.800	95.020	96.410	97.570	82.4%
2	14:59:42	379.900	379.400	83.3%	98.290	101.600	95.450	96.930	98.090	82.7%
3	15:00:09	376.700	376.700	84.6%	98.950	101.300	96.310	97.080	98.260	83.2%
x		378.600	376.800	83.6%	98.460	101.300	95.590	96.810	97.970	82.8%
σ		1.703	2.586	1.0%	0.427	0.377	0.658	0.351	0.357	0.4%
%RSD		0.450	0.686	1.2	0.433	0.372	0.689	0.362	0.365	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	86.3%	0.014	6.985	7.988	23.870	T 5335.000	T 36300.000	T 36110.000	T 36090.000
2	15:05:34	85.6%	0.039	6.645	8.297	15.410	T 5444.000	T 36550.000	T 36580.000	T 36770.000
3	15:06:01	84.7%	0.024	6.307	8.266	20.740	T 5492.000	T 36930.000	T 36650.000	T 37030.000
x		85.6%	0.026	6.645	8.184	20.010	T 5423.000	T 36590.000	T 36450.000	T 36630.000
σ		0.8%	0.013	0.339	0.170	4.280	T 80.100	T 315.700	T 294.300	T 486.400
%RSD		0.9	49.520	5.103	2.077	21.390	T 1.477	T 0.863	T 0.807	T 1.328
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	1.575	T 7317.000	T 47740.000	T 2825.000	98420.000	T 97930.000	72.4%	0.762	0.641
2	15:05:34	1.711	T 7415.000	T 48860.000	T 2845.000	99700.000	T 99040.000	71.2%	0.580	0.715
3	15:06:01	1.599	T 7408.000	T 49270.000	T 2881.000	M 100800.000	TM 100100.000	71.0%	0.338	1.076
x		1.628	T 7380.000	T 48620.000	T 2850.000	M 99650.000	TM 99020.000	71.5%	0.560	0.810
σ		0.072	T 54.650	T 790.200	T 28.660	M 1204.000	TM 1091.000	0.8%	0.212	0.233
%RSD		4.443	T 0.740	T 1.625	T 1.006	M 1.208	TM 1.102	1.0	37.920	28.760
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	0.303	4908.000	1806.000	TM 1225.000	T 1717.000	1893.000	5.830	8.595	6.846
2	15:05:34	0.339	5132.000	1815.000	TM 1236.000	T 1733.000	1909.000	6.095	8.199	7.422
3	15:06:01	0.249	5002.000	1816.000	TM 1242.000	T 1739.000	1900.000	5.849	8.575	8.290
x		0.297	5014.000	1812.000	TM 1234.000	T 1730.000	1901.000	5.925	8.456	7.520
σ		0.045	112.200	5.828	TM 8.384	T 11.330	7.835	0.148	0.223	0.727
%RSD		15.240	2.238	0.322	TM 0.679	T 0.655	0.412	2.492	2.639	9.667
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	0.095	0.232	4.216	9.453	7.955	0.492	-0.487	23.120	22.080
2	15:05:34	0.151	0.254	3.977	9.182	8.593	1.065	-0.422	22.650	23.000
3	15:06:01	0.108	0.282	4.142	9.303	7.633	0.608	0.590	21.130	24.750
x		0.118	0.256	4.112	9.313	8.060	0.722	-0.106	22.300	23.280
σ		0.030	0.025	0.122	0.136	0.488	0.303	0.604	1.038	1.358
%RSD		25.240	9.815	2.975	1.459	6.057	42.020	568.800	4.653	5.833
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	0.000	-0.157	-2.229	89.240	75.6%	0.172	0.297	0.199	0.957
2	15:05:34	0.000	-0.206	-0.362	87.150	75.3%	0.228	0.200	0.208	1.136
3	15:06:01	0.000	0.182	-1.878	90.090	74.7%	0.211	0.203	0.252	1.061
x		0.000	-0.060	-1.490	88.830	75.2%	0.204	0.234	0.220	1.051
σ		0.000	0.211	0.992	1.511	0.5%	0.029	0.055	0.028	0.090
%RSD		0.000	349.800	66.600	1.701	0.6	14.190	23.660	12.810	8.545
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	0.010	0.004	0.002	0.011	79.7%	-0.020	-0.045	0.520	0.498
2	15:05:34	0.002	0.004	0.019	0.008	78.8%	-0.027	-0.032	0.515	0.495
3	15:06:01	-0.001	0.000	0.025	0.013	78.1%	-0.047	-0.041	0.504	0.477
x		0.004	0.003	0.015	0.011	78.8%	-0.032	-0.039	0.513	0.490
σ		0.006	0.002	0.012	0.003	0.8%	0.014	0.006	0.008	0.011
%RSD		168.500	73.290	75.970	25.920	1.0	44.540	16.110	1.568	2.221
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:07	286.300	286.100	83.0%	0.062	0.066	0.011	0.017	0.014	81.0%
2	15:05:34	293.200	289.600	84.0%	0.064	0.062	0.014	0.009	0.012	82.0%
3	15:06:01	295.600	293.100	83.9%	0.055	0.063	0.012	0.019	0.015	81.8%
x		291.700	289.600	83.6%	0.060	0.064	0.012	0.015	0.013	81.6%
σ		4.812	3.492	0.5%	0.005	0.002	0.002	0.005	0.002	0.5%
%RSD		1.650	1.206	0.6	8.155	3.414	16.640	34.550	12.440	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	79.2%	0.045	4.837	5.769	25.920	T 3615.000	T 18510.000	T 18440.000	T 18440.000
2	15:11:27	80.8%	0.070	5.525	5.631	18.740	T 3672.000	T 18490.000	T 18350.000	T 18410.000
3	15:11:53	80.9%	0.026	5.590	5.545	11.430	T 3662.000	T 18410.000	T 18220.000	T 18370.000
x		80.3%	0.047	5.317	5.648	18.700	T 3649.000	T 18470.000	T 18340.000	T 18410.000
σ		1.0%	0.022	0.418	0.113	7.246	T 30.250	T 51.160	T 111.100	T 35.950
%RSD		1.2	46.590	7.852	1.995	38.750	T 0.829	T 0.277	T 0.606	T 0.195
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	17.920	T 3507.000	T 44140.000	T 2739.000	50280.000	T 50020.000	66.7%	0.621	0.036
2	15:11:27	18.310	T 3494.000	T 44780.000	T 2768.000	49800.000	T 50400.000	66.1%	0.967	-0.029
3	15:11:53	17.740	T 3487.000	T 44620.000	T 2746.000	49780.000	T 49800.000	67.1%	0.592	-0.193
x		17.990	T 3496.000	T 44510.000	T 2751.000	49950.000	T 50070.000	66.6%	0.727	-0.062
σ		0.289	T 10.290	T 330.700	T 14.630	286.000	T 304.600	0.5%	0.209	0.118
%RSD		1.606	T 0.294	T 0.743	T 0.532	0.573	T 0.608	0.8	28.720	190.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	0.838	1445.000	8753.000	TM 12400.000	T 8013.000	8582.000	33.630	6.211	5.554
2	15:11:27	0.857	1461.000	8863.000	TM 12490.000	T 8091.000	8541.000	33.520	6.399	4.750
3	15:11:53	0.894	1485.000	8761.000	TM 12480.000	T 8014.000	8486.000	33.100	6.346	5.888
x		0.863	1464.000	8792.000	TM 12450.000	T 8039.000	8536.000	33.410	6.319	5.397
σ		0.029	19.900	61.610	TM 50.100	T 44.540	48.310	0.280	0.097	0.585
%RSD		3.303	1.359	0.701	TM 0.402	T 0.554	0.566	0.839	1.535	10.830
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	0.912	1.117	6.912	9.127	8.241	0.152	0.194	12.160	11.920
2	15:11:27	0.940	0.934	7.067	8.798	8.853	0.520	-0.168	11.220	13.800
3	15:11:53	0.962	1.111	7.098	9.767	8.724	0.163	-0.377	12.020	13.290
x		0.938	1.054	7.026	9.231	8.606	0.278	-0.117	11.800	13.000
σ		0.025	0.104	0.100	0.493	0.323	0.209	0.289	0.503	0.975
%RSD		2.659	9.853	1.420	5.340	3.749	75.220	246.600	4.264	7.493
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	0.000	0.420	0.705	125.700	74.0%	-0.041	0.026	-0.024	0.832
2	15:11:27	0.000	-0.128	0.092	128.100	73.9%	-0.020	0.026	0.017	0.784
3	15:11:53	0.000	-0.004	-0.876	129.700	74.0%	-0.003	0.031	0.027	1.099
x		0.000	0.096	-0.027	127.800	74.0%	-0.021	0.028	0.006	0.905
σ		0.000	0.287	0.797	1.988	0.1%	0.019	0.003	0.027	0.170
%RSD		0.000	299.500	3006.000	1.555	0.1	88.620	10.090	416.300	18.740
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	0.024	0.025	0.152	0.157	74.9%	-0.000	-0.028	0.085	0.117
2	15:11:27	0.033	0.020	0.172	0.159	75.2%	0.023	-0.023	0.109	0.134
3	15:11:53	0.016	0.025	0.144	0.172	75.4%	0.025	-0.006	0.089	0.140
x		0.025	0.023	0.156	0.162	75.2%	0.016	-0.019	0.094	0.130
σ		0.009	0.003	0.014	0.008	0.3%	0.014	0.012	0.013	0.012
%RSD		35.270	11.050	9.064	5.230	0.4	88.880	61.870	13.440	9.277
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:59	126.700	124.700	79.3%	0.044	0.041	0.094	0.079	0.094	80.2%
2	15:11:27	124.400	124.200	79.6%	0.042	0.042	0.102	0.091	0.099	80.7%
3	15:11:53	125.200	124.900	81.3%	0.040	0.043	0.099	0.096	0.102	81.0%
x		125.400	124.600	80.1%	0.042	0.042	0.099	0.089	0.098	80.6%
σ		1.204	0.360	1.1%	0.002	0.001	0.004	0.009	0.004	0.4%
%RSD		0.960	0.289	1.3	5.535	2.389	4.004	10.050	3.635	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	85.5%	-0.002	8.074	9.406	18.050	T 4071.000	T 19780.000	T 19660.000	T 19670.000
2	15:17:18	86.0%	0.031	9.087	9.922	18.630	T 4119.000	T 19820.000	T 19710.000	T 19640.000
3	15:17:45	86.2%	0.023	9.626	9.734	12.800	T 4135.000	T 19880.000	T 19800.000	T 19640.000
x		85.9%	0.017	8.929	9.687	16.490	T 4108.000	T 19830.000	T 19720.000	T 19650.000
σ		0.4%	0.017	0.788	0.261	3.209	T 33.410	T 48.970	T 73.650	T 15.090
%RSD		0.4	98.730	8.826	2.698	19.450	T 0.813	T 0.247	T 0.374	T 0.077
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	4.746	T 6093.000	T 49920.000	T 3399.000	72930.000	T 72090.000	71.8%	0.406	0.163
2	15:17:18	4.918	T 6085.000	T 50620.000	T 3424.000	73720.000	T 73290.000	71.6%	0.504	0.614
3	15:17:45	4.933	T 6075.000	T 50970.000	T 3437.000	73920.000	T 73440.000	71.3%	0.385	0.295
x		4.866	T 6084.000	T 50500.000	T 3420.000	73530.000	T 72940.000	71.6%	0.432	0.357
σ		0.104	T 8.997	T 533.900	T 19.320	522.700	T 740.800	0.2%	0.064	0.232
%RSD		2.144	T 0.148	T 1.057	T 0.565	0.711	T 1.016	0.3	14.740	64.830
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	0.838	5216.000	8.459	2.203	11.860	81.160	-0.914	0.374	-1.023
2	15:17:18	0.952	5588.000	8.884	2.348	11.370	80.270	-0.913	0.519	-0.727
3	15:17:45	0.988	6332.000	10.670	4.950	13.230	78.980	-0.902	0.547	-0.719
x		0.926	5712.000	9.337	3.167	12.150	80.140	-0.910	0.480	-0.823
σ		0.078	568.200	1.172	1.545	0.967	1.097	0.007	0.093	0.174
%RSD		8.437	9.949	12.550	48.800	7.955	1.369	0.718	19.320	21.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	0.139	0.272	1.465	4.273	3.852	0.508	0.057	5.089	5.546
2	15:17:18	0.136	0.289	1.396	4.434	3.987	0.187	0.078	5.298	4.483
3	15:17:45	0.158	0.243	1.441	4.594	3.870	0.368	0.367	4.039	4.694
x		0.144	0.268	1.434	4.434	3.903	0.355	0.167	4.809	4.908
σ		0.012	0.023	0.035	0.161	0.073	0.161	0.173	0.675	0.563
%RSD		8.351	8.723	2.436	3.620	1.878	45.470	103.500	14.040	11.470
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	0.000	0.131	-2.240	39.450	76.0%	0.104	0.134	0.109	-0.439
2	15:17:18	0.000	0.138	-1.037	39.510	76.4%	0.029	0.059	0.094	0.720
3	15:17:45	0.000	0.530	-0.085	38.510	75.8%	0.087	0.171	0.092	0.039
x		0.000	0.266	-1.120	39.160	76.1%	0.073	0.121	0.099	0.107
σ		0.000	0.229	1.080	0.558	0.3%	0.039	0.057	0.009	0.582
%RSD		0.000	85.780	96.370	1.425	0.4	53.800	46.940	9.344	546.300
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	-0.008	-0.006	0.025	0.005	79.0%	-0.060	-0.070	0.016	0.005
2	15:17:18	0.004	-0.003	-0.004	0.016	79.2%	-0.060	-0.046	-0.009	0.021
3	15:17:45	0.001	-0.001	0.019	0.023	79.3%	-0.047	-0.027	-0.003	0.044
x		-0.001	-0.003	0.013	0.015	79.2%	-0.055	-0.048	0.001	0.024
σ		0.006	0.003	0.015	0.009	0.2%	0.008	0.021	0.013	0.020
%RSD		866.900	81.270	112.600	61.710	0.2	13.750	44.180	1198.000	83.850
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:51	193.100	191.700	82.7%	0.002	0.005	0.079	0.078	0.078	81.9%
2	15:17:18	194.600	193.100	84.0%	0.001	0.001	0.080	0.097	0.084	82.4%
3	15:17:45	195.100	194.000	85.0%	-0.001	0.003	0.071	0.103	0.090	83.0%
x		194.300	192.900	83.9%	0.001	0.003	0.077	0.093	0.084	82.5%
σ		1.046	1.204	1.1%	0.001	0.002	0.004	0.013	0.006	0.6%
%RSD		0.538	0.624	1.3	152.900	75.510	5.836	13.870	7.016	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	89.6%	-0.027	2.038	2.096	18.590	487.900	T 16720.000	T 16550.000	T 16480.000
2	15:23:09	89.9%	0.004	1.609	2.665	12.870	489.600	T 16760.000	T 16510.000	T 16630.000
3	15:23:36	89.3%	0.021	2.544	2.459	16.710	500.500	T 16760.000	T 16610.000	T 16540.000
x		89.6%	-0.001	2.064	2.407	16.060	492.700	T 16750.000	T 16560.000	T 16550.000
σ		0.3%	0.024	0.468	0.288	2.913	6.805	T 24.870	T 51.560	T 75.150
%RSD		0.3	3577.000	22.660	11.980	18.140	1.381	T 0.149	T 0.311	T 0.454

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	114.600	T 4052.000	T 51550.000	1083.000	18390.000	19020.000	74.5%	1.668	1.117
2	15:23:09	113.700	T 4007.000	T 51910.000	1079.000	18270.000	19080.000	74.9%	1.565	0.433
3	15:23:36	113.700	T 4009.000	T 52000.000	1085.000	18650.000	19110.000	75.1%	1.539	0.504
x		114.000	T 4023.000	T 51820.000	1082.000	18440.000	19070.000	74.9%	1.590	0.685
σ		0.495	T 25.230	T 233.500	3.199	195.000	47.180	0.3%	0.068	0.376
%RSD		0.434	T 0.627	T 0.451	0.296	1.057	0.247	0.4	4.292	54.950

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	2.114	10820.000	138.400	3.367	140.200	156.800	-0.141	0.277	-0.413
2	15:23:09	2.198	11250.000	134.100	4.344	138.800	151.100	-0.118	0.163	-1.074
3	15:23:36	2.111	11140.000	133.100	3.925	139.200	154.300	-0.128	0.262	-1.276
x		2.141	11070.000	135.200	3.878	139.400	154.100	-0.129	0.234	-0.921
σ		0.050	222.600	2.812	0.490	0.700	2.877	0.012	0.062	0.452
%RSD		2.324	2.011	2.080	12.640	0.502	1.867	9.000	26.410	49.040

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	0.183	0.266	1.308	14.820	10.960	-0.032	-0.307	2.122	2.457
2	15:23:09	0.109	0.350	1.342	14.560	10.360	0.416	-0.057	2.506	3.292
3	15:23:36	0.141	0.369	1.347	13.910	10.950	0.170	-0.230	1.811	2.639
x		0.144	0.328	1.332	14.430	10.760	0.185	-0.198	2.146	2.796
σ		0.037	0.055	0.021	0.474	0.343	0.224	0.128	0.348	0.439
%RSD		25.950	16.620	1.581	3.281	3.184	121.500	64.640	16.220	15.700

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	0.000	0.094	-1.764	24.970	78.9%	0.059	0.126	0.118	-0.095
2	15:23:09	0.000	0.643	1.132	24.300	79.5%	0.022	0.189	0.067	0.923
3	15:23:36	0.000	-0.098	-0.881	24.810	78.8%	0.091	0.150	0.055	0.340
x		0.000	0.213	-0.504	24.690	79.1%	0.057	0.155	0.080	0.389
σ		0.000	0.385	1.485	0.347	0.4%	0.034	0.032	0.034	0.511
%RSD		0.000	180.700	294.500	1.404	0.5	60.420	20.520	42.160	131.300

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	-0.006	-0.004	-0.001	0.014	82.4%	-0.067	-0.058	-0.049	-0.010
2	15:23:09	-0.004	0.003	0.009	0.007	82.7%	-0.049	-0.063	-0.032	-0.006
3	15:23:36	-0.003	-0.003	0.006	0.014	83.3%	-0.029	-0.014	-0.015	-0.002
x		-0.004	-0.001	0.005	0.012	82.8%	-0.048	-0.045	-0.032	-0.006
σ		0.002	0.004	0.005	0.004	0.5%	0.019	0.027	0.017	0.004
%RSD		36.880	325.400	103.900	35.340	0.6	39.990	60.540	53.830	63.390

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:42	M 710.000	M 711.100	85.6%	-0.002	0.000	0.125	0.122	0.120	85.9%
2	15:23:09	M 708.000	M 712.800	87.7%	0.001	-0.001	0.119	0.110	0.119	85.9%
3	15:23:36	M 712.500	M 717.900	87.2%	-0.001	0.001	0.127	0.131	0.125	86.8%
x		M 710.200	M 714.000	86.8%	-0.001	-0.000	0.124	0.121	0.121	86.2%
σ		M 2.275	M 3.519	1.1%	0.002	0.001	0.004	0.011	0.003	0.5%
%RSD		M 0.320	M 0.493	1.2	215.500	771.400	3.253	8.909	2.500	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	88.6%	-0.011	23.940	26.980	14.890	T 2981.000	T 24640.000	T 24250.000	T 24170.000
2	15:29:02	88.6%	0.013	24.660	26.740	16.020	T 2997.000	T 24350.000	T 24340.000	T 24200.000
3	15:29:28	87.6%	-0.003	26.050	26.740	7.104	T 3060.000	T 24680.000	T 24550.000	T 24430.000
x		88.3%	-0.000	24.880	26.820	12.670	T 3012.000	T 24560.000	T 24380.000	T 24270.000
σ		0.6%	0.012	1.076	0.140	4.852	T 41.690	T 182.800	T 152.900	T 145.100
%RSD		0.7	7941.000	4.323	0.523	38.300	T 1.384	T 0.744	T 0.627	T 0.598

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	65.430	T 5256.000	T 48590.000	2114.000	64700.000	T 64040.000	73.6%	1.007	1.387
2	15:29:02	65.020	T 5216.000	T 48860.000	2122.000	65130.000	T 64560.000	73.1%	1.203	1.383
3	15:29:28	65.180	T 5276.000	T 49570.000	2142.000	64880.000	T 64500.000	72.3%	0.834	1.203
x		65.210	T 5250.000	T 49010.000	2126.000	64910.000	T 64370.000	73.0%	1.015	1.324
σ		0.208	T 30.330	T 505.800	14.450	217.000	T 284.400	0.7%	0.185	0.105
%RSD		0.319	T 0.578	T 1.032	0.680	0.334	T 0.442	0.9	18.190	7.913

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	1.378	7801.000	146.200	3.219	154.000	209.600	-0.666	0.941	-0.218
2	15:29:02	1.276	7659.000	147.500	3.433	151.100	202.500	-0.652	1.152	0.290
3	15:29:28	1.367	7781.000	147.900	3.589	151.500	208.000	-0.678	1.069	0.017
x		1.340	7747.000	147.200	3.414	152.200	206.700	-0.666	1.054	0.030
σ		0.056	77.100	0.909	0.185	1.566	3.700	0.013	0.106	0.254
%RSD		4.186	0.995	0.617	5.428	1.029	1.790	1.931	10.070	854.900

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	0.582	0.688	2.817	6.662	4.926	-0.056	-0.033	7.995	7.790
2	15:29:02	0.658	0.698	2.876	5.992	5.112	0.075	0.291	7.061	7.489
3	15:29:28	0.634	0.698	2.845	5.646	5.350	0.005	0.115	8.219	8.644
x		0.625	0.695	2.846	6.100	5.129	0.008	0.124	7.759	7.974
σ		0.039	0.006	0.029	0.516	0.213	0.066	0.162	0.614	0.599
%RSD		6.249	0.828	1.036	8.461	4.143	797.900	130.600	7.916	7.511

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	0.000	0.980	0.411	67.700	77.2%	1.164	1.166	1.205	0.631
2	15:29:02	0.000	0.550	-1.092	65.550	77.3%	1.248	1.119	1.147	0.976
3	15:29:28	0.000	0.631	-0.769	65.960	77.0%	1.230	1.283	1.260	0.493
x		0.000	0.720	-0.483	66.400	77.2%	1.214	1.189	1.204	0.700
σ		0.000	0.228	0.791	1.140	0.2%	0.044	0.084	0.056	0.249
%RSD		0.000	31.710	163.700	1.717	0.2	3.661	7.087	4.669	35.550

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	-0.001	-0.001	0.009	0.014	81.6%	-0.047	-0.067	-0.070	-0.050
2	15:29:02	0.002	0.001	-0.004	0.010	81.4%	-0.067	-0.081	-0.063	-0.057
3	15:29:28	0.002	0.004	0.005	0.004	81.4%	-0.044	-0.070	-0.025	-0.050
x		0.001	0.001	0.003	0.009	81.5%	-0.053	-0.072	-0.053	-0.052
σ		0.002	0.003	0.006	0.005	0.1%	0.013	0.008	0.024	0.004
%RSD		151.500	176.300	188.300	52.900	0.2	23.910	10.380	45.910	7.772

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:35	163.800	163.000	85.5%	0.030	0.037	0.148	0.150	0.151	83.9%
2	15:29:02	165.200	164.200	86.0%	0.042	0.037	0.157	0.137	0.154	84.2%
3	15:29:28	165.300	165.300	85.8%	0.030	0.040	0.147	0.140	0.147	84.4%
x		164.800	164.200	85.8%	0.034	0.038	0.151	0.142	0.150	84.1%
σ		0.801	1.144	0.2%	0.007	0.002	0.006	0.007	0.003	0.3%
%RSD		0.487	0.697	0.3	20.480	4.899	3.678	5.089	2.221	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	89.5%	0.020	5.547	6.648	10.550	615.500	T 22520.000	T 22510.000	T 22290.000
2	15:34:54	90.2%	0.004	5.326	5.651	17.700	616.300	T 22470.000	T 22430.000	T 22170.000
3	15:35:21	90.3%	-0.011	5.907	6.385	17.420	622.200	T 22690.000	T 22580.000	T 22510.000
x		90.0%	0.004	5.593	6.228	15.230	618.000	T 22560.000	T 22500.000	T 22320.000
σ		0.4%	0.016	0.293	0.517	4.052	3.638	T 119.000	T 72.970	T 173.800
%RSD		0.5	354.300	5.243	8.303	26.610	0.589	T 0.528	T 0.324	T 0.779

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	5.269	T 3612.000	T 50430.000	1290.000	24860.000	26140.000	74.7%	0.273	1.043
2	15:34:54	5.426	T 3567.000	T 50620.000	1287.000	25210.000	26170.000	74.4%	0.274	1.091
3	15:35:21	5.485	T 3571.000	T 51360.000	1300.000	25310.000	26510.000	73.6%	0.230	1.097
x		5.393	T 3583.000	T 50800.000	1292.000	25130.000	26270.000	74.2%	0.259	1.077
σ		0.112	T 25.200	T 487.400	6.772	235.200	207.100	0.6%	0.025	0.030
%RSD		2.073	T 0.703	T 0.959	0.524	0.936	0.788	0.8	9.589	2.745

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	0.570	10520.000	26.620	1.827	34.260	47.810	-0.255	0.327	-0.941
2	15:34:54	0.616	10450.000	25.510	2.010	32.590	46.890	-0.258	0.284	-1.105
3	15:35:21	0.497	10720.000	25.270	2.097	32.430	47.840	-0.249	0.269	-0.846
x		0.561	10560.000	25.800	1.978	33.090	47.510	-0.254	0.293	-0.964
σ		0.060	138.700	0.719	0.138	1.012	0.540	0.004	0.030	0.131
%RSD		10.700	1.313	2.788	6.977	3.058	1.136	1.716	10.270	13.580

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	0.274	0.419	1.777	4.289	3.097	-0.149	-0.135	2.276	3.251
2	15:34:54	0.339	0.441	1.691	3.930	2.833	0.390	-0.115	2.835	2.411
3	15:35:21	0.280	0.365	1.753	4.096	2.867	0.165	-0.128	2.489	3.160
x		0.298	0.408	1.740	4.105	2.932	0.135	-0.126	2.533	2.941
σ		0.036	0.039	0.045	0.180	0.144	0.270	0.010	0.282	0.461
%RSD		12.100	9.551	2.567	4.380	4.900	199.700	8.080	11.130	15.680

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	0.000	-0.402	-0.543	44.460	78.0%	2.113	1.807	1.999	0.718
2	15:34:54	0.000	0.158	-1.156	43.240	78.5%	1.935	1.922	2.031	0.825
3	15:35:21	0.000	-0.142	-0.531	43.660	78.0%	2.161	2.339	1.955	0.364
x		0.000	-0.129	-0.743	43.790	78.2%	2.070	2.023	1.995	0.636
σ		0.000	0.280	0.357	0.620	0.3%	0.119	0.280	0.038	0.241
%RSD		0.000	217.400	48.090	1.416	0.4	5.736	13.850	1.909	37.940

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	0.006	-0.002	0.006	0.019	82.6%	-0.052	-0.081	-0.064	-0.070
2	15:34:54	0.004	0.001	0.003	0.016	82.4%	-0.050	-0.059	-0.053	-0.044
3	15:35:21	0.001	-0.002	-0.000	0.009	81.8%	-0.059	-0.040	-0.048	-0.034
x		0.003	-0.001	0.003	0.015	82.3%	-0.054	-0.060	-0.055	-0.049
σ		0.002	0.002	0.003	0.005	0.4%	0.005	0.020	0.008	0.019
%RSD		73.150	150.200	103.100	33.380	0.5	9.195	33.860	15.100	37.920

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:27	109.200	109.000	86.2%	-0.007	-0.005	0.038	0.034	0.044	84.9%
2	15:34:54	108.300	109.000	87.4%	-0.003	-0.003	0.045	0.048	0.049	85.6%
3	15:35:21	109.500	108.800	87.8%	-0.002	-0.005	0.054	0.051	0.051	86.3%
x		109.000	109.000	87.1%	-0.004	-0.004	0.046	0.044	0.048	85.6%
σ		0.632	0.102	0.8%	0.003	0.001	0.008	0.009	0.004	0.7%
%RSD		0.580	0.094	0.9	67.920	32.950	17.010	20.100	7.908	0.8

CCV MW9737 10/18/2017 15:39:52 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	75.3%	314.900	304.500	317.300	4.988	T 63470.000	T 58570.000	T 58460.000	T 58570.000
2	15:40:46	77.4%	300.100	307.100	304.200	1.678	T 60920.000	T 56290.000	T 55970.000	T 56180.000
3	15:41:12	77.5%	298.300	311.400	305.100	4.729	T 62000.000	T 57160.000	T 57040.000	T 56370.000
x		76.7%	101.478%	102.552%	102.956%	3.798	T 103.555%	T 57340.000	T 57160.000	T 95.064%
σ		1.2%	n/a	n/a	n/a	1.841	T n/a	T 1149.000	T 1247.000	T n/a
%RSD		1.6	2.979	1.140	2.373	48.470	T 2.057	T 2.004	T 2.182	T 2.331

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	296.400	T 2997.000	751.400	T 60940.000	60450.000	T 59410.000	68.3%	302.800	304.200
2	15:40:46	283.200	T 2857.000	756.400	T 58920.000	57880.000	T 57800.000	69.6%	300.900	290.200
3	15:41:12	284.600	T 2859.000	749.200	T 59690.000	59090.000	T 58110.000	69.2%	301.600	295.300
x		96.014%	T 96.817%	752.300	T 99.751%	59140.000	T 97.403%	69.0%	100.586%	98.851%
σ		n/a	T n/a	3.682	T n/a	1290.000	T n/a	0.7%	n/a	n/a
%RSD		2.525	T 2.751	0.490	T 1.703	2.181	T 1.459	0.9	0.328	2.393

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	305.800	71960.000	T 59470.000	305.700	T 59700.000	T 59320.000	283.200	285.800	291.000
2	15:40:46	293.800	69740.000	T 56910.000	293.200	T 57310.000	T 56710.000	270.100	268.500	270.500
3	15:41:12	295.000	69460.000	T 57180.000	295.900	T 57780.000	T 57270.000	273.400	272.900	277.100
x		99.407%	70390.000	T 57860.000	99.427%	T 58260.000	T 96.278%	91.851%	91.906%	279.500
σ		n/a	1370.000	T 1408.000	n/a	T 1262.000	T n/a	n/a	n/a	10.460
%RSD		2.220	1.946	T 2.433	2.211	T 2.166	T 2.385	2.464	3.262	3.742

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	279.300	282.900	285.200	294.600	285.400	298.900	293.300	0.174	-0.376
2	15:40:46	263.800	268.600	271.800	277.000	272.000	288.500	275.800	-0.605	-0.422
3	15:41:12	268.800	271.700	276.100	278.300	280.700	297.400	285.400	-0.197	-1.019
x		270.600	91.466%	92.569%	283.300	279.300	98.313%	284.800	-0.209	-0.606
σ		7.910	n/a	n/a	9.835	6.805	n/a	8.748	0.389	0.359
%RSD		2.923	2.748	2.458	3.472	2.436	1.898	3.071	186.200	59.200

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	0.000	294.200	-0.410	306.800	71.1%	314.800	314.300	312.000	300.900
2	15:40:46	0.000	281.700	-0.866	295.500	73.4%	301.100	301.500	301.300	290.300
3	15:41:12	0.000	291.000	-4.348	297.400	73.6%	301.700	303.500	300.400	289.900
x		0.000	96.320%	-1.875	99.974%	72.7%	101.956%	102.148%	304.600	293.700
σ		0.000	n/a	2.154	n/a	1.4%	n/a	n/a	6.462	6.205
%RSD		0.000	2.244	114.900	2.020	1.9	2.536	2.250	2.122	2.113

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	291.900	285.200	298.900	294.400	72.8%	307.200	314.000	322.200	303.500
2	15:40:46	280.600	272.300	285.100	286.700	74.1%	297.300	303.900	313.900	298.300
3	15:41:12	278.600	270.700	285.400	283.700	75.7%	295.800	301.900	314.700	296.400
x		94.571%	276.100	289.800	96.091%	74.2%	100.035%	102.200%	105.643%	99.800%
σ		n/a	7.936	7.894	n/a	1.5%	n/a	n/a	n/a	n/a
%RSD		2.524	2.875	2.724	1.922	2.0	2.067	2.128	1.455	1.221

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:19	303.100	306.300	78.4%	315.900	T 306.600	311.200	311.700	T 311.500	76.7%
2	15:40:46	295.800	294.500	80.7%	302.600	T 295.600	298.600	301.000	T 301.300	78.7%
3	15:41:12	294.300	294.600	82.0%	303.800	T 293.900	298.100	302.300	T 300.700	79.8%
x		99.243%	99.495%	80.3%	102.477%	T 99.567%	100.865%	101.669%	T 101.497%	78.4%
σ		n/a	n/a	1.8%	n/a	T n/a	n/a	n/a	T n/a	1.6%
%RSD		1.575	2.279	2.3	2.392	T 2.311	2.457	1.921	T 1.989	2.0

CCB IM8211-01 10/18/2017 15:45:41 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	85.5%	0.056	1.330	1.619	-7.364	-1.751	4.061	4.038	4.207
2	15:46:35	86.2%	0.014	1.288	1.354	-9.527	-2.758	4.602	4.275	4.432
3	15:47:02	86.0%	-0.002	0.616	1.526	-11.380	-2.509	5.022	5.871	5.415
x		85.9%	0.023	1.078	1.500	-9.422	-2.339	4.562	4.728	4.685
σ		0.4%	0.030	0.401	0.135	2.008	0.525	0.482	0.997	0.643
%RSD		0.5	132.000	37.190	8.977	21.310	22.430	10.560	21.090	13.720

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.960	0.653	414.400	7.096	8.579	-5.501	73.7%	0.065	-0.001
2	15:46:35	0.788	0.053	431.900	5.270	7.417	-6.955	74.4%	0.041	-0.001
3	15:47:02	0.925	0.116	459.700	4.347	4.359	-3.271	74.4%	0.041	-0.048
x		0.891	0.274	435.300	5.571	6.785	-5.242	74.1%	0.049	-0.017
σ		0.091	0.330	22.820	1.399	2.180	1.856	0.4%	0.014	0.027
%RSD		10.220	120.600	5.243	25.110	32.130	35.400	0.6	28.630	165.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	-0.000	8.135	4.801	0.086	4.682	5.349	0.015	0.040	-0.610
2	15:46:35	-0.000	11.040	4.680	0.093	3.817	5.182	0.015	0.002	-1.439
3	15:47:02	-0.008	20.620	4.389	0.107	3.741	5.191	0.016	0.058	-0.706
x		-0.003	13.270	4.623	0.095	4.080	5.240	0.016	0.034	-0.918
σ		0.005	6.533	0.212	0.010	0.523	0.094	0.001	0.029	0.454
%RSD		159.700	49.250	4.577	10.970	12.810	1.792	4.779	86.140	49.380

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	-0.047	0.001	0.074	0.165	0.013	-0.015	0.109	-0.909	-0.533
2	15:46:35	-0.058	-0.011	0.066	0.130	0.004	-0.025	0.012	-0.736	-0.921
3	15:47:02	-0.031	0.010	0.067	0.290	-0.003	0.033	0.119	-0.393	0.172
x		-0.045	-0.000	0.069	0.195	0.005	-0.002	0.080	-0.679	-0.427
σ		0.013	0.010	0.004	0.084	0.008	0.031	0.059	0.263	0.554
%RSD		29.560	44840.000	6.400	43.070	167.900	1524.000	73.780	38.680	129.700

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.000	0.174	-1.196	-0.019	79.5%	0.120	0.158	0.143	-0.252
2	15:46:35	0.000	0.038	-2.683	0.092	80.2%	0.181	0.156	0.128	0.223
3	15:47:02	0.000	0.162	-1.518	-0.016	80.1%	0.118	0.136	0.042	-0.070
x		0.000	0.125	-1.799	0.019	80.0%	0.140	0.150	0.105	-0.033
σ		0.000	0.076	0.782	0.063	0.4%	0.036	0.012	0.055	0.240
%RSD		0.000	60.700	43.500	329.900	0.5	25.590	7.954	52.140	729.100

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.014	0.022	0.015	0.019	83.5%	0.034	0.036	0.559	0.573
2	15:46:35	0.018	0.020	0.011	0.016	83.6%	-0.011	0.047	0.571	0.603
3	15:47:02	0.020	0.032	0.012	0.011	83.4%	0.020	0.053	0.529	0.487
x		0.017	0.025	0.013	0.015	83.5%	0.014	0.045	0.553	0.554
σ		0.003	0.006	0.002	0.004	0.1%	0.023	0.009	0.022	0.060
%RSD		19.370	25.820	13.340	25.570	0.1	158.100	19.190	3.885	10.870

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.023	0.035	85.3%	0.020	0.019	0.016	0.012	0.017	83.7%
2	15:46:35	0.019	0.009	85.3%	0.017	0.013	0.020	0.023	0.018	85.5%
3	15:47:02	0.023	0.047	86.0%	0.013	0.017	0.025	0.026	0.019	86.3%
x		0.022	0.031	85.5%	0.017	0.016	0.020	0.020	0.018	85.2%
σ		0.002	0.020	0.4%	0.003	0.003	0.004	0.007	0.001	1.4%
%RSD		11.290	64.210	0.5	19.550	19.120	20.530	35.790	6.687	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	83.8%	0.032	26.960	29.450	28.850	┬4672.000	┬23790.000	┬23600.000	┬23410.000
2	15:52:25	85.5%	0.023	26.680	28.730	23.060	┬4666.000	┬23710.000	┬23550.000	┬23380.000
3	15:52:52	86.1%	0.006	27.630	29.370	28.150	┬4692.000	┬23660.000	┬23510.000	┬23430.000
x		85.1%	0.021	27.090	29.190	26.690	┬4677.000	┬23720.000	┬23550.000	┬23410.000
σ		1.2%	0.013	0.490	0.392	3.160	┬13.450	┬65.220	┬40.890	┬23.000
%RSD		1.4	64.590	1.809	1.343	11.840	┬0.288	┬0.275	┬0.174	┬0.098
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	111.700	┬5862.000	┬50050.000	┬2647.000	71460.000	┬71080.000	71.8%	3.322	1.090
2	15:52:25	114.100	┬5816.000	┬50130.000	┬2676.000	72740.000	┬71350.000	71.3%	3.274	1.264
3	15:52:52	┬116.500	┬5816.000	┬50860.000	┬2674.000	71380.000	┬71740.000	71.4%	3.757	1.003
x		┬114.100	┬5831.000	┬50350.000	┬2666.000	71860.000	┬71390.000	71.5%	3.451	1.119
σ		┬2.407	┬26.400	┬444.000	┬16.690	765.500	┬331.400	0.3%	0.266	0.133
%RSD		┬2.110	┬0.453	┬0.882	┬0.626	1.065	┬0.464	0.4	7.706	11.870
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	1.335	5277.000	400.500	24.090	414.900	468.500	-0.814	0.432	-0.727
2	15:52:25	1.304	5995.000	398.300	24.010	412.100	462.500	-0.797	0.455	-0.805
3	15:52:52	1.296	6214.000	401.800	23.960	410.900	457.500	-0.790	0.533	-1.060
x		1.311	5829.000	400.200	24.020	412.600	462.800	-0.800	0.474	-0.864
σ		0.021	489.900	1.794	0.066	2.057	5.463	0.012	0.053	0.174
%RSD		1.573	8.405	0.448	0.276	0.499	1.180	1.521	11.200	20.140
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	0.270	0.357	2.137	5.534	4.682	0.150	0.111	15.060	16.600
2	15:52:25	0.407	0.430	2.087	5.694	4.853	0.559	0.227	15.980	16.920
3	15:52:52	0.288	0.429	2.208	6.571	4.576	-0.051	-0.099	17.430	16.480
x		0.322	0.405	2.144	5.933	4.704	0.219	0.079	16.150	16.670
σ		0.074	0.042	0.061	0.558	0.140	0.311	0.165	1.194	0.230
%RSD		23.090	10.260	2.846	9.409	2.977	141.800	207.200	7.393	1.380
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	0.000	0.051	-1.631	58.960	76.1%	0.427	0.495	0.518	0.487
2	15:52:25	0.000	0.384	0.213	58.140	75.9%	0.386	0.487	0.467	1.351
3	15:52:52	0.000	0.514	1.149	58.100	75.7%	0.484	0.477	0.452	0.849
x		0.000	0.316	-0.090	58.400	75.9%	0.432	0.486	0.479	0.896
σ		0.000	0.239	1.415	0.483	0.2%	0.049	0.009	0.035	0.434
%RSD		0.000	75.550	1576.000	0.826	0.2	11.400	1.893	7.247	48.440
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	0.002	0.011	0.014	0.019	79.2%	0.005	0.015	0.207	0.156
2	15:52:25	0.009	0.010	0.005	0.008	78.7%	-0.027	-0.008	0.167	0.192
3	15:52:52	0.011	0.004	0.018	0.017	79.1%	0.012	0.039	0.167	0.167
x		0.007	0.008	0.012	0.015	79.0%	-0.003	0.015	0.180	0.172
σ		0.005	0.004	0.007	0.006	0.3%	0.021	0.023	0.023	0.019
%RSD		64.800	48.780	54.090	38.510	0.4	629.500	152.100	12.630	10.940
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:58	202.900	201.600	83.0%	0.012	0.013	0.156	0.152	0.155	83.1%
2	15:52:25	201.000	200.000	83.4%	0.008	0.009	0.160	0.160	0.154	83.3%
3	15:52:52	200.300	202.200	84.5%	0.010	0.010	0.147	0.142	0.149	83.9%
x		201.400	201.300	83.6%	0.010	0.011	0.154	0.151	0.153	83.4%
σ		1.328	1.129	0.8%	0.002	0.002	0.007	0.009	0.003	0.4%
%RSD		0.659	0.561	0.9	19.520	17.500	4.455	6.110	2.091	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	86.9%	0.006	0.795	1.028	-5.088	1079.000	T 9203.000	T 9128.000	T 9017.000
2	15:58:16	87.3%	-0.003	1.076	0.802	-7.197	1071.000	T 9052.000	T 9024.000	T 8995.000
3	15:58:43	86.2%	0.014	0.356	0.887	-8.971	1073.000	T 8977.000	T 8999.000	T 8941.000
x		86.8%	0.006	0.742	0.906	-7.085	1074.000	T 9077.000	T 9050.000	T 8984.000
σ		0.6%	0.008	0.363	0.114	1.944	4.332	T 115.000	T 68.610	T 39.000
%RSD		0.7	143.800	48.840	12.600	27.440	0.403	T 1.267	T 0.758	T 0.434
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	1.033	2231.000	10880.000	848.800	26700.000	27620.000	73.7%	0.253	0.077
2	15:58:16	1.108	2183.000	10920.000	846.400	26490.000	27670.000	73.3%	0.042	0.695
3	15:58:43	1.251	2148.000	10750.000	831.700	26130.000	27510.000	73.6%	0.207	0.554
x		1.131	2187.000	10850.000	842.300	26440.000	27600.000	73.5%	0.167	0.442
σ		0.111	41.750	85.960	9.245	287.300	82.070	0.2%	0.111	0.324
%RSD		9.779	1.909	0.793	1.098	1.086	0.297	0.3	66.120	73.340
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	0.062	2063.000	275.400	56.870	291.400	296.400	0.519	2.623	1.253
2	15:58:16	0.102	1874.000	276.200	55.610	286.300	301.700	0.509	2.709	1.315
3	15:58:43	0.098	1885.000	266.000	54.870	283.400	298.400	0.567	2.545	1.434
x		0.087	1941.000	272.500	55.780	287.000	298.900	0.532	2.625	1.334
σ		0.022	106.000	5.704	1.010	4.055	2.704	0.031	0.082	0.092
%RSD		25.590	5.459	2.093	1.811	1.413	0.905	5.826	3.132	6.896
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	-0.022	0.021	0.131	2.398	1.833	0.330	-0.243	6.049	5.162
2	15:58:16	0.004	0.074	0.163	2.218	1.762	0.114	-0.046	4.586	5.322
3	15:58:43	0.035	-0.025	0.263	2.509	1.534	0.385	0.438	4.832	4.855
x		0.006	0.023	0.186	2.375	1.709	0.277	0.050	5.156	5.113
σ		0.029	0.049	0.069	0.147	0.156	0.143	0.350	0.784	0.237
%RSD		505.300	213.500	37.190	6.189	9.141	51.770	702.600	15.200	4.637
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	0.000	-0.021	-0.260	16.830	78.5%	-0.085	-0.085	-0.110	0.101
2	15:58:16	0.000	-0.203	0.959	17.380	78.0%	-0.140	-0.064	-0.090	-0.188
3	15:58:43	0.000	-0.206	0.378	16.870	77.7%	-0.130	-0.069	-0.093	0.411
x		0.000	-0.144	0.359	17.020	78.1%	-0.118	-0.073	-0.098	0.108
σ		0.000	0.106	0.610	0.305	0.4%	0.029	0.011	0.011	0.299
%RSD		0.000	73.710	170.000	1.790	0.5	24.550	15.140	10.820	278.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	0.004	-0.002	0.006	0.006	82.0%	-0.065	-0.110	-0.058	-0.029
2	15:58:16	0.002	-0.003	0.000	0.004	81.6%	-0.090	-0.128	-0.045	-0.021
3	15:58:43	-0.002	-0.001	-0.003	0.005	81.6%	-0.107	-0.111	-0.056	-0.044
x		0.001	-0.002	0.001	0.005	81.7%	-0.087	-0.116	-0.053	-0.031
σ		0.003	0.001	0.005	0.001	0.2%	0.021	0.010	0.007	0.012
%RSD		232.900	58.140	434.600	20.200	0.3	24.040	8.670	12.750	37.260
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:49	113.300	113.400	84.4%	0.008	0.005	0.003	0.009	0.006	83.7%
2	15:58:16	113.300	114.200	84.2%	0.007	0.005	0.001	0.005	0.001	85.0%
3	15:58:43	112.600	111.800	85.6%	-0.000	0.006	0.003	0.006	0.006	85.7%
x		113.100	113.100	84.7%	0.005	0.005	0.002	0.007	0.004	84.8%
σ		0.399	1.198	0.8%	0.004	0.001	0.001	0.002	0.003	1.0%
%RSD		0.353	1.059	0.9	91.620	13.450	47.840	26.630	62.040	1.2

SJ12043-008(5) 10/18/2017 16:03:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	86.7%	0.022	-1.025	-0.563	16.850	94.570	T 3762.000	4040.000	4060.000
2	16:04:07	87.4%	0.006	-0.451	-0.481	9.182	95.970	T 3757.000	3991.000	4032.000
3	16:04:34	89.1%	0.005	-0.959	-0.309	12.280	94.770	T 3704.000	4010.000	4023.000
x		87.7%	0.011	-0.811	-0.451	12.770	95.110	T 3741.000	4014.000	4038.000
σ		1.2%	0.010	0.314	0.130	3.859	0.757	T 32.400	24.450	19.170
%RSD		1.4	90.650	38.720	28.790	30.210	0.796	T 0.866	0.609	0.475

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	26.080	1006.000	11300.000	236.300	4105.000	4176.000	74.4%	0.204	0.545
2	16:04:07	25.570	999.700	11390.000	236.600	4151.000	4167.000	74.0%	0.276	0.571
3	16:04:34	25.440	994.200	11480.000	233.600	4160.000	4122.000	74.8%	0.712	0.477
x		25.700	1000.000	11390.000	235.500	4139.000	4155.000	74.4%	0.397	0.531
σ		0.340	5.906	89.660	1.649	29.840	29.080	0.4%	0.275	0.049
%RSD		1.322	0.591	0.787	0.700	0.721	0.700	0.6	69.220	9.136

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	0.509	2766.000	28.450	0.605	36.920	33.870	-0.032	0.127	-1.149
2	16:04:07	0.414	2780.000	30.550	0.608	36.520	31.070	-0.029	0.040	-1.184
3	16:04:34	0.480	2835.000	30.300	0.605	35.250	32.380	-0.033	0.083	-1.357
x		0.468	2793.000	29.770	0.606	36.230	32.440	-0.032	0.083	-1.230
σ		0.049	36.780	1.147	0.002	0.874	1.405	0.002	0.044	0.112
%RSD		10.460	1.317	3.853	0.263	2.412	4.330	7.295	52.420	9.061

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	-0.026	0.020	0.227	2.759	2.350	-0.355	-0.101	1.536	1.891
2	16:04:07	-0.025	0.010	0.045	2.876	2.019	0.029	-0.325	1.915	1.821
3	16:04:34	-0.066	0.044	0.294	2.748	2.463	0.209	-0.001	1.030	2.097
x		-0.039	0.024	0.189	2.794	2.277	-0.039	-0.143	1.494	1.936
σ		0.023	0.017	0.129	0.071	0.231	0.288	0.166	0.444	0.144
%RSD		59.990	70.320	68.240	2.540	10.120	737.700	116.400	29.730	7.412

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	0.000	-0.151	-1.188	5.811	79.2%	-0.116	-0.082	-0.097	-0.135
2	16:04:07	0.000	-0.145	-1.156	5.690	78.6%	-0.086	-0.106	-0.087	-0.054
3	16:04:34	0.000	-0.033	-1.783	5.316	79.4%	-0.097	-0.057	-0.109	-0.513
x		0.000	-0.110	-1.376	5.606	79.1%	-0.099	-0.082	-0.098	-0.234
σ		0.000	0.066	0.353	0.258	0.4%	0.015	0.025	0.011	0.245
%RSD		0.000	60.610	25.670	4.600	0.5	15.260	30.150	11.230	104.500

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	-0.008	-0.007	0.000	0.002	83.1%	-0.080	-0.086	-0.104	-0.078
2	16:04:07	-0.008	-0.003	0.003	0.002	82.6%	-0.086	-0.110	-0.103	-0.089
3	16:04:34	-0.007	-0.006	0.009	0.007	83.2%	-0.071	-0.109	-0.101	-0.079
x		-0.008	-0.005	0.004	0.004	83.0%	-0.079	-0.102	-0.102	-0.082
σ		0.001	0.002	0.005	0.003	0.3%	0.008	0.013	0.002	0.006
%RSD		10.660	32.560	114.000	83.420	0.4	9.499	12.960	1.470	7.384

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:40	158.400	155.500	85.2%	-0.005	-0.004	0.021	0.018	0.023	84.6%
2	16:04:07	157.700	154.700	85.6%	-0.007	-0.003	0.028	0.013	0.025	85.6%
3	16:04:34	155.900	155.600	85.8%	-0.003	-0.004	0.033	0.025	0.030	86.3%
x		157.300	155.300	85.5%	-0.005	-0.004	0.027	0.018	0.026	85.5%
σ		1.284	0.472	0.3%	0.002	0.001	0.006	0.006	0.003	0.8%
%RSD		0.816	0.304	0.3	36.690	16.930	22.080	31.490	12.660	1.0

LLCCV MW9753 10/18/2017 16:09:04 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	88.4%	0.301	21.980	22.270	-8.207	396.500	49.210	52.090	49.730
2	16:09:59	87.8%	0.463	23.750	23.200	-15.780	398.100	50.460	51.600	52.370
3	16:10:25	88.2%	0.453	23.260	22.570	-15.200	402.800	51.020	48.880	51.180
x		88.1%	101.436%	91.981%	90.727%	-13.060	99.786%	50.230	50.860	102.188%
σ		0.3%	n/a	n/a	n/a	4.215	n/a	0.930	1.726	n/a
%RSD		0.3	22.450	3.981	2.101	32.270	0.807	1.851	3.394	2.581
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	37.450	98.210	342.500	200.100	426.500	381.600	75.2%	4.645	4.282
2	16:09:59	36.770	98.220	359.200	202.600	377.500	383.800	75.3%	4.202	4.503
3	16:10:25	37.370	97.270	371.400	201.400	376.500	378.400	75.1%	4.792	4.285
x		92.985%	97.901%	357.700	100.690%	393.500	95.322%	75.2%	90.924%	87.129%
σ		n/a	n/a	14.550	n/a	28.590	n/a	0.1%	n/a	n/a
%RSD		0.995	0.555	4.068	0.603	7.265	0.705	0.2	6.761	2.913
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	4.783	1315.000	21.760	4.829	28.220	21.030	4.733	4.975	3.289
2	16:09:59	4.845	1327.000	22.240	4.809	26.850	19.480	4.772	4.916	3.822
3	16:10:25	4.796	1325.000	22.860	4.943	27.580	23.760	4.577	5.118	3.844
x		96.163%	1323.000	22.290	97.213%	27.550	107.113%	93.878%	100.061%	3.652
σ		n/a	6.517	0.553	n/a	0.687	n/a	n/a	n/a	0.314
%RSD		0.676	0.493	2.480	1.484	2.494	10.120	2.200	2.079	8.601
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	4.824	4.977	9.535	11.000	9.178	1.639	5.059	-1.569	-0.160
2	16:09:59	5.146	4.698	9.642	9.723	9.758	1.573	5.609	-0.920	-1.093
3	16:10:25	4.757	4.707	10.240	9.601	9.804	1.835	5.300	-0.645	-0.388
x		4.909	95.881%	98.046%	10.110	9.580	84.105%	5.323	-1.045	-0.547
σ		0.208	n/a	n/a	0.777	0.349	n/a	0.276	0.475	0.486
%RSD		4.233	3.312	3.856	7.683	3.641	8.092	5.183	45.430	88.910
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	0.000	5.301	-0.070	9.434	80.1%	9.412	9.624	9.303	0.290
2	16:09:59	0.000	4.620	1.122	9.325	79.6%	9.537	9.945	9.738	0.599
3	16:10:25	0.000	5.186	-1.194	9.234	79.2%	9.850	9.379	9.458	0.769
x		0.000	100.717%	-0.047	9.331	79.6%	9.599	96.493%	9.500	0.553
σ		0.000	n/a	1.158	0.100	0.4%	0.225	n/a	0.221	0.243
%RSD		0.000	7.244	2450.000	1.073	0.5	2.347	2.945	2.325	43.940
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	1.032	0.982	0.077	0.105	84.0%	3.504	4.995	1.818	1.805
2	16:09:59	1.012	1.007	0.086	0.072	83.1%	3.332	5.167	1.800	1.779
3	16:10:25	0.988	0.932	0.077	0.069	84.5%	3.498	5.173	1.842	1.678
x		101.063%	0.973	0.080	82.092%	83.9%	3.445	102.234%	1.820	87.700%
σ		n/a	0.038	0.005	n/a	0.7%	0.098	n/a	0.021	n/a
%RSD		2.185	3.911	6.598	24.670	0.8	2.841	1.977	1.173	3.845
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:31	4.562	4.737	85.8%	0.522	0.488	0.982	0.986	0.981	83.9%
2	16:09:59	4.724	4.806	85.9%	0.519	0.507	0.912	0.958	0.968	84.9%
3	16:10:25	4.773	4.740	86.1%	0.483	0.498	0.970	0.979	0.985	86.0%
x		93.722%	4.761	85.9%	0.508	99.538%	0.955	0.975	97.799%	84.9%
σ		n/a	0.039	0.1%	0.022	n/a	0.037	0.014	n/a	1.0%
%RSD		2.352	0.827	0.1	4.299	1.843	3.906	1.479	0.895	1.2

LLCCV2 MW9754 10/18/2017 16:14:57

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	84.7%	1.800	125.800	127.400	-10.490	T 2007.000	252.100	250.500	254.900
2	16:15:51	85.7%	2.145	115.300	124.500	-3.783	T 1964.000	246.800	247.400	247.300
3	16:16:18	84.9%	1.814	117.200	124.900	-9.280	T 1987.000	248.700	251.500	248.500
x		85.1%	1.920	119.400	125.600	-7.852	T 1986.000	249.200	249.800	250.200
σ		0.5%	0.195	5.609	1.589	3.576	T 21.760	2.698	2.163	4.089
%RSD		0.6	10.160	4.695	1.265	45.540	T 1.095	1.083	0.866	1.634
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	191.600	511.300	261.500	1067.000	2113.000	1982.000	71.5%	26.630	22.480
2	16:15:51	184.900	485.700	271.400	1051.000	1966.000	1913.000	71.5%	25.860	23.760
3	16:16:18	185.200	491.500	280.700	1054.000	1940.000	1947.000	71.4%	25.000	22.360
x		187.200	496.200	271.200	1057.000	2006.000	1947.000	71.5%	25.830	22.870
σ		3.790	13.440	9.572	8.537	93.110	34.770	0.1%	0.816	0.778
%RSD		2.024	2.709	3.530	0.808	4.641	1.786	0.1	3.158	3.401
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	24.860	6309.000	117.900	25.100	112.600	108.000	24.720	25.130	23.950
2	16:15:51	24.140	5905.000	114.900	24.150	108.400	106.500	23.660	24.610	23.080
3	16:16:18	24.420	6198.000	115.000	24.420	107.500	104.800	23.790	23.620	23.580
x		24.470	6138.000	115.900	24.560	109.500	106.400	24.060	24.450	23.540
σ		0.364	208.700	1.727	0.490	2.765	1.587	0.579	0.764	0.439
%RSD		1.487	3.400	1.490	1.993	2.525	1.491	2.407	3.122	1.864
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	24.570	25.080	48.990	51.770	48.190	9.601	25.500	-1.636	-0.429
2	16:15:51	23.910	24.470	48.040	47.510	47.940	9.535	24.090	-0.936	-0.675
3	16:16:18	24.560	23.600	48.240	47.790	47.510	9.027	24.900	-1.838	-0.823
x		24.350	24.380	48.430	49.020	47.880	9.388	24.830	-1.470	-0.643
σ		0.381	0.748	0.500	2.385	0.345	0.314	0.707	0.474	0.199
%RSD		1.565	3.066	1.033	4.865	0.720	3.348	2.848	32.220	30.990
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	0.000	26.500	2.593	48.550	76.7%	51.370	50.910	50.460	0.897
2	16:15:51	0.000	25.350	-3.487	47.460	77.3%	49.530	49.320	48.790	1.249
3	16:16:18	0.000	24.350	0.735	48.360	77.2%	49.180	49.940	49.090	0.566
x		0.000	25.400	-0.053	48.120	77.1%	50.020	50.060	49.440	0.904
σ		0.000	1.072	3.116	0.580	0.4%	1.175	0.799	0.893	0.342
%RSD		0.000	4.222	5866.000	1.205	0.5	2.349	1.597	1.807	37.770
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	5.259	4.927	0.415	0.417	80.4%	17.090	25.410	9.880	9.514
2	16:15:51	5.012	4.952	0.399	0.423	81.1%	16.610	24.220	9.687	9.003
3	16:16:18	4.952	4.860	0.420	0.422	81.1%	16.370	24.570	9.646	9.481
x		5.074	4.913	0.412	0.421	80.8%	16.690	24.730	9.738	9.332
σ		0.163	0.047	0.011	0.003	0.4%	0.363	0.610	0.125	0.286
%RSD		3.206	0.962	2.639	0.650	0.5	2.176	2.464	1.283	3.064
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:24	24.670	24.320	82.6%	2.510	2.572	4.958	5.201	5.074	83.0%
2	16:15:51	24.460	24.130	84.6%	2.444	2.436	4.757	4.983	4.912	84.1%
3	16:16:18	24.590	23.760	84.3%	2.486	2.443	4.795	4.958	4.891	84.6%
x		24.580	24.070	83.8%	2.480	2.483	4.837	5.047	4.959	83.9%
σ		0.104	0.284	1.1%	0.033	0.077	0.107	0.134	0.100	0.8%
%RSD		0.425	1.178	1.3	1.337	3.082	2.206	2.652	2.022	1.0

Co 4 ppb MW9592 10/18/2017 16:20:49

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	87.0%	0.014	0.116	0.930	-7.435	7.895	2.083	2.384	2.093
2	16:21:44	86.2%	-0.027	-0.199	0.815	-3.746	8.904	2.141	2.227	2.398
3	16:22:11	86.4%	-0.002	-0.246	0.327	-5.521	9.350	2.391	2.705	2.669
x		86.5%	-0.005	-0.110	0.691	-5.568	8.717	2.205	2.439	2.387
σ		0.4%	0.020	0.197	0.320	1.845	0.746	0.163	0.244	0.288
%RSD		0.5	407.300	179.500	46.400	33.140	8.554	7.410	9.994	12.080
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	2.324	1.766	189.600	-0.216	8.592	-7.045	73.5%	0.066	-0.057
2	16:21:44	2.373	1.976	199.300	-0.422	6.501	-6.841	73.7%	-0.005	0.096
3	16:22:11	2.350	1.492	216.200	0.847	0.336	-4.333	73.5%	0.019	-0.040
x		2.349	1.745	201.700	0.070	5.143	-6.073	73.6%	0.026	-0.000
σ		0.024	0.242	13.500	0.681	4.293	1.510	0.1%	0.036	0.084
%RSD		1.042	13.890	6.691	974.700	83.460	24.870	0.2	136.300	167600.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	0.078	140.300	0.614	0.041	6.296	1.383	3.744	0.021	-1.265
2	16:21:44	0.107	82.290	1.351	0.064	6.018	1.186	3.853	0.028	-1.345
3	16:22:11	0.069	134.300	1.236	0.049	5.812	0.596	3.741	0.053	-1.218
x		0.085	119.000	1.067	0.051	6.042	1.055	3.779	0.034	-1.276
σ		0.020	31.910	0.397	0.012	0.243	0.410	0.064	0.017	0.064
%RSD		23.670	26.820	37.180	22.700	4.014	38.830	1.685	49.450	5.052
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	-0.039	0.037	0.270	0.392	0.342	-0.081	0.223	-1.476	-1.035
2	16:21:44	-0.056	0.001	0.272	0.232	0.228	-0.045	0.160	-1.389	-0.866
3	16:22:11	-0.060	0.006	0.278	0.397	0.285	0.123	-0.312	-1.383	-1.078
x		-0.052	0.015	0.273	0.340	0.285	-0.001	0.024	-1.416	-0.993
σ		0.011	0.020	0.005	0.093	0.057	0.109	0.292	0.052	0.112
%RSD		21.470	134.000	1.712	27.470	19.990	10080.000	1234.000	3.676	11.270
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	0.000	-0.323	-0.001	-0.030	79.1%	-0.109	-0.076	-0.070	0.064
2	16:21:44	0.000	0.239	0.642	-0.024	78.3%	-0.101	-0.070	-0.052	-0.124
3	16:22:11	0.000	0.619	0.969	-0.051	77.8%	-0.065	-0.070	-0.073	0.024
x		0.000	0.178	0.536	-0.035	78.4%	-0.092	-0.072	-0.065	-0.012
σ		0.000	0.474	0.493	0.014	0.7%	0.023	0.004	0.011	0.099
%RSD		0.000	265.600	92.010	39.370	0.8	25.330	4.876	17.530	851.400
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	-0.004	-0.006	-0.003	0.001	82.0%	-0.033	-0.100	-0.119	-0.087
2	16:21:44	-0.006	-0.005	-0.000	0.007	82.2%	-0.087	-0.065	-0.131	-0.110
3	16:22:11	-0.005	-0.003	0.003	0.004	83.0%	-0.054	-0.101	-0.136	-0.088
x		-0.005	-0.004	-0.000	0.004	82.4%	-0.058	-0.089	-0.129	-0.095
σ		0.001	0.002	0.003	0.003	0.5%	0.027	0.020	0.009	0.013
%RSD		16.140	38.300	4952.000	78.980	0.6	46.860	22.920	6.798	13.460
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:21:17	0.002	0.019	84.1%	-0.001	0.001	0.004	0.007	0.006	84.5%
2	16:21:44	0.028	0.019	85.2%	-0.002	0.000	0.007	0.013	0.008	86.3%
3	16:22:11	0.006	0.026	85.3%	-0.002	0.003	0.011	0.008	0.007	86.2%
x		0.012	0.021	84.9%	-0.001	0.002	0.007	0.009	0.007	85.7%
σ		0.014	0.004	0.7%	0.001	0.002	0.003	0.003	0.001	1.0%
%RSD		113.800	18.520	0.8	46.820	107.500	46.440	37.240	15.660	1.2

CCV MW9737 10/18/2017 16:26:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	77.1%	293.800	294.200	301.500	0.227	T 59940.000	T 56060.000	T 56060.000	T 55790.000
2	16:27:36	78.0%	296.500	305.200	299.500	-6.939	T 60690.000	T 56720.000	T 56280.000	T 56120.000
3	16:28:03	78.1%	294.700	306.000	299.700	4.974	T 61070.000	T 56600.000	T 56590.000	T 56110.000
x		77.8%	98.339%	100.602%	100.077%	-0.580	T 100.943%	T 56460.000	T 56310.000	T 93.342%
σ		0.5%	n/a	n/a	n/a	5.997	T n/a	T 352.900	T 265.500	T n/a
%RSD		0.7	0.473	2.176	0.372	1035.000	T 0.954	T 0.625	T 0.472	T 0.336

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	282.000	T 2840.000	173.600	T 59250.000	58210.000	T 57060.000	69.0%	298.000	288.300
2	16:27:36	283.700	T 2859.000	180.000	T 60030.000	58780.000	T 58210.000	69.4%	301.500	292.300
3	16:28:03	283.800	T 2849.000	202.200	T 59560.000	58560.000	T 57350.000	70.8%	298.900	284.600
x		94.384%	T 94.977%	185.300	T 99.356%	58520.000	T 95.901%	69.7%	99.823%	96.133%
σ		n/a	T n/a	14.970	T n/a	288.300	T n/a	0.9%	n/a	n/a
%RSD		0.360	T 0.343	8.078	T 0.659	0.493	T 1.040	1.4	0.607	1.345

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	290.000	67540.000	T 56790.000	290.800	T 56800.000	T 56310.000	271.200	271.000	266.700
2	16:27:36	290.400	67710.000	T 57260.000	296.300	T 57740.000	T 56800.000	273.400	275.600	272.700
3	16:28:03	289.900	68880.000	T 57450.000	294.000	T 57400.000	T 57250.000	272.100	274.500	265.000
x		96.708%	68040.000	T 57170.000	97.904%	T 57310.000	T 94.646%	90.730%	91.226%	268.100
σ		n/a	730.000	T 339.000	n/a	T 472.500	T n/a	n/a	n/a	4.048
%RSD		0.093	1.073	T 0.593	0.934	T 0.824	T 0.821	0.407	0.884	1.510

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	263.900	268.900	272.300	275.000	274.400	285.100	282.800	-0.228	-0.178
2	16:27:36	266.600	272.000	271.200	277.300	277.800	291.700	280.300	-0.616	-0.833
3	16:28:03	263.900	270.400	272.000	278.900	273.400	286.400	269.700	-0.450	0.244
x		264.800	90.137%	90.617%	277.100	275.200	95.913%	277.600	-0.431	-0.256
σ		1.561	n/a	n/a	1.981	2.281	n/a	6.975	0.195	0.543
%RSD		0.589	0.584	0.210	0.715	0.829	1.216	2.513	45.080	212.300

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	0.000	280.400	-0.859	291.900	73.3%	295.100	297.400	296.700	283.000
2	16:27:36	0.000	281.300	-1.838	292.400	73.9%	297.000	299.300	299.100	284.500
3	16:28:03	0.000	290.700	-0.349	293.100	75.1%	297.400	302.400	299.500	286.000
x		0.000	94.712%	-1.015	97.495%	74.1%	98.841%	99.909%	298.400	284.500
σ		0.000	n/a	0.757	n/a	0.9%	n/a	n/a	1.493	1.531
%RSD		0.000	2.013	74.520	0.211	1.3	0.406	0.848	0.500	0.538

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	275.900	269.000	284.400	280.100	75.0%	290.000	296.000	303.600	287.200
2	16:27:36	274.800	269.200	281.000	281.100	76.0%	292.000	297.900	309.900	291.300
3	16:28:03	277.000	270.800	284.200	279.300	76.8%	293.200	300.000	310.800	293.300
x		91.964%	269.700	283.200	93.382%	75.9%	97.240%	99.324%	102.712%	96.870%
σ		n/a	0.971	1.915	n/a	0.9%	n/a	n/a	n/a	n/a
%RSD		0.385	0.360	0.676	0.313	1.1	0.561	0.674	1.270	1.071

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:09	290.200	289.300	79.8%	298.600	T 289.800	292.000	295.800	T 295.800	78.7%
2	16:27:36	289.900	290.200	80.6%	299.000	T 290.200	294.000	297.000	T 296.700	79.6%
3	16:28:03	290.300	290.400	82.5%	300.700	T 292.900	295.700	298.900	T 298.600	79.9%
x		96.710%	96.651%	80.9%	99.814%	T 96.983%	97.973%	99.074%	T 99.005%	79.4%
σ		n/a	n/a	1.4%	n/a	T n/a	n/a	n/a	T n/a	0.7%
%RSD		0.072	0.209	1.7	0.367	T 0.595	0.630	0.528	T 0.487	0.8

CCB IM8211-01 10/18/2017 16:32:32 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	85.7%	0.006	1.899	1.757	-9.683	-3.606	2.844	2.340	2.513
2	16:33:26	88.3%	-0.003	1.765	1.632	-9.932	-4.396	2.682	2.711	2.663
3	16:33:53	87.3%	-0.027	0.926	1.245	-4.480	-4.970	2.436	2.928	2.363
x		87.1%	-0.008	1.530	1.545	-8.032	-4.324	2.654	2.659	2.513
σ		1.3%	0.017	0.527	0.267	3.079	0.685	0.205	0.297	0.150
%RSD		1.5	216.300	34.450	17.290	38.330	15.830	7.723	11.180	5.962
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	0.542	0.494	139.300	5.818	5.157	-10.040	75.9%	0.039	-0.014
2	16:33:26	0.491	-0.090	142.700	4.804	6.208	-12.100	75.5%	-0.029	0.012
3	16:33:53	0.466	-0.715	146.500	2.685	1.084	-8.808	76.6%	0.038	-0.032
x		0.500	-0.104	142.800	4.436	4.150	-10.320	76.0%	0.016	-0.011
σ		0.039	0.605	3.634	1.599	2.707	1.663	0.6%	0.039	0.022
%RSD		7.834	584.400	2.544	36.040	65.230	16.130	0.8	243.300	193.100
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	-0.014	1.036	5.069	0.055	3.227	4.788	0.011	0.032	-0.857
2	16:33:26	-0.023	-17.660	3.753	0.051	2.822	4.366	0.010	0.020	-1.369
3	16:33:53	-0.039	-2.205	3.579	0.071	1.970	3.444	0.002	0.001	-1.457
x		-0.025	-6.277	4.134	0.059	2.673	4.200	0.007	0.017	-1.228
σ		0.013	9.991	0.815	0.010	0.642	0.687	0.005	0.016	0.324
%RSD		49.570	159.200	19.710	17.720	24.020	16.360	65.730	90.610	26.420
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	-0.053	-0.018	-0.109	-0.001	-0.021	0.004	-0.232	-0.960	-0.935
2	16:33:26	-0.067	-0.007	0.004	0.031	0.014	0.003	0.015	-1.319	-0.053
3	16:33:53	-0.077	0.001	0.002	0.092	-0.022	-0.049	-0.049	-0.993	-0.606
x		-0.066	-0.008	-0.034	0.041	-0.010	-0.014	-0.089	-1.091	-0.531
σ		0.012	0.009	0.064	0.047	0.020	0.030	0.128	0.199	0.446
%RSD		18.250	119.300	188.300	116.300	207.000	214.200	144.400	18.200	83.950
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	0.000	0.204	1.817	-0.106	81.8%	0.121	0.164	0.091	0.161
2	16:33:26	0.000	-0.159	0.158	0.000	81.1%	0.120	0.107	0.161	0.422
3	16:33:53	0.000	0.008	-1.011	-0.033	81.3%	0.069	0.048	0.042	0.306
x		0.000	0.018	0.321	-0.046	81.4%	0.103	0.106	0.098	0.296
σ		0.000	0.182	1.421	0.054	0.4%	0.030	0.058	0.060	0.131
%RSD		0.000	1023.000	442.300	117.600	0.5	28.580	54.690	61.140	44.100
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	0.015	0.029	0.002	0.011	84.5%	0.058	0.049	0.525	0.586
2	16:33:26	0.019	0.025	0.002	0.014	84.7%	-0.013	0.049	0.569	0.575
3	16:33:53	0.013	0.015	0.015	0.012	84.6%	0.044	0.018	0.594	0.498
x		0.016	0.023	0.006	0.012	84.6%	0.030	0.039	0.563	0.553
σ		0.003	0.007	0.007	0.002	0.1%	0.038	0.018	0.035	0.048
%RSD		18.370	32.030	111.400	14.790	0.1	126.400	47.170	6.191	8.656
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	0.010	0.025	85.5%	0.008	0.015	0.017	0.013	0.014	83.8%
2	16:33:26	0.018	0.039	86.3%	0.006	0.009	0.003	0.008	0.009	85.5%
3	16:33:53	0.023	0.037	86.6%	0.010	0.007	0.010	0.010	0.010	86.6%
x		0.017	0.034	86.1%	0.008	0.010	0.010	0.010	0.011	85.3%
σ		0.006	0.007	0.6%	0.002	0.004	0.007	0.003	0.003	1.4%
%RSD		37.340	21.940	0.7	23.010	37.480	71.620	27.170	25.680	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	83.8%	-0.001	0.621	0.278	38.420	6.805	1.367	1.576	1.272
2	16:39:15	85.5%	0.015	-0.496	-0.158	35.680	6.389	1.562	1.392	1.690
3	16:39:42	85.1%	-0.027	0.342	-0.010	31.050	7.287	1.791	1.875	1.471
x		84.8%	-0.004	0.155	0.037	35.050	6.827	1.573	1.614	1.477
σ		0.9%	0.021	0.581	0.222	3.723	0.450	0.212	0.244	0.209
%RSD		1.1	494.400	373.900	605.500	10.620	6.584	13.480	15.100	14.140
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	2.350	11.380	T 324100.000	29.920	6.393	1.761	68.0%	0.279	0.550
2	16:39:15	2.196	10.350	T 322700.000	27.760	1.841	1.410	68.8%	0.351	1.733
3	16:39:42	2.447	10.310	T 323000.000	28.570	2.938	0.590	68.9%	0.576	1.636
x		2.331	10.680	T 323300.000	28.750	3.724	1.254	68.6%	0.402	1.306
σ		0.127	0.605	T 739.700	1.092	2.376	0.601	0.5%	0.155	0.657
%RSD		5.442	5.667	T 0.229	3.797	63.800	47.940	0.7	38.580	50.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	0.574	10550.000	14.950	0.113	4.762	1.819	0.001	0.212	-0.957
2	16:39:15	0.651	10960.000	13.220	0.102	4.712	1.621	-0.002	0.202	-1.057
3	16:39:42	0.566	11640.000	12.990	0.134	4.357	1.348	0.001	0.242	-1.200
x		0.597	11050.000	13.720	0.116	4.610	1.596	0.000	0.219	-1.071
σ		0.047	547.800	1.072	0.016	0.221	0.237	0.002	0.021	0.122
%RSD		7.828	4.958	7.814	14.010	4.786	14.830	5726.000	9.655	11.380
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	0.386	0.399	0.021	0.198	-0.050	0.639	-0.031	28.260	28.080
2	16:39:15	0.296	0.355	-0.008	0.055	-0.037	-0.172	0.014	27.850	28.580
3	16:39:42	0.330	0.321	0.016	0.398	-0.047	0.753	-0.160	28.020	29.170
x		0.337	0.358	0.010	0.217	-0.045	0.407	-0.059	28.040	28.610
σ		0.045	0.039	0.016	0.172	0.007	0.504	0.091	0.203	0.546
%RSD		13.390	10.960	155.900	79.140	15.270	123.900	153.400	0.723	1.909
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	0.000	-0.241	0.839	0.006	71.9%	0.340	0.462	0.403	-1.137
2	16:39:15	0.000	-0.051	-0.159	-0.029	72.2%	0.305	0.353	0.385	0.057
3	16:39:42	0.000	-0.256	-1.517	0.051	73.9%	0.248	0.311	0.292	-0.279
x		0.000	-0.183	-0.279	0.009	72.7%	0.298	0.375	0.360	-0.453
σ		0.000	0.114	1.183	0.040	1.1%	0.047	0.078	0.059	0.616
%RSD		0.000	62.430	424.000	436.400	1.5	15.720	20.660	16.480	135.900
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	0.007	0.010	-0.001	0.016	75.7%	3.131	4.580	0.548	0.532
2	16:39:15	0.022	0.016	0.002	-0.010	76.5%	3.213	4.773	0.403	0.398
3	16:39:42	0.008	0.007	0.002	-0.022	76.6%	3.287	4.750	0.367	0.366
x		0.012	0.011	0.001	-0.005	76.3%	3.210	4.701	0.439	0.432
σ		0.008	0.005	0.002	0.020	0.5%	0.078	0.106	0.096	0.088
%RSD		66.250	42.810	182.300	370.500	0.7	2.445	2.248	21.840	20.370
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:48	-0.019	-0.004	81.0%	-0.002	-0.003	0.023	0.031	0.031	88.7%
2	16:39:15	-0.024	-0.004	81.2%	-0.003	-0.004	0.026	0.038	0.028	88.4%
3	16:39:42	-0.014	0.001	83.1%	-0.001	0.000	0.028	0.028	0.028	86.9%
x		-0.019	-0.003	81.8%	-0.002	-0.002	0.026	0.032	0.029	88.0%
σ		0.005	0.003	1.2%	0.001	0.002	0.002	0.005	0.002	0.9%
%RSD		23.990	106.600	1.4	35.850	111.500	8.773	15.550	6.034	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	82.5%	222.900	223.800	228.900	24.640	T 2322.000	T 2134.000	2254.000	2271.000
2	16:45:08	84.3%	219.900	218.600	229.000	22.390	T 2320.000	T 2133.000	2255.000	2264.000
3	16:45:35	83.4%	221.700	229.600	229.900	22.730	T 2358.000	T 2140.000	2254.000	2279.000
x		83.4%	221.500	224.000	229.300	23.250	T 2334.000	T 2136.000	2254.000	2271.000
σ		0.9%	1.513	5.524	0.572	1.212	T 21.450	T 3.785	0.746	7.737
%RSD		1.1	0.683	2.466	0.250	5.212	T 0.919	T 0.177	0.033	0.341
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	216.200	18.210	T 335800.000	2483.000	2335.000	2244.000	67.8%	227.500	212.500
2	16:45:08	217.100	17.850	T 334600.000	2478.000	2341.000	2252.000	68.0%	222.500	213.800
3	16:45:35	218.400	18.610	T 336900.000	2502.000	2369.000	2249.000	67.7%	223.800	212.000
x		217.300	18.220	T 335800.000	2488.000	2348.000	2249.000	67.8%	224.600	212.800
σ		1.121	0.381	T 1195.000	12.730	18.090	4.111	0.1%	2.575	0.944
%RSD		0.516	2.089	T 0.356	0.512	0.770	0.183	0.2	1.147	0.444
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	226.500	62180.000	2474.000	223.800	T 2227.000	2319.000	217.600	218.200	212.600
2	16:45:08	224.200	60370.000	2435.000	222.100	T 2205.000	2307.000	217.100	213.500	213.100
3	16:45:35	224.300	60940.000	2455.000	224.300	T 2218.000	2324.000	218.900	216.900	218.300
x		225.000	61160.000	2455.000	223.400	T 2217.000	2317.000	217.900	216.200	214.700
σ		1.309	922.100	19.610	1.150	T 11.390	8.852	0.918	2.444	3.163
%RSD		0.582	1.508	0.799	0.515	T 0.514	0.382	0.421	1.130	1.473
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	220.000	223.900	246.400	254.100	251.300	210.200	200.500	26.290	27.530
2	16:45:08	218.000	220.700	254.800	256.000	255.100	213.700	202.800	24.820	27.700
3	16:45:35	215.100	222.100	253.200	251.400	251.200	213.800	198.000	26.680	26.790
x		217.700	222.200	251.500	253.800	252.500	212.600	200.400	25.930	27.340
σ		2.462	1.624	4.449	2.311	2.231	2.040	2.419	0.982	0.482
%RSD		1.131	0.731	1.769	0.911	0.884	0.960	1.207	3.788	1.764
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	0.000	202.000	-0.164	218.400	72.5%	220.200	224.900	220.600	219.000
2	16:45:08	0.000	211.500	-0.111	219.900	71.6%	223.000	223.900	221.500	220.700
3	16:45:35	0.000	206.200	0.752	217.000	73.2%	219.200	221.300	220.100	214.500
x		0.000	206.500	0.159	218.400	72.4%	220.800	223.400	220.700	218.100
σ		0.000	4.807	0.515	1.446	0.8%	1.944	1.856	0.703	3.220
%RSD		0.000	2.327	323.400	0.662	1.1	0.881	0.831	0.319	1.476
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	213.600	210.100	217.900	213.500	75.8%	223.600	230.100	226.000	213.400
2	16:45:08	213.800	210.800	218.300	214.400	75.8%	224.300	230.800	227.600	214.900
3	16:45:35	210.600	207.000	216.900	214.000	76.0%	224.400	230.400	227.000	214.500
x		212.600	209.300	217.700	214.000	75.9%	224.100	230.400	226.900	214.300
σ		1.809	2.010	0.724	0.441	0.1%	0.393	0.322	0.847	0.772
%RSD		0.851	0.960	0.333	0.206	0.2	0.175	0.140	0.373	0.360
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:41	217.500	218.600	81.1%	213.900	T 210.800	209.200	211.600	217.400	86.6%
2	16:45:08	219.200	219.200	82.8%	217.300	T 213.700	213.100	214.200	220.900	86.2%
3	16:45:35	218.800	219.700	83.4%	218.200	T 214.300	215.000	217.200	223.500	85.5%
x		218.500	219.200	82.4%	216.500	T 212.900	212.400	214.300	220.600	86.1%
σ		0.850	0.578	1.2%	2.304	T 1.844	2.947	2.786	3.076	0.5%
%RSD		0.389	0.264	1.4	1.064	T 0.866	1.387	1.300	1.394	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	86.7%	0.022	6.380	7.147	40.670	1.804	2.485	2.704	2.915
2	16:50:59	86.5%	0.023	6.032	6.739	53.670	1.897	2.768	2.663	3.048
3	16:51:27	86.5%	0.039	6.499	6.418	35.930	2.393	2.961	2.762	3.103
x		86.6%	0.028	6.303	6.768	43.420	2.031	2.738	2.710	3.022
σ		0.1%	0.010	0.243	0.365	9.187	0.317	0.239	0.050	0.097
%RSD		0.1	34.050	3.848	5.394	21.160	15.600	8.735	1.834	3.196
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	23.430	6.433	T 378100.000	23.100	61.970	51.980	70.4%	0.268	0.941
2	16:50:59	23.900	6.361	T 384100.000	24.120	58.510	56.710	69.4%	0.696	1.626
3	16:51:27	23.080	6.160	T 378900.000	22.800	75.860	56.010	69.5%	0.396	1.936
x		23.470	6.318	T 380400.000	23.340	65.450	54.900	69.8%	0.453	1.501
σ		0.413	0.142	T 3261.000	0.694	9.184	2.554	0.5%	0.220	0.509
%RSD		1.761	2.243	T 0.857	2.974	14.030	4.651	0.8	48.480	33.910
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	0.686	11390.000	31.590	0.469	16.310	18.600	0.017	0.177	-0.955
2	16:50:59	0.694	11190.000	28.760	0.441	15.890	13.400	0.011	0.187	-0.853
3	16:51:27	0.660	11330.000	31.210	0.488	15.970	14.210	0.018	0.133	-1.469
x		0.680	11300.000	30.520	0.466	16.050	15.400	0.016	0.165	-1.092
σ		0.018	97.750	1.539	0.024	0.222	2.794	0.004	0.029	0.331
%RSD		2.612	0.865	5.041	5.095	1.385	18.140	23.000	17.420	30.270
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	0.341	0.318	0.166	0.152	0.167	0.416	0.048	22.760	20.410
2	16:50:59	0.339	0.214	0.218	0.362	0.113	0.316	-0.499	21.760	19.910
3	16:51:27	0.312	0.345	0.285	0.359	0.177	0.258	0.139	20.350	22.000
x		0.331	0.292	0.223	0.291	0.152	0.330	-0.104	21.620	20.770
σ		0.017	0.069	0.060	0.121	0.034	0.080	0.345	1.211	1.091
%RSD		5.014	23.590	26.830	41.450	22.520	24.330	331.700	5.600	5.252
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	0.000	0.070	0.021	0.318	74.2%	0.275	0.216	0.327	-0.126
2	16:50:59	0.000	0.218	-0.249	0.342	73.7%	0.209	0.283	0.266	-0.086
3	16:51:27	0.000	-0.054	-2.162	0.272	74.2%	0.234	0.205	0.262	0.229
x		0.000	0.078	-0.797	0.311	74.0%	0.239	0.235	0.285	0.006
σ		0.000	0.136	1.190	0.036	0.3%	0.033	0.042	0.036	0.194
%RSD		0.000	175.100	149.400	11.460	0.4	13.980	17.820	12.810	3493.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	0.016	0.009	-0.001	-0.004	77.8%	3.636	5.325	0.260	0.296
2	16:50:59	0.019	0.018	0.025	-0.013	78.1%	3.537	5.246	0.215	0.259
3	16:51:27	0.027	0.033	0.025	0.026	78.0%	3.700	5.207	0.206	0.225
x		0.020	0.020	0.016	0.003	78.0%	3.624	5.259	0.227	0.260
σ		0.005	0.012	0.015	0.020	0.2%	0.082	0.060	0.029	0.036
%RSD		26.590	61.110	92.280	657.600	0.2	2.269	1.146	12.770	13.770
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:32	0.086	0.102	82.4%	0.046	0.051	0.070	0.065	0.074	86.8%
2	16:50:59	0.080	0.093	83.9%	0.060	0.060	0.065	0.066	0.066	86.0%
3	16:51:27	0.108	0.076	83.5%	0.060	0.056	0.077	0.079	0.070	86.2%
x		0.091	0.090	83.3%	0.055	0.056	0.071	0.070	0.070	86.3%
σ		0.015	0.013	0.8%	0.008	0.004	0.006	0.008	0.004	0.4%
%RSD		15.900	14.740	1.0	14.040	7.870	8.680	11.180	6.105	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	84.1%	218.500	233.100	235.400	29.330	T 2295.000	T 2105.000	2230.000	2245.000
2	16:56:52	85.3%	217.300	234.100	231.200	28.930	T 2309.000	T 2094.000	2213.000	2227.000
3	16:57:19	85.4%	213.000	231.600	233.000	25.780	T 2270.000	T 2050.000	2165.000	2189.000
x		84.9%	216.200	232.900	233.200	28.010	T 2291.000	T 2083.000	2202.000	2220.000
σ		0.7%	2.856	1.257	2.132	1.942	T 19.890	T 29.330	33.810	29.030
%RSD		0.9	1.321	0.540	0.914	6.931	T 0.868	T 1.408	1.535	1.307

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	219.600	80.580	T 401300.000	2410.000	2261.000	2210.000	70.7%	212.800	209.100
2	16:56:52	219.100	80.660	T 401400.000	T 2295.000	2305.000	2197.000	70.2%	212.400	208.400
3	16:57:19	212.600	81.200	T 399200.000	2387.000	2251.000	2196.000	70.5%	215.100	203.700
x		217.100	80.810	T 400600.000	T 2364.000	2272.000	2201.000	70.4%	213.400	207.100
σ		3.908	0.339	T 1223.000	T 60.870	28.850	7.909	0.3%	1.453	2.941
%RSD		1.800	0.419	T 0.305	T 2.575	1.269	0.359	0.4	0.681	1.420

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	220.300	62960.000	2396.000	217.100	T 2155.000	2314.000	210.700	211.600	205.300
2	16:56:52	217.800	62060.000	2361.000	215.900	T 2139.000	2255.000	210.800	208.100	210.100
3	16:57:19	213.300	60520.000	2323.000	212.600	T 2100.000	2207.000	206.800	203.700	202.300
x		217.100	61850.000	2360.000	215.200	T 2131.000	2259.000	209.400	207.800	205.900
σ		3.588	1237.000	36.440	2.357	T 28.340	53.240	2.244	3.959	3.922
%RSD		1.652	1.999	1.544	1.095	T 1.329	2.357	1.071	1.906	1.905

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	214.700	218.900	198.000	196.900	198.700	202.000	196.500	25.660	24.810
2	16:56:52	212.100	216.400	195.300	197.700	197.700	204.900	188.600	24.730	25.270
3	16:57:19	206.400	210.200	193.300	198.100	195.300	196.800	191.000	24.160	26.230
x		211.100	215.200	195.500	197.600	197.200	201.200	192.000	24.850	25.440
σ		4.206	4.477	2.375	0.575	1.727	4.114	4.036	0.758	0.723
%RSD		1.992	2.081	1.214	0.291	0.876	2.045	2.102	3.051	2.843

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	0.000	194.400	2.242	214.200	73.8%	217.700	220.700	218.500	222.000
2	16:56:52	0.000	195.000	0.353	212.000	74.0%	216.200	219.100	216.800	211.100
3	16:57:19	0.000	190.700	-0.898	209.800	73.8%	214.700	217.800	212.700	203.900
x		0.000	193.300	0.566	212.000	73.9%	216.200	219.200	216.000	212.400
σ		0.000	2.291	1.581	2.209	0.1%	1.520	1.448	2.972	9.124
%RSD		0.000	1.185	279.500	1.042	0.1	0.703	0.660	1.376	4.296

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	211.100	208.500	211.800	209.400	76.9%	221.700	227.500	220.800	210.300
2	16:56:52	207.600	204.800	211.100	206.900	77.1%	218.500	225.600	221.400	210.000
3	16:57:19	204.700	202.700	209.100	205.600	77.9%	216.200	219.900	216.900	206.800
x		207.800	205.300	210.700	207.300	77.3%	218.800	224.300	219.700	209.000
σ		3.187	2.935	1.441	1.942	0.5%	2.781	3.945	2.436	1.963
%RSD		1.533	1.430	0.684	0.937	0.7	1.271	1.758	1.109	0.939

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:25	215.500	215.100	82.2%	213.800	T 210.900	210.700	213.200	218.500	85.1%
2	16:56:52	214.100	215.200	82.9%	213.200	T 212.100	211.700	211.100	218.400	85.1%
3	16:57:19	208.600	210.300	84.5%	213.200	T 210.800	208.800	210.700	217.100	85.3%
x		212.700	213.500	83.2%	213.400	T 211.300	210.400	211.700	218.000	85.2%
σ		3.679	2.794	1.2%	0.354	T 0.714	1.442	1.343	0.766	0.1%
%RSD		1.730	1.308	1.4	0.166	T 0.338	0.686	0.635	0.351	0.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	85.9%	0.015	1.245	0.994	31.750	-3.116	1.319	1.364	1.174
2	17:02:44	86.6%	0.006	0.965	1.516	34.300	-3.584	1.355	1.385	1.543
3	17:03:12	87.7%	-0.003	0.153	0.931	33.380	-3.247	1.411	1.594	1.432
x		86.7%	0.006	0.788	1.147	33.140	-3.315	1.362	1.447	1.383
σ		0.9%	0.009	0.567	0.321	1.288	0.241	0.047	0.127	0.189
%RSD		1.1	141.100	72.020	28.010	3.885	7.277	3.418	8.776	13.700
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	2.943	5.759	┬372200.000	15.020	2.728	1.101	70.6%	0.316	1.133
2	17:02:44	2.964	4.515	┬370300.000	18.690	10.390	0.979	69.9%	0.270	1.109
3	17:03:12	2.839	4.756	┬368100.000	19.120	7.157	0.355	69.8%	0.295	1.180
x		2.915	5.010	┬370200.000	17.610	6.759	0.812	70.1%	0.294	1.140
σ		0.067	0.660	┬2026.000	2.255	3.849	0.400	0.4%	0.023	0.036
%RSD		2.300	13.170	┬0.547	12.810	56.940	49.280	0.6	7.831	3.168
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	0.716	10930.000	9.235	0.263	0.662	0.581	0.019	0.169	-1.177
2	17:02:44	0.628	11200.000	10.180	0.249	0.140	-0.436	0.011	0.152	-1.560
3	17:03:12	0.628	11190.000	10.110	0.219	0.250	0.045	0.016	0.219	-1.344
x		0.657	11110.000	9.843	0.244	0.351	0.063	0.015	0.180	-1.361
σ		0.051	154.200	0.528	0.023	0.275	0.509	0.004	0.035	0.192
%RSD		7.720	1.388	5.363	9.357	78.400	801.900	27.730	19.350	14.120
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	0.290	0.295	-0.015	0.285	0.014	-0.673	0.200	16.960	19.370
2	17:02:44	0.221	0.250	-0.023	0.186	-0.078	0.421	0.156	18.000	18.780
3	17:03:12	0.226	0.240	-0.050	0.151	-0.072	0.226	-0.134	17.320	19.040
x		0.246	0.262	-0.029	0.207	-0.046	-0.009	0.074	17.420	19.060
σ		0.038	0.029	0.019	0.069	0.051	0.584	0.181	0.526	0.297
%RSD		15.620	11.120	63.310	33.500	112.600	6641.000	244.400	3.017	1.555
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	0.000	0.788	2.462	-0.130	74.8%	0.170	0.230	0.133	-0.249
2	17:02:44	0.000	0.145	-0.308	-0.005	74.6%	0.079	0.039	0.106	-0.288
3	17:03:12	0.000	0.807	0.279	-0.048	75.2%	0.023	0.063	-0.005	-0.342
x		0.000	0.580	0.811	-0.061	74.9%	0.091	0.111	0.078	-0.293
σ		0.000	0.377	1.459	0.064	0.3%	0.074	0.104	0.073	0.046
%RSD		0.000	64.990	180.000	104.300	0.4	82.090	94.190	94.150	15.860
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	0.001	0.004	-0.004	-0.006	77.8%	3.548	5.229	0.072	0.107
2	17:02:44	0.003	0.003	0.006	0.008	77.8%	3.585	5.303	0.067	0.084
3	17:03:12	0.014	0.010	0.003	-0.006	78.4%	3.623	5.272	0.067	0.085
x		0.006	0.006	0.002	-0.001	78.0%	3.585	5.268	0.069	0.092
σ		0.007	0.004	0.005	0.008	0.3%	0.037	0.037	0.003	0.013
%RSD		115.300	66.390	275.300	589.100	0.4	1.036	0.710	4.317	14.100
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:02:17	0.008	0.026	82.5%	0.067	0.065	0.052	0.053	0.054	83.2%
2	17:02:44	0.017	0.026	83.2%	0.052	0.054	0.040	0.035	0.039	83.0%
3	17:03:12	0.017	0.020	84.4%	0.048	0.051	0.046	0.045	0.049	83.9%
x		0.014	0.024	83.4%	0.055	0.057	0.046	0.044	0.047	83.4%
σ		0.005	0.003	1.0%	0.010	0.007	0.006	0.009	0.008	0.5%
%RSD		35.660	13.560	1.2	18.030	12.980	12.610	20.360	16.100	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	86.7%	216.500	229.200	227.800	29.260	T 2253.000	T 2083.000	2191.000	2206.000
2	17:08:39	85.9%	214.100	227.700	228.900	29.090	T 2293.000	T 2072.000	2209.000	2197.000
3	17:09:06	87.0%	210.000	217.700	223.100	28.980	T 2267.000	T 2058.000	2185.000	2164.000
x		86.5%	213.500	224.900	226.600	29.110	T 2271.000	T 2071.000	2195.000	2189.000
σ		0.6%	3.303	6.254	3.078	0.139	T 20.240	T 12.840	12.390	21.920
%RSD		0.7	1.547	2.781	1.358	0.476	T 0.892	T 0.620	0.564	1.001
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	207.200	20.010	T 332000.000	2396.000	2275.000	2154.000	71.4%	222.600	207.900
2	17:08:39	206.500	20.270	T 335300.000	2417.000	2191.000	2208.000	69.7%	214.100	208.900
3	17:09:06	202.900	19.510	T 331800.000	2403.000	2256.000	2157.000	69.7%	213.900	206.600
x		205.500	19.930	T 333000.000	2405.000	2241.000	2173.000	70.3%	216.900	207.800
σ		2.300	0.388	T 2006.000	10.940	43.830	30.750	1.0%	4.965	1.131
%RSD		1.119	1.947	T 0.602	0.455	1.956	1.415	1.4	2.289	0.544
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	217.700	60140.000	2371.000	216.700	T 2151.000	2282.000	213.200	209.400	206.500
2	17:08:39	219.500	62040.000	2390.000	220.200	T 2151.000	2285.000	212.800	211.100	210.900
3	17:09:06	217.400	60520.000	2366.000	218.700	T 2147.000	2236.000	211.500	209.500	212.300
x		218.200	60900.000	2376.000	218.500	T 2150.000	2268.000	212.500	210.000	209.900
σ		1.103	1006.000	12.790	1.759	T 2.560	27.290	0.893	0.942	3.028
%RSD		0.505	1.652	0.538	0.805	T 0.119	1.203	0.420	0.449	1.442
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	217.000	218.900	195.500	198.300	196.500	202.300	193.300	16.520	17.760
2	17:08:39	213.600	222.600	197.400	200.100	197.500	205.600	193.200	15.700	18.380
3	17:09:06	213.200	216.600	196.100	199.700	197.100	200.800	190.700	16.430	17.900
x		214.600	219.400	196.400	199.400	197.100	202.900	192.400	16.220	18.010
σ		2.110	3.074	0.954	0.951	0.527	2.425	1.495	0.450	0.327
%RSD		0.983	1.402	0.486	0.477	0.268	1.195	0.777	2.775	1.814
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	0.000	200.400	-0.063	212.400	75.4%	217.400	218.500	219.200	216.200
2	17:08:39	0.000	202.100	-1.543	210.800	74.3%	216.900	216.500	213.100	213.500
3	17:09:06	0.000	198.200	-1.211	212.000	73.9%	214.800	213.200	216.700	209.900
x		0.000	200.200	-0.939	211.700	74.6%	216.300	216.100	216.300	213.200
σ		0.000	1.963	0.777	0.845	0.8%	1.364	2.677	3.072	3.171
%RSD		0.000	0.980	82.730	0.399	1.0	0.631	1.239	1.420	1.487
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	211.700	206.700	214.700	209.700	77.2%	218.800	227.300	220.900	210.100
2	17:08:39	205.600	203.600	208.300	205.700	77.7%	216.900	222.900	220.900	209.000
3	17:09:06	205.500	201.700	210.100	207.000	77.5%	217.800	222.100	218.600	207.500
x		207.600	204.000	211.100	207.500	77.5%	217.800	224.100	220.100	208.800
σ		3.523	2.533	3.314	2.023	0.2%	0.926	2.786	1.342	1.306
%RSD		1.697	1.242	1.570	0.975	0.3	0.425	1.243	0.610	0.626
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:11	214.000	212.700	82.2%	216.500	T 215.200	214.000	216.200	222.100	83.0%
2	17:08:39	214.100	212.900	83.3%	216.600	T 216.300	213.700	216.700	222.300	82.9%
3	17:09:06	211.400	211.200	83.9%	215.600	T 215.500	213.600	214.500	220.700	82.9%
x		213.200	212.300	83.2%	216.200	T 215.700	213.800	215.800	221.700	82.9%
σ		1.523	0.952	0.9%	0.563	T 0.575	0.203	1.170	0.865	0.1%
%RSD		0.715	0.448	1.0	0.260	T 0.267	0.095	0.542	0.390	0.1

CCV MW9737 10/18/2017 17:13:36 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	75.7%	295.100	306.900	304.700	2.609	T 60240.000	T 55490.000	T 55310.000	T 55350.000
2	17:14:30	75.7%	296.200	314.700	308.500	5.009	T 60410.000	T 55960.000	T 55560.000	T 55410.000
3	17:14:58	75.0%	296.100	305.100	308.100	7.275	T 60710.000	T 56030.000	T 55900.000	T 55920.000
x		75.5%	98.599%	102.962%	102.373%	4.964	T 100.756%	T 55830.000	T 55590.000	T 92.601%
σ		0.4%	n/a	n/a	n/a	2.333	T n/a	T 296.700	T 293.300	T n/a
%RSD		0.5	0.214	1.668	0.676	46.990	T 0.391	T 0.531	T 0.528	T 0.557
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	281.300	T 2865.000	2954.000	T 58760.000	56710.000	T 56460.000	69.8%	293.300	292.200
2	17:14:30	279.500	T 2864.000	2998.000	T 59180.000	57200.000	T 56670.000	68.8%	297.400	290.800
3	17:14:58	279.800	T 2866.000	2979.000	T 59440.000	58200.000	T 56880.000	67.9%	298.200	293.400
x		93.395%	T 95.493%	2977.000	T 98.549%	57370.000	T 94.446%	68.8%	98.769%	97.377%
σ		n/a	T n/a	22.350	T n/a	759.800	T n/a	1.0%	n/a	n/a
%RSD		0.344	T 0.036	0.751	T 0.578	1.324	T 0.372	1.4	0.902	0.439
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	291.100	67450.000	T 56620.000	290.100	T 57490.000	T 56870.000	276.800	279.100	277.400
2	17:14:30	291.300	68130.000	T 56810.000	290.500	T 56940.000	T 56550.000	276.700	279.300	272.400
3	17:14:58	295.000	69510.000	T 57090.000	293.000	T 57310.000	T 57080.000	278.900	282.800	279.700
x		97.480%	68360.000	T 56840.000	97.069%	T 57240.000	T 94.724%	92.486%	93.458%	276.500
σ		n/a	1048.000	T 238.800	n/a	T 279.500	T n/a	n/a	n/a	3.728
%RSD		0.750	1.533	T 0.420	0.537	T 0.488	T 0.475	0.459	0.744	1.348
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	273.300	276.900	269.700	271.600	269.800	291.500	279.000	0.367	0.442
2	17:14:30	272.800	278.600	270.400	275.100	268.900	291.900	278.000	0.898	0.429
3	17:14:58	271.000	280.500	272.200	276.100	274.300	293.200	277.200	0.623	-0.553
x		272.400	92.894%	90.249%	274.300	271.000	97.406%	278.100	0.629	0.106
σ		1.238	n/a	n/a	2.349	2.901	n/a	0.946	0.265	0.571
%RSD		0.455	0.652	0.466	0.856	1.070	0.307	0.340	42.170	538.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	0.000	277.900	1.093	291.500	72.5%	304.600	301.600	301.600	289.400
2	17:14:30	0.000	289.700	-2.115	291.200	73.0%	299.600	302.500	298.700	283.000
3	17:14:58	0.000	284.700	1.405	287.700	72.9%	300.800	303.700	301.500	282.400
x		0.000	94.702%	0.128	96.703%	72.8%	100.566%	100.865%	300.600	284.900
σ		0.000	n/a	1.949	n/a	0.3%	n/a	n/a	1.661	3.890
%RSD		0.000	2.098	1525.000	0.732	0.4	0.860	0.362	0.552	1.365
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	283.000	273.700	283.600	279.800	73.9%	290.300	300.600	300.600	282.900
2	17:14:30	279.500	269.700	281.200	278.300	73.8%	289.200	296.000	300.100	286.800
3	17:14:58	281.100	270.700	282.700	279.900	73.5%	288.500	297.000	306.100	289.500
x		93.734%	271.400	282.500	93.103%	73.7%	96.436%	99.284%	100.752%	95.471%
σ		n/a	2.106	1.175	n/a	0.2%	n/a	n/a	n/a	n/a
%RSD		0.618	0.776	0.416	0.319	0.3	0.308	0.823	1.100	1.176
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:03	295.200	291.700	78.2%	300.500	T 296.100	294.800	297.500	T 298.600	75.0%
2	17:14:30	291.800	290.600	78.9%	300.800	T 294.000	295.000	299.500	T 298.800	74.7%
3	17:14:58	293.400	288.700	78.7%	301.400	T 295.200	295.400	301.000	T 300.300	74.3%
x		97.826%	96.788%	78.6%	100.309%	T 98.377%	98.364%	99.777%	T 99.755%	74.7%
σ		n/a	n/a	0.3%	n/a	T n/a	n/a	n/a	T n/a	0.3%
%RSD		0.584	0.522	0.4	0.157	T 0.356	0.108	0.594	T 0.315	0.4

CCB IM8211-01 10/18/2017 17:19:27 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	87.8%	0.037	2.013	2.260	-6.659	-7.269	3.425	3.628	3.763
2	17:20:21	88.1%	0.037	2.211	2.035	-15.220	-7.799	3.464	3.533	3.523
3	17:20:48	89.4%	0.036	1.440	1.617	-17.520	-8.084	3.493	3.533	3.317
x		88.4%	0.037	1.888	1.971	-13.130	-7.717	3.461	3.564	3.534
σ		0.8%	0.001	0.400	0.326	5.722	0.414	0.034	0.055	0.223
%RSD		1.0	1.662	21.200	16.560	43.570	5.359	0.980	1.533	6.317
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	0.582	0.196	1617.000	0.354	4.683	-11.420	79.4%	0.079	0.068
2	17:20:21	0.528	-0.012	1718.000	-1.353	6.730	-12.550	78.6%	-0.008	0.012
3	17:20:48	0.486	-0.275	1771.000	-1.760	3.797	-13.230	78.7%	-0.030	-0.071
x		0.532	-0.031	1702.000	-0.920	5.070	-12.400	78.9%	0.014	0.003
σ		0.048	0.236	78.400	1.122	1.504	0.915	0.5%	0.058	0.070
%RSD		9.046	773.300	4.606	121.900	29.660	7.382	0.6	423.200	2350.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	0.008	36.100	4.405	0.061	6.711	3.674	0.010	0.058	-1.520
2	17:20:21	0.005	51.740	5.087	0.069	6.129	4.197	0.022	0.053	-1.321
3	17:20:48	0.007	97.010	4.229	0.065	5.166	3.479	0.014	0.053	-1.243
x		0.007	61.620	4.574	0.065	6.002	3.783	0.015	0.055	-1.361
σ		0.002	31.640	0.453	0.004	0.781	0.372	0.006	0.003	0.143
%RSD		25.080	51.340	9.911	5.776	13.010	9.820	37.660	5.235	10.510
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	-0.049	-0.032	0.060	0.204	0.015	-0.040	-0.030	-0.213	0.492
2	17:20:21	-0.055	0.056	-0.013	0.085	0.062	0.001	-0.347	-0.675	0.678
3	17:20:48	-0.059	-0.007	-0.027	-0.006	0.011	0.153	0.187	-0.118	0.176
x		-0.054	0.006	0.006	0.094	0.030	0.038	-0.063	-0.335	0.449
σ		0.005	0.045	0.047	0.105	0.028	0.102	0.269	0.298	0.254
%RSD		9.362	774.300	730.700	111.700	95.160	267.500	423.600	88.860	56.510
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	0.000	-0.029	-0.577	-0.028	83.6%	0.213	0.259	0.180	0.240
2	17:20:21	0.000	0.098	-1.399	0.046	83.5%	0.145	0.244	0.178	-0.074
3	17:20:48	0.000	0.448	-1.096	0.011	82.9%	0.105	0.093	0.111	0.210
x		0.000	0.173	-1.024	0.009	83.3%	0.154	0.199	0.156	0.125
σ		0.000	0.247	0.416	0.037	0.4%	0.055	0.092	0.039	0.173
%RSD		0.000	143.200	40.630	391.900	0.5	35.390	46.410	25.110	138.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	0.036	0.030	0.011	0.017	84.8%	0.029	0.083	0.662	0.652
2	17:20:21	0.032	0.023	0.026	0.029	85.4%	0.042	0.018	0.688	0.646
3	17:20:48	0.033	0.041	-0.001	0.018	84.9%	0.021	0.055	0.641	0.596
x		0.034	0.031	0.012	0.021	85.0%	0.031	0.052	0.663	0.631
σ		0.002	0.009	0.013	0.007	0.3%	0.011	0.032	0.024	0.031
%RSD		6.589	28.500	110.400	32.190	0.4	35.020	62.740	3.548	4.861
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:54	0.031	0.033	85.4%	0.027	0.029	0.020	0.029	0.022	81.1%
2	17:20:21	0.018	0.044	85.9%	0.037	0.032	0.013	0.022	0.021	82.7%
3	17:20:48	0.044	0.018	86.7%	0.026	0.030	0.025	0.022	0.023	83.6%
x		0.031	0.032	86.0%	0.030	0.030	0.019	0.025	0.022	82.4%
σ		0.013	0.013	0.7%	0.006	0.001	0.006	0.004	0.001	1.2%
%RSD		40.850	41.600	0.8	20.310	4.579	30.930	16.260	3.954	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	88.3%	0.197	2.910	2.001	80.110	32.820	551.300	548.300	552.600
2	17:26:11	88.0%	0.239	1.681	3.061	85.450	34.320	546.600	541.200	542.400
3	17:26:38	85.7%	0.196	2.414	2.455	86.830	34.200	550.700	540.200	541.200
x		87.3%	0.211	2.335	2.506	84.130	33.780	549.500	543.300	545.400
σ		1.4%	0.024	0.618	0.532	3.547	0.829	2.575	4.426	6.265
%RSD		1.6	11.470	26.470	21.230	4.217	2.455	0.469	0.815	1.149

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	TM 13810.000	T 1114.000	T 333700.000	273.300	108.300	107.000	73.8%	342.200	38.660
2	17:26:11	TM 13610.000	T 1120.000	T 329600.000	273.000	118.600	111.500	72.5%	T 336.900	38.800
3	17:26:38	TM 13770.000	T 1019.000	T 329900.000	273.700	133.500	107.500	71.3%	352.900	38.750
x		TM 13730.000	T 1084.000	T 331000.000	273.300	120.100	108.700	72.5%	T 344.000	38.740
σ		TM 106.700	T 56.650	T 2291.000	0.390	12.670	2.471	1.2%	T 8.137	0.070
%RSD		TM 0.777	T 5.225	T 0.692	0.143	10.550	2.274	1.7	T 2.366	0.181

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	15.110	16940.000	10990.000	17.640	T 9962.000	10530.000	0.908	4.884	4.710
2	17:26:11	14.600	16070.000	10810.000	17.650	T 9778.000	10390.000	0.934	4.897	4.351
3	17:26:38	14.830	15560.000	10930.000	17.630	T 9838.000	10420.000	0.969	4.872	3.949
x		14.850	16190.000	10910.000	17.640	T 9859.000	10450.000	0.937	4.885	4.337
σ		0.257	696.200	89.500	0.007	T 93.850	75.990	0.031	0.012	0.381
%RSD		1.732	4.300	0.820	0.040	T 0.952	0.727	3.298	0.251	8.788

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	1.231	1.238	5.466	6.790	5.466	2.011	-0.211	19.140	20.090
2	17:26:11	1.102	1.209	5.280	6.137	5.492	2.374	0.183	18.110	18.200
3	17:26:38	1.135	1.360	5.391	6.435	5.278	1.987	0.490	17.780	21.220
x		1.156	1.269	5.379	6.454	5.412	2.124	0.154	18.340	19.840
σ		0.067	0.081	0.094	0.327	0.117	0.217	0.352	0.709	1.526
%RSD		5.815	6.348	1.739	5.070	2.157	10.200	228.700	3.865	7.693

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	0.000	-0.047	-0.195	2.835	88.1%	0.677	0.849	0.677	1.031
2	17:26:11	0.000	0.290	-0.857	2.678	T 91.4%	0.569	0.616	0.597	1.603
3	17:26:38	0.000	0.245	0.492	2.995	85.9%	0.488	0.623	0.589	1.284
x		0.000	0.163	-0.187	2.836	T 88.5%	0.578	0.696	0.621	1.306
σ		0.000	0.183	0.674	0.159	T 2.7%	0.095	0.133	0.049	0.287
%RSD		0.000	112.400	361.600	5.587	T 3.1	16.400	19.060	7.858	21.960

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	0.020	0.022	0.007	0.023	79.4%	3.475	4.905	0.587	0.591
2	17:26:11	0.045	0.019	0.013	0.022	79.2%	3.415	5.027	0.567	0.662
3	17:26:38	0.054	0.024	0.033	0.015	79.0%	3.574	4.832	0.529	0.533
x		0.039	0.022	0.018	0.020	79.2%	3.488	4.922	0.561	0.595
σ		0.018	0.003	0.013	0.005	0.2%	0.080	0.098	0.030	0.065
%RSD		44.420	12.620	75.980	23.380	0.3	2.302	1.999	5.272	10.850

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:44	24.090	24.300	84.6%	0.116	0.131	12.800	12.090	12.660	86.4%
2	17:26:11	24.050	24.190	85.3%	0.137	0.138	12.840	12.330	12.720	86.0%
3	17:26:38	25.050	24.340	85.5%	0.147	0.143	12.820	12.210	12.650	85.6%
x		24.400	24.280	85.1%	0.133	0.137	12.820	12.210	12.680	86.0%
σ		0.569	0.082	0.5%	0.016	0.006	0.022	0.120	0.034	0.4%
%RSD		2.333	0.336	0.6	11.890	4.658	0.174	0.983	0.271	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	88.0%	229.100	233.600	237.400	27.320	T 2490.000	T 2825.000	3002.000	3032.000
2	17:32:02	87.9%	231.800	238.200	238.900	26.630	T 2500.000	T 2842.000	3054.000	3047.000
3	17:32:28	88.1%	224.600	229.900	233.200	32.190	T 2524.000	T 2836.000	3026.000	2988.000
x		88.0%	228.500	233.900	236.500	28.710	T 2505.000	T 2835.000	3027.000	3022.000
σ		0.1%	3.632	4.127	2.949	3.032	T 17.500	T 8.793	25.830	30.480
%RSD		0.1	1.589	1.764	1.247	10.560	T 0.699	T 0.310	0.853	1.008

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	TM 16910.000	T 764.400	T 318400.000	T 3276.000	2470.000	2405.000	74.0%	M 664.100	239.900
2	17:32:02	TM 16900.000	T 855.800	T 321600.000	T 3332.000	2480.000	2452.000	72.3%	M 666.000	243.100
3	17:32:28	TM 16650.000	T 877.400	T 319100.000	T 3333.000	2445.000	2427.000	71.4%	M 672.500	241.400
x		TM 16820.000	T 832.500	T 319700.000	T 3314.000	2465.000	2428.000	72.6%	M 667.500	241.500
σ		TM 150.000	T 60.000	T 1684.000	T 32.560	17.600	23.870	1.3%	M 4.424	1.595
%RSD		TM 0.892	T 7.208	T 0.527	T 0.982	0.714	0.983	1.8	M 0.663	0.661

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	239.200	69670.000	9793.000	242.600	T 8848.000	9377.000	222.400	221.400	218.800
2	17:32:02	243.800	71760.000	9883.000	242.500	T 8816.000	9391.000	220.700	225.900	220.600
3	17:32:28	241.400	69130.000	9885.000	242.500	T 8845.000	9446.000	222.200	219.700	209.500
x		241.500	70190.000	9854.000	242.500	T 8836.000	9405.000	221.800	222.300	216.300
σ		2.314	1387.000	52.700	0.081	T 17.960	36.050	0.930	3.217	5.947
%RSD		0.958	1.976	0.535	0.034	T 0.203	0.383	0.420	1.447	2.749

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	213.800	228.500	204.500	205.000	201.100	192.200	186.700	14.150	15.430
2	17:32:02	213.500	231.600	206.200	213.400	206.600	197.200	187.700	15.930	13.540
3	17:32:28	211.500	226.600	203.400	204.000	204.100	198.900	184.000	13.060	14.950
x		212.900	228.900	204.700	207.500	204.000	196.100	186.200	14.380	14.640
σ		1.228	2.531	1.401	5.116	2.757	3.489	1.907	1.448	0.984
%RSD		0.577	1.106	0.685	2.466	1.352	1.779	1.024	10.070	6.721

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	0.000	203.500	-0.369	209.800	86.0%	196.500	202.300	199.400	222.000
2	17:32:02	0.000	204.900	-0.060	210.500	85.7%	191.700	195.100	195.300	221.100
3	17:32:28	0.000	207.700	-0.849	208.400	85.1%	191.800	195.400	194.800	220.900
x		0.000	205.400	-0.426	209.500	85.6%	193.300	197.600	196.500	221.300
σ		0.000	2.098	0.397	1.095	0.5%	2.757	4.086	2.530	0.578
%RSD		0.000	1.021	93.240	0.523	0.6	1.426	2.068	1.287	0.261

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	225.200	213.300	219.700	221.700	78.5%	223.300	226.500	200.600	188.600
2	17:32:02	220.500	210.400	221.200	220.400	78.7%	222.800	224.500	199.000	188.500
3	17:32:28	217.000	207.100	215.800	218.000	79.1%	220.300	222.400	197.600	188.000
x		220.900	210.300	218.900	220.000	78.8%	222.200	224.500	199.100	188.400
σ		4.081	3.111	2.757	1.870	0.3%	1.608	2.031	1.502	0.331
%RSD		1.848	1.479	1.259	0.850	0.4	0.724	0.905	0.755	0.176

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:35	272.000	268.100	83.9%	228.400	T 225.100	234.900	237.900	T 238.900	T 83.6%
2	17:32:02	266.500	265.500	85.0%	231.300	T 227.700	238.700	238.900	T 241.200	T 82.9%
3	17:32:28	267.300	266.300	85.4%	231.200	T 227.300	238.100	240.300	T 241.700	T 83.0%
x		268.600	266.700	84.8%	230.300	T 226.700	237.300	239.100	T 240.600	T 83.2%
σ		2.956	1.325	0.8%	1.667	T 1.391	2.059	1.204	T 1.531	T 0.4%
%RSD		1.100	0.497	0.9	0.724	T 0.614	0.868	0.504	T 0.636	T 0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	89.7%	227.400	248.700	248.900	60.780	T 2578.000	T 2932.000	3126.000	3132.000
2	17:37:53	89.9%	224.600	245.600	245.300	44.910	T 2542.000	T 2906.000	3086.000	3119.000
3	17:38:20	88.3%	224.000	242.400	238.100	49.930	T 2518.000	T 2856.000	3047.000	3047.000
x		89.3%	225.400	245.500	244.100	51.880	T 2546.000	T 2898.000	3086.000	3099.000
σ		0.9%	1.829	3.141	5.510	8.113	T 30.210	T 38.410	39.500	46.280
%RSD		1.0	0.812	1.279	2.258	15.640	T 1.186	T 1.325	1.280	1.493
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	TM 19120.000	T 2550.000	T 371200.000	T 3552.000	2544.000	2526.000	72.5%	TM 893.500	258.000
2	17:37:53	TM 18660.000	T 2499.000	T 364100.000	T 3503.000	2609.000	2461.000	72.6%	TM 883.800	252.600
3	17:38:20	TM 18410.000	T 2395.000	T 360100.000	T 3466.000	2312.000	2434.000	72.2%	TM 846.000	246.000
x		TM 18730.000	T 2481.000	T 365100.000	T 3507.000	2488.000	2473.000	72.4%	TM 874.400	252.200
σ		TM 360.900	T 79.160	T 5608.000	T 42.870	155.900	47.270	0.2%	TM 25.080	5.966
%RSD		TM 1.927	T 3.190	T 1.536	T 1.222	6.266	1.911	0.3	TM 2.868	2.365
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	253.100	73630.000	11440.000	258.000	T 10160.000	10820.000	227.400	228.900	217.300
2	17:37:53	244.900	71360.000	11050.000	252.200	T 9928.000	10650.000	220.400	224.100	206.200
3	17:38:20	237.700	69960.000	10900.000	247.200	T 9741.000	10410.000	215.300	216.800	212.000
x		245.200	71650.000	11130.000	252.500	T 9942.000	10630.000	221.000	223.300	211.800
σ		7.673	1850.000	276.300	5.414	T 208.500	207.700	6.081	6.119	5.511
%RSD		3.129	2.582	2.483	2.144	T 2.097	1.954	2.751	2.741	2.601
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	214.700	232.400	199.900	203.900	204.600	202.900	174.900	22.180	21.990
2	17:37:53	209.700	224.900	200.900	211.200	199.300	193.700	175.600	22.390	20.610
3	17:38:20	204.400	217.400	194.900	197.900	194.200	186.400	170.600	21.450	22.620
x		209.600	224.900	198.600	204.300	199.400	194.300	173.700	22.000	21.740
σ		5.114	7.512	3.227	6.642	5.201	8.296	2.682	0.493	1.026
%RSD		2.440	3.340	1.625	3.251	2.609	4.269	1.544	2.240	4.719
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	0.000	204.000	0.596	210.700	88.6%	194.000	200.600	199.400	220.700
2	17:37:53	0.000	196.100	1.723	205.800	87.8%	193.600	198.200	196.000	214.800
3	17:38:20	0.000	196.700	0.675	202.100	87.3%	189.100	191.500	192.400	209.400
x		0.000	199.000	0.998	206.200	87.9%	192.200	196.800	195.900	215.000
σ		0.000	4.391	0.629	4.307	0.7%	2.698	4.714	3.519	5.652
%RSD		0.000	2.207	63.020	2.089	0.8	1.403	2.396	1.796	2.629
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	223.600	212.200	219.300	221.400	78.6%	226.200	231.500	205.000	193.700
2	17:37:53	219.000	208.000	216.500	219.400	78.8%	224.600	227.600	203.900	193.600
3	17:38:20	214.400	203.600	213.100	214.700	78.5%	220.600	223.000	200.000	190.500
x		219.000	207.900	216.300	218.500	78.6%	223.800	227.300	203.000	192.600
σ		4.632	4.299	3.071	3.448	0.2%	2.916	4.244	2.623	1.821
%RSD		2.115	2.068	1.420	1.578	0.2	1.303	1.867	1.292	0.946
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	276.700	280.300	85.6%	233.200	T 229.000	243.100	246.400	T 246.700	T 83.5%
2	17:37:53	276.300	276.600	86.3%	230.700	T 227.400	240.900	241.200	T 244.000	T 83.9%
3	17:38:20	271.900	271.900	86.4%	222.600	T 221.600	232.000	235.700	T 236.600	T 85.2%
x		275.000	276.300	86.1%	228.800	T 226.000	238.700	241.100	T 242.400	T 84.2%
σ		2.626	4.186	0.4%	5.535	T 3.924	5.842	5.333	T 5.233	T 0.9%
%RSD		0.955	1.515	0.5	2.419	T 1.736	2.448	2.212	T 2.159	T 1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	89.3%	0.115	1.460	2.341	13.600	-4.977	118.900	122.200	121.600
2	17:43:44	89.8%	0.091	1.269	1.201	10.790	-5.230	118.000	116.900	120.800
3	17:44:11	91.2%	0.089	0.804	1.344	4.944	-4.926	118.400	120.400	120.200
x		90.1%	0.098	1.178	1.629	9.778	-5.044	118.500	119.800	120.800
σ		1.0%	0.015	0.338	0.621	4.417	0.163	0.443	2.670	0.723
%RSD		1.1	14.870	28.680	38.120	45.170	3.228	0.374	2.228	0.598

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	TM 3034.000	T 225.600	T 74380.000	51.290	26.820	11.450	76.7%	85.510	8.420
2	17:43:44	TM 3013.000	T 288.000	T 74240.000	50.900	32.650	9.711	76.9%	65.570	9.158
3	17:44:11	TM 3010.000	T 228.600	T 74010.000	51.670	19.950	8.418	76.4%	82.580	8.463
x		TM 3019.000	T 247.400	T 74210.000	51.290	26.480	9.859	76.7%	77.890	8.680
σ		TM 12.630	T 35.190	T 185.300	0.387	6.355	1.521	0.2%	10.770	0.414
%RSD		TM 0.418	T 14.220	T 0.250	0.755	24.000	15.420	0.3	13.820	4.773

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	3.388	5228.000	2356.000	3.976	T 2247.000	2380.000	0.230	1.205	0.025
2	17:43:44	3.260	5074.000	2367.000	3.922	T 2250.000	2310.000	0.188	1.080	-0.331
3	17:44:11	3.292	5068.000	2347.000	3.895	T 2221.000	2307.000	0.251	1.130	-0.006
x		3.314	5123.000	2357.000	3.931	T 2239.000	2332.000	0.223	1.139	-0.104
σ		0.066	90.430	9.883	0.041	T 16.280	41.460	0.032	0.063	0.197
%RSD		2.004	1.765	0.419	1.041	T 0.727	1.778	14.320	5.522	189.600

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	0.174	0.290	1.199	1.283	1.190	0.481	0.206	4.189	4.782
2	17:43:44	0.217	0.334	1.192	1.772	1.338	0.369	-0.194	4.479	5.827
3	17:44:11	0.133	0.281	1.271	1.505	1.209	0.778	-0.211	5.093	4.713
x		0.175	0.301	1.221	1.520	1.245	0.543	-0.066	4.587	5.107
σ		0.042	0.028	0.044	0.245	0.080	0.211	0.236	0.461	0.624
%RSD		24.230	9.411	3.587	16.090	6.462	38.960	356.400	10.060	12.220

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	0.000	0.060	-0.293	0.470	84.0%	0.063	0.101	0.058	0.049
2	17:43:44	0.000	0.235	-1.125	0.637	83.9%	0.032	-0.025	0.054	0.154
3	17:44:11	0.000	0.422	-3.620	0.763	83.6%	-0.038	0.140	0.080	0.228
x		0.000	0.239	-1.680	0.623	83.8%	0.019	0.072	0.064	0.144
σ		0.000	0.181	1.732	0.147	0.2%	0.051	0.086	0.014	0.090
%RSD		0.000	75.660	103.100	23.540	0.2	273.500	119.400	22.040	62.620

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	0.009	0.009	0.005	0.002	83.8%	0.656	0.899	-0.026	0.013
2	17:43:44	0.017	0.012	0.024	0.014	84.2%	0.655	0.899	-0.009	0.031
3	17:44:11	0.023	0.019	0.014	0.008	84.2%	0.591	0.899	-0.025	-0.001
x		0.016	0.013	0.014	0.008	84.1%	0.634	0.899	-0.020	0.014
σ		0.007	0.005	0.009	0.006	0.2%	0.037	0.000	0.010	0.016
%RSD		45.140	37.410	62.230	71.840	0.2	5.904	0.026	47.370	114.500

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:17	5.215	5.282	86.6%	0.117	0.103	2.898	2.840	2.856	84.1%
2	17:43:44	5.285	5.413	87.5%	0.093	0.092	2.893	2.697	2.816	85.3%
3	17:44:11	5.582	5.432	88.8%	0.111	0.107	2.855	2.769	2.835	85.5%
x		5.361	5.376	87.6%	0.107	0.101	2.882	2.769	2.836	85.0%
σ		0.195	0.081	1.1%	0.012	0.007	0.024	0.072	0.020	0.8%
%RSD		3.639	1.515	1.3	11.370	7.292	0.818	2.593	0.710	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	87.6%	214.200	238.600	236.100	87.690	T 2293.000	T 2506.000	2681.000	2719.000
2	17:49:33	87.8%	215.300	233.800	238.600	80.180	T 2324.000	T 2530.000	2689.000	2703.000
3	17:50:01	87.8%	216.300	236.500	235.600	96.760	T 2344.000	T 2542.000	2686.000	2722.000
x		87.7%	215.200	236.300	236.800	88.210	T 2320.000	T 2526.000	2685.000	2715.000
σ		0.1%	1.050	2.419	1.648	8.301	T 25.900	T 18.460	4.134	10.290
%RSD		0.1	0.488	1.024	0.696	9.411	T 1.116	T 0.731	0.154	0.379

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	TM 12610.000	T 2916.000	T 304600.000	T 2463.000	2262.000	2239.000	73.1%	497.000	242.900
2	17:49:33	TM 12520.000	T 3061.000	T 305000.000	T 2512.000	2309.000	2261.000	71.7%	TM 504.200	243.100
3	17:50:01	TM 12720.000	T 3053.000	T 310000.000	T 2529.000	2307.000	2266.000	70.4%	M 511.300	243.600
x		TM 12620.000	T 3010.000	T 306600.000	T 2501.000	2293.000	2256.000	71.7%	TM 504.200	243.200
σ		TM 100.800	T 81.240	T 3009.000	T 34.330	27.040	14.620	1.4%	TM 7.185	0.341
%RSD		TM 0.799	T 2.699	T 0.982	T 1.372	1.179	0.648	1.9	TM 1.425	0.140

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	229.500	65200.000	12390.000	224.500	T 10970.000	11710.000	209.800	211.700	202.400
2	17:49:33	230.100	65130.000	12260.000	T 222.500	T 11030.000	11730.000	211.900	214.400	199.600
3	17:50:01	231.900	66790.000	12540.000	230.000	T 11050.000	11890.000	210.100	213.800	204.300
x		230.500	65700.000	12400.000	T 225.700	T 11020.000	11780.000	210.600	213.300	202.100
σ		1.291	938.000	140.600	T 3.863	T 43.120	98.020	1.142	1.421	2.378
%RSD		0.560	1.428	1.134	T 1.712	T 0.392	0.832	0.542	0.666	1.177

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	206.000	219.300	192.500	192.500	190.600	207.800	185.200	17.300	17.190
2	17:49:33	204.600	219.400	192.200	191.900	192.700	208.000	182.600	15.840	17.620
3	17:50:01	204.900	218.600	194.800	198.300	194.200	209.300	183.200	18.040	18.090
x		205.200	219.100	193.200	194.200	192.500	208.400	183.700	17.060	17.640
σ		0.722	0.430	1.436	3.521	1.826	0.791	1.338	1.118	0.452
%RSD		0.352	0.196	0.744	1.813	0.948	0.380	0.729	6.554	2.564

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	0.000	204.200	2.062	191.600	86.7%	194.200	198.400	200.300	211.400
2	17:49:33	0.000	212.000	0.518	191.400	85.4%	198.200	200.800	201.800	212.900
3	17:50:01	0.000	203.700	-1.660	193.800	84.7%	197.600	203.800	200.800	214.200
x		0.000	206.600	0.307	192.300	85.6%	196.700	201.000	201.000	212.800
σ		0.000	4.701	1.870	1.312	1.0%	2.124	2.715	0.774	1.416
%RSD		0.000	2.275	609.600	0.682	1.2	1.080	1.351	0.385	0.665

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	211.700	201.900	208.200	210.000	78.8%	220.300	225.300	224.300	212.700
2	17:49:33	213.500	202.000	210.900	212.600	78.1%	221.500	225.200	223.500	213.700
3	17:50:01	212.100	201.100	208.300	209.900	78.3%	223.000	223.400	225.900	213.300
x		212.400	201.700	209.100	210.800	78.4%	221.600	224.600	224.600	213.200
σ		0.948	0.487	1.557	1.533	0.4%	1.316	1.111	1.202	0.518
%RSD		0.447	0.242	0.745	0.727	0.5	0.594	0.495	0.535	0.243

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:49:06	235.100	235.900	85.0%	219.700	T 217.400	227.600	230.200	236.600	83.2%
2	17:49:33	237.300	236.100	85.2%	220.900	T 219.800	228.800	231.300	T 233.300	83.5%
3	17:50:01	236.900	235.800	85.5%	218.600	T 217.300	228.200	229.800	T 231.500	84.1%
x		236.400	235.900	85.2%	219.700	T 218.200	228.200	230.500	T 233.800	83.6%
σ		1.163	0.154	0.2%	1.153	T 1.418	0.597	0.781	T 2.596	0.5%
%RSD		0.492	0.065	0.2	0.525	T 0.650	0.261	0.339	T 1.110	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	95.8%	0.475	4.384	3.904	221.300	58.430	T 660.700	680.500	677.500
2	17:55:22	93.9%	0.530	4.141	3.877	213.200	60.160	T 660.400	671.200	677.500
3	17:55:49	93.3%	0.489	3.577	3.355	216.000	60.760	T 660.800	690.500	688.900
x		94.3%	0.498	4.034	3.712	216.900	59.780	T 660.600	680.700	681.300
σ		1.3%	0.029	0.414	0.309	4.116	1.210	T 0.204	9.663	6.582
%RSD		1.4	5.748	10.260	8.335	1.898	2.025	T 0.031	1.420	0.966

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	TM 32690.000	T 2105.000	T 349600.000	330.300	274.300	288.900	79.3%	T 369.700	48.040
2	17:55:22	TM 32790.000	T 1899.000	T 350700.000	328.300	295.200	289.100	78.9%	T 350.800	47.020
3	17:55:49	TM 32600.000	T 1891.000	T 352100.000	345.600	316.400	295.300	76.5%	T 379.000	46.380
x		TM 32690.000	T 1965.000	T 350800.000	334.700	295.300	291.100	78.2%	T 366.500	47.150
σ		TM 91.770	T 121.500	T 1280.000	9.491	21.040	3.626	1.5%	T 14.360	0.841
%RSD		TM 0.281	T 6.181	T 0.365	2.835	7.124	1.245	2.0	T 3.918	1.783

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	23.290	22490.000	T 13310.000	33.570	T 13280.000	14230.000	1.315	10.720	10.120
2	17:55:22	22.650	21550.000	T 13170.000	33.400	T 13160.000	14120.000	1.278	10.860	9.296
3	17:55:49	22.440	21570.000	T 13330.000	33.360	T 13240.000	14210.000	1.352	10.560	9.553
x		22.790	21870.000	T 13270.000	33.450	T 13230.000	14190.000	1.315	10.710	9.657
σ		0.441	534.900	T 86.790	0.112	T 64.490	60.800	0.037	0.150	0.423
%RSD		1.935	2.446	T 0.654	0.334	T 0.488	0.429	2.815	1.400	4.375

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	7.287	8.072	9.498	12.680	9.810	1.819	0.181	20.610	20.240
2	17:55:22	7.100	7.806	9.112	12.550	9.461	2.900	0.491	19.770	20.810
3	17:55:49	7.453	8.151	8.925	11.450	9.749	2.863	0.242	19.490	18.740
x		7.280	8.010	9.178	12.230	9.673	2.527	0.304	19.960	19.930
σ		0.177	0.180	0.292	0.678	0.186	0.614	0.164	0.583	1.067
%RSD		2.426	2.252	3.179	5.544	1.925	24.290	53.990	2.922	5.353

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	0.000	-0.059	-0.511	4.827	93.8%	0.955	0.855	0.948	1.679
2	17:55:22	0.000	0.474	1.792	4.979	93.3%	0.795	0.990	0.949	2.218
3	17:55:49	0.000	1.307	0.067	4.971	92.8%	0.741	0.760	0.881	1.445
x		0.000	0.574	0.449	4.926	93.3%	0.830	0.868	0.926	1.780
σ		0.000	0.688	1.198	0.085	0.5%	0.111	0.116	0.039	0.397
%RSD		0.000	119.900	266.700	1.730	0.5	13.410	13.340	4.210	22.270

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	0.020	0.015	-0.001	0.044	84.8%	3.490	4.999	0.058	0.033
2	17:55:22	0.011	0.013	0.026	0.018	84.4%	3.554	5.042	0.050	0.074
3	17:55:49	0.028	0.025	0.035	0.025	84.7%	3.480	4.980	0.056	0.076
x		0.019	0.017	0.020	0.029	84.6%	3.508	5.007	0.054	0.061
σ		0.008	0.007	0.018	0.013	0.2%	0.040	0.032	0.004	0.024
%RSD		43.380	37.550	92.230	45.340	0.2	1.141	0.638	7.666	39.580

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:56	90.720	90.160	89.7%	0.242	0.251	15.340	14.750	15.300	85.9%
2	17:55:22	91.460	90.450	90.0%	0.237	0.242	15.170	14.710	15.020	87.3%
3	17:55:49	90.130	89.450	90.4%	0.250	0.221	15.160	14.680	15.060	87.8%
x		90.770	90.020	90.0%	0.243	0.238	15.220	14.720	15.130	87.0%
σ		0.663	0.516	0.4%	0.006	0.015	0.101	0.035	0.152	1.0%
%RSD		0.730	0.574	0.4	2.586	6.346	0.661	0.237	1.005	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	105.2%	0.526	5.422	5.569	114.600	103.600	T 1984.000	2082.000	2092.000
2	18:01:12	104.2%	0.632	4.488	5.451	119.400	105.200	T 1967.000	2066.000	2085.000
3	18:01:39	103.7%	0.446	5.023	5.083	111.400	106.200	T 1972.000	2100.000	2094.000
x		104.4%	0.535	4.977	5.368	115.100	105.000	T 1974.000	2083.000	2091.000
σ		0.7%	0.093	0.469	0.253	3.996	1.329	T 8.742	16.540	4.792
%RSD		0.7	17.480	9.415	4.715	3.471	1.266	T 0.443	0.794	0.229

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	TM 123100.000	T 1024.000	T 317600.000	1291.000	128.400	67.160	95.9%	475.900	198.600
2	18:01:12	TM 122600.000	T 1067.000	T 316500.000	1294.000	111.200	66.330	95.0%	479.200	197.500
3	18:01:39	TM 123200.000	T 1025.000	T 319500.000	1305.000	125.700	67.960	93.7%	477.200	198.400
x		TM 123000.000	T 1039.000	T 317900.000	1297.000	121.800	67.150	94.9%	477.400	198.200
σ		TM 319.500	T 24.340	T 1497.000	7.177	9.252	0.813	1.1%	1.665	0.575
%RSD		TM 0.260	T 2.343	T 0.471	0.554	7.597	1.211	1.1	0.349	0.290

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	119.900	41930.000	T 54570.000	27.890	T 53720.000	T 53550.000	6.910	36.720	33.380
2	18:01:12	118.500	40590.000	T 53880.000	27.930	T 53600.000	T 53190.000	6.733	35.760	35.810
3	18:01:39	119.600	41130.000	T 53750.000	27.870	T 53290.000	T 52790.000	6.801	36.000	33.840
x		119.300	41220.000	T 54070.000	27.900	T 53540.000	T 53180.000	6.814	36.160	34.340
σ		0.741	677.600	T 441.200	0.027	T 221.300	T 378.000	0.090	0.495	1.288
%RSD		0.621	1.644	T 0.816	0.097	T 0.413	T 0.711	1.314	1.367	3.751

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	7.203	7.559	30.790	35.650	29.990	13.210	0.445	13.170	13.860
2	18:01:12	6.886	7.740	29.860	33.930	29.810	12.440	0.401	14.010	13.860
3	18:01:39	7.159	7.723	29.290	34.100	30.190	13.240	0.299	13.840	13.270
x		7.082	7.674	29.980	34.560	30.000	12.960	0.382	13.670	13.660
σ		0.172	0.100	0.760	0.950	0.191	0.454	0.075	0.446	0.340
%RSD		2.426	1.298	2.534	2.748	0.635	3.506	19.530	3.263	2.491

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	0.000	0.650	2.308	8.424	118.9%	2.512	2.842	2.763	13.570
2	18:01:12	0.000	0.372	0.584	7.981	117.3%	2.449	2.759	2.847	11.450
3	18:01:39	0.000	0.298	3.735	8.261	115.9%	2.740	2.666	2.735	13.500
x		0.000	0.440	2.209	8.222	117.3%	2.567	2.756	2.781	12.840
σ		0.000	0.186	1.578	0.224	1.5%	0.153	0.088	0.058	1.208
%RSD		0.000	42.200	71.440	2.726	1.3	5.966	3.204	2.097	9.404

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	0.097	0.016	0.010	-0.019	93.0%	6.649	9.250	0.269	0.290
2	18:01:12	0.077	0.016	0.018	0.006	93.2%	6.558	9.237	0.250	0.259
3	18:01:39	0.095	0.016	0.008	-0.018	92.9%	6.576	9.095	0.245	0.286
x		0.090	0.016	0.012	-0.010	93.0%	6.594	9.194	0.254	0.279
σ		0.011	0.000	0.005	0.014	0.2%	0.048	0.086	0.013	0.017
%RSD		12.260	1.973	42.910	135.400	0.2	0.728	0.936	4.936	5.957

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:45	61.960	61.400	93.7%	0.353	0.373	37.670	35.980	37.360	92.8%
2	18:01:12	62.300	62.320	93.3%	0.361	0.374	37.600	35.940	37.120	94.3%
3	18:01:39	61.660	60.830	94.7%	0.394	0.368	37.740	36.160	37.580	92.3%
x		61.980	61.520	93.9%	0.369	0.372	37.670	36.030	37.360	93.1%
σ		0.317	0.749	0.7%	0.022	0.004	0.067	0.115	0.230	1.0%
%RSD		0.512	1.217	0.8	5.896	0.947	0.177	0.319	0.614	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	101.2%	1.016	7.216	6.708	171.000	109.600	T 2451.000	2601.000	2615.000
2	18:07:01	101.1%	0.955	6.223	7.711	185.000	109.700	T 2449.000	2571.000	2585.000
3	18:07:28	100.2%	0.886	6.928	6.794	184.700	110.400	T 2425.000	2579.000	2593.000
x		100.8%	0.952	6.789	7.071	180.200	109.900	T 2442.000	2583.000	2598.000
σ		0.5%	0.065	0.511	0.556	7.989	0.432	T 14.080	15.550	15.690
%RSD		0.5	6.811	7.522	7.862	4.433	0.393	T 0.577	0.602	0.604

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	TM 110400.000	T 884.800	T 382900.000	T 1515.000	371.400	292.600	89.3%	M 687.100	227.500
2	18:07:01	TM 109900.000	T 863.600	T 380700.000	1590.000	324.400	302.200	87.9%	M 691.800	226.000
3	18:07:28	TM 108900.000	T 853.900	T 379000.000	1573.000	330.500	290.700	87.5%	M 697.100	220.800
x		TM 109700.000	T 867.400	T 380900.000	T 1559.000	342.100	295.200	88.2%	M 692.000	224.700
σ		TM 800.000	T 15.810	T 1999.000	T 39.530	25.550	6.171	1.0%	M 4.972	3.512
%RSD		TM 0.729	T 1.822	T 0.525	T 2.535	7.469	2.090	1.1	M 0.719	1.563

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	118.900	42720.000	T 63560.000	50.030	T 62820.000	T 62170.000	7.342	36.340	36.450
2	18:07:01	116.700	41990.000	T 62360.000	49.190	T 61690.000	T 61260.000	7.198	36.240	33.570
3	18:07:28	115.700	42040.000	T 62370.000	49.410	T 61550.000	T 61500.000	6.962	36.360	32.660
x		117.100	42250.000	T 62760.000	49.540	T 62020.000	T 61650.000	7.167	36.310	34.230
σ		1.652	406.800	T 685.700	0.433	T 701.200	T 472.700	0.192	0.066	1.976
%RSD		1.411	0.963	T 1.092	0.875	T 1.131	T 0.767	2.675	0.182	5.773

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	9.003	10.050	30.580	35.170	30.370	14.020	0.784	23.800	24.810
2	18:07:01	8.871	9.572	30.710	34.860	31.310	13.750	0.813	22.560	22.900
3	18:07:28	8.770	10.400	30.490	34.370	30.970	13.280	0.523	22.910	23.620
x		8.881	10.010	30.600	34.800	30.880	13.680	0.707	23.090	23.780
σ		0.117	0.416	0.110	0.403	0.474	0.373	0.160	0.637	0.964
%RSD		1.318	4.158	0.360	1.158	1.535	2.727	22.600	2.757	4.055

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	0.000	2.049	6.043	10.190	113.8%	2.844	2.945	2.897	13.520
2	18:07:01	0.000	2.308	3.953	10.720	114.0%	2.766	2.965	2.830	11.100
3	18:07:28	0.000	2.116	5.186	10.420	111.8%	2.660	2.700	3.012	11.510
x		0.000	2.158	5.061	10.450	113.2%	2.757	2.870	2.913	12.040
σ		0.000	0.134	1.051	0.267	1.2%	0.092	0.147	0.092	1.298
%RSD		0.000	6.224	20.760	2.558	1.1	3.344	5.130	3.158	10.770

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	0.080	0.010	0.074	0.053	88.9%	6.088	8.512	0.289	0.311
2	18:07:01	0.077	0.031	0.055	0.055	88.9%	5.935	8.282	0.295	0.275
3	18:07:28	0.094	0.020	0.066	0.057	89.0%	6.139	8.204	0.248	0.233
x		0.084	0.021	0.065	0.055	88.9%	6.054	8.332	0.277	0.273
σ		0.009	0.010	0.010	0.002	0.0%	0.106	0.160	0.026	0.039
%RSD		11.030	50.320	14.640	3.173	0.0	1.754	1.920	9.272	14.230

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:34	116.300	114.500	91.8%	0.500	0.531	47.050	45.010	46.710	89.8%
2	18:07:01	114.200	114.500	92.2%	0.502	0.490	46.780	44.960	46.640	90.5%
3	18:07:28	113.700	114.300	92.4%	0.491	0.511	47.120	44.640	46.570	90.3%
x		114.700	114.400	92.1%	0.498	0.511	46.980	44.870	46.640	90.2%
σ		1.396	0.122	0.3%	0.006	0.020	0.177	0.203	0.069	0.4%
%RSD		1.217	0.107	0.3	1.190	3.974	0.376	0.452	0.149	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	97.4%	0.488	2.018	2.520	246.700	33.890	T 864.800	898.800	904.100
2	18:12:50	96.0%	0.444	3.396	2.520	245.200	34.990	T 869.600	901.800	901.900
3	18:13:17	95.3%	0.589	2.255	2.489	245.300	34.010	T 864.600	894.100	901.400
x		96.2%	0.507	2.557	2.509	245.700	34.300	T 866.300	898.200	902.500
σ		1.1%	0.074	0.737	0.018	0.833	0.604	T 2.836	3.880	1.460
%RSD		1.1	14.680	28.810	0.721	0.339	1.762	T 0.327	0.432	0.162

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	TM 40490.000	T 1370.000	T 333200.000	458.300	191.400	155.500	81.2%	390.800	67.860
2	18:12:50	TM 40430.000	T 1253.000	T 336500.000	456.700	163.200	152.400	80.8%	382.400	66.940
3	18:13:17	TM 40320.000	T 1249.000	T 331600.000	462.400	167.800	155.400	79.5%	T 375.800	67.980
x		TM 40410.000	T 1291.000	T 333800.000	459.100	174.100	154.500	80.5%	T 383.000	67.590
σ		TM 83.610	T 68.800	T 2507.000	2.983	15.090	1.773	0.9%	T 7.520	0.569
%RSD		TM 0.207	T 5.329	T 0.751	0.650	8.663	1.148	1.1	T 1.963	0.842

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	36.120	22410.000	T 20220.000	37.160	T 20380.000	22440.000	1.812	11.770	10.600
2	18:12:50	35.510	21900.000	T 19950.000	36.710	T 20080.000	22060.000	1.713	12.140	10.590
3	18:13:17	35.800	21750.000	T 19950.000	36.700	T 20170.000	22010.000	1.769	11.980	10.330
x		35.810	22020.000	T 20040.000	36.860	T 20210.000	22170.000	1.764	11.960	10.500
σ		0.304	346.500	T 157.400	0.261	T 151.300	236.200	0.050	0.184	0.153
%RSD		0.848	1.574	T 0.786	0.708	T 0.749	1.065	2.816	1.538	1.456

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	5.033	5.796	29.780	32.460	30.080	4.433	0.599	17.560	18.850
2	18:12:50	5.092	5.495	29.520	32.280	29.180	3.905	0.202	18.020	16.220
3	18:13:17	4.897	5.850	28.910	31.280	29.170	4.742	0.521	17.830	17.930
x		5.007	5.714	29.400	32.010	29.480	4.360	0.441	17.800	17.660
σ		0.100	0.191	0.447	0.631	0.526	0.423	0.210	0.230	1.335
%RSD		1.998	3.350	1.519	1.971	1.784	9.703	47.670	1.293	7.559

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	0.000	0.715	-0.718	4.228	98.4%	1.109	1.111	1.196	3.314
2	18:12:50	0.000	1.074	2.641	4.737	98.7%	1.054	1.285	1.127	2.460
3	18:13:17	0.000	0.060	0.975	4.368	98.7%	1.146	1.291	1.153	2.531
x		0.000	0.616	0.966	4.444	98.6%	1.103	1.229	1.159	2.768
σ		0.000	0.514	1.680	0.263	0.2%	0.047	0.102	0.035	0.474
%RSD		0.000	83.460	173.900	5.921	0.2	4.223	8.332	3.021	17.110

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	0.046	0.015	0.030	0.034	87.1%	3.807	5.173	0.013	0.034
2	18:12:50	0.036	0.019	0.061	0.048	87.5%	3.696	5.221	0.030	0.023
3	18:13:17	0.022	0.018	0.041	0.042	86.5%	3.840	5.275	0.033	0.042
x		0.035	0.017	0.044	0.041	87.1%	3.781	5.223	0.025	0.033
σ		0.012	0.002	0.016	0.007	0.5%	0.076	0.051	0.011	0.010
%RSD		34.650	11.470	35.920	17.240	0.6	2.004	0.975	41.730	29.010

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:23	58.790	58.050	91.6%	0.223	0.221	21.280	20.110	21.020	87.1%
2	18:12:50	58.920	58.680	91.5%	0.228	0.223	21.060	20.330	20.930	87.6%
3	18:13:17	58.460	57.750	92.3%	0.225	0.230	20.880	19.700	20.510	89.4%
x		58.720	58.160	91.8%	0.225	0.225	21.080	20.040	20.820	88.0%
σ		0.235	0.476	0.4%	0.003	0.004	0.201	0.319	0.272	1.2%
%RSD		0.401	0.819	0.5	1.110	1.992	0.951	1.593	1.305	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	96.7%	0.696	2.541	1.922	265.200	46.040	T 849.000	872.600	877.500
2	18:18:39	97.3%	0.466	2.998	1.774	263.800	44.770	T 833.400	858.900	867.300
3	18:19:06	97.4%	0.474	2.397	2.439	272.200	46.300	T 843.900	870.600	870.600
x		97.1%	0.545	2.646	2.045	267.100	45.710	T 842.100	867.400	871.800
σ		0.4%	0.130	0.314	0.350	4.476	0.818	T 7.954	7.437	5.209
%RSD		0.4	23.920	11.870	17.090	1.676	1.789	T 0.945	0.857	0.598

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	TM 39290.000	T 1431.000	T 309400.000	457.000	184.200	140.700	81.9%	407.400	66.850
2	18:18:39	TM 38600.000	T 1410.000	T 305700.000	452.000	145.800	143.000	82.1%	403.700	65.240
3	18:19:06	TM 38740.000	T 1338.000	T 308100.000	460.800	162.800	141.500	81.5%	T 387.000	65.030
x		TM 38880.000	T 1393.000	T 307700.000	456.600	164.200	141.800	81.8%	T 399.400	65.710
σ		TM 364.000	T 48.860	T 1859.000	4.391	19.200	1.183	0.3%	T 10.850	0.992
%RSD		TM 0.936	T 3.509	T 0.604	0.962	11.690	0.835	0.4	T 2.718	1.510

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	35.450	21480.000	T 19210.000	37.120	T 19310.000	21310.000	1.905	13.020	11.400
2	18:18:39	34.400	21500.000	T 19180.000	36.950	T 19240.000	20980.000	1.816	12.400	12.700
3	18:19:06	34.640	21400.000	T 18920.000	36.720	T 18910.000	20900.000	1.766	11.790	11.780
x		34.830	21460.000	T 19100.000	36.930	T 19160.000	21060.000	1.829	12.400	11.960
σ		0.555	48.150	T 161.400	0.204	T 213.400	218.400	0.071	0.617	0.669
%RSD		1.592	0.224	T 0.845	0.553	T 1.114	1.037	3.857	4.978	5.597

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	4.827	5.204	26.200	28.070	25.910	4.204	0.249	16.210	15.480
2	18:18:39	4.720	5.217	25.500	27.850	25.840	3.588	0.699	16.450	16.390
3	18:19:06	4.508	5.166	25.190	26.550	25.120	3.789	0.606	14.820	15.580
x		4.685	5.196	25.630	27.490	25.620	3.860	0.518	15.830	15.820
σ		0.162	0.027	0.518	0.825	0.434	0.314	0.238	0.876	0.500
%RSD		3.467	0.512	2.019	3.000	1.693	8.141	45.910	5.536	3.160

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	0.000	0.652	2.101	4.605	99.4%	1.042	1.203	1.073	2.772
2	18:18:39	0.000	0.473	-2.652	4.347	98.5%	0.958	1.251	1.130	2.556
3	18:19:06	0.000	1.168	0.451	4.343	99.0%	1.064	1.084	0.986	2.368
x		0.000	0.765	-0.033	4.432	99.0%	1.022	1.180	1.063	2.565
σ		0.000	0.361	2.413	0.150	0.4%	0.056	0.086	0.073	0.202
%RSD		0.000	47.240	7226.000	3.380	0.4	5.486	7.320	6.845	7.889

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	0.024	0.016	0.027	0.015	88.1%	3.465	5.083	-0.010	0.010
2	18:18:39	0.027	0.017	0.044	0.019	87.8%	3.568	4.997	-0.004	0.000
3	18:19:06	0.039	0.021	0.038	0.017	88.1%	3.491	4.901	0.029	0.005
x		0.030	0.018	0.036	0.017	88.0%	3.508	4.993	0.005	0.005
σ		0.008	0.002	0.009	0.002	0.1%	0.053	0.091	0.021	0.005
%RSD		25.870	13.240	23.810	11.210	0.2	1.523	1.823	430.100	93.960

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:12	53.110	52.680	90.9%	0.206	0.201	21.200	20.250	21.080	88.0%
2	18:18:39	53.610	53.230	92.1%	0.182	0.210	20.830	20.240	20.790	88.8%
3	18:19:06	54.010	52.810	92.7%	0.230	0.210	20.930	20.290	20.850	89.5%
x		53.580	52.900	91.9%	0.206	0.207	20.990	20.260	20.910	88.8%
σ		0.448	0.288	0.9%	0.024	0.005	0.193	0.025	0.150	0.7%
%RSD		0.836	0.543	1.0	11.510	2.340	0.919	0.124	0.719	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	74.7%	290.800	295.600	301.400	6.164	T 59610.000	T 54630.000	T 54400.000	T 54480.000
2	18:24:29	73.6%	296.900	301.900	308.800	2.114	T 60810.000	T 55160.000	T 54940.000	T 54880.000
3	18:24:56	73.5%	292.300	300.200	305.200	3.045	T 60820.000	T 55080.000	T 55060.000	T 54780.000
x		74.0%	97.780%	99.750%	101.718%	3.774	T 100.691%	T 54960.000	T 54800.000	T 91.189%
σ		0.7%	n/a	n/a	n/a	2.121	T n/a	T 290.700	T 352.400	T n/a
%RSD		0.9	1.092	1.100	1.220	56.210	T 1.156	T 0.529	T 0.643	T 0.384
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	278.200	T 2820.000	3470.000	T 58820.000	56300.000	T 56140.000	67.4%	289.800	287.000
2	18:24:29	283.100	T 2828.000	3552.000	T 58960.000	56690.000	T 55840.000	65.7%	292.800	287.700
3	18:24:56	283.800	T 2835.000	3498.000	T 59590.000	57460.000	T 56100.000	65.1%	295.700	288.900
x		93.900%	T 94.257%	3507.000	T 98.544%	56820.000	T 93.381%	66.0%	97.586%	95.964%
σ		n/a	T n/a	41.470	T n/a	592.000	T n/a	1.2%	n/a	n/a
%RSD		1.088	T 0.274	1.183	T 0.693	1.042	T 0.287	1.8	1.011	0.333
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	291.500	68950.000	T 56300.000	288.200	T 55970.000	T 55600.000	271.500	273.700	272.200
2	18:24:29	291.600	68700.000	T 56680.000	291.500	T 57170.000	T 56750.000	277.900	278.800	271.600
3	18:24:56	291.600	68090.000	T 56850.000	291.100	T 56620.000	T 56480.000	275.800	273.600	276.500
x		97.200%	68580.000	T 56610.000	96.765%	T 56590.000	T 93.789%	91.692%	91.791%	273.400
σ		n/a	444.600	T 280.200	n/a	T 602.900	T n/a	n/a	n/a	2.697
%RSD		0.020	0.648	T 0.495	0.619	T 1.066	T 1.070	1.193	1.086	0.987
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	272.400	276.200	266.600	264.400	267.900	281.600	280.200	0.636	0.195
2	18:24:29	269.500	274.500	266.900	272.300	268.200	286.100	271.100	0.735	0.988
3	18:24:56	268.000	277.000	268.000	272.800	268.900	287.400	271.400	-0.223	0.458
x		269.900	91.962%	89.051%	269.800	268.300	95.012%	274.300	0.383	0.547
σ		2.227	n/a	n/a	4.715	0.476	n/a	5.174	0.527	0.404
%RSD		0.825	0.462	0.275	1.748	0.177	1.063	1.886	137.700	73.860
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	0.000	283.200	-0.024	290.500	70.3%	294.700	300.000	298.500	283.700
2	18:24:29	0.000	287.200	0.643	283.300	70.5%	298.100	299.800	292.700	276.200
3	18:24:56	0.000	280.900	1.720	285.300	69.6%	299.100	299.100	297.400	281.500
x		0.000	94.581%	0.780	95.449%	70.2%	99.096%	99.877%	296.200	280.500
σ		0.000	n/a	0.880	n/a	0.5%	n/a	n/a	3.078	3.878
%RSD		0.000	1.123	112.900	1.312	0.7	0.770	0.160	1.039	1.383
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	278.400	273.200	280.300	277.500	71.9%	288.100	294.900	298.200	279.900
2	18:24:29	273.000	268.200	277.800	275.400	72.8%	285.100	291.800	296.800	278.600
3	18:24:56	273.800	269.700	279.500	274.500	71.7%	286.900	295.000	302.000	284.200
x		91.684%	270.300	279.200	91.942%	72.1%	95.560%	97.963%	99.663%	93.637%
σ		n/a	2.592	1.265	n/a	0.6%	n/a	n/a	n/a	n/a
%RSD		1.057	0.959	0.453	0.559	0.8	0.531	0.622	0.905	1.050
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:02	289.300	287.100	76.7%	296.900	T 291.900	294.600	297.200	T 297.900	73.2%
2	18:24:29	286.900	285.000	77.1%	296.100	T 290.300	290.100	295.400	T 295.100	73.6%
3	18:24:56	286.400	284.200	76.9%	298.800	T 291.800	290.900	295.300	T 296.500	72.9%
x		95.850%	95.146%	76.9%	99.089%	T 97.120%	97.285%	98.668%	T 98.824%	73.2%
σ		n/a	n/a	0.2%	n/a	T n/a	n/a	n/a	T n/a	0.3%
%RSD		0.540	0.540	0.2	0.477	T 0.304	0.830	0.363	T 0.476	0.5

CCB IM8211-01 10/18/2017 18:29:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	85.0%	0.015	1.300	1.711	-9.618	-2.349	3.723	3.388	3.850
2	18:30:18	86.6%	0.014	0.077	1.313	-5.299	-1.347	5.146	5.156	4.987
3	18:30:45	86.3%	0.063	0.085	0.564	-7.337	2.187	8.595	8.935	8.629
x		86.0%	0.031	0.487	1.196	-7.418	-0.503	5.821	5.826	5.822
σ		0.8%	0.028	0.704	0.583	2.161	2.383	2.505	2.834	2.496
%RSD		1.0	91.850	144.400	48.700	29.130	473.500	43.030	48.640	42.870

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	1.622	1.181	2007.000	1.814	7.341	-10.730	74.9%	0.017	-0.034
2	18:30:18	1.919	-0.190	2104.000	1.631	8.240	-9.631	75.5%	0.086	0.014
3	18:30:45	3.047	-0.107	2212.000	4.387	6.207	-6.781	75.6%	0.040	0.107
x		2.196	0.295	2108.000	2.611	7.263	-9.047	75.3%	0.047	0.029
σ		0.752	0.769	102.800	1.541	1.019	2.038	0.4%	0.035	0.071
%RSD		34.220	260.900	4.876	59.040	14.030	22.520	0.5	73.340	246.300

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	0.004	86.930	5.505	0.061	7.252	6.646	0.020	0.070	-1.036
2	18:30:18	0.006	82.960	7.647	0.068	7.449	6.443	0.019	0.038	-1.206
3	18:30:45	0.033	57.690	11.360	0.093	10.700	10.670	0.043	0.069	-1.368
x		0.014	75.860	8.169	0.074	8.467	7.920	0.027	0.059	-1.203
σ		0.016	15.860	2.960	0.017	1.937	2.385	0.014	0.018	0.166
%RSD		114.200	20.910	36.240	22.800	22.870	30.110	50.350	30.520	13.810

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	0.002	0.004	-0.013	-0.093	-0.044	-0.070	0.327	-0.696	0.355
2	18:30:18	-0.062	0.078	0.020	0.032	0.001	-0.176	0.258	-0.184	-0.358
3	18:30:45	-0.033	0.028	0.048	0.032	-0.019	0.093	0.282	-0.712	0.180
x		-0.031	0.037	0.018	-0.010	-0.020	-0.051	0.289	-0.531	0.059
σ		0.032	0.038	0.031	0.072	0.023	0.135	0.035	0.300	0.372
%RSD		103.000	103.600	167.300	749.700	110.500	264.800	12.080	56.560	630.300

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	0.000	-0.155	-1.805	-0.053	79.9%	0.156	0.224	0.187	0.363
2	18:30:18	0.000	-0.100	-2.119	-0.022	80.5%	0.141	0.099	0.143	0.243
3	18:30:45	0.000	0.203	-2.122	0.143	80.6%	0.116	0.110	0.157	0.406
x		0.000	-0.017	-2.015	0.023	80.3%	0.138	0.144	0.162	0.337
σ		0.000	0.193	0.182	0.105	0.4%	0.020	0.069	0.022	0.085
%RSD		0.000	1112.000	9.039	465.600	0.4	14.340	48.050	13.780	25.140

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	0.038	0.035	0.018	0.014	81.7%	-0.034	0.029	0.656	0.680
2	18:30:18	0.038	0.028	0.005	0.007	84.6%	0.003	0.004	0.576	0.661
3	18:30:45	0.068	0.057	0.014	0.041	83.5%	0.045	-0.017	0.572	0.557
x		0.048	0.040	0.012	0.021	83.3%	0.005	0.005	0.601	0.633
σ		0.017	0.015	0.006	0.018	1.5%	0.040	0.023	0.047	0.066
%RSD		35.850	37.010	51.980	84.560	1.8	842.500	452.200	7.900	10.460

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:51	-0.002	0.025	82.6%	0.020	0.018	0.033	0.017	0.024	78.9%
2	18:30:18	0.006	0.045	83.9%	0.025	0.027	0.017	0.023	0.024	80.5%
3	18:30:45	0.050	0.033	84.6%	0.042	0.051	0.039	0.048	0.044	82.3%
x		0.018	0.034	83.7%	0.029	0.032	0.030	0.029	0.030	80.5%
σ		0.028	0.010	1.0%	0.012	0.017	0.011	0.017	0.012	1.7%
%RSD		153.500	30.020	1.2	40.520	52.740	37.260	56.530	38.310	2.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	98.8%	0.193	3.761	3.814	127.400	66.970	T 936.600	970.500	971.800
2	18:36:09	99.1%	0.214	3.378	3.406	122.900	67.080	T 928.100	959.500	972.100
3	18:36:35	99.9%	0.198	2.828	3.355	137.600	67.640	T 935.100	966.500	972.500
x		99.3%	0.202	3.322	3.525	129.300	67.230	T 933.300	965.500	972.100
σ		0.5%	0.011	0.469	0.252	7.549	0.363	T 4.537	5.601	0.379
%RSD		0.6	5.380	14.120	7.138	5.838	0.539	T 0.486	0.580	0.039

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	TM 60240.000	T 1117.000	T 320600.000	667.400	44.060	19.620	86.8%	488.000	106.000
2	18:36:09	TM 59890.000	T 1060.000	T 321500.000	664.800	40.610	21.330	86.7%	489.800	104.300
3	18:36:35	TM 59770.000	T 1145.000	T 324800.000	676.900	60.210	23.660	85.1%	476.900	106.000
x		TM 59970.000	T 1107.000	T 322300.000	669.700	48.290	21.540	86.2%	484.900	105.400
σ		TM 242.500	T 43.250	T 2231.000	6.372	10.460	2.028	1.0%	6.991	0.988
%RSD		TM 0.404	T 3.906	T 0.692	0.952	21.670	9.418	1.2	1.442	0.937

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	62.190	33510.000	T 20280.000	14.820	T 20390.000	22580.000	3.427	18.370	17.960
2	18:36:09	60.170	31730.000	T 20010.000	15.100	T 20100.000	22140.000	3.473	18.110	16.540
3	18:36:35	61.010	32170.000	T 20370.000	15.270	T 20440.000	22320.000	3.517	18.630	18.650
x		61.120	32470.000	T 20220.000	15.060	T 20310.000	22350.000	3.473	18.370	17.720
σ		1.019	924.400	T 187.900	0.228	T 186.600	222.900	0.045	0.263	1.072
%RSD		1.667	2.847	T 0.929	1.514	T 0.919	0.997	1.291	1.431	6.052

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	2.134	2.297	10.050	12.160	10.200	4.115	-0.265	15.810	15.550
2	18:36:09	2.053	2.215	10.610	12.550	9.978	4.320	0.190	14.570	15.600
3	18:36:35	2.117	2.370	10.480	11.390	10.450	5.366	-0.311	14.220	15.120
x		2.101	2.294	10.380	12.030	10.210	4.600	-0.128	14.870	15.420
σ		0.042	0.077	0.296	0.592	0.237	0.671	0.277	0.832	0.267
%RSD		2.016	3.371	2.849	4.919	2.318	14.580	215.800	5.594	1.731

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	0.000	0.182	-1.659	5.428	96.5%	1.701	1.920	1.695	6.678
2	18:36:09	0.000	0.663	-0.216	5.698	96.7%	1.545	1.496	1.620	5.369
3	18:36:35	0.000	0.044	-2.111	5.691	95.6%	1.628	1.759	1.690	6.965
x		0.000	0.296	-1.329	5.606	96.3%	1.625	1.725	1.668	6.338
σ		0.000	0.325	0.989	0.154	0.6%	0.078	0.214	0.042	0.851
%RSD		0.000	109.700	74.480	2.743	0.6	4.792	12.410	2.534	13.420

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	0.052	0.018	-0.003	-0.000	88.3%	4.757	6.565	0.798	0.769
2	18:36:09	0.041	0.024	0.005	-0.022	88.7%	4.633	6.532	0.698	0.688
3	18:36:35	0.054	0.021	0.011	0.004	88.8%	4.833	6.549	0.672	0.636
x		0.049	0.021	0.004	-0.006	88.6%	4.741	6.549	0.723	0.698
σ		0.007	0.003	0.007	0.014	0.3%	0.101	0.016	0.066	0.067
%RSD		14.690	15.500	166.700	232.700	0.3	2.130	0.249	9.196	9.621

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:42	29.670	29.510	90.0%	0.132	0.146	21.540	20.730	21.390	89.2%
2	18:36:09	29.590	29.990	91.9%	0.147	0.147	21.530	20.840	21.470	89.6%
3	18:36:35	30.370	29.260	92.4%	0.155	0.134	21.610	20.590	21.310	89.9%
x		29.880	29.590	91.4%	0.145	0.142	21.560	20.720	21.390	89.6%
σ		0.426	0.371	1.3%	0.012	0.007	0.042	0.122	0.083	0.4%
%RSD		1.427	1.252	1.4	8.114	4.852	0.197	0.591	0.390	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	97.4%	0.270	2.176	2.066	226.300	56.420	658.400	640.800	644.100
2	18:42:00	96.7%	0.390	1.945	2.001	230.900	55.320	646.400	626.200	635.100
3	18:42:27	96.0%	0.275	1.601	1.951	233.200	57.120	643.900	631.400	636.800
x		96.7%	0.312	1.907	2.006	230.200	56.280	649.500	632.800	638.700
σ		0.7%	0.068	0.289	0.058	3.512	0.908	7.748	7.416	4.754
%RSD		0.8	21.680	15.170	2.880	1.526	1.613	1.193	1.172	0.744
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	TM 23940.000	T 893.800	T 343200.000	527.400	83.990	54.060	80.2%	258.700	29.800
2	18:42:00	TM 23580.000	T 860.800	T 337200.000	516.900	55.510	52.120	80.3%	246.300	29.080
3	18:42:27	TM 23330.000	T 888.600	T 334700.000	511.900	81.690	53.560	79.7%	T 269.100	27.880
x		TM 23620.000	T 881.100	T 338400.000	518.700	73.730	53.250	80.1%	T 258.000	28.920
σ		TM 309.100	T 17.790	T 4363.000	7.946	15.820	1.007	0.3%	T 11.440	0.968
%RSD		TM 1.309	T 2.019	T 1.290	1.532	21.460	1.892	0.4	T 4.435	3.347
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	21.720	26200.000	4057.000	12.470	T 3767.000	3937.000	0.861	4.656	3.421
2	18:42:00	21.170	25350.000	3938.000	12.120	T 3682.000	3875.000	0.849	4.175	2.957
3	18:42:27	20.990	25800.000	3939.000	12.080	T 3676.000	3815.000	0.869	4.373	2.913
x		21.290	25780.000	3978.000	12.220	T 3708.000	3876.000	0.860	4.401	3.097
σ		0.384	425.900	68.270	0.216	T 51.160	61.480	0.010	0.242	0.281
%RSD		1.803	1.652	1.716	1.762	T 1.379	1.586	1.170	5.489	9.086
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	1.530	1.603	10.950	11.750	11.180	1.265	0.602	20.210	21.370
2	18:42:00	1.318	1.643	10.260	11.850	10.170	1.905	0.610	18.960	20.380
3	18:42:27	1.343	1.507	10.350	12.410	10.350	1.916	0.728	19.400	20.950
x		1.397	1.585	10.520	12.000	10.570	1.695	0.647	19.520	20.900
σ		0.115	0.070	0.372	0.354	0.540	0.373	0.070	0.634	0.497
%RSD		8.261	4.433	3.531	2.950	5.113	21.970	10.870	3.245	2.378
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	0.000	0.734	0.900	5.114	99.9%	0.216	0.309	0.375	2.476
2	18:42:00	0.000	1.593	0.927	5.269	99.4%	0.210	0.154	0.270	0.411
3	18:42:27	0.000	1.322	-0.259	5.228	99.3%	0.192	0.312	0.260	0.434
x		0.000	1.216	0.523	5.204	99.5%	0.206	0.258	0.301	1.107
σ		0.000	0.439	0.677	0.080	0.3%	0.013	0.090	0.064	1.186
%RSD		0.000	36.080	129.600	1.547	0.3	6.168	34.930	21.200	107.200
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	0.027	0.025	0.116	0.116	86.5%	3.293	4.452	0.250	0.243
2	18:42:00	0.016	0.023	0.113	0.119	86.2%	3.209	4.515	0.228	0.221
3	18:42:27	0.034	0.016	0.116	0.095	86.3%	3.152	4.381	0.199	0.191
x		0.026	0.021	0.115	0.110	86.3%	3.218	4.449	0.226	0.218
σ		0.009	0.005	0.001	0.013	0.1%	0.071	0.067	0.026	0.026
%RSD		35.600	23.310	1.292	12.050	0.2	2.204	1.506	11.460	12.000
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:33	34.100	33.900	90.7%	0.087	0.087	24.150	23.180	24.080	87.9%
2	18:42:00	32.840	33.330	91.6%	0.081	0.088	23.940	22.810	23.850	88.3%
3	18:42:27	33.380	32.930	91.9%	0.086	0.082	23.920	22.640	23.800	88.0%
x		33.440	33.390	91.4%	0.085	0.086	24.000	22.880	23.910	88.0%
σ		0.629	0.485	0.6%	0.003	0.003	0.129	0.274	0.151	0.2%
%RSD		1.880	1.452	0.7	4.121	3.664	0.539	1.199	0.632	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	92.3%	0.065	-0.635	-0.527	47.730	17.350	14.880	15.990	18.430
2	18:47:51	91.8%	0.019	-1.508	-0.482	58.530	17.920	15.120	15.880	15.840
3	18:48:18	90.7%	-0.011	-1.034	-0.610	50.800	19.950	15.940	16.710	16.960
x		91.6%	0.024	-1.059	-0.540	52.350	18.410	15.310	16.190	17.080
σ		0.8%	0.038	0.437	0.065	5.564	1.365	0.554	0.451	1.302
%RSD		0.9	158.900	41.250	12.100	10.630	7.414	3.621	2.785	7.627

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	TM 749.300	T 284.800	T 318600.000	33.490	23.330	2.354	75.3%	T 245.000	3.597
2	18:47:51	TM 736.600	T 297.500	T 315700.000	35.090	19.330	8.220	75.2%	222.200	4.411
3	18:48:18	TM 744.900	T 283.200	T 317100.000	36.020	11.640	6.299	73.6%	194.000	5.646
x		TM 743.600	T 288.500	T 317100.000	34.870	18.100	5.624	74.7%	T 220.400	4.551
σ		TM 6.446	T 7.851	T 1477.000	1.277	5.939	2.990	1.0%	T 25.540	1.032
%RSD		TM 0.867	T 2.721	T 0.466	3.663	32.810	53.160	1.3	T 11.580	22.670

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	3.022	20860.000	255.600	5.383	T 250.700	245.300	0.038	0.336	-0.979
2	18:47:51	2.975	20330.000	256.100	5.365	T 247.900	242.700	0.054	0.448	-0.616
3	18:48:18	2.890	19850.000	254.000	5.319	T 246.100	237.800	0.044	0.364	-0.312
x		2.962	20350.000	255.200	5.356	T 248.200	241.900	0.045	0.383	-0.636
σ		0.066	501.400	1.092	0.033	T 2.310	3.782	0.008	0.058	0.334
%RSD		2.243	2.464	0.428	0.617	T 0.931	1.563	17.370	15.240	52.500

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	0.002	0.099	3.606	4.251	3.445	-0.341	-0.127	11.210	10.740
2	18:47:51	0.025	0.078	3.455	3.987	3.109	0.749	-0.117	11.790	11.490
3	18:48:18	0.120	0.130	2.904	3.273	2.701	0.584	-0.009	11.910	10.560
x		0.049	0.102	3.322	3.837	3.085	0.331	-0.084	11.640	10.930
σ		0.063	0.026	0.369	0.506	0.373	0.587	0.065	0.377	0.493
%RSD		128.100	25.620	11.110	13.180	12.080	177.500	77.450	3.239	4.507

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	0.000	0.192	-1.374	1.362	83.5%	-0.006	0.050	0.038	0.060
2	18:47:51	0.000	-0.235	-0.225	1.360	82.9%	-0.005	0.036	0.032	-0.152
3	18:48:18	0.000	-0.218	-1.350	1.407	83.2%	-0.011	0.022	0.058	-0.040
x		0.000	-0.087	-0.983	1.376	83.2%	-0.007	0.036	0.042	-0.044
σ		0.000	0.242	0.657	0.027	0.3%	0.003	0.014	0.013	0.106
%RSD		0.000	278.900	66.810	1.944	0.3	46.870	39.400	31.760	242.300

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	-0.003	-0.003	0.015	-0.002	82.4%	2.814	4.220	0.037	0.040
2	18:47:51	-0.004	-0.007	0.006	-0.008	82.7%	2.835	4.172	0.019	0.045
3	18:48:18	0.007	-0.002	0.003	-0.001	82.1%	2.745	4.184	0.010	0.053
x		0.000	-0.004	0.008	-0.004	82.4%	2.798	4.192	0.022	0.046
σ		0.006	0.003	0.006	0.004	0.3%	0.047	0.025	0.014	0.007
%RSD		8505.000	71.290	82.690	101.700	0.4	1.669	0.589	62.760	14.750

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:24	3.969	3.666	87.3%	0.005	0.004	2.444	2.328	2.459	83.8%
2	18:47:51	3.758	3.714	87.0%	0.008	0.005	2.395	2.293	2.404	84.7%
3	18:48:18	3.875	3.666	87.8%	0.009	0.006	2.409	2.163	2.383	86.1%
x		3.867	3.682	87.4%	0.007	0.005	2.416	2.261	2.415	84.9%
σ		0.106	0.028	0.4%	0.002	0.001	0.025	0.087	0.040	1.1%
%RSD		2.730	0.754	0.5	31.360	20.510	1.053	3.830	1.639	1.3

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	97.0%	0.554	1.833	3.245	272.300	75.770	T 1263.000	1316.000	1325.000
2	18:53:42	97.3%	0.510	3.609	3.186	272.000	75.500	T 1270.000	1336.000	1342.000
3	18:54:09	98.9%	0.580	2.384	3.251	260.800	77.950	T 1255.000	1322.000	1318.000
x		97.7%	0.548	2.608	3.227	268.400	76.410	T 1263.000	1325.000	1328.000
σ		1.0%	0.036	0.909	0.036	6.575	1.341	T 7.464	10.390	12.720
%RSD		1.0	6.495	34.840	1.116	2.450	1.755	T 0.591	0.785	0.958
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	TM 49970.000	T 1602.000	T 330800.000	652.900	116.600	107.100	83.1%	TM 615.800	100.400
2	18:53:42	TM 50610.000	T 1618.000	T 338600.000	670.500	97.900	113.600	81.9%	484.800	101.100
3	18:54:09	TM 50080.000	T 1516.000	T 338700.000	662.800	120.100	104.400	82.5%	483.400	101.000
x		TM 50220.000	T 1579.000	T 336000.000	662.100	111.500	108.400	82.5%	TM 528.000	100.800
σ		TM 339.800	T 54.820	T 4527.000	8.830	11.920	4.736	0.6%	TM 76.050	0.396
%RSD		TM 0.677	T 3.473	T 1.347	1.334	10.690	4.370	0.7	TM 14.400	0.392
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	46.490	29530.000	T 26480.000	38.380	T 26510.000	T 26770.000	2.708	14.910	13.710
2	18:53:42	46.980	28790.000	T 26610.000	39.030	T 26720.000	T 26780.000	2.656	15.000	12.250
3	18:54:09	47.240	27850.000	T 26620.000	38.300	T 26290.000	T 26770.000	2.647	14.830	13.030
x		46.900	28720.000	T 26570.000	38.570	T 26510.000	T 26770.000	2.670	14.910	13.000
σ		0.381	844.500	T 80.010	0.400	T 215.000	T 9.989	0.033	0.084	0.728
%RSD		0.812	2.940	T 0.301	1.037	T 0.811	T 0.037	1.240	0.564	5.604
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	2.964	3.129	20.290	23.250	20.540	3.558	1.083	28.290	29.140
2	18:53:42	2.938	3.450	20.340	22.740	20.700	4.867	0.454	27.670	29.180
3	18:54:09	2.999	3.265	20.300	21.020	20.570	4.246	0.613	29.060	28.740
x		2.967	3.281	20.310	22.340	20.610	4.224	0.717	28.340	29.020
σ		0.030	0.161	0.028	1.168	0.085	0.654	0.327	0.695	0.247
%RSD		1.017	4.909	0.137	5.230	0.411	15.490	45.630	2.454	0.849
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	0.000	0.715	1.313	4.742	100.4%	1.092	1.202	1.089	3.950
2	18:53:42	0.000	1.355	-1.736	4.604	100.0%	1.045	1.071	1.016	3.885
3	18:54:09	0.000	0.729	1.784	4.802	100.5%	0.993	1.155	1.070	3.480
x		0.000	0.933	0.454	4.716	100.3%	1.043	1.143	1.059	3.772
σ		0.000	0.366	1.911	0.102	0.3%	0.050	0.067	0.038	0.255
%RSD		0.000	39.180	421.300	2.158	0.3	4.793	5.845	3.581	6.747
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	0.024	0.008	0.036	-0.009	85.0%	3.649	5.340	0.136	0.186
2	18:53:42	0.021	0.007	0.048	0.028	86.5%	3.734	5.096	0.128	0.143
3	18:54:09	0.040	0.015	0.050	0.017	86.5%	3.702	5.253	0.130	0.138
x		0.028	0.010	0.045	0.012	86.0%	3.695	5.229	0.131	0.156
σ		0.010	0.004	0.007	0.019	0.8%	0.043	0.124	0.004	0.026
%RSD		35.170	45.930	16.340	159.200	1.0	1.156	2.365	3.117	16.840
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:15	61.150	60.450	90.5%	0.203	0.218	23.310	22.370	23.160	87.4%
2	18:53:42	60.720	59.350	91.4%	0.207	0.214	23.510	22.400	23.310	87.9%
3	18:54:09	60.820	59.470	92.5%	0.210	0.218	23.350	22.430	23.140	88.7%
x		60.900	59.760	91.5%	0.206	0.217	23.390	22.400	23.200	88.0%
σ		0.222	0.603	1.0%	0.003	0.002	0.104	0.028	0.092	0.6%
%RSD		0.364	1.009	1.1	1.689	1.028	0.445	0.127	0.397	0.7

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	105.0%	0.362	2.949	2.923	130.600	118.300	T 1166.000	1228.000	1234.000
2	18:59:33	106.9%	0.296	2.193	2.919	126.600	118.800	T 1169.000	1225.000	1238.000
3	19:00:01	106.2%	0.311	2.633	3.562	124.100	119.800	T 1154.000	1231.000	1227.000
x		106.0%	0.323	2.592	3.135	127.100	119.000	T 1163.000	1228.000	1233.000
σ		1.0%	0.035	0.380	0.370	3.261	0.741	T 8.091	3.311	5.588
%RSD		0.9	10.720	14.650	11.790	2.565	0.623	T 0.696	0.270	0.453
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	TM 91590.000	T 1192.000	T 326000.000	816.700	83.640	40.600	89.1%	TM 568.800	79.330
2	18:59:33	TM 91770.000	T 1146.000	T 329100.000	822.500	74.980	41.030	89.2%	487.900	79.760
3	19:00:01	TM 90400.000	T 1076.000	T 325100.000	811.600	85.260	39.090	90.0%	482.900	80.300
x		TM 91250.000	T 1138.000	T 326700.000	816.900	81.290	40.240	89.4%	TM 513.200	79.800
σ		TM 744.100	T 58.580	T 2083.000	5.454	5.524	1.020	0.5%	TM 48.250	0.482
%RSD		TM 0.815	T 5.148	T 0.638	0.668	6.795	2.536	0.6	TM 9.401	0.604
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	75.970	38700.000	T 17230.000	17.840	T 17300.000	18930.000	5.960	38.530	37.420
2	18:59:33	75.730	37910.000	T 17220.000	17.990	T 17150.000	18740.000	5.941	37.890	38.480
3	19:00:01	75.350	37090.000	T 17090.000	17.670	T 17020.000	18560.000	5.795	37.510	36.890
x		75.680	37900.000	T 17180.000	17.830	T 17160.000	18740.000	5.899	37.980	37.600
σ		0.316	805.200	T 77.450	0.157	T 143.800	181.700	0.090	0.516	0.812
%RSD		0.417	2.125	T 0.451	0.882	T 0.838	0.969	1.533	1.358	2.158
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	1.749	2.034	13.110	16.210	13.580	3.339	0.121	19.830	19.610
2	18:59:33	1.899	2.018	13.310	16.300	13.610	3.256	0.160	20.800	20.020
3	19:00:01	1.898	2.209	12.790	16.150	13.010	3.521	0.173	17.830	18.780
x		1.849	2.087	13.070	16.220	13.400	3.372	0.152	19.490	19.470
σ		0.086	0.106	0.265	0.073	0.338	0.136	0.027	1.518	0.633
%RSD		4.677	5.074	2.024	0.450	2.519	4.023	18.010	7.788	3.250
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	0.000	0.041	-1.086	9.627	100.2%	0.692	0.634	0.705	10.840
2	18:59:33	0.000	0.662	0.543	8.243	100.3%	0.711	0.819	0.681	10.060
3	19:00:01	0.000	0.186	-0.638	8.186	100.5%	0.789	0.692	0.721	10.980
x		0.000	0.297	-0.393	8.686	100.3%	0.731	0.715	0.702	10.630
σ		0.000	0.325	0.841	0.816	0.2%	0.051	0.094	0.020	0.493
%RSD		0.000	109.500	213.900	9.391	0.2	7.015	13.200	2.860	4.642
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	0.075	0.011	0.002	-0.026	91.7%	4.890	6.342	0.119	0.107
2	18:59:33	0.068	0.009	0.010	-0.017	93.1%	4.686	6.532	0.130	0.142
3	19:00:01	0.058	0.011	0.018	-0.008	93.7%	4.777	6.369	0.111	0.103
x		0.067	0.010	0.010	-0.017	92.9%	4.784	6.415	0.120	0.117
σ		0.009	0.001	0.008	0.009	1.0%	0.102	0.103	0.010	0.021
%RSD		12.900	12.520	76.080	50.920	1.1	2.128	1.604	8.043	18.240
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:06	52.070	52.680	93.4%	0.153	0.150	32.950	31.840	32.950	91.0%
2	18:59:33	52.010	51.990	94.7%	0.158	0.138	33.160	31.910	32.840	91.6%
3	19:00:01	51.910	51.600	95.2%	0.134	0.143	32.790	31.740	32.740	92.6%
x		52.000	52.090	94.4%	0.148	0.144	32.970	31.830	32.850	91.7%
σ		0.082	0.548	0.9%	0.013	0.006	0.189	0.082	0.105	0.8%
%RSD		0.158	1.052	0.9	8.734	4.122	0.572	0.258	0.319	0.9

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	98.8%	0.514	4.621	4.802	151.200	75.780	T 1686.000	1758.000	1759.000
2	19:05:25	100.1%	0.586	4.213	4.524	139.800	76.630	T 1655.000	1735.000	1733.000
3	19:05:52	97.5%	0.659	4.211	4.571	149.800	78.580	T 1667.000	1760.000	1757.000
x		98.8%	0.586	4.348	4.632	146.900	77.000	T 1669.000	1751.000	1750.000
σ		1.3%	0.073	0.236	0.149	6.189	1.431	T 15.370	14.300	14.690
%RSD		1.3	12.390	5.434	3.218	4.212	1.859	T 0.921	0.817	0.839
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	TM 63280.000	T 1575.000	T 337500.000	1296.000	125.300	102.700	86.4%	TM 916.300	125.600
2	19:05:25	TM 62810.000	T 1630.000	T 335200.000	T 1265.000	133.800	105.700	85.3%	TM 823.700	125.200
3	19:05:52	TM 63670.000	T 1522.000	T 343600.000	1325.000	149.200	103.900	84.3%	M 738.200	125.100
x		TM 63260.000	T 1576.000	T 338800.000	T 1295.000	136.100	104.100	85.3%	TM 826.100	125.300
σ		TM 432.000	T 54.180	T 4338.000	T 29.830	12.090	1.502	1.0%	TM 89.120	0.280
%RSD		TM 0.683	T 3.438	T 1.281	T 2.303	8.884	1.442	1.2	TM 10.790	0.224
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	66.570	32190.000	T 35380.000	41.890	T 35410.000	T 34890.000	4.428	24.350	23.520
2	19:05:25	65.710	31540.000	T 35070.000	41.790	T 35010.000	T 34870.000	4.196	24.520	23.370
3	19:05:52	65.740	31530.000	T 35230.000	42.010	T 35230.000	T 34970.000	4.330	24.040	23.590
x		66.010	31750.000	T 35220.000	41.900	T 35210.000	T 34910.000	4.318	24.300	23.490
σ		0.486	377.000	T 154.500	0.108	T 197.000	T 51.640	0.117	0.245	0.116
%RSD		0.736	1.187	T 0.439	0.258	T 0.559	T 0.148	2.704	1.009	0.494
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	8.587	9.260	26.010	29.390	25.360	6.928	0.643	16.980	18.140
2	19:05:25	8.525	9.119	23.960	27.040	24.320	8.461	0.336	17.090	17.020
3	19:05:52	8.495	9.834	24.130	26.350	23.980	7.639	0.525	18.580	16.190
x		8.535	9.405	24.700	27.590	24.550	7.676	0.501	17.550	17.120
σ		0.047	0.378	1.134	1.595	0.720	0.767	0.155	0.894	0.982
%RSD		0.552	4.023	4.592	5.782	2.932	9.994	30.940	5.093	5.736
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	0.000	1.254	1.571	6.761	107.5%	1.622	1.621	1.610	7.316
2	19:05:25	0.000	0.797	1.615	7.294	106.9%	1.592	1.619	1.589	9.259
3	19:05:52	0.000	1.309	-1.242	6.951	105.9%	1.495	1.791	1.640	7.580
x		0.000	1.120	0.648	7.002	106.7%	1.570	1.677	1.613	8.052
σ		0.000	0.281	1.637	0.270	0.8%	0.067	0.099	0.026	1.054
%RSD		0.000	25.100	252.500	3.857	0.8	4.241	5.877	1.598	13.090
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	0.051	0.005	0.010	0.007	88.7%	4.349	5.833	0.137	0.124
2	19:05:25	0.035	0.008	-0.003	-0.011	87.2%	4.330	6.188	0.187	0.148
3	19:05:52	0.036	0.009	0.011	0.001	87.0%	4.595	6.111	0.187	0.168
x		0.041	0.007	0.006	-0.001	87.6%	4.425	6.044	0.170	0.147
σ		0.009	0.002	0.008	0.009	1.0%	0.148	0.187	0.029	0.022
%RSD		22.150	29.210	135.400	883.100	1.1	3.344	3.088	17.020	14.750
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:57	61.620	59.950	92.0%	0.417	0.435	25.810	24.790	25.650	87.9%
2	19:05:25	61.340	61.070	91.4%	0.405	0.428	25.620	24.680	25.560	88.1%
3	19:05:52	60.920	60.630	92.4%	0.439	0.439	25.940	24.770	25.700	88.3%
x		61.290	60.550	91.9%	0.420	0.434	25.790	24.750	25.640	88.1%
σ		0.352	0.565	0.5%	0.017	0.006	0.163	0.061	0.071	0.2%
%RSD		0.575	0.933	0.6	4.058	1.288	0.632	0.245	0.276	0.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	96.0%	0.164	1.980	0.095	45.230	13.920	367.000	365.700	366.000
2	19:11:16	97.5%	0.118	-0.974	0.135	47.210	14.070	364.000	365.900	363.700
3	19:11:43	96.6%	0.200	0.654	0.033	38.400	14.210	360.800	362.900	364.400
x		96.7%	0.161	0.554	0.088	43.620	14.070	364.000	364.800	364.700
σ		0.8%	0.041	1.480	0.051	4.622	0.142	3.108	1.660	1.164
%RSD		0.8	25.610	267.300	58.780	10.600	1.010	0.854	0.455	0.319
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	TM 15600.000	T 661.200	T 328900.000	290.900	168.700	136.300	80.4%	360.300	14.580
2	19:11:16	TM 15520.000	T 666.000	T 325900.000	285.600	150.700	129.100	79.9%	T 426.200	15.140
3	19:11:43	TM 15420.000	T 703.600	T 325600.000	284.900	143.600	135.500	79.7%	371.900	15.190
x		TM 15510.000	T 676.900	T 326800.000	287.100	154.300	133.600	80.0%	T 386.200	14.970
σ		TM 86.750	T 23.210	T 1789.000	3.295	12.940	3.975	0.4%	T 35.210	0.337
%RSD		TM 0.559	T 3.429	T 0.547	1.148	8.385	2.975	0.5	T 9.117	2.254
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	17.350	23620.000	1951.000	17.460	T 1836.000	1895.000	0.705	4.792	3.779
2	19:11:16	17.070	23780.000	1960.000	17.260	T 1813.000	1906.000	0.710	4.906	4.065
3	19:11:43	17.110	23880.000	1940.000	17.250	T 1823.000	1885.000	0.639	4.686	4.202
x		17.180	23760.000	1951.000	17.330	T 1824.000	1895.000	0.685	4.794	4.015
σ		0.153	134.100	10.370	0.117	T 11.440	10.460	0.040	0.110	0.216
%RSD		0.889	0.564	0.531	0.676	T 0.627	0.552	5.836	2.295	5.374
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	2.372	2.501	5.496	6.030	5.711	1.128	-0.083	12.550	13.180
2	19:11:16	2.185	2.606	5.619	6.456	5.719	1.385	0.106	12.240	13.230
3	19:11:43	2.217	2.302	5.492	6.399	5.555	0.611	-0.328	12.010	13.360
x		2.258	2.470	5.536	6.295	5.662	1.041	-0.102	12.270	13.260
σ		0.100	0.155	0.073	0.231	0.092	0.394	0.218	0.271	0.092
%RSD		4.429	6.265	1.310	3.674	1.629	37.880	214.300	2.206	0.692
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	0.000	-0.233	-0.657	5.158	91.0%	0.194	0.235	0.254	1.396
2	19:11:16	0.000	0.292	-0.136	5.281	91.0%	0.244	0.205	0.215	1.632
3	19:11:43	0.000	-0.168	-0.885	4.869	90.4%	0.137	0.255	0.202	1.794
x		0.000	-0.036	-0.559	5.103	90.8%	0.192	0.232	0.224	1.607
σ		0.000	0.286	0.384	0.211	0.3%	0.054	0.025	0.027	0.201
%RSD		0.000	796.600	68.600	4.144	0.4	28.110	11.010	12.120	12.480
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	0.014	0.001	0.016	-0.016	86.4%	3.471	4.645	-0.047	-0.014
2	19:11:16	0.005	0.005	-0.001	-0.002	85.4%	3.255	4.813	-0.053	-0.025
3	19:11:43	0.006	-0.001	0.002	-0.019	86.0%	3.393	4.757	-0.044	-0.031
x		0.008	0.002	0.006	-0.012	85.9%	3.373	4.738	-0.048	-0.023
σ		0.005	0.003	0.009	0.009	0.5%	0.109	0.086	0.005	0.009
%RSD		58.120	161.300	165.300	74.640	0.6	3.234	1.807	9.705	37.750
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:10:49	20.750	20.060	89.8%	0.055	0.054	12.720	12.210	12.690	86.5%
2	19:11:16	20.400	20.260	90.5%	0.059	0.063	13.060	12.470	12.890	86.8%
3	19:11:43	20.390	19.200	91.6%	0.071	0.067	12.840	12.340	12.730	87.8%
x		20.510	19.840	90.6%	0.062	0.061	12.870	12.340	12.770	87.0%
σ		0.203	0.563	0.9%	0.008	0.007	0.174	0.131	0.105	0.7%
%RSD		0.987	2.839	1.0	13.230	11.040	1.355	1.058	0.825	0.8

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	96.9%	0.089	-0.848	0.077	80.530	36.180	438.200	429.500	436.200
2	19:17:06	96.2%	0.127	-0.901	0.487	70.490	35.750	438.300	433.400	432.500
3	19:17:33	97.1%	0.133	-0.085	0.128	73.960	36.220	438.600	430.700	438.100
x		96.8%	0.117	-0.611	0.230	74.990	36.050	438.400	431.200	435.600
σ		0.5%	0.024	0.457	0.224	5.098	0.262	0.209	1.973	2.832
%RSD		0.5	20.410	74.730	97.020	6.797	0.727	0.048	0.458	0.650
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	TM 19240.000	T 982.900	T 328900.000	349.900	202.000	178.600	80.3%	476.800	18.350
2	19:17:06	TM 19190.000	T 995.800	T 328700.000	358.200	208.800	193.400	78.8%	TM 608.500	16.660
3	19:17:33	TM 19110.000	T 911.900	T 327400.000	353.000	226.800	190.000	78.8%	474.000	18.440
x		TM 19180.000	T 963.500	T 328300.000	353.700	212.500	187.300	79.3%	TM 519.800	17.810
σ		TM 63.730	T 45.130	T 832.900	4.189	12.810	7.746	0.8%	TM 76.850	1.004
%RSD		TM 0.332	T 4.684	T 0.254	1.184	6.026	4.135	1.1	TM 14.790	5.634
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	20.510	25960.000	2204.000	21.920	T 2059.000	2131.000	0.810	5.279	5.077
2	19:17:06	20.270	26080.000	T 2206.000	22.150	T 2090.000	2124.000	0.804	4.876	4.991
3	19:17:33	20.060	25820.000	2205.000	21.700	T 2049.000	2149.000	0.785	4.790	3.926
x		20.280	25950.000	T 2205.000	21.920	T 2066.000	2135.000	0.800	4.981	4.664
σ		0.229	131.200	T 1.034	0.228	T 21.150	13.210	0.013	0.261	0.641
%RSD		1.129	0.506	T 0.047	1.039	T 1.024	0.619	1.649	5.244	13.750
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	3.187	3.539	5.570	7.418	5.287	0.320	-0.358	15.170	15.420
2	19:17:06	3.164	3.440	5.558	7.047	5.395	0.313	-0.020	16.660	14.560
3	19:17:33	3.279	3.549	5.538	6.988	5.616	0.358	-0.101	15.030	15.210
x		3.210	3.509	5.555	7.151	5.433	0.330	-0.160	15.620	15.060
σ		0.061	0.060	0.016	0.233	0.168	0.024	0.177	0.903	0.447
%RSD		1.907	1.721	0.289	3.255	3.085	7.264	110.700	5.784	2.964
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	0.000	0.285	1.057	6.246	92.5%	0.208	0.246	0.252	1.872
2	19:17:06	0.000	0.021	3.402	6.483	92.1%	0.207	0.216	0.215	1.987
3	19:17:33	0.000	0.310	1.664	6.420	91.3%	0.241	0.314	0.232	1.402
x		0.000	0.205	2.041	6.383	92.0%	0.219	0.259	0.233	1.754
σ		0.000	0.160	1.217	0.123	0.6%	0.020	0.050	0.018	0.310
%RSD		0.000	77.870	59.610	1.922	0.7	8.936	19.370	7.852	17.660
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	0.010	0.007	0.016	-0.002	84.4%	3.632	4.845	-0.035	-0.015
2	19:17:06	0.017	0.003	0.011	-0.006	84.5%	3.459	4.799	-0.078	-0.044
3	19:17:33	0.008	0.007	0.025	0.016	84.4%	3.440	4.786	-0.036	-0.055
x		0.011	0.006	0.018	0.003	84.4%	3.510	4.810	-0.049	-0.038
σ		0.005	0.002	0.007	0.012	0.1%	0.106	0.031	0.025	0.021
%RSD		40.130	35.980	42.490	465.400	0.1	3.020	0.648	50.010	54.950
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:39	28.070	28.740	89.6%	0.066	0.061	15.810	15.140	15.670	85.6%
2	19:17:06	29.010	28.250	89.9%	0.057	0.064	15.770	14.860	15.530	86.4%
3	19:17:33	28.390	28.280	90.0%	0.061	0.060	15.620	14.680	15.470	87.5%
x		28.490	28.430	89.8%	0.061	0.062	15.730	14.890	15.560	86.5%
σ		0.476	0.274	0.2%	0.004	0.002	0.097	0.233	0.105	1.0%
%RSD		1.669	0.963	0.2	6.722	3.057	0.616	1.565	0.676	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	99.3%	0.249	2.208	2.458	164.600	60.620	T 1199.000	1252.000	1255.000
2	19:22:57	99.4%	0.298	2.650	2.543	158.400	62.330	T 1208.000	1264.000	1270.000
3	19:23:24	98.2%	0.216	1.900	2.608	176.500	63.480	T 1204.000	1249.000	1258.000
x		99.0%	0.254	2.252	2.536	166.500	62.140	T 1204.000	1255.000	1261.000
σ		0.7%	0.041	0.377	0.075	9.231	1.442	T 4.124	8.213	8.020
%RSD		0.7	16.250	16.730	2.968	5.544	2.320	T 0.343	0.655	0.636

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	TM 78220.000	T 1337.000	T 312300.000	801.300	83.340	45.150	87.8%	TM 535.100	158.900
2	19:22:57	TM 78940.000	T 1299.000	T 314400.000	812.600	66.540	44.210	87.2%	432.300	160.400
3	19:23:24	TM 77760.000	T 1265.000	T 313000.000	800.700	78.360	42.410	86.7%	422.900	157.200
x		TM 78310.000	T 1300.000	T 313200.000	804.900	76.080	43.920	87.2%	TM 463.400	158.800
σ		TM 594.300	T 36.340	T 1041.000	6.754	8.626	1.394	0.6%	TM 62.280	1.594
%RSD		TM 0.759	T 2.794	T 0.333	0.839	11.340	3.173	0.7	TM 13.440	1.004

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	87.700	35820.000	T 52940.000	20.890	T 52650.000	T 52130.000	3.583	22.330	20.450
2	19:22:57	87.590	35360.000	T 52840.000	21.260	T 52790.000	T 52570.000	3.501	22.410	21.530
3	19:23:24	87.630	34680.000	T 52210.000	21.000	T 52670.000	T 52090.000	3.497	22.230	21.690
x		87.640	35290.000	T 52660.000	21.050	T 52700.000	T 52260.000	3.527	22.320	21.220
σ		0.057	573.200	T 394.300	0.186	T 78.060	T 268.000	0.049	0.089	0.673
%RSD		0.065	1.624	T 0.749	0.884	T 0.148	T 0.513	1.381	0.398	3.172

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	2.452	2.854	14.650	17.820	14.790	10.790	0.624	11.180	12.560
2	19:22:57	2.449	2.833	14.210	18.120	14.770	9.955	0.628	10.200	11.860
3	19:23:24	2.274	2.811	14.390	18.660	14.720	9.959	0.411	11.320	11.960
x		2.392	2.833	14.420	18.200	14.760	10.240	0.554	10.900	12.130
σ		0.102	0.021	0.223	0.425	0.033	0.483	0.124	0.610	0.381
%RSD		4.273	0.749	1.543	2.334	0.224	4.719	22.390	5.596	3.143

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	0.000	0.804	0.876	7.550	103.2%	1.908	2.051	2.001	8.113
2	19:22:57	0.000	1.662	-1.408	7.427	103.3%	1.866	2.060	2.022	9.265
3	19:23:24	0.000	1.411	-1.619	7.121	102.8%	1.862	1.929	2.058	9.072
x		0.000	1.292	-0.717	7.366	103.1%	1.879	2.013	2.027	8.817
σ		0.000	0.441	1.384	0.221	0.3%	0.026	0.073	0.029	0.617
%RSD		0.000	34.130	192.900	3.001	0.3	1.364	3.632	1.431	6.995

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	0.054	0.008	0.004	-0.010	87.1%	5.272	7.488	0.095	0.105
2	19:22:57	0.053	0.004	0.015	-0.004	87.7%	5.512	7.514	0.089	0.123
3	19:23:24	0.053	0.010	0.032	-0.012	87.9%	5.115	7.378	0.090	0.124
x		0.053	0.007	0.017	-0.009	87.6%	5.300	7.460	0.092	0.118
σ		0.001	0.003	0.014	0.004	0.5%	0.200	0.072	0.003	0.011
%RSD		1.454	39.850	83.050	50.270	0.5	3.774	0.970	3.761	9.181

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:30	45.050	44.630	89.7%	0.246	0.217	26.540	25.360	26.380	86.5%
2	19:22:57	44.920	44.370	91.5%	0.231	0.225	26.600	25.860	26.360	87.7%
3	19:23:24	44.650	44.340	91.2%	0.233	0.221	26.320	25.310	26.060	87.8%
x		44.870	44.450	90.8%	0.236	0.221	26.490	25.510	26.270	87.3%
σ		0.202	0.160	1.0%	0.008	0.004	0.146	0.302	0.177	0.7%
%RSD		0.451	0.360	1.1	3.468	1.868	0.552	1.184	0.674	0.9

SJ13066-016 10/18/2017 19:27:52

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	96.2%	0.193	1.647	1.812	197.200	73.100	807.100	788.200	786.700
2	19:28:48	95.9%	0.201	1.434	1.256	218.500	73.020	806.500	778.500	775.800
3	19:29:16	95.7%	0.172	1.788	1.538	209.400	74.930	801.800	789.800	782.500
x		95.9%	0.188	1.623	1.535	208.400	73.680	805.100	785.500	781.700
σ		0.2%	0.015	0.178	0.278	10.720	1.084	2.921	6.118	5.483
%RSD		0.2	7.982	10.970	18.090	5.143	1.471	0.363	0.779	0.701
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	TM 44780.000	T 1931.000	T 297200.000	541.400	51.270	39.770	82.4%	TM 627.400	55.660
2	19:28:48	TM 44830.000	T 1904.000	T 293700.000	536.600	52.530	37.240	81.9%	M 520.500	53.640
3	19:29:16	TM 44840.000	T 1919.000	T 297400.000	537.800	56.340	36.430	81.8%	M 508.900	54.210
x		TM 44820.000	T 1918.000	T 296100.000	538.600	53.380	37.810	82.1%	TM 552.300	54.500
σ		TM 33.530	T 13.580	T 2082.000	2.491	2.637	1.747	0.3%	TM 65.300	1.040
%RSD		TM 0.075	T 0.708	T 0.703	0.462	4.941	4.619	0.4	TM 11.820	1.907
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	49.810	27190.000	T 13590.000	15.240	T 13620.000	14640.000	2.254	14.400	13.490
2	19:28:48	49.040	27140.000	T 13510.000	14.710	T 13410.000	14490.000	2.223	14.720	13.970
3	19:29:16	48.340	26330.000	T 13500.000	14.780	T 13420.000	14430.000	2.249	13.820	14.070
x		49.070	26890.000	T 13530.000	14.910	T 13480.000	14520.000	2.242	14.310	13.840
σ		0.735	486.200	T 46.200	0.287	T 121.500	108.000	0.017	0.458	0.307
%RSD		1.498	1.808	T 0.341	1.925	T 0.901	0.744	0.738	3.201	2.217
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	1.780	2.026	38.090	40.040	38.970	4.446	0.160	12.790	12.350
2	19:28:48	1.867	2.177	38.980	41.680	41.090	3.485	0.483	12.260	11.510
3	19:29:16	1.818	1.998	39.620	41.510	40.430	4.278	0.578	12.620	13.190
x		1.822	2.067	38.900	41.080	40.160	4.070	0.407	12.560	12.350
σ		0.044	0.096	0.765	0.901	1.088	0.514	0.219	0.270	0.843
%RSD		2.410	4.666	1.966	2.192	2.708	12.620	53.800	2.152	6.829
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	0.000	0.643	-1.087	8.518	95.0%	0.630	0.806	0.589	8.146
2	19:28:48	0.000	-0.076	-0.824	8.411	94.7%	0.559	0.567	0.547	7.403
3	19:29:16	0.000	0.148	-0.815	8.123	94.5%	0.620	0.649	0.553	6.887
x		0.000	0.238	-0.908	8.351	94.7%	0.603	0.674	0.563	7.479
σ		0.000	0.368	0.154	0.204	0.2%	0.038	0.122	0.023	0.633
%RSD		0.000	154.600	17.000	2.445	0.3	6.320	18.080	4.010	8.462
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	0.049	0.013	0.012	-0.020	85.9%	4.094	5.698	0.010	0.067
2	19:28:48	0.041	0.005	0.009	-0.009	85.9%	4.046	5.647	0.023	0.050
3	19:29:16	0.039	0.008	0.012	-0.011	85.4%	3.924	5.693	-0.001	0.033
x		0.043	0.009	0.011	-0.013	85.8%	4.021	5.679	0.011	0.050
σ		0.005	0.004	0.002	0.006	0.3%	0.088	0.028	0.012	0.017
%RSD		12.610	44.290	14.760	44.540	0.3	2.185	0.490	113.400	33.120
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:20	30.440	29.900	89.6%	0.127	0.132	33.780	32.160	33.420	84.5%
2	19:28:48	29.760	29.090	89.6%	0.122	0.122	33.500	31.980	33.070	85.6%
3	19:29:16	30.010	29.590	90.7%	0.129	0.121	33.300	31.960	33.040	86.2%
x		30.070	29.530	90.0%	0.126	0.125	33.530	32.030	33.180	85.5%
σ		0.345	0.408	0.6%	0.003	0.006	0.238	0.112	0.212	0.9%
%RSD		1.147	1.383	0.7	2.667	4.886	0.710	0.350	0.639	1.0

CCV MW9737 10/18/2017 19:33:45 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	71.5%	301.900	309.300	306.500	5.520	T 61740.000	T 56230.000	T 55740.000	T 55900.000
2	19:34:39	71.7%	298.800	306.100	300.400	2.576	T 61140.000	T 55130.000	T 55280.000	T 55470.000
3	19:35:06	70.0%	302.100	314.600	306.100	1.817	T 62120.000	T 55710.000	T 55880.000	T 56050.000
x		71.1%	100.316%	103.330%	101.441%	3.304	T 102.783%	T 55690.000	T 55630.000	T 93.010%
σ		0.9%	n/a	n/a	n/a	1.956	T n/a	T 552.800	T 316.700	T n/a
%RSD		1.3	0.608	1.376	1.106	59.190	T 0.800	T 0.993	T 0.569	T 0.539
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	286.600	T 2911.000	3954.000	T 59710.000	58340.000	T 57180.000	64.6%	301.400	295.700
2	19:34:39	292.900	T 2895.000	4051.000	T 58930.000	57190.000	T 56930.000	64.0%	298.300	289.500
3	19:35:06	304.900	T 2911.000	4130.000	T 59540.000	56850.000	T 57630.000	62.7%	298.200	289.700
x		98.265%	T 96.845%	4045.000	T 98.984%	57460.000	T 95.409%	63.7%	99.775%	97.205%
σ		n/a	T n/a	88.510	T n/a	778.400	T n/a	1.0%	n/a	n/a
%RSD		3.142	T 0.322	2.188	T 0.693	1.355	T 0.625	1.5	0.614	1.210
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	296.400	69320.000	T 57280.000	293.100	T 57470.000	T 57600.000	282.800	277.900	287.400
2	19:34:39	294.800	69250.000	T 56790.000	287.700	T 57080.000	T 56890.000	274.100	275.600	277.200
3	19:35:06	295.800	68990.000	T 56980.000	291.200	T 57180.000	T 57580.000	277.600	276.700	279.200
x		98.551%	69190.000	T 57020.000	96.892%	T 57240.000	T 95.590%	92.727%	92.242%	281.200
σ		n/a	173.300	T 244.800	n/a	T 204.500	T n/a	n/a	n/a	5.392
%RSD		0.272	0.251	T 0.429	0.947	T 0.357	T 0.704	1.576	0.429	1.917
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	273.700	280.200	274.400	279.700	278.200	294.700	279.300	1.591	0.359
2	19:34:39	271.100	276.200	272.700	270.000	273.600	288.900	277.900	1.302	-0.349
3	19:35:06	274.000	280.500	274.900	276.100	275.800	297.300	279.800	1.233	0.222
x		272.900	92.987%	91.337%	275.300	275.900	97.881%	279.000	1.376	0.077
σ		1.589	n/a	n/a	4.873	2.332	n/a	0.993	0.190	0.376
%RSD		0.582	0.862	0.429	1.770	0.845	1.462	0.356	13.830	485.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	0.000	296.000	-2.572	291.400	68.2%	302.800	307.000	302.500	301.600
2	19:34:39	0.000	281.700	-0.850	289.400	67.9%	300.600	303.300	302.700	289.200
3	19:35:06	0.000	281.600	-0.779	292.400	66.9%	302.500	304.300	299.600	281.000
x		0.000	95.479%	-1.400	97.029%	67.7%	100.652%	101.615%	301.600	290.600
σ		0.000	n/a	1.016	n/a	0.7%	n/a	n/a	1.770	10.380
%RSD		0.000	2.896	72.540	0.522	1.0	0.399	0.620	0.587	3.571
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	283.700	277.600	285.500	282.400	69.9%	293.800	300.100	304.100	287.700
2	19:34:39	279.200	274.300	287.000	281.300	69.5%	294.000	297.900	305.100	290.200
3	19:35:06	282.700	274.900	286.600	285.200	68.2%	295.900	301.900	310.200	293.700
x		93.957%	275.600	286.400	94.317%	69.2%	98.194%	99.990%	102.158%	96.849%
σ		n/a	1.736	0.742	n/a	0.9%	n/a	n/a	n/a	n/a
%RSD		0.844	0.630	0.259	0.720	1.3	0.379	0.674	1.071	1.043
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:12	291.700	292.100	74.2%	304.900	T 302.200	300.900	303.200	T 307.200	69.6%
2	19:34:39	293.600	292.700	75.0%	304.100	T 299.200	295.500	301.600	T 305.300	69.9%
3	19:35:06	293.400	292.200	74.4%	288.400	T 283.500	283.700	286.100	T 289.400	T 73.4%
x		97.624%	97.441%	74.5%	99.713%	T 98.326%	97.786%	98.986%	T 100.216%	T 71.0%
σ		n/a	n/a	0.4%	n/a	T n/a	n/a	n/a	T n/a	T 2.1%
%RSD		0.350	0.118	0.6	3.105	T 3.396	3.004	3.172	T 3.241	T 3.0

CCB IM8211-01 10/18/2017 19:39:35 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	82.2%	0.034	0.980	1.444	-7.793	1.999	6.726	6.877	6.822
2	19:40:29	82.1%	0.085	0.806	1.216	-10.750	3.646	8.950	8.407	8.354
3	19:40:56	81.8%	0.060	0.945	1.574	-1.641	10.880	14.170	14.060	14.440
x		82.0%	0.060	0.910	1.412	-6.729	5.508	9.950	9.783	9.873
σ		0.2%	0.026	0.092	0.182	4.648	4.723	3.824	3.785	4.032
%RSD		0.2	43.300	10.070	12.860	69.080	85.760	38.430	38.690	40.840

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	2.505	0.471	2587.000	6.491	14.350	-7.746	71.5%	0.021	0.014
2	19:40:29	3.183	0.429	2738.000	7.060	5.894	-4.855	71.1%	0.045	0.106
3	19:40:56	4.715	0.402	2856.000	15.090	17.270	0.541	72.3%	0.163	0.066
x		3.468	0.434	2727.000	9.546	12.510	-4.020	71.6%	0.076	0.062
σ		1.132	0.035	134.900	4.808	5.909	4.206	0.6%	0.076	0.046
%RSD		32.650	8.082	4.947	50.360	47.250	104.600	0.9	99.750	74.540

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	0.009	102.100	9.484	0.097	9.634	9.001	0.034	0.062	-1.106
2	19:40:29	0.023	92.650	11.070	0.078	11.420	9.119	0.034	0.096	-1.101
3	19:40:56	0.057	107.000	14.880	0.148	15.630	13.620	0.067	0.087	-1.583
x		0.030	100.600	11.810	0.108	12.230	10.580	0.045	0.082	-1.263
σ		0.025	7.305	2.771	0.036	3.080	2.635	0.019	0.017	0.277
%RSD		82.780	7.261	23.470	33.470	25.190	24.910	42.820	21.130	21.930

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	-0.054	-0.017	0.029	0.145	0.017	0.013	0.277	-0.277	0.545
2	19:40:29	-0.031	0.037	0.118	0.113	-0.018	-0.088	0.311	-0.191	0.517
3	19:40:56	0.008	0.034	0.030	0.041	0.047	0.066	0.184	-0.282	0.210
x		-0.026	0.018	0.059	0.100	0.015	-0.003	0.257	-0.250	0.424
σ		0.032	0.030	0.051	0.053	0.032	0.078	0.066	0.051	0.186
%RSD		122.300	167.100	86.740	53.310	211.800	2638.000	25.680	20.500	43.850

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	0.000	0.147	0.204	0.012	76.1%	0.218	0.197	0.162	0.520
2	19:40:29	0.000	-0.364	1.748	0.021	75.9%	0.106	0.185	0.144	0.148
3	19:40:56	0.000	0.387	-0.798	0.032	77.6%	0.038	0.122	0.137	0.397
x		0.000	0.057	0.385	0.022	76.5%	0.121	0.168	0.148	0.355
σ		0.000	0.383	1.283	0.010	0.9%	0.091	0.040	0.013	0.190
%RSD		0.000	678.500	333.600	45.160	1.2	75.070	23.960	8.705	53.480

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	0.054	0.058	0.009	0.019	78.6%	0.016	0.031	0.649	0.606
2	19:40:29	0.061	0.063	0.031	0.041	79.9%	0.018	0.033	0.548	0.611
3	19:40:56	0.113	0.098	0.063	0.076	80.2%	0.031	0.036	0.575	0.647
x		0.076	0.073	0.034	0.045	79.6%	0.022	0.033	0.591	0.622
σ		0.032	0.022	0.027	0.029	0.9%	0.008	0.003	0.052	0.022
%RSD		42.200	30.330	78.460	63.320	1.1	37.740	8.053	8.807	3.535

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:02	0.032	0.055	79.2%	0.032	0.035	0.033	0.034	0.032	76.4%
2	19:40:29	0.040	0.071	80.7%	0.051	0.039	0.057	0.045	0.048	77.7%
3	19:40:56	0.107	0.093	81.8%	0.086	0.076	0.070	0.076	0.076	79.2%
x		0.060	0.073	80.6%	0.056	0.050	0.054	0.052	0.052	77.8%
σ		0.041	0.019	1.3%	0.027	0.022	0.019	0.022	0.022	1.4%
%RSD		69.150	26.180	1.6	48.590	44.710	35.070	42.510	43.010	1.8

SJ13066-017 10/18/2017 19:45:24

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	94.3%	0.630	4.971	5.591	112.100	61.780	T 1447.000	1516.000	1517.000
2	19:46:19	95.0%	0.500	5.700	5.662	107.500	59.370	T 1437.000	1502.000	1510.000
3	19:46:45	94.7%	0.577	5.348	5.840	91.640	59.990	T 1416.000	1494.000	1514.000
x		94.7%	0.569	5.340	5.698	103.700	60.380	T 1433.000	1504.000	1514.000
σ		0.4%	0.065	0.364	0.128	10.720	1.251	T 15.770	11.410	3.545
%RSD		0.4	11.510	6.827	2.248	10.330	2.072	T 1.100	0.759	0.234
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	TM 29200.000	T 1012.000	T 274500.000	1358.000	91.970	58.690	82.4%	423.600	108.100
2	19:46:19	TM 29080.000	T 979.800	T 277900.000	1372.000	78.090	61.120	81.4%	416.800	108.500
3	19:46:45	TM 29060.000	T 1038.000	T 275500.000	1371.000	88.740	56.980	80.3%	413.500	109.300
x		TM 29110.000	T 1010.000	T 276000.000	1367.000	86.270	58.930	81.4%	418.000	108.600
σ		TM 77.280	T 29.020	T 1735.000	7.736	7.266	2.082	1.1%	5.138	0.636
%RSD		TM 0.266	T 2.874	T 0.629	0.566	8.423	3.534	1.3	1.229	0.585
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	59.510	27910.000	T 31620.000	28.190	T 31530.000	T 31730.000	2.093	9.321	8.145
2	19:46:19	59.950	27270.000	T 31710.000	28.500	T 31400.000	T 31540.000	2.009	8.809	8.192
3	19:46:45	59.180	26230.000	T 31460.000	27.980	T 31240.000	T 31280.000	1.983	9.312	7.861
x		59.550	27140.000	T 31590.000	28.230	T 31390.000	T 31520.000	2.028	9.147	8.066
σ		0.385	849.000	T 128.400	0.263	T 146.700	T 225.200	0.058	0.293	0.179
%RSD		0.647	3.128	T 0.406	0.932	T 0.467	T 0.715	2.844	3.204	2.220
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	8.378	9.367	13.950	16.070	13.660	31.920	1.032	9.347	9.386
2	19:46:19	8.493	9.170	14.400	15.340	14.770	30.460	1.086	8.688	9.295
3	19:46:45	8.052	9.154	13.810	16.690	13.790	32.040	1.223	8.246	9.884
x		8.308	9.230	14.050	16.030	14.070	31.480	1.114	8.760	9.522
σ		0.229	0.118	0.309	0.678	0.610	0.881	0.099	0.554	0.317
%RSD		2.756	1.282	2.201	4.227	4.333	2.798	8.842	6.325	3.327
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	0.000	2.103	-0.524	13.710	105.2%	19.430	20.300	20.510	3.524
2	19:46:19	0.000	1.802	0.677	14.250	104.1%	19.470	19.980	19.810	4.106
3	19:46:45	0.000	1.841	-0.427	13.600	103.3%	20.010	20.000	20.160	3.259
x		0.000	1.915	-0.091	13.850	104.2%	19.640	20.090	20.160	3.630
σ		0.000	0.164	0.667	0.347	1.0%	0.321	0.179	0.353	0.433
%RSD		0.000	8.565	731.500	2.506	0.9	1.634	0.889	1.748	11.940
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	0.048	0.036	-0.032	0.006	85.2%	3.519	4.983	0.941	0.937
2	19:46:19	0.053	0.033	-0.038	-0.011	84.4%	3.521	4.975	0.896	0.897
3	19:46:45	0.053	0.029	-0.047	-0.019	84.1%	3.492	4.946	0.828	0.814
x		0.051	0.033	-0.039	-0.008	84.5%	3.511	4.968	0.888	0.883
σ		0.003	0.003	0.008	0.013	0.6%	0.016	0.019	0.057	0.063
%RSD		5.258	10.730	20.090	162.700	0.7	0.449	0.390	6.361	7.090
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:45:51	56.050	55.490	88.7%	0.460	0.462	32.970	31.650	32.530	85.8%
2	19:46:19	55.950	55.930	88.9%	0.441	0.467	32.800	31.740	32.660	86.1%
3	19:46:45	55.700	55.770	89.4%	0.461	0.469	33.390	32.020	33.050	85.5%
x		55.900	55.730	89.0%	0.454	0.466	33.060	31.800	32.750	85.8%
σ		0.181	0.223	0.4%	0.012	0.003	0.303	0.190	0.272	0.3%
%RSD		0.323	0.399	0.4	2.538	0.730	0.916	0.598	0.830	0.4

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	93.6%	0.154	0.705	1.027	97.920	20.160	336.300	336.700	335.700
2	19:52:08	94.1%	0.252	0.379	0.563	101.000	19.850	333.200	330.400	333.200
3	19:52:35	93.6%	0.200	0.990	0.522	101.200	21.470	335.200	333.500	335.400
x		93.7%	0.202	0.691	0.704	100.000	20.490	334.900	333.500	334.800
σ		0.3%	0.049	0.306	0.280	1.831	0.860	1.548	3.149	1.372
%RSD		0.3	24.120	44.270	39.840	1.831	4.197	0.462	0.944	0.410
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	TM 13020.000	T 1142.000	T 323900.000	251.700	65.560	48.550	77.5%	315.500	16.540
2	19:52:08	TM 12990.000	T 1224.000	T 325200.000	251.400	45.850	45.270	76.2%	330.400	18.850
3	19:52:35	TM 12880.000	T 1050.000	T 322600.000	257.600	41.050	46.810	75.9%	338.700	18.870
x		TM 12960.000	T 1139.000	T 323900.000	253.500	50.820	46.880	76.6%	328.200	18.080
σ		TM 77.960	T 86.950	T 1304.000	3.476	12.990	1.640	0.9%	11.780	1.342
%RSD		TM 0.601	T 7.636	T 0.403	1.371	25.560	3.498	1.1	3.590	7.419
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	12.480	23610.000	5514.000	27.690	T 5116.000	5400.000	0.578	4.377	3.788
2	19:52:08	12.220	22980.000	5501.000	28.570	T 5075.000	5361.000	0.600	4.447	3.846
3	19:52:35	11.950	23220.000	5480.000	27.720	T 5089.000	5339.000	0.592	4.587	3.585
x		12.220	23270.000	5498.000	27.990	T 5093.000	5366.000	0.590	4.470	3.740
σ		0.264	317.600	16.990	0.503	T 21.230	30.890	0.011	0.107	0.137
%RSD		2.158	1.365	0.309	1.795	T 0.417	0.576	1.879	2.387	3.667
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	2.650	3.055	5.919	7.842	6.242	1.169	-0.100	17.000	14.700
2	19:52:08	2.781	2.775	6.271	7.451	6.408	0.702	0.248	15.040	16.470
3	19:52:35	2.731	2.901	5.971	8.013	6.335	1.731	-0.170	15.730	17.130
x		2.721	2.911	6.053	7.768	6.328	1.201	-0.007	15.930	16.100
σ		0.066	0.140	0.190	0.288	0.084	0.515	0.224	0.993	1.256
%RSD		2.426	4.816	3.140	3.707	1.320	42.880	3014.000	6.235	7.799
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	0.000	0.508	-0.993	3.466	87.1%	0.336	0.297	0.367	0.797
2	19:52:08	0.000	0.291	-0.931	3.612	85.9%	0.398	0.352	0.344	0.870
3	19:52:35	0.000	0.476	-1.203	3.235	86.0%	0.355	0.317	0.339	1.184
x		0.000	0.425	-1.042	3.438	86.3%	0.363	0.322	0.350	0.951
σ		0.000	0.118	0.143	0.190	0.7%	0.032	0.028	0.015	0.206
%RSD		0.000	27.660	13.680	5.522	0.8	8.839	8.646	4.257	21.640
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	0.008	-0.000	0.008	0.028	82.5%	3.191	4.381	0.256	0.258
2	19:52:08	0.004	0.006	0.005	0.009	81.3%	2.982	4.534	0.207	0.239
3	19:52:35	0.010	0.007	0.026	0.007	82.0%	2.961	4.472	0.204	0.194
x		0.007	0.004	0.013	0.014	81.9%	3.045	4.462	0.222	0.230
σ		0.003	0.004	0.012	0.012	0.6%	0.127	0.077	0.029	0.033
%RSD		39.920	91.830	90.540	82.040	0.7	4.171	1.715	13.120	14.350
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:41	21.870	21.470	86.2%	0.058	0.062	9.165	8.679	9.006	81.6%
2	19:52:08	21.710	21.210	87.1%	0.056	0.058	9.074	8.427	8.838	82.9%
3	19:52:35	21.110	20.840	88.3%	0.056	0.060	9.015	8.492	8.772	83.6%
x		21.560	21.170	87.2%	0.056	0.060	9.084	8.532	8.872	82.7%
σ		0.397	0.313	1.0%	0.001	0.002	0.076	0.131	0.121	1.0%
%RSD		1.841	1.480	1.2	1.882	3.637	0.833	1.533	1.359	1.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	100.4%	0.449	3.249	3.739	121.400	54.670	T 1140.000	1176.000	1176.000
2	19:57:57	100.3%	0.338	4.031	3.969	119.800	56.430	T 1124.000	1170.000	1186.000
3	19:58:24	100.7%	0.357	2.657	3.704	118.900	60.520	T 1135.000	1181.000	1191.000
x		100.5%	0.381	3.313	3.804	120.000	57.200	T 1133.000	1176.000	1184.000
σ		0.2%	0.060	0.689	0.144	1.280	3.003	T 8.436	5.826	7.679
%RSD		0.2	15.610	20.810	3.787	1.066	5.249	T 0.745	0.496	0.648

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	TM 80280.000	T 1135.000	T 322700.000	855.200	70.160	38.510	88.0%	444.200	105.100
2	19:57:57	TM 80350.000	T 1116.000	T 323500.000	857.900	61.070	37.130	87.4%	432.300	104.100
3	19:58:24	TM 80260.000	T 1115.000	T 325600.000	867.100	58.010	36.610	86.8%	433.300	106.700
x		TM 80300.000	T 1122.000	T 324000.000	860.100	63.080	37.420	87.4%	436.600	105.300
σ		TM 48.590	T 11.550	T 1495.000	6.249	6.316	0.983	0.6%	6.643	1.298
%RSD		TM 0.061	T 1.029	T 0.461	0.727	10.010	2.628	0.7	1.522	1.233

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	80.350	37800.000	T 34450.000	17.610	T 34110.000	T 33880.000	3.845	27.100	26.450
2	19:57:57	78.220	36670.000	T 34170.000	17.510	T 33770.000	T 33590.000	3.920	27.090	25.120
3	19:58:24	79.850	36720.000	T 34000.000	17.420	T 33820.000	T 33560.000	3.955	26.240	24.610
x		79.470	37070.000	T 34210.000	17.510	T 33900.000	T 33680.000	3.907	26.810	25.390
σ		1.116	636.400	T 224.100	0.095	T 180.300	T 176.700	0.056	0.494	0.949
%RSD		1.404	1.717	T 0.655	0.542	T 0.532	T 0.525	1.440	1.843	3.738

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	4.447	4.490	15.450	18.950	17.020	7.691	-0.280	12.040	13.080
2	19:57:57	4.144	4.920	16.070	17.020	16.020	7.969	0.094	12.180	12.760
3	19:58:24	4.325	4.766	16.150	17.550	15.940	7.250	0.004	11.370	12.210
x		4.305	4.725	15.890	17.840	16.330	7.637	-0.061	11.870	12.680
σ		0.153	0.218	0.382	0.997	0.602	0.363	0.195	0.432	0.442
%RSD		3.544	4.608	2.402	5.587	3.686	4.747	321.000	3.640	3.482

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	0.000	0.538	0.772	10.620	100.6%	2.068	1.788	1.823	10.870
2	19:57:57	0.000	0.182	2.605	10.380	101.3%	1.901	1.901	1.831	10.110
3	19:58:24	0.000	0.399	-1.080	10.880	100.5%	1.785	1.830	1.937	11.660
x		0.000	0.373	0.766	10.630	100.8%	1.918	1.840	1.863	10.880
σ		0.000	0.179	1.843	0.249	0.4%	0.142	0.057	0.064	0.777
%RSD		0.000	48.070	240.700	2.343	0.4	7.423	3.109	3.411	7.143

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	0.065	0.015	0.013	0.002	87.3%	4.914	6.919	0.263	0.256
2	19:57:57	0.066	0.015	0.007	0.013	88.3%	5.045	6.805	0.191	0.218
3	19:58:24	0.074	0.023	0.021	-0.008	89.2%	4.926	6.835	0.196	0.198
x		0.068	0.017	0.014	0.003	88.2%	4.962	6.853	0.216	0.224
σ		0.005	0.005	0.007	0.011	1.0%	0.072	0.059	0.040	0.030
%RSD		7.153	28.080	49.380	378.100	1.1	1.460	0.864	18.670	13.190

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:30	42.090	41.620	88.8%	0.188	0.190	38.970	37.730	38.880	86.0%
2	19:57:57	41.860	42.290	90.3%	0.209	0.194	38.780	37.370	38.620	86.7%
3	19:58:24	41.790	41.310	91.5%	0.195	0.196	38.880	37.410	38.670	87.4%
x		41.910	41.740	90.2%	0.197	0.193	38.870	37.500	38.720	86.7%
σ		0.159	0.497	1.3%	0.011	0.003	0.095	0.195	0.139	0.7%
%RSD		0.380	1.191	1.5	5.403	1.616	0.245	0.521	0.359	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	97.8%	0.520	4.040	3.746	196.100	83.170	T 1625.000	1700.000	1698.000
2	20:03:47	97.1%	0.575	2.503	3.898	197.300	84.070	T 1621.000	1703.000	1686.000
3	20:04:14	97.5%	0.508	3.170	3.393	195.000	83.770	T 1579.000	1659.000	1669.000
x		97.5%	0.535	3.238	3.679	196.100	83.670	T 1608.000	1687.000	1684.000
σ		0.3%	0.036	0.771	0.259	1.139	0.454	T 25.430	24.460	14.880
%RSD		0.3	6.653	23.800	7.040	0.581	0.542	T 1.581	1.450	0.884
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	TM 69780.000	T 1431.000	T 329200.000	1066.000	138.900	128.700	84.5%	M 667.300	133.400
2	20:03:47	TM 69560.000	T 1292.000	T 326400.000	T 1050.000	151.100	131.500	83.7%	M 675.100	131.600
3	20:04:14	TM 69070.000	T 1284.000	T 322300.000	1060.000	162.200	128.800	83.2%	TM 791.100	130.000
x		TM 69470.000	T 1336.000	T 326000.000	T 1059.000	150.700	129.700	83.8%	TM 711.100	131.700
σ		TM 365.300	T 82.700	T 3501.000	T 7.778	11.630	1.600	0.7%	TM 69.320	1.684
%RSD		TM 0.526	T 6.192	T 1.074	T 0.735	7.715	1.234	0.8	TM 9.747	1.279
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	72.780	34340.000	T 38250.000	42.410	T 38280.000	T 38190.000	4.611	25.540	26.430
2	20:03:47	71.290	33300.000	T 37560.000	41.990	T 37750.000	T 37570.000	4.717	24.920	24.770
3	20:04:14	71.130	33030.000	T 37300.000	41.570	T 37220.000	T 37140.000	4.603	24.710	21.750
x		71.730	33560.000	T 37700.000	41.990	T 37750.000	T 37630.000	4.644	25.060	24.310
σ		0.910	693.500	T 490.300	0.419	T 531.200	T 530.500	0.064	0.429	2.371
%RSD		1.268	2.067	T 1.300	0.998	T 1.407	T 1.410	1.371	1.713	9.750
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	6.923	7.788	22.510	24.880	22.550	8.972	0.515	14.630	14.990
2	20:03:47	6.884	7.635	21.850	25.430	21.990	8.541	0.144	15.340	15.710
3	20:04:14	6.714	7.336	21.520	26.470	22.400	8.152	0.821	13.390	16.010
x		6.841	7.586	21.960	25.590	22.310	8.555	0.493	14.450	15.570
σ		0.111	0.230	0.506	0.804	0.293	0.410	0.339	0.987	0.521
%RSD		1.627	3.031	2.306	3.144	1.312	4.796	68.720	6.827	3.345
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	0.000	1.309	0.596	8.441	100.2%	1.524	1.708	1.680	10.120
2	20:03:47	0.000	0.998	0.161	8.500	99.6%	1.550	1.736	1.647	8.064
3	20:04:14	0.000	0.626	1.601	8.197	99.5%	1.531	1.632	1.604	7.781
x		0.000	0.977	0.786	8.379	99.8%	1.535	1.692	1.644	8.655
σ		0.000	0.342	0.739	0.160	0.4%	0.013	0.054	0.038	1.277
%RSD		0.000	35.000	93.990	1.913	0.4	0.863	3.186	2.332	14.760
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	0.053	0.014	0.023	-0.025	85.7%	5.918	6.785	0.178	0.182
2	20:03:47	0.063	0.007	0.040	0.013	85.9%	5.055	6.859	0.185	0.192
3	20:04:14	0.043	0.009	0.006	0.005	85.3%	5.015	6.846	0.180	0.192
x		0.053	0.010	0.023	-0.002	85.7%	5.330	6.830	0.181	0.189
σ		0.010	0.003	0.017	0.020	0.3%	0.510	0.039	0.004	0.006
%RSD		18.350	34.940	75.560	887.900	0.4	9.573	0.576	1.988	2.962
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:20	79.110	78.150	88.6%	0.330	0.335	26.240	25.290	26.020	85.0%
2	20:03:47	78.140	77.430	89.0%	0.320	0.340	26.540	25.010	25.980	85.7%
3	20:04:14	77.580	76.470	89.5%	0.335	0.360	25.980	25.050	25.760	86.6%
x		78.280	77.350	89.0%	0.328	0.345	26.250	25.120	25.920	85.8%
σ		0.771	0.841	0.4%	0.008	0.014	0.280	0.149	0.138	0.8%
%RSD		0.985	1.088	0.5	2.423	3.930	1.065	0.594	0.531	0.9

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	99.9%	0.508	3.432	3.754	105.900	61.830	T 1540.000	1598.000	1602.000
2	20:09:38	98.2%	0.460	4.739	4.452	108.400	62.710	T 1541.000	1618.000	1622.000
3	20:10:05	100.2%	0.387	4.411	4.138	106.200	61.490	T 1497.000	1565.000	1570.000
x		99.4%	0.452	4.194	4.115	106.800	62.010	T 1526.000	1594.000	1598.000
σ		1.0%	0.061	0.680	0.350	1.341	0.627	T 24.830	26.780	26.040
%RSD		1.1	13.450	16.210	8.495	1.255	1.011	T 1.627	1.680	1.629
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	TM 98370.000	T 1035.000	T 361900.000	1038.000	130.900	104.000	87.3%	M 540.100	170.300
2	20:09:38	TM 99390.000	T 990.200	T 359700.000	1038.000	136.200	99.430	86.2%	M 538.800	169.500
3	20:10:05	TM 95840.000	T 989.800	T 347700.000	1003.000	141.500	95.190	86.7%	M 520.500	162.900
x		TM 97870.000	T 1005.000	T 356400.000	1027.000	136.200	99.540	86.7%	M 533.100	167.600
σ		TM 1829.000	T 26.010	T 7683.000	19.940	5.289	4.407	0.5%	M 10.940	4.108
%RSD		TM 1.869	T 2.588	T 2.155	1.942	3.884	4.428	0.6	M 2.052	2.451
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	100.100	41820.000	T 53280.000	27.140	T 53550.000	T 53520.000	4.968	30.790	30.690
2	20:09:38	100.400	41950.000	T 53550.000	27.540	T 53660.000	T 53580.000	5.089	30.410	29.010
3	20:10:05	98.460	40600.000	T 52110.000	27.070	T 52190.000	T 52300.000	5.027	29.630	27.260
x		99.640	41460.000	T 52980.000	27.250	T 53130.000	T 53130.000	5.028	30.280	28.980
σ		1.034	743.300	T 762.800	0.255	T 817.800	T 723.400	0.061	0.589	1.717
%RSD		1.038	1.793	T 1.440	0.934	T 1.539	T 1.361	1.205	1.944	5.924
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	5.407	5.676	19.660	22.970	20.110	11.250	0.192	15.470	17.390
2	20:09:38	5.155	5.677	20.060	22.780	19.940	12.430	0.587	15.800	17.610
3	20:10:05	5.202	5.378	19.370	22.190	20.270	11.450	0.581	15.060	16.560
x		5.255	5.577	19.700	22.650	20.110	11.710	0.453	15.440	17.190
σ		0.134	0.173	0.343	0.407	0.167	0.631	0.227	0.373	0.555
%RSD		2.544	3.096	1.742	1.796	0.830	5.387	49.990	2.415	3.227
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	0.000	0.016	-0.207	10.800	96.4%	2.756	2.651	2.780	14.450
2	20:09:38	0.000	0.620	2.284	11.730	95.6%	2.838	2.713	2.826	13.160
3	20:10:05	0.000	0.504	0.318	10.480	95.7%	2.531	2.644	2.626	12.110
x		0.000	0.380	0.798	11.000	95.9%	2.708	2.669	2.744	13.240
σ		0.000	0.321	1.313	0.649	0.4%	0.159	0.038	0.105	1.172
%RSD		0.000	84.370	164.500	5.901	0.5	5.855	1.421	3.819	8.850
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	0.091	0.007	0.008	-0.013	86.0%	6.263	8.104	0.277	0.284
2	20:09:38	0.084	0.004	0.013	-0.002	85.8%	6.234	8.342	0.283	0.259
3	20:10:05	0.074	0.014	0.005	-0.056	85.8%	6.123	8.267	0.271	0.268
x		0.083	0.008	0.009	-0.024	85.9%	6.206	8.238	0.277	0.270
σ		0.008	0.005	0.004	0.029	0.1%	0.074	0.122	0.006	0.012
%RSD		10.010	61.700	47.600	121.800	0.1	1.188	1.475	2.204	4.521
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:11	52.910	52.640	87.4%	0.260	0.254	33.730	32.390	33.460	86.2%
2	20:09:38	52.800	51.480	88.2%	0.245	0.278	34.120	32.980	33.920	85.2%
3	20:10:05	51.920	51.210	89.1%	0.244	0.269	33.220	32.140	33.170	86.0%
x		52.550	51.780	88.2%	0.249	0.267	33.690	32.500	33.520	85.8%
σ		0.543	0.759	0.9%	0.009	0.012	0.452	0.434	0.380	0.5%
%RSD		1.033	1.467	1.0	3.651	4.461	1.343	1.336	1.133	0.6

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	95.2%	220.300	238.500	242.600	67.940	T 2439.000	T 4127.000	4419.000	4433.000
2	20:15:28	94.4%	217.900	243.000	238.800	74.290	T 2464.000	T 4118.000	4420.000	4471.000
3	20:15:55	94.1%	220.600	236.200	235.700	75.690	T 2474.000	T 4096.000	4406.000	4421.000
x		94.6%	219.600	239.200	239.000	72.640	T 2459.000	T 4114.000	4415.000	4441.000
σ		0.5%	1.490	3.477	3.457	4.131	T 17.860	T 15.840	7.544	26.100
%RSD		0.6	0.679	1.453	1.446	5.687	T 0.726	T 0.385	0.171	0.588
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	TM 128000.000	T 2243.000	T 394900.000	T 4103.000	2280.000	2206.000	81.5%	M 876.000	407.100
2	20:15:28	TM 128100.000	T 2208.000	T 396700.000	T 4130.000	2233.000	2182.000	80.5%	M 881.200	402.000
3	20:15:55	TM 126600.000	T 2196.000	T 393800.000	T 4120.000	2233.000	2192.000	79.4%	M 859.700	405.000
x		TM 127600.000	T 2216.000	T 395100.000	T 4118.000	2249.000	2194.000	80.5%	M 872.300	404.700
σ		TM 864.600	T 24.510	T 1467.000	T 13.880	27.450	12.090	1.1%	M 11.220	2.546
%RSD		TM 0.678	T 1.106	T 0.371	T 0.337	1.221	0.551	1.3	M 1.286	0.629
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	330.300	97570.000	T 59130.000	230.600	T 58980.000	T 59070.000	206.900	243.900	244.500
2	20:15:28	328.900	96230.000	T 59250.000	230.400	T 58670.000	T 58430.000	205.400	239.300	240.100
3	20:15:55	327.900	94930.000	T 58530.000	228.300	T 58570.000	T 58670.000	202.700	240.700	235.000
x		329.000	96240.000	T 58970.000	229.800	T 58740.000	T 58720.000	205.000	241.300	239.900
σ		1.210	1323.000	T 380.700	1.271	T 217.200	T 324.400	2.142	2.316	4.716
%RSD		0.368	1.375	T 0.646	0.553	T 0.370	T 0.552	1.045	0.960	1.966
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	204.100	210.400	209.000	208.900	207.500	197.400	168.300	21.130	21.870
2	20:15:28	200.900	210.400	206.700	216.100	207.000	195.800	170.300	19.660	20.160
3	20:15:55	196.900	207.300	205.600	208.200	207.000	197.200	164.300	20.420	20.450
x		200.600	209.400	207.100	211.100	207.200	196.800	167.600	20.400	20.830
σ		3.601	1.801	1.760	4.368	0.306	0.889	3.030	0.731	0.912
%RSD		1.795	0.860	0.850	2.070	0.148	0.452	1.807	3.583	4.378
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	0.000	174.100	14.180	214.200	88.5%	192.800	194.000	192.400	231.500
2	20:15:28	0.000	177.300	13.440	212.700	88.5%	188.000	191.400	189.600	229.700
3	20:15:55	0.000	179.300	11.380	212.000	88.3%	187.300	192.400	190.100	224.300
x		0.000	176.900	13.000	212.900	88.4%	189.400	192.600	190.700	228.500
σ		0.000	2.610	1.451	1.118	0.1%	2.986	1.314	1.462	3.758
%RSD		0.000	1.475	11.160	0.525	0.1	1.577	0.682	0.767	1.644
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	216.800	206.100	213.400	214.400	80.0%	216.200	217.200	132.700	126.200
2	20:15:28	214.700	202.700	208.800	212.800	80.2%	216.200	217.900	132.500	125.800
3	20:15:55	210.900	200.600	208.400	211.500	80.2%	216.700	217.500	131.200	126.000
x		214.100	203.100	210.200	212.900	80.1%	216.400	217.500	132.100	126.000
σ		2.966	2.737	2.797	1.433	0.1%	0.333	0.330	0.804	0.202
%RSD		1.385	1.347	1.331	0.673	0.2	0.154	0.152	0.608	0.160
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:01	305.600	304.200	83.6%	222.500	T 222.300	256.900	255.600	T 259.000	T 84.4%
2	20:15:28	306.400	306.500	83.9%	220.300	T 218.800	254.700	256.000	T 258.500	T 85.3%
3	20:15:55	306.900	304.400	84.5%	227.300	T 225.000	261.400	261.500	T 265.600	82.5%
x		306.300	305.000	84.0%	223.400	T 222.000	257.700	257.700	T 261.000	T 84.1%
σ		0.629	1.302	0.4%	3.580	T 3.106	3.396	3.290	T 3.957	T 1.5%
%RSD		0.205	0.427	0.5	1.602	T 1.399	1.318	1.276	T 1.516	T 1.7

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	92.2%	227.700	256.300	246.300	84.280	T 2535.000	T 4264.000	4581.000	4599.000
2	20:21:18	91.1%	226.000	249.300	243.600	83.580	T 2533.000	T 4297.000	4590.000	4625.000
3	20:21:46	90.9%	225.300	242.200	243.600	84.600	T 2526.000	T 4245.000	4551.000	4567.000
x		91.4%	226.300	249.300	244.500	84.160	T 2531.000	T 4268.000	4574.000	4597.000
σ		0.7%	1.187	7.030	1.556	0.522	T 4.685	T 26.320	20.250	29.510
%RSD		0.7	0.525	2.820	0.637	0.620	T 0.185	T 0.617	0.443	0.642

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	TM 133100.000	T 1996.000	T 325100.000	T 4269.000	2201.000	2259.000	78.8%	M 915.100	427.100
2	20:21:18	TM 132700.000	T 1962.000	T 324300.000	T 4285.000	2319.000	2263.000	78.2%	M 920.300	424.700
3	20:21:46	TM 132000.000	T 1939.000	T 318100.000	T 4245.000	2372.000	2230.000	77.6%	M 916.600	416.600
x		TM 132600.000	T 1966.000	T 322500.000	T 4266.000	2297.000	2251.000	78.2%	M 917.300	422.800
σ		TM 536.800	T 28.710	T 3853.000	T 20.010	87.430	17.850	0.6%	M 2.683	5.514
%RSD		TM 0.405	T 1.460	T 1.195	T 0.469	3.806	0.793	0.8	M 0.293	1.304

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	344.000	96680.000	T 64150.000	241.200	T 64370.000	T 64240.000	216.200	250.100	253.500
2	20:21:18	343.900	94810.000	T 63920.000	240.200	T 63830.000	T 64080.000	211.700	252.500	244.200
3	20:21:46	336.800	93320.000	T 63610.000	240.000	T 63440.000	T 63350.000	209.400	249.000	239.600
x		341.600	94940.000	T 63890.000	240.500	T 63880.000	T 63890.000	212.400	250.600	245.800
σ		4.115	1682.000	T 271.700	0.636	T 466.600	T 470.300	3.492	1.792	7.054
%RSD		1.205	1.771	T 0.425	0.265	T 0.730	T 0.736	1.644	0.715	2.870

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	207.500	216.800	212.800	220.100	214.700	206.800	170.400	11.470	12.380
2	20:21:18	206.000	213.800	212.600	220.800	214.100	204.100	168.400	12.670	11.200
3	20:21:46	204.000	215.400	214.200	220.400	211.000	204.900	167.800	11.970	11.240
x		205.800	215.300	213.200	220.500	213.300	205.300	168.900	12.040	11.610
σ		1.741	1.529	0.900	0.360	1.967	1.385	1.358	0.605	0.673
%RSD		0.846	0.710	0.422	0.163	0.922	0.674	0.804	5.023	5.802

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	0.000	182.500	17.870	219.500	87.9%	192.600	195.600	196.000	234.000
2	20:21:18	0.000	179.600	14.520	219.300	87.4%	192.400	196.000	195.400	234.000
3	20:21:46	0.000	186.800	18.490	218.100	86.6%	190.700	196.400	193.500	231.500
x		0.000	182.900	16.960	219.000	87.3%	191.900	196.000	195.000	233.200
σ		0.000	3.637	2.138	0.777	0.7%	1.046	0.411	1.335	1.455
%RSD		0.000	1.988	12.610	0.355	0.8	0.545	0.210	0.685	0.624

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	220.800	210.600	220.300	221.200	78.4%	222.500	224.200	129.500	124.200
2	20:21:18	218.400	204.600	216.200	218.100	79.0%	221.400	222.500	130.000	123.800
3	20:21:46	214.800	204.400	216.200	217.400	79.0%	218.600	221.600	129.700	123.000
x		218.000	206.500	217.500	218.900	78.8%	220.800	222.800	129.700	123.700
σ		3.025	3.508	2.377	1.989	0.3%	1.985	1.312	0.225	0.585
%RSD		1.388	1.699	1.093	0.909	0.4	0.899	0.589	0.173	0.473

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:20:51	324.300	318.800	81.4%	235.300	T 235.700	274.600	277.900	T 279.900	79.7%
2	20:21:18	318.800	313.300	82.6%	234.100	T 233.100	273.500	273.900	T 276.900	80.5%
3	20:21:46	313.100	313.200	82.8%	233.200	T 231.200	274.800	273.300	T 276.700	80.5%
x		318.700	315.100	82.2%	234.200	T 233.300	274.300	275.000	T 277.800	80.3%
σ		5.587	3.231	0.8%	1.038	T 2.262	0.723	2.513	T 1.794	0.5%
%RSD		1.753	1.025	0.9	0.443	T 0.969	0.263	0.914	T 0.646	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	96.7%	0.199	1.356	2.410	-1.588	0.591	288.600	288.400	292.600
2	20:27:09	95.6%	0.120	2.479	2.084	11.300	0.481	293.700	290.900	293.100
3	20:27:36	95.9%	0.274	1.581	1.723	14.460	0.502	296.100	293.800	291.100
x		96.1%	0.198	1.805	2.073	8.057	0.525	292.800	291.000	292.200
σ		0.5%	0.077	0.594	0.344	8.502	0.058	3.819	2.728	1.022
%RSD		0.6	38.980	32.920	16.590	105.500	11.140	1.304	0.937	0.350
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	TM 17910.000	T 188.700	T 68420.000	180.600	28.960	3.095	82.9%	93.610	31.890
2	20:27:09	TM 18230.000	T 197.000	T 69840.000	183.000	30.020	6.747	82.6%	96.550	31.320
3	20:27:36	TM 18010.000	T 187.300	T 70640.000	180.200	17.930	5.829	83.1%	92.150	31.200
x		TM 18050.000	T 191.000	T 69630.000	181.300	25.630	5.223	82.9%	94.100	31.470
σ		TM 163.900	T 5.235	T 1121.000	1.508	6.698	1.900	0.2%	2.240	0.368
%RSD		TM 0.908	T 2.741	T 1.610	0.832	26.130	36.370	0.3	2.381	1.169
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	18.870	7983.000	T 10380.000	5.233	T 10030.000	10750.000	0.934	6.270	4.166
2	20:27:09	19.140	8441.000	11360.000	5.343	T 10150.000	10840.000	0.997	5.836	3.771
3	20:27:36	18.870	8478.000	11450.000	5.343	T 10230.000	10920.000	1.033	6.133	4.993
x		18.960	8301.000	T 11060.000	5.306	T 10140.000	10840.000	0.988	6.080	4.310
σ		0.158	275.700	T 591.700	0.063	T 97.730	83.320	0.050	0.222	0.623
%RSD		0.831	3.322	T 5.348	1.193	T 0.964	0.769	5.099	3.649	14.460
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	1.013	1.139	3.933	5.068	4.005	1.985	0.271	2.567	3.900
2	20:27:09	1.055	1.219	4.407	3.662	3.964	1.835	0.103	2.663	2.872
3	20:27:36	1.090	1.352	4.007	5.084	4.207	2.017	0.312	2.485	3.094
x		1.053	1.237	4.116	4.605	4.059	1.946	0.229	2.572	3.289
σ		0.038	0.108	0.255	0.816	0.130	0.097	0.110	0.089	0.541
%RSD		3.655	8.707	6.200	17.720	3.209	4.994	48.320	3.465	16.460
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	0.000	-0.239	1.275	2.112	88.4%	0.474	0.542	0.532	2.008
2	20:27:09	0.000	-0.183	-1.360	2.138	88.7%	0.481	0.526	0.511	2.239
3	20:27:36	0.000	0.257	-0.577	2.222	88.7%	0.473	0.504	0.509	1.686
x		0.000	-0.055	-0.221	2.158	88.6%	0.476	0.524	0.517	1.977
σ		0.000	0.272	1.354	0.057	0.1%	0.004	0.019	0.013	0.278
%RSD		0.000	495.000	613.100	2.661	0.2	0.924	3.589	2.504	14.050
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	0.082	0.044	0.049	0.051	88.2%	0.985	1.274	-0.044	-0.053
2	20:27:09	0.095	0.080	0.081	0.069	88.5%	1.049	1.407	-0.040	-0.015
3	20:27:36	0.107	0.088	0.080	0.096	89.9%	0.971	1.405	-0.038	-0.017
x		0.094	0.071	0.070	0.072	88.9%	1.001	1.362	-0.041	-0.028
σ		0.012	0.023	0.018	0.023	0.9%	0.041	0.076	0.003	0.021
%RSD		13.170	33.180	25.430	31.700	1.0	4.133	5.570	7.586	74.760
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:42	9.228	9.015	89.5%	0.174	0.165	6.218	5.857	6.083	85.5%
2	20:27:09	9.123	8.899	89.7%	0.191	0.196	6.101	5.826	6.081	86.7%
3	20:27:36	9.267	8.944	90.8%	0.191	0.186	6.111	5.871	5.981	87.6%
x		9.206	8.952	90.0%	0.185	0.182	6.143	5.852	6.049	86.6%
σ		0.074	0.058	0.7%	0.010	0.016	0.065	0.023	0.058	1.1%
%RSD		0.809	0.651	0.8	5.199	8.572	1.061	0.398	0.960	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	90.8%	225.400	242.600	241.600	114.700	T 2400.000	T 3461.000	3678.000	3692.000
2	20:32:58	88.6%	230.000	245.200	245.300	118.700	T 2436.000	T 3501.000	3729.000	3718.000
3	20:33:26	89.1%	229.200	246.500	245.400	107.700	T 2491.000	T 3496.000	3705.000	3734.000
x		89.5%	228.200	244.800	244.100	113.700	T 2442.000	T 3486.000	3704.000	3715.000
σ		1.1%	2.442	1.959	2.154	5.564	T 45.830	T 21.620	25.650	20.820
%RSD		1.3	1.070	0.800	0.883	4.892	T 1.876	T 0.620	0.692	0.561
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	TM 87200.000	T 2846.000	T 328300.000	T 3131.000	2339.000	2229.000	76.4%	M 702.000	365.100
2	20:32:58	TM 87690.000	T 2865.000	T 329500.000	T 3169.000	2419.000	2263.000	75.2%	M 678.100	367.000
3	20:33:26	TM 87290.000	T 2833.000	T 329400.000	T 3225.000	2283.000	2293.000	73.7%	TM 820.700	363.400
x		TM 87390.000	T 2848.000	T 329100.000	T 3175.000	2347.000	2262.000	75.1%	TM 733.600	365.200
σ		TM 256.800	T 15.910	T 687.000	T 47.060	68.550	32.370	1.3%	TM 76.380	1.768
%RSD		TM 0.294	T 0.559	T 0.209	T 1.482	2.921	1.431	1.8	TM 10.410	0.484
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	308.200	88610.000	T 50180.000	237.900	T 50460.000	T 49870.000	213.700	234.300	227.300
2	20:32:58	309.300	87540.000	T 50020.000	238.800	T 49800.000	T 49660.000	213.400	231.900	230.100
3	20:33:26	312.000	88520.000	T 50210.000	T 239.700	T 49870.000	T 49950.000	218.500	236.800	231.700
x		309.800	88220.000	T 50130.000	T 238.800	T 50040.000	T 49830.000	215.200	234.300	229.700
σ		1.974	594.400	T 102.400	T 0.915	T 362.100	T 152.300	2.874	2.433	2.234
%RSD		0.637	0.674	T 0.204	T 0.383	T 0.724	T 0.306	1.335	1.038	0.973
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	208.300	219.900	210.200	213.200	208.700	215.000	189.000	14.680	15.950
2	20:32:58	209.600	218.300	211.000	209.800	210.600	217.900	187.300	16.230	13.950
3	20:33:26	212.300	222.400	211.900	218.100	211.000	220.700	181.900	16.190	15.730
x		210.000	220.200	211.100	213.700	210.100	217.900	186.100	15.700	15.210
σ		2.053	2.033	0.847	4.159	1.205	2.873	3.731	0.882	1.097
%RSD		0.978	0.923	0.401	1.946	0.574	1.319	2.005	5.614	7.213
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	0.000	195.700	10.510	208.300	84.2%	215.100	217.900	217.000	226.400
2	20:32:58	0.000	195.000	11.550	211.600	83.2%	215.600	219.200	217.600	235.400
3	20:33:26	0.000	200.300	10.560	210.800	82.7%	217.500	220.000	221.400	237.500
x		0.000	197.000	10.870	210.200	83.4%	216.100	219.000	218.700	233.100
σ		0.000	2.912	0.590	1.693	0.8%	1.277	1.045	2.421	5.866
%RSD		0.000	1.478	5.426	0.805	0.9	0.591	0.477	1.107	2.517
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	221.500	211.800	222.700	221.200	76.7%	235.300	240.700	239.200	228.000
2	20:32:58	225.200	211.600	223.500	225.000	76.3%	238.000	245.300	243.200	231.000
3	20:33:26	223.400	215.100	224.100	226.300	75.5%	239.300	245.200	245.600	233.000
x		223.400	212.800	223.400	224.200	76.2%	237.600	243.700	242.600	230.700
σ		1.873	1.945	0.718	2.651	0.6%	2.072	2.647	3.222	2.510
%RSD		0.839	0.914	0.321	1.183	0.8	0.872	1.086	1.328	1.088
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:31	278.700	278.000	81.4%	226.100	T 224.900	250.100	252.900	T 254.700	T 83.0%
2	20:32:58	279.600	279.700	81.0%	232.100	T 229.700	256.400	258.800	T 261.400	T 81.7%
3	20:33:26	281.500	281.200	81.0%	233.600	T 231.600	256.900	258.900	T 262.700	T 82.0%
x		279.900	279.600	81.1%	230.600	T 228.700	254.500	256.900	T 259.600	T 82.2%
σ		1.412	1.592	0.2%	3.965	T 3.434	3.821	3.419	T 4.259	T 0.7%
%RSD		0.504	0.569	0.3	1.720	T 1.501	1.502	1.331	T 1.641	T 0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	97.9%	0.566	7.151	7.834	275.500	164.300	T 1864.000	1970.000	1974.000
2	20:38:49	98.2%	0.672	6.469	7.419	268.900	165.500	T 1864.000	1965.000	1971.000
3	20:39:17	98.3%	0.722	6.565	6.892	273.300	164.000	T 1820.000	1925.000	1956.000
x		98.1%	0.653	6.728	7.381	272.600	164.600	T 1850.000	1953.000	1967.000
σ		0.2%	0.079	0.369	0.472	3.382	0.821	T 25.490	24.430	10.130
%RSD		0.2	12.140	5.483	6.395	1.241	0.499	T 1.378	1.251	0.515

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	TM 70340.000	T 1436.000	T 353100.000	1277.000	132.800	96.370	79.8%	466.400	75.400
2	20:38:49	TM 70030.000	T 1359.000	T 352800.000	1264.000	107.600	89.390	80.2%	488.800	74.380
3	20:39:17	TM 69040.000	T 1265.000	T 345600.000	1237.000	96.270	95.690	80.9%	TM 588.100	73.710
x		TM 69800.000	T 1353.000	T 350500.000	1260.000	112.200	93.820	80.3%	TM 514.400	74.500
σ		TM 678.500	T 85.480	T 4231.000	20.250	18.710	3.846	0.6%	TM 64.750	0.852
%RSD		TM 0.972	T 6.317	T 1.207	1.608	16.670	4.100	0.7	TM 12.590	1.143

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	52.370	31990.000	6429.000	29.310	T 5838.000	6098.000	2.021	12.120	9.926
2	20:38:49	51.630	31940.000	6326.000	T 34.470	T 5788.000	6108.000	1.957	11.670	10.800
3	20:39:17	50.550	31080.000	6164.000	28.730	T 5651.000	5930.000	2.059	12.240	9.325
x		51.520	31670.000	6306.000	T 30.840	T 5759.000	6045.000	2.012	12.010	10.020
σ		0.915	509.600	133.600	T 3.159	T 96.430	99.780	0.052	0.304	0.744
%RSD		1.776	1.609	2.119	T 10.240	T 1.674	1.650	2.575	2.534	7.428

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	1.346	1.618	11.770	16.160	12.390	1.860	1.077	21.680	23.380
2	20:38:49	1.334	1.587	12.270	14.510	12.300	2.322	0.947	21.540	22.780
3	20:39:17	1.120	1.563	11.400	13.930	11.770	0.979	0.712	22.860	21.230
x		1.267	1.589	11.810	14.870	12.150	1.721	0.912	22.020	22.460
σ		0.127	0.028	0.435	1.159	0.336	0.682	0.185	0.727	1.108
%RSD		10.040	1.736	3.682	7.797	2.765	39.650	20.330	3.300	4.932

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	0.000	1.029	1.891	9.734	103.4%	0.345	0.488	0.399	3.479
2	20:38:49	0.000	1.135	1.598	10.130	104.4%	0.361	0.391	0.456	2.271
3	20:39:17	0.000	1.006	3.670	9.252	104.1%	0.387	0.453	0.424	1.581
x		0.000	1.057	2.386	9.704	104.0%	0.364	0.444	0.427	2.444
σ		0.000	0.069	1.121	0.437	0.5%	0.021	0.049	0.029	0.961
%RSD		0.000	6.495	46.990	4.508	0.5	5.809	11.060	6.703	39.300

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	0.039	0.031	0.042	-0.036	83.6%	4.432	6.187	0.033	0.035
2	20:38:49	0.050	0.050	0.039	0.000	84.0%	4.339	6.137	0.010	0.021
3	20:39:17	0.058	0.056	0.036	0.077	84.6%	4.464	6.116	0.022	0.049
x		0.049	0.046	0.039	0.014	84.1%	4.411	6.147	0.022	0.035
σ		0.010	0.013	0.003	0.058	0.5%	0.065	0.037	0.011	0.014
%RSD		20.040	27.930	8.239	423.800	0.6	1.477	0.595	51.910	41.090

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:23	74.370	72.750	88.4%	0.315	0.306	41.450	40.270	41.730	83.3%
2	20:38:49	74.120	73.620	89.1%	0.307	0.303	41.290	39.720	41.100	84.4%
3	20:39:17	73.150	72.290	90.6%	0.284	0.320	40.890	39.050	40.680	85.3%
x		73.880	72.890	89.4%	0.302	0.310	41.210	39.680	41.170	84.3%
σ		0.643	0.674	1.1%	0.016	0.009	0.288	0.609	0.528	1.0%
%RSD		0.870	0.925	1.2	5.302	2.900	0.699	1.534	1.282	1.2

CCV MW9737 10/18/2017 20:43:47 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	67.7%	298.800	303.600	306.000	3.336	T 60140.000	T 55100.000	T 55020.000	T 54960.000
2	20:44:41	67.6%	294.800	311.200	308.500	2.072	T 60620.000	T 55120.000	T 55050.000	T 55100.000
3	20:45:07	67.9%	295.200	298.600	302.800	5.038	T 60440.000	T 54610.000	T 54940.000	T 54360.000
x		67.7%	98.757%	101.488%	101.914%	3.482	T 100.666%	T 54940.000	T 55000.000	T 91.347%
σ		0.1%	n/a	n/a	n/a	1.489	T n/a	T 284.600	T 60.040	T n/a
%RSD		0.2	0.746	2.091	0.932	42.750	T 0.406	T 0.518	T 0.109	T 0.723
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	294.700	T 2887.000	3961.000	T 58110.000	57320.000	T 56910.000	59.4%	302.300	292.000
2	20:44:41	300.200	T 2862.000	3994.000	T 57880.000	57400.000	T 57070.000	58.7%	298.200	289.100
3	20:45:07	307.600	T 2827.000	4052.000	T 58080.000	57080.000	T 57710.000	57.6%	293.500	281.800
x		100.278%	T 95.279%	4002.000	T 96.704%	57260.000	T 95.385%	58.6%	99.335%	95.880%
σ		n/a	T n/a	45.920	T n/a	166.900	T n/a	0.9%	n/a	n/a
%RSD		2.154	T 1.054	1.147	T 0.218	0.291	T 0.735	1.5	1.482	1.821
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	295.500	69200.000	T 57130.000	290.400	T 56810.000	T 56640.000	275.000	275.400	277.700
2	20:44:41	292.900	68760.000	T 56800.000	289.400	T 57260.000	T 57050.000	272.600	272.200	278.200
3	20:45:07	294.200	69010.000	T 56800.000	291.500	T 57210.000	T 57080.000	273.400	275.400	282.100
x		98.062%	68990.000	T 56910.000	96.816%	T 57090.000	T 94.870%	91.220%	91.447%	279.300
σ		n/a	221.300	T 194.200	n/a	T 244.200	T n/a	n/a	n/a	2.409
%RSD		0.440	0.321	T 0.341	0.361	T 0.428	T 0.433	0.441	0.688	0.863
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	266.200	275.600	269.600	276.400	269.700	287.500	273.500	2.871	0.553
2	20:44:41	264.800	269.900	271.900	268.900	273.500	289.600	272.600	2.020	0.502
3	20:45:07	270.600	277.300	269.800	273.800	273.100	290.500	278.200	3.036	0.011
x		267.200	91.428%	90.141%	273.000	272.100	96.400%	274.800	2.642	0.355
σ		3.075	n/a	n/a	3.803	2.099	n/a	2.995	0.545	0.299
%RSD		1.151	1.416	0.478	1.393	0.771	0.543	1.090	20.630	84.300
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	0.000	281.400	0.557	291.600	63.6%	301.500	299.300	296.700	288.400
2	20:44:41	0.000	298.700	-3.798	291.900	62.0%	301.000	301.900	298.900	286.400
3	20:45:07	0.000	283.700	2.235	290.000	61.8%	293.700	302.300	299.200	286.600
x		0.000	95.977%	-0.335	97.052%	62.5%	99.582%	100.377%	298.300	287.100
σ		0.000	n/a	3.114	n/a	1.0%	n/a	n/a	1.364	1.090
%RSD		0.000	3.262	928.600	0.347	1.6	1.462	0.542	0.457	0.380
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	278.900	271.500	284.500	281.500	65.0%	290.500	295.800	302.100	283.600
2	20:44:41	275.900	268.900	281.500	279.100	64.3%	292.000	296.600	304.800	287.600
3	20:45:07	270.700	269.300	284.600	278.400	64.9%	289.600	295.600	303.800	287.900
x		91.722%	269.900	283.600	93.219%	64.7%	96.898%	98.661%	101.185%	95.463%
σ		n/a	1.374	1.780	n/a	0.4%	n/a	n/a	n/a	n/a
%RSD		1.504	0.509	0.628	0.581	0.6	0.423	0.175	0.439	0.842
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:44:14	286.900	289.800	70.5%	297.600	T 296.300	292.500	296.200	T 301.200	66.8%
2	20:44:41	288.800	287.700	70.2%	297.800	T 297.100	292.500	295.800	T 300.800	66.9%
3	20:45:07	289.200	288.500	70.2%	284.700	T 283.700	279.200	281.500	T 283.800	T 71.0%
x		96.106%	96.222%	70.3%	97.795%	T 97.461%	96.032%	97.051%	T 98.425%	T 68.2%
σ		n/a	n/a	0.2%	n/a	T n/a	n/a	n/a	T n/a	T 2.4%
%RSD		0.430	0.377	0.2	2.564	T 2.565	2.666	2.884	T 3.356	T 3.5

CCB IM8211-01 10/18/2017 20:49:38 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	74.9%	0.069	1.081	2.878	-5.740	15.480	10.910	11.400	10.650
2	20:50:32	76.1%	0.077	1.202	1.916	-6.613	19.800	16.040	15.540	16.780
3	20:51:00	77.6%	0.157	1.364	1.558	-16.020	29.030	29.370	30.870	30.550
x		76.2%	0.101	1.215	2.117	-9.456	21.440	18.770	19.270	19.320
σ		1.4%	0.049	0.142	0.683	5.698	6.923	9.528	10.260	10.190
%RSD		1.8	48.300	11.700	32.240	60.250	32.300	50.760	53.230	52.740
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	4.648	0.623	2464.000	13.970	11.100	-3.718	62.6%	0.086	0.019
2	20:50:32	6.485	0.764	2505.000	17.700	13.170	3.973	63.8%	0.111	0.119
3	20:51:00	12.400	0.894	2572.000	21.780	28.730	13.910	63.5%	0.247	0.169
x		7.844	0.760	2514.000	17.820	17.670	4.723	63.3%	0.148	0.102
σ		4.051	0.136	54.230	3.907	9.641	8.839	0.6%	0.087	0.077
%RSD		51.640	17.820	2.157	21.930	54.570	187.200	1.0	58.730	74.810
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	0.034	130.400	14.600	0.109	13.250	14.480	0.051	0.092	-0.522
2	20:50:32	0.072	134.900	17.280	0.132	16.670	14.930	0.092	0.126	-0.463
3	20:51:00	0.153	150.400	33.360	0.173	33.930	34.720	0.150	0.208	-0.360
x		0.086	138.600	21.750	0.138	21.280	21.380	0.098	0.142	-0.448
σ		0.061	10.510	10.150	0.033	11.090	11.560	0.050	0.059	0.082
%RSD		70.190	7.583	46.660	23.580	52.090	54.080	50.960	41.840	18.280
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	0.029	0.070	0.093	0.151	0.006	0.054	-0.084	-0.326	0.447
2	20:50:32	0.061	0.031	0.098	0.403	0.047	0.033	0.537	-0.074	-0.526
3	20:51:00	0.130	0.073	0.208	0.183	0.159	0.134	0.639	-0.327	-0.260
x		0.073	0.058	0.133	0.246	0.071	0.074	0.364	-0.242	-0.113
σ		0.051	0.023	0.065	0.137	0.079	0.053	0.391	0.146	0.503
%RSD		69.840	40.630	49.030	55.790	111.800	72.020	107.400	60.070	444.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	0.000	0.380	-3.231	0.141	67.7%	0.269	0.170	0.248	0.186
2	20:50:32	0.000	-0.077	-2.272	0.153	69.4%	0.162	0.300	0.181	0.025
3	20:51:00	0.000	0.146	-0.910	0.253	69.1%	0.291	0.237	0.225	0.105
x		0.000	0.150	-2.138	0.182	68.7%	0.241	0.236	0.218	0.106
σ		0.000	0.228	1.167	0.061	0.9%	0.069	0.065	0.034	0.081
%RSD		0.000	152.500	54.570	33.780	1.3	28.710	27.570	15.560	76.320
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	0.091	0.080	0.050	0.054	70.2%	0.076	0.080	0.607	0.681
2	20:50:32	0.115	0.117	0.074	0.070	71.4%	0.090	0.073	0.655	0.638
3	20:51:00	0.164	0.143	0.151	0.165	72.0%	0.115	0.174	0.701	0.639
x		0.123	0.113	0.092	0.096	71.2%	0.094	0.109	0.655	0.653
σ		0.037	0.031	0.053	0.060	0.9%	0.019	0.056	0.047	0.025
%RSD		30.320	27.780	57.500	62.320	1.3	20.680	51.620	7.175	3.817
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:05	0.064	0.082	73.7%	0.069	0.074	0.066	0.068	0.063	70.8%
2	20:50:32	0.102	0.117	74.9%	0.114	0.107	0.106	0.075	0.091	72.3%
3	20:51:00	0.186	0.196	75.0%	0.152	0.141	0.150	0.156	0.156	73.0%
x		0.117	0.132	74.6%	0.112	0.108	0.107	0.100	0.103	72.0%
σ		0.063	0.058	0.7%	0.041	0.034	0.042	0.049	0.048	1.1%
%RSD		53.300	44.390	1.0	36.980	31.360	38.960	48.710	46.130	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	89.9%	0.265	1.467	1.847	116.800	40.820	403.400	407.600	404.500
2	20:56:23	90.0%	0.399	1.622	1.369	112.700	42.230	402.300	409.900	403.100
3	20:56:50	91.0%	0.348	1.857	1.797	113.800	40.490	399.700	396.800	400.700
x		90.3%	0.337	1.649	1.671	114.400	41.180	401.800	404.800	402.800
σ		0.6%	0.067	0.196	0.263	2.112	0.924	1.929	7.005	1.928
%RSD		0.7	19.980	11.910	15.740	1.845	2.245	0.480	1.731	0.479

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	TM 10920.000	T 1166.000	T 316800.000	265.200	135.200	140.000	71.9%	295.900	21.080
2	20:56:23	TM 10910.000	T 1045.000	T 319000.000	270.900	158.900	135.100	72.6%	T 424.200	20.460
3	20:56:50	TM 10770.000	T 1023.000	T 314900.000	253.600	133.200	136.800	73.0%	T 466.500	20.540
x		TM 10870.000	T 1078.000	T 316900.000	263.300	142.500	137.300	72.5%	T 395.600	20.690
σ		TM 87.080	T 77.170	T 2062.000	8.811	14.300	2.474	0.5%	T 88.810	0.340
%RSD		TM 0.801	T 7.159	T 0.651	3.347	10.030	1.802	0.7	T 22.450	1.641

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	11.040	33840.000	4933.000	26.790	T 4621.000	4807.000	0.572	4.448	2.708
2	20:56:23	10.990	33100.000	4901.000	27.090	T 4556.000	4770.000	0.551	4.436	2.557
3	20:56:50	10.920	32830.000	4865.000	26.720	T 4555.000	4748.000	0.548	4.474	3.103
x		10.980	33260.000	4900.000	26.870	T 4577.000	4775.000	0.557	4.453	2.790
σ		0.061	521.700	33.980	0.193	T 38.020	29.990	0.013	0.019	0.282
%RSD		0.559	1.569	0.694	0.718	T 0.831	0.628	2.363	0.427	10.110

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	1.777	1.824	16.470	18.560	15.740	1.246	0.308	12.680	13.260
2	20:56:23	1.744	1.942	13.130	15.150	13.620	0.021	-0.284	14.990	14.420
3	20:56:50	1.588	1.751	11.660	12.810	11.360	0.272	0.013	13.580	15.250
x		1.703	1.839	13.750	15.510	13.570	0.513	0.012	13.750	14.310
σ		0.101	0.096	2.465	2.895	2.192	0.647	0.296	1.164	0.998
%RSD		5.927	5.238	17.920	18.670	16.150	126.100	2376.000	8.466	6.972

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	0.000	0.054	-1.060	2.870	83.4%	0.429	0.430	0.487	1.656
2	20:56:23	0.000	0.106	-0.215	2.780	83.2%	0.315	0.379	0.308	1.407
3	20:56:50	0.000	-0.086	2.570	3.030	83.6%	0.275	0.416	0.300	0.196
x		0.000	0.024	0.431	2.893	83.4%	0.340	0.408	0.365	1.086
σ		0.000	0.099	1.900	0.127	0.2%	0.080	0.026	0.106	0.781
%RSD		0.000	408.400	440.300	4.379	0.2	23.560	6.480	29.030	71.870

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	0.011	0.008	0.024	-0.002	76.3%	2.942	4.224	0.704	0.636
2	20:56:23	0.011	0.007	0.022	0.016	77.1%	2.944	4.216	0.571	0.648
3	20:56:50	0.012	0.010	0.009	0.014	77.6%	2.973	4.196	0.542	0.517
x		0.011	0.008	0.018	0.009	77.0%	2.953	4.212	0.606	0.600
σ		0.000	0.002	0.008	0.009	0.7%	0.017	0.015	0.086	0.072
%RSD		3.439	19.910	46.670	102.500	0.9	0.581	0.344	14.230	12.060

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:55	32.440	30.520	80.9%	0.137	0.128	8.437	8.038	8.424	76.9%
2	20:56:23	31.980	30.650	82.8%	0.137	0.133	8.324	7.818	8.271	79.4%
3	20:56:50	31.990	30.350	83.9%	0.128	0.127	8.517	7.755	8.227	79.7%
x		32.130	30.500	82.5%	0.134	0.130	8.426	7.870	8.307	78.7%
σ		0.262	0.150	1.6%	0.005	0.003	0.097	0.149	0.103	1.5%
%RSD		0.814	0.493	1.9	3.699	2.482	1.152	1.888	1.243	2.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	98.0%	0.529	4.705	4.038	250.300	94.110	T 1272.000	1317.000	1338.000
2	21:02:11	97.3%	0.584	3.517	4.786	267.600	96.310	T 1298.000	1355.000	1357.000
3	21:02:38	97.6%	0.526	4.015	4.507	271.800	97.890	T 1297.000	1353.000	1371.000
x		97.6%	0.546	4.079	4.444	263.200	96.100	T 1289.000	1341.000	1355.000
σ		0.3%	0.033	0.597	0.378	11.350	1.898	T 14.890	21.230	16.240
%RSD		0.4	6.027	14.630	8.500	4.313	1.975	T 1.155	1.582	1.198

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	TM 37340.000	T 1218.000	T 324200.000	1322.000	172.900	151.100	81.0%	211.500	47.880
2	21:02:11	TM 38240.000	T 1204.000	T 336800.000	1386.000	188.100	155.800	79.7%	T 364.600	49.520
3	21:02:38	TM 38700.000	T 1162.000	T 339300.000	1405.000	161.500	162.900	77.8%	215.000	50.310
x		TM 38090.000	T 1194.000	T 333400.000	1371.000	174.200	156.600	79.5%	T 263.700	49.240
σ		TM 694.100	T 28.900	T 8076.000	43.600	13.360	5.943	1.6%	T 87.400	1.236
%RSD		TM 1.822	T 2.419	T 2.422	3.181	7.668	3.796	2.0	T 33.140	2.510

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	40.290	37070.000	T 3333.000	17.420	T 3131.000	3230.000	0.763	5.821	4.242
2	21:02:11	41.430	37470.000	3418.000	18.020	T 3177.000	3324.000	0.845	6.129	4.293
3	21:02:38	41.960	37030.000	3431.000	18.140	T 3212.000	3348.000	0.810	5.920	3.915
x		41.230	37190.000	T 3394.000	17.860	T 3173.000	3300.000	0.806	5.957	4.150
σ		0.853	244.000	T 53.690	0.385	T 40.640	62.460	0.041	0.157	0.205
%RSD		2.069	0.656	T 1.582	2.156	T 1.281	1.893	5.133	2.636	4.941

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	2.203	2.520	8.990	11.360	9.391	2.126	1.107	18.760	20.730
2	21:02:11	2.229	2.336	8.754	11.920	9.942	0.888	0.660	18.310	19.250
3	21:02:38	2.174	2.465	9.152	11.470	9.959	2.308	1.085	21.720	18.510
x		2.202	2.440	8.965	11.580	9.764	1.774	0.951	19.600	19.490
σ		0.028	0.094	0.200	0.295	0.323	0.773	0.252	1.853	1.129
%RSD		1.250	3.870	2.229	2.550	3.309	43.570	26.500	9.455	5.794

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	0.000	1.852	-0.122	10.860	101.3%	0.209	0.369	0.281	1.178
2	21:02:11	0.000	0.921	0.636	10.780	100.5%	0.208	0.293	0.255	0.791
3	21:02:38	0.000	1.502	0.400	11.770	101.0%	0.163	0.227	0.237	0.984
x		0.000	1.425	0.305	11.140	101.0%	0.193	0.296	0.257	0.985
σ		0.000	0.471	0.388	0.547	0.4%	0.026	0.071	0.022	0.194
%RSD		0.000	33.020	127.100	4.917	0.4	13.520	24.030	8.564	19.650

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	0.068	0.050	0.031	0.041	82.4%	3.142	4.459	0.291	0.301
2	21:02:11	0.071	0.053	0.016	0.041	83.2%	3.228	4.629	0.255	0.263
3	21:02:38	0.085	0.065	0.061	0.036	83.5%	3.234	4.556	0.238	0.239
x		0.074	0.056	0.036	0.039	83.1%	3.201	4.548	0.261	0.268
σ		0.009	0.008	0.022	0.003	0.6%	0.051	0.085	0.027	0.031
%RSD		12.040	14.470	62.230	7.185	0.7	1.605	1.868	10.450	11.690

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:01:45	65.320	64.630	86.6%	0.191	0.184	43.160	41.400	43.180	85.1%
2	21:02:11	64.970	65.020	87.4%	0.200	0.185	44.660	43.230	44.510	84.1%
3	21:02:38	64.870	64.880	88.5%	0.194	0.197	44.660	42.540	44.260	84.4%
x		65.050	64.840	87.5%	0.195	0.189	44.160	42.390	43.980	84.5%
σ		0.239	0.194	1.0%	0.005	0.007	0.865	0.923	0.707	0.5%
%RSD		0.367	0.299	1.1	2.398	3.677	1.959	2.176	1.607	0.6

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	93.2%	0.292	0.451	0.986	145.400	30.160	543.400	534.100	537.200
2	21:08:01	94.2%	0.312	0.499	1.337	141.600	31.560	544.600	539.300	536.300
3	21:08:28	93.1%	0.430	0.106	1.162	143.400	T 44.140	542.200	539.200	543.800
x		93.5%	0.345	0.352	1.161	143.500	T 35.280	543.400	537.500	539.100
σ		0.6%	0.075	0.214	0.176	1.891	T 7.700	1.192	2.996	4.093
%RSD		0.7	21.690	60.800	15.120	1.318	T 21.820	0.219	0.557	0.759

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	TM 13820.000	T 1381.000	T 285900.000	341.200	225.100	219.400	76.1%	261.800	25.730
2	21:08:01	TM 13810.000	T 1486.000	T 286700.000	342.400	243.500	210.800	75.3%	T 384.700	26.870
3	21:08:28	TM 13870.000	T 1342.000	T 286400.000	342.600	248.400	222.900	74.5%	271.700	27.010
x		TM 13830.000	T 1403.000	T 286400.000	342.100	239.000	217.700	75.3%	T 306.100	26.540
σ		TM 31.360	T 74.710	T 398.400	0.778	12.280	6.219	0.8%	T 68.260	0.702
%RSD		TM 0.227	T 5.325	T 0.139	0.228	5.140	2.856	1.1	T 22.300	2.646

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	18.580	28820.000	2909.000	21.890	T 2656.000	2741.000	1.380	3.893	1.907
2	21:08:01	18.070	27800.000	2893.000	22.020	T 2666.000	2759.000	1.309	4.165	2.841
3	21:08:28	17.970	28220.000	2867.000	22.030	T 2642.000	2748.000	1.282	3.837	2.385
x		18.210	28280.000	2890.000	21.980	T 2655.000	2749.000	1.323	3.965	2.378
σ		0.331	509.100	20.850	0.075	T 12.410	9.237	0.051	0.175	0.467
%RSD		1.817	1.800	0.722	0.340	T 0.467	0.336	3.822	4.418	19.650

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	3.624	4.591	9.075	10.970	9.133	0.496	-0.171	8.302	8.770
2	21:08:01	3.674	4.330	8.974	10.310	8.929	0.945	-0.205	8.047	7.944
3	21:08:28	3.696	4.383	9.023	9.126	9.251	0.187	0.165	8.389	7.770
x		3.665	4.435	9.024	10.140	9.105	0.542	-0.070	8.246	8.161
σ		0.037	0.138	0.051	0.936	0.163	0.382	0.204	0.178	0.535
%RSD		1.000	3.117	0.564	9.235	1.789	70.330	291.100	2.155	6.551

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	0.000	0.725	-0.270	3.667	112.2%	0.242	0.220	0.224	0.691
2	21:08:01	0.000	0.986	-2.886	3.957	112.2%	0.157	0.239	0.222	0.489
3	21:08:28	0.000	0.515	-2.421	3.782	111.2%	0.239	0.203	0.215	0.616
x		0.000	0.742	-1.859	3.802	111.9%	0.213	0.221	0.220	0.599
σ		0.000	0.236	1.396	0.146	0.6%	0.048	0.018	0.005	0.102
%RSD		0.000	31.770	75.080	3.846	0.5	22.610	8.166	2.338	17.040

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	0.008	0.013	0.020	0.028	80.9%	3.505	3.768	0.072	0.114
2	21:08:01	0.020	0.012	0.049	0.027	81.1%	3.231	3.905	0.072	0.102
3	21:08:28	0.013	0.018	0.041	0.005	80.0%	3.327	4.034	0.069	0.057
x		0.014	0.014	0.037	0.020	80.7%	3.354	3.902	0.071	0.091
σ		0.006	0.003	0.015	0.013	0.6%	0.139	0.133	0.002	0.030
%RSD		42.950	23.360	41.870	63.980	0.7	4.156	3.406	2.702	32.960

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:07:34	41.780	40.940	87.3%	0.124	0.111	20.470	19.580	20.560	82.0%
2	21:08:01	41.630	41.650	88.8%	0.100	0.120	20.870	19.390	20.660	82.3%
3	21:08:28	42.460	41.580	89.0%	0.107	0.122	20.760	19.030	20.580	82.8%
x		41.960	41.390	88.4%	0.110	0.118	20.700	19.330	20.600	82.4%
σ		0.442	0.394	0.9%	0.012	0.006	0.205	0.275	0.051	0.4%
%RSD		1.052	0.951	1.0	11.200	5.211	0.991	1.424	0.246	0.5

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	92.6%	0.746	1.474	0.246	197.200	35.170	T 719.100	723.700	729.200
2	21:13:50	93.5%	0.665	-0.182	0.231	195.800	35.370	740.200	720.400	727.800
3	21:14:17	93.7%	0.670	0.242	0.335	185.900	36.040	732.300	710.200	713.200
x		93.2%	0.694	0.511	0.270	193.000	35.530	T 730.500	718.100	723.400
σ		0.6%	0.045	0.860	0.056	6.151	0.457	T 10.660	6.987	8.866
%RSD		0.6	6.546	168.400	20.790	3.188	1.286	T 1.459	0.973	1.226

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	TM 21650.000	T 1212.000	T 283900.000	311.100	96.150	74.180	75.8%	216.800	28.090
2	21:13:50	TM 21410.000	T 1208.000	T 285800.000	319.300	91.180	74.350	74.1%	223.700	26.680
3	21:14:17	TM 21210.000	T 1190.000	T 284400.000	312.800	81.910	73.450	75.1%	207.300	26.560
x		TM 21420.000	T 1203.000	T 284700.000	314.400	89.750	73.990	75.0%	215.900	27.110
σ		TM 221.600	T 12.190	T 984.500	4.331	7.227	0.478	0.8%	8.250	0.853
%RSD		TM 1.034	T 1.013	T 0.346	1.378	8.053	0.646	1.1	3.820	3.147

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	22.150	28920.000	4998.000	20.990	T 4613.000	4821.000	1.531	4.785	3.121
2	21:13:50	22.190	28750.000	5041.000	20.700	T 4627.000	4818.000	1.578	4.845	2.285
3	21:14:17	21.190	28280.000	4946.000	20.810	T 4568.000	4785.000	1.533	4.956	2.726
x		21.850	28650.000	4995.000	20.840	T 4602.000	4808.000	1.547	4.862	2.711
σ		0.566	332.300	47.620	0.146	T 30.920	19.980	0.026	0.087	0.418
%RSD		2.592	1.160	0.953	0.700	T 0.672	0.416	1.709	1.786	15.430

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	3.942	4.319	8.886	10.600	8.828	0.855	-0.380	5.491	4.949
2	21:13:50	3.530	4.382	8.959	9.185	9.007	1.571	0.054	4.732	4.971
3	21:14:17	3.705	4.352	8.427	10.600	8.847	0.641	0.157	4.302	3.511
x		3.726	4.351	8.757	10.130	8.894	1.022	-0.056	4.842	4.477
σ		0.207	0.031	0.288	0.817	0.099	0.487	0.285	0.602	0.836
%RSD		5.546	0.714	3.292	8.069	1.107	47.630	505.900	12.440	18.680

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	0.000	1.225	-1.705	3.236	108.7%	0.188	0.287	0.231	0.476
2	21:13:50	0.000	0.965	-1.688	3.129	108.7%	0.190	0.221	0.275	-0.043
3	21:14:17	0.000	0.205	-2.135	3.216	108.2%	0.149	0.253	0.250	0.841
x		0.000	0.798	-1.842	3.194	108.5%	0.176	0.254	0.252	0.425
σ		0.000	0.530	0.253	0.057	0.3%	0.023	0.033	0.022	0.444
%RSD		0.000	66.410	13.740	1.781	0.3	13.000	13.110	8.882	104.600

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	0.023	0.019	0.032	0.025	80.2%	3.627	4.876	0.330	0.391
2	21:13:50	0.036	0.028	0.014	0.004	80.6%	3.834	4.960	0.344	0.334
3	21:14:17	0.019	0.021	0.029	0.020	81.4%	3.670	4.779	0.346	0.393
x		0.026	0.023	0.025	0.017	80.7%	3.710	4.872	0.340	0.373
σ		0.009	0.004	0.010	0.011	0.6%	0.110	0.091	0.009	0.033
%RSD		34.490	19.530	39.540	65.190	0.7	2.952	1.859	2.513	8.916

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:23	36.490	35.580	87.1%	0.143	0.137	122.400	120.900	124.600	80.7%
2	21:13:50	36.560	36.490	87.6%	0.149	0.157	120.600	118.800	122.900	82.4%
3	21:14:17	36.240	35.690	87.7%	0.157	0.150	120.300	118.000	122.200	82.5%
x		36.430	35.920	87.5%	0.150	0.148	121.100	119.200	123.200	81.9%
σ		0.169	0.497	0.3%	0.007	0.010	1.142	1.474	1.256	1.0%
%RSD		0.463	1.384	0.4	4.638	6.906	0.943	1.236	1.019	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	91.7%	0.205	-0.131	0.255	100.600	29.920	438.700	436.300	440.100
2	21:19:39	92.9%	0.187	-0.520	-0.267	105.200	29.800	437.500	434.300	442.300
3	21:20:06	92.2%	0.189	-0.986	-0.032	94.510	30.560	435.800	435.300	435.500
x		92.3%	0.194	-0.545	-0.015	100.100	30.090	437.300	435.300	439.300
σ		0.6%	0.010	0.428	0.261	5.343	0.405	1.466	1.010	3.503
%RSD		0.6	5.059	78.420	1742.000	5.337	1.346	0.335	0.232	0.797
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	TM 11320.000	T 1321.000	T 308700.000	264.000	93.950	71.080	74.4%	245.200	16.490
2	21:19:39	TM 11390.000	T 1339.000	T 310900.000	266.800	90.670	79.560	72.9%	260.500	16.820
3	21:20:06	TM 11260.000	T 1202.000	T 308600.000	262.400	85.880	73.440	73.5%	260.700	17.140
x		TM 11320.000	T 1287.000	T 309400.000	264.400	90.170	74.690	73.6%	255.500	16.820
σ		TM 64.740	T 74.520	T 1292.000	2.241	4.060	4.378	0.8%	8.894	0.327
%RSD		TM 0.572	T 5.789	T 0.417	0.847	4.503	5.862	1.0	3.481	1.942
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	12.910	28850.000	2121.000	16.400	T 1990.000	2060.000	1.049	3.659	2.044
2	21:19:39	13.550	28840.000	2133.000	16.320	T 1990.000	2068.000	1.035	3.127	2.530
3	21:20:06	13.070	28040.000	2137.000	15.870	T 1978.000	2053.000	1.141	3.357	2.363
x		13.180	28580.000	2131.000	16.190	T 1986.000	2060.000	1.075	3.381	2.312
σ		0.334	461.300	8.732	0.284	T 6.952	7.512	0.058	0.267	0.247
%RSD		2.537	1.614	0.410	1.754	T 0.350	0.365	5.386	7.894	10.680
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	2.095	2.308	7.377	8.046	7.353	1.000	-0.136	12.760	12.380
2	21:19:39	1.908	2.583	7.622	9.387	7.308	0.137	0.220	11.720	11.660
3	21:20:06	1.991	2.292	7.369	7.375	7.521	1.520	-0.071	11.430	13.930
x		1.998	2.395	7.456	8.269	7.394	0.886	0.005	11.970	12.660
σ		0.094	0.164	0.144	1.024	0.112	0.699	0.190	0.696	1.155
%RSD		4.694	6.829	1.932	12.390	1.515	78.930	4204.000	5.819	9.129
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	0.000	0.697	-1.608	3.128	97.7%	0.094	0.166	0.049	0.258
2	21:19:39	0.000	0.167	-0.601	2.658	97.5%	0.089	0.049	0.101	0.514
3	21:20:06	0.000	0.466	-1.570	2.881	96.8%	0.092	0.082	0.055	0.573
x		0.000	0.443	-1.260	2.889	97.3%	0.092	0.099	0.068	0.449
σ		0.000	0.266	0.571	0.235	0.5%	0.002	0.060	0.028	0.168
%RSD		0.000	60.050	45.320	8.134	0.5	2.385	60.950	41.280	37.440
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	0.011	-0.000	0.015	-0.011	78.4%	2.897	3.633	-0.045	-0.007
2	21:19:39	0.009	0.004	0.015	-0.025	80.2%	2.806	3.558	-0.031	-0.028
3	21:20:06	0.004	-0.000	0.018	-0.004	79.1%	3.017	3.749	-0.055	-0.035
x		0.008	0.001	0.016	-0.013	79.2%	2.907	3.647	-0.044	-0.023
σ		0.004	0.002	0.002	0.010	0.9%	0.106	0.096	0.012	0.014
%RSD		47.650	193.700	11.840	77.560	1.1	3.646	2.638	26.990	61.660
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:12	21.830	22.580	85.5%	0.074	0.089	11.850	10.860	11.840	80.2%
2	21:19:39	23.020	21.340	86.6%	0.087	0.082	11.860	10.740	11.690	81.6%
3	21:20:06	22.950	22.410	86.5%	0.067	0.088	11.780	10.840	11.740	81.7%
x		22.600	22.110	86.2%	0.076	0.086	11.830	10.820	11.750	81.2%
σ		0.671	0.674	0.7%	0.010	0.004	0.048	0.064	0.073	0.8%
%RSD		2.971	3.049	0.8	13.300	4.580	0.408	0.591	0.621	1.0

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	90.2%	0.390	-0.280	0.407	201.200	80.810	578.500	573.600	571.600
2	21:25:29	90.6%	0.436	0.573	0.589	202.500	82.590	574.200	563.700	569.700
3	21:25:57	91.6%	0.439	0.091	0.209	190.800	82.260	575.400	572.700	566.600
x		90.8%	0.421	0.128	0.402	198.100	81.890	576.000	570.000	569.300
σ		0.7%	0.028	0.428	0.190	6.370	0.949	2.202	5.470	2.536
%RSD		0.8	6.531	334.200	47.330	3.215	1.158	0.382	0.960	0.446

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	TM 14070.000	T 1743.000	T 304000.000	T 362.900	98.240	87.190	72.8%	260.800	24.270
2	21:25:29	TM 13980.000	T 1580.000	T 305500.000	335.000	82.060	82.910	72.4%	T 436.700	24.350
3	21:25:57	TM 13970.000	T 1637.000	T 306000.000	333.600	101.500	89.570	71.9%	262.200	23.200
x		TM 14000.000	T 1653.000	T 305200.000	T 343.800	93.940	86.560	72.3%	T 319.900	23.940
σ		TM 52.530	T 82.570	T 1037.000	T 16.550	10.420	3.375	0.4%	T 101.200	0.643
%RSD		TM 0.375	T 4.994	T 0.340	T 4.812	11.090	3.899	0.6	T 31.620	2.686

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	21.550	29710.000	6517.000	23.700	T 5976.000	6236.000	1.422	5.794	3.601
2	21:25:29	21.740	28990.000	6452.000	23.430	T 5951.000	6181.000	1.418	5.145	3.635
3	21:25:57	21.880	29260.000	6494.000	23.420	T 5960.000	6206.000	1.467	5.191	4.379
x		21.720	29320.000	6488.000	23.520	T 5962.000	6208.000	1.436	5.377	3.872
σ		0.169	362.800	32.890	0.159	T 12.610	27.520	0.028	0.362	0.439
%RSD		0.779	1.238	0.507	0.677	T 0.212	0.443	1.915	6.739	11.350

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	9.877	11.540	26.120	26.030	25.870	1.337	0.111	14.330	14.490
2	21:25:29	9.677	10.620	25.280	26.280	24.990	1.800	0.168	12.710	14.310
3	21:25:57	9.706	11.210	26.250	27.170	25.740	2.171	-0.153	13.180	15.010
x		9.753	11.120	25.890	26.490	25.530	1.770	0.042	13.410	14.600
σ		0.108	0.468	0.531	0.600	0.475	0.418	0.171	0.834	0.364
%RSD		1.107	4.204	2.050	2.264	1.861	23.610	407.000	6.220	2.490

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	0.000	0.923	-0.710	2.899	100.4%	0.345	0.341	0.386	0.402
2	21:25:29	0.000	0.296	-1.655	3.135	99.8%	0.305	0.372	0.398	0.744
3	21:25:57	0.000	0.241	-0.884	2.793	98.8%	0.317	0.358	0.386	0.313
x		0.000	0.487	-1.083	2.942	99.7%	0.322	0.357	0.390	0.486
σ		0.000	0.379	0.503	0.175	0.8%	0.020	0.016	0.007	0.227
%RSD		0.000	77.840	46.420	5.962	0.8	6.334	4.394	1.811	46.750

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	0.017	0.028	0.061	0.045	77.6%	3.876	5.068	0.066	0.078
2	21:25:29	0.032	0.029	0.045	0.056	78.1%	3.777	5.093	0.056	0.060
3	21:25:57	0.015	0.021	0.045	0.046	78.4%	3.826	5.184	0.064	0.043
x		0.021	0.026	0.051	0.049	78.0%	3.826	5.115	0.062	0.060
σ		0.009	0.005	0.009	0.006	0.4%	0.049	0.061	0.005	0.018
%RSD		42.770	17.280	18.330	12.330	0.5	1.293	1.197	8.771	29.230

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:25:02	27.270	27.160	85.5%	0.116	0.101	69.180	67.160	69.030	80.1%
2	21:25:29	27.990	26.850	85.0%	0.121	0.123	68.260	66.220	68.490	81.4%
3	21:25:57	27.160	27.040	86.3%	0.110	0.121	69.210	67.010	69.580	81.1%
x		27.470	27.020	85.6%	0.116	0.115	68.880	66.800	69.040	80.9%
σ		0.454	0.158	0.7%	0.006	0.012	0.540	0.504	0.548	0.7%
%RSD		1.653	0.584	0.8	4.912	10.770	0.784	0.754	0.793	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	89.9%	0.336	-1.053	0.036	73.970	66.150	781.400	761.700	762.700
2	21:31:19	90.3%	0.319	-0.568	0.053	77.150	64.280	T 748.500	762.400	762.900
3	21:31:46	90.9%	0.270	-0.706	0.020	81.990	63.660	765.700	752.200	752.700
x		90.4%	0.308	-0.775	0.037	77.700	64.700	T 765.200	758.800	759.400
σ		0.5%	0.034	0.250	0.017	4.042	1.294	T 16.440	5.707	5.819
%RSD		0.6	11.110	32.240	45.250	5.201	2.000	T 2.149	0.752	0.766
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	TM 13610.000	T 1338.000	T 300900.000	263.300	101.400	85.210	72.8%	395.400	23.670
2	21:31:19	TM 13560.000	T 1330.000	T 299700.000	T 292.900	105.200	89.480	72.3%	400.500	24.390
3	21:31:46	TM 13440.000	T 1274.000	T 296100.000	250.700	97.070	87.230	72.1%	375.600	25.630
x		TM 13540.000	T 1314.000	T 298900.000	T 269.000	101.200	87.310	72.4%	390.500	24.560
σ		TM 87.890	T 34.730	T 2529.000	T 21.690	4.064	2.133	0.4%	13.180	0.994
%RSD		TM 0.649	T 2.643	T 0.846	T 8.065	4.016	2.443	0.5	3.374	4.046
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	19.050	28210.000	3798.000	33.620	T 3502.000	3641.000	1.938	5.351	3.106
2	21:31:19	18.720	27650.000	3824.000	33.160	T 3524.000	3654.000	2.000	4.872	2.903
3	21:31:46	18.090	26250.000	3781.000	33.170	T 3490.000	3603.000	1.882	4.717	4.097
x		18.620	27370.000	3801.000	33.310	T 3505.000	3633.000	1.940	4.980	3.369
σ		0.489	1006.000	21.620	0.263	T 17.140	26.240	0.059	0.331	0.639
%RSD		2.625	3.676	0.569	0.790	T 0.489	0.722	3.036	6.636	18.970
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	2.526	3.216	7.070	8.371	6.773	0.598	-0.293	5.953	6.152
2	21:31:19	2.426	3.099	6.890	8.169	7.428	0.493	-0.253	5.559	5.551
3	21:31:46	2.390	3.017	7.274	8.242	7.208	0.467	-0.063	5.758	7.066
x		2.447	3.111	7.078	8.261	7.137	0.519	-0.203	5.757	6.256
σ		0.071	0.100	0.192	0.102	0.333	0.069	0.123	0.197	0.763
%RSD		2.884	3.208	2.718	1.235	4.669	13.330	60.400	3.416	12.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	0.000	0.364	-2.221	2.120	112.7%	0.062	0.037	0.084	0.922
2	21:31:19	0.000	0.764	1.279	1.883	113.2%	0.024	0.049	0.030	0.618
3	21:31:46	0.000	0.375	-2.849	2.010	111.2%	0.071	0.002	0.057	0.906
x		0.000	0.501	-1.263	2.004	112.4%	0.052	0.029	0.057	0.815
σ		0.000	0.228	2.224	0.118	1.0%	0.025	0.024	0.027	0.171
%RSD		0.000	45.410	176.000	5.900	0.9	46.960	83.110	47.760	20.960
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	0.002	-0.001	0.012	-0.002	78.3%	4.213	4.956	-0.063	-0.027
2	21:31:19	0.005	-0.004	-0.004	-0.007	77.9%	4.067	4.898	-0.057	-0.037
3	21:31:46	0.006	0.002	-0.004	0.006	78.0%	4.228	4.852	-0.071	-0.032
x		0.004	-0.001	0.001	-0.001	78.1%	4.169	4.902	-0.064	-0.032
σ		0.002	0.003	0.009	0.006	0.2%	0.089	0.052	0.007	0.005
%RSD		50.970	294.600	619.100	597.000	0.3	2.141	1.060	10.560	14.380
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:30:52	29.860	28.740	86.3%	0.094	0.109	15.150	13.520	14.880	80.1%
2	21:31:19	29.900	29.630	87.7%	0.097	0.100	14.990	13.320	14.780	80.4%
3	21:31:46	30.150	29.490	88.0%	0.099	0.096	14.950	13.260	14.690	81.5%
x		29.970	29.290	87.3%	0.097	0.102	15.030	13.370	14.780	80.7%
σ		0.157	0.476	0.9%	0.003	0.007	0.105	0.136	0.098	0.8%
%RSD		0.523	1.625	1.1	2.687	6.755	0.698	1.020	0.664	0.9

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	87.1%	0.966	-0.341	0.804	246.900	70.870	883.100	864.400	864.500
2	21:37:07	88.8%	0.773	0.109	0.969	227.200	70.100	862.200	851.500	844.000
3	21:37:35	87.8%	0.879	0.866	1.165	233.100	70.440	T 837.800	850.200	851.800
x		87.9%	0.873	0.211	0.979	235.700	70.470	T 861.000	855.400	853.400
σ		0.8%	0.097	0.610	0.181	10.130	0.384	T 22.640	7.836	10.350
%RSD		0.9	11.090	288.700	18.470	4.296	0.544	T 2.630	0.916	1.213

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	TM 25730.000	T 1891.000	T 299700.000	T 487.800	2079.000	2136.000	70.7%	220.200	43.670
2	21:37:07	TM 25340.000	T 1914.000	T 297700.000	T 483.300	2195.000	2150.000	71.2%	T 356.800	42.660
3	21:37:35	TM 25010.000	T 1855.000	T 296800.000	T 476.700	2120.000	2129.000	70.2%	222.500	42.280
x		TM 25360.000	T 1886.000	T 298100.000	T 482.600	2131.000	2139.000	70.7%	T 266.500	42.870
σ		TM 356.900	T 29.870	T 1501.000	T 5.571	58.830	10.650	0.5%	T 78.190	0.717
%RSD		TM 1.407	T 1.584	T 0.504	T 1.154	2.760	0.498	0.7	T 29.340	1.673

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	28.300	30230.000	12260.000	25.500	T 10870.000	11530.000	2.534	7.180	4.373
2	21:37:07	28.110	28900.000	11810.000	25.070	T 10520.000	11160.000	2.542	7.926	4.499
3	21:37:35	28.430	29360.000	T 11170.000	25.090	T 10680.000	11370.000	2.725	7.614	5.392
x		28.280	29500.000	T 11740.000	25.220	T 10690.000	11350.000	2.600	7.573	4.754
σ		0.159	675.100	T 547.700	0.241	T 177.800	189.900	0.108	0.374	0.556
%RSD		0.563	2.289	T 4.663	0.954	T 1.664	1.673	4.146	4.943	11.690

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	8.308	10.170	24.580	27.650	24.690	4.337	0.686	7.642	8.015
2	21:37:07	7.458	8.800	23.580	24.320	23.770	3.027	-0.055	7.042	7.169
3	21:37:35	7.670	9.100	23.770	25.630	24.890	3.222	0.155	7.554	7.874
x		7.812	9.357	23.970	25.860	24.450	3.529	0.262	7.412	7.686
σ		0.442	0.721	0.531	1.674	0.599	0.707	0.382	0.324	0.454
%RSD		5.659	7.709	2.214	6.472	2.449	20.040	145.800	4.374	5.902

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	0.000	0.599	-1.670	18.770	100.8%	1.024	1.042	1.096	0.920
2	21:37:07	0.000	0.915	-0.234	16.440	T 113.1%	0.858	0.954	0.921	1.262
3	21:37:35	0.000	1.535	1.011	17.800	100.6%	0.986	0.825	0.943	0.526
x		0.000	1.016	-0.298	17.670	T 104.8%	0.956	0.940	0.986	0.903
σ		0.000	0.476	1.341	1.170	T 7.1%	0.087	0.109	0.096	0.368
%RSD		0.000	46.860	450.600	6.623	T 6.8	9.049	11.630	9.685	40.770

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	0.058	0.045	0.276	0.238	76.3%	4.184	5.784	0.031	0.028
2	21:37:07	0.041	0.038	0.250	0.293	76.8%	4.088	5.795	0.023	0.052
3	21:37:35	0.048	0.035	0.281	0.294	76.1%	4.280	5.512	0.069	0.008
x		0.049	0.039	0.269	0.275	76.4%	4.184	5.697	0.041	0.029
σ		0.008	0.006	0.017	0.032	0.4%	0.096	0.160	0.024	0.022
%RSD		16.860	14.020	6.307	11.650	0.5	2.293	2.812	59.480	75.360

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:41	60.950	61.600	83.4%	0.202	0.219	64.300	62.860	64.510	77.6%
2	21:37:07	61.680	59.710	83.3%	0.207	0.200	63.390	61.870	63.590	78.9%
3	21:37:35	60.310	60.070	84.0%	0.207	0.208	62.860	61.150	63.140	79.2%
x		60.980	60.460	83.6%	0.205	0.209	63.510	61.960	63.750	78.6%
σ		0.686	1.008	0.4%	0.003	0.009	0.727	0.859	0.701	0.9%
%RSD		1.125	1.667	0.5	1.324	4.527	1.145	1.386	1.100	1.1

CCV MW9737 10/18/2017 21:42:04 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	66.8%	303.100	301.400	305.500	0.352	T 60920.000	T 56080.000	T 55740.000	T 55280.000
2	21:42:58	66.8%	302.500	305.700	306.100	1.992	T 61580.000	T 55840.000	T 55500.000	T 55720.000
3	21:43:25	65.6%	299.100	310.700	307.700	5.808	T 61980.000	T 56180.000	T 56020.000	T 55970.000
x		66.4%	100.517%	101.985%	102.137%	2.718	T 102.485%	T 56030.000	T 55750.000	T 92.765%
σ		0.7%	n/a	n/a	n/a	2.799	T n/a	T 174.200	T 256.800	T n/a
%RSD		1.1	0.720	1.528	0.366	103.000	T 0.873	T 0.311	T 0.461	T 0.625
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	292.400	T 2901.000	3716.000	T 58650.000	57560.000	T 57960.000	58.3%	296.600	291.100
2	21:42:58	288.700	T 2876.000	3787.000	T 59060.000	57770.000	T 57780.000	57.6%	301.000	292.000
3	21:43:25	288.800	T 2902.000	3790.000	T 58910.000	57690.000	T 57730.000	57.2%	300.300	292.000
x		96.652%	T 96.430%	3765.000	T 98.120%	57670.000	T 96.372%	57.7%	99.769%	97.241%
σ		n/a	T n/a	41.780	T n/a	103.400	T n/a	0.6%	n/a	n/a
%RSD		0.733	T 0.493	1.110	T 0.354	0.179	T 0.208	1.0	0.788	0.183
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	296.800	69420.000	T 57980.000	292.800	T 57690.000	T 57750.000	278.900	281.600	271.900
2	21:42:58	296.400	69080.000	T 57020.000	293.000	T 57760.000	T 57630.000	275.500	276.600	282.700
3	21:43:25	292.500	70050.000	T 57300.000	289.000	T 57100.000	T 56740.000	271.400	273.200	279.800
x		98.410%	69520.000	T 57440.000	97.192%	T 57520.000	T 95.623%	91.761%	92.374%	278.100
σ		n/a	491.600	T 494.400	n/a	T 366.600	T n/a	n/a	n/a	5.590
%RSD		0.816	0.707	T 0.861	0.772	T 0.637	T 0.957	1.351	1.533	2.010
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	270.000	277.500	269.700	272.400	276.200	290.800	275.100	1.809	0.207
2	21:42:58	267.600	273.600	270.200	279.800	273.800	292.100	282.000	2.083	-0.015
3	21:43:25	267.400	274.400	274.100	279.100	274.500	293.500	280.300	1.929	-0.078
x		268.300	91.733%	90.446%	277.100	274.900	97.374%	279.100	1.941	0.038
σ		1.435	n/a	n/a	4.048	1.204	n/a	3.566	0.137	0.149
%RSD		0.535	0.743	0.890	1.461	0.438	0.452	1.278	7.078	391.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	0.000	294.200	-0.452	291.500	62.4%	298.600	301.800	302.200	283.200
2	21:42:58	0.000	284.300	-2.642	293.500	61.3%	301.500	299.600	303.600	291.200
3	21:43:25	0.000	289.200	1.211	293.600	60.7%	302.700	307.100	303.300	289.800
x		0.000	96.407%	-0.628	97.626%	61.5%	100.318%	100.943%	303.000	288.100
σ		0.000	n/a	1.932	n/a	0.9%	n/a	n/a	0.721	4.284
%RSD		0.000	1.719	307.900	0.421	1.4	0.693	1.271	0.238	1.487
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	277.600	272.600	283.300	282.800	64.5%	291.100	297.100	303.200	287.000
2	21:42:58	278.300	274.300	286.700	283.800	63.4%	295.000	299.400	308.900	292.100
3	21:43:25	276.000	271.700	286.700	282.300	63.5%	293.300	302.000	309.800	292.200
x		92.433%	272.800	285.600	94.314%	63.8%	97.715%	99.834%	102.436%	96.816%
σ		n/a	1.326	1.958	n/a	0.6%	n/a	n/a	n/a	n/a
%RSD		0.419	0.486	0.686	0.278	1.0	0.672	0.820	1.168	1.027
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:31	290.400	291.500	69.8%	305.000	T 304.300	299.700	304.300	T 309.000	65.4%
2	21:42:58	293.300	290.900	69.5%	300.900	T 302.000	297.500	303.300	T 307.600	65.8%
3	21:43:25	292.300	291.200	69.7%	287.100	T 284.800	280.700	283.200	T 287.100	T 70.5%
x		97.340%	97.066%	69.6%	99.225%	T 99.010%	97.546%	98.984%	T 100.408%	T 67.2%
σ		n/a	n/a	0.1%	n/a	T n/a	n/a	n/a	T n/a	T 2.8%
%RSD		0.507	0.091	0.2	3.141	T 3.586	3.558	4.006	T 4.064	T 4.2

CCB IM8211-01 10/18/2017 21:47:52 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	73.0%	0.043	1.094	1.871	-4.409	16.140	12.600	13.510	13.490
2	21:48:47	73.8%	0.061	0.994	1.301	-8.141	18.820	15.250	15.820	14.770
3	21:49:14	74.0%	0.118	0.433	0.808	-11.960	31.560	27.790	28.020	27.550
x		73.6%	0.074	0.840	1.327	-8.171	22.180	18.550	19.120	18.600
σ		0.5%	0.039	0.356	0.532	3.777	8.239	8.115	7.796	7.774
%RSD		0.7	53.240	42.370	40.090	46.220	37.150	43.750	40.780	41.790

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	3.599	0.247	2379.000	18.430	17.570	-0.675	61.6%	0.117	0.102
2	21:48:47	3.749	-0.328	2465.000	18.870	14.830	-0.426	62.4%	0.170	0.073
3	21:49:14	4.796	1.014	2636.000	30.430	43.920	13.280	62.5%	0.252	0.054
x		4.048	0.311	2493.000	22.570	25.440	4.060	62.2%	0.180	0.076
σ		0.652	0.673	130.600	6.807	16.070	7.987	0.5%	0.068	0.024
%RSD		16.110	216.400	5.240	30.150	63.150	196.700	0.8	38.070	31.140

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	0.051	106.100	13.660	0.129	12.720	14.410	0.049	0.087	-0.543
2	21:48:47	0.096	161.600	16.610	0.145	14.630	13.400	0.091	0.108	-0.657
3	21:49:14	0.165	164.600	28.730	0.202	25.950	26.390	0.139	0.167	-0.957
x		0.104	144.100	19.670	0.159	17.770	18.060	0.093	0.120	-0.719
σ		0.058	32.960	7.992	0.038	7.148	7.225	0.045	0.042	0.214
%RSD		55.340	22.870	40.640	24.220	40.230	40.000	48.360	34.530	29.760

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	0.021	0.048	0.057	0.003	0.051	0.065	0.386	-0.288	-0.279
2	21:48:47	0.039	0.083	0.090	0.078	0.032	0.016	-0.222	-0.710	-0.687
3	21:49:14	0.040	0.191	0.163	0.340	0.086	0.015	0.004	-0.646	-0.552
x		0.034	0.107	0.103	0.140	0.056	0.032	0.056	-0.548	-0.506
σ		0.011	0.074	0.054	0.177	0.027	0.028	0.307	0.227	0.208
%RSD		31.990	69.330	52.580	125.900	47.880	87.770	548.500	41.460	41.110

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	0.000	-0.115	-0.054	0.078	66.7%	0.199	0.144	0.203	0.371
2	21:48:47	0.000	0.018	-2.862	0.098	66.9%	0.110	0.215	0.198	0.233
3	21:49:14	0.000	-0.127	0.533	0.035	68.0%	0.188	0.198	0.164	-0.434
x		0.000	-0.075	-0.794	0.071	67.2%	0.166	0.186	0.188	0.057
σ		0.000	0.081	1.814	0.032	0.7%	0.048	0.037	0.021	0.430
%RSD		0.000	108.000	228.500	45.400	1.0	29.120	19.790	11.320	759.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	0.094	0.098	0.025	0.060	70.2%	0.049	0.069	0.611	0.633
2	21:48:47	0.088	0.095	0.065	0.059	70.2%	0.061	0.097	0.609	0.626
3	21:49:14	0.168	0.151	0.137	0.120	70.6%	0.046	0.164	0.622	0.589
x		0.116	0.114	0.076	0.080	70.3%	0.052	0.110	0.614	0.616
σ		0.044	0.032	0.057	0.035	0.2%	0.008	0.049	0.007	0.024
%RSD		38.190	27.760	74.820	43.800	0.3	14.970	44.200	1.115	3.822

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:48:20	0.044	0.106	72.6%	0.072	0.070	0.068	0.069	0.072	70.6%
2	21:48:47	0.115	0.099	73.7%	0.099	0.083	0.078	0.098	0.085	71.6%
3	21:49:14	0.124	0.137	74.5%	0.160	0.139	0.150	0.139	0.147	73.0%
x		0.094	0.114	73.6%	0.110	0.098	0.099	0.102	0.101	71.7%
σ		0.044	0.020	1.0%	0.045	0.036	0.045	0.035	0.040	1.2%
%RSD		46.370	17.940	1.3	40.950	37.290	45.270	33.980	39.820	1.6

SJ17002-001 10/18/2017 21:53:42

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	88.1%	0.976	12.880	11.840	122.800	166.300	T 3678.000	3889.000	3926.000
2	21:54:36	86.9%	1.242	10.170	13.020	127.200	163.300	T 3652.000	3880.000	3906.000
3	21:55:03	86.9%	1.129	12.050	11.820	112.700	167.400	T 3675.000	3921.000	3963.000
x		87.3%	1.115	11.700	12.230	120.900	165.700	T 3668.000	3897.000	3932.000
σ		0.7%	0.133	1.390	0.689	7.426	2.132	T 14.190	21.620	29.270
%RSD		0.8	11.950	11.880	5.634	6.144	1.287	T 0.387	0.555	0.745
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	TM 53470.000	T 2648.000	T 275300.000	2024.000	1470.000	1391.000	73.8%	M 837.000	85.850
2	21:54:36	TM 52990.000	T 2620.000	T 274300.000	2034.000	1449.000	1381.000	73.4%	M 840.600	84.090
3	21:55:03	TM 53710.000	T 2533.000	T 279700.000	2061.000	1409.000	1389.000	72.5%	M 857.400	84.850
x		TM 53390.000	T 2600.000	T 276500.000	2040.000	1443.000	1387.000	73.2%	M 845.000	84.930
σ		TM 364.200	T 59.890	T 2893.000	19.160	31.010	5.436	0.7%	M 10.910	0.881
%RSD		TM 0.682	T 2.303	T 1.046	0.939	2.149	0.392	0.9	M 1.291	1.038
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	87.100	40840.000	T 35570.000	52.160	T 34980.000	T 34650.000	5.432	12.690	10.950
2	21:54:36	86.050	39990.000	T 35330.000	52.390	T 34650.000	T 34390.000	5.267	12.390	10.510
3	21:55:03	87.420	39560.000	T 35550.000	52.560	T 34890.000	T 34760.000	5.329	12.310	10.300
x		86.860	40130.000	T 35480.000	52.370	T 34840.000	T 34600.000	5.343	12.460	10.590
σ		0.717	652.500	T 130.700	0.198	T 173.000	T 191.000	0.083	0.201	0.330
%RSD		0.825	1.626	T 0.368	0.378	T 0.497	T 0.552	1.557	1.614	3.111
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	1.329	1.850	28.500	32.760	28.940	13.150	0.190	6.408	5.269
2	21:54:36	1.284	1.741	28.400	31.560	28.370	13.610	0.104	4.990	5.397
3	21:55:03	1.396	1.679	28.800	33.210	29.710	13.970	0.428	6.858	6.227
x		1.337	1.756	28.570	32.510	29.000	13.570	0.241	6.085	5.631
σ		0.056	0.086	0.209	0.850	0.670	0.412	0.168	0.975	0.520
%RSD		4.217	4.924	0.731	2.616	2.311	3.037	69.700	16.020	9.239
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	0.000	1.728	1.047	137.800	113.0%	0.681	0.741	0.749	6.256
2	21:54:36	0.000	0.927	2.645	136.000	111.9%	0.637	0.778	0.739	5.008
3	21:55:03	0.000	0.255	4.668	136.700	111.7%	0.746	0.729	0.680	4.371
x		0.000	0.970	2.786	136.800	112.2%	0.688	0.749	0.723	5.212
σ		0.000	0.737	1.815	0.890	0.7%	0.055	0.025	0.037	0.959
%RSD		0.000	76.050	65.130	0.651	0.6	7.927	3.396	5.160	18.400
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	0.052	0.038	0.013	0.012	75.3%	4.228	5.643	0.726	0.682
2	21:54:36	0.042	0.036	-0.006	0.004	74.9%	4.246	5.663	0.635	0.583
3	21:55:03	0.062	0.032	0.023	0.013	74.9%	4.151	5.417	0.584	0.542
x		0.052	0.035	0.010	0.010	75.1%	4.208	5.574	0.648	0.602
σ		0.010	0.003	0.015	0.005	0.2%	0.050	0.137	0.072	0.072
%RSD		19.330	8.066	152.000	52.490	0.3	1.194	2.450	11.110	11.960
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:09	144.300	144.600	82.1%	0.367	0.340	27.650	25.770	27.000	78.1%
2	21:54:36	145.400	143.700	82.3%	0.377	0.352	27.370	26.140	27.190	77.8%
3	21:55:03	147.400	144.700	82.1%	0.375	0.344	27.570	26.100	27.360	78.4%
x		145.700	144.300	82.2%	0.373	0.345	27.530	26.000	27.180	78.1%
σ		1.539	0.533	0.1%	0.005	0.006	0.146	0.202	0.177	0.3%
%RSD		1.056	0.369	0.1	1.450	1.843	0.529	0.777	0.650	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	86.0%	205.700	232.000	234.100	52.470	T 2408.000	T 6591.000	T 6702.000	T 6682.000
2	22:00:26	84.8%	206.500	230.500	233.700	52.440	T 2426.000	T 6641.000	T 6728.000	7233.000
3	22:00:54	86.2%	204.200	226.000	230.300	50.630	T 2442.000	T 6603.000	7172.000	T 6686.000
x		85.7%	205.500	229.500	232.700	51.850	T 2425.000	T 6611.000	T 6867.000	T 6867.000
σ		0.8%	1.215	3.151	2.117	1.055	T 17.000	T 25.950	T 264.500	T 316.900
%RSD		0.9	0.591	1.373	0.910	2.034	T 0.701	T 0.393	T 3.851	T 4.614

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	TM 83460.000	T 2391.000	T 272400.000	T 6658.000	16130.000	16170.000	71.7%	M 1515.000	307.500
2	22:00:26	TM 83610.000	T 2286.000	T 272700.000	T 6695.000	15590.000	16010.000	71.6%	M 1503.000	306.600
3	22:00:54	TM 82710.000	T 2297.000	T 273100.000	T 6735.000	15670.000	16110.000	70.5%	TM 1669.000	305.700
x		TM 83260.000	T 2324.000	T 272700.000	T 6696.000	15800.000	16100.000	71.3%	TM 1562.000	306.600
σ		TM 481.700	T 57.780	T 316.400	T 38.800	291.600	80.260	0.7%	TM 92.770	0.900
%RSD		TM 0.579	T 2.486	T 0.116	T 0.580	1.846	0.499	0.9	TM 5.939	0.293

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	298.000	87440.000	T 41420.000	251.300	T 40720.000	T 40230.000	189.800	200.700	179.100
2	22:00:26	295.600	85810.000	T 41140.000	248.600	T 40200.000	T 40110.000	187.900	199.200	174.400
3	22:00:54	298.600	86370.000	T 41610.000	250.900	T 40680.000	T 40280.000	189.000	199.500	170.500
x		297.400	86540.000	T 41390.000	250.300	T 40530.000	T 40210.000	188.900	199.800	174.700
σ		1.625	824.200	T 236.400	1.468	T 289.200	T 91.610	0.995	0.802	4.312
%RSD		0.546	0.952	T 0.571	0.587	T 0.714	T 0.228	0.527	0.401	2.468

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	159.800	188.500	180.800	183.500	179.900	196.600	128.100	6.001	5.433
2	22:00:26	160.100	186.700	182.500	188.000	181.000	190.600	125.200	4.839	4.923
3	22:00:54	158.200	187.500	184.500	186.000	180.700	194.100	125.700	5.173	5.255
x		159.300	187.600	182.600	185.800	180.500	193.800	126.300	5.338	5.204
σ		1.030	0.886	1.874	2.239	0.565	3.025	1.564	0.598	0.259
%RSD		0.646	0.472	1.026	1.205	0.313	1.561	1.238	11.210	4.975

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	0.000	172.400	7.222	293.600	113.2%	133.000	139.800	141.600	186.400
2	22:00:26	0.000	171.500	10.960	296.800	111.3%	134.000	139.800	141.200	184.100
3	22:00:54	0.000	172.900	6.255	293.600	112.0%	133.800	140.700	140.900	186.100
x		0.000	172.300	8.145	294.700	112.2%	133.600	140.100	141.200	185.500
σ		0.000	0.689	2.483	1.854	0.9%	0.544	0.528	0.341	1.262
%RSD		0.000	0.400	30.480	0.629	0.8	0.407	0.377	0.242	0.680

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	194.700	173.900	185.800	194.100	73.2%	196.900	195.500	138.600	131.300
2	22:00:26	195.800	175.000	186.900	197.300	72.0%	198.400	198.800	140.300	133.300
3	22:00:54	195.800	174.800	187.700	198.100	72.0%	198.300	197.700	140.800	134.100
x		195.400	174.600	186.800	196.500	72.4%	197.900	197.300	139.900	132.900
σ		0.658	0.574	0.976	2.121	0.7%	0.802	1.710	1.164	1.436
%RSD		0.337	0.329	0.522	1.080	0.9	0.406	0.867	0.832	1.080

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:59	436.400	438.600	79.6%	212.600	T 216.100	T 247.500	242.900	252.600	74.2%
2	22:00:26	435.700	435.600	80.1%	207.600	T 212.800	234.900	236.600	245.800	76.0%
3	22:00:54	437.200	438.400	81.2%	207.600	T 213.900	236.300	237.900	246.100	76.5%
x		436.400	437.600	80.3%	209.200	T 214.300	T 239.600	239.100	248.200	75.6%
σ		0.721	1.684	0.8%	2.868	T 1.664	T 6.894	3.323	3.811	1.2%
%RSD		0.165	0.385	1.0	1.370	T 0.777	T 2.878	1.390	1.536	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	88.2%	226.300	258.500	262.400	66.320	T 2723.000	T 7195.000	T 7322.000	T 7235.000
2	22:06:17	88.2%	225.900	255.900	257.500	58.880	T 2731.000	T 7186.000	7817.000	T 7235.000
3	22:06:44	87.1%	224.900	254.800	259.100	66.640	T 2714.000	T 7178.000	T 7334.000	T 7285.000
x		87.9%	225.700	256.400	259.700	63.940	T 2723.000	T 7186.000	T 7491.000	T 7251.000
σ		0.6%	0.733	1.875	2.501	4.391	T 8.219	T 8.669	T 282.400	T 28.760
%RSD		0.7	0.325	0.731	0.963	6.866	T 0.302	T 0.121	T 3.770	T 0.397
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	TM 91490.000	T 2720.000	T 350200.000	T 7540.000	4813.000	4815.000	73.9%	M 1803.000	345.800
2	22:06:17	TM 91110.000	T 2666.000	T 350000.000	T 7664.000	4995.000	4802.000	72.6%	TM 2011.000	338.900
3	22:06:44	TM 91980.000	T 2680.000	T 347200.000	T 7600.000	4842.000	4757.000	72.6%	M 1788.000	335.500
x		TM 91530.000	T 2689.000	T 349100.000	T 7602.000	4884.000	4791.000	73.0%	TM 1867.000	340.000
σ		TM 437.100	T 28.370	T 1709.000	T 62.340	97.650	30.740	0.8%	TM 124.800	5.266
%RSD		TM 0.478	T 1.055	T 0.489	T 0.820	1.999	0.642	1.1	TM 6.685	1.549
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	326.900	91200.000	T 43890.000	276.000	T 42750.000	T 42310.000	210.000	220.100	193.300
2	22:06:17	330.800	92150.000	T 43430.000	273.900	T 42750.000	T 42550.000	208.600	219.600	184.400
3	22:06:44	324.900	89960.000	T 43210.000	273.500	T 42580.000	T 41870.000	207.400	218.500	191.200
x		327.500	91100.000	T 43510.000	274.500	T 42690.000	T 42240.000	208.700	219.400	189.600
σ		3.023	1095.000	T 350.800	1.377	T 93.990	T 345.300	1.273	0.786	4.616
%RSD		0.923	1.202	T 0.806	0.502	T 0.220	T 0.818	0.610	0.358	2.434
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	176.500	209.000	201.700	202.800	203.100	204.800	134.500	10.310	9.556
2	22:06:17	174.900	208.800	201.900	209.200	199.600	209.400	126.400	9.665	9.958
3	22:06:44	171.800	206.300	203.600	203.200	200.900	202.800	132.800	9.033	9.918
x		174.400	208.100	202.400	205.100	201.200	205.700	131.200	9.670	9.811
σ		2.364	1.519	1.040	3.604	1.752	3.355	4.285	0.640	0.221
%RSD		1.356	0.730	0.514	1.757	0.871	1.631	3.265	6.617	2.257
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	0.000	180.800	8.165	304.400	118.5%	147.600	154.000	156.800	201.900
2	22:06:17	0.000	184.300	7.752	306.700	119.0%	146.100	155.500	155.600	203.500
3	22:06:44	0.000	175.700	7.941	306.500	116.9%	146.800	154.600	155.800	210.100
x		0.000	180.200	7.953	305.900	118.1%	146.800	154.700	156.100	205.200
σ		0.000	4.323	0.207	1.265	1.1%	0.745	0.757	0.623	4.351
%RSD		0.000	2.398	2.603	0.413	0.9	0.508	0.490	0.399	2.121
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	219.100	193.900	209.000	218.700	73.7%	225.000	225.100	162.800	154.200
2	22:06:17	214.800	192.400	209.200	220.300	73.3%	224.400	226.200	163.400	153.600
3	22:06:44	216.400	192.200	209.800	221.000	73.0%	222.500	227.200	163.300	154.000
x		216.800	192.800	209.300	220.000	73.3%	224.000	226.200	163.200	153.900
σ		2.181	0.940	0.422	1.173	0.3%	1.311	1.050	0.362	0.270
%RSD		1.006	0.488	0.202	0.533	0.4	0.585	0.464	0.222	0.175
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:50	492.100	489.600	81.7%	228.100	T 229.000	259.100	260.700	T 264.700	T 79.4%
2	22:06:17	489.900	490.000	82.8%	232.500	T 233.500	267.100	265.000	T 270.600	77.8%
3	22:06:44	490.900	488.100	83.2%	224.500	T 225.800	256.400	256.200	T 261.500	T 80.4%
x		490.900	489.200	82.6%	228.400	T 229.400	260.900	260.600	T 265.600	T 79.2%
σ		1.108	1.007	0.8%	3.988	T 3.863	5.531	4.392	T 4.611	T 1.3%
%RSD		0.226	0.206	0.9	1.746	T 1.684	2.120	1.685	T 1.736	T 1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	84.6%	0.358	3.746	4.258	16.460	26.380	950.800	928.000	933.100
2	22:12:08	85.6%	0.296	3.665	4.267	16.730	25.460	913.500	900.100	894.600
3	22:12:35	86.9%	0.340	3.651	3.388	20.370	24.290	887.300	857.100	866.700
x		85.7%	0.331	3.687	3.971	17.850	25.380	917.200	895.100	898.100
σ		1.2%	0.032	0.052	0.505	2.181	1.049	31.910	35.720	33.360
%RSD		1.3	9.681	1.400	12.710	12.210	4.135	3.479	3.991	3.715

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	TM 12920.000	T 608.200	T 66200.000	476.100	334.500	333.400	70.9%	204.000	20.070
2	22:12:08	TM 12440.000	T 645.200	T 64260.000	453.000	292.100	314.800	71.6%	203.300	19.640
3	22:12:35	TM 12220.000	T 545.400	T 63170.000	446.000	328.600	305.200	72.1%	189.600	20.130
x		TM 12520.000	T 599.600	T 64540.000	458.400	318.400	317.800	71.5%	198.900	19.950
σ		TM 357.300	T 50.480	T 1534.000	15.770	22.980	14.310	0.6%	8.101	0.266
%RSD		TM 2.853	T 8.419	T 2.377	3.441	7.216	4.503	0.9	4.072	1.333

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	21.460	9768.000	10130.000	13.450	T 9194.000	9807.000	1.366	3.631	2.363
2	22:12:08	20.520	9018.000	9569.000	12.970	T 8705.000	9330.000	1.346	3.304	1.871
3	22:12:35	19.990	8629.000	9485.000	12.740	T 8578.000	9086.000	1.308	3.116	2.106
x		20.660	9138.000	9729.000	13.060	T 8826.000	9408.000	1.340	3.350	2.114
σ		0.743	578.800	353.500	0.362	T 325.400	367.000	0.030	0.261	0.246
%RSD		3.594	6.334	3.633	2.774	T 3.687	3.901	2.220	7.788	11.640

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	0.380	0.445	8.336	10.470	8.391	3.304	0.144	1.205	1.432
2	22:12:08	0.349	0.449	7.829	8.757	7.875	3.478	-0.001	0.547	1.457
3	22:12:35	0.291	0.398	7.821	9.036	7.960	3.401	0.107	1.440	1.269
x		0.340	0.431	7.995	9.420	8.075	3.394	0.083	1.064	1.386
σ		0.045	0.029	0.295	0.918	0.276	0.087	0.076	0.462	0.102
%RSD		13.270	6.670	3.685	9.747	3.423	2.572	90.840	43.460	7.367

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	0.000	0.805	0.027	43.170	84.4%	0.097	0.258	0.149	1.264
2	22:12:08	0.000	0.595	0.255	41.840	85.2%	0.091	0.132	0.205	1.314
3	22:12:35	0.000	0.710	0.006	41.090	84.5%	0.102	0.158	0.160	0.465
x		0.000	0.703	0.096	42.030	84.7%	0.097	0.183	0.171	1.014
σ		0.000	0.105	0.138	1.053	0.4%	0.006	0.066	0.030	0.477
%RSD		0.000	14.950	144.000	2.505	0.5	5.901	36.370	17.540	46.980

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	0.055	0.039	0.038	0.035	78.4%	0.841	1.117	-0.053	-0.033
2	22:12:08	0.042	0.047	0.049	0.042	79.5%	0.823	1.168	-0.056	-0.013
3	22:12:35	0.060	0.053	0.059	0.061	79.3%	0.810	1.103	-0.045	-0.023
x		0.053	0.046	0.049	0.046	79.1%	0.825	1.129	-0.052	-0.023
σ		0.009	0.007	0.011	0.014	0.5%	0.015	0.034	0.006	0.010
%RSD		17.810	15.780	22.290	29.400	0.7	1.859	3.038	11.500	44.630

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:11:41	34.840	34.280	81.1%	0.186	0.199	6.537	6.264	6.438	78.4%
2	22:12:08	32.170	32.640	83.4%	0.202	0.181	6.213	6.073	6.192	80.4%
3	22:12:35	32.840	32.820	83.8%	0.168	0.185	5.927	5.805	5.994	81.3%
x		33.280	33.250	82.8%	0.185	0.188	6.226	6.047	6.208	80.0%
σ		1.386	0.897	1.5%	0.017	0.010	0.305	0.230	0.222	1.5%
%RSD		4.164	2.699	1.8	9.312	5.211	4.900	3.810	3.582	1.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	84.2%	192.000	215.800	213.600	95.860	T 2121.000	T 5126.000	5543.000	5600.000
2	22:17:58	82.9%	197.300	220.300	215.800	100.600	T 2185.000	T 5210.000	5622.000	5642.000
3	22:18:25	81.9%	199.200	213.500	214.800	94.500	T 2206.000	T 5275.000	5642.000	5700.000
x		83.0%	196.200	216.500	214.700	96.990	T 2171.000	T 5204.000	5602.000	5648.000
σ		1.1%	3.735	3.448	1.098	3.217	T 44.240	T 74.500	52.550	50.260
%RSD		1.4	1.904	1.592	0.511	3.317	T 2.038	T 1.432	0.938	0.890
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	TM 49520.000	T 3749.000	T 257100.000	T 3713.000	3229.000	3118.000	69.4%	M 958.200	256.800
2	22:17:58	TM 49740.000	T 3973.000	T 261200.000	T 3747.000	3239.000	3086.000	69.1%	M 962.700	258.700
3	22:18:25	TM 50250.000	T 3925.000	T 264300.000	T 3810.000	3242.000	3132.000	67.5%	M 976.600	257.400
x		TM 49830.000	T 3883.000	T 260900.000	T 3756.000	3237.000	3112.000	68.7%	M 965.800	257.600
σ		TM 375.300	T 117.800	T 3636.000	T 49.090	6.913	23.820	1.0%	M 9.598	0.952
%RSD		TM 0.753	T 3.034	T 1.394	T 1.307	0.214	0.766	1.5	M 0.994	0.370
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	264.600	73810.000	T 34810.000	218.600	T 34150.000	T 34190.000	179.900	185.300	164.200
2	22:17:58	266.400	73780.000	T 34880.000	222.600	T 34650.000	T 34600.000	180.600	185.800	164.300
3	22:18:25	265.900	72780.000	T 34940.000	220.800	T 34670.000	T 34300.000	180.800	186.100	161.100
x		265.700	73460.000	T 34870.000	220.700	T 34490.000	T 34360.000	180.400	185.700	163.200
σ		0.938	584.000	T 64.410	1.999	T 295.900	T 209.000	0.511	0.414	1.841
%RSD		0.353	0.795	T 0.185	0.906	T 0.858	T 0.608	0.283	0.223	1.128
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	158.400	183.800	179.200	178.800	175.300	192.300	131.900	6.048	5.571
2	22:17:58	158.600	185.300	180.400	181.700	177.400	190.000	137.500	5.211	4.698
3	22:18:25	158.500	186.000	179.900	177.600	176.300	192.600	134.900	4.594	4.847
x		158.500	185.000	179.800	179.400	176.300	191.600	134.800	5.284	5.039
σ		0.120	1.153	0.597	2.123	1.031	1.417	2.815	0.729	0.467
%RSD		0.075	0.623	0.332	1.183	0.585	0.739	2.089	13.800	9.268
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	0.000	180.400	3.155	258.200	105.0%	142.800	148.900	151.100	174.100
2	22:17:58	0.000	179.800	2.031	262.400	104.2%	144.100	150.000	150.900	177.900
3	22:18:25	0.000	182.400	0.910	261.700	103.6%	142.400	149.800	149.100	171.800
x		0.000	180.900	2.032	260.800	104.3%	143.100	149.600	150.300	174.600
σ		0.000	1.369	1.123	2.241	0.7%	0.875	0.595	1.100	3.103
%RSD		0.000	0.757	55.250	0.859	0.7	0.611	0.398	0.732	1.777
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	187.500	168.900	182.500	189.200	71.6%	197.300	202.900	204.600	192.800
2	22:17:58	185.800	169.400	183.400	189.800	72.0%	197.300	203.400	204.700	193.900
3	22:18:25	183.000	166.000	181.500	188.900	72.1%	196.600	200.800	202.300	192.800
x		185.400	168.100	182.500	189.300	71.9%	197.100	202.400	203.800	193.200
σ		2.301	1.818	0.927	0.472	0.3%	0.413	1.360	1.383	0.641
%RSD		1.241	1.082	0.508	0.250	0.4	0.210	0.672	0.679	0.332
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:17:31	329.200	327.600	80.2%	194.300	T 199.000	218.000	218.900	224.500	76.5%
2	22:17:58	329.400	328.600	81.1%	195.300	T 201.200	T 224.600	219.700	229.100	76.6%
3	22:18:25	325.800	328.100	80.8%	197.600	T 202.100	T 226.600	220.400	229.100	76.1%
x		328.200	328.100	80.7%	195.700	T 200.800	T 223.100	219.600	227.600	76.4%
σ		2.009	0.493	0.4%	1.676	T 1.576	T 4.487	0.769	2.651	0.3%
%RSD		0.612	0.150	0.6	0.856	T 0.785	T 2.011	0.350	1.165	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	90.1%	2.303	18.200	18.430	113.800	232.200	T 4714.000	5104.000	5112.000
2	22:23:48	90.3%	2.290	21.460	18.410	118.500	233.200	T 4697.000	5094.000	5101.000
3	22:24:15	89.7%	2.275	18.070	18.970	112.500	234.800	T 4727.000	5066.000	5131.000
x		90.0%	2.289	19.250	18.600	114.900	233.400	T 4713.000	5088.000	5115.000
σ		0.3%	0.014	1.923	0.319	3.154	1.307	T 14.730	20.000	15.060
%RSD		0.4	0.593	9.993	1.717	2.745	0.560	T 0.313	0.393	0.294

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	TM 59820.000	T 1430.000	T 334600.000	T 2618.000	2380.000	2270.000	76.0%	M 1104.000	103.200
2	22:23:48	TM 59700.000	T 1394.000	T 331000.000	T 2592.000	2258.000	2253.000	75.9%	M 1087.000	100.300
3	22:24:15	TM 59710.000	T 1315.000	T 330800.000	T 2616.000	2309.000	2239.000	75.1%	M 1099.000	102.000
x		TM 59740.000	T 1380.000	T 332100.000	T 2608.000	2316.000	2254.000	75.7%	M 1097.000	101.800
σ		TM 63.980	T 58.890	T 2169.000	T 14.460	61.430	15.730	0.5%	M 8.747	1.460
%RSD		TM 0.107	T 4.268	T 0.653	T 0.554	2.652	0.698	0.6	M 0.797	1.435

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	90.920	38280.000	T 39140.000	84.570	T 38080.000	T 37520.000	9.892	18.500	13.990
2	22:23:48	90.110	36840.000	T 38760.000	84.620	T 37730.000	T 37110.000	9.835	18.770	15.370
3	22:24:15	89.820	36650.000	T 38480.000	83.450	T 37780.000	T 37090.000	10.140	19.230	14.340
x		90.280	37260.000	T 38790.000	84.210	T 37860.000	T 37240.000	9.955	18.830	14.570
σ		0.568	888.400	T 329.500	0.659	T 191.500	T 240.800	0.161	0.368	0.714
%RSD		0.629	2.385	T 0.849	0.783	T 0.506	T 0.647	1.615	1.954	4.904

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	2.327	3.173	33.670	36.740	33.790	11.130	-0.727	6.538	5.759
2	22:23:48	2.408	3.132	33.650	35.990	34.100	12.940	-0.615	6.119	5.738
3	22:24:15	2.121	3.226	34.370	34.500	34.330	11.130	-0.249	5.693	5.129
x		2.285	3.177	33.890	35.740	34.070	11.730	-0.530	6.117	5.542
σ		0.148	0.047	0.410	1.139	0.268	1.042	0.250	0.423	0.358
%RSD		6.471	1.474	1.211	3.186	0.788	8.877	47.190	6.907	6.455

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	0.000	0.134	3.429	69.090	153.4%	0.748	0.966	0.880	4.695
2	22:23:48	0.000	1.105	2.362	69.120	154.5%	0.696	0.912	0.862	5.552
3	22:24:15	0.000	0.517	3.116	69.060	153.2%	0.790	0.883	0.892	5.508
x		0.000	0.585	2.969	69.090	153.7%	0.745	0.920	0.878	5.252
σ		0.000	0.489	0.548	0.028	0.7%	0.047	0.042	0.016	0.483
%RSD		0.000	83.600	18.470	0.040	0.5	6.326	4.543	1.771	9.187

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	0.066	0.040	0.026	-0.008	76.8%	4.462	5.858	0.096	0.112
2	22:23:48	0.055	0.037	0.035	-0.000	77.0%	4.463	5.737	0.106	0.117
3	22:24:15	0.064	0.042	0.053	0.074	76.9%	4.441	5.904	0.111	0.102
x		0.062	0.040	0.038	0.022	76.9%	4.455	5.833	0.105	0.110
σ		0.006	0.003	0.014	0.045	0.1%	0.012	0.086	0.008	0.007
%RSD		9.358	6.941	36.440	208.600	0.1	0.278	1.482	7.335	6.762

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:23:20	138.900	138.400	85.2%	0.709	0.716	26.610	25.160	26.320	78.5%
2	22:23:48	139.500	138.600	86.1%	0.743	0.737	26.130	24.480	25.970	79.6%
3	22:24:15	140.800	139.200	86.6%	0.682	0.744	26.170	24.950	26.120	79.7%
x		139.700	138.700	86.0%	0.711	0.732	26.300	24.860	26.140	79.2%
σ		0.985	0.405	0.7%	0.031	0.014	0.268	0.349	0.178	0.7%
%RSD		0.705	0.292	0.8	4.336	1.942	1.018	1.403	0.679	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	88.3%	1.962	14.300	13.960	105.400	151.600	T 3550.000	3810.000	3811.000
2	22:29:38	87.7%	1.558	13.140	13.530	105.200	150.000	T 3516.000	3780.000	3792.000
3	22:30:05	88.9%	1.585	15.600	13.860	114.700	148.700	T 3469.000	3692.000	3710.000
x		88.3%	1.702	14.350	13.780	108.400	150.100	T 3512.000	3761.000	3771.000
σ		0.6%	0.226	1.232	0.225	5.456	1.464	T 40.500	61.430	53.600
%RSD		0.7	13.270	8.584	1.633	5.032	0.976	T 1.153	1.634	1.422
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	TM 44220.000	T 2502.000	T 313700.000	2345.000	4604.000	4733.000	72.8%	M 859.200	62.020
2	22:29:38	TM 44030.000	T 2540.000	T 312700.000	T 2263.000	4726.000	4700.000	71.7%	M 852.800	61.310
3	22:30:05	TM 43170.000	T 2357.000	T 305000.000	T 2221.000	4630.000	4642.000	72.1%	M 840.700	60.830
x		TM 43810.000	T 2466.000	T 310500.000	T 2276.000	4654.000	4692.000	72.2%	M 850.900	61.390
σ		TM 557.900	T 96.860	T 4759.000	T 63.250	64.220	45.580	0.5%	M 9.409	0.598
%RSD		TM 1.273	T 3.928	T 1.533	T 2.779	1.380	0.972	0.7	M 1.106	0.975
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	74.290	35120.000	T 24820.000	76.900	T 24370.000	T 24660.000	7.142	14.380	11.110
2	22:29:38	73.770	34700.000	T 24470.000	75.050	T 23860.000	26030.000	6.975	13.730	10.740
3	22:30:05	72.100	33720.000	T 23980.000	73.770	T 23690.000	25790.000	6.850	13.630	10.250
x		73.390	34510.000	T 24420.000	75.240	T 23970.000	T 25490.000	6.989	13.910	10.700
σ		1.145	720.000	T 422.100	1.571	T 356.300	T 728.800	0.147	0.405	0.434
%RSD		1.560	2.086	T 1.728	2.088	T 1.486	T 2.859	2.099	2.909	4.054
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	2.569	3.682	28.740	28.730	28.360	5.787	-0.439	5.629	6.071
2	22:29:38	2.599	3.262	28.170	30.700	29.050	6.700	-0.863	6.582	5.724
3	22:30:05	2.517	3.251	28.190	30.380	27.800	6.621	-0.440	5.780	5.365
x		2.562	3.399	28.360	29.940	28.400	6.369	-0.581	5.997	5.720
σ		0.042	0.246	0.323	1.057	0.627	0.506	0.244	0.512	0.353
%RSD		1.628	7.227	1.137	3.531	2.208	7.943	42.050	8.544	6.179
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	0.000	0.624	1.773	48.020	129.9%	0.379	0.404	0.446	3.383
2	22:29:38	0.000	0.458	2.427	47.850	129.0%	0.361	0.441	0.413	3.924
3	22:30:05	0.000	0.831	0.069	47.380	128.3%	0.341	0.456	0.491	3.657
x		0.000	0.638	1.423	47.750	129.1%	0.361	0.434	0.450	3.654
σ		0.000	0.187	1.218	0.333	0.8%	0.019	0.026	0.039	0.271
%RSD		0.000	29.300	85.550	0.698	0.6	5.256	6.101	8.681	7.404
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	0.039	0.025	0.029	-0.016	76.5%	4.156	5.321	0.022	0.038
2	22:29:38	0.048	0.009	0.029	0.014	75.5%	4.058	5.291	0.031	0.053
3	22:30:05	0.049	0.028	0.029	0.021	76.1%	4.342	5.250	0.016	0.029
x		0.045	0.021	0.029	0.006	76.0%	4.185	5.287	0.023	0.040
σ		0.005	0.010	0.000	0.020	0.5%	0.144	0.036	0.007	0.012
%RSD		12.180	47.740	1.058	325.300	0.6	3.443	0.672	31.360	30.940
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:29:11	89.310	87.680	84.2%	0.421	0.395	21.130	19.750	21.030	77.5%
2	22:29:38	89.390	88.860	85.0%	0.399	0.386	20.680	19.670	20.630	78.4%
3	22:30:05	88.310	87.760	85.7%	0.376	0.394	20.840	19.440	20.530	78.8%
x		89.000	88.100	85.0%	0.399	0.391	20.880	19.620	20.730	78.2%
σ		0.599	0.662	0.8%	0.022	0.005	0.226	0.164	0.265	0.6%
%RSD		0.673	0.751	0.9	5.580	1.256	1.082	0.838	1.277	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	66.5%	305.900	312.500	309.200	-2.914	T 62150.000	T 56220.000	T 56330.000	T 55790.000
2	22:35:29	65.9%	295.400	307.300	309.500	3.783	T 61480.000	T 55230.000	T 55640.000	T 55340.000
3	22:35:56	65.3%	300.300	298.600	304.300	-0.288	T 62340.000	T 56320.000	T 55960.000	T 55810.000
x		65.9%	100.179%	102.045%	102.547%	0.194	T 103.316%	T 55920.000	T 55980.000	T 92.740%
σ		0.6%	n/a	n/a	n/a	3.374	T n/a	T 601.500	T 346.700	T n/a
%RSD		0.9	1.745	2.289	0.955	1743.000	T 0.730	T 1.076	T 0.619	T 0.481
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	296.400	T 2922.000	3662.000	T 59940.000	58570.000	T 57840.000	56.9%	300.200	293.600
2	22:35:29	292.400	T 2880.000	3671.000	T 59200.000	57690.000	T 57630.000	56.5%	304.000	290.400
3	22:35:56	297.600	3170.000	3741.000	T 59730.000	58200.000	T 57990.000	55.5%	292.200	288.400
x		98.491%	T 99.688%	3691.000	T 99.376%	58160.000	T 96.368%	56.3%	99.589%	96.924%
σ		n/a	T n/a	43.340	T n/a	445.200	T n/a	0.7%	n/a	n/a
%RSD		0.923	T 5.240	1.174	T 0.638	0.766	T 0.311	1.3	2.018	0.907
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	297.600	70400.000	T 57700.000	296.900	T 58520.000	T 58440.000	279.500	280.400	280.700
2	22:35:29	292.300	68850.000	T 56960.000	293.200	T 57770.000	T 57450.000	275.500	276.700	274.900
3	22:35:56	296.800	69140.000	T 57370.000	293.800	T 57010.000	T 57390.000	274.500	275.500	278.600
x		98.524%	69460.000	T 57340.000	98.225%	T 57760.000	T 96.267%	92.164%	92.498%	278.100
σ		n/a	826.600	T 368.100	n/a	T 755.400	T n/a	n/a	n/a	2.980
%RSD		0.974	1.190	T 0.642	0.674	T 1.308	T 1.021	0.961	0.925	1.072
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	274.100	280.200	274.400	278.400	277.400	295.400	278.500	2.572	-0.178
2	22:35:29	266.100	271.000	271.100	278.400	272.400	292.500	280.600	1.974	-0.132
3	22:35:56	264.500	275.600	271.100	274.300	274.300	290.900	275.600	1.390	-0.662
x		268.300	91.863%	90.739%	277.000	274.700	97.647%	278.200	1.979	-0.324
σ		5.140	n/a	n/a	2.355	2.500	n/a	2.497	0.591	0.294
%RSD		1.916	1.666	0.709	0.850	0.910	0.769	0.897	29.850	90.780
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	0.000	293.600	0.818	293.300	60.9%	304.000	310.000	305.500	291.700
2	22:35:29	0.000	286.300	0.812	292.200	61.0%	296.600	301.500	297.800	286.500
3	22:35:56	0.000	287.100	2.069	289.800	60.1%	297.200	301.100	298.100	284.700
x		0.000	96.331%	1.233	97.249%	60.7%	99.752%	101.393%	300.500	287.600
σ		0.000	n/a	0.724	n/a	0.5%	n/a	n/a	4.377	3.632
%RSD		0.000	1.376	58.710	0.601	0.8	1.362	1.645	1.457	1.263
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	282.500	274.900	292.200	284.300	63.5%	295.300	304.200	307.100	289.200
2	22:35:29	270.300	266.300	279.600	276.100	64.1%	287.300	294.900	301.500	287.100
3	22:35:56	271.900	269.100	282.400	279.300	63.1%	291.000	295.600	304.600	289.100
x		91.630%	270.100	284.700	93.306%	63.5%	97.068%	99.411%	101.464%	96.156%
σ		n/a	4.352	6.613	n/a	0.5%	n/a	n/a	n/a	n/a
%RSD		2.401	1.611	2.323	1.476	0.8	1.366	1.751	0.916	0.407
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:02	294.700	293.000	68.7%	305.700	T 303.200	295.800	302.400	T 305.500	66.1%
2	22:35:29	289.000	288.400	69.5%	299.300	T 297.500	292.400	296.900	T 300.700	66.4%
3	22:35:56	289.900	287.100	69.3%	286.600	T 286.400	282.500	285.500	T 289.300	T 69.4%
x		97.064%	96.503%	69.2%	99.065%	T 98.568%	96.742%	98.312%	T 99.501%	T 67.3%
σ		n/a	n/a	0.4%	n/a	T n/a	n/a	n/a	T n/a	T 1.9%
%RSD		1.052	1.081	0.6	3.275	T 2.891	2.384	2.930	T 2.788	T 2.8

CCB IM8211-01 10/18/2017 22:40:24 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	72.0%	0.152	2.585	2.169	-6.991	35.770	27.670	28.120	26.800
2	22:41:17	72.9%	0.091	2.265	1.890	-8.723	38.980	34.160	33.950	34.660
3	22:41:44	73.1%	0.188	1.040	1.783	-12.840	53.640	48.830	48.820	50.020
x		72.6%	0.143	1.963	1.948	-9.517	42.790	36.890	36.960	37.160
σ		0.6%	0.049	0.815	0.199	3.002	9.529	10.840	10.680	11.810
%RSD		0.8	33.960	41.520	10.240	31.540	22.270	29.390	28.880	31.790

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	7.219	1.484	2203.000	38.850	27.670	14.570	61.1%	0.316	0.101
2	22:41:17	9.167	0.919	2303.000	38.330	32.490	21.060	61.3%	0.258	0.125
3	22:41:44	13.480	1.734	2401.000	52.010	51.190	35.790	61.2%	0.372	0.176
x		9.957	1.379	2303.000	43.070	37.120	23.810	61.2%	0.315	0.134
σ		3.206	0.417	98.980	7.754	12.430	10.870	0.1%	0.057	0.038
%RSD		32.200	30.270	4.299	18.000	33.480	45.660	0.2	18.060	28.530

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	0.176	204.200	32.730	0.191	28.690	30.300	0.140	0.279	-0.773
2	22:41:17	0.128	175.800	38.480	0.242	36.630	34.290	0.162	0.148	-0.246
3	22:41:44	0.207	211.000	53.250	0.324	53.800	57.710	0.247	0.225	-1.129
x		0.170	197.000	41.490	0.252	39.710	40.770	0.183	0.217	-0.716
σ		0.040	18.690	10.580	0.067	12.830	14.810	0.056	0.066	0.444
%RSD		23.480	9.487	25.510	26.520	32.320	36.320	30.780	30.180	62.020

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	0.047	0.167	0.115	0.239	0.039	0.177	0.455	-1.083	-0.671
2	22:41:17	0.097	0.160	0.099	0.080	0.092	0.040	-0.087	-1.247	-0.676
3	22:41:44	0.200	0.241	0.260	0.389	0.272	0.271	0.323	-0.790	-0.368
x		0.115	0.189	0.158	0.236	0.134	0.163	0.230	-1.040	-0.572
σ		0.078	0.045	0.089	0.154	0.122	0.116	0.283	0.232	0.176
%RSD		67.910	23.720	56.340	65.320	91.000	71.490	122.800	22.260	30.860

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	0.000	0.116	-1.386	0.192	65.4%	0.322	0.320	0.230	0.483
2	22:41:17	0.000	0.416	0.634	0.064	66.9%	0.206	0.287	0.221	-0.024
3	22:41:44	0.000	-0.111	-1.456	0.386	66.8%	0.221	0.311	0.333	0.326
x		0.000	0.140	-0.736	0.214	66.4%	0.250	0.306	0.261	0.261
σ		0.000	0.264	1.187	0.162	0.8%	0.063	0.017	0.062	0.259
%RSD		0.000	188.100	161.300	75.690	1.2	25.300	5.474	23.760	99.260

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	0.187	0.163	0.095	0.166	69.6%	0.133	0.172	0.603	0.639
2	22:41:17	0.197	0.172	0.134	0.155	69.9%	0.156	0.183	0.641	0.697
3	22:41:44	0.263	0.242	0.257	0.236	70.2%	0.222	0.236	0.685	0.663
x		0.216	0.192	0.162	0.186	69.9%	0.170	0.197	0.643	0.666
σ		0.041	0.043	0.084	0.044	0.3%	0.046	0.034	0.041	0.029
%RSD		19.090	22.430	52.120	23.680	0.4	27.150	17.210	6.341	4.374

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:50	0.199	0.178	72.4%	0.184	0.181	0.142	0.142	0.151	71.3%
2	22:41:17	0.259	0.237	72.8%	0.207	0.182	0.183	0.174	0.186	72.1%
3	22:41:44	0.247	0.277	73.5%	0.273	0.255	0.235	0.260	0.245	73.2%
x		0.235	0.231	72.9%	0.221	0.206	0.187	0.192	0.194	72.2%
σ		0.032	0.050	0.5%	0.046	0.043	0.047	0.061	0.047	0.9%
%RSD		13.600	21.690	0.7	20.810	20.610	25.080	31.720	24.430	1.3

LR MW9709 10/18/2017 22:46:13 QC Status: FAIL (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	59.1%	M 995.300	M 2018.000	M 2053.000	5.383	TM 120500.000	TM 110900.000	TM 111100.000	TM 110200.000
2	22:47:07	58.1%	M 1038.000	M 2097.000	M 2140.000	9.338	TM 125600.000	TM 115200.000	TM 114700.000	TM 114100.000
3	22:47:34	59.3%	M 997.100	M 2025.000	M 2077.000	1.969	TM 121700.000	TM 111900.000	TM 111300.000	TM 111100.000
x		58.8%	M 101.022%	M 2047.000	M 2090.000	5.564	TM 102.152%	TM 112700.000	TM 112400.000	TM 93.156%
σ		0.6%	M n/a	M 44.090	M 44.930	3.688	TM n/a	TM 2261.000	TM 2049.000	TM n/a
%RSD		1.1	M 2.413	M 2.154	M 2.149	66.280	TM 2.215	TM 2.006	TM 1.823	TM 1.833
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	TM 105400.000	9.192	7416.000	TM 119500.000	M 118700.000	TM 118000.000	50.4%	M 1989.000	TM 1847.000
2	22:47:07	TM 110200.000	8.934	7836.000	TM 123100.000	M 123800.000	TM 122000.000	49.5%	M 2085.000	TM 1922.000
3	22:47:34	TM 105800.000	9.216	7712.000	TM 119500.000	M 119800.000	TM 119400.000	50.2%	M 2019.000	TM 1833.000
x		TM 89.268%	9.114	7655.000	TM 100.553%	M 120800.000	TM 99.860%	50.0%	M 2031.000	TM 93.366%
σ		TM n/a	0.156	215.500	TM n/a	M 2678.000	TM n/a	0.5%	M 49.040	TM n/a
%RSD		TM 2.470	1.714	2.816	TM 1.727	M 2.217	TM 1.704	1.0	M 2.415	TM 2.561
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	TM 1877.000	460400.000	TM 115100.000	TM 1878.000	TM 114500.000	TM 115100.000	TM 1779.000	M 1811.000	M 1807.000
2	22:47:07	TM 1947.000	474500.000	TM 118600.000	TM 1938.000	TM 119200.000	TM 118900.000	TM 1828.000	M 1868.000	M 1850.000
3	22:47:34	TM 1899.000	462200.000	TM 116100.000	TM 1880.000	TM 115300.000	TM 115500.000	TM 1785.000	M 1824.000	M 1800.000
x		TM 95.383%	465700.000	TM 116600.000	TM 94.919%	TM 116300.000	TM 97.086%	TM 89.856%	M 91.722%	M 1819.000
σ		TM n/a	7672.000	TM 1785.000	TM n/a	TM 2502.000	TM n/a	TM n/a	M n/a	M 26.700
%RSD		TM 1.878	1.648	TM 1.530	TM 1.788	TM 2.151	TM 1.785	TM 1.481	M 1.626	M 1.468
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	M 1812.000	M 1818.000	M 1820.000	M 1922.000	M 1926.000	M 1969.000	M 1817.000	35.580	30.180
2	22:47:07	M 1871.000	M 1870.000	M 1893.000	M 1986.000	M 1985.000	M 2035.000	M 1852.000	36.160	31.620
3	22:47:34	M 1832.000	M 1823.000	M 1841.000	M 1954.000	M 1931.000	M 1977.000	M 1816.000	35.580	27.790
x		M 1838.000	M 91.851%	M 92.562%	M 1954.000	M 1947.000	M 99.689%	M 1828.000	35.770	29.860
σ		M 29.540	M n/a	M n/a	M 31.870	M 32.600	M n/a	M 20.390	0.335	1.935
%RSD		M 1.607	M 1.553	M 2.053	M 1.631	M 1.674	M 1.805	M 1.115	0.937	6.481
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	0.000	M 1860.000	35.010	M 2055.000	52.9%	M 2154.000	M 2128.000	TM 2031.000	M 1908.000
2	22:47:07	0.000	M 1924.000	43.640	M 2115.000	52.7%	M 2219.000	M 2208.000	TM 2089.000	M 1997.000
3	22:47:34	0.000	M 1845.000	38.050	M 2052.000	53.6%	M 2149.000	M 2135.000	TM 2043.000	M 1910.000
x		0.000	M 93.818%	38.900	M 2074.000	53.1%	M 2174.000	M 107.847%	TM 2054.000	M 1938.000
σ		0.000	M n/a	4.377	M 35.170	0.5%	M 38.900	M n/a	TM 30.850	M 50.440
%RSD		0.000	M 2.256	11.250	M 1.696	0.9	M 1.789	M 2.054	TM 1.502	M 2.602
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	25.670	25.440	M 1960.000	TM 1817.000	56.7%	TM 1879.000	TM 1934.000	TM 1033.000	M 1048.000
2	22:47:07	27.230	26.320	M 2054.000	TM 1889.000	55.2%	TM 1981.000	TM 2024.000	TM 1085.000	TM 1048.000
3	22:47:34	26.270	25.560	M 1970.000	TM 1828.000	56.9%	TM 1905.000	TM 1950.000	TM 1048.000	M 1067.000
x		8.796%	25.770	M 1995.000	TM 92.236%	56.3%	TM 1922.000	TM 98.478%	TM 1055.000	TM 105.421%
σ		n/a	0.480	M 51.190	TM n/a	0.9%	TM 53.040	TM n/a	TM 26.510	TM n/a
%RSD		3.000	1.863	M 2.566	TM 2.118	1.7	TM 2.760	TM 2.436	TM 2.512	TM 1.066
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:46:40	TM 9997.000	TM 9882.000	62.1%	TM 959.400	TM 975.800	TM 1875.000	TM 1965.000	TM 1953.000	61.8%
2	22:47:07	TM 10410.000	TM 10280.000	61.8%	TM 1009.000	TM 1024.000	TM 1965.000	TM 2054.000	TM 2041.000	60.8%
3	22:47:34	TM 10130.000	TM 9983.000	63.0%	TM 986.100	TM 996.300	TM 1910.000	TM 2006.000	TM 1991.000	61.5%
x		TM 101.811%	TM 10050.000	62.3%	TM 984.700	TM 99.874%	TM 1917.000	TM 2008.000	TM 99.750%	61.4%
σ		TM n/a	TM 204.000	0.6%	TM 24.660	TM n/a	TM 45.420	TM 44.390	TM n/a	0.5%
%RSD		TM 2.074	TM 2.030	1.0	TM 2.504	TM 2.425	TM 2.370	TM 2.210	TM 2.207	0.9

IS MW9749 10/18/2017 22:52:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	75.9%	0.254	21.050	20.950	-5.256	64.370	31.060	31.520	30.580
2	22:52:58	76.7%	0.343	18.750	19.020	0.751	65.340	37.640	37.170	37.180
3	22:53:25	77.4%	0.322	16.910	16.850	-1.255	71.060	48.460	48.390	50.610
x		76.6%	0.306	18.910	18.940	-1.920	66.930	39.050	39.030	39.460
σ		0.8%	0.047	2.075	2.052	3.058	3.611	8.787	8.588	10.210
%RSD		1.0	15.250	10.980	10.830	159.300	5.395	22.500	22.010	25.870
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	24.100	1.056	1639.000	53.990	29.420	10.140	64.6%	0.537	0.337
2	22:52:58	28.970	0.760	1690.000	53.240	42.080	16.280	64.9%	0.534	0.562
3	22:53:25	39.570	0.737	1778.000	51.390	30.520	34.130	64.6%	0.537	0.625
x		30.880	0.851	1702.000	52.880	34.010	20.180	64.7%	0.536	0.508
σ		7.908	0.178	70.130	1.336	7.013	12.470	0.2%	0.002	0.151
%RSD		25.610	20.910	4.120	2.526	20.620	61.760	0.3	0.316	29.780
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	0.455	379.600	30.750	0.547	28.170	28.560	0.487	0.565	0.327
2	22:52:58	0.558	340.800	35.720	0.578	33.540	35.740	0.620	0.583	-0.109
3	22:53:25	0.697	386.000	47.860	0.816	45.140	44.030	0.706	0.875	0.177
x		0.570	368.800	38.110	0.647	35.620	36.110	0.605	0.674	0.131
σ		0.121	24.480	8.802	0.147	8.672	7.741	0.110	0.174	0.222
%RSD		21.250	6.638	23.090	22.700	24.350	21.440	18.250	25.780	168.600
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	0.500	0.491	0.569	0.732	0.429	0.734	1.656	-0.511	-0.522
2	22:52:58	0.556	0.528	0.598	0.690	0.588	0.844	1.332	-0.394	-0.541
3	22:53:25	0.700	0.753	0.849	0.838	0.745	1.148	1.394	-0.480	-0.122
x		0.585	0.591	0.672	0.753	0.587	0.909	1.460	-0.462	-0.395
σ		0.103	0.142	0.154	0.076	0.158	0.215	0.172	0.060	0.236
%RSD		17.630	24.030	22.940	10.150	26.900	23.650	11.770	13.050	59.860
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	0.000	1.267	-3.275	0.593	69.1%	1.003	1.088	1.063	0.353
2	22:52:58	0.000	1.401	0.724	0.523	69.6%	1.167	1.086	1.073	0.467
3	22:53:25	0.000	1.124	-1.282	0.798	69.6%	1.160	1.134	1.186	0.844
x		0.000	1.264	-1.278	0.638	69.4%	1.110	1.103	1.107	0.555
σ		0.000	0.139	1.999	0.143	0.3%	0.093	0.027	0.068	0.257
%RSD		0.000	10.990	156.500	22.440	0.4	8.347	2.485	6.161	46.310
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	0.039	0.051	0.579	0.487	72.6%	2.076	2.927	0.303	0.279
2	22:52:58	0.036	0.031	0.566	0.570	73.0%	1.978	2.962	0.287	0.344
3	22:53:25	0.057	0.036	0.688	0.734	73.3%	2.154	2.938	0.374	0.420
x		0.044	0.039	0.611	0.597	73.0%	2.069	2.942	0.322	0.347
σ		0.011	0.011	0.067	0.126	0.4%	0.088	0.018	0.046	0.071
%RSD		26.220	27.310	10.960	21.040	0.5	4.258	0.615	14.370	20.320
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:52:31	2.448	2.767	74.7%	0.178	0.180	0.552	0.624	0.585	73.9%
2	22:52:58	3.125	3.118	76.0%	0.204	0.205	0.664	0.641	0.666	74.2%
3	22:53:25	3.859	3.892	76.0%	0.235	0.236	0.760	0.845	0.793	74.6%
x		3.144	3.259	75.6%	0.206	0.207	0.659	0.703	0.682	74.2%
σ		0.705	0.576	0.8%	0.029	0.028	0.104	0.123	0.105	0.4%
%RSD		22.440	17.670	1.0	13.960	13.480	15.780	17.490	15.390	0.5

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	79.2%	0.054	6.096	6.957	-8.063	3.666	2.526	3.171	2.807
2	22:58:45	78.6%	0.028	7.710	6.217	-0.807	4.562	3.978	4.017	4.071
3	22:59:12	79.0%	0.162	6.068	5.552	0.582	7.622	6.831	7.060	6.604
x		78.9%	0.081	6.625	6.242	-2.763	5.283	4.445	4.749	4.494
σ		0.3%	0.071	0.940	0.703	4.642	2.074	2.191	2.046	1.934
%RSD		0.4	87.090	14.190	11.250	168.000	39.260	49.280	43.070	43.020

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	2.098	0.395	1479.000	0.048	2.139	-16.190	66.4%	0.026	0.014
2	22:58:45	3.153	0.135	1523.000	3.417	0.992	-13.760	66.5%	0.026	0.078
3	22:59:12	5.319	0.563	1590.000	5.380	2.090	-12.790	66.8%	0.077	0.081
x		3.523	0.365	1531.000	2.948	1.740	-14.250	66.6%	0.043	0.058
σ		1.642	0.216	56.210	2.697	0.649	1.748	0.2%	0.030	0.038
%RSD		46.610	59.110	3.673	91.470	37.270	12.270	0.4	68.570	65.310

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	0.064	222.500	2.577	0.064	2.841	1.625	0.016	0.098	-1.387
2	22:58:45	0.031	200.100	4.512	0.071	3.232	2.147	0.028	0.070	-0.983
3	22:59:12	0.079	220.800	5.953	0.135	5.295	3.886	0.077	0.056	-0.983
x		0.058	214.500	4.347	0.090	3.789	2.553	0.040	0.075	-1.117
σ		0.024	12.430	1.694	0.039	1.318	1.183	0.033	0.022	0.233
%RSD		42.060	5.796	38.980	43.230	34.790	46.360	80.900	29.090	20.870

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	-0.014	0.059	0.105	0.171	0.046	-0.027	-0.314	-0.944	-0.583
2	22:58:45	-0.013	-0.004	0.168	0.132	0.127	0.100	0.336	-1.094	-0.907
3	22:59:12	0.020	0.052	0.180	0.311	0.158	0.141	0.495	-0.744	-0.155
x		-0.002	0.036	0.151	0.205	0.110	0.071	0.172	-0.927	-0.548
σ		0.019	0.034	0.040	0.094	0.057	0.088	0.428	0.176	0.377
%RSD		825.600	95.570	26.680	45.990	52.090	123.200	248.900	18.930	68.820

Run	Time	82Kr	82Se	83Kr	86Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	0.000	-0.110	0.639	-0.042	70.4%	0.083	0.149	0.109	-0.014
2	22:58:45	0.000	-0.111	-0.098	0.047	71.7%	0.148	0.154	0.114	0.007
3	22:59:12	0.000	0.710	-0.715	0.055	71.0%	0.123	0.162	0.109	-0.213
x		0.000	0.163	-0.058	0.020	71.0%	0.118	0.155	0.111	-0.073
σ		0.000	0.473	0.678	0.054	0.6%	0.033	0.007	0.003	0.121
%RSD		0.000	290.400	1168.000	267.400	0.9	28.160	4.343	2.747	165.600

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	0.005	0.011	0.020	0.016	73.8%	0.879	1.225	-0.064	-0.056
2	22:58:45	0.033	0.023	0.034	0.064	74.8%	0.851	1.253	-0.077	-0.014
3	22:59:12	0.009	0.027	0.098	0.077	74.8%	0.912	1.270	-0.007	-0.006
x		0.015	0.020	0.051	0.052	74.5%	0.881	1.249	-0.049	-0.025
σ		0.015	0.008	0.042	0.032	0.6%	0.030	0.023	0.037	0.027
%RSD		98.460	41.120	82.030	61.850	0.8	3.460	1.852	76.070	106.000

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:58:18	0.109	0.195	76.0%	0.013	0.013	0.058	0.052	0.050	75.6%
2	22:58:45	0.246	0.288	77.2%	0.025	0.020	0.066	0.085	0.073	75.8%
3	22:59:12	0.503	0.564	78.2%	0.031	0.030	0.112	0.134	0.123	76.2%
x		0.286	0.349	77.1%	0.023	0.021	0.079	0.090	0.082	75.9%
σ		0.200	0.192	1.1%	0.009	0.009	0.029	0.041	0.037	0.3%
%RSD		69.970	55.140	1.4	39.430	41.810	37.030	45.700	45.330	0.4

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	79.7%	0.098	3.110	2.798	-3.631	3.388	8.651	9.210	8.961
2	23:04:33	80.0%	0.089	1.617	2.935	-4.257	2.238	8.387	8.625	9.007
3	23:05:00	81.1%	0.122	2.693	2.559	-6.121	3.364	9.127	9.183	9.675
4	23:05:27	81.2%	0.104	2.230	2.407	-5.817	3.897	10.010	9.905	9.265
5	23:05:53	80.4%	0.071	2.471	2.328	-1.928	3.368	9.720	9.936	10.130
6	23:06:19	81.5%	0.095	1.671	2.764	-2.757	2.872	9.767	9.909	9.557
x		80.6%	0.097	2.299	2.632	-4.085	3.188	9.277	9.461	9.433
σ		0.7%	0.017	0.584	0.239	1.661	0.567	0.661	0.541	0.447
%RSD		0.9	17.640	25.420	9.070	40.660	17.790	7.121	5.718	4.737
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	7.759	0.908	1336.000	3.920	3.083	-12.130	67.9%	0.152	0.057
2	23:04:33	7.232	-0.089	1401.000	2.106	5.318	-10.500	67.9%	0.126	0.058
3	23:05:00	7.856	1.914	1440.000	4.231	6.375	-10.240	68.2%	0.126	0.056
4	23:05:27	8.319	0.271	1505.000	2.488	10.850	-7.968	68.1%	0.177	0.099
5	23:05:53	8.573	0.213	1564.000	5.140	4.299	-9.023	67.2%	0.128	0.126
6	23:06:19	8.665	0.921	1622.000	3.071	6.395	-11.840	68.1%	0.050	0.075
x		8.067	0.690	1478.000	3.492	6.054	-10.280	67.9%	0.126	0.078
σ		0.550	0.722	106.000	1.145	2.672	1.602	0.4%	0.043	0.029
%RSD		6.822	104.700	7.173	32.780	44.130	15.580	0.5	33.690	36.670
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	0.141	237.500	10.010	0.164	9.900	7.297	0.119	0.150	-1.409
2	23:04:33	0.118	259.300	8.030	0.159	9.049	6.415	0.100	0.150	-0.999
3	23:05:00	0.115	303.000	9.655	0.158	9.109	7.938	0.096	0.081	-0.829
4	23:05:27	0.131	268.500	10.260	0.172	9.673	8.947	0.103	0.170	-1.498
5	23:05:53	0.172	264.600	10.670	0.175	9.181	10.720	0.106	0.132	-1.087
6	23:06:19	0.190	261.800	9.978	0.193	9.956	9.192	0.103	0.150	-1.228
x		0.144	265.800	9.766	0.170	9.478	8.419	0.105	0.139	-1.175
σ		0.030	21.210	0.915	0.013	0.413	1.529	0.008	0.031	0.253
%RSD		20.980	7.981	9.364	7.705	4.358	18.160	7.624	22.240	21.550
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	0.082	0.128	0.123	0.406	0.127	0.112	-0.421	-1.247	-0.791
2	23:04:33	0.009	0.077	0.218	0.235	0.205	0.164	0.267	-0.890	-1.036
3	23:05:00	0.116	0.110	0.188	0.196	0.201	0.058	0.505	-0.740	-0.739
4	23:05:27	0.074	0.171	0.172	0.336	0.001	0.136	-0.246	-0.785	-0.583
5	23:05:53	0.060	0.153	0.136	0.480	0.085	0.002	0.019	-1.115	-0.458
6	23:06:19	0.093	0.194	0.232	0.373	0.136	0.186	0.655	-1.154	-0.773
x		0.072	0.139	0.178	0.338	0.126	0.110	0.130	-0.988	-0.730
σ		0.036	0.042	0.044	0.107	0.077	0.069	0.422	0.211	0.197
%RSD		50.270	30.560	24.480	31.570	61.030	62.630	325.400	21.370	27.020
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	0.000	0.410	-2.102	0.103	72.8%	0.077	0.101	0.093	-0.162
2	23:04:33	0.000	0.003	-2.377	0.185	71.6%	0.067	0.081	0.072	0.124
3	23:05:00	0.000	-0.070	-2.086	0.248	72.4%	0.049	0.095	0.081	0.433
4	23:05:27	0.000	0.136	-1.452	0.166	72.6%	0.112	0.182	0.082	0.022
5	23:05:53	0.000	0.153	-0.165	0.040	72.6%	0.113	0.024	0.086	-0.332
6	23:06:19	0.000	0.137	-1.113	0.164	72.2%	0.033	0.013	0.053	-0.053
x		0.000	0.128	-1.549	0.151	72.4%	0.075	0.083	0.078	0.005
σ		0.000	0.164	0.824	0.072	0.5%	0.032	0.061	0.014	0.262
%RSD		0.000	128.300	53.180	47.490	0.6	43.150	73.720	17.860	5101.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:04:06	0.042	0.026	0.085	0.106	74.5%	0.763	1.018	-0.056	-0.041
2	23:04:33	0.041	0.037	0.132	0.096	75.4%	0.631	0.975	-0.076	-0.046
3	23:05:00	0.035	0.031	0.167	0.115	76.1%	0.681	1.034	-0.052	-0.029
4	23:05:27	0.025	0.043	0.103	0.117	76.4%	0.700	1.018	-0.030	-0.004
5	23:05:53	0.032	0.031	0.118	0.112	75.2%	0.670	0.962	-0.048	-0.047
6	23:06:19	0.043	0.043	0.148	0.149	75.5%	0.659	0.858	-0.059	-0.039
x		0.037	0.035	0.126	0.116	75.5%	0.684	0.978	-0.053	-0.035
σ		0.007	0.007	0.030	0.018	0.7%	0.045	0.065	0.015	0.016

%RSD		18.710	19.820	23.860	15.310	0.9	6.565	6.654	28.580	47.110
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**
1	23:04:06	0.710	0.635	77.0%	0.036	0.042	0.141	0.143	0.145	74.7%
2	23:04:33	0.558	0.600	77.9%	0.042	0.042	0.126	0.147	0.136	76.6%
3	23:05:00	0.708	0.631	78.8%	0.048	0.048	0.128	0.146	0.140	77.3%
4	23:05:27	0.734	0.746	79.1%	0.045	0.045	0.148	0.152	0.152	77.7%
5	23:05:53	0.683	0.657	78.0%	0.047	0.048	0.146	0.164	0.148	77.8%
6	23:06:19	0.674	0.708	78.7%	0.050	0.050	0.130	0.145	0.143	77.9%
x		0.678	0.663	78.3%	0.045	0.046	0.137	0.149	0.144	77.0%
σ		0.062	0.054	0.8%	0.005	0.003	0.009	0.008	0.006	1.2%
%RSD		9.180	8.174	1.0	11.010	7.152	6.938	5.332	4.149	1.6

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	79.8%	0.018	1.303	1.036	1.223	-8.749	1.264	1.651	1.458
2	23:11:43	81.1%	0.035	0.878	1.101	-3.381	-8.664	1.317	1.275	1.210
3	23:12:10	81.1%	0.035	0.237	0.619	-5.546	-8.476	1.723	2.117	1.861
4	23:12:37	81.9%	0.026	0.883	0.409	-10.790	-8.952	1.765	2.195	1.427
5	23:13:04	81.5%	-0.009	0.763	0.734	1.868	-7.955	2.500	2.541	2.757
6	23:13:31	82.2%	-0.000	0.958	0.775	-5.822	-8.060	2.454	2.699	2.470
x		81.3%	0.017	0.837	0.779	-3.742	-8.476	1.837	2.080	1.864
σ		0.9%	0.018	0.347	0.259	4.766	0.395	0.536	0.537	0.624
%RSD		1.1	105.800	41.420	33.180	127.400	4.664	29.190	25.820	33.490
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	1.348	1.212	1248.000	-4.119	-1.417	-18.590	68.4%	0.530	0.080
2	23:11:43	1.420	0.929	1293.000	-3.835	-2.497	-16.870	67.7%	0.050	-0.033
3	23:12:10	1.673	0.796	1341.000	-5.524	-2.516	-16.380	68.1%	-0.001	-0.066
4	23:12:37	1.645	0.156	1386.000	-4.208	-3.629	-17.190	68.0%	-0.001	-0.006
5	23:13:04	2.304	0.885	1441.000	-4.761	-1.432	-17.610	68.5%	-0.027	0.064
6	23:13:31	2.335	0.569	1477.000	-5.028	-1.400	-17.460	68.0%	-0.001	0.039
x		1.788	0.758	1364.000	-4.579	-2.148	-17.350	68.1%	0.092	0.013
σ		0.431	0.361	87.350	0.637	0.901	0.751	0.3%	0.216	0.057
%RSD		24.090	47.610	6.402	13.920	41.930	4.327	0.5	235.900	449.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	0.074	191.300	2.058	0.041	2.909	0.781	0.002	0.067	-1.097
2	23:11:43	0.041	202.800	1.918	0.044	1.872	-0.316	0.003	0.020	-0.921
3	23:12:10	0.041	250.600	1.079	0.054	2.476	0.828	0.011	0.054	-1.323
4	23:12:37	0.049	230.500	1.373	0.060	1.893	0.802	0.010	0.020	-1.453
5	23:13:04	0.040	214.500	2.413	0.067	2.826	2.331	0.021	0.046	-1.327
6	23:13:31	0.022	233.600	2.713	0.072	2.690	0.453	0.018	0.054	-1.232
x		0.044	220.600	1.926	0.056	2.444	0.813	0.011	0.044	-1.225
σ		0.017	21.830	0.616	0.012	0.459	0.861	0.008	0.020	0.190
%RSD		38.140	9.896	31.970	21.540	18.790	105.900	71.120	44.800	15.520
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	-0.038	0.026	0.107	-0.014	-0.029	0.002	-0.326	-1.364	-0.854
2	23:11:43	-0.038	-0.011	0.040	0.159	0.051	0.037	-0.010	-0.808	-1.135
3	23:12:10	-0.062	0.027	0.046	-0.015	0.029	-0.020	0.310	-1.339	-0.134
4	23:12:37	-0.064	0.038	0.020	-0.049	-0.051	0.017	-0.188	-1.452	-0.224
5	23:13:04	-0.012	0.032	0.023	0.054	0.087	0.095	-0.006	-1.258	-0.691
6	23:13:31	-0.024	0.033	0.025	0.125	-0.067	0.020	-0.140	-1.003	0.315
x		-0.040	0.024	0.044	0.044	0.003	0.025	-0.060	-1.204	-0.454
σ		0.020	0.018	0.033	0.084	0.061	0.039	0.217	0.247	0.534
%RSD		51.250	73.980	74.850	192.300	1796.000	156.900	361.000	20.530	117.700
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**86Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	0.000	0.132	-1.114	0.056	72.2%	-0.069	-0.075	-0.073	-0.086
2	23:11:43	0.000	-0.059	-0.876	0.045	73.9%	-0.024	-0.104	-0.068	-0.186
3	23:12:10	0.000	-0.336	0.096	0.011	73.4%	-0.110	-0.050	-0.055	-0.507
4	23:12:37	0.000	0.003	-0.813	0.002	72.6%	-0.116	-0.098	-0.049	-0.297
5	23:13:04	0.000	0.469	1.997	-0.051	73.3%	-0.075	-0.039	-0.072	-0.394
6	23:13:31	0.000	0.068	-2.113	0.083	73.1%	-0.113	-0.072	-0.082	-0.273
x		0.000	0.046	-0.470	0.024	73.1%	-0.084	-0.073	-0.067	-0.291
σ		0.000	0.263	1.400	0.048	0.6%	0.036	0.026	0.012	0.149
%RSD		0.000	570.900	297.700	194.500	0.8	42.340	35.200	18.320	51.210
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:16	0.008	0.003	-0.003	0.014	75.4%	0.508	0.590	-0.119	-0.112
2	23:11:43	0.009	0.009	0.000	0.002	76.1%	0.468	0.775	-0.133	-0.101
3	23:12:10	0.020	0.013	0.017	0.005	76.0%	0.505	0.777	-0.114	-0.109
4	23:12:37	0.015	0.019	0.000	0.016	75.8%	0.520	0.708	-0.125	-0.117
5	23:13:04	0.015	0.014	0.013	0.022	77.1%	0.478	0.720	-0.122	-0.105
6	23:13:31	0.015	0.012	0.017	0.004	77.2%	0.512	0.790	-0.131	-0.113
x		0.014	0.012	0.007	0.011	76.3%	0.498	0.727	-0.124	-0.109
σ		0.005	0.005	0.009	0.008	0.7%	0.020	0.075	0.007	0.006

%RSD		34.220	45.940	125.500	73.480	1.0	4.083	10.270	5.801	5.325
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**
1	23:11:16	0.039	0.076	77.3%	0.003	0.003	0.026	0.022	0.025	75.2%
2	23:11:43	0.066	0.067	78.5%	0.007	0.009	0.021	0.032	0.026	77.6%
3	23:12:10	0.119	0.099	78.4%	0.004	0.008	0.030	0.038	0.031	77.1%
4	23:12:37	0.047	0.132	79.2%	0.003	0.010	0.030	0.032	0.032	77.7%
5	23:13:04	0.135	0.159	79.7%	0.003	0.012	0.039	0.049	0.044	78.7%
6	23:13:31	0.125	0.112	80.5%	0.007	0.007	0.040	0.037	0.041	78.8%
x		0.089	0.108	78.9%	0.004	0.008	0.031	0.035	0.033	77.5%
σ		0.042	0.035	1.1%	0.002	0.003	0.007	0.009	0.008	1.3%
%RSD		47.960	32.190	1.4	47.770	37.790	23.250	26.060	23.240	1.7

Performance Report

Raw Supportive Data

Analyst: SLS
Status: Level 2 review released
Matrix: Aqueous

Printed: 10/26/17 1026

Prep Batch: 54056
3005A Draper 2 - Total Recoverable Acid Digestion (ICP-MS)

Start Date: 10/14/2017 1145
End Date: 10/14/2017 1745
Level 2 Analyst: BNW
Digestion Cup ID: 1705110
Ext Solvent: 1:1 HNO3/1:1 HCl
Reagents Vol. (mL): 1.0, 0.5
Chem ID: IM8160-01 (12/17), IM8160-02 (12/17)
Hot Block ID: Hot Block # 8
Filter Paper Lot Num: 70613758
Digestion Temperature (°C): 97

Sample ID	QC Code	Client Sample ID	Run	Analysis Descript	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
SQ54056-001	MB		1	6020A	50		0.0	50			LCS/MS/MSD pipette 274
SQ54056-002	LCS		1	6020A	50	17-988 (6/18)	0.5	50			
SJ12043-001	Sample	16C1	1	6020A	50		0.0	50	04/09/2018 0825	10/27/2017	
SJ12043-002	Sample	16MW8	1	6020A	50		0.0	50	04/08/2018 1140	10/27/2017	
SJ12043-003	Sample	16MW9	1	6020A	50		0.0	50	04/09/2018 0740	10/27/2017	
SJ12043-004	Sample	16WC1A	1	6020A	50		0.0	50	04/08/2018 1350	10/27/2017	
SJ12043-004MS	MS		1	6020A	50	17-988 (6/18)	0.5	50			
SJ12043-004MD	MSD		1	6020A	50	17-988 (6/18)	0.5	50			
SJ12043-005	Sample	16WDUP	1	6020A	50		0.0	50	04/08/2018 1405	10/27/2017	
SJ12043-006	Sample	16WC1B	1	6020A	50		0.0	50	04/08/2018 1300	10/27/2017	
SJ12043-007	Sample	16-2	1	6020A	50		0.0	50	04/08/2018 1055	10/27/2017	
SJ12043-008	Sample	16-3	1	6020A	50		0.0	50	04/07/2018 1400	10/27/2017	
SJ12043-009	Sample	16-5	1	6020A	50		0.0	50	04/08/2018 0910	10/27/2017	
SJ12043-010	Sample	16WC2B	1	6020A	50		0.0	50	04/08/2018 1010	10/27/2017	
SJ12043-011	Sample	16SPRING	1	6020A	50		0.0	50	04/08/2018 0920	10/27/2017	

(end of report) **Total Samples: 11**

Mercury

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: SJ12043 **Method Type:** CVAA **SOW No.:**

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
SJ12043-001	16C1	
SJ12043-002	16MW8	
SJ12043-003	16MW9	
SJ12043-004	16WC1A	
SJ12043-004S	16WC1AS	Matrix Spike
SJ12043-004SD	16WC1ASD	Matrix Spike Duplicate
SJ12043-005	16WDUP	
SJ12043-006	16WC1B	
SJ12043-007	16-2	
SJ12043-008	16-3	
SJ12043-009	16-5	
SJ12043-010	16WC2B	
SJ12043-011	16SPRING	

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.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: High Purity

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Mercury	2.182700	2.000000	109	90.0 - 110.0	CV	10/13/2017	22:57	HG4101317A
CCV1									
	Mercury	2.063200	2.000000	103	80.0 - 120.0	CV	10/13/2017	23:03	HG4101317A
CCV2									
	Mercury	2.059700	2.000000	103	80.0 - 120.0	CV	10/13/2017	23:34	HG4101317A
CCV3									
	Mercury	2.001800	2.000000	100	80.0 - 120.0	CV	10/14/2017	00:00	HG4101317A

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** SJ12043

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	-0.037600	+/-2.000000	U	2.000000	2.000000	CV	10/13/2017	22:59	HG4101317A
CCB1	Mercury	-0.036500	+/-2.000000	U	2.000000	2.000000	CV	10/13/2017	23:05	HG4101317A
CCB2	Mercury	-0.037200	+/-2.000000	U	2.000000	2.000000	CV	10/13/2017	23:36	HG4101317A
CCB3	Mercury	-0.037400	+/-2.000000	U	2.000000	2.000000	CV	10/14/2017	00:02	HG4101317A

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: Hg4 Run Number: HG4101317A

Start Date: 10/13/2017 End Date: 10/14/2017

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
BLANK	1.00	2243																X								
STD 0.1 17HG1270	1.00	2246																X								
STD 0.2 17HG1269	1.00	2248																X								
STD 1.0 17HG1268	1.00	2250																X								
STD 2.0 17HG1267	1.00	2252																X								
STD 5.0 17HG1266	1.00	2254																X								
ICV1	1.00	2257																X								
ICB1	1.00	2259																X								
ZZZZZZ	1.00	2301																								
CCV1	1.00	2303																X								
CCB1	1.00	2305																X								
ZZZZZZ	1.00	2308																								
SO54040-001	1.00	2310																X								
SO54040-002	1.00	2312																X								
SJ12043-001	1.00	2314																X								
ZZZZZZ	1.00	2317																								
SJ12043-002	1.00	2321																X								
SJ12043-003	1.00	2323																X								
SJ12043-004	1.00	2325																X								
SJ12043-004S	1.00	2327																X								
SJ12043-004SD	1.00	2329																X								
SJ12043-005	1.00	2332																X								
CCV2	1.00	2334																X								
CCB2	1.00	2336																X								
SJ12043-006	1.00	2338																X								
SJ12043-007	1.00	2340																X								
SJ12043-008	1.00	2343																X								
SJ12043-009	1.00	2345																X								
SJ12043-010	1.00	2347																X								
SJ12043-011	1.00	2349																X								
ZZZZZZ	1.00	2351																								
ZZZZZZ	1.00	2354																								
ZZZZZZ	1.00	2356																								
ZZZZZZ	1.00	2358																								
CCV3	1.00	0000																X								
CCB3	1.00	0002																X								
ZZZZZZ	1.00	0005																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: SJ12043

Instrument ID Number: Hg4 Run Number: HG4101317A

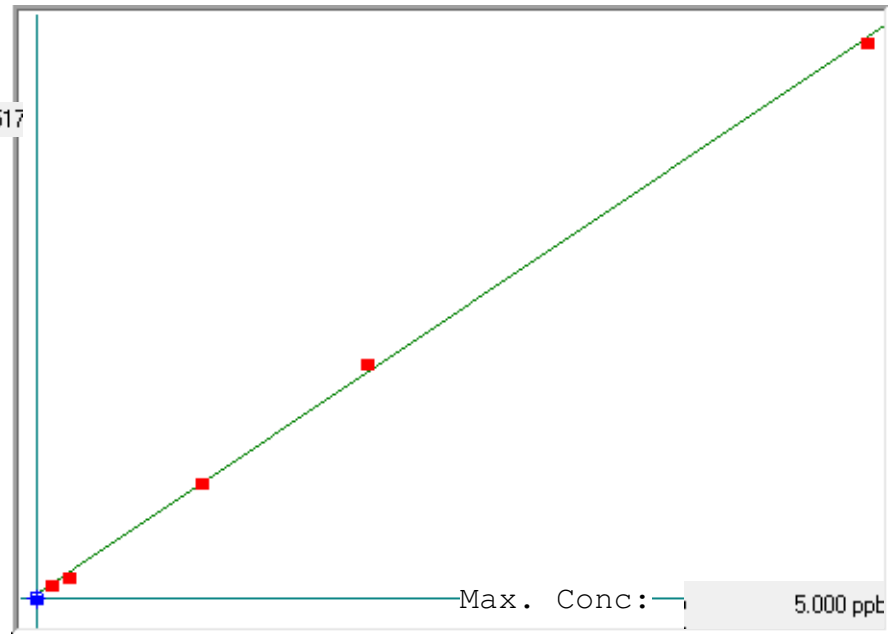
Start Date: 10/13/2017 End Date: 10/14/2017

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	0007																								
ZZZZZZ	1.00	0009																								
ZZZZZZ	1.00	0011																								
ZZZZZZ	1.00	0014																								
ZZZZZZ	1.00	0016																								
ZZZZZZ	1.00	0018																								
ZZZZZZ	1.00	0020																								
ZZZZZZ	1.00	0022																								
ZZZZZZ	1.00	0025																								
ZZZZZZ	1.00	0027																								
ZZZZZZ	1.00	0029																								
ZZZZZZ	1.00	0031																								
ZZZZZZ	1.00	0033																								
ZZZZZZ	1.00	0036																								
ZZZZZZ	1.00	0038																								
ZZZZZZ	1.00	0040																								
ZZZZZZ	1.00	0042																								
ZZZZZZ	1.00	0044																								
ZZZZZZ	1.00	0047																								
ZZZZZZ	1.00	0049																								
ZZZZZZ	1.00	0051																								
ZZZZZZ	1.00	0053																								
ZZZZZZ	1.00	0056																								
ZZZZZZ	1.00	0058																								
ZZZZZZ	1.00	0100																								
ZZZZZZ	1.00	0102																								
ZZZZZZ	1.00	0104																								
ZZZZZZ	1.00	0107																								

Raw Sample Data

7470A/245.1

Linear



A= 0.0000e+000

B= 1.4059e-004

C= -3.3499e-002

Rho= 0.9996846

Accept= Accepted

Accepted Date=

10/13/17 22:57

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4
BLANK 10/14/17	0.000	-0.025	-0.025	62	0.000	62			
STD 0.1 17HG1270 10/14/17	0.100	0.089	-0.011	870	0.0 %	870			
STD 0.2 17HG1269 10/14/17	0.200	0.170	-0.030	1448	0.0 %	1448			
STD 1.0 17HG1268 10/14/17	1.000	1.016	0.016	7462	0.0 %	7462			
STD 2.0 17HG1267 10/14/17	2.000	2.091	0.091	15109	0.0 %	15109			
STD 5.0 17HG1266 10/14/17	5.000	4.960	-0.040	35517	0.0 %	35517			

HG4101317A

Method: 7470A/245.1 Operator: SLS Date of Analysis: 13 Oct 2017 22:43:49

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
BLANK 10/14/17 - 1		-	ppb	62	13 Oct 2017 22:43:54
STD 0.1 17HG1270 10/14/17 - 1		-	ppb	870	13 Oct 2017 22:46:05
STD 0.2 17HG1269 10/14/17 - 1		-	ppb	1448	13 Oct 2017 22:48:18
STD 1.0 17HG1268 10/14/17 - 1		-	ppb	7462	13 Oct 2017 22:50:31
STD 2.0 17HG1267 10/14/17 - 1		-	ppb	15109	13 Oct 2017 22:52:43
STD 5.0 17HG1266 10/14/17 - 1		-	ppb	35517	13 Oct 2017 22:54:55
ICV 17HG1272 10/14/17 - 1		109.1% 2.1827	ppb	15764	13 Oct 2017 22:57:08
ICB 10/14/17 - 1		-0.0376	ppb	-29	13 Oct 2017 22:59:21
LLICV 17HG1270 10/14/17 - 1		85.7% 0.0857	ppb	848	13 Oct 2017 23:01:34
CCV 17HG1267 10/14/17 - 1		103.2% 2.0632	ppb	14914	13 Oct 2017 23:03:47
CCB 10/14/17 - 1		-0.0365	ppb	-21	13 Oct 2017 23:05:57
0.2 PPB - 1	0.2PPB analyst forgot to fill cup	-0.0357	ppb	-16	13 Oct 2017 23:08:10
SQ54040001 - 1	MB 54040	-0.0207	ppb	91	13 Oct 2017 23:10:21
SQ54040002 - 1	LCS 54040	2.1677	ppb	15657	13 Oct 2017 23:12:32
SJ12043001 - 1	16C1	-0.0402	ppb	-48	13 Oct 2017 23:14:43
0.2 PPB - 1	0.2PPB	0.1708	ppb	1453	13 Oct 2017 23:17:16
SJ12043002 - 1	16MW8	-0.0199	ppb	97	13 Oct 2017 23:21:05
SJ12043003 - 1	16MW9	-0.0251	ppb	60	13 Oct 2017 23:23:15
SJ12043004 - 1	16WC1A	-0.0268	ppb	48	13 Oct 2017 23:25:26
SJ12043004MS - 1	16WC1A MS	1.9240	ppb	13924	13 Oct 2017 23:27:38
SJ12043004MD - 1	16WC1A MSD	1.8435	ppb	13351	13 Oct 2017 23:29:50
SJ12043005 - 1	16WDUP	-0.0698	ppb	-258	13 Oct 2017 23:32:06
CCV 17HG1267 10/14/17 - 1		103.0% 2.0597	ppb	14889	13 Oct 2017 23:34:20
CCB 10/14/17 - 1		-0.0372	ppb	-26	13 Oct 2017 23:36:31
SJ12043006 - 1	16WC1B	0.0410	ppb	530	13 Oct 2017 23:38:44
SJ12043007 - 1	16-2	-0.0284	ppb	36	13 Oct 2017 23:40:57
SJ12043008 - 1	16-3	-0.0286	ppb	35	13 Oct 2017 23:43:10
SJ12043009 - 1	16-5	-0.0286	ppb	35	13 Oct 2017 23:45:21
SJ12043010 - 1	16WC2B	-0.0286	ppb	35	13 Oct 2017 23:47:32
SJ12043011 - 1	16SPRING	-0.0256	ppb	56	13 Oct 2017 23:49:43
SQ54041001 - 1	MB 54041	-0.0230	ppb	75	13 Oct 2017 23:51:54
SQ54041002 - 1	LCS 54041	2.0663	ppb	14936	13 Oct 2017 23:54:06
SJ05073001 - 1	Resin Exchange Water	-0.0352	ppb	-12	13 Oct 2017 23:56:17
SJ05073001MS - 1	Resin Exchange Water MS	2.1802	ppb	15746	13 Oct 2017 23:58:30
CCV 17HG1267 10/14/17 - 1		100.1% 2.0018	ppb	14477	14 Oct 2017 00:00:42
CCB 10/14/17 - 1		-0.0374	ppb	-28	14 Oct 2017 00:02:55
SJ05073001MD - 1	Resin Exchange Water MSD	2.1872	ppb	15796	14 Oct 2017 00:05:08
SJ06072001 - 1	IDW-Water	-0.0393	ppb	-41	14 Oct 2017 00:07:20
SQ54042001 - 1	MB 54042	-0.0290	ppb	32	14 Oct 2017 00:09:35
SQ54042002 - 1	LCS 54042	2.0864	ppb	15079	14 Oct 2017 00:11:48
SJ06072002 - 1	IDW-Sludge	-0.0445	ppb	-78	14 Oct 2017 00:14:00
SJ06073001 - 1	Soilidification Pits-CP (S17188)	-0.0218	ppb	83	14 Oct 2017 00:16:14
SJ05066001 - 1	S1	-0.0275	ppb	43	14 Oct 2017 00:18:25
SJ09014001 - 1	1710030930PA	-0.0121	ppb	152	14 Oct 2017 00:20:37
SJ09014001MS - 1	1710030930PA MS	2.2673	ppb	16366	14 Oct 2017 00:22:48
SJ09014001MD - 1	1710030930PA MSD	2.2370	ppb	16150	14 Oct 2017 00:25:00
CCV 17HG1267 10/14/17 - 1		101.2% 2.0237	ppb	14633	14 Oct 2017 00:27:14
CCB 10/14/17 - 1		-0.0384	ppb	-35	14 Oct 2017 00:29:26
SJ09016001 - 1	#1	0.0057	ppb	279	14 Oct 2017 00:31:39
SJ09018001 - 1	W171003 1000 PA	0.1051	ppb	986	14 Oct 2017 00:33:51
SQ54043001 - 1	MB 54043	-0.0280	ppb	39	14 Oct 2017 00:36:02
SQ54043002 - 1	LCS 54043	2.2211	ppb	16037	14 Oct 2017 00:38:15
SJ09043001 - 1	Cutting Oil	-0.0381	ppb	-33	14 Oct 2017 00:40:27
SJ09043001MS - 1	Cutting Oil MS	1.2176	ppb	8899	14 Oct 2017 00:42:42
SJ09043001MD - 1	Cutting Oil MSD	1.2082	ppb	8832	14 Oct 2017 00:44:55
SQ54044001 - 1	MB 54044	-0.0595	ppb	-185	14 Oct 2017 00:47:10
SQ54044002 - 1	LCS 54044	2.1213	ppb	15327	14 Oct 2017 00:49:24
SJ11002001 - 1	Mineral Wells Waste Lime	0.0884	ppb	867	14 Oct 2017 00:51:35
CCV 17HG1267 10/14/17 - 1		101.6% 2.0323	ppb	14694	14 Oct 2017 00:53:49
CCB 10/14/17 - 1		-0.0401	ppb	-47	14 Oct 2017 00:56:00
SJ11002001MS - 1	Mineral Wells Waste Lime MS	2.1892	ppb	15810	14 Oct 2017 00:58:13
SJ11002001MD - 1	Mineral Wells Waste Lime MSD	2.1405	ppb	15464	14 Oct 2017 01:00:24
SNCL2 - 1	IM 8200-01 (10/14/17)	-0.0751	ppb	-296	14 Oct 2017 01:02:38
CCV 17HG1267 10/14/17 - 1		99.5% 1.9895	ppb	14390	14 Oct 2017 01:04:53
CCB 10/14/17 - 1		-0.0419	ppb	-60	14 Oct 2017 01:07:03

Raw Supportive Data

Analyst: SLS
Status: Level 2 review released
Matrix: ERROR

Printed: 11/06/17 1115

Prep Batch: 54039
7470A-P - Mercury Preparation Linked: 7470A,245.1

Start Date: 10/13/2017 1946
End Date: 10/13/2017 2146
Level 2 Analyst: NJT
Digestion Cup ID: 1705110
Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl
Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4
Chem ID: 17-583 (1/22), IM8160-01 (12/17), IM8057-01 (11/17), IM8160-03 (12/17), IM8057-02 (11/17)
Hot Block ID: Hot Block #4
Digestion Temperature (°C): 97

Sample ID	QC Code	Client Sample ID	Run	Analysis Descript	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
SQ54039-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000		0.0	50			CAL 0
SQ54039-104	Standard	Conc = 0.10 mg/L	1	245.1	40.000	17HG1265	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-204	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	17HG1266	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-304	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	17HG1267	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-404	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	17HG1268	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-504	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	17HG1269	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-604	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	17HG1270	0.0	50			PREP EXP 10/14/17 @ 2146
SQ54039-001	MB		1	245.1	40.000		0.0	50			CCB
SQ54039-804	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	17HG1267 (10/14/17)	0.0	50			CCV
SQ54039-101	MB		1	245.1	40.000		0.0	50			ICB
SQ54039-1004	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	17HG1272 (10/14/17)	0.0	50			ICV

(end of report)

Total Samples: 0

Analyst: SLS
Status: Level 2 review released
Matrix: Aqueous

Prep Batch: 54040
7470A-P Draper - Mercury Preparation

Printed: 11/06/17 1115

Start Date: 10/13/2017 1946
End Date: 10/13/2017 2146
Level 2 Analyst: BEB
Digestion Cup ID: 1705110
Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl
Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4
Chem ID: 17-583 (1/22), IM8160-01 (12/17), IM8057-01 (11/17), IM8160-03 (12/17), IM8057-02 (11/17)
Hot Block ID: Hot Block #4
Digestion Temperature (°C): 97

Sample ID	QC Code	Client Sample ID	Run	Analysis Descript	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
SQ54040-001	MB		1	7470A	40.000		0.0	50			LCS/MS/MSD pipette 299
SQ54040-002	LCS		1	7470A	40.000	17HG1256 (11/6/17)	1.0	50			
SJ12043-001	Sample	16C1	1	7470A	40.000		0.0	50	11/08/2017 0825	10/27/2017	
SJ12043-002	Sample	16MW8	1	7470A	40.000		0.0	50	11/07/2017 1140	10/27/2017	
SJ12043-003	Sample	16MW9	1	7470A	40.000		0.0	50	11/08/2017 0740	10/27/2017	
SJ12043-004	Sample	16WC1A	1	7470A	40.000		0.0	50	11/07/2017 1350	10/27/2017	
SJ12043-004MS	MS		1	7470A	40.000	17HG1256 (11/6/17)	1.0	50			
SJ12043-004MD	MSD		1	7470A	40.000	17HG1256 (11/6/17)	1.0	50			
SJ12043-005	Sample	16WDUP	1	7470A	40.000		0.0	50	11/07/2017 1405	10/27/2017	
SJ12043-006	Sample	16WC1B	1	7470A	40.000		0.0	50	11/07/2017 1300	10/27/2017	
SJ12043-007	Sample	16-2	1	7470A	40.000		0.0	50	11/07/2017 1055	10/27/2017	
SJ12043-008	Sample	16-3	1	7470A	40.000		0.0	50	11/06/2017 1400	10/27/2017	
SJ12043-009	Sample	16-5	1	7470A	40.000		0.0	50	11/07/2017 0910	10/27/2017	
SJ12043-010	Sample	16WC2B	1	7470A	40.000		0.0	50	11/07/2017 1010	10/27/2017	
SJ12043-011	Sample	16SPRING	1	7470A	40.000		0.0	50	11/07/2017 0920	10/27/2017	
SQ54040-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			Standard PB: 54039

(end of report) **Total Samples: 11**

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, 2017**
Expiration Date: **June 14, 2018**
Certificate # 9197

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

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2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
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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	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	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
EPA TO-15 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	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	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3-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	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
EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9197

Eurofins Lancaster Laboratories Environmental, LLC
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Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
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AIR

METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	PROPYLENE	LA DEQ
EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ

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DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	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	LEAD	PA
EPA 200.8 REV 5.4	SELENIUM	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 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 507 REV 2.1	ALACHLOR	PA
EPA 507 REV 2.1	SIMAZINE	PA
EPA 515.1 REV 4	DALAPON	PA
EPA 515.1 REV 4	PENTACHLOROPHENOL	PA
EPA 515.1 REV 4	SILVEX (2,4,5-TP)	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	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	PA

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	CADMIUM	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	NICKEL	PA
EPA 200.8 REV 5.4	THALLIUM	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 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 507 REV 2.1	ATRAZINE	PA
EPA 515.1 REV 4	2,4-D	PA
EPA 515.1 REV 4	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 515.1 REV 4	PICLORAM	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	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

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DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA
EPA 525.2 REV 2	ATRAZINE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 525.2 REV 2	ENDRIN	PA
EPA 525.2 REV 2	HEPTACHLOR	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
SM 2130 B-2001	TURBIDITY	PA
SM 2510 B-1997	CONDUCTIVITY	PA
SM 4500-F⁻ C-1997	FLUORIDE	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 9215 B-1994	HETEROTROPHIC PLATE COUNT	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA

METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	VINYL CHLORIDE	PA
EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	OXAMYL	PA
SM 2320 B-1997	ALKALINITY AS CACO3	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-H+ B-2000	PH	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	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-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	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-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	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-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 160.4	RESIDUE-VOLATILE	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-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-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	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	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-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1631 E	MERCURY	PA

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EPA 1664 A	OIL AND GREASE (AS 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
EPA 1666 A	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ETHYL ACETATE	PA
EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA
EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	METHYL FORMATE	PA
EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA
EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEPTANE	PA
EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL	PA
EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1666 A	XYLENE (TOTAL)	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',5,5',6-OCTACHLOROBIPHENYL (BZ-194)	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',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	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',5-HEPTACHLOROBIPHENYL (BZ-170)	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',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,4'-HEXACHLOROBIPHENYL (BZ-130)	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',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	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',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA



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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',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	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',5,6,6'-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',5,6'-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

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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	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,2',4,4',6,6'-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
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA



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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-CHLOROBIPHENYL (BZ-1)	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
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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 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

METHOD	ANALYTE	PRIMARY
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 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

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METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA
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	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	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 B	ALUMINUM	PA
EPA 6010 B	ARSENIC	PA
EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	CADMIUM	PA
EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COPPER	PA
EPA 6010 B	LEAD	PA
EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	POTASSIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	MANGANESE	PA
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	BORON	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 B	PREP: FLORISIL CLEANUP	PA
EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	PA
EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ANTIMONY	PA
EPA 6010 B	BARIUM	PA
EPA 6010 B	BORON	PA
EPA 6010 B	CALCIUM	PA
EPA 6010 B	COBALT	PA
EPA 6010 B	IRON	PA
EPA 6010 B	LITHIUM	PA
EPA 6010 B	MANGANESE	PA
EPA 6010 B	NICKEL	PA
EPA 6010 B	SELENIUM	PA

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EPA 6010 B	SILVER	PA
EPA 6010 B	STRONTIUM	PA
EPA 6010 B	TIN	PA
EPA 6010 B	VANADIUM	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	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
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	BORON	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 608	4,4'-DDE	PA
EPA 608	ALDRIN	PA
EPA 608	SODIUM	PA
EPA 6010 B	THALLIUM	PA
EPA 6010 B	TITANIUM	PA
EPA 6010 B	ZINC	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
EPA 6010 C - 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	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	TIN	PA
EPA 608	4,4'-DDD	PA
EPA 608	4,4'-DDT	PA
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA



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METHOD	ANALYTE	PRIMARY
EPA 608	AROCLOR-1016 (PCB-1016)	PA
EPA 608	AROCLOR-1221 (PCB-1221)	PA
EPA 608	AROCLOR-1232 (PCB-1232)	PA
EPA 608	AROCLOR-1242 (PCB-1242)	PA
EPA 608	AROCLOR-1248 (PCB-1248)	PA
EPA 608	AROCLOR-1254 (PCB-1254)	PA
EPA 608	AROCLOR-1260 (PCB-1260)	PA
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	CHLORDANE (TECH.)	PA
EPA 608	DELTA-BHC	PA
EPA 608	DIELDRIN	PA
EPA 608	ENDOSULFAN I	PA
EPA 608	ENDOSULFAN II	PA
EPA 608	ENDOSULFAN SULFATE	PA
EPA 608	ENDRIN	PA
EPA 608	ENDRIN ALDEHYDE	PA
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	HEPTACHLOR	PA
EPA 608	HEPTACHLOR EPOXIDE	PA
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA
EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	CHLORPYRIFOS	PA
EPA 622	DEMETON-O	PA
EPA 622	DEMETON-S	PA
EPA 622	DIAZINON	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 622	DISULFOTON	PA
EPA 622	ETHOPROP	PA
EPA 622	FENSULFOTHION	PA
EPA 622	FENTHION	PA
EPA 622	MERPHOS	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 622	MEVINPHOS	PA
EPA 622	NALED	PA
EPA 622	PHORATE	PA
EPA 622	STIROFOS	PA
EPA 624	1,1,1-TRICHLOROETHANE	PA
EPA 624	1,1,2,2-TETRACHLOROETHANE	PA
EPA 624	1,1,2-TRICHLOROETHANE	PA
EPA 624	1,1-DICHLOROETHANE	PA
EPA 624	1,2-DICHLOROBENZENE	PA
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 624	1,2-DICHLOROPROPANE	PA
EPA 624	1,3-DICHLOROBENZENE	PA
EPA 624	1,4-DICHLOROBENZENE	PA
EPA 624	2-CHLOROETHYL VINYL ETHER	PA
EPA 624	ACROLEIN (PROPENAL)	PA
EPA 624	ACRYLONITRILE	PA
EPA 624	BENZENE	PA
EPA 624	BROMODICHLOROMETHANE	PA
EPA 624	BROMOFORM	PA
EPA 624	CARBON TETRACHLORIDE	PA
EPA 624	CHLOROBENZENE	PA
EPA 624	CHLORODIBROMOMETHANE	PA
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CHLOROFORM	PA
EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	ETHYLBENZENE	PA
EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA

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METHOD	ANALYTE	PRIMARY
EPA 624	TOLUENE	PA
EPA 624	TRANS-1,3-DICHLOROPROPENE	PA
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA
EPA 625	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 625	2,4-DICHLOROPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 625	2-CHLOROPHENOL	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA
EPA 625	4-NITROPHENOL	PA
EPA 625	ACENAPHTHYLENE	PA
EPA 625	BENZIDINE	PA
EPA 625	BENZO(A)PYRENE	PA
EPA 625	BENZO(G,H,I)PERYLENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 625	CHRYSENE	PA
EPA 625	DI-N-OCTYL PHTHALATE	PA
EPA 625	DIETHYL PHTHALATE	PA
EPA 625	FLUORANTHENE	PA
EPA 625	HEXACHLOROBENZENE	PA
EPA 625	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625	INDENO(1,2,3-CD) PYRENE	PA
EPA 625	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625	N-NITROSODIPHENYLAMINE	PA
EPA 625	NITROBENZENE	PA
EPA 625	PHENANTHRENE	PA
EPA 625	PYRENE	PA
EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA
EPA 625 - EXTENDED	ANILINE	PA
EPA 625 - EXTENDED	N-DECANE	PA
EPA 624	TRANS-1,2-DICHLOROETHENE	PA
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 624	VINYL CHLORIDE	PA
EPA 625	1,2,4-TRICHLOROBENZENE	PA
EPA 625	2,4,6-TRICHLOROPHENOL	PA
EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-NITROPHENOL	PA
EPA 625	4-BROMOPHENYL PHENYL ETHER	PA
EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	ACENAPHTHENE	PA
EPA 625	ANTHRACENE	PA
EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(B)FLUORANTHENE	PA
EPA 625	BENZO(K)FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BUTYL BENZYL PHTHALATE	PA
EPA 625	DI-N-BUTYL PHTHALATE	PA
EPA 625	DIBENZO(A,H) ANTHRACENE	PA
EPA 625	DIMETHYL PHTHALATE	PA
EPA 625	FLUORENE	PA
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625	HEXACHLOROETHANE	PA
EPA 625	ISOPHORONE	PA
EPA 625	N-NITROSODIMETHYLAMINE	PA
EPA 625	NAPHTHALENE	PA
EPA 625	PENTACHLOROPHENOL	PA
EPA 625	PHENOL	PA
EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA
EPA 625 - EXTENDED	ACETOPHENONE	PA
EPA 625 - EXTENDED	CARBAZOLE	PA
EPA 625 - EXTENDED	N-OCTADECANE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 625 - EXTENDED	PYRIDINE	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
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	METHANOL	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 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
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	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 (TECH.)	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

Commonwealth of Virginia

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2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8081 B	CHLORDANE (TECH.)	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 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	ETHION	PA
EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENTHION	PA
EPA 8141 A	MERPHOS	PA
EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	RONNEL	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA
EPA 8141 B	CHLORPYRIFOS	PA
EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHOPROP	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
EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8141 A	ATRAZINE	PA
EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DIAZINON	PA
EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	MALATHION	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	NALED	PA
EPA 8141 A	PHORATE	PA
EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	ATRAZINE	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DISULFOTON	PA
EPA 8141 B	ETHION	PA
EPA 8141 B	FAMPHUR	PA

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METHOD	ANALYTE	PRIMARY
EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	MALATHION	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	NALED	PA
EPA 8141 B	PHORATE	PA
EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
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 8141 B	FENTHION	PA
EPA 8141 B	MERPHOS	PA
EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	RONNEL	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TRICHLORONATE	PA
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	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL)	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)	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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
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	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	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	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
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	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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
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 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 - 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	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL)	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)	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	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	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	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL	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	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	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-HEPTANE	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHYL ACETATE	PA
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	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	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	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	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	T-AMYL ALCOHOL (TAA)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA
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	PA



Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 9197

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

Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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
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

METHOD	ANALYTE	PRIMARY
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	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	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIETHYL PHTHALATE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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
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 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
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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	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	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
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

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,3-DICHLOROBENZENE	PA
EPA 8270 D	1,4-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 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



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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	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	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	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CARBAZOLE	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	DIBENZO(A,H) PYRENE	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
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 9012 B	TOTAL CYANIDE	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-METHYLNAPHTHALENE	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
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 9012 A	TOTAL CYANIDE	PA
EPA 9040 C	PH	PA

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Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	CHLORIDE	PA
EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	SULFATE	PA
OIA-1677-09	AMENABLE CYANIDE	PA
RSK-175	ETHANE	PA
RSK-175	METHANE	PA
SM 2310 B-1997	ACIDITY, AS CACO3	PA
SM 2340 C-1997	TOTAL HARDNESS AS CACO3	PA
SM 2540 B-1997	RESIDUE-TOTAL	PA
SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA
SM 3500-CR B-2009	CHROMIUM VI	PA
SM 4500-F^- C-1997	FLUORIDE	PA
SM 4500-NH3 D-1997	AMMONIA AS N	PA
SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA
SM 4500-SIO2 C-1997	SILICA AS SIO2	PA
SM 5210 B-2001	CARBONACEOUS BOD, CBOD	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA

METHOD	ANALYTE	PRIMARY
EPA 9056 A	BROMIDE	PA
EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRITE	PA
EPA 9066	TOTAL PHENOLICS	PA
OIA-1677-09	FREE CYANIDE	PA
RSK-175	ETHENE (ETHYLENE)	PA
SM 2120 B-2001	COLOR	PA
SM 2320 B-1997	ALKALINITY AS CACO3	PA
SM 2510 B-1997	CONDUCTIVITY	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 F-1997	RESIDUE-SETTLEABLE	PA
SM 4500-F^- B-1997	FLUORIDE	PA
SM 4500-NH3 B-1997	AMMONIA AS N	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 4500-$S2^-$ D-2000	SULFIDE	PA
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	PA
SM 5310 C-2000	TOTAL ORGANIC CARBON	PA
SM 9222 D-1997	FECAL COLIFORMS	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

METHOD	ANALYTE	PRIMARY
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



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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
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',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 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



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SOLID AND CHEMICAL MATERIALS

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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
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	2,2',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',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



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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
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',4,6-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	2,3,3',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

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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
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 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA
EPA 6010 B	ANTIMONY	PA
EPA 6010 B	BARIUM	PA
EPA 6010 B	BORON	PA
EPA 6010 B	CALCIUM	PA
EPA 6010 B	COBALT	PA
EPA 6010 B	IRON	PA

METHOD	ANALYTE	PRIMARY
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	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 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3550 B	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 B	ALUMINUM	PA
EPA 6010 B	ARSENIC	PA
EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	CADMIUM	PA
EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COPPER	PA
EPA 6010 B	LEAD	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SILVER	PA
EPA 6010 B	STRONTIUM	PA
EPA 6010 B	TIN	PA
EPA 6010 B	VANADIUM	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	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	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
EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 6020 A	ANTIMONY	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	BORON	PA
EPA 6020 A - EXTENDED	TIN	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 7471 B	MERCURY	PA
EPA 8015 B	ETHANOL	PA
EPA 6010 B	MANGANESE	PA
EPA 6010 B	NICKEL	PA
EPA 6010 B	SELENIUM	PA
EPA 6010 B	SODIUM	PA
EPA 6010 B	THALLIUM	PA
EPA 6010 B	TITANIUM	PA
EPA 6010 B	ZINC	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	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
EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ARSENIC	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 7196 A	CHROMIUM VI	PA
EPA 7471 A	MERCURY	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHYLENE GLYCOL	PA



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METHOD	ANALYTE	PRIMARY
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	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 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
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	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 (TECH.)	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'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	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 8081 B	HEPTACHLOR EPOXIDE	PA



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METHOD	ANALYTE	PRIMARY
EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8082 A - OIL	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A - OIL	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A - OIL	AROCLOR-1254 (PCB-1254)	PA
EPA 8141 A	ATRAZINE	PA
EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DIAZINON	PA
EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHION	PA
EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENTHION	PA
EPA 8141 A	MERPHOS	PA
EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	RONNEL	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DIAZINON	PA
EPA 8141 B	DISULFOTON	PA
EPA 8141 B	ETHION	PA
EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENTHION	PA
EPA 8141 B	MERPHOS	PA
EPA 8141 B	MEVINPHOS	PA

METHOD	ANALYTE	PRIMARY
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	MIREX	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - OIL	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A - OIL	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A - OIL	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A - OIL	AROCLOR-1260 (PCB-1260)	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	MALATHION	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	NALED	PA
EPA 8141 A	PHORATE	PA
EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	ATRAZINE	PA
EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHOPROP	PA
EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	MALATHION	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	NALED	PA

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METHOD	ANALYTE	PRIMARY
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	RONNEL	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TRICHLORONATE	PA
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	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROTOLUENE	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

METHOD	ANALYTE	PRIMARY
EPA 8141 B	PHORATE	PA
EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
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-ISOPROPYLTOLUENE (P-CYMENE)	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



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EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
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	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	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL	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	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 B	CHLOROFORM	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	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-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	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

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9197

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

Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,4-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)	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	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	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
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	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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	PENTACHLOROETHANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	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	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA
EPA 8270 C	1,4-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 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	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DINITROBENZENE	PA
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	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



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SOLID AND CHEMICAL MATERIALS

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EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	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	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	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	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	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
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

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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 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	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE	PA
EPA 8270 D	1,4-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 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	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	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	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



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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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	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
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	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	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 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 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	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



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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	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-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 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	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL	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 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 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

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9197

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

Virginia Laboratory ID: 460182
Effective Date: June 15, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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	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 9045 C	PH	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9066	TOTAL PHENOLICS	PA
EPA 9081	CATION EXCHANGE CAPACITY	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	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 9012 A	CYANIDE	PA
EPA 9045 D	PH	PA
EPA 9060	TOTAL ORGANIC CARBON	PA
EPA 9071 B	OIL AND GREASE (AS HEM)	PA
EPA 9095 B	FREE LIQUID	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
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, 2017**
Expiration Date: **September 14, 2018**
Certificate # 9396

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

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Scope of Accreditation

VELAP Certificate No.: 9396

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2017
Expiration Date: September 14, 2018

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 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

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 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

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Scope of Accreditation

VELAP Certificate No.: 9396

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2017
Expiration Date: September 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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 - EXTENDED	MOLYBDENUM	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	VANADIUM	FL
EPA 6020 B - EXTENDED	BORON	FL
EPA 608	4,4'-DDD	FL
EPA 608	4,4'-DDT	FL
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	AROCLOR-1221 (PCB-1221)	FL
EPA 608	AROCLOR-1242 (PCB-1242)	FL
EPA 608	AROCLOR-1254 (PCB-1254)	FL
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	DELTA-BHC	FL
EPA 608	ENDOSULFAN I	FL
EPA 608	ENDOSULFAN SULFATE	FL
EPA 608	ENDRIN ALDEHYDE	FL
EPA 608	HEPTACHLOR	FL
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 624	1,1,2,2-TETRACHLOROETHANE	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	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	TIN	FL
EPA 6020 B	ZINC	FL
EPA 6020 B - EXTENDED	TITANIUM	FL
EPA 608	4,4'-DDE	FL
EPA 608	ALDRIN	FL
EPA 608	AROCLOR-1016 (PCB-1016)	FL
EPA 608	AROCLOR-1232 (PCB-1232)	FL
EPA 608	AROCLOR-1248 (PCB-1248)	FL
EPA 608	AROCLOR-1260 (PCB-1260)	FL
EPA 608	CHLORDANE (TECH)	FL
EPA 608	DIELDRIN	FL
EPA 608	ENDOSULFAN II	FL
EPA 608	ENDRIN	FL
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	HEPTACHLOR EPOXIDE	FL
EPA 624	1,1,1-TRICHLOROETHANE	FL
EPA 624	1,1,2-TRICHLOROETHANE	FL

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Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9396

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2017
Expiration Date: September 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624	1,1-DICHLOROETHANE	FL
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 624	2-CHLOROETHYL VINYL ETHER	FL
EPA 624	BROMODICHLOROMETHANE	FL
EPA 624	CARBON TETRACHLORIDE	FL
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 624	CIS-1,3-DICHLOROPROPENE	FL
EPA 624	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 624	TOLUENE	FL
EPA 624	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	FL
EPA 625	1,2,4-TRICHLOROBENZENE	FL
EPA 625	2,4-DICHLOROPHENOL	FL
EPA 625	2,4-DINITROPHENOL	FL
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625	2-CHLOROPHENOL	FL
EPA 625	2-NITROPHENOL	FL
EPA 625	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 625	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625	ACENAPHTHENE	FL
EPA 625	ANTHRACENE	FL
EPA 625	BENZO(A)ANTHRACENE	FL
EPA 625	BENZO(B)FLUORANTHENE	FL
EPA 625	BENZO(K)FLUORANTHENE	FL
EPA 625	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625	BUTYL BENZYL PHTHALATE	FL
EPA 625	DI-N-BUTYL PHTHALATE	FL
EPA 625	DIBENZO(A,H) ANTHRACENE	FL

METHOD	ANALYTE	PRIMARY
EPA 624	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 624	1,2-DICHLOROPROPANE	FL
EPA 624	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 624	BENZENE	FL
EPA 624	BROMOFORM	FL
EPA 624	CHLOROBENZENE	FL
EPA 624	CHLOROFORM	FL
EPA 624	ETHYLBENZENE	FL
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624	TRANS-1,2-DICHLOROETHENE	FL
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624	VINYL CHLORIDE (CHLOROETHANE)	FL
EPA 624 - EXTENDED	XYLENE (TOTAL)	FL
EPA 625	2,4,6-TRICHLOROPHENOL	FL
EPA 625	2,4-DIMETHYLPHENOL	FL
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625	2-CHLORONAPHTHALENE	FL
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625	3,3'-DICHLOROBENZIDINE	FL
EPA 625	4-CHLORO-3-METHYLPHENOL	FL
EPA 625	4-NITROPHENOL	FL
EPA 625	ACENAPHTHYLENE	FL
EPA 625	BENZIDINE	FL
EPA 625	BENZO(A)PYRENE	FL
EPA 625	BENZO(G,H,I)PERYLENE	FL
EPA 625	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE) (DEHP)	FL
EPA 625	CHRYSENE	FL
EPA 625	DI-N-OCTYL PHTHALATE	FL
EPA 625	DIETHYL PHTHALATE	FL



Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 9396

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2017
Expiration Date: September 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 625	DIMETHYL PHTHALATE	FL
EPA 625	FLUORENE	FL
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 625	HEXACHLOROETHANE	FL
EPA 625	ISOPHORONE	FL
EPA 625	N-NITROSODIMETHYLAMINE	FL
EPA 625	NAPHTHALENE	FL
EPA 625	PENTACHLOROPHENOL	FL
EPA 625	PHENOL	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	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 625	FLUORANTHENE	FL
EPA 625	HEXACHLOROBENZENE	FL
EPA 625	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625	INDENO(1,2,3-CD) PYRENE	FL
EPA 625	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625	N-NITROSODIPHENYLAMINE	FL
EPA 625	NITROBENZENE	FL
EPA 625	PHENANTHRENE	FL
EPA 625	PYRENE	FL
EPA 7470 A	MERCURY	FL
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 (TECH.)	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



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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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	2,2-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	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	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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	1,2,4,5-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

METHOD	ANALYTE	PRIMARY
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 (CHLOROETHANE)	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

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
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	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
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	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

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	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
EPA 8081 B	CHLORDANE (TECH)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	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 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



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METHOD	ANALYTE	PRIMARY
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
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	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
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL



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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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 (CHLOROETHANE)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	VA
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 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 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
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



Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 9396

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2017
Expiration Date: September 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
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
EPA 8270 D	SAFROLE	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	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
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

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 9045 D	PH	FL	EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL